

Elgin Gates
1922-1988
Founder of
The Silhouette
and first president
of IHMSA

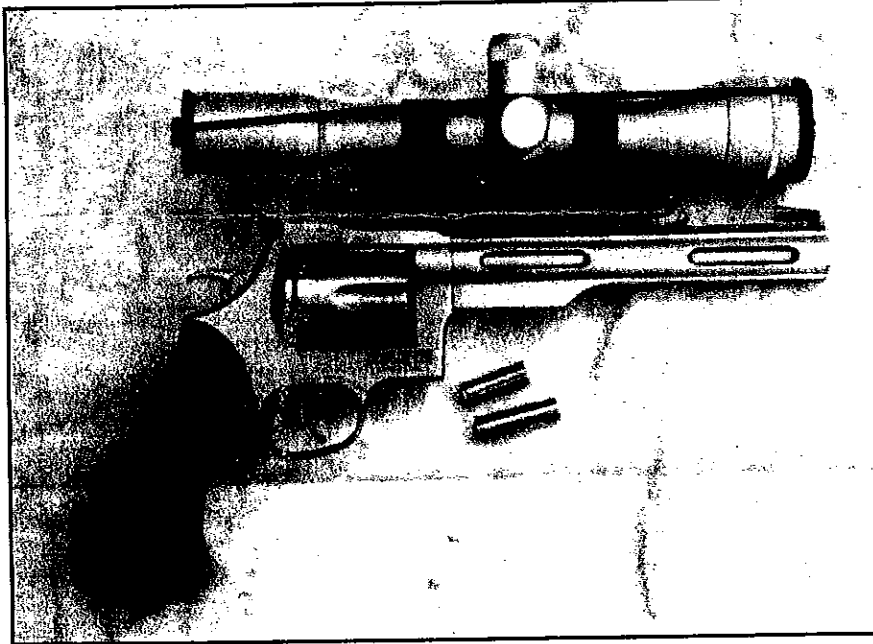


The Silhouette

VOL 18 NO 2

THE SILHOUETTE

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This is the prototype Wesson 414 E.T. Gates pictured with a standard .41 Mag case and a .414 E.T. Gates case for comparison purposes. The "production" guns should have silhouette sights and Houge rubber finger grove grips, plus another surprise or two. For our test we have mounted a Burrell 7 Power Silver scope on it. Which makes for a beautiful combination.

The .414 Gates Super Mag Story

BY TERRY WRIGHT
Senior Editor

"Now it can be told." That was line that the late Elgin Gates used when he announced a new product to the world in The Silhouette. I, for one, really appreciated that line. It generally meant that the new product was either being shipped, or he was expecting that it would shortly be shipped.

Elgin attempted to have a few test models in the hands of his key people long before the public release to see if there were any bugs to be worked out. When everything was working and the company was in the process of producing, the new gismo, then you heard about it in The Silhouette. He usually introduced a new product or gun with the opening line, "Now it can be told." At that point, he went into great detail about how so-and-so had tested the gun for six months, here were the results, and this is what we could expect.

As far as I'm concerned, that's the way it should be done. For years and years

The gun will consistently shoot fifty yard groups under an inch and a half with the right load.

we've heard loads and loads of hype from many, many different companies-about everything from perfume to automobiles. I think when someone has developed a new product they should let us know AFTER it has been tested and proven. Don't hype us half to death for two years about what it's going to be and then disappointment us when the said product does not live up to its promotion. Which brings us to the 414 Super Mag or the 414 Gates, as I prefer to call it. It is here.

Creator of Wildcats

Elgin T. Gates was what I'd refer to as a "shaker and a doer." In addition to his other accomplishments, he was a creator of wildcats. Some of his more successful wildcats have been the International series of cartridges. These were all based on the 300 Savage case with the shoulder pushed back and changed to 38 degrees. This series was offered in 8 different calibers with the 7 MM being the most popular. Then there was the 7 International rimmed, based on the 30 twice case. The round has shown popularity with the Unlimited crowd in the TC. If you're thinking about having a custom TC barrel build for Unlimited class, this round is a great choice. The round is also quite popular in the Wichita break open pistol used in Production class. The round has also been used in hunting pistols, where it works very well.

One of Elgin's best ideas was the 7 MM Super Mag. This is a necked-down 357 Super Mag case made for the folks who

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Leading Off

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- For those looking for more details on the .414 E.T. Gates, don't miss our cover story.
- Gun Owners are concerned about the supposed release of Handgun Control Confidential Documents. See Page 10.
- Does shoot for loot sound like fun? Read the story of one who did. See Page 11.
- For the latest in legislative updates, don't miss Neal Knox's writeups. See Page 16.

Silhouette News

With the many proposals being circulated to restrict or eliminate our guns, this month's news is not the best. The Silhouette would encourage everyone to get involved in this highly political issue, as this may be the turning point of gun ownership by the private citizen.

Our sources at Capitol Hill have advised us that one of the reasons that the anti-gunners are jamming this down our throats is that they expect many people running for re-election during the Fall '94 Congressional elections not to return. Another factor may be the release of the so-called HCI 5-year plan which was supposedly leaked to gun owners in January. This document may or may not be a hoax. But either way it's scary.

On the primer front, we are told that the industry is shipping 15 million primers per week; however, gun owners are literally buying them by the 100's of thousands. One major primer distributor told a customer that they are shipping 3 million primers per week, and they are back-ordered for 5 months. And that is just one distributor.

The firearms manufacturing industry is also caught up with high demand for everything and any-

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didn't like the rimless case of the 223 parent case, replacing the 7 TC. TC made a special run of these 7 MM/Super Mag barrels. I have one that shoots under a half-inch at fifty yards with boring regulatory. Not only that, but the brass FALLS out of the chamber. You don't have to dig it out with your fingers like you do the 7 TC. That little aspect right there makes the round very worth while. The Silhouette still has a few 7 MM Supers if you want one.

Another good cartridge that the man came up with is the 7 MM/Gates. Here Elgin took the 375 Super Mag case and necked it down to 7 MM. A very good round. It has the same case capacity as the 7 MM/BR, but with a rim. With a rim the case works well in a BF or in a TC. My M.O.A. 7 MM/Gates has won the state championship two years in a row. It is an accurate (I mean real accurate) and efficient little round. As a matter of fact, in the M.O.A. it's probably a little more accurate than the 7 BR, because of the rim, but that's another story. I had hoped that TC would see the light, chambering the round for us, but it doesn't look like they are going to. In a 10-inch barrel it's a much better choice than the 7-30 Waters. I have given up waiting on TC for a 7 MM/E.T. Gates and had Bullberry build

"...because at this point this is probably the most accurate center fire revolver I've ever fired."

