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1 2 3 4 5 6 7	C. D. Michel – S.B.N. 144258 Clinton B. Monfort – S.B.N. 255609 Sean A. Brady – S.B.N. 262007 MICHEL & ASSOCIATES, PC 180 E. Ocean Boulevard, Suite 200 Long Beach, CA 90802 Telephone: 562-216-4444 Facsimile: 562-216-4445 Email: <u>cmichel@michellawyers.com</u> Attorneys for Plaintiffs		
8	IN THE SUPERIOR COURT O	F THE STATE OF CALIFORNIA	
9	FOR THE COU	NTY OF FRESNO	
10		10CEC9 02116	
11	SHERIFF CLAY PARKER, TEHAMA	) Case No.: <del>3:09-cv-08011-PCT-PGR ~</del>	
12	COUNTY SHERIFF; HERB BAUER	) ) DECLARATION OF STEPHEN	
13	AND PISTOL ASSOCIATION FOUNDATION; ABLE'S SPORTING, INC.; )	HELSLEY IN SUPPORT OF MOTION	;
14	RTG SPORTING COLLECTIBLES, LLC;	) THE ALTERNATIVE FOR SUMMARY	
15	AND STEVEN STONECIPHER,	) ADJUDICATION AND TRIAL	
16	Plaintiffs and Petitioners,	) Date: January 18, 2011	
17		) Time: 8:30 a.m.	. 
18	VS. )	<ul> <li>Location: Dept. 402</li> <li>Judge: Hon. Jeff Hilton</li> </ul>	
19	THE STATE OF CALIFORNIA; JERRY ) BROWN, IN HIS OFFICIAL CAPACITY AS )		
20	ATTORNEY GENERAL FOR THE STATE )	Date Action Filed: June 17, 2010	
21	OF CALIFORNIA; THE CALIFORNIA ) DEPARTMENT OF JUSTICE; and DOES 1- )	) •	
22	25, )		
23			
24	Defendants and Respondents. )		
25	)		
26	/		
27			
28			
	DECLARATION OF ST	TEPHEN HELSLEY - 1	

# **DECLARATION OF STEPHEN HELSLEY**

I, Stephen Helsley, declare as follows:

I make this declaration of my own personal knowledge and, if called as a witness,
 I could and would testify competently to the truth of the matters set forth herein.

# **Firearms and Ammunition Expert Qualifications**

- 2. My expertise regarding firearms and ammunition is an outgrowth of fifty years of studying and collecting firearms and ammunition. Throughout my life I have owned approximately four hundred firearms, of which I currently own approximately two hundred and twenty. I am an avid collector and student of firearms-related literature, and my collection contains approximately three thousand volumes.
- 3. In 1964, as a Criminology major at Fresno State College, I completed my first firearms course, which focused on Smith & Wesson revolvers and the .38 Special cartridge. In 1965, I began reloading my own ammunition and purchasing and studying literature specifically focused on ammunition cartridges. I now load ammunition for cartridges ranging from .223 Winchester to 8-bore. In that mix are metallic centerfire, paper cased and pinfire ammunition. I also shoot muzzle-loading guns and have hunted with a 20-b Ketland side-by-side flintlock shotgun c.1815.
- 4. In 1967, I began my employment with the California Department of Justice (DOJ). By 1970, I was the departmental firearms instructor, a duty I was assigned until I was appointed Bureau Chief of Narcotic Enforcement by Attorney General Deukmejian in 1979. During the years that I was the Department's firearms instructor, agents could carry any caliber cartridge they preferred. Thus, I routinely dealt with ammunition ranging from .22lr to .44 Remington Magnum.
- 5. In the early 1970s, I began competing in both rifle and pistol matches. By 1973 my expertise was recognized by Guns & Ammo magazine, when they asked me to

co-author a "Mini Manual" on *Custom .45 Automatics*. Since then I have authored at least 50 articles for thirteen other journals. The subject matter ranged from sniper rifles to tactical shotguns to civil war era cartridge conversion revolvers.

- 6. I have also reviewed books dealing with the history of ammunition production in England and France. Some examples of the books I have reviewed include *Systeme Lefaucheux* by Chris Curtis and *Paradox* by Roger Lake and David Baker. I have also acted as a researcher for other authors. One example is an article by Silvio Calabi that ran in the November/December 2006 issue of *Shooting Sportsman* magazine. The article "Less is More" is the definitive work on the origin and development of the 28-g shotshell. Additionally, I recently co-authored a book, *Hemingway's Guns*, which was published by Shooting Sportsman Books in October of 2010.
- 7. During the 1970s, while employed as a DOJ Field Supervisor in San Diego, I was first qualified in court as a "firearms expert." In 1973, I took the required training to become an NRA Certified Police Firearms Instructor and a California Commission on Peace Officers Standards and Training certified firearms instructor. In addition to being certified as a firearms expert, I am a member of the American Academy of Forensic Sciences and a Technical Adviser to the Association of Firearm and Tool Mark Examiners.
- 8. In 1970, I was awarded the Attorney General's Purple Heart Medal upon returning to duty with the Department of Justice after sustaining four gunshot wounds during an undercover heroin investigation. Subsequently, in 1974, I received the Attorney General's Valor Medal for my actions during an undercover cocaine investigation that resulted in a hostage situation and gun-fight.
- In 1975, I attended the FBI National Academy in Quantico, Virginia. Included in the required course work was one on firearms. I graduated from the 102nd session of the FBI National Academy with a 4.0 grade point average.

