FROM VISION to REALITY

AT THE PEAK OF ITS PROFESSION, WHISTLER'S ECOSIGN DESIGNS THE WORLD'S SNOWY PLAYGROUNDS

BY DAMIAN INWOOD

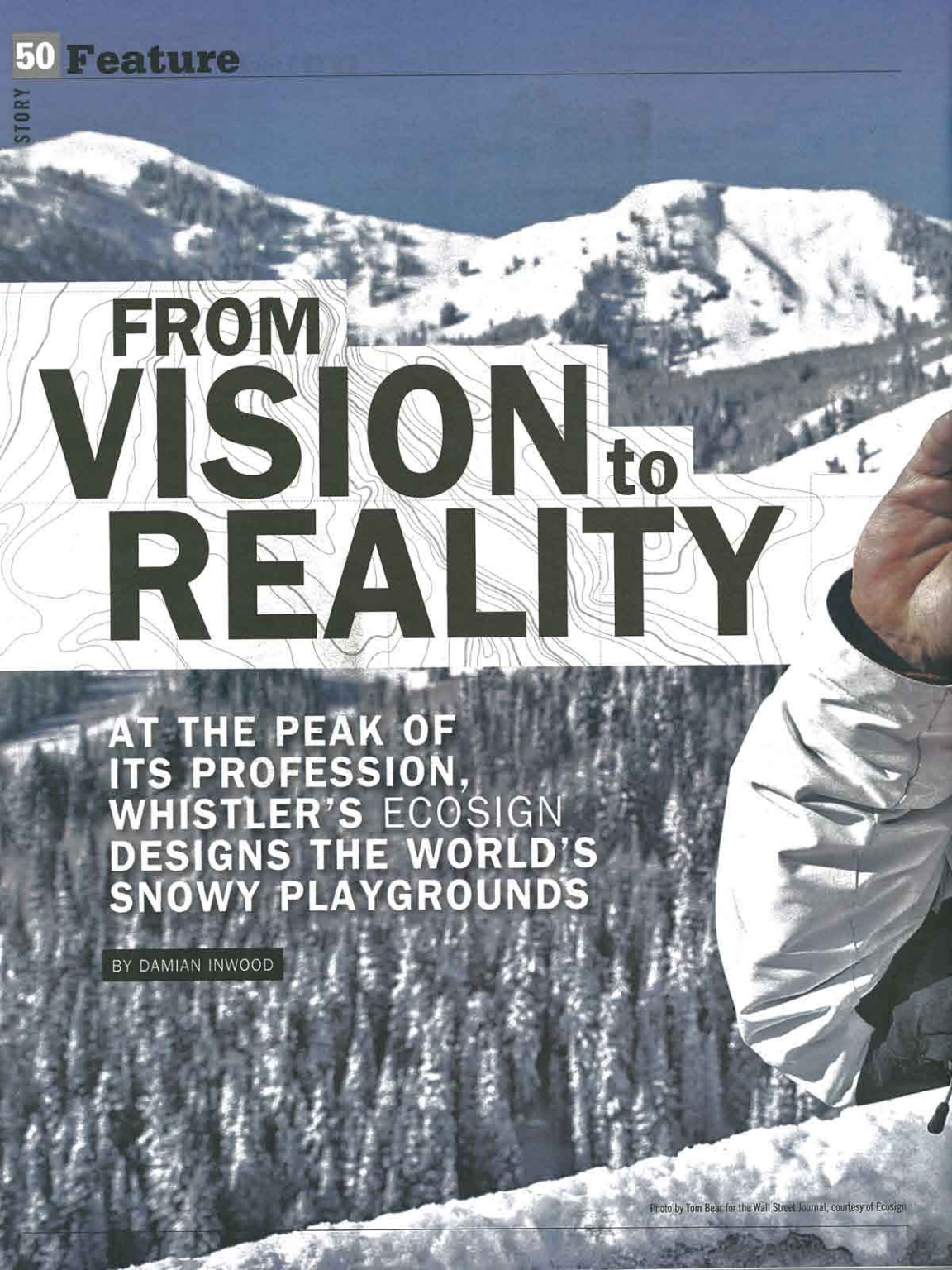
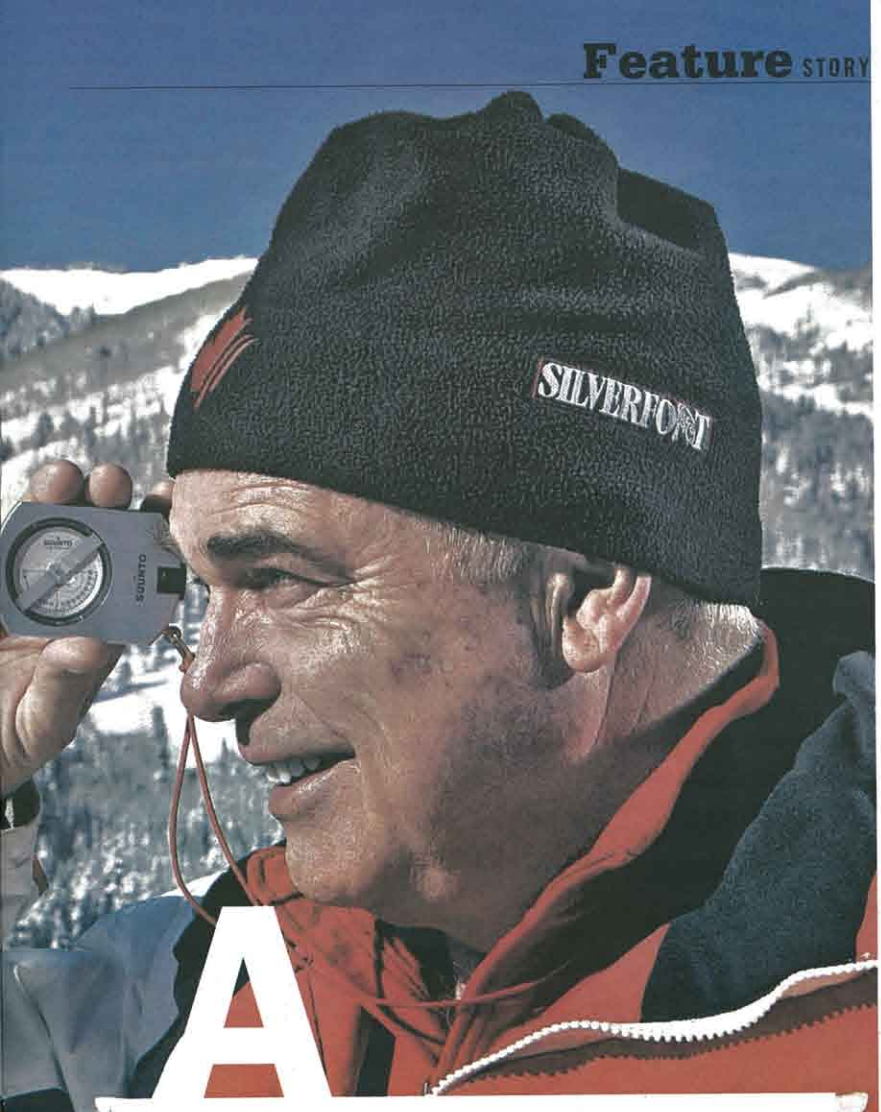