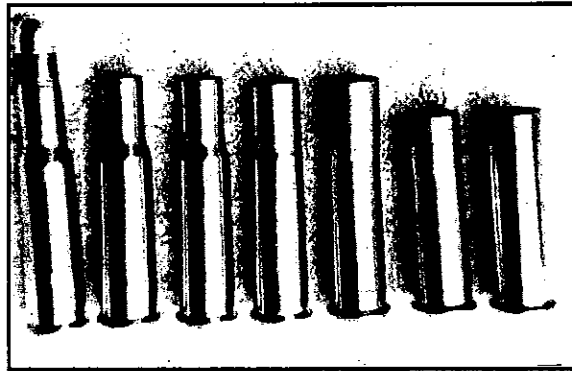
me a 10-inch barrel in the 7 E.T. Gates caliber. So far I haven't had a chance to start a test program on the barrel yet.

As you can see, there was a pattern developing here. Elgin was going to neck down everyone of his revolver Super Mag cartridges to 7 MM. (and later to other calibers). Obviously the 445 Super Mag was going to be next. We would have had a 7 MM/445 Super Mag. By the way, this ought to be a great round. It looks like the case capacity would be about Max in a 10-inch barreled TC and would work well in a 14 or 15-inch barrel. Maybe someday I'll be able to talk Robert into pursuing that one.

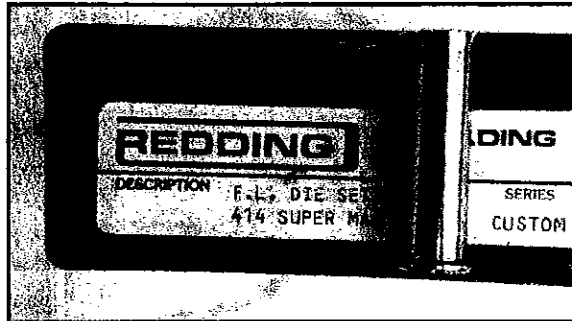
The Super Mags

As I mentioned, Elgin developed a series of revolver cartridges based on a length of 1.610 inches. First was the very popular 357 Super Mag. It has done very well in the Wesson, Seville, and El Dorado. The round has done well in the TC, Riley, and Wichita single shots also. It has probably won more revolver matches in the Wesson than any other round, including the 44 Mag. It should do better now that Wesson has given us a fast twist barrel for the 357 Super Mag and the new "Ram" revolver.

Next came the 375 Super Mag. This round is chambered in the Wesson and "was" chambered in the Seville. A very good round if chambered in a revolver with the right twist in the barrel. I think Wesson should have built the 375 with a



The case forming process. Left to Right, a factory 303 Savage case. Next is the case with the bullet pulled, neck expanded to 35 cal. The fourth case has been necked to .375, five has been expanded to .41, while the sixth has been trimmed, ready to load. You will notice on the 7th case that fire forming has taken the bulge out of the case.



The very first set of Redding .414 Super Mag dies. Many silhouette shooters know the exacting quality that Redding puts into their products.

faster twist barrel. It probably would have been a lot more popular.

In 1988 Elgin introduced the 445 Super Mag in the Wesson. Not a great deal of people shoot Silhouettes with the 445, but the hunters love it. It's been so popular that The Silhouette has had trouble keeping up with the brass orders. The 445 Super Mag makes a great round for hunting big game with heavy bullets. If you want to hunt with a 300 grain 44 bullet, the 445 Super Mag is the one to use (Hornady, Speer, or Nosler). It handles the heavy bullet very well. Not only that, but the recoil in the big Wesson is a lot less than you'd think. A lot less. At this point in time, there many people have shot my 445 Wesson with 300 grain bullets. Every single one of those people have said that the recoil was less than they thought it would be. These statements are courtesy of Wesson's engineering.

As I said, in early 1988 Elgin gave us the 445 Super Mag, just a few months before his death. By that time I had done a few projects for Elgin, namely: the 7mm Super Mag, the 7 MM Gates, the 7BR M.O.A., the 10-inch Browning, and how to properly use a chronograph, etc. I should point out that with the 7 Super Mag and the 7 MM Gates, there were other people testing in addition to myself. Elgin always liked to get several opinions and different points of view.

The 414 Super Mag

At the time that the 445 Super Mag was in process, Elgin was working on the 414 Super Mag. It was going to be the next

one in the series to be introduced. Elgin realized that among the shooters, there were some died-in-the-wool 41 caliber fans, included myself. His feeling was that the 445 Super Mag was going to do great things, especially for the 44 Mag fans. He wanted the 41 Mag fans to have something to crow about as well. At the time of Elgin's passing, the 414 project was off to a good start. Not many people know this, but the 414 Super Mag dies from Redding has been ready since the middle of 1988. I have had a set in my hot little hands for some time now.

During the course of all of this, Elgin and I communicated about the 414 Super Mag. Elgin knew that I was a 41 caliber fan and had confirmed that I would get one of the first test models when they became available. I had a great time writing letters back and forth to Elgin about the 414 project. Early in 1989 the 414 was to be ready for its public debut. Elgin wanted to announce the 414 sometime in the mid-summer, if all went well.

Things did not go quite as planned, as many of you well know. Elgin passed away in late 1988 and everything got put on hold for several different reasons. First, of course was Elgin's passing. Everything had to stop while the Gates family sorted out a multitude of different details. Also, Wesson was selling a lot more 445's than they thought they would. This held up any production on the 414. The third problem and probably the most prevalent, was the constant call for 445

A representative sampling of 414 E.T. Gates Groups. All fired at 50 yards using 7X Burris



30.0 WW 296, Sierra
170 Grain Bullet, Grp
1.500



29.0 Hodgen 4227,
Hornady 210
Silhouette, Grp 1.00

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brass. Every time Robert tried to get Federal, PMC, or someone else to make a run of 414 brass, the back orders for 445 brass had to take its place. By 1991 Wesson Arms was ready and able to start producing the 414's. As a matter of fact, the instruction books that come with the Wesson revolvers list the 414 Super Mag as one of the calibers available, even though they were not until this time. They haven't been available, because up to this point there hasn't been any brass to be had. Wesson is not about to put out a gun unless there is commercial brass available, because most people won't buy a gun that they have to make brass for. Even if some of these people are willing to make their own brass, they may not get it right, resulting in injury. There are a couple of different ways one can make brass to work in the 414 Super Mag. One works quite well; the other does not. We'll discuss the subject of brass in a moment.

