

# The Los Angeles Silhouette Club

## African Cast Bullet Hunt

By Sarel Badenhorst

We could no longer swat or wave away mopani flies ... Ignoring their assault, as far as humanly possible, we made the final approach. The bull had now taken rest in the shade of a tree, and was presenting a shot that would angle through his right shoulder to a point just in front of his left hip. My brother Casper silently released the safety of his 378 Weatherby Magnum while I cocked my 454 Casull and settled the sights on the buffalo's shoulder. As I fired the buffalo turned to his right; he then turned through 90' and took off. We had previously arranged that Casper would fire if my shot was incorrectly placed so, without him saying a word, I was sure my shot had been true. Before following, we waited for quiet to return to the bush. We found the buffalo, quite dead, only a few paces away from where it had taken the bullet. While the bull was skinned and butchered for the feast that awaited the locals, we examined the bullet's path. Because the bull had turned, the bullet had entered on the inside of the right shoulder, torn through the major arteries from the heart and had gone on through the stomach which was full, limiting penetration to just short of the pelvis. A sure and quick kill.

My 454 Casull revolver was loaded with a 420gr RCBS gas-checked cast bullet loaded to give a muzzle velocity of 1420fps. (Prolonged use of this load could result in arthritis of the wrist!) The alloy did not perform as expected, it expanded too much. Although it had performed better than most handgun bullets, I felt it should have reached the pelvis and only then should the front of the bullet have become deformed.

When hunting medium African game, factory bullets might work well enough, but when hunting heavy or dangerous game you should know how well they perform or you could get into serious trouble.

A bullet's performance is determined by its design, composition and velocity. Handgun hunters who are willing to invest some time and effort can cast bullets that will excel on African game. I have found that **A**) the diameter of the bullet must not be too small (eg a .431" bullet usually gives the best accuracy in a Ruger 44 magnum while a .429" bullet seldom performs well); **B**) the design must favour a large meplat (the flat surface on the tip of the bullet) as this determines the size of the wound channel (a semi-wadcutter will leave a channel only as large as the meplat); **C**) bullet weight is critical for good penetration (for the 44 Magnum 300gr or heavier, in the 454 Casull, 350gr or heavier;); **D**) the alloy must not be too brittle or the bullet will shatter inside the animal. If the alloy is too soft, the bullet will expand too much and not penetrate the vital organs.

Few of the commercially available cast bullets meet all the abovementioned criteria. Some are of excellent quality and can be used as bought, but for the discerning and budget conscious handgun hunter, casting your own is the only cost effective way to meet all the criteria. Let us examine the alloys used for casting bullets, and their actual performance on game as experienced in the field. The process of mixing different alloys can be complicated or made easy. If, like most loaders, you do not have access to a supplier of special lead alloys, the process of using different alloys becomes difficult and discouraging. The easiest way to go is to

use standard wheel weights and pure Linotype (printers lead) as base alloys, since these are readily available.

It is commonly believed that only hard cast (pure linotype) bullets can be used for hunting because a softer alloy will expand too much. This notion is wrong. Johan Kriek used a 440gr bullet cast from linotype in his 454 Casull at 1350fps when he shot a kudu at 40 meters. When the kudu was dressed, the biggest bullet fragment recovered weighed only 260gr with smaller fragments distributed along the length of the wound channel.

The bullet had entered behind the ribs on the right and angled towards the left front shoulder. The largest fragment only just reached the shoulder. Damage to the lungs was less than spectacular.

Similar bullet fragmentation occurred in a warthog shot by my brother Casper, who used a 320gr JDJ gas-checked bullet at 1450fps in his 7.5" Ruger Redhawk. The bullet entered the left shoulder, angling towards the right hip, only 170gr of the bullet was recovered.

Other shots on game confirm this shattering of Linotype cast bullets, so although they can be pushed to very high velocities, these bullets are too brittle for hunting. (Note: Always angle your shots for maximum penetration).

