

# Have Drill, Will Travel

LOW-IMPACT, HELI-PORTABLE DRILLING SPECIALIST, SKYDANCE-XTREME HAS MADE A SIZABLE IMPACT ON THE MARKET.

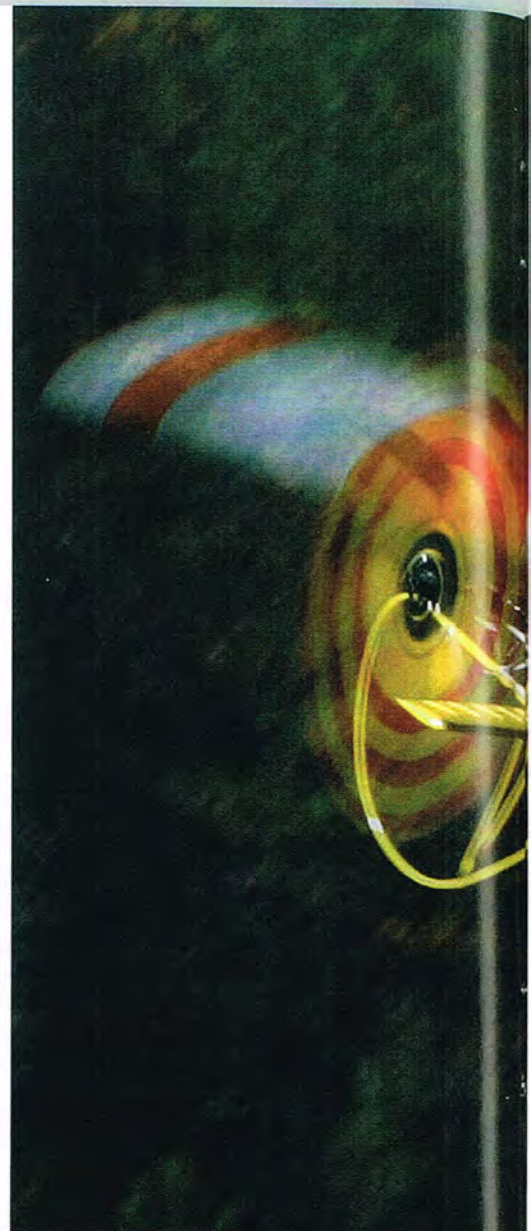
Story and photos by Jason Colquhoun

It's a late October morning in Southern Utah, and the crisp mountain air rushes through the open cockpit of the Lama helicopter we're flying in. There are no heaters or fancy cockpit comforts to be found here, this is a working helicopter. Comforts are simply extra weight.

Flying at an altitude of over 7,000 feet, and with the Lama close to its maximum gross weight, the aircraft shudders under the 1,500-pound load at the end of its long line. The payload is a heli-portable seismic drill being placed on the edge of a steep mountain slope. As the helicopter slows to a hover, the downwash bends the trees on the surface below and stirs the drill catcher into action. Feathering the controls with his head out the door, the pilot shuffles the helicopter left and right, guiding the drill through the trees and into place as the catcher unhooks the line. Free from its load, the helicopter races across the sky to its next pick up. It's quite a spectacle, and those performing the show are the players in the seismic industry's newest success story, heli-portable drilling specialist Skydance Helicopters and Xtreme drilling.

## A MEETING OF THE MINDS

Skydance-Xtreme is the creation of Jeff and Peggy Cain, Mike Murray and Keith Burgess. The four combine 50 years of experience in remote seismic heli-portable drilling into one complete-service company. Initially two separate entities, Skydance had provided the seismic drilling industry with aerial lifting helicopters, while Xtreme did the drilling services on the ground. "Mike and I had worked some jobs together previously," said Jeff Cain, "and then met at the Society of Exploration Geophysicists Symposium in 2003 and got to talking about our industry." Said Murray: "It didn't take us long in talking to realize we shared the same opinions on how the industry was running, and we finally said hey, why don't we join forces?"

