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Number 135

RIFLE

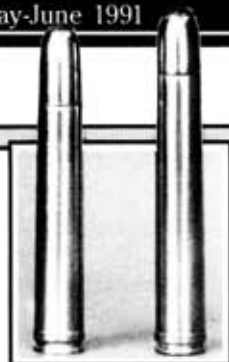
The Sporting Firearms Journal



.458 Lott

1,000 Yard .223

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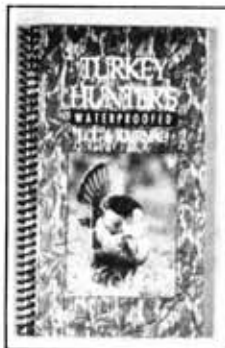
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SPOTTING SCOPE

Dave Scovill

Notes from Southport



William B. Ruger, Jr. has been elected President of Sturm, Ruger & Co., Inc. As President, Bill, Jr. will be directly and specifically in charge of all operational matters of the corporation, except for firearms engineering and development, which Bill, Sr. will continue to direct personally.

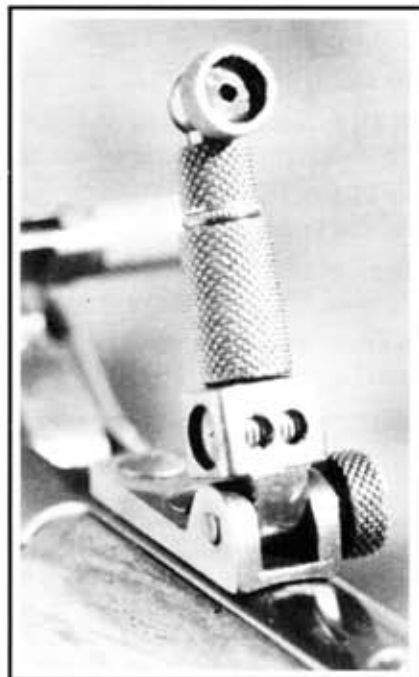
Ruger has introduced a left-handed

Model 77 MKII long-action that should be on dealer shelves by mid-year. If the sample .30-06 that was forwarded for testing is a typical specimen, Ruger is going to have to hustle to fill the orders. We will have more on this rifle and the new All-Weather stainless steel MKII long action in the next issue of *Rifle*.

Meltdown

The Glock .40 S&W reviewed in *Rifle* No. 134 is a Model 22. The Model 20 is a 10mm. Further, the Glock slide is steel. (Boy, some days you're the bug, some days you're the windshield.)

The sight pictured on page 63 in *Rifle* No. 134 is not the correct sight. A photo of the Outdoor Industries tang sight that was the subject of Al Miller's product test is shown here. Outdoor Industries' new address is P.O. Box 450421, Atlanta GA 30345.



Eldorado Cartridge Corporation

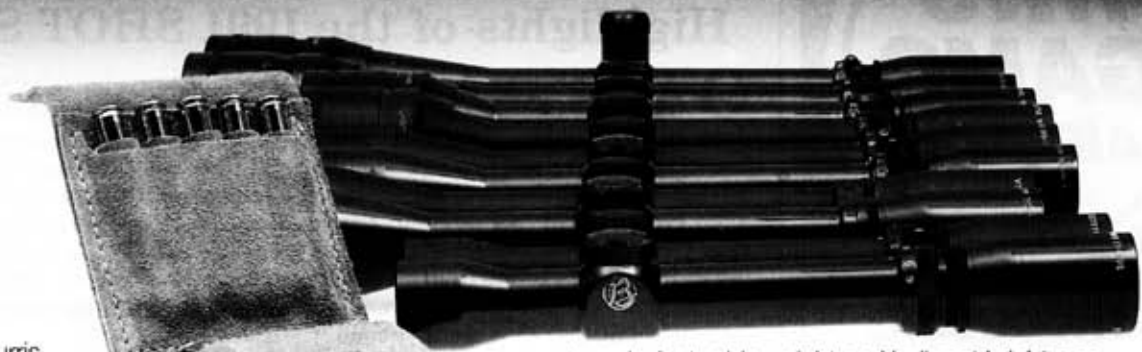
Eldorado is offering a couple of interesting ideas in factory loads. The Starfire is a new line of high performance pistol and revolver ammunition. The patented Starfire bullet has flutes and ribs that combine to inspire controlled expansion. They are presently available in .357 Magnum, .38 Special, .44 Remington Magnum, .45 ACP, 9mm and 10mm.

