The Los Angeles Silhouette Club

John's Mould

By: Glen E. Fryxell

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Over the years, I've had my share of feeling awkward. Not surprisingly, most of those feelings came during my teenage years and involved girls. Anymore, awkwardness is a thankfully rare sensation. But occasionally an awkward situation can transform into something special. Recently a friend of mine had bid on an online auction involving an unusual bullet mould that I was interested in. I casually asked him to let me know if the bidding got too high for his comfort, and to let me know if he was going to drop out, so that I could start bidding, as I did not want to bid against my friend. This auction was for an Ideal 358446 HP mould, one that I have been looking for several years. My fondness for cast HP bullets is no secret, and this particular mould occupies a unique spot in the rich history of the .357 Magnum. I had all of the other significant .357 HP moulds and was interested in adding this one to complete the story. In the end, John ended up winning the auction. He then turned around and gave me the mould as a gift. This made me feel a little awkward, as it made me feel as though I had inadvertently shystered the mould out from under my friend. But the bottom line is he steadfastly refused to let me pay him for the mould, and insisted that I accept it as personal gift (so I sent him some bullets cast from it, as a thank you gesture). Yes, John is a gracious man.

Back in the late 1920's Elmer Keith was exploring the use of high-pressure loads in the S&W N-frame .38 Special, the Heavy Duty and the Outdoorsman. Given the thick cylinder walls of these revolvers, he was able to safely work with much higher pressures than were the norm in those days, and consequently, obtain much higher velocities. At first he was using 12.0 grains DuPont #80 powder and getting about 1100 fps with his 173 grain SWC (the Ideal 358429). Later, in 1933 when 2400 was introduced, he switched over to this powder and raised velocities to 1200 fps. His fondness for 2400 would last for the rest of his life. S&W took note of these experiments and decided to offer this new level of ballistics to the shooters of the day. Working with Phil Sharpe, they developed a new cartridge (made 1/10" longer so that it could not be loaded into smaller, weaker guns) that operated at 35,000-40,000 psi peak pressure. Sharpe's load development encompassed a wide variety of plain-based cast bullets, but focused on the H&G #51 (the so-called "Sharpe solid", this was before the SWC term was in common usage), a 160 grain SWC designed by Sharpe and inspired by Keith's 358429, and the 146 grain HP version of the H&G #51 (the "Sharpe HP"). Using hefty doses of 2400, Sharpe was able to achieve velocities that were unheard of for handguns (1500-1600 fps) with these bullets, along with excellent accuracy. Thus, the .357 Magnum was born.

Keith's 358429 173 grain SWC is an excellent bullet, but it was designed for use in .38 Special cases in the .38/.44 Heavy Duty loads. Unfortunately, the nose turned out to be too long to work in the longer .357 Magnum case (when chambered, the nose would stick out past the front of the cylinder of the S&W Magnum and prevent rotation). Sharpe

had gone to George Hensley for his moulds, so when the .357 Magnum was unveiled in 1935, Lyman/Ideal didn't have a bullet that was really suitable for "The Magnum". Early reports talked about the leading problems associated with factory ammo (which turned out to be due to marginal lube quality), and so Lyman designed their .357 Magnum bullet to have an unprecedented (for handguns) *three* lube grooves. If they were going to stick with a "standard" bullet weight, this didn't leave much room for a crimp groove, so they put in an itty-bitty one in the middle of the forward driving band. The nose was made short enough to allow use in the new S&W Magnum, and the bullet was named the Ideal 358443 (cataloged at the last minute in 1936).

The Ideal 358443; the first bullet Lyman designed for the .357 Magnum.

With its small meplat, deep seating, and wimpy crimp groove, the 358443 never was very popular. Keith continued to promote his 358429 (either loaded into .38 Special cases, or seated deeply into .357 brass and crimped over the forward driving band). George Hensley teamed up with James Gibbs and started machining bullet mould history, making high quality moulds, many for "The Magnum". Cramer and Modern-Bond were also making well thought-out moulds for the .357 Magnum. Lyman, the dominant bullet mould manufacturer in America, was losing the Magnum race.

Market pressures clearly indicated that the American shooting public wanted a flat-nosed SWC with a moderately large meplat, but with a nose that was short enough to function in the S&W Magnum. So, Lyman responded by fattening up the nose/ogive of the 358443 to something along the lines of the Sharpe solid, converting the upper lube groove to a beveled crimp groove, moving the bottom two lube grooves forward to create a thicker base band (to seal the Magnum's high pressure gases more effectively) and eliminating that miniscule vestige of a crimp groove. Thus was born the 358446, a 160 grain plain-based SWC, first cataloged in 1940 and promoted as "the standard bullet for the .357 Magnum". It was an excellent, and popular, bullet for the .357 Magnum cartridge for many years.

The Lyman 358446, "the standard bullet for the .357 Magnum".

It was standard practice at the Lyman factory to offer, at the customer's request, any non-HB mould design in HP form (sadly, this is no longer true). Some HP designs (like the Keith 358439 and Gould 457122) were added to the catalog as standard fare, others were offered on a special order basis. I have found no evidence in the Ideal Handbooks of the period to indicate that the 358446 HP was ever listed as a standard offering, however it does pop up from time to time in the gun press of the times. For example, in the early 1960s Skeeter Skelton wrote of using the 358446 HP in the .357 Magnum (his article was reprinted in "Hunting for Handgunners" by Larry Kelly and JD Jones). He described how the HP cavity was larger in the 358446 HP than it was in the similar gas-checked 358156 HP (.150" vs. .125"), and the result was that the PB bullet opened up faster than did the GC bullet.