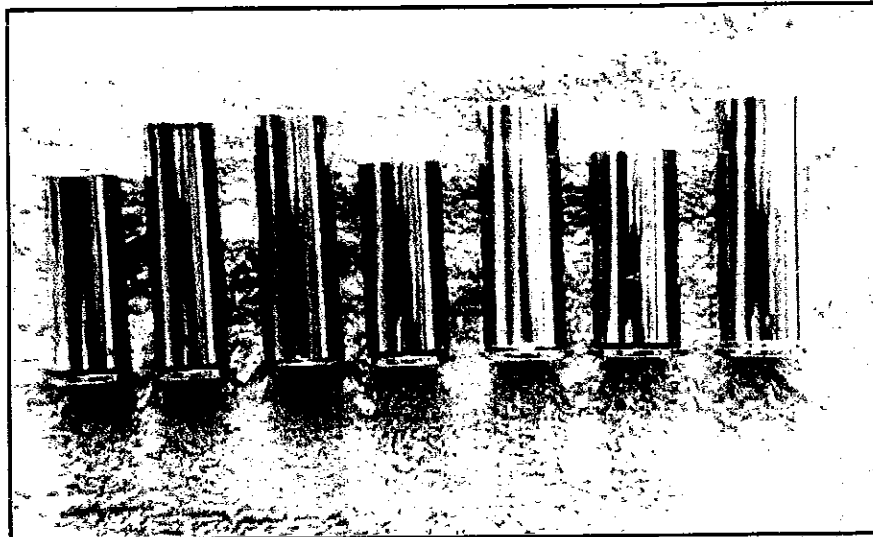
One last thing about Elgin. Everybody makes a big fuss about how Elmer Keith developed the 44 Mag. Elmer and a couple of other fellows may have talked "the powers that be" into developing the 44 Mag, but that was all. Elmer never

As you can well see, the 414 Super Mag is no slouch when it comes to flat-out velocity.

produced any chamber drawings, he never invested any of his money into having reaming or brass made, or into the guns themselves. In short Elmer never had a dime invested in any way in the 44 Mag. He just took credit for the idea.

On the other hand Elgin spent a lot of his own time and money. He made chamber drawings. He had reamers made. He bought die sets. And together with Wesson arms he had guns built. He knew if he waited for some other gun companies to do it on their own it might never happen. The point is—all the praise was piled on Elmer for no more than an idea and what did Elgin get for all his ideas, effort, time and money? Don't misunderstand, I'm not taking anything away from Elmer. He was one tough old boy. On the other hand, I think Elgin deserves some credit for seeing the project through from start to finish.

Before we get into meat of the 414, there are a couple of things I think you should know. The sole reason that we are finally going to get the 414 is because of Robert and Randy Gates. You have no idea how hard it is to put something like this together. Their many, many hours on the phone trying get details worked out. Just trying to get Starline and Wesson together on the dimensions of the brass and chambers was a job in itself. If we are to maintain Elgin's close specks then we can't let anybody drop the ball. We'd be in a real fix if the brass turned out too small or too big for Wesson's chambers. As it turned out, Bob Talbot and I apparently had one of the few if only case drawings for the 414 Super Mag left. Elgin set me a copy in 1988 to look over. He sent the copy with his notes on what the actual



This is an interesting comparison of a few of Elgin Gates Super Mag Series. From left to right, the .357 mag, .357 Super Mag, .375 Super Mag, .41 Magnum, the .414 Super Mag, 44 mag, and the .445 Super Mag. As you can see Gates cartridges stand tall above the rest.

dimensions should be on the brass and in the gun. The point is that there is a lot of leg work that has to be done to make a project like this fly. We owe a hand to Robert and Randy Gates for their work on this project. Also we must mention Wesson Arms, they have been there

when we needed them. Nobody, and I mean nobody, in the industry except Wesson has been willing to take on the various Super Mag projects. Everybody else just keeps feeding us the same old tired stuff. No new calibers; no nothing. Not so with Wesson. These people are operating in the 1990's not the 1890's. Also a good word about Bob Talbot, Wesson's engineer. He can really make things work. Bob is a very intelligent fellow. Bob is the one who has worked out all the little details that surface with a new project like this. Many thanks to the folks at Wesson who made this whole thing work.

Lastly, there are the folks at Starline brass. They made room for us in their busy schedules for our run of brass. Robert Gates could just as well have let this whole project die on the vine in 1988 and 1989. He didn't have to spend the countless hours, not to mention money, trying to get this thing to work. Perhaps someday someone else may or may not have gotten around to the 414 Super Mag, but I doubt it. Wesson arms is not in the business of making brass. They build fine revolvers.

Probably some this has to do with my consistent prodding about the 414 Super Mag. In the worst way I wanted this 414 project to roll. Many thanks to the Gates family, because we now have a true 41 Super Magnum. And boy, is it a honey.

The other thing that I want to touch on is the Gates family's confidence in me. They could easily have found someone else to do the development work on the 414 Super Mag. There are many people out there who are confident enough to take on a project like this. I think one of the reasons that they elected me is because I have been involved (in a small way) in the 414 project almost from the start. I want to publicly thank the Gates family for giving me this opportunity. Also, Wesson Arms deserves my thanks for letting me test their new gun.

The 414 Arrives

Just before Christmas my friendly gun dealer called and said he had a package for me from The Silhouette. I knew what it was—a tool room model from Wesson. When I got home and pulled the big revolver out of its box I found that it had EXP-414 stamped on the side, denoting an experimental model. I am grateful that Wesson would allow me to test their new revolver. And that's what we intend to do, test it and experiment with it.

The main objective is to develop loading data for the new cartridge. For the next several weeks we are going to run every conceivable powder and bullet combination through this gun that time will allow. When the first production models show up, we'll hit that hard and heavy also. We'll probably test a couple of different primers. Hopefully by mid-summer we will have good solid data on the new round.

The new 414 Super Mag from Wesson is a beauty. Wesson has always had good quality control on the outside finish of their guns. Every Wesson that I've ever seen has been finished very well on the outside. The last few years the finish on the inside has been good also. There was a time when a Dan Wesson purchased for competition would probably have to be sent back to the factory for adjustments or repairs. That is not the case today. Wesson's commitment to quality control shows in their latest revolvers.

Wesson Quality is Excellent

These days most of the Wesson revolvers that I get to test are production line guns. The quality has been excellent, to say the least. It's been a long time since I had to send one back because of quality problems. Let me further say that I haven't sent one of the new ones back for any reason. I normally test the guns vigorously. By that I mean that I put a lot of rounds through the guns doing load development. The other reason for all the rounds is to find out how a said gun is going to hold up. I've tested a lot of Wessons and my opinion is that you can hardly wear one out. Some so-called "gun testers" fire 6 rounds of factory ammo through a brand X test gun and declare it the greatest thing since popcorn. I know

for a fact that those same people have to send those same brand X guns back to the factory to be worked on before they can even fire the 6 rounds. The point is, these new Wesson's will go thousands of rounds without a hitch right out of the box.

For example, I've been working with a Wesson 32-20 the last few months. The gun is a joy to shoot. The quality is great and the gun is finished well. By now the gun has had a lot of test rounds through it. It was right when it came out of the box and it's never been back to the factory and probably never will. The inside specks are also very tight, a Wesson trade

The only way I can develop loads for a new cartridge is by actual practice.

mark. As one would expect, the accuracy is very good.

Wesson gained a reputation for supplying revolvers with very tight specks. The 414 Super Mag test model used here is no exception. The chambers are tight as are the exit holes. With exit holes of .410 and a barrel of about .409, it can't help but be accurate. Bob Talbot tells me that this specimen has very good cylinder-to-barrel alignment. He says that were looking at less than .002 run out between the barrel and cylinder holes. He must be right, because at this point this is probably the most accurate center fire revolver I've ever fired. Go back and reread the last sentence. That's exactly what I said, the "most" accurate center fire revolver I've ever tested up to this point.

