



# ON TARGET

Newsletter of the Buffalo Rifle Association of Australia *Issue 28 - Aug 2015*

## APERTURE

### ARE YOU POISONING YOURSELF?

Any shooter who loads his own rounds, and particularly those who cast their own projectiles would be foolish to ignore the possibility that they could be building up lead levels in their blood to a dangerous level.

But how many of us go along to a GP for a blood test? Not many I would suggest.

For this reason BRAA has sourced a self-testing kit for Blood Lead levels that you can easily use at home.

The kit consists of a tube into which you put a urine sample. To the sample you add the chemicals that come in the kit and then compare the colour against the test strip (see picture).

The result is in parts per million and the recommendation is that if you get higher than half way up the scale you hot foot to the Doctor to get a full blood test.

The writer has done both a blood test and a self test and the results are very similar, certainly close enough to tell very clearly if you have a problem or not.

The kits are supplied by a Canadian firm called Osumex and their website at [www.heavymetalstest.com](http://www.heavymetalstest.com) will give you more details about lead levels and the kits themselves. They will cost \$50 which includes \$8.50 postage, so if you can collect a kit during a shoot the cost will be \$41.50.

BRAA will order a supply only when we have orders to fill so please call Bill Sherman on 0418 257 330 (or email at [bsher40@bigpond.com](mailto:bsher40@bigpond.com)) if you would like to buy a kit.



This article was researched and prepared by

Bill Sherman

Thanks Bill

## BULLET-IN

Australian Arms Auctions P/L, Melbourne, wish to advise that our next auction, No.45, is **NOW AVAILABLE ONLINE**. To view, go to:- [http://www.australianarmsauctions.com/cat\\_online\\_1.html](http://www.australianarmsauctions.com/cat_online_1.html)

**Date:** Sunday 4<sup>th</sup> October 2015 at 10.00 am

**Viewing:** Saturday 12 noon until 5 pm & Sunday 8 am until 10 am, auction start.

**Venue:** Eley Park Community Centre, 87 Eley Road, Blackburn South.

**Australian Arms Auctions Pty Ltd**

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## SIDE EVENT ... cont. from 'On The Line' Page 3

The Nioka side event is usually a .22 side match on the Friday afternoon. It has to be Friday, as we will have the AGM after the main match on Saturday. AND ... Paul Mc has made up a set of silhouette targets, which he will be bringing along with the intention that we use them for the side match. Details of the shoot will be advised on the day, bring along your favorite .22 for the match.



## COMING UP

The October and November shoots are scheduled for the Cooyal Range, details are opposite. They are always good long distance shoots. Put them in your diary NOW!

## THE POSSE

President:	Gary Vandersluis
Secretary/Treasurer:	Bill Sherman
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## SHOT TO BITZ

**The August Whiskey Shoot at Cooyal was abandoned due to many regular shooters being unable to attend. BRAA apologizes for any inconvenience caused to BRAA members.**

So, since there is no shoot to report on, and to fill in all the blank spaces, Andrew has kindly submitted the following for your interest.

### Northern Smelters Pty Ltd

For those of us casting our own projectiles we have the experience of sourcing lead and tin and alloying up our own mix for casting into projectiles. Like others, I have been to the local scrap metal dealer and purchased old sheet roofing lead for prices that sometimes makes one unsure if one is getting seen off. It then has to be melted and fluxed and cleaned up and poured into some form of ingot mould. Next one has to source the tin, and antimony if it is being used to increase hardness, and make up an alloy. This is repeated regularly if you are shooting 500+gn projectiles, and get approx. 30 to the Kg!

Others of us collect old wheel weights, or lead from the mound at the rifle range. A cheap and economical supply, but the composition is a total unknown, and consistency of the metal alloy between collection and casting sessions is non-existent. Wheel weights can contain anything, and are made for their weight, not their alloy composition.

Having sourced clean lead, one has to source tin, and the usual supply is solder bars, if you don't know where to get tin. Some trawl the Op Shops and buy old Pewter (mainly tin, but can contain copper and other metals). Using this method again can give unpredictable alloy compositions.

It can be difficult to maintain consistency of the alloy between batches using these methods. Unpredictable, or non-repeatable alloy compositions, will throw an unpredictable range of bullet weights from the mould blocks.

Lastly is the time taken in sourcing the components, and the hassle of cleaning, weighing and bathing the ingredients?