My appreciation of cast HP's began with Elmer.

The Lyman 358446 HP mould.

Keith's 358439, a 154 grain HP version of his .38/44 Heavy Duty bullet. Expansion of this HP is explosive at magnum velocities, with excellent accuracy and no leading. As a result of the superb performance of this bullet, I have had a fondness for PB cast HP's in revolvers for many years. Knowing that the 358446 weighed about 10 grains less than Keith's 358429, the idea of a 358446 HP was intriguing, as this bullet would be very close in weight to the 146 grain Sharpe HP used in the original development of the .357 Magnum, and the nose would be short enough to function in all .357 revolvers. The search for the mould was on. It would be several years before one found its way into my hands.

Casting with the 358446 HP mould, the bullets drop from the blocks at 146 grains when cast with WW alloy and have a measured BHN of 12. Previous experience has shown that WW alloy allows for very good expansion at magnum velocities, but is too hard to allow expansion at "standard" velocities (i.e. below 1000 fps). For .357 loads operating at magnum velocities, WW alloy is just the ticket. These bullets were sized .358", lubed with my homemade Moly lube (50/50 by weight Moly grease and beeswax) and loaded on top of 14.5 grains of 2400 and sparked with a CCI small pistol magnum primer (#550). This combination delivered 1597 fps from an 8 3/8" S&W 586, with very good accuracy (6 shots into 1 1/2" at 25 yards), and minimal leading. Expansion testing in water (2L pop bottle filled with water, penetrated lengthwise, backed by a bale of newspapers) revealed complete fragmentation of the 358446 HP at this velocity. This is an excellent varmint load. Expansion of the 358446 HP is every bit as violent as Elmer Keith's 358439 (perhaps even more so), and the 358446 HP definitely expands more rapidly than does the somewhat more staid 358156 HP designed by Ray Thompson. The key is found in the cavities: both the 358446 HP and the 358439 have cavities with mouths of about .150", while the Ray Thompson designed 358156 HP has a cavity with a mouth of only .125". Thus Thompson's bullet provides more controlled expansion relative to the two plain-based designs. The 358446 HP is about 8-10 grains lighter than is Keith's 358439, and so it can be driven faster, and since it's velocity that makes HP's expand, this added speed makes for added spectacle!

Being a PB HP design, this bullet is also very well suited for use

in the .38 Special. However, the lesser velocities of the .38 Special dictate that this bullet must be cast of softer stuff in order to expand. This batch of .38 Special bullets was tailored specifically to function at normal .38 velocities (including snubbies), and was cast from very soft alloy (about 40-1, lead to tin). These bullets weighed an average of 151.5 grains and had a measured BHN of about 6. These bullets were sized/lubed as above and loaded over 4.1 grains of Bullseye. Test firing in a 2" S&W Model 637 and a 3" S&W Model 60 revealed velocities of 824 fps and 909 fps, respectively, with decent accuracy and no leading. Expansion testing (as above) showed that these bullets expanded modestly, even from the short barrels of these belly guns. From an 8 3/8" S&W Model 14, this load generated1012 fps and put 5 shots into 1 3/4" at 25 yards. When fired into water, expansion was excellent. From a 6" K-38 Masterpiece, this load generated 974 fps and

Lyman 358446 HP loaded into .357 Magnum cartridge.

fine accuracy (an excellent summertime varmint load).

I also cast up a batch from recovered range scrap. I knew from previous experience with this particular source of bullet metal that the cleaned up alloy had a BHN of around 8, making it very well suited for cast HP's in the 1000 fps (i.e. +P) range. These bullets weighed an average of 149.5 grains and had a measured BHN of about 7.5. These bullets were sized/lubed as above and loaded over 8.5 grains of HS-7, sparked with a CCI 550 primer, and test fired in a lovely old 1949 vintage 5-screw K-38 Masterpiece that I got from my good friend Rob Applegate. This +P load delivers about 1050 fps from this 6" barrel and expands just fine (however this alloy is too hard to expand at snubby velocities).

The 358446 HP, loaded into the .38 Special and similar bullet recovered after being fired into water at 1000 fps.

Summarizing the observations above, it can be seen that by simply by varying the alloy, this fine bullet can be tailored to perform well at snubby velocities, .38 +P velocities and full-throttle .357 Magnum velocities. Cast HP's are versatile indeed.

This was not a popular mould design (which is why it took so long to find one). The Keith 358439 was more commonly written about and more commonly encountered since it was the original .38/.357 cast HP and was promoted by none other than Elmer Keith. The gas-checked Thompson 358156 HP was a better seller, in part because of it's GC and in part because of Skeeter's fondness for it, but the 358446 HP is nonetheless an excellent bullet with it's own unique place in history. It provides the original weight of cast HP that Phil Sharpe used to develop the .357 Magnum load data 70 years ago, which is a very useful (and commonly overlooked) weight for both of these perennial classic cartridges. And each time I cast with this mould, I hold a tangible manifestation of my friend's generosity in my hands. I will cherish this mould, and the bullets that drop from it, for the rest of my days.

Thank you John!

- Glen E. Fryxell

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