.414s Inherent Accuracy

The gun will consistently shoot fifty yard groups under an inch and a half with

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the right load. Some groups will go down close to an inch. Bob says that because of the inherent accuracy of the 41 caliber and Wesson's commitment to quality control this just might turn out to be the best Super Mag of the series. I tend to agree with what Bob says because this revolver shoots fantastic groups. Granted, it's a tool room model but still, you just cannot believe how well this thing shoots. Once the right combination is found you can shoot as many slugs through the same hole as you want to.

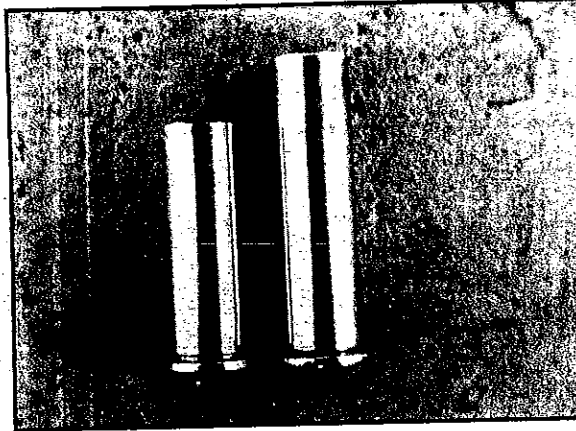
Why such good accuracy? For one thing, I personally believe that the 414 has a little bit more flexibility than the 445 Super Mag does. More on this later. I'll tell you before we go any further that I think that the Gates family and Wesson Arms have a real winner in this new 414 Super Mag. The accuracy is great and the velocity is great. The 414 Super Mag is going to be a winner and I can't wait to get my own.

Having said that, I'm an perfectly aware that there have been other so-called 41 Super mags built before this one. Jeff Munnell of Seville fame built several 41 Super Mags on long Seville frames. Jeff is probably "the" expert on 41 Super Mags. There have been other

"...I felt we all would be better off if I just developed data from scratch for this gun using this brass."

individuals who have taken big frame Wessons and rebuilt them into a 41 Super Mags.

One method is to take a 357 or 375 Super Mag and bore the cylinder out to 41 caliber. Then it's just a matter of fitting a 41 caliber barrel. These were mainly just guns built on an individual basis. Most of these conversions used 220 swift brass as a starting point to build useable brass out of. The brass works, except for one problem. The rim thickness of the 220 swift brass is .045 instead of the usual .060. When someone converts a Wesson from 375 Super Mag or whatever, the cylinder must be set back to compensate for the thinner rim. If the cylinder is left set at the regular head space of the parent cartridge, 357 or 375 Super Mag, then it will be too great for the 220 swift brass. You would end up with a real head space of .020 or .025. This amount of head space could and would cause misfires. If you add the real head space of .020 to .025 to the amount the primer set down in the primer pocket you could conceivably come up with a distance of .030 that the firing pin has to travel before it even touches the primer. If the total travel of the firing pin is only .040 or .045 then you can see that the primer in question would not receive much of a thump. The net result is either misfires or velocities that are erratic. You can take my word about the misfire, I've tried it. Not only do you get misfires, but you get wild shot-to-shot velocity spreads. If one were to set the



This is a closeup of a standard 41 magnum case right, and the .414 Gates case made out of 303 Savage brass. As you can see, the .414 gives you considerably more case capacity, not to mention better performance.

cylinder back to compensate for the head space, then you could eliminate the misfires.

If you set the cylinder back, then you create another problem. If the cylinder is set back .015, as it should be to use 220 swift brass, then you cannot fire regular 41 Mag brass in the gun. That's because the rim on a regular 41 Mag case is .060, as it should be. Therefore, you could only fire the brass made from the thinner rimmed 220 swift brass.

The beauty of Elgin's designs is that you can fire regular rounds in the gun. In the 357 Super Mag you can fire regular 357's or even 38 specials if you like, as well as the longer 357 Super Mag. In the 445 Super Mag you can fire the regular 44 Mag round or the 44 special or even the old 44 Russian. The way I count, that's four rounds from the same revolver. Pretty good foresight on Elgin's part I'd say.

The new 414 Super Mag is going to be the same deal. You can shoot the full length (1.610) 414 Super Mag brass of course, or the regular 41 Mag round. Some of us in the past have taken 41 Mag brass and trimmed it down to "41 special" length. This also can be fired in the 414 Super Mag.

Prototype Brass

At the time that the tool room test 414 showed up, there was not yet any 414 brass available. Wesson and the Gates family wanted to debut the 414 Super Mag at the Shot Show in January. I did not get the gun until just before Christmas. What to do for brass? As I said, the 220 Swift deal doesn't work very well for other reasons besides the wrong head space. The 220 brass is too big at the base or web. To get it to go into the cylinder the heads have to be swaged down. This, in itself, is a real chore. Then once you get the brass cut off to the correct length, it's too thick in the walls. With a bullet seated in the case, it's too fat to go into the chamber. So you have to ream the brass to get the clearance you need. If you had chambers that were cut big enough to take the thick brass and had the head space problem worked out, then the 220 swift brass would work well. I made up a few cases out of 220 swift to try but it was fruitless. After all the work to get the brass to fit the gun, the misfire situation would not allow me to get any concrete data.

This left me in a fix for brass, but Jeff Munnell came to the rescue. He suggested using 303 Savage brass. He said

he thought that it was the right size at the web. A little checking showed that he was right. According to the spec sheet the 303 Savage brass would be pretty close. The actual diameter of the 414 chambers at the back of the cylinder is .338. Please keep in mind that this is a test gun. The actual chamber size of the production guns will probably be about .336 to .338. According to an old Lyman manual that I had the old 303 Savage brass is supposed to be .341 at the base. However, I thought that it would probably fit because they always make brass smaller than spec. The reason for that is so they won't run into any problems with a customer who has a tight chambered rifle. We all know they never make it as big as the specks call for.

There is only one problem with this idea. 303 Savage ammo has been out of production for years. You cannot buy brass for a 303 Savage. You cannot run down to your local sporting goods store and buy factory loaded ammo for a 303 Savage. All is not lost, however. The Old Western Scrounger has just about anything that you can imagine. Especially if it's a hard-to-get item. Fortunately for us and our project he had some factory loaded 303 Savage ammo. It is Winchester brand loaded with 190 grain silver tips. Because of the scarcity of this item, they are not cheap.

Robert made arrangements to get 100 rounds and send it to me. When it arrived, it looked new. I don't know how old the stuff is, but it looks like it was made yesterday. Anyway, the first thing I did was measure the brass to see if it was going to fit. Sometimes you get lucky. This time we were very lucky. At the base (web) the new 303 Savage brass measures .337. Remember, I said that the Wesson chambers were .338. The 303 Savage brass is just .001 less in diameter than the Wesson 414 chambers. How's that for a Bench Rest fit, folks? It couldn't have been a better fit if I'd planned it.