- In later years I took other firearms training that ranged from use of the Heckler & Koch 9mm MP5 submachine gun to concealed weapons training for a Nevada "carry permit."
- 11. When I became DOJ Chief of the Bureau of Narcotic Enforcement, I had the overall responsibility of reviewing agent-involved shootings, as well as purchasing their ammunition and firearms, which included handguns and rifles.
- 12. In 1985, I became Chief of the DOJ Bureau of Forensic Services (BFS). As BFS Chief, I was involved in setting standards for the casework of those doing firearm and tool mark examinations. On a larger scale, I was instrumental in establishing the California Criminalistics Institute ("CCI") which at that time was one of only three formal forensic training/research institutes in the United States. CCI established a number of firearms courses that are still being offered. I remained Chief of the BFS through 1988.
- 13. In 1988, I was promoted to Assistant Director of the DOJ's Investigation and Enforcement Branch, a position I held until I retired. As Assistant Director, I was deeply involved in firearm issues, including the drafting of assault weapon-related legislation. During this period, I was able to participate in ammunition testing at the U.S. Army Wound Ballistic Laboratory at Letterman Institute in San Francisco.
- 14. From 1993 until 2000, I was the State Liaison for the National Rifle Association ("NRA") in Sacramento. In that position I responded to requests from legislators and staff regarding ammunition and firearms-related matters. After leaving the NRA, my expertise in firearms and ammunition continued to expand as I logged countless hours hunting and shooting competitively, as well as reloading ammunition. New competitive disciplines that I engaged in included Long Range Tactical Rifle, Black Powder Rifle Cartridge Silhouette, and Military Rifle Silhouette. I also became involved in shotgun and double rifle competition. I hunted Bison in North Dakota with a Sharps rifle made in 1863 and grouse in

Maine with a French pinfire shotgun c.1860. For all of these activities, I reloaded my own cartridges. In 2003, I visited the Yuma Proving Grounds with a group of forensic scientists. I was there to have my ammunition tested using Doppler radar and high-speed photography.

15. At various times in the past I have conducted seminars on sniper rifles, and in 2007 and 2008, I co-taught a workshop on dangerous game rifles and the ammunition for them.

- 16. In 2003, I toured the principal gun making firms in Brecia and Gardone, Italy. In 2008, I did the same in Suhl, Germany. In 2005, I toured the Federal Cartridge Company in Anoka, Minnesota to learn how they made ammunition. For the past seven years, I have consulted with California-based gun makers B. Searcy & Co. and John Rigby & Co. Between 2004 and 2007, I also consulted with GaugeMate, Inc. on the design of sub-gauge adapters for shotguns.
- 17. My consulting efforts also involve civil and criminal matters. Most recently, I have been reconstructing the discharge of a pistol in a Central California training school that seriously injured one of the students. During the last decade, I have done fine gun photography and acted as a judge in the Gold Medal Concours d'Elegance of Fine Guns. My photographs of firearms and cartridges have been used for magazine ads and to support articles. Additionally, I inventory firearms collections and provide valuations if requested. The most recent was a 77-gun collection in Montana that I did in June. I recently traveled to Moscow, Russia where I toured an arms manufacturer and firearm museums. I am currently working on an article that examines shotguns and rifles made on the Needham patent of 1852. These firearms use "needle-fire" cartridges a design that was used by both armies in the Franco-Prussian War of 1870.
- I currently load 60 different types of ammunition. They range from the common (.30-06, .357 S&W Magnum and .30 Carbine) to the obscure (6.5x53.5mm Daudeteau, the .44 Evans and the 10.15x63mmR Serbian). I have the required

tools for at least 40 more should I choose to load for them. I have cast my own lead bullets since 1966 and also have experience with bullet swaging. Learning how to load ammunition properly (particularly for the obscure cartridges) requires extensive research. To that end my book collection contains many volumes on cartridge history, fabrication and reloading.

19. Knowledge acquired during the course of my studies and personal and professional experiences described herein form the basis for my testimony in this matter.

# Ammunition/Cartridge History, Distinctions, and Nomenclature

20. All modern centerfire and rimfire ammunition for use in rifles and/or handguns consist of the same components: a metal casing that suspends a metal projectile over a charge of powder confined within the metal casing and a primer (or priming charge) to ignite the powder - ("self-contained metallic ammunition"). A true and correct copy of *Principles of Firearms – Definitions – Ammunition Components*, http://rkba.org/guns/principles/definitions/ammunition.html (last visited December 5, 2010) is filed concurrently herewith as Exhibit "11."

21. Self-contained metallic ammunition has been available for almost 160 years. Whether a particular cartridge is used in a handgun (pistol or revolver) or a rifle (or a shorter carbine version) is determined by the needs and desires of the end user. Very large cartridges are generally not used in handguns because of recoil or the weapon's bulk, not because of design or strength limitations. Smaller and relatively less powerful cartridges have been, and continue to be, widely used in both rifles and handguns. This is generally referred to as "cartridge interchangeability." Thus, a single box of cartridges may be consumed by use in a rifle and a pistol.

22. By the 1880s, brass cartridge cases were in their modern form. The French invented smokeless powder circa 1886, which generally replaced black powder as

the most commonly used propellant in modern self-contained metallic ammunition.