The softest easily available alloy is the lowly wheel weight. This is reputed to be too soft for hunting; it can cause excessive leading with a negative effect on accuracy.

There is good and bad news, little leading occurs at lower velocities or if the bullets are properly heat treated; the downside is that this alloy can expand too much and limit penetration if the velocities are too high.

A 44 magnum 250gr semi-wadcutter cast with a wheel weight and 50/50 mix (at 1425fps from a Ruger Redhawk) recovered from an impala shot at 27 meters is shown in **(photo 3)**. It entered low in the chest, went through the heart and shattered the pelvis before stopping under the skin near the tail. The same load, used on a blesbuck at 76 meters, entered at the right shoulder and stopped under the skin after shattering the left hip joint **(Photo 4)**. Although this performance could be regarded as satisfactory on those animals, this mix does not meet my criteria.

We tried mixing wheel-weights with linotype in differing proportions and also started heat treating the cast bullets, finally settling on two alloys for hunting bullets.

For general hunting: plain wheel weights, heat treated. For extreme penetration: wheel weights mixed with Linotype (4:1 by weight) and then hardened. (This gave an alloy of 93.6% lead, 1% tin and 5.4% antimony.) This alloy is difficult to cast at normal temperatures, but with a higher setting and a hot mould it casts as easily as other alloys.

There are two heat treating methods: The difficult method consists of heating the bullets in an oven to just below melting temperature and then quenching in room temperature water.

The method we prefer is to drop the hot bullets directly from the mould into room temperature water. This gives the bullets a surface hardening that will be removed if the bullets are sized down, so they should be lubricated with a die of a larger diameter. This method does not sound as if it would work, but it does. Proof of these alloys, as always, lies in their performance on game. The bullet used to take the buffalo mentioned earlier was cast from wheel weights and heat treated. Broadside shots on buffalo with this bullet, not hitting the shoulder on entering but on exiting, usually give complete penetration. On other game like kudu and wildebeest this alloy in either 44 Magnum or 454 Casull gives complete full length penetration. A 250gr SWC at 1300fps from the 454 Casull completely penetrated a warthog and was recovered from an embankment behind it (**photo 5**). Johan Kriek used a 400gr SWC at 1300fps cast from wheel weights to shoot a kudu at 63 paces. The bullet entered the right shoulder and exited low in the left hip. The kudu dropped as if pole axed.

Eddie Dunn has used these bullets extensively. He shot a kudu at 50 paces with his 454 Casull using a 400gr bullet at 1400fps. The bullet entered at the base of the shoulder/neck on the right, broke the spine and exited virtually lengthwise in front of the left hip. The kudu dropped as if struck by lightning. Eddie confirms that big heavy bullets maintain their momentum and give outstanding penetration on large game. The extra hard alloy we use gives extremely good penetration in tough game even at low-ish velocities.

When Casper shot an eland at 84 paces (345 JDJ at 1600fps) the bullet entered through the neck and stopped in the left hip (photo 8 shows the recovered bullet). Compare this with the 420gr east bullet (Lyman 45770 rifle mould) (**photo 9**) loaded to 1300fps that broke the right shoulder of an eland and stopped in its left hip. The 320gr JDJ bullets in 44 magnum cast from this alloy have been used successfully on elephant, penetrating the brain with frontal shots. After problems with 454 cases, which bulged when loaded with 420gr bullets, the mould was shortened to cast a 380gr bullet.

This bullet (**Photo 10**), at 1350fps, was used to take a wildebeest at 65 meters. After full length penetration, the bullet broke the pelvis. We have found that this bullet weight is better for overall penetration in the 454 Casull.