Expanding The Brass

Next I pulled the bullet on a case and expanded the neck. I trimmed it to 1.610 in length and seated a bullet to see if it would chamber without having to ream the necks. I can't believe we got lucky twice in a row. The round chambered! After fireforming, the brass was measured at the case mouth and the inside of the chamber where the mouth of the brass would be. Here we ended up with just .002 clearance. That's two thousandths on the front and one thousandth on the

back-wow! That's what you call good fitting brass. Jeff definitely knows what he's talking about.

The steps to make the brass follow (see picture). The first step is to pull all the bullets and dump the powder. I used a collet puller for this. I, personally, don't like inertia pullers. For one, they're too messy.

Next the case is run over a Sinclair 338 or 35 caliber expander. This opens the necks up just a little. The next step is to run the brass through one of the Redding expander dies that The Silhouette supplies. This die was made to expand 30-30 brass out to 375 caliber to make 375 Super Mag brass. We now have an almost straight walled case, except for a tiny trace of the neck left.

At this point I had to make a little modification to a 41 expander die. Most

With Remington bulk bullets, W-296 showed great accuracy.

expander dies only expand into the case neck about one quarter to three eighths of an inch. If you run the case on the expander any further than this, the plug will bell the mouth, which is what they are supposed to do. The 303 Savage brass is just a fuzz over two inches long. We need to trim it to 1.610. This means we are taking over 400 of brass off the mouth. One could run the brass over a 41 caliber expander. At this point the mouth would be expanded to 41 caliber but for only a quarter inch or so deep. You could trim a quarter of an inch off the mouth and then expand the case again with the 41 expander plug and then trim it a second time down to the final length.

I didn't want to trim it twice so I turned the 41 expander down to 40 caliber for a length of one half inch. This way the cases could be run over the expander just one time instead of two. The cases were then run through a Foster case trimmer with a 40 caliber pilot. The brass was trimmed to a length of 1.620. They were left a little long, because when fired, they will become shorter. A drill was hooked up to the Foster trimmer to save the wrist. With the drill the .400 can be trimmed off the brass in a jiffy. With the brass all trimmed to length it was deburred and run over a 41 caliber expander. At this point the brass is ready to load and fire form.

I will explain why the expander was turned down to 40 caliber instead of being left at 41 caliber. The first few pieces of brass that I made into 414, I expanded to 41 caliber first and then trimmed. Then I loaded the brass up with some 200 grain Remington bullets to fire for the brass. Doing the brass this way I ran into a small problem. Remember I told you that at the case mouth with a bullet seated there was only a about .002 clearance between the chamber and the loaded round. When the brass is first expanded it is hard to get it to expand evenly all the way around the circumference of the neck. The bulge is sometimes a little bigger on one side than the other. With the clearances so tight, it sometimes makes the round a little harder to chamber initially. After they have been

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fired formed the first time, they fit like a glove. Because of the sometimes tight fit the first time, I just expanded the brass to 40 caliber and fire formed it with a 40 caliber bullet. From this point it's just straight forward reloading. Once the brass has been through the chamber one time everything is fine.

Load Development

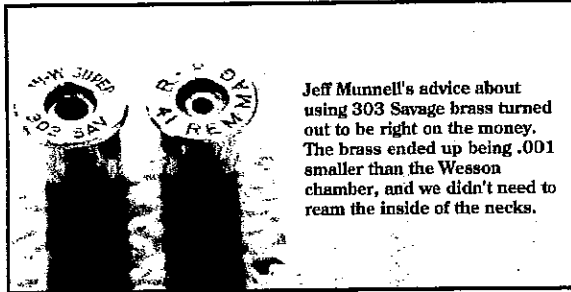
Load development started out just a bit slow. When sailing uncharted waters, better take it slow. I am aware that there is some data available for some of the other one-off 41 Super Mags, but I choose not to use it. My feeling was that this is a new gun and I'm using 303 Savage brass. Therefore I felt we all would be better off if I just developed data from scratch for this gun using this brass.

I want to emphasize that I do not have access to a test lab. I have no way of knowing what the actual pressures are that these loads develop. The only way I can develop loads for a new cartridge is by actual practice. That means that these loads were developed for this specific gun using this specific brass.

The 414 Super Mag will churn out 11-1200 foot pounds of energy depending on the bullet and velocity.

THEREFORE, THESE LOADS ARE ONLY SAFE IN THIS GUN. DO NOT USE THESE LOADS IN ANY OTHER 41 SUPER MAG OR 414 SUPER MAG. THESE LOADS ARE FOR REFERENCE ONLY!!

In the past I've had fair luck measuring case heads on rimless cases as a means to judge pressure. I have never been able to get accurate readings on rimmed cases using this method. Some folks like to use the looks of primers in their favorite hunting rifle to judge pressures. I don't think looking at primers is a very accurate way to judge what's going on inside your chamber. This is particularly true of revolvers. Some revolvers will flatten primers even if the pressure is not excessive. This is because of excess headspace. If a revolver has too much headspace, then when the firing pin hits the primer, it drives everything forward—case and all. When the primer fires, it pushes the brass forward until the rim sits tight against the back of the cylinder. The force from the primer charge will back the primer out of the pocket. The primer will back up until it hits the standing breach. With a small portion of the primer sticking out of the primer pocket, it has no support in this area around its circumference. If there is enough pressure in the load being fired, and it does take a great amount, it will cause the primer to expand a little at the point where it's unsupported. At the point when the powder charge has developed



Jeff Munnell's advice about using 303 Savage brass turned out to be right on the money. The brass ended up being .001 smaller than the Wesson chamber, and we didn't need to ream the inside of the necks.

enough pressure to force the brass case back against the standing breach, the back of the primer will just be mashed over. We you drop the brass out of the cylinders, the primers will appear to be smashed flat.

This can be caused by two things. Excess pressure or too much head space or both.

The point is, looking at primers is not a good way to judge pressure in your revolver, single shot pistol or rifle. If the primer's appearance and measuring the rim are not reliable for me, then what is? For me the best way to tell when the load is getting close to the top is by seeing how hard the brass extracts from the cylinder. If the brass falls out of the cylinder, then the load is obviously very mild. If the brass comes out with some resistance, then the load is quite obviously close to maximum. If you have to pound the brass out of the cylinder, then the load is obviously way over the safe limit. I admit that using this method is not the best for checking pressures. But, it's the only way I have of doing it. It does, however, tell me what is safe in this gun using this brass.

One other thing. Because the brass in the Super Mag series is so long, it can tend to drag a little when it comes out of the cylinders. Do not confuse this with high pressure. This Super Mag series of revolver cartridges has almost no taper. In addition to the length (1.610) this can cause them to be a little sticky in the cylinder at times. Another thing that can cause the brass to drag a little is the powder you use. Some powders will leave a lot of residue in the chambers. This can cause the brass to stick in the cylinders if it is not cleaned out. Just be careful of what you are seeing. If the brass is printing (the pressure is so high the brass comes out with a imprint of the chamber on the outside) then you have excess pressure. If the chambers are just dirty, then you may not be getting high pressures.