Photo by Tom Bear for the Wall Street Journal, courtesy of Ecosign



As Eric Callender thundered across a mountain plateau, high above Beirut, he made sure his snowmobile stayed right in the tracks of his Lebanese guide.

When you make your living as a ski resort mountain planner, there are many potential threats, including deadly avalanches.

But today, Callender wasn't worrying about being buried alive on the slopes of Mount Sannine.

The 37-year-old Whistler resident was more concerned he might be blown to kingdom come.

"The snowmobile guide explained we had to follow in single file behind him because there were tank mines on the top plateau of this mountain," Callender chuckled, in a recent interview. "He said the mines had been cleared but they hadn't, and there were these little posts with X's on them. They said these were tank mines and they only go off if there's something really big and heavy, with a lot of steel in it — and snowmobiles don't qualify."

Callender has spent 15 years travelling the globe to far-flung mountain ranges to scope out ski resorts for Whistler-based Ecosign Mountain Resort Planners Ltd.

Although it's easy to picture his job as part-James Bond, part-heli-skier, he says it's often far more mundane than that.

Like the time, while scouting for ski slopes in Kazakhstan, he had to ride to the mapping area on horseback, through waist-deep snowdrifts.

And rather than seeking the steep and deep powder, his job involves mapping out the blue, intermediate runs that are the bread and butter of ski resorts.

