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Eureka Gold

Field Test Report

I first heard about this new addition to Minelab's stable of detectors quite a number of months back amidst the usual cacophony of a goldfield. Some were saying one thing about it and others saying another and as is usual with rumours, the truth often laying somewhere in between, this is pretty much what I discovered when I was fortunate enough to be given the opportunity to try this new detector out.

The first thing which I noticed in regards to its features was the retaining of the triple frequency selection of 6.4, 20 and 60 kHz. This is a well tried and proven feature which was first used on the XT 18000 making it a very versatile detector to use giving it a broader than usual operating range in different soil conditions. It makes sense then that this feature has been retained, though improved somewhat with the inclusion of a "Fast, Fixed and Slow track" selector switch , further stretching the detectors ability to cope with a wider range of differing ground conditions thus building on the triple frequency's reputation. The second most notable thing which was strikingly apparent was the new battery system. The new easy access rechargeable NIMH pack is a welcome relief from the old set up which at times had you reaching for the nearest screw driver or pocket knife in which to use to prise open the often stubborn sliding cover of the previous models. The pack itself has a small green LED light which glows brightly during charging but which fades in intensity after full charge is achieved. It's worth noting though that in pitch black darkness this light "just" remains lit enough to still see it so under these conditions do not expect to see it completely diminish. In daylight though, it appears to go completely out.

Another new feature is the easy mount system, one push of a button will have the control box firmly mounted to the stem and just as easily it is released from it. There is also supplied a rear mounting bracket with which to position the control box rear of the handgrip and just under the armrest which adds to the better overall balance of the detector as a whole. The only trade off in doing so means that the controls are now out of relatively easy reach of the operating hand. Still, with the machine running auto tracking this is not much of a trade off to worry about.

I made my mind up from the start to test this detector out on a variety of grounds around the goldfields and to try a couple of things out such as how the detection ability was affected by a full , compared to partially discharged battery and to see if any improvements had been made in the discrimination department.

The first port of call was an old gold town site in the local area. Some good coins and relics have come out of here in the past with the result being that the spot has had a fair belting by numerous operators using all types of discriminating detectors. To find something worthwhile here I considered to be quite a challenge due to this previous heavy traffic and a good indication as to whether the Eureka Gold's discrimination, which is touted as being improved over previous models, was of any advantage.

The ground here consists of a dark brown loamy topsoil covering of about 4 to 6

inches deep and with a gravelly type of wash beneath it. The ground changes in a few areas from positive to negative but generally it is fairly consistent and after a brief "dummy" run on test targets I chose to run the machine in Fixed ground balance on 6.4 kHz, the disc on 1/3 of its setting, the sensitivity on 90% and running Boost on the selector.

Getting used to the discrimination was pretty easy. On junk, the constant hum of the threshold would either drop out completely or drop and then ring off slightly to iron and rubbish targets. Good retrievables such as musket balls, spoons, coins etc were solid repeatable target signals with what I would call "a good depth of sound" .
It's interesting too , that a feature of the Eureka's discriminator is its ability to self adjust the actual depth level of its discrimination. To best describe this Ill quote an extract from the manual. "Therefore in mild ground the detector will discriminate accurately at greater depth, while in hot ground the discrimination depth is reduced to maintain reliable discrimination. At all times, however, the depth and sensitivity that the Eureka Gold picks up targets is not reduced."

It's worth noting too that the tracking speed which is selected has a bearing on the disc as well. In Fast track the first sweep or pass over a target is the most reliable, in Slow track the first two passes are so but in Fixed it makes no difference how often you pass over a given target. It is for the last reason mentioned why I chose to hunt at this location in the Fixed mode as the ground here was fairly consistent in its makeup and also there were multiple targets close together and by using Fixed mode I felt I was better able to separate them and analyse each more accurately. It wasn't long into the test that I recovered my first good target of a musket ball which gave a strong solid signal and was recovered from 6 to 8 inches deep, below the loam and solidly embedded in the clayish wash. A number of rubbish targets later saw me unearth an 1863 penny from around the same depth followed soon after by another musket ball and then a 1856 threepence which lay at about 6 to 7 inches deep in the same ground type. Other items recovered included old spoons, buttons and pieces of old buckles.

I was pretty impressed at the day's end by the Eureka's discriminator and believe it to be much more advanced than those found on earlier models such as the FTs or XTs. I did try out the difference of full to partially discharged battery on a target that I left for that purpose and could not tell the difference. To me it is something I would not worry about.

The next place of trial was around an old reef working. Another hammered spot which has been gone over countless times in the past but yielded much gold. Unfortunately, though my previous three trips there had yielded naught so I was again keen to see whether the Eureka Gold could turn anything up.

