January 2018

At Avalanche Mitigation Services (AMS) we warmly welcome competition to our Falcon GT Avalauncher - as long as the playing field is level. As such, we have always stood behind a philosophy of providing 'documentable' statements- ones that can be backed by undisputable facts. One of our competitors employs a different strategy- one that damages our reputation. It is with this brief report that we set the record straight.

On Dave Sly's Maple Leaf Powder web site it states: "The Avacaster is supported by our group of marketing companies. We have experienced, highly skilled, field technicians who know how to resolve your Avalauncher issues. We are not a lone individual who cannot properly support or stand up for their product." This statement is clearly aimed at AMS since we are the only other Avalauncher manufacturer in North America. To clarify, we used Aerospace Engineers to design the Falcon GT Avalauncher. Folks who work for NASA and the Jet Propulsion Lab. Our engineer is also an outdoor badass- guiding Everest numerous times. It was our design vision to not only use our personal hands-on Avalanche Mitigation expertise but to employ like talented professionals to design the Falcon GT. No competing Avalauncher manufacturer in the world can claim this. Our field based, full pressure field testing with fully weighted inert projectiles and an Applied Physicist lead to the most efficient Avalauncher in the world as well as spot on Targeting Models. On the other hand, the Nitro Xpress Avalauncher ownership, marketed by Maple Leaf Powder, admit to lying about purported Patents and Range numbers- see attached. Their bogus range numbers are still posted on Mr. Sly's web site.

Interestingly, the Avacaster Ops Manual states only a 1.5 km effective range with 615 meters elevation gain while the Falcon GT's super efficient, science based design documents 2325 meters at 300 psi with 685 meters elevation gain for Peters/Avalanche Control Systems/CIL Classic rounds. That, my friends, **gives the Falcon GT Avalauncher over 50% more horizontal range** with greater vertical gain than the Avacaster at the same pressure with similar Nitrogen volumes. Nitrogen gas isn't cheap as any astute launcher based program manager will attest. Most former Launcher Company B2000M users find they can reach their targeting objectives with our machine with 10% less pressure.

We even help folks who don't own our products. Contrary to Sly's heckle that we're a Lone Gunman, we've given phone guidance to folks to fix their non AMS products No need for pricey on site tech support- simply unnecessary most of the time. We not only know our own products inside and out but we are true Avalauncher experts no matter who the manufacturer. For example, here is someone we helped for free- although several years later they bought one of our Avalaunchers:

John, just wanted to send a letter of gratitude for the technical support you provided us on our McCracken Avalauncher last week. Your education and credentials speak for themselves, but what you don't see in those is the man and the person. In our conversations and email communications what came through to me was your willingness to help others, to take time out of your busy schedule to offer guidance and technical support to someone who doesn't even own one of your guns. These are the intangible traits that, I am sure, will continue to make you and your business extremely successful in your field. With great respect and deepest regards, Matthew M. Mierzejewski, Surface Services Supervisor, Freeport-McMoran Copper and Gold- Henderson Mine

When Maple Leaf Powder rave up their 'experienced, highly skilled field technicians' we have to wonder if they were on site for the photos posted on Maple Leaf's web site. At AMS we would never think of mounting an Avalauncher on a truck bed- in fact, we forbid our customers to do so for various safety reasons that we will be glad to elaborate on. The ability to hype marketing or install chair lifts does not in any way make someone capable of designing a world class Avalauncher. Pete Peters, in all his ingenuity, held himself back by not tasking Engineers for input. The French Atomic Energy Commission designed their Avalauncheur in the early 1980s- the first Breech loading Avalauncher.

While we have a much more efficient valve we meet this machine manufacturer on a respectful, level playing field. It is likely because of this that we have a cooperative research agreement in place with the manufacturer of their binary explosive projectile. What do Avalauncher specialists who have used other machines have to say about the Falcon GT?

Hi John, we just fired the launcher for the first time last Tuesday. I have fired thousand of launcher rounds from all sorts of guns. Yours is by far the best. You beautifully addressed all of the things that drove me crazy for years. Congratulations and thanks. Rick Owsley built us a trailer right on par with your launcher. Tanks and tube stored below the deck. Jacks with crampons! Nice tool boxes and it is very stable. If anyone would like one built Rick is interested in building another and gets my highest recommendations. I don't think ITD will be buying another gun right now but if we do I would want a Falcon. Cheers, Bill Nicholson, Idaho Transportation Department Lead Avalanche Forecaster

