

**TEMPERATURES
CHANGE.
POINT OF IMPACT
SHOULDN'T.**



You can't change the weather. The weather shouldn't change your shooting. That's why we developed the newest propellant in the Reloder® family, Reloder 16. Like Reloder 23 and AR-Comp,™ the all-new propellant uses TZ® technology to provide exceptionally consistent velocities across the temperature spectrum. Its burn speed puts it squarely in the 4350 family and makes it perfect for traditional hunting calibers such as 30-06 Spring., 270 Win., 243 Win. and Win. Short Magnums. It features a proprietary de-coppering additive and contain no DNT or DBP. **Hot or cold. Always on target.**

TZ® is a registered trademark of EURENCO Bofors AB; EI® is a registered trademark of Nitrochemie Wimmis AG.

For more information visit alliantpowder.com



6.5-284 Norma Match & Hunting Loads

RIFLE'S
HANDLOADER®
Ammunition Reloading Journal



**CZ 527
American
6.5 Grendel**

Extreme
Temperature
Powder Testing

Loads for a Model 71
.348 Winchester

DIGGING UP RARE
BRASS AND PROJECTILES



NEW IMR Red Pistol Powder

December 2017 No. 311

\$5.99US \$7.99CAN



Display until 1/15/18 Printed in USA

Quality Cartridge and Hawk Bullets

After years of scrounging for components, it is nice to have newly manufactured brass and bullets available for this Savage Model 1899 .32-40.

Terry Wieland

In the bad old days when good brass was so hard to come by, we haunted small-town gun shows, buying up lots of a dozen cases here, a dozen there – used, grimy, tarnished and of uncertain history, but ready to be lovingly returned to life (It was hoped!) and ready to reload.

Old-timers used to do the same thing with bullets. You'd be nosing around a trestle table laden down with the detritus of someone's loading room and find a beat-up, old partial box of Remington Core-Lokts, usually with about 25 or 30 bullets in it. Not enough to do any load development; not enough, really, to do anything except haul out data for a load you put together during the Carter administration, pray that it didn't require HiVel No. 2, and cobble together enough loads for a .32 Remington to resight the old beast and get through one hunting season.

Lest you think that's mere hyperbole intended to scare you into laying in a lifetime's supply of brass

Digging Up Rare Brass and Projectiles

and bullets for every gun on hand, right now while the getting's good, relax. It's not intended to scare anyone, nor is it mere hyperbole. It's all true. I was there, and I did it, and so has every other serious shooter of my acquaintance over the age of 50. I won't even mention primers.

Taking a quick stroll through the dusty aisles of my memory, I recall living through three full-blown primer droughts – by which I mean serious shortages lasting at least a year. There have been two periods of serious brass shortages of every caliber, not just the oldies or the weirdies. Bullet shortages come and go. If memory serves, these usually coincide with periods of radically increased military demand.

If a handloader wants to really shudder, go back and read accounts of what shooters had to do between 1939 and 1945. The U.S. wasn't even in the war for the first two and a half years, but available ammunition capacity was concentrated on military contracts for the British and other countries that were fighting. Munitions companies were not about to divert ma-

chinery to produce small runs of .32-40, for example, when they could keep them running full blast, turning out .303 British for stacks of immediate cash. Those shortages continued for years after hostilities ceased, but this at least had the benefit of spurring the creation of small specialty companies like Hodgdon, Sierra, CCI, Speer, Hornady and Nosler.

In recent years both bullet and brass manufacturing has become less of a big-money investment as technology has progressed and the necessary machinery has become more available and less expensive. It's still not cheap, and making good bullets and brass requires a lot more than a piece of machinery or two, but it has allowed some even smaller niche companies to get into the business, filling a definite need that is not worthwhile for bigger manufacturers.