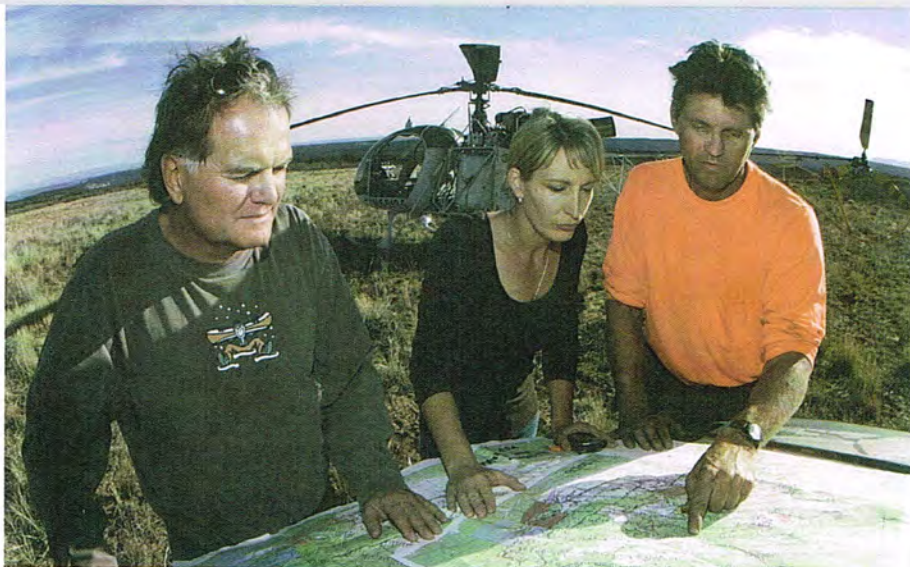


**ABOVE** Skydance-Xtreme's Eurocopter SA-315B Lama helicopters are aptly suited for high-altitude, heavy-lifting operations.

**BELOW** Drillers Jamie Mishler (left) and Jason Sanders (right) operate Xtreme's high-tech, heli-portable drills in dense scrub oak.







What followed was a structuring of their combined businesses and objectives, and, in October 2003, Murray and the Cains moved forward to provide the energy exploration industry with a turnkey, heli-portable drilling operation.

"There have been a couple of companies that have tried such a merger," remarked Peggy Cain, "but these companies are no longer around. What they were lacking in their approach, we have in abundance: expertise on all levels."

**ABOVE** Skydance-Xtreme's owners, Jeff Cain (left) and Mike Murray, discuss drilling operations with client project supervisor Louise Sandberg.

**BELOW** Flying near the hills of Southern Utah, the nimble and powerful Lama races through the sky enroute to its next drill pick-up.

While the other three handle the operations side, financial partner Burgess is the quiet tail rotor of the firm. Handling both legal and marketing concerns for the company, Burgess keeps close contact with the clients, both in helping set the company's direction and in keeping things from spinning out of control.

#### EYES IN THE SKY

Everything above the ground is Jeff Cain's domain. A veteran helicopter pilot who began flying at the age of 20 while living in New Zealand, he and brother Mike formed Skydance as a family business in 1983. Cain's work took him all over the world, and he flew everything from Lamas to Hughes 500s, with jobs ranging from tuna

boats, fire fighting and moving drills, to powerline inspection and pouring concrete. He exemplifies a true love of flying—which is evident in his expression as he talks about his work. It is that passion and experience which has led him to become one of the best long liners around.

Said Cain: "This area of specialization is very fulfilling for me, and I love the work. It's so involved. You really are the eyes in the sky for the operation on the ground. You can see things the guys below may not be aware of, and it's often up to you to solve a logistical problem." He then added: "Operating at altitude with close to max gross weight requires great piloting and fuel management skills, being ever mindful of the changing power requirements, winds and weather conditions. We operate at fuel minimums to maximize the payload capacity, and a good pilot out here really has to push the envelope and then know when to call it a day."