In summer, he'll lace up his hiking boots and scramble down mountain trails, watching for natural

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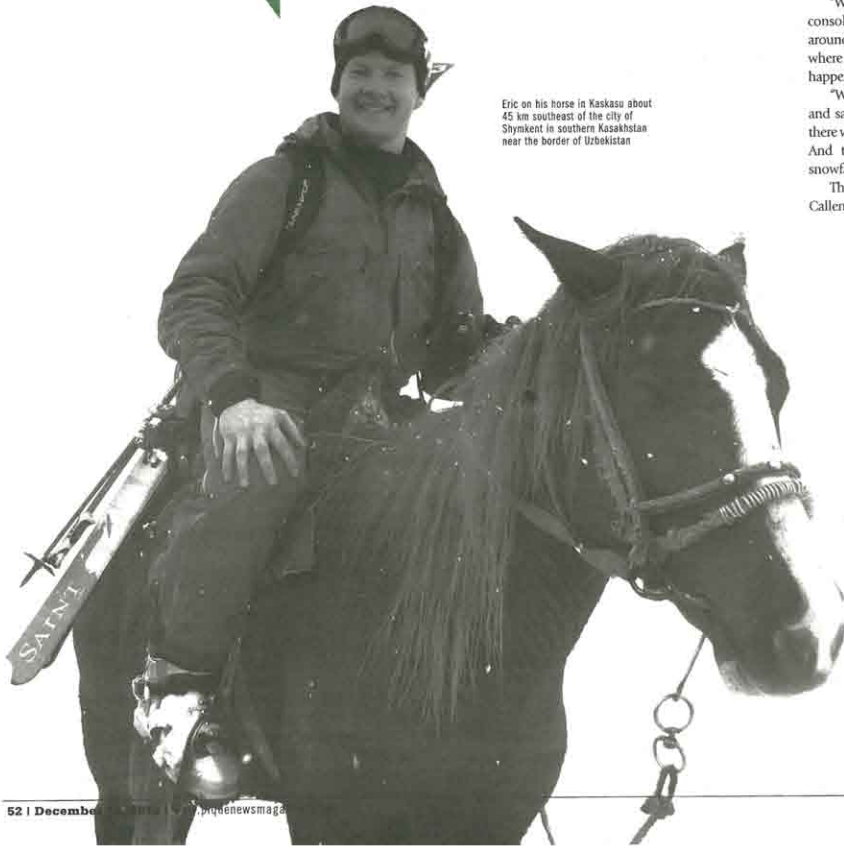


Eric on his horse in Kaskasu about 45 km southeast of the city of Shymkent in southern Kasakhstan near the border of Uzbekistan

obstacles and visualizing ski trails, lift towers and lodges.

In winter, Callender's always aware of the danger of avalanches and always packs several sets of survival gear — shovels, probes and transceivers.

"In three different countries I've had my guides say, 'Oh, we don't need that, there's no avalanches here,'" he said. "I kind of look at them and say, 'What? The laws of gravity and physics don't apply in this country?'

"They'll usually tell me they've been there for many years and nobody's ever been killed in an avalanche, 'so don't worry, we know what we're doing.'"

For instance, on Callender's first trip to Kazakhstan his guide was a 45-year-old Russian ski mountaineer who tied a 10-metre-long, blue, nylon cord to his wrist for his avalanche beacon.

His Lebanese guides showed an equally blasé attitude when it came to avalanches.

In the mountains above Beirut, it can snow heavily, very much like on Mount Washington, he said.

"We were snowed in for three days and it snowed something like two metres," Callender recalled.

"We waited for a day to let the snow consolidate. Then we headed up, and around the corner there was a mountain where a pretty good Class 2 avalanche had happened the day before."

"We weren't in any danger but I pointed and said, 'I thought you told me yesterday there weren't any avalanches in this country?' And the guide said, 'Well, after a huge snowfall, there's going to be avalanches.'"

The guides had been young men, said Callender, when Beirut was being torn apart by civil war.

"They're tough people and grew up when there were snipers in the streets and bombs going off, so they didn't really give a damn about avalanches," he added. "Later, they said that if there was an avalanche, it was God's will and if you happened to be in the way, it was 'meant to be.'

"It was something uncontrollable, like if you were walking down the street and a car bomb went off and you were wiped out. There was no point worrying about it — if it happens, it happens, if it doesn't, it doesn't."

Callender believes his "closest call" had come on that same, 10-day trip to Lebanon in 2005.

The day after the mountain planner left Beirut, after spending 10 days there, Rafic Hariri,

the country's former prime minister, was assassinated by a massive bomb.

The blast severely damaged the hotel that Callender had been staying at.

"The explosion site was chosen because of a dead-end, u-turn route outside the hotel, that all traffic had to take, due to construction," he said. "I had been stuck in traffic gridlock at that exact location numerous times. So, while it was not a scary situation in the field, or related to mountain design, it was a moment to take pause."

Ecosign's offices sit on the outskirts of Whistler Village, where the company has been based since Paul Mathews founded it in 1975.

Take a walk along the Alpine Meadows cul-de-sac and you'd hardly give a second glance to the walk-up apartment building that the company calls home.

Walk down a dark hallway and into the reception area, however, and it's soon apparent that Ecosign is an international operation.

There are four clocks on the wall, showing the current time in Whistler, Montreal, Zurich and Tokyo.