With the brass made, the first order of business was to install the old faithful Burris seven power scope on the test gun. This old scope has been on many test guns in the past. It has withstood everything from 22 rim fire to 445 TC's. During the tests The Silhouette sent over a new "silver" Burris seven power. This enabled me to work on another project simultaneously.

As previously mentioned, the brass was fire formed with 40 caliber bullets for the most part. After I had fire formed about half of the brass using this method, I modified the case expanding process just a little and fire formed the remainder of the brass using Remington 200 grain bullets. About 20 grains of AAC #9 work well for this.

Initial Testing

Initial testing was done in small steps with the 200 grain Remington bullets. I used the Remingtons for the pressure

checks for two reasons. First, they are quite reasonably priced when purchased in bulk. Second, they are about in the middle of the weight range of available 41 caliber bullets. Once I had the parameters set for the various powders with the 200 grainers, it was fairly simple to figure out the powder charges for both the lighter and heavier bullets.

Because this is a brand new cartridge with no data, the pressure checks were mandatory. By running pressure checks, I was able to ascertain how much of which powder was acceptable with the 200 grain bullets. Powder charges were started low and worked up. They were worked up until they proved to be excessive. In other words, I stuck the brass in the cylinder a few times. This was a mandatory move. If you don't work up until you find the maximum load, then you defeat the whole purpose of the new Super Magnum. You have to know what the maximum acceptable powder charge is. Once the top load is found, then it's just a matter of backing up to an acceptable level.

I am in no way saying that you should try over loads in your guns. Quite the contrary. What I'm saying is that I found the maximum loads for you so you won't have to. The loads shown on the chart represent loads that are safe in this test gun with the 303 Savage brass. Production guns and brass will be different. The loads may well have to be rolled back a bit. The loads shown on this chart are for reference only. They are shown so that you may get an idea of the Wesson 414 Super Mag revolver's potential.

DO NOT TRY TO USE THESE LOADS IN YOUR GUN.

With the brass fire formed and the pressure checks run; it is time to see what this baby will do! The first powder that I tried of course was AAC #9. Accurate Arms does not recommend using this powder in the 445 Super Mag. Having tested AAC #9 to great length in the 445 Super Mag, I tend to agree. There are certain combinations in which the powder will work in the 445. However, there are situations where the powder is a little unstable in the 445. For the most part, I found this to be the case in the 414 Super Mag. The powder is relatively fast burning when compared to ACC-1680. The Super Mag series of cartridges were designed to use slow power to launch rather heavy bullets. These big cases are no place for Bullseye and Unique powder. If you want to shoot light plinking loads, then use Special or standard 41 Mag cases and light bullets. My initial thought was that the powder would work with the light Sierra 170 grain hollow point even though it's a bit on the fast side for this application. Apparently my thinking was faulty. The extreme spreads with this combination were totally unacceptable. Accuracy was terrible. These two were not made for each other. I should point out that in a standard 41 Mag case, these two work very well together. In a stan-

dard 41 Mag I have found this powder to work VERY well.

Strange as it may seem, when I tried the powder with the 210 grain Hornady bullets, the velocity spreads were completely normal. Accuracy wasn't bad either. The problem was that pressure was reached before any decent velocity was obtained. Again, I think this powder belongs in standard 41 Mag brass and not 414 Super Mag brass.

New Powder From Finland

The next powder on the scale is a new powder. It's called NV-110. This is not to be confused with H-110. NV-110 is made by VihtaVuori Oy (totally unpronounceable) of Finland. These folks have several new powders out for the American shooter. A couple of these look like they would do fine in our single shots, but that's another story. NV-110 is shown as VN-110 in these pages. The extra letter is shown so that it won't be

Thunderbird 680 and the 210 grain Hornady Silhouette bullet were made for each other.

confused with Hogdons H-110.

VN-110 appears to have about the same burning rate as AAC #9, maybe just a little slower. According to the reference chart, VN-110 takes about one grain more powder to achieve the same velocity from the Sierra 170 grain bullets that ACC #9 does. Here again the new powder appears to be a little bit fast for a case this big. I should add that I've tried VN-110 in a standard 357 Mag and it works well. Could be that it's like AAC #9—works well in the standard Mags, but not too well in the super Mags.

Accuracy with the new powder does not appear to be too red hot. VN-110 showed fair accuracy with the 170 grain Sierra but was a failure with a very good Hornady 210 Match bullet. I don't think it's the powder's fault. In my Wesson 357 Mag the powder works well with a Remington 125 HP. I think what we have here is a mismatch between case capacity and burning rate.

Old Faithfuls

IMR and H-4227 are two powders that have been around Magnum loads for years. Both of these powders have worked well in several different cartridges, 357, 41, 44 Mags and the 45 Colt. For years one of the favorite loads for the 357 Super Mag was 20 grains of H-4227 with the 180 grain Hornady bullet. It did well in several different guns. In this 414 Super Mag they don't work well at all, in either velocity or accuracy. They build pressure too fast to achieve any kind of speed. I could not obtain any velocity to speak of before the brass got sticky in the chambers. Although it's not indicated on the data chart, these two work quite well for a slightly reduced load. Accuracy is better at lower velocity with the 27's. If you want to load this powder a grain or two below the bottom loads shown, it will work, but you won't get any velocity. Also, there is a lot less muzzle blast with these powders than there is with the ball powders.

Hodgdon's H-110 and Winchester's 296

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are two good powders for the velocity-oriented people. With W-296 a full 1700 FPS was seen with the 170 grain Sierra bullet. Think about that, 1700 feet per second. H-110 was only a few feet behind. Both of these powders showed good accuracy also. W-296 showed fine accuracy with every bullet tested. I don't know if this is a look at things to come or if this particular 414 Super Mag has a take to ball powder, but we will all gladly take a combination of speed and accuracy. H-110 was pretty much the same story in the accuracy department. H-110 showed a liking for all the bullets tried. Take your pick: W-296 or H-110. It's a toss up. Keep in mind that at 1700 FPS a revolver that shoots under an inch and a half at fifty yards could be used to hunt varmints with or maybe it's just the fun of watching them all go in the same hole away out there.

With Remington bulk bullets, W-296 showed great accuracy. The 200 grain

I'm not letting out all the secrets, but the first few are going to be special and different from the rest.

Remington and 296 might make a good small deer load. Another bullet this powder likes is the 210 grain Hornady Silhouette bullet. You can obtain 1500 FPS with ease using these two together. An addition factor is the outstanding accuracy.

All Out Velocity

When it came down to all-out velocity with the heavy bullets, Winchester's 680 won. Unfortunately, W-680 has been discontinued. That's a shame because the 414 Super Mag and Winchester 680 were made for each other. Velocity is great and accuracy is good. Have a gander at the data chart. W-680 and the 210 grain Hornady bullet showed over 1550 FPS velocity! And, this was in 40-50 degree weather.