#### LOW-IMPACT SPECIALISTS

What does make things a little easier for the company's pilots, though, is the custom-made nature of the drills. Normally, one would expect seismic drills to be rather large, bulky creations, spitting oil and debris as they tunnel downward, but that's not the case with Skydance-Xtreme. Its drills and related components are state-of-the-art





process involving a compressor and a supply basket, which all need to be moved with the drill." He pointed to the neighboring hillside where a crew was getting ready to receive (catch) a drill. The Lama appeared over the tree tops with a drill attached to a 100-foot long line. Veteran pilot Doug Ford descended and lowered the drill through the heavy scrub-oak to the awaiting driller, and after only a few seconds was on his way to pick up the compressor. As the Lama disappeared, Murray continued where he left off. "The compressors posed a problem in fabrication, because they have a large diesel engine, which powers the compressor for the drill, so weight became a big factor."

Drilling operations regularly occur at higher altitudes, often over 7,000 feet, so the lifting capability of the Lama had to be considered. Stated Murray: "These drills are custom built for Lama operations, and as the Lama is limited to about 1,500 pounds lifting capacity at these altitudes, keeping drill and compressor construction within the 1,500-pound limit was crucial and challenging . . . aluminum was the only material we could consider for fabrication."

The Lama appeared again with the compressor in tow, and the aerial display of long-lining artistry continued. On the ground, the drill crew had already leveled the drill and quickly hooked up the compressor while Ford flew off for the supply basket. Within a minute, the Lama was overhead once more, delivering the supply basket containing drill bits, water and explosives. "That was a pretty quick move," remarked Murray. "About seven minutes from hole to hole. That's the way you must operate if you're going to get the job

custom fabrications, which carry out their duties in the most efficient and low-impact manner.

"I had these seismic drills designed in my head, and until Jeff and I had merged operations, I didn't yet have one built," recalled Murray. "The actual design was based on over 25 years of experience in this business, and I designed and fabricated them from scratch." One need only examine Murray's work to see the pride in workmanship, from the intricate cuts to the flawless welds.

It is the kind of quality one expects from someone who exudes efficiency in every movement. Murray's work as a driller has taken him all over

**ABOVE** Driller Jamie Mishler prepares to "catch" a compressor, as the Lama maneuvers high overhead.

**BELOW** A bird's-eye view of pilot Doug Ford, as he leans out of the cockpit and maneuvers a drill into place.

the world, and given him the experience that has led this modest and friendly man to become one of the most sought after drilling experts in the industry today.

True to his character, though, Murray wants to talk about the process, the fabrications and the crews, rather than himself. "It's not just the drills," he remarked, "it's actually a three-stage





Drillers Jamie Mishler and Jason Sanders inspect a drill in the field. The harsh conditions mean drills require regular maintenance and inspections.

done within the constraints we're dealing with." Satisfied with his crew, Murray returned to the conversation at hand: "This business requires a production-minded approach, but often it comes down to the drillers attitudes, and their willingness to work hard."

In turn, the crews on the ground share a high opinion of Murray. "He never gets upset or emotional when problems arise," said driller Jamie Mishler. "We all respect him, and when we're a man short, Mike will be out there catching drills or fixing compressors," added Jason Sanders.

The seismic drilling process is simple—in principle—drill a 40-foot hole about three inches

wide in which an explosive charge will be placed at the bottom. Unfortunately, crews regularly encounter drill sites located on 50-degree slopes, with heavy scrub brush and inconsistencies in the hardness of the rock being drilled.

Even with potential difficulties, this process has tremendous positives. Each drill completes about 10-12 holes per day, spaced usually around 300 feet apart. Seismic recording crews will then set out sensors called geophones that read the

shock waves of the explosive charges upon detonation. "It allows the researchers to make a three-dimensional picture of an area of land and see where the deposits may lie," stated Murray. "It's become a very accurate method of exploration, with very high percentage rates of positive findings." In the past, drilling operations would often drill 10 holes in search of oil and there would've been 10 roads built to each site. Of those 10 holes, perhaps one would yield oil findings. Said Murray, "Today, when the researchers see the seismic results, they can pretty much point to a spot with a high degree of accuracy and say drill right there, and we're not ripping up the landscape."