Recently I calculated out how much a DIY 30Kg batch of 20:1 bullet alloy was costing me in lead, tin, time, travel, weighing the components, cleaning the lead and fluxing etc. I compared this with commercially sourced 20:1 alloy and was surprised that the difference was in the order of \$1.50 per Kg.



..... 'Northern Smelters' Continued .....

I have been aware of Northern Smelters Pty Ltd for some time, but have never purchased from them. Northern Smelters have off-the-shelf 5Kg ingots of bullet alloy in a number of compositions (see their website [www.northernsmelters.com.au](http://www.northernsmelters.com.au)):

- 2% tin, 6% antimony, 92% lead (Brinell Hardness: 15) in 5kg ingots
- 'Lyman No. 2' - 5% tin, 5% antimony, 90% lead (Brinell Hardness: 15) in 5kg ingots
- Tin/lead alloys: 1:20(BH:10), 1:25(BH:9.5), 1:30(BH:9) in 5kg ingots
- Pure lead - available in sticks or 5kg ingots



An email to Kathryn at Northern Smelters, a phone call with Credit Card Details, and on the same day the product was shipped. You can order a single 5Kg ingot, boxes of 3 or 6 ingots, or more. Prices will vary on the commodities rate, but 1:20 tin/lead was about \$8.50 per Kg. Freight on 30Kg of 20:1 ingots, and 1Kg of pure tin, was \$30.00 to Sydney. The key here is consistency of the alloy from Northern Smelters, you will always get repeatable consistency, and stable bullet weights out of the mould blocks.



Many thanks for that Andrew.

I'm sure we all benefited from your submission. ....Sf

## ON THE LINE

**Note! The following dates and arrangements are subject to change from time to time depending on prevailing conditions etc. Every effort will be made by your Committee to advise any changes well prior to the event. It is also advisable to check this calendar with each issue of "On Target"**

### CALENDAR 2015

Jan.	24/25	Cooyal	"B"	7,5,3+9	s/e	Muzzle Loaders
Feb.	21/22	Cooyal	"P"	8,6,4+10	s/e	Shotgun
April	5/6	Canberra	"P"	s/e (4 <sup>th</sup> )	SSAA	Silhouette tbe
April	25/26	Cooyal	"B"	Mini Quigley	s/e	Quigley Bucket
May	23/24	Nioka	"B"	Champagne Shoot	s/e	.22 rifle
June	27/28	Cooyal	"P"	7,6,4+10	s/e	Lever Rifle
July	25/26	Cooyal	"P"	6,5,4+7	s/e	Shotgun
Aug.	22/23	Cooyal	"B"	8,6,3+10	s/e	(CANCELLED)
Sept.	26/27	Nioka	Billy Dixon+AGM	s/e	.22 rifle	
Oct.	24/25	Cooyal	"P"	8,7,6+9	s/e	Pistol tba
Nov.	28/29	Cooyal	"B"	6,5,3+9	s/e	Shotgun
Dec.						No match.

**Note!** In each match;

- "B" means shot on buffalo plate
- "P" means shot on paper targets
- the 'numbers' are (hundred) yards.
- the match will be shot in that order
- '+' separates Sat & Sun
- "s/e" means side event (duh!).

### NEXT SHOOT

**The next BRAA shoot is our signature event the BILLY DIXON and BRAA AGM at NIOKA.**

**PLEASE NOTE the date has been changed from the original schedule.**

You may recall that we moved from the last weekend in September to the previous weekend to accommodate the Meigels who own and run the range. They had clashing events and asked us to move ours by a week and we obliged. However that clash no longer exists and we are able to return to our preferred date, in this case 26-27 September. Because the AGM is to be held on Saturday evening the 26<sup>th</sup>, the side event, .22 rifle will be held on Friday afternoon 25<sup>th</sup> so as not to delay proceedings on Saturday.

### THE EVENT

Attached to the email along with this newsletter, there are **three other documents**. Some have been already sent via email to members, and are provided again in case you missed them;

- Notice of Meeting and Committee Nomination Form
- Invitation & Application Form (for the shoot)
- Programme (and rules) for the Billy Dixon Shoot

### ACCOMMODATION

**Nioka Range** is 42 kms from Manilla on the Boggabri Road and has excellent facilities for camping or caravans. Bar-B-Q's plus hot and cold water for showers and clean pit toilets are provided. Meals will be provided by the Miegels or just bring your own.