Ecosign has designed or developed more than 350 projects — including working on four Olympic Games and the Peak 2 Peak Gondola — in close to three dozen countries around the globe.

In the company boardroom, the shelves are lined with binders showing projects in countries like Russia, Japan, China, Norway, Argentina, Australia, Canada and the U.S.

It was a hot, sunny day in early Fall and the 65-year-old Mathews greeted me in a short-sleeved shirt, shorts and flip-flops.

While his clothing may have appeared casual, there was a flinty resolve in his manner, when it came to describing his company and his passion for designing super-efficient ski resorts.

Mathews had recently returned from an energy-sapping trip to Kazakhstan.

"It's a long bloody way — 18,000 kilometres each way and that's just Almaty," he grinned. "Then I had to go up to Astana, just to add a couple more thousand."

He opened a large world atlas on the boardroom table to show exactly where Ecosign is working in Central Asia.

The butt of jokes in the spoof movie Borat, Kazakhstan may seem remote from Canada, but its government aims to attract ski tourists from the huge markets of Russia and China.

"There's a lot going on in the former Soviet Union," said Mathews, who has also done work in Georgia and Turkmenistan. "In Kazakhstan, they have oil and gas wealth and they're putting seven per cent of their royalties aside for future industries and tourism is one of them."

Ecosign is working on two projects there.

"The government wants us to study the whole mountain region near Almaty and see if there's some potential resorts for the future," said Mathews. "Then there's a second project called Kok-Jailau (Green Valley) that we won a public tender to design. It's right on the city's edge."

So just how do you go about finding good ski terrain in a place like Kazakhstan?

Mathews said his company starts with Google Earth and satellite imagery and then sources old Soviet military maps.

"It's funny that man-made features aren't on the maps so accurately — things like bridges, highways and powerlines," he chuckled. "It was the old Soviet way of leading people off track. But we go in with hand-held GPS and go click where the bridges are."

Ecosign, which has a staff of 15, begins each project by finding the best available contour maps and colour-coding them, based on the steepness of the terrain.

Then they go out in the field armed with topographical maps, compasses and GPS devices to climb or ski down mountainsides, marking reference points, boundaries and working out where obstacles may lie.

Back in the office, planners and designers use tracing paper to pencil in things like lifts, trails and base areas. They also use sophisticated, 3-D computer modelling and two programs they've developed called Terrain Capacity Analysis and Base Land Suitability Analysis.

The Kazakhstan government originally asked Ecosign to look for suitable ski terrain in a 30-kilometre radius of Almaty.

"But that wasn't very intelligent, because half of the radius would be out on the steppe, where there are no mountains," said Mathews.

Instead, Ecosign pushed the zone east and west, into a 2,108-square-kilometre rectangle, and found good potential at either end, well outside the original terms of reference.

"Sometimes governments will go bananas on you and say you have to follow what they ask," said Mathews. "But since we went and found good areas first and then informed the client we had broadened the study area, they seem to have taken it in good stride."

Ecosign is no stranger to this type of work.

A couple of years ago, the company did a similar project in Norway, which was using North Sea oil royalties to develop resorts.

"We studied the whole of Norway," says Mathews. "They have a lot of resorts but they're designed for Norwegians, so they have T-bars with 100 cabins. We went up and looked at the whole country and told them what were the key target areas."

The very first search of that kind done by Ecosign was in 1980 for the late-Premier Peter Lougheed, when the Alberta government was planning for the 1988 Calgary Olympics.

"He gave us 22,000-square-kilometres from the U.S. border up to Lake Louise," grinned Mathews. "And, shit, I flew 175 hours

in a Bell Jet Ranger on that project back in the early '80s. We did snow coverage and satellite snow coverage and looked at satellite imagery, topographic maps."

The key to good skiing is slope gradient, he said.

"The funny thing about ski terrain is that God didn't make as much of it as you would think," he added. "So many mountains are too steep and then, of course, you can be too flat. So you're looking for the missing porridge that's just right for the three bears."

From a helicopter, good ski terrain can look quite gentle until you get down close to it.

Ecosign combed the 22,000-square-kilometres and came up with 17 starters before narrowing the field down to seven or eight.

"I went and landed on the top and hiked down each one of them," he said. "Then we started doing rough plans of what they would all look like. We were having meetings about every week to 10 days with the Alberta cabinet in Edmonton and reporting our findings."

The final result was the Nakiska Resort at Mount Allan, less than an hour from downtown Calgary, which hosted the alpine events in 1988.

Ecosign's research usually leads to a resort going ahead and that's often put out to public tender.

"If they make it qualification or experience-based, it gives us a good leg up on the local competitors," said Mathews. "Then you're into detailed design, what we call the master plan, for the ski lifts, ski runs, urbanism, roads and parking and right down to the landscaping."