Here, with the gold being predominantly small from detectable specks up to 7 or so grams, I decided to choose the 60 kHz setting. I chose Normal on the signal switch , Boost was just a little too chattery, 100% on the sensitivity and Slow track for the quiet areas and Fast for the more mineralized spots consisting of reddish

clay and country rock. I also ran Fixed for the almost neutral quartz piles where I scanned for specimens. There were a lot of small metal fragments in this ground left by the old timer's picks and hammers and after digging up too many for my liking I turned the disc on to see how it performed on 60 kHz. Now whilst it did not sound exactly like it did at the old town site, I can say that it was useable and eventually understandable. In this area on the chosen settings the Eureka performed really well. In tracking there were a few rolling piping sounds as the tracking adjusted but return sweeps saw these to be just that and after a while understanding what was going on became second nature and no problem at all. And yes, I did find some gold. Just when all was starting to look a little glum I spied, lying between two larger rocks, a piece of quartz with some unusual looking small black crystals in its cavity. I picked it up to look at it and realizing it was really nothing great was about to throw it away when I decided to scan it. Yep, there was a signal and by looking carefully at it saw gold, about .5 to 1 grams worth of fine gold poking out from under some green slate which was attached to it.

Test area three saw me in the bush just off a country road in a little known area where I can only guess a small village used to be. The ground here is best described as "savage" with much ironstone and mineralized clays wreaking havoc with any type of machine whether it be PI or VLF. This soon saw me choosing 6.4 kHz and turning the sensitivity down to just 1/4 of its ability with the signal switch on Normal. Tracking was set to Fast. I have to admit that this ground was a struggle to work at times as many false signals were generated by its rapidly changing ground make up. Positive, negative, neutral, positive patches all within inches of each other soon had me wanting to walk away, but, having said that let me add that this ground would and has tested to the limits any machine built as well as its operator's patience and really it did not surprise me. Backing the sensitivity down even a touch more saw a workable formula arise and a degree of stability eventuate but generally I would not choose this sort of ground in which to run a VLF detector. I chose it for one reason only, to see if it could. The answer was "yes" but to 1/5 of its capability , which I might add is better than not at all and assuring to know that you can at least have a go "anywhere". Did I find anything here? Yes, a 1945 Florin.

My final trial saw me on some pipeclay heaps which again had seen much action in the past with everything from Goldbugs to Goldstingers to Goldmasters go over it and now the Eureka Gold. I wasn't sure what to expect here with the ground being dead quiet and easy to work with all those machines used to scour out the last bits of gold that the old timers had left behind but reckoned it should prove a decent trial. It was not long before I realized that the Eureka was a real little screamer being able to be run absolutely flat out. 60 kHz, Boost and 100% sensitivity soon saw small targets pop up everywhere. There may have been no big ones but I can tell you this, the place was alive. No 4 shotgun pellets were detecting quite audibly from 1 to 3 inches deep and with nothing to cause confusion it was not long before you would hear a target and be able to, with 90% accuracy, call it for what it was. I recovered 4 small bits of gold in no time and I mean small. The 4 together added up to just 1/10 of a gram. I lost count of the shotgun pellets and 22 slugs I unearthed and there's one thing for sure, there's still plenty more gold in those

heaps. I tried 20 kHz out here too as I had not done much with it previously and found it to be just as stated. A perfect compromise between the stable 6.4 and hotter 60 kHz settings. Discrimination was reasonably good on 20 and depth just a bit better than 60.

So, my final thoughts and verdict on this detector. Well, I can say that as far as VLFs go the Eureka Gold is right up there with the best of them and in many instances surpasses what is on offer by other manufacturers. Its versatility and ability to be used in varying ground types is unsurpassed and its discriminator in my opinion is far superior to its predecessors of the XT range. Its sensitivity and target response at the top end of the scale is exceptional with just a sniff of gold required to set it off. Those out there who like high grading quartz refuse heaps will find the Eureka Gold right at home performing this task as it absolutely howled on all the specimens which I used in testing this machine for that purpose. Some may say "what's the use?" My reply is this, that over the years I have paid many a bill from gold which I have extracted from specimens containing fine gold concentrations. Many of which a PI will not register on. Another purpose where such high sensitivity comes into play is that of grading mullock heaps on the diggings. Many leads were extremely rich in fine gold only and although PI machines are the Rolls Royce for nuggets they are "blind" to many rich fine gold deposits. I know of people who use high frequency VLFs to sample mullock dumps for fine or very small gold and when they find one which fits the bill they set about to washing the mullock from which the gold is found and often recover much fine payable gold in the process. Like they say "there is more than one way to skin a cat". The other place a good VLF is right at home is in highly junked areas. Everyone who has used a PI will know that highly junked spots drive you insane as they not only pick up targets below the coil from great distances but also from every other direction as well. Slotting in amongst it all becomes nigh impossible at times leaving the operator with the only option of walking away. A good VLF discriminator such as the Eureka Gold is right at home in these situations and slots in nicely between the junk being capable of isolating multiple targets which PI machines see as one. Most pros I know of use a good VLF along with their PI detector for this very purpose.

So for those after a good VLF with disc ability which offers versatility for coin, relic and gold detecting and high sensitivity I can honestly recommend the Eureka Gold.

By B.T.