The Barnes X-Bullet is loaded in the Eldorado Classic line. Current offerings include the 150, 165 and 180-grain .30-06 loads, 150 and 180 grains in the .300 Winchester Magnum and 150 and 165 grains in the .308 Winchester. Write to Eldorado Cartridge Corporation, Box 308, Boulder City NV 89005-0308 for a catalog covering the complete line of PMC cartridges and components. A list of rare cases and factory loads is also available from the Eldorado Custom Shop.

Remington for 1991

Remington has introduced a new line of "Extended Range" centerfire ammunition. The new bullet designs are featured in the 165-grain .280 Rem-

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ington, 165-grain 7mm Remington Magnum, 178-grain .308 Winchester, 152 and 178-grain .30-06, 178-grain .300 Winchester Magnum and 178-grain .300 Weatherby Magnum.

Informal test results on a couple dozen Texas whitetails suggest the Extended Range concept combines accuracy, high ballistic coefficients and devastating impact with optimum bullet weights in respective calibers. Remington also notes that the 178-grain bullet in the .30-06 and the .300 Weatherby Magnum, for example, are not the same bullet. One is designed for responsible velocities at the .30-06 level of performance, the other is beefed up to withstand the rigors of impact velocities generated by the Weatherby Magnum.

The Extended Range bullets currently available are flatbase designs. Boat-tails will be added in the 140-grain .270 Winchester, 165-grain .308 Winchester and .30-06, and 190-grain .300 Winchester and .300 Weatherby Magnum in early 1991.

Remington has also introduced the



Classic Limited Edition 7mm Weatherby Magnum and two factory loads with 140 and 175-grain pointed soft-point Core-Lokt bullets. Muzzle velocities are 3,225 and 2,950 fps, respectively. The Classic 7mm Weatherby Magnum rifle is a standard Model 700 long action with a 24-inch, one-in-9 1/4-inch twist barrel.

For .416 fans, Remington is offering a 350-grain .416 Remington load that

generated 13 percent more energy than the .338 Winchester with a 250-grain bullet and 14 percent more clout than the 270-grain bullet in the .375 H&H.

If you are in the market for a shotgun, you better write to Remington for a catalog. The new goodies are simply too numerous to mention, although the 870 Express should cause budget-conscious shooters to drool over the list of options. ●



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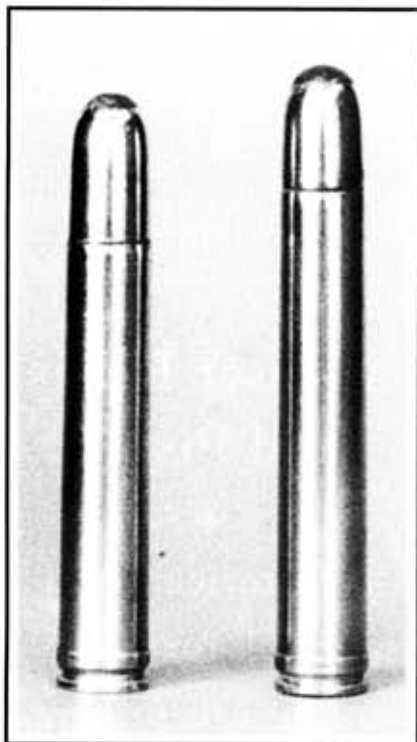
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The .458 Winchester Magnum (left) and .458 Lott are identical in all respects but length. By increasing case length by .300 inch (nominal), internal case capacity is expanded by 12 to 14 percent, depending on the brass.

G. Sitton

JACK LOTT journeyed to Mozambique in 1959. Armed with a .458 Winchester Magnum rifle, softs and solids, he engaged a Cape buffalo in mortal combat. Jack shot the bull twice, only to watch it disappear into the bush. Then he and his professional hunter (PH) set about trailing the bull. Armed with horns, hooves and malevolence, the bull tossed, trod upon and otherwise abused Jack. The PH finally shot the bull off his client. A total of 11 assorted bullets from Jack's .458 and the PH's .375 H&H were required to end the beast.

Jack Lott was left with broken ribs, torn muscles, bruises, cuts, abrasions, a damaged eye and an abiding interest

in big bore rifles. This interest eventually led to the development of the .458 Lott.