Sochi, site of the 2014 Winter Olympics, was one of Ecosign's more interesting contracts.

Mathews was hired by Boris Beresovsky, a wealthy business mogul and member of the Russian Duma, who flew him up and down the Caucusus in his private jet.

"We were just looking out of the window," Mathews remembered. "Simple as that. As we flew farther and farther I suddenly said, 'Wait a minute! Turn this plane around.' I could see what looked like some pretty good terrain there in the Krasnaya Polyana region."

Compared to the steep, ski-unfriendly crags and long, deep gullies he'd watched passing below, he saw an area with high plateaus, long, flowing runs, expert bowls and great snow. They landed at Sochi, a city graced with palm trees, perched on the coast of the Black Sea.

Mathews was soon in a world of armored limousines, armed bodyguards and was quickly rubbing shoulders with the Russian elite.

People like Russian President Vladimir Putin and oligarchs Vladimir Potanin and Mikhail Prokhorov who ran Norilsk, a massive nickel company, and wanted to build a resort at Rosa Khutor.

"Then in Febuary, '05, Potanin has a big press conference saying he's going to build this thing," Mathews recalled.

He attended the media bash, along with eight TV stations, 40 journalists and assembled ministers. Afterwards there was a reception on the top floor of Potanin's Interros company headquarters.

The president of the Russian Olympic Committee, Leonid Tiegochiv and legendary

"I SAID, "OKAY. IT'LL COST YOU $30,000 AND I NEED FOUR MONTHS TO DO IT," ADDED MATHEWS. "JUST ABOUT THEN, POTANIN ARRIVED AND HE HEARD THE OFFER. HE SAID, 'PAUL YOU HAVE ONLY TWO MONTHS BUT $40,000.' SO ACTUALLY HE GAVE US 40 GRAND AND WE WENT HOME."

"After you get some years of experience, you get to be able to spot it with the naked eye fairly well.

"I don't know how many people in the world have that special talent but I guess, after 38 years, I've probably had 750 to 800 helicopter hours now."

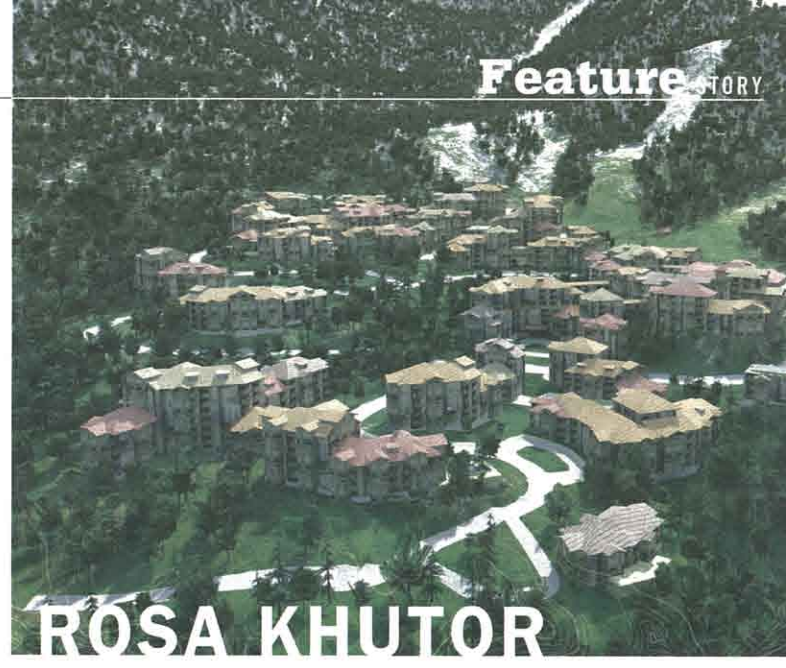
The original Alberta plan called for Olympic skiing to take place in three different areas with a race on each mountain.

"It was the most inefficient design you could have and it would penetrate deep into Kanaskis Country that's still very undeveloped," said Mathews.

"It got built for $23 million and probably saved the Alberta Government $200 million," said Mathews. "Nakiska still works quite well. They get couple of hundred thousand ski visits per year."

In 2000, the Russian federal government hired Mathews to take a look at the Caucasus Mountains

"I did the very southernmost end of Russia and that led us to Sochi," he said. "We've also done Georgia on the south side of the Caucasus. We did Montenegro, the former Yugoslavia, and we did Serbia and we've done Norway."



hockey defenceman Viacheslav Fetisov, the Russian Minister of Sport, were there.