23. Numerous cartridges, including, but not limited to, .22 Short, .22 Long Rifle, .30 Mauser, .32-20, .32 Smith & Wesson, .38-40, .44-40, .45 Long Colt, and 45-70 Government, can be used in identical firearms that were manufactured both in or before 1898 and after 1898, and are commonly used in handguns. True and correct copies of NORM FLAYDERMAN, FLAYDERMAN'S GUIDE TO ANTIQUE AMERICAN FIREARMS 265-66 (7th ed. 1998) (hereafter FLAYDERMAN'S) and Chuck Hawks, *A Brief History of .22 Rimfire Ammunition*, 2005, http://www.chuckhawks.com/history\_rimfire\_ammo.htm; and page 85 of FLAYDERMAN'S are filed concurrently herewith as Exhibits "12," "17," and "19," respectively.

24. Firearms manufactured in the "black-powder era" can safely use modern smokeless loads if the pressure generated is within its threshold. And the reciprocal is true, a modern firearm can safely use black-powder loads. For example, the .45 Long Colt cartridge has been in almost constant production since 1872. A firearm chambered for .45 Long Colt, whether manufactured before or after 1898, can shoot smokeless powder or black powder loads safely.

25. After self-contained metallic ammunition is manufactured, if stored correctly, it is likely to still work properly after a century has passed. Accordingly, when ammunition is manufactured, there is no way to know if it will be fired from a rifle or handgun - or will remain unused. For instance, military .30 M1 Carbine cartridges made during World War II or the Korean War may yet be used in a cowboy style revolver in 2015. True and correct copies of Robert Gibson, *A Pocket History of the M1 Carbine*, http://www.fulton-armory.com/M1Carbine.htm; and The Ruger New Model Blackhawk Single-Action Revolver,

http://www.ruger.com/products/newModelBlackhawkBlued/models.html (last

visited December 5, 2010) are filed concurrently herewith as Exhibits "30" and "31," respectively.

26. The historical record is quite clear that "cartridge interchange-ability" began almost immediately after "perfection" of the Lefaucheux pinfire metallic cartridge in the early 1850s. The following paragraphs provide a chronology that details when certain cartridges were introduced, the type of firearm they were originally used in, and how their interchangeability was applied in other types of firearms. Paragraphs 27 through 51 provide examples of cartridge interchangeability, though such examples are by no means exhaustive. As this phenomenon has not been confined to the United States, examples from Europe are also included. The chronology is divided into "Obsolete Cartridges", "Rimfire and Centerfire Cartridges" and "Single-Shot Pistols for all Sizes of Cartridges." In the paragraphs following that I will explain why when discussing the subject matter of ammunition it is crucial to use the proper terminology to avoid confusion. Then I will explain why I am unable to determine what ammunition is principally for use in a handgun.

#### **Obsolete Cartridges**

27. 12mm pinfire: In 1854, Eugene Lefaucheux patented and began producing a six-shot, 12mm pinfire revolver in Paris, France. In 1857, his revolver was adopted by the French military and production was instituted at the French Imperial Arms Factory at St. Etienne. Concurrently, Lefaucheux was producing revolver-carbines and single-shot rifles that used the 12mm cartridge for public sale. Lefaucheux-designed firearms (rifles and handguns) would later be made in both Belgium and Spain. As examples, true and correct copies of Firearms History, Technology & Development: Cartridges: Pinfire Cartridge, http://firearmshistory.blogspot.com/2010/05/cartridges-pinfire-cartridge.html (May 4, 2010); Gun & Game Forums – Some of my Antiques, http://www.gunandgame.com/forums/antique-firearms/103761-some-my-

antiques.html; and an Image of a Lefaucheaux Model 1854 are filed concurrently herewith as Exhibits "13," "14," and "15," respectively.

28. .41 Volcanic: In 1855, the Volcanic Repeating Arms Company (later renamed The New Haven Arms Company and then the Winchester Repeating Arms Company) produced a caseless .41 caliber cartridge that was utilized in both a handgun and carbine rifle. As an example, a true and correct copy of an Image & Description of Volcanic Lever Action Pistols and Carbines is filed concurrently herewith as Exhibit "16."

### **<u>Rimfire and Centerfire Cartridges</u>**

- 29. .22 Short: In 1857, Smith & Wesson introduced their Model No. 1 revolver that was chambered for the .22 rimfire Short cartridge. The .22 Short has been in continuous production since its introduction. It has been used in a range of firearms from gallery rifles to Olympic pistols and in every action-type (pump, single-shot, semiautomatic, lever action, etc.). The .22 Short can also be safely fired in any firearm (handgun or rifle) that is chambered for the .22 Long or .22 Long Rifle. Exhibit "17" is an example of this.
- 30. .577 Snider: In 1867, the British government adopted their first centerfire cartridge the .577 Snider. It was used in converted Pattern 1853 muzzle loading percussion rifles. Commercial manufacturers produced "double-barreled" Howdah pistols for dangerous game hunters that utilized this same cartridge. As an example, a true and correct copy of Arms Collectors' Association of the Northern Territory, Inc., *Tiger Tamer: A 12-Bore Howdah Double*, http://www.acant.org.au/Articles/HowdahRifle.html is filed concurrently herewith as Exhibit "18."
- 31. 44-40 Winchester: This was the original cartridge for the Winchester Model 1873 lever-action rifle. By 1878, Colt was using it in their Single Action Army Revolver. Exhibit "19" is an example of this. Both the Winchester and the Colt would later be chambered for the .38-40 Winchester and the .32-20 Winchester