The field of new brass includes Quality Cartridge, and for bullets, Hawk, Inc. Those are just two, and there seem to be new ones coming along all the time, but Quality Cartridge and Hawk have been around long enough to establish a track record, build a rep-

Quality Cartridge and Hawk Bullets



Cartridges handloaded using Quality Cartridge brass include (left to right): the .32-40 with a Hawk 170-grain, .321-inch flatnose; the 8x56 Mannlicher-Schönauer with a Hawk 200, .323-inch roundnose; and a .41 Special case with a 175-grain, cast wadcutter.

utation for their products and attract a loyal clientele. I've been using Hawk bullets in various applications for about 15 years, and



Hawk bullets include (left to right): a 160-grain, .286-inch semi-roundnose; a .32-caliber (.321-inch) 170-grain flatnose; and an 8mm (.323-inch) 200-grain roundnose. The .32 is especially useful because its cannelure is in the correct place for the .32-40.

Quality Cartridge brass almost as long. Hawk (www.hawkbullets.com) is run by Andy Hill and is located in New Jersey; Quality Cartridge (www.qual-cart.com) is in Maryland.

To start with Hawk, Andy's bullets are available in a wide range of diameters, weights and configurations. The basis of his quality rests on using pure copper jackets containing pure lead cores. Within certain velocity limits, this combination has proven very effective for 130 years. The jackets are not bonded; instead, bullets are tailored to a particular velocity range by varying the thickness of the jacket, usually from .025 to .035 inch, depending on caliber.

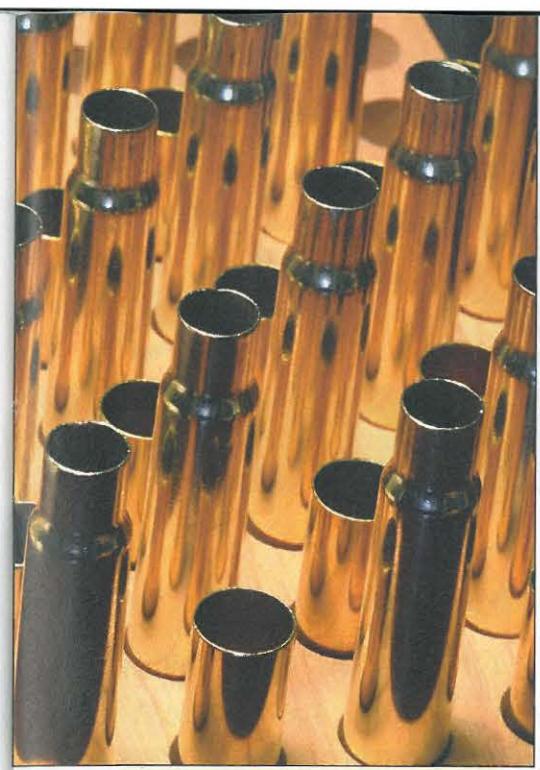
Bonding, by whichever of the many methods now being employed (or claimed), is an expen-

sive process and adds substantially to production costs. This naturally translates into increased prices, and while I've been known to pay extravagantly for some bullets, it is not something I do willingly. As well, if a handloader shoots a lot, and most of those bullets are only hitting paper or steel plates rather than game, why waste money on bonded bullets?

Another consideration is that older cartridges, like the aforementioned .32-40, 8x56 Mannlicher-Schönauer, .32 Special or 9x57, do not generate enough velocity to make bonding necessary, even if hunting elk. What's more, many of the barrels in older rifles were made of softer steel than that used today. It responds better to either lubricated lead or soft copper than to harder alloys, especially at higher velocities. What this adds up to is that for many great, old cartridges, Hawk bullets will perform well on either game animals or inanimate objects, and be kind to both your rifle and your bank account in the process.

My experience with Quality Cartridge's brass has been nothing but good, and I have used six or seven different calibers over the years. The most common fault with brass is splitting on the first or second shot – a problem I have encountered with other brands of brass in the past in some (but not all) calibers. By coincidence, it happened almost every time with some new .32-40 and .303 Savage brass bought a dozen years ago. With brass, the only real test (provided it chambers properly) is whether it lasts and can be reloaded over and over without case necks hardening and splitting. I have yet to have this happen with any Quality case.