"I was up there with a glass of Chablis, standing at one of those tall, round tables, with some canapés and whatnot and I saw them vectoring on my table and I thought, 'Uh-oh, this is going to be bad. Something's up if these two guys are coming to see me.'"

At the time, Moscow was bidding against London, New York, Madrid and Paris for the 2012 Summer Games.

It was pretty stiff competition and Tiegochiv told Mathews he thought Russia had no chance.

"He said, 'Paul, do you think it's possible for some Winter Olympics down in this region near Sochi?'" said Mathews. "I said, 'I have no idea. We haven't looked specifically at that. The Olympics have a certain requirement and we have to check if there are physically these possibilities.'"

Tiegochiv told him to go ahead.

"I said, Okay. It'll cost you $30,000 and I need four months to do it,' added Mathews. "Just about then, Potanin arrived and he heard the offer. He said, 'Paul you have only two months but $40,000.' So actually he gave us 40 grand and we went home."

By then Ecosign had been analyzing the valley for about five years and had all the data in its computers in Whistler.

"We were beginning to get to know the place pretty well," chuckled Mathews. "We got home and we put in the snow cluster (alpine and Nordic events), while the ice events would go to Sochi, by the sea."

Mathews said Vancouver's 2010 bid helped sell that concept plan because Vancouver also sat on the ocean and had successfully separated the snow and ice events.

"Low and behold, we drew up the snow cluster and, in April that year, we presented the concept to Putin and he said, 'Oh I like that idea, so please proceed.'" he said.

Mathews said his work in Sochi ended about 18 months ago.

"I don't know how many times I've been to Sochi, me and my staff," he said. "I'm waiting for something to go wrong and the mad call to come and fix it."

During his time working in Russia, Mathews said he was able to master the tricky task of attending marathon banquets where guests were expected to toast every speech with a shot of vodka.

"Christ Almighty, when you get 20 speakers, you just get shit-faced," said Mathews. " So an old FIS (International Ski Federation) guy from Sweden said, 'No no, there's a way to handle this.'"

There would be glasses of water on the table and it's quite permitted to drink your vodka and then have a drink of water afterwards as a chaser, Mathews was told.

"What you do is you take the shot and slam it down on the table like everybody else, and then you grab your water and slowly let the vodka back into the water glass," he said, smiling. "Mind you, you have to change your water glass every once in a while. So, after a couple of quite bleary dinner parties, I'd figured it out."

Born in 1947, Mathews grew up in Breckenridge, Colo.

He first strapped on the boards when he was four or five years old.

"It was delightful. There was a group of families and there was a little cabin there with a big, pot-bellied stove and a big pot of water on it, and every family just came in and dumped their hotdogs in," he remembered. "They ran us up on a rope tow and we all had to walk down to pack down that week's fresh snow, before we could go skiing."

A Vietnam War vet, Mathews studied forestry at the University of Washington and skied at Snoqualmie Pass and Stevens Pass.

"They were the most brutally implemented things you could imagine," he said. "Bulldozers tearing the landscape apart, no erosion control, the hillsides were just washed down into the parking lots."

Mathews hated what he saw and said he toyed with the idea of joining the Sierra Club or the World Wildlife Fund to block development of ski resorts.

"It was one of those gut decisions where you say, 'Do you want to be part of the solution or part of the problem?'" he added.

With guidance from his professor, Mathews turned towards learning the science of the mountains — things like wildlife, flora and fauna, "to understand those systems and what they can and cannot take." Then he added two years of landscape architecture to his program to learn design skills.

While ski-bumming around Europe in 1971, Mathews went to Chamonix and Zermatt.