cartridges. Later, the Winchester Model 1892 rifle, the Colt Lightning Slide Action rifle and the Marlin Model 1894 rifle and numerous Smith & Wesson revolvers would also be chambered for the same three cartridges. In the 1990s, what is generally described as "cowboy action shooting" became very popular (and has remained so) and resulted in replica firearms (rifles and revolvers) of the weapons previously described in this paragraph (and others) being imported primarily from Italy. As an example, a true and correct copy of What is SASS?, http://www.sassnet.com/About-What-is-SASS-001A.php (last visited December 5, 2010) is filed concurrently herewith as Exhibit "20." In addition to .32-20, .38-40 and .44-40, the imports are chambered for .38 Special, .357 Magnum and .45 Long Colt. As an example, a true and correct copy of Uberti 1873 Rifle & Carbine, http://www.uberti.com/firearms/1873 rifle and carbine.php (last visited December 5, 2010) is filed concurrently herewith as Exhibit "21." The .38 Special was introduced in 1902 by Smith & Wesson for use in their Military and Police Model revolver. The .357 Magnum was introduced in 1935 and the .45 Long Colt c. 1872.

32. .45-70 Government: The .45-70 was the US military's primary service cartridge for rifles from 1873 until the Spanish American War. It has been used in boltaction, single-shot, lever-action and pump-action rifles. Although a large cartridge, the .45-70 has also been used in a number of revolvers. Most recently, .45-70 revolvers have been made by Magnum Research and Super Six Ltd. As an example, a true and correct copy of Gallery of Guns – Item Detail – Magnum Research BFR 45-70,

https://galleryofguns.com/genie/Default.aspx?item=BFR45%2f707 (last visited December 5, 2010) is filed concurrently herewith as Exhibit "22."

33. .22 Long Rifle: This cartridge was likely introduced in 1887 by the Stevens Arms & Tool Co. for use in their single shot rifles. It is quite likely the most popular firearm cartridge in the world. It is estimated that millions of Ruger 10-22 rifles

alone have been made for it since 1964. A pistol version of the 10-22 called "The Charger" was also made. The number and variety of firearms that use the .22 Long Rifle cartridge are likely incalculable. As examples, true and correct copies of Ruger 10/22 Rifles, http://www.ruger.com/products/1022/index.html (last visited December 5, 2010) and Ruger Charger, http://www.survival-gear-guide.com/Ruger-Charger.html (last visited December 5, 2010) are filed concurrently herewith as Exhibits "23" and "24," respectively. Exhibits "17" and "22" are also examples of this.

34. 9mm Luger (9x19mm Parabellum): In 1902, the 9x18mm cartridge was developed for use in the American Eagle Luger pistol and other models. Luger also produced a carbine using the same cartridge. The 9x19mm has been used extensively in submachine guns. Various models of submachine guns have used and use the 9x19mm. It is also used in the Ruger 9mm PC carbine, the Marlin 9mm Camp Carbine and Colt AR-15 style rifles with a conducive upper-receiver. As examples, true and correct copies of 9mm Carbines & Grease Guns, http://www.best9mm.com/carbines/index.html (last visited December 5, 2010); Marlin Model 9 Camp Carbine Owner's Manual; and an Image & Description of a Luger Carbine, are filed concurrently herewith as Exhibits "25, " "26," and "27," respectively.

35. 9x23mm Largo: The cartridge was developed in Belgium in 1903. It was subsequently used in handguns made in Belgium (Bergman-Bayard) and Spain (Astra, Llama, Star and Jo-Lo-Ar). In addition to submachine gun use, three boltaction rifle models were made in Spain (Onena, Destroyer and Ignacio Zubillaga). As an example, a true and correct copy of 9mm Largo Firearms, http://www.9mmlargo.com/ (last visited December 5, 2010) is filed concurrently herewith as Exhibit "28."

36. 45 ACP: Developed for use in the Colt Model 1910 pistol and was later adopted by the US military with the Model 1911 Colt pistol. It is perhaps best known for its relationship to the Thompson Sub Machine Gun (Tommy Gun) and the M3A1 (Grease Gun). Harrington & Richardson produced M60 and M65 semi-automatic .45 ACP Reising Guns. The British military used the .45 ACP cartridge in modified No.1 Mark III Short Magazine Lee Enfield rifles to create the DeLisle carbine rifle. Later, Marlin produced the .45 Camp Carbine rifle which utilized this same cartridge. As an example, a true and correct copy of www.notpurfect.com – Neal Pritchett, *Firearms Reviews and Commentary - Marlin Camp Gun .45*, http://www.notpurfect.com/main/campgun.htm (last visited December 5, 2010) is filed concurrently herewith as Exhibit "29."

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37. 30 M1 Carbine: The cartridge and rifle were adopted in 1941. By the end of the war, 6.2 million carbines had been made. In 1963, the Director of Civilian Marksmanship began releasing the carbines for sale to members of the National Rifle Association. Increased consumer interest ultimately saw new manufacturers make carbine rifles that utilized this same cartridge. They included Plainfield, Universal, Iver Johnson and Marlin (M62 Levermatic). Among the handguns using the .30 carbine round was the Ruger Blackhawk revolver that has been produced for approximately 40 years. Exhibits "30" and "31" showcase examples. 38. .44 Remington Magnum: In 1955, Smith & Wesson introduced the .44 Remington Magnum cartridge for use in their Model 29 revolver. In 1961, Ruger introduced the Deerstalker .44 Magnum carbine -- about 250,000 of which were produced over the next 25-years. Ruger then introduced the Model 96/44M lever-action rifle c. 1996. Their most current model is the Model 77/44 bolt-action rifle. Lever action carbines have also been made by Rossi (Model 65 SRC), Browning B-92, Marlin (Model 1894) and E. M. F. (Model 1892). One pump-action carbine, the Universal Vulcan 440, was also produced. As an example, a true and correct copy of Jim Hammond, Shooting with Jim: Ruger 44 Magnum Carbine Product Review, http://www.shootingwithjim.com/ruger-44-carbine.htm (last visited December 5, 2010) is filed concurrently herewith as Exhibit "32."