Regardless of its actual virtues and vices, the .458 Lott stands alone among modern sporting rifle cartridges. To my knowledge, no other round — factory or wildcat — had as its inspiration such a direct and harrowing experience with dangerous game. No product of abstraction, the Lott. It owes little to theory and less to market research. This one comes directly from the place where dirt and blood and bone combine to leave a man with strong convictions.

Following his handshake with eternity, Jack reached the understandable conclusion that the .458 Winchester was less than he wanted for large and threatening animals. In the *Hand-loader's Digest* (Tenth Edition) article on his creation, Jack cites chronograph readings of 1,906 fps for factory .458 Winchester ammunition from 22-inch barrels; 1,975 fps from 24-inch barrels. These velocities applied, of course, to the usual bullets of 500 and 510 grains, circa 1984. If you consider the published muzzle velocity of 2,040 fps from a 24-inch barrel to be marginal for the presumed purpose of this round (and many do so consider), these numbers do not engender confidence.

Incidentally, my use of Jack's given name is not presumptuous. We had an amiable working relationship some years ago when I was the editor of *Petersen's HUNTING* and he was an occasional contributor to that magazine.

The objective of Jack's development program was a cartridge capable of delivering 500-grain bullets from the muzzle at 2,300 to 2,350 fps. His efforts were successful. The resulting muzzle energy, something close to 6,000 foot-pounds, was deemed a comfort.

Ultimately, a straight-tapered, belted case measuring 2.8 inches in length was created by opening up and trimming .375 H&H brass. The Lott, then, is .300 inch longer than the .458 Winchester and in all other respects iden-

tical; rifles chambered for the former cartridge handle the latter with no discernable loss of velocity or accuracy. Extensive use of the shorter rounds, however, will lead to erosion of the chamber behind the mouth of the Lott case. This, in turn, could result in difficult extraction or, far worse in a dangerous game rifle, stuck cases when the longer Lott loads are used. Therefore, use of .458 Winchester ammunition should be limited to emergencies, such as those special moments when you find yourself on the far side of yon and the airlines have misplaced your baggage.

At this point, introduction of my collaborators in this investigation is appropriate. David Miller and Curt Crum, whose combined talents are responsible for the museum-quality sporting rifles of the David Miller Company (3131 E. Greenlee, Tucson AZ 85716), probably have more experience in working with the .458 Lott than anyone, save Jack himself.

Dave became interested in the Lott after hunting elephant in the rain forests of the Central African Republic with a .404 Jeffrey. The classic brain shot being unavailable, he provoked a large bull with a heart shot at about 20 yards. By the time he and his PH stopped shooting, the elephant had come within ten feet of them. Dave's comment: "With a heart shot at 20 yards, a legally dead elephant can run around until he kills you." He, too, wanted a bigger hammer, something really stout, yet compatible with a standard-length action.

Dave and Curt subsequently built four rifles for the .458 Lott. Their rifles are internationally acknowledged for their artistic qualities; not commonly recognized is the functional excellence of their work. In the course of sorting out solutions to various practical requirements of both guns and loads, plus testing extensively the finished rifles, they fired many hundreds of rounds. They know the cartridge, as well as the particulars of building rifles

.458 Lott



The Ruger No. 1H Tropical rifle used in load development and testing was originally chambered for the .458 Winchester Magnum. With the Burris 1 3/4-5x scope, it weighs 10.5 pounds.

to contain it, and have shared that knowledge freely during my research for this report.

The Ruger No. 1 rifle employed in my testing and load development began as .458 Winchester Magnum. I reckon this to be the easiest and least expensive basis for putting up a .458 Lott rifle, no action or magazine alterations, no need for stock reinforcement. Dave simply pulled the barrel, ran the Lott reamers into the .458 Winchester chamber, replaced the barrel, and I went shooting.

With a Burris 1 3/4-5x scope in Ruger's rings, the rifle weighs 10.5 pounds. A lighter rifle would be unfriendly. Given bullets of the same weight, the Barnes Ballistics program tells me recoil energies from full-power Lott loads exceed those of the .458 Winchester by 35 to 40 percent when both are fired from the same rifle.

There are at least three ways to come by brass for the .458 Lott.

Miller's original method was both clever and necessary. A mould was modified to cast a .458 bullet with a .375 shank. Weight was a bit more than 260 grains. The lead slugs were seated over 30 grains of Hercules 2400 in Winchester .375 brass, with a tuft of polyester fiber used to hold the powder against the primer. The fire-formed cases were sized full-length in a .458 Winchester die that was set up .125 inch from the shellholder. When trimmed to 2.790 inches overall and

tumbled to clean, the cases were finished Lott brass.