"I was smitten," he admitted. I said,

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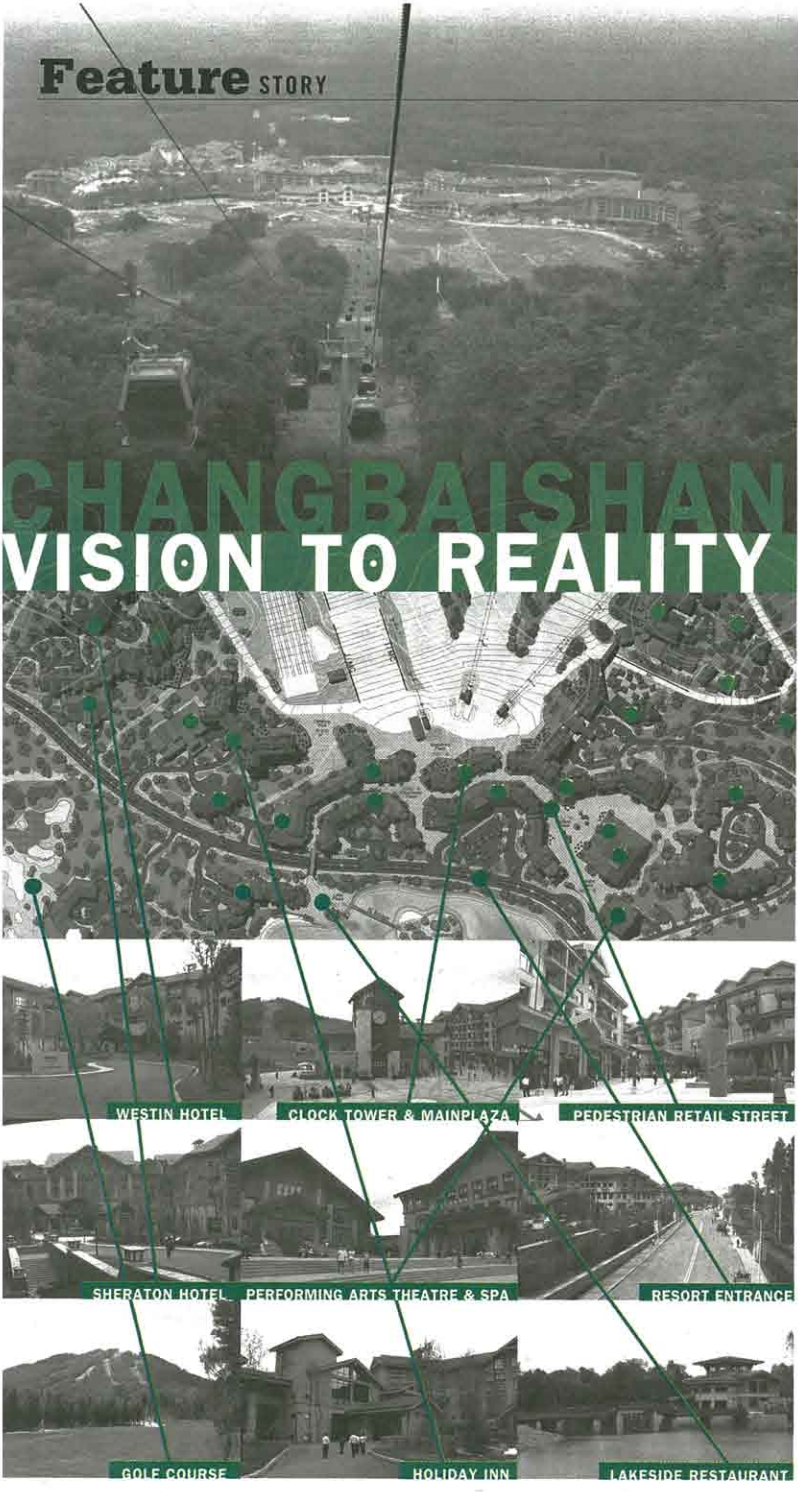

'Look at these cool little towns with no traffic, it's such a special experience.' That left an indelible impression, there's no question, and I have been amongst many who've spread that gospel."

Around that time, he went to Whistler and that was the start of a four-decade relationship.

Mathews is part of the "Toad Hall" group of nude, hippie skiers, captured in the iconic, 1973 photograph that's been turned into a popular poster and graces many a Whistler living room wall.

"I was a student, so I couldn't draw unemployment but I was on the UIC ski team," Mathews explained. "There were 30 of us living at the north end of Green Lake in a place called Soo Valley. It was a logging camp and there was a main house with some rooms, a big kitchen and dining area and then there were 13 outlying cabins."

The group paid $60-a-year to share one of the cabins, which became known as Toad Hall.

"There was fresh water coming down 16 Mile Creek, car batteries drove the tape decks for our music and we had kerosene lanterns and wood stoves for cooking," he added. "We lived without water and electricity and just skied every day. Then one morning in the Spring, after a big party night, someone said, 'Come on we're taking a group photo,' We used to go around naked sunbathing in May, so it was a nice mixture of boys and girls with ski gear and I'm captured, infamously, in that photo."

Look around Whistler Village today and Mathews' fingerprints are all over it, from the pedestrian stroll to the low-rise buildings, the underground parking and the way you can walk to the Blackcomb lifts without sweating up an icy hillside.

When Whistler was on the drawing board, Mathews was chair of the resort municipality's advisory planning commission at the "tender age of 27."

He worked with Al and Nancy Raine, who also believed in the European village concept.

"So during the design of Whistler Village there were huge knock-down battles between the developers and other council members and lawyers and economists," said Mathews. "The conventional wisdom was, 'There's no way this pedestrian village will work, you cannot afford underground parking and you need to build higher than three-and-a-half or four storeys," he said.

Since then, says former Intrawest Resort Operations Group president, Hugh Smythe, Mathews has repeatedly used his expertise to put his stamp on Whistler.