l	39. 22 Winchester Magnum Rimfire - Introduced in 1960, it quickly became wildly
2	popular and is now a standard chambering in both rifles and handguns. Exhibit
3	"17" is an example of this.
4	40256 Winchester Magnum - When introduced in 1960, no firearm was chambered
5	for it. In 1963, Marlin offered their Model 62 Levermatic (a rifle) in .256
6	Winchester Magnum and in 1966, Ruger introduced a single shot pistol called the
7	Hawkeye, also chambered in .256 Winchester Magnum. As an example, a true
8	and correct copy of Chuck Hawks, The .256 Winchester, 2004,
9	http://www.chuckhawks.com/256Win.htm is filed concurrently herewith as
10	Exhibit "33."
11	41221 Remington Fireball: Federal law prohibits conversion of a rifle into a
12	handgun. Thus, existing bolt-action rifle actions couldn't be used to build
13	handguns. To fill this need, in 1963, Remington introduced the XP-100 single-
14	shot, bolt-action pistol that was chambered for the .221 Fireball cartridge. Later
15	they added a magazine fed version that was chambered for .223 Remington, .22-
16	250, 7mm-08 Remington, .250 Savage, .308 Winchester, .350 Remington
17	Magnum and .35 Remington. As an example, a true and correct copy of Glenn
18	Custom - PRICING - Remington XP-100,
19	http://glenncustom.com/pricing_remxp100.html (last visited December 5, 2010) is
20	filed concurrently herewith as Exhibit "34." In 2002, Remington began offering
21	their Model 700 bolt-action rifle in the same .221 Fireball chambering. As an
22	example, a true and correct copy of Bud's Gun Shop – Catalog – Rifles –
23	Remington 700 LV Light Varmint .221 Fireball,
24	http://www.budsgunshop.com/catalog/product_info.php/products_id/96185 (last
25	visited December 5, 2010) is filed concurrently herewith as Exhibit "35."
26	4241 Remington Magnum: Smith & Wesson introduced the .41 Remington
27	Magnum cartridge with their Model 57 revolver in 1964. Ruger, and others, make
28	.41 magnum revolvers and Marlin offers the cartridge in their Model 1894 lever-
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1	action carbine. As an example, a true and correct copy of Impact Guns – Marlin
2	41 Magnum Model 1894FG 20" Walnut,
3	http://www.impactguns.com/store/1894FG.html (last visited December 5, 2010) is
4	filed concurrently herewith as Exhibit "36."
5	4340 Smith & Wesson: This cartridge was the result of work by Winchester and
6	Smith & Wesson c.1989. It is used in a variety of handguns, as well as carbines,
7	including the Beretta Cx4 Storm, the Hi Point 4095, the Kel-Tec SUB-2000, the
8	Olympic Arms K40, (as an example, a true and correct copy of . 40 S&W
9	Carbines: We Shoot Hi-Point, Beretta, Olympic Arms, GUN TESTS, May 2006,
10	http://www.gun-tests.com/issues/18_5/features/5332-1.html is filed concurrently
11	herewith as Exhibit "37") as well as others such as the Ruger PC4 carbine. DAN
12	SHIDELER, THE GUN DIGEST BOOK OF MODERN GUN VALUES (15th ed. 2009) 433
13	(hereafter GUN DIGEST). And, AR-15 lowers are commonly chambered in .40
14	S&W. The Federal Bureau of Investigation sought AR-15 carbines chambered in
15	.40 S&W as its officially issued carbine. See a true and correct copy of <i>Colt</i>
16	Pattern . 40 S&W Caliber Carbines, FEDERAL BUSINESS OPPORTUNITIES, Aug. 7,
17	2009,
18	https://www.fbo.gov/index?tab=core&s=opportunity&mode=form&id=6ac219a2
19	e12e8aedc2755b3053e32af1&tabmode=list filed concurrently herewith as Exhibit
20	"38."
21	44. 5.7x28mm: This cartridge was developed in the 1990s for dual use (handgun and
22	carbine). It originally could only be used in two firearm models available to
23	civilians: the PS90 semi-automatic carbine rifle and the FN Five-Seven semi-
24	automatic pistol. As an example, a true and correct copy of FNH 5.7x28 Bulk
25	Ammo Advertisement is filed concurrently herewith as Exhibit "39." Since then,
26	AR-57 uppers chambered for the FN cartridge have been produced, as has a new
27	carbine called the FN PS90. Other companies are expected to produce other
28	models of firearms chambered in this cartridge in the near future.