For the non-campers there is accommodation available at the Manilla Motel and also at Boggabri and Gunnedah.

This is great opportunity for BRAA members across the State to get together.

The campfire at night is an excellent place to swap lies and share an after dinner 'warmer' - whatever your pleasure.

## GUNSMITH (Advanced from page 4)

**CAST ASIDES....** More from our good mate Gav

Having this afternoon just completed a fairly short but satisfactory casting session it occurred to me that so much of who we are and what we do is comprised of many 'little things'. Certainly shooting and in this instance, casting is no less so. Small, seemingly insignificant things can matter or at least this has been my experience. Here are a few things that generally work for me. They may not suit everyone but at least here's some food for thought.

**Preparation** and time management seem to be high on the list for me and I've found my best results with casting come about when I'm not rushed for time or 'squeezing it in' during two or three available hours a few days before a pending shoot. A rushed casting session usually results in fewer bullets cast and quite possibly of less than ideal finish. Allow yourself time.

**Preheating.** Remember it's not just the roast pork that needs a hot oven; it's your lead pot and mix. Most electric furnaces make a feature of how fast they can melt the mix but it's important that it's heated through and a fairly consistent in temperature. While the mix may break down in say 20-30 mins, allow it another 20 or so to stabilise. This also allows any dross and debris to come to the top. Check the temperature with a proper thermometer on several occasions in lead up to beginning to cast. Get to know what the settings on your pot equate to in real 'degrees', rather than guesstimates. I've found around 750F+ ( but less than 800 F) to be reliable for a good pour with metals in the 20/1 - 16/1 ratio. Ideally if you can cast well between 720 - 750F, that's great but I've found it to be a little inconsistent for me.

**Preheat your mould.** It's essential that your mould is preheated. Dealing predominantly with steel moulds, it is quite acceptable to place them on the edge of an electric hotplate on low for 20 - 30 minutes or so before you start casting. Aluminium and brass blocks are better off not subjected to direct heat and I've found a small plate of aluminium between the hot plate and the blocks provides enough heat dispersion to prevent any damage. Aluminium blocks do heat up quickly though so keep an eye on them and brass blocks can warp if overheated directly.

**Your mix and how much?** Whatever ratio you are planning on using, have it adjusted and the lead pot nearly full. Avoid adjusting the mix during a session. The more mix, the more stable the temperature and the more casting you can do. While the two pots I use ( a Lee and an RCBS ) are listed as 20lb pots, I tend to only load them with 16 -18lbs. This allows a little space at the top of the pot without it being too high and still enables relatively easy skimming of dross or the adding of flux. Also, as I've started now to cast with 16/1 it makes it easy to do the math/s . Arithmetic never a strong suit of mine!

Keep the ladle hot while youre casting and if possible keep the head below the surface of the melt until the pour. This allows for good flow from the ladle and removes the chance of any 'freeze' while your pouring. I do hate a blocked nozzle ! Every now and then it will skin up and collect some of the oxidized 'skin' on the surface. If this happens, just tap it on a brick or something solid to get rid of the residue. Another tip is periodically drop a bead of bullet lube or bees wax in the ladle head itself and let it fall through the pour hole. This should free up the pour for a while if its slowing up.

..... continued on page 4 .....

## BISON TALES

### LUBE IT UP

Gavin's been playing in the garage again. Here are some thoughts from him on lube.

About a year ago, I made some enquiries with one of the guys on the Shiloh forum about making his own bullet lube and I asked him if he had any recipe he'd let me have a bash at.

He is predominantly a paper patch guy so that means he'd be using lube wads, rather than greasing bullets, but I figured it was worth a try. In the absence of bees wax, he's been using ...wait for it... 'Ozokerite' wax (you'll have to look that up... I did). It's a natural wax and not a byproduct of something or petroleum based. I believe it may have a higher melting point than bees wax, but can't remember off hand. Anyway, he uses this along with either peanut oil or baby oil and also adds Vaseline. Was all sounding very environmentally friendly until Vaseline and baby oil wasn't it? Some also recommend jojoba oil, but finding pure Jojoba oil in reasonable quantities doesn't seem to be as easy as I'd hoped.

Anyway... into the garage I went this afternoon and made up about 800 mls of what I hope will work as bullet lube. Now I'm just scared to use it in case it doesn't work. I threw in the remnants of a soy wax, scented candle and that, along with the baby oil has given it a nice odour at least.