One great advantage with Quality brass is a proper headstamp to match your rifle. This is not an issue unless you are traveling with a rifle and ammunition, and for customs and legal reasons need to have them match. This is necessary with my .450 Ackley, which is one reason I bought about 200 cases earlier this year. That is more



Quality Cartridge brass was used for both the .41 Special and the 8x56 M-S.

than a lifetime supply, as anyone who has shot much with a .450 Ackley can attest.

For the purposes of this test, I wanted to get Quality brass and load it with Hawk bullets, but this was only possible with two cartridges, the .32-40 and 8x56 Mannlicher-Schönauer. I got some .41 Special brass, which I loaded with no-name, 175-grain, cast bullets. Hawk also sent bullets for the .280 Ross, which I will test at some future date. This test was fairly carefully planned, but the plans came apart because of a common problem with both Hawk and Quality. That is, they are often out of stock on a bullet or case, and one has to wait until they do another run. Unlike big companies like Winchester that may decide it's time for some more .32-40 brass and then run off a half million or so, small companies do limited runs. One cannot blame them for this. However, if there is something you need, it's a good idea to get your name on the waiting list, if for no other reason than to help establish a demand, and hope that supply will be forthcoming.

Quality Cartridge could supply the .450 Ackley brass I needed, but Hawk was out of stock on some .450 bullets; conversely, Hawk sup-

plied .280 Ross bullets, but Quality had no brass.

For fun, I decided to measure and weigh 10 random samples each of the bullets received from Hawk. On the box, the company states that the bullets contained therein have been electronically weighed and will not vary more than plus or minus .5 grain. The bullets were 170 grain, .321 inch (.32-40); 200 grain, .323 inch (8x56 M-S) and 160 grain, .280 Ross.

The 170-grain bullets varied between 169.3 and 170.5 grains (a range of 1.2 grains) and measured a uniform .322 inch, with two bullets measuring .3227. The 200-grain, 8mm bullets varied from 198.6 to 199.2 grains (.6 grain difference) and measured from .3238 to .3242 inch. The 160-grain .280s ranged from 159.5 to 160.2 grains (.7 grain difference) and varied in diameter from .2860 to .2872 inch.

Since benchrest shooters like to weigh cases to achieve uniformity, I did the same with three Quality cases: .32-40, 8x56 M-S, and .41 Special. The .32-40 brass varied from 131.6 to 132.9 grains. The 8x56 M-S varied from 176.0 to 178.1 grains, and the .41 Specials from 91.2 to 93.0 grains. These weight variations are comparable



The .32-40's straight tapered case can be tricky to load. Carefully condition and bell case mouths, even when loading jacketed bullets; a slightly longer case or incomplete cannelure can ruin brass.

with what I've found weighing 6 PPC and .22-250 Remington brass in the past, and that was brass intended for benchrest and target work.

Loading these bullets in this brass and shooting them for veloc-

(Continued on page 67)

PMA Micro Die Adjuster

We won't say it's the best thing to happen to reloading... but you might!

Innovative Reloading Equipment for the Accurate Rifleman

PMA Tool
260.246.5860
www.pmatool.com

Wipe-Out™

Brushless Bore Cleaner

SAME rifle after cleaning

before cleaning after cleaning

“put Wipe-Out in a gun you think is clean”

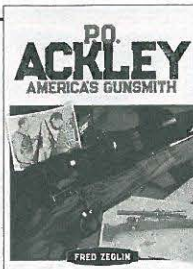
Sharp Shoot R Precision Products
Box 171 - Paola, KS 66071
785-883-4444 phone - www.sharpshootr.com
e-mail = gethelp@sharpshootr.com

MADE IN USA

Noted Author and Gunsmith Fred Zeglin Pens Book on Legendary Gunsmith P.O. Ackley!