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45. .17 HMR and .17 Mach 2: These two rimfire cartridges were introduced in 2002 and 2004 respectively. They use the .22 Magnum and .22 Long Rifle cases and smaller diameter bullets. They can (and are) being used in all manner of handguns and rifles, just like .22 rimfire cartridges. As examples, true and correct copies of Chuck Hawks, The .17 Hornady Magnum Rimfire, 2007, http://www.chuckhawks.com/17HMR.htm; and Excel Arms - New Products -New Models X-22P and X-22R, http://www.excelarms.com/newproducts.html (last visited September 6, 2010) are filed concurrently herewith as Exhibits "40" and "41," respectively. Single Shot Pistols that Utilize All Ammunition Cartridges 46. Thompson/Center: In 1967, Thompson/Center introduced their Contender pistol (the "T/C"). It is a single-shot, break-action design that utilizes interchangeable barrels to accommodate all cartridge sizes that can be used in rifles. T/Cs have been chambered for cartridges from the diminutive .17 Mach 2 rimfire to those suitable for hunting elephants. The current model of the Contender is the G-2. Their website lists 102 available chamberings. Other barrel makers offer a greater selection. As examples, true and correct copies of About Thompson Center Arms, http://www.tcarms.com/about (last visited December 5, 2010); Thompson Center Arms - Caliber Selection - Encore Pistols, http://www.tcarms.com/customShop/chart encore pistol.php (last visisted December 5, 2010); Match Grade Machine – Chamberings Available, http://www.matchgrademachine.com/chamberings\_public.php (last visited December 5, 2010); and John Taffin, The Custom Pistols of Gary Reeder, Guns Magazine, March 2001, available at http://findarticles.com/p/articles/mi\_m0BQY/is\_3\_47/ai\_70650330/ are filed concurrently herewith as Exhibits "42," "43," "44," and "45," respectively.

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1	47. BF Single Shot: The range of cartridges for use in this pistol is .17 rimfire to .45-
2	70, all of which cartridges can be and are used in various rifles. (GUN DIGEST
3	107.)
4	48. Kimber Predator Hunter: The range of cartridges for use in this pistol is .221
5	Fireball to 7mm TCU, all of which cartridges can be and are used in various
6	rifles. (GUN DIGEST 176.)
7	49. Magnum Research Lone Eagle: The range of cartridges for use in this pistol is .22
8	Hornet to .444 Marlin, all of which cartridges can be and are used in various
9	rifles. (GUN DIGEST 185.)
10	50. Pachmayr Dominator: The range of cartridges for use in this pistol is .22 Hornet
11	to .35 Remington, all of which cartridges can be and are used in various rifles.
12	(GUN DIGEST 196.)
13	51. Savage Striker: The range of cartridges for use in this pistol is .22-250, .243
14	Winchester and .308 Winchester, all of which cartridges can be and are used in
15	various rifles. (GUN DIGEST 207.)
15 16	various rifles. (GUN DIGEST 207.) Designating ammunition between caliber or cartridge
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16 17	Designating ammunition between caliber or cartridge
16 17 18	Designating ammunition between caliber or cartridge 52. For the person who knows little about firearms, the imprecise use of technical
16 17 18 19	Designating ammunition between caliber or cartridge 52. For the person who knows little about firearms, the imprecise use of technical terms is predictable. A common error is to assume that "everyone knows"
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16 17 18 19 20 21 22	Designating ammunition between caliber or cartridge 52. For the person who knows little about firearms, the imprecise use of technical terms is predictable. A common error is to assume that "everyone knows" something or that it is "common knowledge." When people refer to ".22s," "9mms," ".45s," or any other "caliber" of cartridges, and assume they have communicated effectively the specific ammunition cartridge they have in mind,
116 117 118 119 200 21 221 222 23	Designating ammunition between caliber or cartridge 52. For the person who knows little about firearms, the imprecise use of technical terms is predictable. A common error is to assume that "everyone knows" something or that it is "common knowledge." When people refer to ".22s," "9mms," ".45s," or any other "caliber" of cartridges, and assume they have communicated effectively the specific ammunition cartridge they have in mind, they are usually mistaken.
116 117 118 119 200 221 222 233 233	<ul> <li>Designating ammunition between caliber or cartridge</li> <li>52. For the person who knows little about firearms, the imprecise use of technical terms is predictable. A common error is to assume that "everyone knows" something or that it is "common knowledge." When people refer to ".22s," "9mms," ".45s," or any other "caliber" of cartridges, and assume they have communicated effectively the specific ammunition cartridge they have in mind, they are usually mistaken.</li> <li>53. Cartridges have 'names.' Those originating in Europe are frequently described by</li> </ul>
116 117 118 119 20 21 22 23 22 23 24 25	<ul> <li>Designating ammunition between caliber or cartridge</li> <li>52. For the person who knows little about firearms, the imprecise use of technical terms is predictable. A common error is to assume that "everyone knows" something or that it is "common knowledge." When people refer to ".22s," "9mms," ".45s," or any other "caliber" of cartridges, and assume they have communicated effectively the specific ammunition cartridge they have in mind, they are usually mistaken.</li> <li>53. Cartridges have 'names.' Those originating in Europe are frequently described by their bullet diameter and case length in millimeters (<i>e.g.</i>, 9x35mmR (rimed).)</li> </ul>
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116 117 118 119 20 21 22 23 24 25 25 66	<ul> <li>Designating ammunition between caliber or cartridge</li> <li>52. For the person who knows little about firearms, the imprecise use of technical terms is predictable. A common error is to assume that "everyone knows" something or that it is "common knowledge." When people refer to ".22s," "9mms," ".45s," or any other "caliber" of cartridges, and assume they have communicated effectively the specific ammunition cartridge they have in mind, they are usually mistaken.</li> <li>53. Cartridges have 'names.' Those originating in Europe are frequently described by their bullet diameter and case length in millimeters (<i>e.g.</i>, 9x35mmR (rimed).) England has traditionally described cartridges by bore diameter (<i>e.g.</i>, .450 Adams). The American approach has been a mixture that includes groove</li> </ul>

N.H. Roberts), the company that introduced the cartridge (.44 Remington Magnum) or something fanciful (.22 Cheetah).