Unfortunately, it was found that the barreled action dedicated to fireforming brass suffered significant gas-cutting in the neck portion of its chamber after only 200 rounds. Fortunately, we now have better ways to go.

Barnes offers .375 Basic brass of Winchester manufacture in both annealed and unannealed form. I let them do the annealing. After forming in the RCBS sizing die, the still-lubed cases were run into a trim die by the same maker and filed to length. Cleaned, deburred and chamfered, they were ready for work.

A-Square has fully formed and trimmed Lott cases, headstamped accordingly. They also sell ammunition loaded with their bullets, which probably makes the round a semi-wildcat, or quasi-factory cartridge.

This headstamp, by the way, makes A-Square's cases the brass of choice for .458 Lott owners venturing to Ethiopia and other lands where the customs regulations demand strict, literal agreement between a rifle's chambering and ammunition for same. In such places, the functionaries are unimpressed by the wonders of wildcatting.

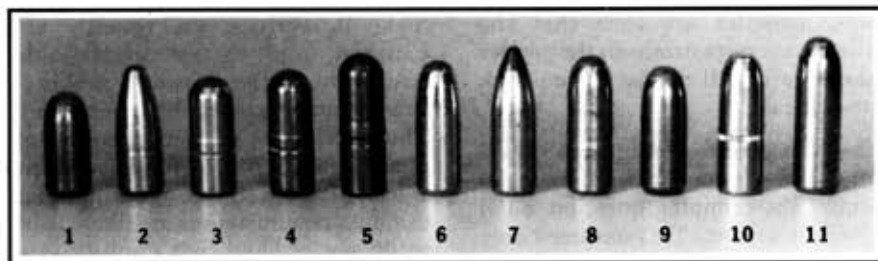
Loads for a .458 Lott rifle had best say ".458 Lott" on their heads, not "Barnes Ammo" or ".375 H&H." Lack of attention to this detail has left more than one hunter with no choice but to use a rented rifle.

Unfired A-Square cases average .015 inch shorter than my formed and trimmed Barnes brass. This means only that they can grow more before reaching the 2.820 inch maximum length allowed by my rifle's chamber. I take 2.785 inches to be trim length, and cases require trimming infrequently.

Depending on the source of the cases being used, the Lott improves on the .458 Winchester's case capacity (as measured in grains of water) from 12 to 14 percent. It should go without saying, but I will say it anyway: this increased capacity *cannot be directly translated to increased powder charges.*

All ammunition was produced on the new RCBS AmmoMaster press in single stage configuration. The gap between this tool's base and top plates is almost 7.5 inches, an enormous convenience when longer than standard cartridges are being assembled.

Bullets ranging from 400 to 600 grains were tested. Frankly, I see no use for lighter projectiles in a cartridge



Bullets used in the Lott are representative of the finest dangerous game projectiles ever made. They include the (1) 400-grain Hawk SP; (2) 400-grain Trophy Bonded Bear Claw; (3) 465-grain Lion-Load SP; (4) Dead-Tough SP and (5) Monolithic Solid from A-Square; (6) 500-grain RNSP and (7) semi-spitzer from Barnes; (8) 500-grain Trophy Bonded Bear Claw; (9) 500-grain Hawk RNSP; (10) 500-grain Hornady FMJ and (11) 600-grain Barnes RNSP.



The .458 Lott brass can be acquired in at least three ways. The .375 H&H case at left is ready to fireform, using a special two-caliber cast bullet with a .375-inch shank and .458-inch nose section. Center, the Barnes .375 Basic case needs only to be sized and trimmed to 2.8 inches. Right, A-Square's unprimed cases are fully formed as they come from the box.

of this sort. The Lott is meant to be a stopper for the biggest, toughest mammals on the planet. Loaded to anything like full velocity in this cartridge, the 300 and 350-grain bullets will almost surely disintegrate on, or soon after, impact. This could ruin the better part of half an elk, or most of a deer. Further, any rifle heavy enough to be manageable with the Lott will be no brush hunter's delight. Besides, the factories catalog guns and loads that do everything a down-loaded Lott could ever do. They call them .45-70s.