Thunderbird 680 and AAC 1680 were both given a good try. Both the velocity and the accuracy appear to be about parallel. I couldn't get quite as much velocity from these two as with W-680, but the accuracy is just as good.

Thunderbird 680 and the 210 grain Hornady Silhouette bullet were made for each other. Look at the data chart again. T-680 would CONSISTENTLY put five shots UNDER an inch and a half at fifty yards. That was with a range of a couple of grain difference in powder charge. This would be a great combination to try on steel targets if you've a mind to. I would have liked to try the gun on Silhouettes but just didn't work out. I fully intend to try the production gun on metal however.

Good old AAC-1680. Good powder. The burning rate seems to be the same as T-680. Accuracy didn't seem quite as good. My guess is that AAC-1680 could be

Wesson 414 Super Mag

Data Chart
by Terry Wright

All loads tested over Oehler 35P Chronograph
All loads tested with Federal 210 Match primers
All loads tested with Burris 7 power scope over sand bags
All loads tested at fifty yards
All loads tested in a temperature of 40 degrees

FACTORY REM 210							
POWDER	LOAD	FPS	ES	SD	NUMBER TESTED	GROUP	COMMENTS
		1302	86	38	5	2.200	

FED 210							
POWDER	LOAD	FPS	ES	SD	NUMBER TESTED	GROUP	COMMENTS
		1355	64	23	5	3.000	

The following loads were assembled using Winchester 303 Savage brass.

SIERRA 170 HP							
POWDER	LOAD	FPS	ES	SD	NUMBER TESTED	GROUP	COMMENTS
AAC #9	22.0	1552	147	64	5	2.500	Unstable, do not use.
AAC #9	23.0	1600	143	71	5	2.500	
AAC #9	24.0	1654	157	80	5	2.000	
VN-110	22.0	1467	120	50	5	1.800	
VN-110	23.0	1563	46	18	5	2.000	
VN-110	24.0	1581	43	19	5	2.300	
IMR-4227	27.0	1544	61	24	5	1.600	
IMR-4227	28.0	1565	72	28	5	1.600	
H-4227	27.0	1500	78	49	5	1.400	Good accuracy
H-4227	28.0	1541	99	56	5	1.800	
H-110	30.0	1488	90	40	5	1.500	
H-110	31.0	1523	69	28	5	1.500	
H-110	32.0	1582	62	28	5	1.900	HIG JUMP FPS
H-110	33.0	1695	22	10	5	1.400	Good accurate combination.
W-296	30.0	1560	66	27	5	1.500	
W-296	31.0	1605	38	17	5	1.500	
W-296	32.0	1641	80	34	5	1.500	Very FAST!!
W-296	33.0	1706	47	17	5	2.500	
W-680	32.0	1362	66	23	5	2.000	
W-680	33.0	1406	78	28	5	1.200	GREAT
W-680	34.0	1503	62	22	5	1.500	Good accuracy
W-680	35.0	1568	68	24	5	1.500	Good accuracy
W-680	36.0	1610	43	17	5	1.600	
T-680	34.0	1424	86	32	5	1.500	
T-680	35.0	1454	56	23	5	1.500	
T-680	36.0	1508	16	16	5	2.200	
AAC 1680	33.0	1362	125	59	5	1.700	
AAC 1680	34.0	1427	55	21	5	1.600	
AAC 1680	35.0	1489	23	10	5	1.800	Full case
AAC 1680	36.0	1649	38	20	5	1.800	Too slow
H-4198	30.0	1177	79	28	5	1.800	

REM 200 HP							
POWDER	LOAD	FPS	ES	SD	NUMBER TESTED	GROUP	COMMENTS
AAC #9	20.0						Did not test
AAC #9	21.0						Did not test
AAC #9	22.0						Did not test
AAC #9	22.0	1381	80	26	5	3.300	Not a good powder choice
VN-110	20.0	1414	128	51	5	3.000	
VN-110	21.0	1452	88	40	5	3.000	
VN-110	22.0	1492	60	29	5	2.000	
IMR-4227	25.0	1402	52	20	5	2.000	STICKY
IMR-4227	26.0	1456	62	24	5	2.200	
H-4227	25.0	1420	62	24	5	2.000	STICKY
H-4227	26.0	1448	98	38	5	2.200	
H-110	27.0	1376	56	21	5	2.200	
H-110	28.0	1405	60	28	5	1.900	
H-110	28.0	1462	106	41	5	1.600	Accurate
H-110	29.0	1452	39	35	5	1.800	
H-110	30.0	1520	39	35	5	2.000	
W-296	27.0	1464	133	48	5	1.500	
W-296	28.0	1477	60	20	5	1.200	WOW WOW
W-296	29.0	1534	38	17	5	1.700	
W-296	30.0	1573	83	33	5	1.500	GOOD
W-680	33.0	1497	49	19	5	1.600	GOOD
W-680	34.0	1541	31	13	5	2.000	
W-680	34.5	1551	68	23	5	1.500	
T-680	33.0	1421	48	22	5	1.300	WOW
T-680	34.0	1473	49	18	5	1.450	STICKY
T-680	35.0	1502	38	17	5	2.200	
T-680	35.0	1588	70	34	5	2.200	
AAC 1680	33.0	1413	61	17	5	2.000	
AAC 1680	33.0	1443	26	12	5	1.600	
AAC 1680	34.0	1474	49	25	5	1.700	
AAC 1680	35.0	1474	49	25	5	1.700	
H-4198	29.0	1186	73	29	5	1.700	Too slow

SPEER 200 HP							
POWDER	LOAD	FPS	ES	SD	NUMBER TESTED	GROUP	COMMENTS
W-296	27.0	1417	63	30	5	2.200	
W-296	28.0	1462	99	45	5	2.000	
W-296	29.0	1512	76	27	5	1.700	Fair accuracy
W-296	30.0	1558	55	22	5	1.800	
W-680	33.0	1456	31	11	5	2.500	
W-680	34.0	1507	52	21	5	2.200	

414 E.T. Gates Test Data Continued On Page 14

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.414 Gates

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made to shoot just as well as T-680 with a primer change. Time only permitted trying one primer. Remington's or Winchester's large rifle primer may work just as well or better with this powder. AAC-1680 and T-680 both showed pretty decent velocity.

Speaking of velocity... Seventeen hundred feet per second from a 170 grain bullet. Fifteen hundred and fifty feet per second was obtained from the 210 grain Hornady bullet. A full fifteen hundred feet was coaxed out of the 220 grain Sierra bullet. As you can well see, the 414 Super Mag is no slouch when it comes to flat-out velocity. These are pretty impressive numbers, folks.

As some of you may have read in the Jan-Feb issue of The Silhouette, the energy numbers are pretty exciting as well. The 414 Super Mag will churn out 11-1200 foot pounds of energy depending on the bullet and velocity. This is 300-400 foot pounds more than the factory 41 mag-round puts out. As you can see by the chart, we easily beat the factory rounds in the velocity department also. The test gun routinely beat the factory rounds by 200-250 feet per second.