Hi John, I just wanted to let you know how pleased we are with your Falcon GT Avalauncher- it is a really well-built, precision instrument that is proving to be invaluable at our Laguna del Maule project in Chile for doing avalanche control. I am also really pleased with all the support that you were able to provide us in getting the Avalauncher fully operational- in that regard, it has been a real pleasure...developing the ranging tables and making sure that the targeting is spot-on. Please don't hesitate to include me as a reference if anyone would like to know more about how well your Avalauncher works, and how good your customer support is. Thanks again, Frank W. Baumann, P.Eng., Geological Engineer - Special Projects

Sunshine Village ski resort in the Canadian Rockies bought a Falcon GT Avalauncher in the summer of 2011, which we installed at the base of Delirium Dive (so we named it the "Delirium Falcon"). We have had great success with the gun using Orica's AVR 1 and AVR 2 rounds for different placements. It has proven to be far more precise than the vintage guns we're accustomed to, and is certainly a safer product to deploy explosives from. We even had good success with a mid-storm shoot in February where winds were over 100km/hr at ridge top and the temperature was somewhere in the -18 Celsius/ 0 Fahrenheit range. Great work on this gun John, and thanks for all the advice along the way. Cheers, BRENDAN MARTLAND, Avalanche Forecaster; Snow Safety Supervisor

Next up, again from Maple Leaf Powder's web site: "Ammunition sits in the barrel ahead of heavy breach metals." And, Mr. Sly comments on his Avacaster video: "...Ammunition sits up in the Barrel...outsider of the valve where all the violent vortexing of the gases get dumped." Maple Leaf aims this most directly at the earliest Falcon GT Avalaunchers- a model that hasn't been sold since 2011 and was easily modified. It is interesting that the Nitro Xpress and the Avacaster rave up the heavy Ribbed Barrel that these machines are supplied with- a Barrel with dramatically more metal than any other Avalauncher in the world. And, truth be told, I'd bet a cold beverage that the Avacaster and any other Avalauncher ever made <u>all</u> place the Tail end of the projectile more or less the same distance from the front of the gas dump ports.

Speaking of violent vortexes, remember that it was AMS who got to the bottom of the elusive 'Barrel Scratches.' AMS presented their finding to CIL, Dave Sly, the National Ski Area

Association's Explosive Committee and Orica in January of 2013- that as a result of reflected pressure pulses the Arming Disk was being stripped off in the Barrel during launch compromising the fuzing safety system. The world's foremost Avalauncher authority confirmed our findings (Update 2019: see our "**Arming Disk Projectile Safety Bulletin** 2013" article). Maple Leaf's 'experienced, highly skilled, field technicians' on the other hand said just prior to our report that: "As you can see we have scratches... what else would you expect from an aluminum tube that has hard things speeding thru it? None of the gunners thinks that it is an issue" and "We are all in agreement that it is physically impossible for the base plate on a stubby to contact the inside wall of the tube" and "We also expect friction and wear on our skis from skiing on rocks... it goes with the territory and we replace them when they are worn out." All ignorant statements from an 'experienced, highly skilled field technician'. The result of AMS's research? Orica pulled their Arming Disk projectile from the market that day while the business Mr. Sly represents issued a notice reaffirming their mandate to fire from protection (2019 update: Stubby was discontinued around 2016- see attached). Some manufacturers, you guessed it- the Lone Gunman, have used scientists to understand the 'violent vortexes' while others simply stumble about the vortex with short lived products, unacceptable quality control and sales antics aimed to confuse where the real expertise lies (Update 2019: see attached note from CIL firing Dave Sly).

Maple Leaf Powder's web site states: "Removable end caps on the pressure vessels enables proper clean out to avoid rust and corrosion." The French Avalauncheur manufacturer, Ruggieri, has made 168 Avalauncheurs, none of stainless steel and all without cleanouts. Pete Peters, of Avalanche Control Systems, has made over 100 Avalaunchers- none of stainless steel and none with cleanouts. Ralph McCracken of the Launcher Company made around 60 Avalaunchers- none of them stainless and none with cleanouts. Why, you ask, does a device containing Nitrogen, a moisture free gas, need to have Pressure Vessels made of stainless steel and why drive up cost with 'removable end caps' when there is nothing to clean out? We wonder that as well. One could counter that the Breech is exposed to the environment- wouldn't it be nice to make that out of stainless steel? Bottom line is that an Avalauncher, like many machines, needs proper lubrication to function no matter what it is made of. All of our customers who have followed our simple and thorough Operation's Manual have had zero need for stainless steel or removable end caps. Nor have the hundreds and hundreds who bought the other mentioned machines. Hype may sound nice but it doesn't increase accuracy, target repeatability or efficiency. Just ask the folks who designed the Nitro Xpress and went belly up within a few years.