#### CLEARING THE HURDLES

Before any drilling can begin, a vast number of considerations need to be addressed. The preliminary step, once the oil companies have secured leases to a potential oil exploration site, are the checks by surveyors and environmental groups, including botanists, archaeologists and wildlife agencies.

When it comes to environmental and nature concerns, regulations have become tighter. If rare plants are nearby, production can't proceed, and when it comes to wildlife, seismic drilling operations are often forced to be completed in very tight, almost unrealistic timeframes, due to animal mating seasons or migration routes.

When the teams are present, though, it seems some wildlife do adapt fairly quickly. We witnessed a herd of deer graze peacefully on the scrub grass as a Lama passed overhead. Accustomed to the aerial activity, the passing



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helicopter inspired a casual glance of curiosity from a mature female. "The animals get used to us pretty quickly out here, even with the helicopter activity . . ." said Ford.

Murray added that today's oil companies have been forced to be more environmentally conscientious: "Protection of the environment is a primary mandate to oil companies nowadays, due to a checkered past, and none of us would want another Valdez. Both Jeff and myself are avid outdoor people, so naturally we want to protect the environment."

As we walked through the forested operations site, Murray continued pointing out the advantages of Skydance-Xtreme's methods: "This is one of the biggest reasons why heli-portable drilling is of such a benefit over traditional seismic drilling. We aren't building roads into our drill sites or cutting down trees to get to a location. Workers and drills are lowered from the sky and the actual drill holes are the size of a Coke can." As we walked through the dense scruboak, he asked, "Did you see that drill hole of ours you just walked past?" "No," I replied.

"Exactly!" he laughed. "That's what we're after, low environmental impact."

#### FIELD MAINTENANCE

To get that low impact, though, requires precision. Long-line operations are a tricky tango at the best of times, and with the high operating altitudes on this particular project, it becomes a constant series of power maintenance decisions. "We perform regular power checks throughout the day to ensure performance," said mechanic Richard Greenlaw, "along with close inspection of the ship each day." A former Marine aircraft mechanic, Greenlaw has been with Skydance-Xtreme since 2003. Currently, he manages the fleet on site in Utah, while two other mechanics, Mark Ransom and Troy Creeks, work in Colorado. "The Lama is a real pleasure to work on," stated Greenlaw, "and the components are all out in the open. If there's a leak, you see it!" He and the pilots have an ongoing dialog on maintenance issues and close inspections are made daily to keep on top of things. "In remote locations," said Greenlaw, "we can't afford to lose a day due to maintenance, so we try to stay ahead of things." When asked about the disadvantages of the Lama, he mentioned only one: "It often takes several months to get certain parts from Eurocopter,

so you have to be thinking several months ahead when it comes to the life of parts."

Although, when it comes to field maintenance, the biggest problem often isn't the helicopter. "Sometimes, the weather can be a challenging variable. When the mercury drops," said Greenlaw. "the winds pick up and you've got hours of maintenance to do with cold tools in hand on a dark night."

#### THE RIGHT STUFF

That maintenance, though, keeps the star of the aerial show fit and ready to perform. With pow-

ers that belie its lean appearance, the Lama is one of the finest and most trusted workhorses in the industry. There is literally no equal in its class when it comes to power-to-weight ratio and handling ability.

"The Lama is like a Hughes 500 on steroids!" remarked Skydance-Xtreme pilot Peter Law. The New Zealand native, in his first year with the company, has shown extraordinary ability as a Lama long liner, and handles the machine with panache. His ever-positive approach has made him popular on the job. Said driller Jamie Mishler: "He's a lot of fun to work with, and he gets that

**Smart Hook Operations Tip #15**

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## Operator Profile

drill spot on every time, which makes it much easier on us down here on the ground. We'll be having a tough day, drilling in difficult terrain, and then you'll hear that accent over the radio telling you, 'No worries mate, great work! You're a champion!'