Hand-loaded standard 41 Magnum loads in the test gun was one thing I wanted to try. I think a person could beat the factory loads somewhat in the long cylinder gun as far as velocity goes. I base this on the fact that the long cylinder acts like a long throat. Unfortunately I didn't get a chance to try that idea. The test gun had to go back before I got that far. When the production gun shows up, I want to test the standard 41 Mag stuff. It's going to be interesting to see how a hand-loaded 41 mag stacks up against the 414 Super Mag and the factory 41 Mag. My guess is that accuracy will be parallel, there will just be a velocity difference.

This article is a interim project. It was done to introduce us all to the new 414 Super Mag. It was done using converted brass from the 303 Savage. It was done using a hand built tool room test gun. By doing things this way, we all get to learn something and we all get an introduction to the new 414 Super Mag.

An Interesting Project

It has been a very interesting project, to say the least. That's not the end of the story, of course. Sometime in the next few months we hope you are reading about the results of testing a production gun and factory brass. To this point in time, the 414 Super Mag has been my most exciting project. There are a number of reasons for this. One of which is that I finally get to see Elgin's project progress. One of the other reasons that I was so excited about the 414 is the fact that it looks like it's going to be a great round. The accuracy is just fantastic for a revolver. The velocity and energy figures are certainly impressive. With the right bullet this is going to be a great hunting round. Also consider that the recoil is less than a gun of 44 caliber. All else equal, the new round is a little bit flatter shooting than the 44 guns. We'll discuss that aspect a little more in part three.

If you're interested in a 414 Super Mag,

.414 E.T. Gates Test Data Continued From Page 12

W-680	34.5	1526	41	18	5	2,800	FULL CASE
HOR 210 SIL							
POWDER	LOAD	FPS	ES	SD	NUMBER TESTED	GROUP	COMMENTS
AAC #9	20.0	1387	76	40	5	1,500	Accurate but slow
AAC #9	21.0	1424	36	18	5	1,500	
VN-110	19.0	1340	56	30	5	2,500	
VN-110	20.0	1410	38	16	5	2,500	
VN-110	21.0	1400	34	16	5	3,000	LESS velocity?
IMR-4227	25.0	1401	78	40	5	2,500	
IMR-4227	26.0	1443	83	34	5	2,200	Nothing here
H-4227	25.0	1397	70	30	5	2,700	
H-4227	26.0	1424	66	25	5	2,500	
H-110	26.0	1354	81	45	5	2,000	
H-110	27.0	1404	61	25	5	1,900	
H-110	28.0	1463	98	40	5	1,400	Oh yes
H-110	29.0	1505	79	41	5	1,400	Oh yes
W-296	26.0	1397	72	31	5	1,500	296 and this
W-296	27.0	1428	58	25	5	1,400	bullet work
W-296	28.0	1518	87	39	5	1,400	well together
W-296	29.0	1549	37	13	5	1,500	
VN-120	28.0	1245	44	20	5	2,000	VN-120 is too
VN-120	29.0	1314	46	17	5	1,700	balley.
VN-120	30.0	1366	37	14	5	2,500	FULL CASE.
T-680	29.0	1213	58	24	5	1,500	All three
T-680	30.0	1245	34	13	5	1,450	of the 680
T-680	31.0	1300	60	22	5	1,400	powders tried
T-680	32.0	1363	52	22	5	1,400	with this
T-680	33.0	1438	31	13	5	1,400	bullet were
T-680	34.0	1478	47	20	5	1,500	very accurate.
T-680	35.0	1518	89	22	5	2,000	
W-680	29.0	1310	69	27	5	1,300	Good bullet
W-680	30.0	1354	98	36	5	1,500	and good
W-680	31.0	1398	99	40	5	1,900	accuracy.
W-680	32.0	1468	85	33	5	1,800	
W-680	33.0	1518	68	29	5	1,900	
W-680	34.0	1566	78	30	5	2,200	
AAC 1680	30.0	1315	46	22	5	1,500	
AAC 1680	31.0	1348	28	12	5	1,400	
AAC 1680	32.0	1400	31	13	5	1,300	
AAC 1680	33.0	1476	42	19	5	1,500	Accurate
AAC 1680	34.0	1506	15	7	5	2,000	FULL CASE
SPEER 210 TMJ							
POWDER	LOAD	FPS	ES	SD	NUMBER TESTED	GROUP	COMMENTS
AAC 1680	33.0	1342	35	13	5	3,500	
AAC 1680	34.0	1397	92	32	5	3,000	
AAC 1680	35.0	1455	41	18	5	3,000	
SIERRA 220 SIL							
POWDER	LOAD	FPS	ES	SD	NUMBER TESTED	GROUP	COMMENTS
IMR-4227	23.0	1300	80	38	5	4,000	
IMR-4227	24.0	1352	103	38	5	3,500	MAX
H-4227	24.0	1301	49	20	5	3,000	
H-4227	25.0	1365	50	23	5	3,000	MAX
H-110	26.0	1318	61	25	5	2,000	
H-110	27.0	1351	13	5	5	1,500	Good accuracy
H-110	28.0	1407	69	26	5	2,200	
W-296	26.0	1370	67	26	5	2,000	
W-296	27.0	1425	33	11	5	1,800	
W-296	28.0	1430	69	27	5	2,000	
W-680	32.0	1412	28	10	5	2,000	NO MORE FPS
W-680	33.0	1468	82	28	5	1,600	
W-680	34.0	1527	42	18	5	2,500	
T-680	33.0	1399	54	23	5	1,700	
T-680	34.0	1445	78	32	5	1,600	
T-680	34.5	1472	56	23	5	1,400	STICKY
AAC 1680	32.0	1357	62	27	5	1,900	
AAC 1680	33.0	1402	61	23	5	2,500	
AAC 1680	34.0	1464	30	12	5	2,200	
SPEER 220 FP							
POWDER	LOAD	FPS	ES	SD	NUMBER TESTED	GROUP	COMMENTS
AAC 1680	32.0	1391	24	11	5	1,900	
AAC 1680	33.0	1422	37	14	5	2,000	
AAC 1680	34.0	1473	44	19	5	2,200	
CAUTION: Technical data and information contained herein illustrate firing characteristics based upon the limited experience of the testing individual under specific conditions and circumstances. They do not detail the comprehensive training, procedures, techniques and safety precautions which are absolutely necessary to carry on similar activity. ALWAYS CONSULT COMPREHENSIVE REFERENCE MANUALS AND BULLETINS FOR DETAILS OF PROPER TRAINING REQUIREMENT, PROCEDURES, TECHNIQUES AND SAFETY PRECAUTIONS BEFORE ATTEMPTING ANY SIMILAR ACTIVITY. THE SILHOUETTE IS NOT RESPONSIBLE FOR ANY MISUSE OF SAID DATA OR INFORMATION.							