The most comprehensive look ever into the life and work of eminent gunsmith, barrel maker, teacher and cartridge developer **P.O. Ackley: America's Gunsmith** is now available for purchase.

Order online at www.AckleyImproved.com. Use Discount Code HLD417 at Checkout and Save!



High Plains

Reboring & Barrels, L.L.C.
Offering Button and Cut-Rifled Barrels.

- Most calibers and twist rates
- Some AR-15 barrels available

Contact: Norman Johnson
nrjonsn@westriv.com
Phone: 701-448-9188
243 14th Avenue NW
Turtle Lake, ND 58575

TITAN RELOADING
Master Distributor of **LEE PRECISION** Reloading Equipment

994 W. Sumner St.
Hartford, WI 53027
Tel: 262-397-8819

REDDING RELOADING EQUIPMENT

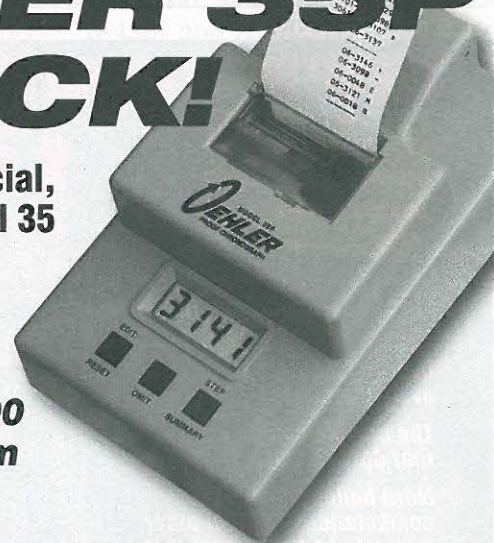
What's the Titan Reloading advantage? **WE RELOAD!**
www.titanreloading.com

OEHLER 35P IS BACK!

Oehler is making a special, limited run of the Model 35 Proof Chronograph.

Call or go online for more information.

Phone: 512-327-6900
oehler-research.com



P.O. Box 9135
Austin, TX 78766

OEHLER
RESEARCH, INC.

Propellant Profiles

(Continued from page 23)

duced consistent shot-to-shot velocities and small groups at 25 yards. These are target – or perhaps Cowboy Action – loads at modest velocities and make great practice and plinking loads.

While doing a lot of shooting with the .44-40 Winchester cartridge in a revolver in recent years and using a variety of 200-grain cast bullets, several powders performed well and now IMR Red can be added to the list.

The .44 Russian is a fun cartridge, and IMR Red worked well with a 240-grain cast bullet. Modest powder charges and modest velocities are ideal for the Cowboy Action game, and here IMR Red shines.

As mentioned, the .44 Special is listed on the IMR Red canister label as well suited for the powder, but published data was not found on the IMR website. As it turned out, 5 grains under a 240-grain bullet gave excellent results for practice or target loads.

Now we get to actual IMR Red published data. In the .45 ACP, maximum loads worked out with both 200- and 230-grain cast bullets in a Colt Government Model. My preferred target load includes a 200-grain bullet, and the load shown at 960 fps may well be more than I'd settle for in Bullseye competition, but the load functioned flawlessly. The 230-grain load was equally good but better suited for general defense-oriented practice.

The .45 Colt load performed well, but the velocity was a bit disappointing due, no doubt, to IMR focusing on target shooting. To be fair, a slower powder would be preferable for a heavier load. For plinking and practice, this load performed quite well.

Reloaders will note that IMR Red, IMR Green and IMR Unequal are packaged in 14-ounce weights instead of the usual one pound. This is due to their light bulk density. They are also available in 4- and 8-pound canisters. IMR Target and IMR Blue come in one-, 4- and 8-pound containers.