54. Three terms, in order of specificity, are used to describe a loaded, self-contained metallic cartridge – ammunition, caliber, and its given name(s). "Ammunition" is defined in the Glossary of the Association of Firearms and Tool Mark Examiners as "One or more loaded cartridges consisting of a primed case, propellant, and with one or more projectiles. Also referred to as fixed or live ammunition." The definition of "caliber" depends on whether it is applied to a firearm or ammunition. When applied to ammunition, the Glossary of the Association of Firearms and Tool Mark Examiners defines it as "[a] numerical term, without the decimal point, included in a cartridge name to indicate the nominal bullet diameter."

55. I have reviewed the "calibers" listed by Defendants in response to Plaintiffs' discovery requests (.454, .45, .44, .40, 10mm, .38, .380, .357, 9mm, .32 and .25). The "caliber" used as part of the name for a cartridge is frequently not an accurate description of the bullet or bore diameter. For instance, according to FRANK C. BARNES, CARTRIDGES OF THE WORLD (Layne Simpson, ed., Gun Digest Books 12th ed. 2009), the .454 Casull has a bore diameter of .452. Likewise, the .38 Smith & Wesson Special is .357, the .32 Smith & Wesson is .312, the .44 Remington Magnum is .429, the 9x18mm (Makarov) is .363, the .218 Bee is .224, the .380 Automatic is .358, the 44 Evans Long is .419, the .32 Protector is .300, etc.

56. Also, within each "caliber" there is a wide range of cartridge lengths, bullet weights, velocity, power, applications and true bullet diameters. Paragraphs 57-64 provide some examples. Perhaps the smallest ".22" is the .22 BB (Bulleted

Breech) Cap. It was introduced in 1845 for the Flobert parlor (salon) rifles. It is still produced and can be fired in any .22 rimfire rifle or handgun. On the other end of the spectrum is the .220 Swift, which was introduced in 1935 and is usually used for long-range varmint shooting.

1.8

- 57. Here is a non-exhaustive list of other ".22s": .222 Remington, .222 Remington Magnum, .223 Remington, .22 PPC, .225 Winchester, .22-250 Remington, .22 Accelerator, .22 Savage High-Power, .22-3000, .22 Hornet, .22 K Hornet, .22 Waldog, .22 Dasher, .22 BR Remington, .220 Weatherby Rocket, .22 Cheetah, .22 Newton, .226 JDJ, .224 Weatherby Magnum, .221 Remington Fireball, .22 Remington Jet, .22 CB Cap, .22 Short, .22 Long, .22 Long Rifle, .22 Extra Long, .22 Winchester Rimfire (WRF), .22 Winchester Magnum (WMR), .22 Winchester Automatic, .22 Remington Automatic, .22 ILARCO 22 Short Magnum Rimfire and the .22 Rimfire Shotshell.
- 58. The difference between certain .22 caliber cartridges is readily apparent. As an example, a true and correct copy of a photograph I took on November 28, 2010 is attached as Exhibit "48," the pair of cartridges pictured at the very left are the .22 BB Cap and the .220 Swift respectively.
- 59. Nine-millimeter cartridges generally had their origin in Europe where that bore diameter found great favor. The oldest is the 9mm pinfire for the Lefaucheux revolver that dates to the mid-19<sup>th</sup> Century. The 9x17mm is a popular 9mm cartridge, and is also known as a .380 domestically. The 9mm Mauser (9x57mm) is a big game hunting cartridge. The difference between the 9x17mm and the 9x57mm is readily apparent in Exhibit "48" where the middle pair of cartridges pictured are the 9x17mm and the 9x57mm respectively.
- 60. Here is a non-exhaustive list of other 9mm cartridges: 9mm Mauser
  Revolver,9x47mmR Swiss, 9x35mmR, 9x40mmR Target, 9mm Knecht Revolver,
  9mm Nagant Revolver, 9mm Luger, 9x63mm Hessmer, 9x56mm Mannlicher,
  9x56mm Haenel, 9x62mm Karl Puff, 9mm Browning Long, 9mm Browning

1	Short, 9mm Steyr, 9mm Bergmann Mars, 9mm Borchardt, 9mm Gasser Revolver,
2	9x38mmR Tesching, 9x42mmMB Target, 9x61mmR Hunting, 9x67mmR
3	Hunting, 9x71mm Peterlongo, 9x53.4mmR Mannlicher, 9x17mm, 9x18mm,
4	9x21mm, 9x72mmR Sauer, 9mm Winchester Magnum, 9mm Federal, 9mm
5	Action Express, 9x25 Dillon and 9mm Glisenti.
6	61. The difference between certain 9mm caliber cartridges is readily apparent. As an
7	example, a true and correct copy of a photograph I took on November 28, 2010 is
8	attached as Exhibit "48," the pair of cartridges pictured in the center are the
9	9x17mm and the 9x57mm respectively.
10	62. Forty-five caliber cartridges are most commonly of domestic origin. The first was
11	probably the .45 Long Colt (c.1872) to be soon followed by the .45 Government
12	(.45-70). Sharing the "45 caliber" title is the .458 Winchester Magnum that was
13	introduced in 1965 for dangerous game (elephant and Cape buffalo) hunting.
14	63. Here is a non-exhaustive list of other .45 caliber cartridges: .45 Automatic
15	Short, 45ACP, 45-90, 450 Marlin, 45-50 Peabody, .45 Remington Thompson, .45-
16	60 Winchester, .45-75 Winchester, .45-100 Ballard, .45-125 Winchester, .45-100
17	Van Choate, .45-100 Remington, .45-120 Sharps, .45 Silhouette, .458x1.5"
18	Barnes, .458x2" American, .450 Alaskan, .450 Howell, .450 Watts Magnum, .458
19	Lott, .450 Assegai, .450 Ackley Magnum, .45 Winchester Magnum, .45 Smith &
20	Wesson, .450 Rigby, .450 Adams, .45 Auto Rim, .45 Webley and .450 Nitro
21	Express.
22	64. The difference between certain .45 caliber cartridges is readily apparent. As an
23	example, in Exhibit "48," the pair of cartridges pictured at the very right are the
24	.450 Adams and the .458 Winchester Magnum respectively.
25	Cannot Determine whether Cartridges Are Principally for Use in Handguns vs. Rifles
26	65. Virtually all modern, commercially produced self-contained metallic ammunition
27	can be safely used interchangeably in a rifle or a handgun.
28	