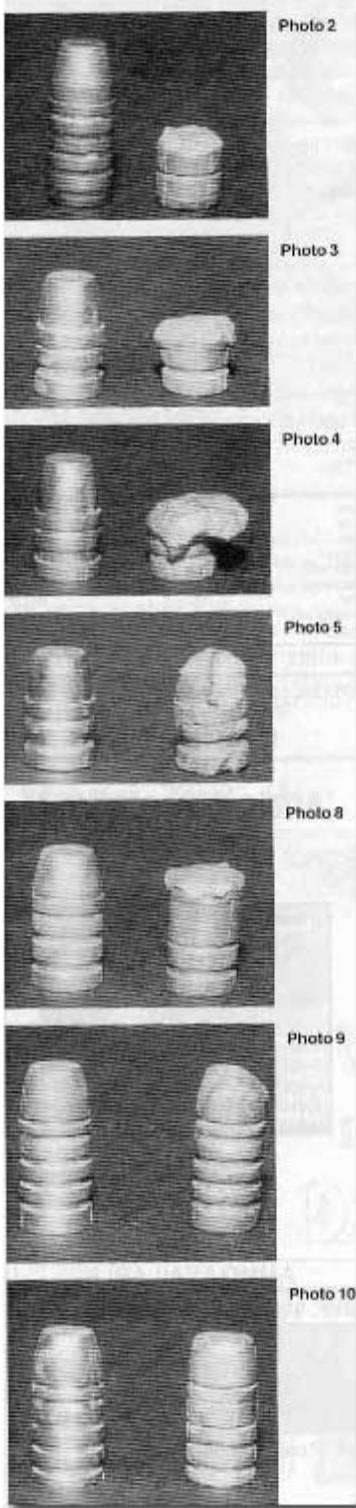
Just remember that animals don't read magazines to determine how they should react when shot. When loading for hunting, the main determining factors are accuracy, bullet placement and penetration.

A load that is 100fps slower than some super load but that you can shoot accurately, is always preferable to the super load that kicks you in the teeth with every shot. Extreme loads will do neither your guns nor your shooting any good.

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**Photo 1** L-R - A standard gmmP cartridge alongside a pristine 420gr gas-checked cast bullet and the one recovered from the buffalo. This impressive performance *disappointed* the author.



**Photo 2** - The 320gr Linotype recovered from the warthog;

**Photo 3** the 250gr SWC (W/W 50150 alloy) recovered f from an impala;

**Photo 4** - As 3 but recovered f from a blesbuck;

**Photo 5** - 250gr SWC (W/W Linotype) recovered f from a warthog;

**Photo 8** - The extra hard alloy bullet recovered f from an eland, shot f from 84 paces;

**Photo 9** - The 420gr (Lyman 45-70 rifle mould) used on an eland;

**Photo 10** -The 38Ogr f from the shortened 420gr mould after full-length penetration on a wildebeest.

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**Always Consult Recognized, Up To Date Handloading Manuals.**

**Follow all safety information regarding bullet casting and load data.**

### CAST BULLET HUNTING Loads

< These loads are for Freedom Arms Revolvers ONLY >

Caliber	Bullet Weight In Grains	Type of Bullet	Powder	Primer	Velocity (fps)
44 Magnum	250	RCBS 245 Gr. SWC	21.5 Gr. S265 Lot No. 111	Hirtenberg #1207	1390
44 Magnum	320	Lyman 300 Gr. SWC #429650	20.0 Gr. S265 Lot No. 111	Hirtenberg #1207	1350

**< These loads are for Freedom Arms Revolvers ONLY >**

Caliber	Bullet Weight In Grains	Type of Bullet	Powder	Primer	Velocity (fps)
454 Casull	255	RCBS 255 Gr. SWC	20.0 Gr. S265 Lot No. 111	Hirtenberg # 1207	1350
454 Casull	380	Lyman 405 FN mould shortened #457643	22.0 Gr. S265 Lot No. 111	Hirtenberg # 1207	1280 (Have achieved 1450 fps)
454 Casull	420	Lyman 405 FN mould #457643	20.5 Gr. S265 Lot No. 111	Hirtenberg # 1207	1300 (Have achieved 1420 fps)

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