Most of the bullets employed are cannellured; the Barnes and Hawk numbers are not. Crimping is not an issue with loads for a single-shot rifle, and Barnes, at least, will provide cannellures if the customer insists. As long as the case neck is tightly sized and the expander ball is .003 to .004 inch under bullet diameter, neck tension alone is generally sufficient to prevent bullet movement in magazine rifles. Furthermore, with the majority of full-power loads, densities are such that the bullet's base rests firmly on the powder charge, so it will not be driven back into the case.

Some knowledgeable big bore shooters will object strenuously to this assessment of the crimping question, but I believe it correct. This assumes only that powder compression is not so great as to unseat bullets. I would add my conviction that a cannellure does nothing good for the structural integrity of a bullet. It must weaken the

jacket, and more than one hairy anecdote suggests that if a bullet is going to come unstuck on very heavy game, the failure is likely to occur at the cannellure.

The Lott ameliorates the .458 Winchester's problem of limited powder capacity, but is still a bit shy on internal room in relation to bore size and the usual 500-grain bullets. The situation is worse when solids or super premium bullets, with their thicker jackets, as well as harder and lighter core alloys, are employed. Balancing the powder's bulk and burning rate with the bullet's weight, bearing surface and hardness becomes most interesting when the goal is Jack's 2,300 fps at the muzzle.

Art Alphin, head of A-Square (One Industrial Park, Bedford KY 40006), responded to this situation by dropping back to bullets of 465 grains in both the .458 Winchester and the Lott. This makes considerable sense. As the data table shows, I was able to better 2,300 fps with several powders when using the A-Square bullets.

Moving up to 500 grains, the plot thickens. Actually, it congeals. IMR-4320 is the only propellant that gave me a comfortable 2,300 fps. In fact, both Jack Lott and Dave Miller arrived at 84 grains of this powder as the answer to the 500 grain/2,300 fps challenge. An insight into just how fine things become in pursuit of this enchanted performance threshold may be had from the fact that Dave had to give some of his rifles as much as .600 inch of freebore to cross the line without pressure frights.

By all accounts, IMR-4320 is no more. Other rifles may be capable of reaching 2,300 fps with the 500-grain slugs and IMR-3031, H-4895, IMR-4895, IMR-4064 or AAC-2520. Without freeboring, my Ruger will not quite make it. Perhaps the recently announced, and as yet unavailable AAC-2700, is the answer. Frankly, I cannot summon much disappointment. The cartridge is altogether sufficient at anything over 2,250 fps. Should this velocity fail to calm a Cape buffalo, for example, circumstances are likely to be so far out of hand that **enough gun** doesn't exist.

Excepting AAC-2520, the Ball powders were to one degree or another disappointing. My preferences for big

bore cartridges run to the extruded numbers in any case. The propellants mentioned in the preceding paragraph are recommended.

The bullets tested are, individually and in the aggregate, truly splendid. That they represent the very finest projectiles for dangerous game is beyond all doubt. For lion and brown bear, the 400-grain Hawk RNSP, the Trophy Bonded Bear Claw of the same weight or the 465-grain A-Square Lion-Load SP are in order. A selection from the list of heavier slugs will do for any other game on the planet.

The No. 1 was a nicely accurate rifle before it was rechambered, and so it remains. Remington's 510-grain softpoint load has made groups (three shots) as small as $\frac{1}{8}$ inch at 50 yards, averaging less than 1.75 MOA. The best Lott handloads will improve on that somewhat and cluster around .75 inch at 50 yards. The single functional difficulty with the rifle came early in the test program when the forend screw loosened from recoil. An application of Loctite® solved the problem.

My only complaints concerning the Ruger have more to do with my carelessness, and the rigors of extended bench sessions with this rather violent cartridge, than with the rifle. When I allow my right thumb to rest on the top of the stock's wrist, instead of wrapping it over, the tang-mounted safety tries to peel the digit like a banana. Further, when 50 or 60 rounds are fired in a sitting, the grooved face of the trigger tends to chew the first joint of my forefinger. Triggers on big bore rifles

.458 Lott 500-grain Barnes RNSP

range (yards)	bullet (inches)	velocity (fps)	energy (ft-lb)
0	-0.90	2,300	5,872
50	0.46	2,192	5,334
100	0.00	2,087	4,834
150	-2.44	1,985	4,372
200	-7.09	1,886	3,947
250	-14.23	1,790	3,557
300	-24.07	1,698	3,200

Zero range: 100
Sight height (inches): 0.90
Ballistic coefficient: .379

Note: Data generated by Barnes Ballistics standard barometric conditions.

should be smooth.