66. There is no generally accepted definition of "handgun ammunition," nor any
commonly understood delineation between "handgun ammunition" and other
ammunition used in the firearms industry, let alone one that allows one to
determine whether certain cartridges are "principally for use" in handguns.
67. Whether a given cartridge is used more often in a handgun than in a rifle may
change and fluctuate over time, depending on the changing popularity and usage
of different types of firearms which utilize that cartridge, or vice-versa.
68. Commercial cartridges are sometimes labeled as being for "rifles" or "pistols."
For instance, Eley makes .22 Long Rifle 40gr Match Pistol ammunition. Despite
the "pistol" designation, it can be safely and effectively used in a rifle. In fact, the
name of the cartridge (.22 Long Rifle) adds to the confusion. Conversely,
Remington .30-30 Express Core-Lokt Rifle cartridges can be used in a Thompson
Contender handgun that is chambered for that cartridge.
69. That "dual-use" of ammunition is anticipated by the manufacturer (box markings
aside) can be seen by the disclaimer on a box of Remington .223 ammunition. It
reads "Notice: These Remington cartridges are adapted to and intended for use
only in arms in good condition originally chambered and designed for the
cartridge." The markings on ammunition boxes are interesting, but are not
controlling as to how it can ultimately be used, or as to whether that particular
ammunition was intended to be used, or will actually be used, more often in a
handgun than in a rifle. Such a determination cannot be made from looking at the
packaging nor from consulting any other resource.
70. While firearms and ammunition literature sometimes make reference to "handgun
ammunition" and "rifle ammunition," when referencing some cartridges, I assume
the authors never anticipated making the technical distinctions necessitated by CA
Penal Code section 12060.
71. The inclusion of military and law enforcement use of submachine guns in
determining whether a certain cartridge is used more often in a handgun could

•	
	have a significant impact, because submachine guns use the same ammunition as
1	
2	many handguns. For instance, the Heckler & Koch MP5 is a popular submachine
3	gun model with both law enforcement and military special operations personnel.
4	It was the submachine gun issued to me by the Department of Justice when I was
5	Assistant Director. The Heckler & Koch MP5 uses the 9mm Luger cartridge. In
б	prior decades, the 9mm Uzi and the .45 ACP Thompson submachine guns were
7	widely used. Such firearms are not "handguns," as they are intended to be fired
8	from the shoulder. From my experience with the Department of Justice, training
9	with submachine guns consumes significant amounts of ammunition, possibly
10	more so than training with handguns chambered for the same cartridge.
11	72. Neither the academic and professional works comprising my library nor my
12	experiences qualifying me as an expert in firearms and ammunition provide me
13	with knowledge as to what cartridges are "principally for use in a handgun."
14	73. Furthermore, I do not know of any sources from which I could determine what
15	cartridges suitable for use in both rifles and handguns are used more often in a
16	handgun than in a long gun.
17	I declare under penalty of perjury under the laws of the State of California that the
18	foregoing is true and correct.
19	Dated: December 6, 2010
20	
21	Stephen Helsley
22	
23	
24	
25	
26	
27	
28	
	DECLARATION OF STEPHEN HELSLEY - 21

1	PROOF OF SERVICE
2	STATE OF CALIFORNIA
3	COUNTY OF FRESNO
4 5	I, Claudia Ayala, am employed in the City of Long Beach, Los Angeles County, California. I am over the age eighteen (18) years and am not a party to the within action. My business address is 180 East Ocean Blvd., Suite 200, Long Beach, California 90802.
6	On December 6, 2010, I served the foregoing document(s) described as
7 8	DECLARATION OF STEPHEN HELSLEY IN SUPPORT OF MOTION FOR SUMMARY JUDGMENT OR IN THE ALTERNATIVE FOR SUMMARY ADJUDICATION AND TRIAL
<ul> <li>9</li> <li>10</li> <li>11</li> <li>12</li> <li>13</li> <li>14</li> <li>15</li> <li>16</li> <li>17</li> <li>18</li> <li>19</li> <li>20</li> <li>21</li> <li>22</li> <li>23</li> <li>24</li> </ul>	<ul> <li>on the interested parties in this action by placing         <ul> <li>I the original</li> <li>[X] a true and correct copy             thereof enclosed in sealed envelope(s) addressed as follows:             <ul></ul></li></ul></li></ul>
25 26 27	in accordance with ordinary business practices. Executed on December 6, 2010, at Long Beach, California. X ( <u>STATE</u> ) I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct.
28	CLAUDIA AYALA
	DECLARATION OF STEPHEN HELSLEY