The first major project they worked on together was the $27 million Blackcomb expansion in the summer of 1987.

"That was the Wizard, Solar Coaster, 7th Heaven, the Glacier T-bar, Horstman Hut, the expansion of the mountaintop

restaurant, the new base area, the day lodge at the bottom of the Wizard and the kids camp," said Smythe. "There was a lot of out-of-the-box thinking and that was a significant project that catapulted Blackcomb into one of the largest ski resorts in North America."

The resort's annual ski visits rocketed up from 325,000 to about 568,000, said Smythe.

"Because he has seen and been involved with more ski resorts than anybody, he's seen it all — the big ones, the small ones — and he's seen all the mistakes," added Smythe.

Roger McCarthy, a councillor for Resort Municipality of Whistler, worked with Mathews in Sochi.

"We flew round in big Mi-8 helicopters," said McCarthy. "Russia is like 'How the West Was Won.' You get conditioned to it. It's, 'He who has the most bodyguards, wins.'"

The former co-president of the Mountain Division at Vail Resorts has done 14 projects with Mathews, in Russia, France, Italy, the U.S. and Canada.

"I've worked with other planner-designers but they're not even close, in terms of understanding," said McCarthy. "He has an unbelievable staff too. The people who work with him are fricking brilliant."

McCarthy said one of Mathews' strengths is that he does more with fewer ski lifts.

"He can look at a piece of terrain and match the downhill capacity with the uphill capacity. In other words, you don't blow the brains out a terrain by 'over-lifting' it," said McCarthy.

Mathews understands "terrain pods" and where to put the top and the bottom of a lift, he added.

"That must seem like a fairly simple thing to figure out, but you can't believe the number of places that I've worked on where it's a complete disaster," said McCarthy. "They're places where the top of the lift was in the wrong place and the bottom was in a hole. Paul's relentless on his grading plans for the bottom and top of a lift."

It makes perfect economic sense, said McCarthy.

"You go and spend $7 million on a high-speed lift that will move 2,800 people-an-hour but, because either the load or the unload is screwed up, you can't get 2,800 people-per-hour on it," he said. "If there's 30 per cent that you're not getting, that's $2.5 million you could have taken out into the parking lot and burned. It's like giving somebody a Ferrari — just because you've got the money to write the cheque doesn't mean you know how to drive it."

McCarthy said designing a ski hill may look simple but there are many different factors to take into account.

"It's things like, how many restaurant seats do you need and how many outdoor seats, and how many days do they get used?" he said. "How many grooming machines do you need? What kind? How many winch-cats do you need, given how steep the terrain is?

"When you walk around with Paul, he'll give you a pretty good idea and then we'll go back and run the numbers, based on what the topographical maps and the terrain maps tell us."

McCarthy says Mathews doesn't suffer fools gladly.

"To give him credit, he's sometimes a little blunt," added McCarthy, a New Zealander who first met Mathews at a Soo Valley party in 1973. "He doesn't necessarily tell you what you want to hear but he'll tell you anyway."

That was exactly the situation in Mont Tremblant when Mathews told then-Intrawest CEO Joe Houssian, that he was going to have to spend $400,000 on drilling and blasting, to lower the village chairlift.

Mont Tremblant president, Patrice Malo, credits Mathews for turning the resort from a run-down money-loser in 1991 into a success story.

"He is the guy that really made it happen in terms of vision and how this mountain was put to the next level and we became the number one ski resort in the East for 16 consecutive years," said Malo. "He thinks like a skier and makes sure that the design he recommends for the mountain is based on the experience of the skier."

Mathews doubled the number of lifts from seven to 14, without cutting many trees and jeopardizing the environment and feel of the mountain, said Malo.

Some 30 years after Mathews was inspired by a trip to Zermatt, he was hired by the Swiss resort to fix it.

According to Hans Peter Julen, president of Zermatt Bergbahnen, four different companies had run the ski resort, which is home to the famed Matterhorn, and were more interested in making money than in the skiing experience.

"In 2002, there was a merger and all the companies came together and we asked Paul to make a new master plan for the whole Zermatt ski area," said Julen. "We invested about $350 million between 2002 and 2012 and the old ski area is now unrecognizable. It's completely renewed."

Two years ago, Mathews was back in Switzerland, studying a way to connect Zermatt with Cervino, a neighbouring ski area in Italy.

"Now he's studying ways of connecting two other neighbouring ski areas to us," added Julen.

The Zermatt resort's board of directors visited Whistler this summer to see how the village works during the Crankworx Freeride Mountainbike Festival.

"We looked at the Peak 2 Peak — a fantastic installation," said Julen. "We are planning to put one in our area, when we have the money." ■