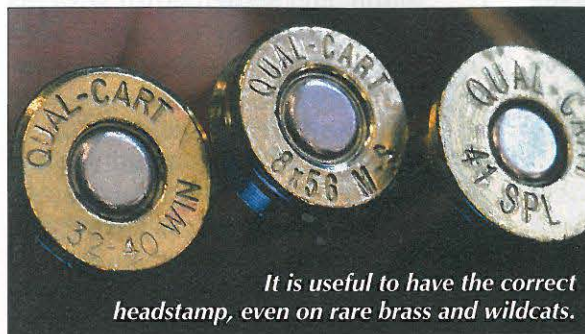
Quality Cartridge and Hawk Bullets (Continued from page 49)

Select Loads with Quality Cartridge Brass

cartridge	bullet (grains)	powder	charge (grains)	velocity (fps)	extreme spread (fps)
.32-40 Winchester	170 Hawk FN	H-4895	27.5	1,761	88
8x56 M-S	200 Hawk RN	VV-N150	41.0	2,071	52
.41 Special*	175 WC cast	Trail Boss	4.2	782	11
.41 Special**	175 WC cast	Trail Boss	4.2	736	22

Notes: Guns for the above loads: Savage Model 1899 .32-40 with a 26-inch barrel (circa 1916); Mannlicher-Schönauer Model 1908 8x56 M-S with a 20-inch barrel (circa 1910); *Seville single-action revolver with a 5-inch barrel (circa 1970); **Smith & Wesson Model 57 DA revolver with a 4-inch barrel. Velocities are the average of five-shots.

Be Alert – Publisher cannot accept responsibility for errors in published load data. Listed loads are only valid in the test firearms used. Reduce initial powder charge by 10 percent and work up while watching for pressure signs.



It is useful to have the correct headstamp, even on rare brass and wildcats.

ity and group size in two rifles that are more than a century old yields results that are absolutely meaningless for anyone other than myself, and only in these two rifles. They may, however, prove useful to someone, if only as starting loads.

The .32-40 brass was loaded with the 170-grain, .321-inch bullets and 27.5 grains of H-4895. The 8x56 Mannlicher-Schönauer was loaded with 41 grains of Vih-tavuori N150. These are both mid-range loads used only to look for any adverse pressure signs that might indicate less case capacity than usual. This is *always* a good idea, especially with old rifles for which original ammunition might have differed considerably. Both loads were taken from Ken Waters' *Pet Loads*. The test rifles were a Savage Model 1899 with a 26-inch, octagonal barrel, and a Mannlicher-Schönauer Model 1908 with a 19.5-inch barrel.

The .41 Special presented a different problem since, being a pure wildcat, there is neither comparable factory brass nor anything in the way of loading data – at least, not that I could find. I there-

fore used Trail Boss and calculated the starting load using Hodgdon's formula (fill case to base of bullet, weigh, then start with 70 percent of that weight). With my unidentified 175-grain cast bullets, maximum

grains. These were tested in both a Seville single-action .41 Magnum and a Smith & Wesson Model 57 .41 Magnum.

Test results are laid out in the accompanying table. However, a few conclusions can be drawn: Accuracy and velocity from the Savage Model 99 .32-40 were sufficient to warrant further work with heavier charges. With the .41 Special cartridge, accuracy was decent while recoil and noise were mild, which is really the point of that cartridge over the .41 Mag-

num. The 8x56 M-S was a pleasant surprise, delivering both excellent open-sight accuracy and sufficient velocity with a 200-grain bullet to make it a fine short-range hunting load. Muzzle blast was substantial, and recoil was about all I would like to have in a Mannlicher with a 19.5-inch barrel. Right out of the box, this is a good hunting load with no further development required.

RAINIER
PEAK PERFORMANCE

REDUCE LEAD VAPORS BY AS MUCH AS 95%

WITH LEADS SAFE BULLETS FROM RAINIER BALLISTICS

"The quality choice of professional shooters"

For additional information or sales, please visit our webpage at www.rainierballistics.com
Tacoma, WA • 800-638-8722

Like us on Facebook