The solidly built Kiwi has a genuine passion for flying, which prompted the Cains to contract him. "He oozed confidence as a pilot, and Peggy just knew he was right for the mix," recalled Cain. "You need that passion for the job. It's tough work and you really need to love it."

Of course, one of the Cains' biggest challenges these days is finding qualified pilots. "It's not a case of just finding pilots who can long line, we're looking for precision long liners," stated Cain. He then added: "Our pilots will be doing 200 pick-ups per day, and drills have to be placed with precision, literally on an 'X,' often onto

**RIGHT** Doug Ford takes a brief rest during operations to stretch his legs. Performing an average of 200 lifts per day means Skydance pilots have a heavy workload.

**BELOW** Jeff Cain, a veteran long liner, said skill is an important factor in this sector, but what's more important is a pilot's attitude and that they have a true love of flying.

40-50 degree slopes or through trees on the first try. A pilot who goes banging up drills and wasting time is not going to last." Unfortunately, Cain feels that government jobs have affected the industry's work ethic and talent pool. "Pilots with these kinds of precision skills are becoming harder to find. You have all of these pilots working government contracts, doing bucket work where incentives are lacking and mediocrity prevails. Accuracy, motivation and skill development fall by the wayside and that kind of work ethic is

unacceptable in the private sector. A pilot who lacks skill, passion and a strong work ethic will drown in the job."

### BEHIND THE SCENES

Skill and a strong work ethic is also vital behind the scenes. For Skydance-Xtreme, much of that comes from Peggy Cain. The financial backbone of the company, Peggy is given great credit for the venture's success. "Peggy is my right hand, she has a good radar and she doesn't let emotion get in the way," stated Jeff Cain.





**ABOVE** Mechanic Richard Greenlaw performs daily maintenance and inspection to keep the fleet of Lamas in top shape.

**RIGHT** Ford finesses a drill into place.

**BELOW** New Zealand born pilot Peter Law, in his first year with Skydance, is a big fan of the Lama: "It's like a Hughes 500 on Steroids!"



Peggy Cain has her own view of the company's journey from its humble beginnings: "Once Jeff, Mike and I got together, we asked ourselves: how can we do this? Personally, I had no apprehensions at all, I mean, with Jeff and Mike, we had a wealth of combined knowledge and experience in one room, it was a recipe for success!"

"Without Peggy," said Jeff Cain, "it simply wouldn't have worked. It would've been a group of guys standing around shooting the shit... she was essential."


"It was quite an adventure back then, paying off one loan and then refinancing another to keep it all running smoothly!" she laughed. When it



came time to purchase more Lamas, it was Peggy who tackled the daunting task with a sense of adventure. "It was a 'who blinks first' method of negotiation really, and one of the most enjoyable experiences was our Lama purchase from Japan . . . it came with a bunch of extras, and it was like Christmas morning for Jeff and I, unwrapping all of the packages on the floor of the hangar! It was a very successful purchase."

#### LEADING THE WAY

Success seems to be a common theme for Skydance-Xtreme these days. As this year's operational season winds down, the company has been able to look back on a stellar year. Said Jeff Cain, "It's just so thrilling to experience this kind of success after all we've put into the business."

That hard work has helped Skydance-Xtreme become the industry leader in heli-portable seismic drilling. While its journey to the pinnacle of this specialized industry has been anything but low-impact, the company's achievements and innovative approach have garnered significant attention from the marketplace, and should help ensure a less turbulent ride in the future. 

*Jason Colquhoun worked in photography in New York for seven years before becoming an AG helicopter pilot. He now resides with his wife, Lorie, and son, Grant, in peaceful Southern California.*