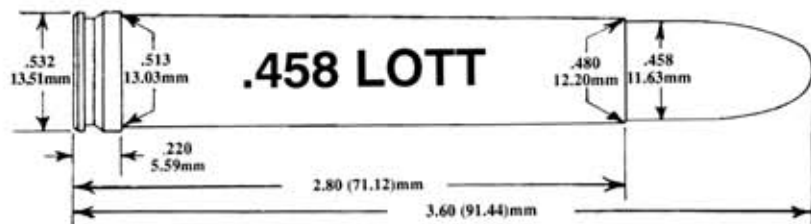
As stated earlier, the Ruger No. 1 in .458 Winchester Magnum has great appeal as the starting point for making a Lott rifle, but its suitability for use on dangerous game is likely to be argued in some quarters. As implied by the experiences of Messrs. Lott and Miller, situations which demand a stopping rifle frequently dictate shooting early and often. One simply does not pop a cap and stand back to admire one's handiwork. There is also a marked tendency among professional hunters to join the fun when Cape buffalo, lions and such are taken under

fire. Those of us who dislike help in settling these matters might do well to deny the PH the excuse of slow follow-up shots. At any rate, I would by no means decline an opportunity to hunt scary stuff with the Ruger. The British

colonials, after all, piled up more dangerous game with their one-shot rifles than any of us will ever see.

Conversion of a bolt-action rifle to

(Continued on page 48)



.458 Lott Load Data

bullet (grains)	powder	charge (grains)	velocity (fps)	case	O.A.L.	remarks
400 Hawk RNSP	IMR-3031	83.0	2,502	Barnes	3.38	excellent
	H-335	84.0	2,429		3.38	normal
	AAC-2520	86.0	2,463		3.38	moderate
400 Trophy Bonded Bear Claw	RL-12	87.0	2,329	Barnes	3.62	accurate
	IMR-4895	86.0	2,453		3.62	near maximum
465 A-Square Lion-Load SP	IMR-3031	81.0	2,344	A-Sq.	3.53	near maximum
	AAC-2230	82.0	2,304		3.53	erratic velocities
465 A-Square Dead-Tough SP	IMR-4064	85.0	2,340	A-Sq.	3.58	good
	AAC-2520	85.0	2,318		3.58	accurate
465 A-Square Monolithic Solid	IMR-4895	83.0	2,324	A-Sq.	3.65	near maximum
	AAC-2460	82.0	2,284		3.65	erratic, low density
500 Barnes RNSP	IMR-4320	83.0	2,321	Barnes	3.58	very accurate
	RL-15	84.0	2,268		3.58	normal
500 Barnes semi-spitzer	H-4895	84.0	2,285	Barnes	3.60	maximum
	AAC-2520	84.0	2,273		3.60	normal
500 Hornady FMJ	RL-15	85.0	2,262	Barnes	3.64	maximum
	AAC-2520	85.0	2,265		3.64	near maximum
	IMR-3031	80.0	2,294		3.64	excellent
	W-748	91.0	2,201		3.64	compressed
500 Hawk RNSP	IMR-4895	82.0	2,281	Barnes	3.60	maximum
	H-335	81.0	2,250		3.60	erratic velocities
500 Trophy Bonded Bear Claw	IMR-4064	84.0	2,264	Barnes	3.64	very accurate
	AAC-2520	85.0	2,273		3.64	maximum
600 Barnes RNSP	H-4895	75.0	2,007	Barnes	3.60	maximum
	IMR-4064	76.0	2,043		3.60	near maximum
465 A-Square Factory Lion-Load			2,264			
465 A-Square Factory Monolithic Solid			2,218			

Federal 215 primers used in all loads. Brass from Barnes and A-Square used as indicated. Velocities are instrumental as recorded 12 feet from the muzzle by an Oehler M35P Proof Chronograph. All testing conducted at temperatures of 60 to 70 degrees Fahrenheit. Maximum loads may be excessive in some rifles, particularly at higher ambient temperatures. Reduce all loads 10 percent and work up only as pressure signs permit.

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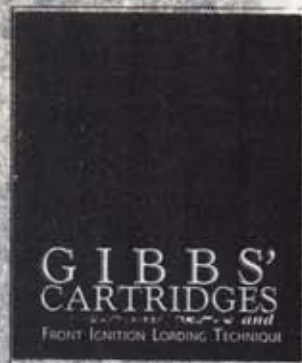
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