Maple Leaf Powder's Avacaster offers a quick release Trigger. My Toyota Tacoma doesn't need to have its starter removed during cold weather, why should an Avalauncher? We will be glad to discuss the matter with you- just give us a call. Suffice it to say that it is a design we are not comfortable with. Same goes for the Avacaster's 400 psi Pressure Relief Valve since max launch pressure for all the projectiles, other than the French, stand at just 300 psi. While we are complemented that the Avacaster copied our pioneering Azimuth Plate and use of Toggle Clamps they missed the mark on duplicating our efficiency as their range numbers bear out.

Maple Leaf Powder touts a 2 year Avacaster Warranty. To date, we have never had a Warranty issue with any of our 37 machines in the field. Nor have ANY of our Customers felt

the need to have expensive Service Contracts for assistance with simple routine maintenance. We of course offer any and all assistance needed. We collaborate with Avalanche Engineering groups to provide global analysis of avalanche problems and complete set up of solutions and training. Our Customers' Endorsements on our Homepage are there for a reason- follow up with them as they are our best salespersons. While on our web site also see our Credentials, Photo Gallery, prices and the many articles that we have written on explosive and avalanche related topics that have been printed in numerous worldwide trade journals.

Finally, let's address the Colorado Department of Transportation's inbore predetonation. AMS was on scene at the accident several hours after it occurred- 3/31/2014. We spoke directly with the Lead Gunner, who has been using Avalaunchers for over 30 years. He said the Falcon GT operated properly. The ATF's report stated they could not find fault with the Avalauncher. AMS asked to inspect the Avalauncher and the Projectile system but strangely were not allowed to do so. As far as we know, only one item was recalled as the result of that accident and it was part of the fuzing system of the projectile- and AMS does not manufacture or distribute projectile systems. The machine that was involved in the accident had over 4000 projectiles through it without issue prior to the accident. To date we have 37 machines in the field with tens of thousands of projectiles through them.

In closing, we were always taught that the most valid indicator of avalanche instability was recent avalanching. To us, the biggest indicator of unprofessionalism is the repeated telling of non truths. See the 'Debunking Dave Sly' article that is on the ARTICLES page of our web site. It was printed as a Letter to the Editor in both the Canadian and American Avalanche Association journals. Mr. Sly was given the opportunity to reply to my Letter in both journals but declined. We don't spend our modest profits glad handing at Trade Shows, hard selling face to face or blowing smoke. As such, we occasionally have to call a spade a spade. Innuendo has no place in avalanche forecasting or Avalauncher marketing- you owe it to yourself to check the facts. Our web site has all the information needed to educate you on all things Avalauncher. Remember we also have upgrades for older launchers to increase their accuracy and target repeatability. Feel free to forward this report but only do so in its entirety and with the attached PDF. Please contact us with any questions or comments. Best wishes, John Brennan, President, Avalanche Mitigation Services, www.avalanchemitigationservices.com

From: Giles Russell [giles@snowtek.co.nz]
Sent: Friday, October 31, 2008 1:25 PM
To: [redacted]
Subject: RE: linear
Marketing people like to put inappropriate numbers in just so it looks right.

Giles

From: [redacted]]
Sent: Friday, 31 October 2008 10:05
To: giles@snowteksystems.com
Subject: linear

Dear Sir,

I have applied fluid kinematics concepts to pneumatic devices similar to your Nitro Xpress and I'm curious why projectile range on vessel pressure is perfectly linear as advertised on your web page?

Kind Regards,

[redacted]

[redacted]
Applied Physicist
[redacted]

John Brennan

From: Everett Clausen <everett.clausen@cilexplosives.com>
Sent: Saturday, January 26, 2019 1:27 PM
To: John Brennan
Subject: Re: Stubby

Stubby was discontinued several years ago

Sent from my iPhone

On Jan 25, 2019, at 3:52 PM, John Brennan <jb@avalanchemitigationservices.com> wrote:

> I assume you are back now, Everett. Trust you had a fantastic trip. Please confirm that the Stubby was discontinued and with a rough date it was taken off the market. Thanks and best wishes
>
> John Brennan
> Avalanche Mitigation Services
> www.avalanchemitigationservices.com
> 970-300-8001

4-18-2019

Div: EVANinc

533, Argenteuil
LACHUTE, Québec
Canada J8H 3Y2

Tel.: 450 566-0655
Fax: 450 566-0677
Web: www.cilexplosives.com

C-I-L Explosives is disappointed but determined in having to announce the suspension of commercial operations between C-I-L Explosives and Dave Sly's Maple Leaf Powder Co due to irreconcilable business disparities. This separation of business is effective immediately and any contact with C-I-L for purposes of Avalanche Control should be made from now on with Braden Schmidt, C-I-L's Technical Marketing Manager at :
Tel or Text 250 423 3302 or Email: braden.schmidt@cilexplosives.com