I've poured into one of my lubsizers, but the proof...if there is any... is yet to come. Soy wax and paraffin all rate a mention. Beeswax is fine, but by no means the be-all & end-all (pardon the pun) of ingredients. I guess it's traditional and in years gone by, more readily available. The waxy oil (Spermacetti?) that came from a gland in the sperm whale was the traditional oil to be mixed, along with purified tallow (salts removed) and beeswax. For obvious reasons there's not a lot of the sperm whale by-product around these days. Remember most of this stems from the 1870's up to probably 1920 and generally relates to lube or grease cookies placed in the case between two paste board wads. Target shooters generally refrained from lubed loads, preferring to wipe between shots. Mind you this was in the days of paper patch and leading wasn't an issue from shot to shot. It was purely for fouling control.

Jojoba oil, whilst still used by some, was seen as to be the least effective by quite a few, but remember this is in comparison to others they've tried. By that I just mean its not as good as some others. I'm trying to source an oil that apparently comes from New Zealand, called Meadowfoam oil. It comes very highly recommended but it's not cheap. It's deemed to be close to Spermacett, but without the whale or grief from the Greens, I may source 500mls of that to give it a try.

..... 'LUBE IT UP' Continued .....

Basically one needs a wax or carrying agent that won't melt too readily, but can carry the relevant oil in suspension without leaching. This appears to be the problem with some lubes. It seems some shooters actually have a winter lube and summer lube, but that's just too complicated for me. Ozokerite wax seems pretty damn hard on its own. My leaning at this stage is to dilute the wax quotient with some soy wax and then use the chosen oil (baby, vegetable, jojoba, meadow foam) along with some Vaseline. Guess I could use Vaporub but it might bring to tears the eyes. Maybe good in winter though!

The Mix - these were ballpark figures to start off with. They are all given in U.S. cups and oz, so I've used Google to work out some ratios. Basically it's 3/1 ratio of whatever wax to whatever oil. Then divide the total by 5.82 (probably round it down, but not up) and add that amount of Vaseline. This sets quite firm though and here is where the mix needs to be cut back a little with oil or the ratio of wax changed. These would make pretty good lube cookies for paper patch in hot climates though. At that solidity I don't think they'll work through a lube sizer...certainly not in winter at any rate. This is why I'm contemplating breaking it down with some soy wax and dropping the ratio of wax down anyway. A work in progress as you can see.

I guess I'll give it a run eventually... one day. .... J.B.

Thanks for your thoughts Gav. Has anyone out there been playing with his or her own lube? Now how about some comments of your own experience. Doesn't have to be a story just some comments.

## GUNSMITH ..... 'CAST ASIDES' continued from page 3

Dont skimp on the sprue ! These are big bullets guys and girls and they need good fill and a lot of weight behind them to do so. Keep the metal in the ladle generous and as close to the same level for each pour. A good sprue also helps to keep the sprue plate hot and this in turn helps both the pour and the bullet fillout. Some like to return the sprue to the mix as they go but I prefer to finish the session and add them all at once. At the same time I can place the mould back on the heater plate to maintain its heat while the mix deals with the sprues and returns itself to the operating temperature. ( good time for comfort stop and a snack ? ...but remember to WASH YOUR HANDS ! )

**Timing and consistency.** Develop a rhythm and cadence when you are casting. I have an old clock handy with a visible seconds hand and if I get out of synch (which I do often I'm told) I just glance at the second hand and get back into step. For example. 1. Ladle to the mould and roll upright over 2-3 seconds. 2. Hold the ladle in place for a count of 6 and remove ( place head of the ladle below the surface now ) 3. Watch for the 'generous' sprue to frost over. nb. I've found this to be a count of 5-7. Any less means the sprue plate is not warm enough and I usually end up with some error in the projectile. 4. now that the sprue is frosted I would wait no less than 10 seconds and sometimes as much as 20 seconds depending on what bullet and/or what mould I was using. Now crack the sprue plate with a leather mallet, wooden hammer handle or similar and deposit the sprue in its own pile. Lower the mould so its only a couple of inches above the drop cloth and give the pivot pit a tap or two until the bullet releases from both sides. This method I've found works better than opening the mould and tapping the centre pin if the bullet sticks on one side and is less likely to result in a damaged bullet.

Well these are just some of the things that generally work for me. They may not work for you but if you are experiencing any problems, they may at least be worth a try.

..... " See you when my sights are down" .....J.B.