The Luckiest Surveyors in the World

At least for this one special week in April 2020.

- written by Jackie VanderPol, RIEGL USA

Every true surveyor can recall *that* project. That special assignment where maybe it was so remote that there wasn't another vehicle or person in sight for miles and miles…. it was all yours.

A place so naturally beautiful that it was almost spiritual.

To be confident of your ability to perform your craft at the highest level possible, in a location like this, is truly one of life's greatest pleasures for a surveyor. And to share the experience with a few true friends and colleagues puts the experience over the top.

You know…*THAT* project, the one that checks all the boxes.

Herman Strydom, Francois Stroh and crews met in the Sperrgebiet diamond mining area of Namibia to create a digital twin of several ghost towns.

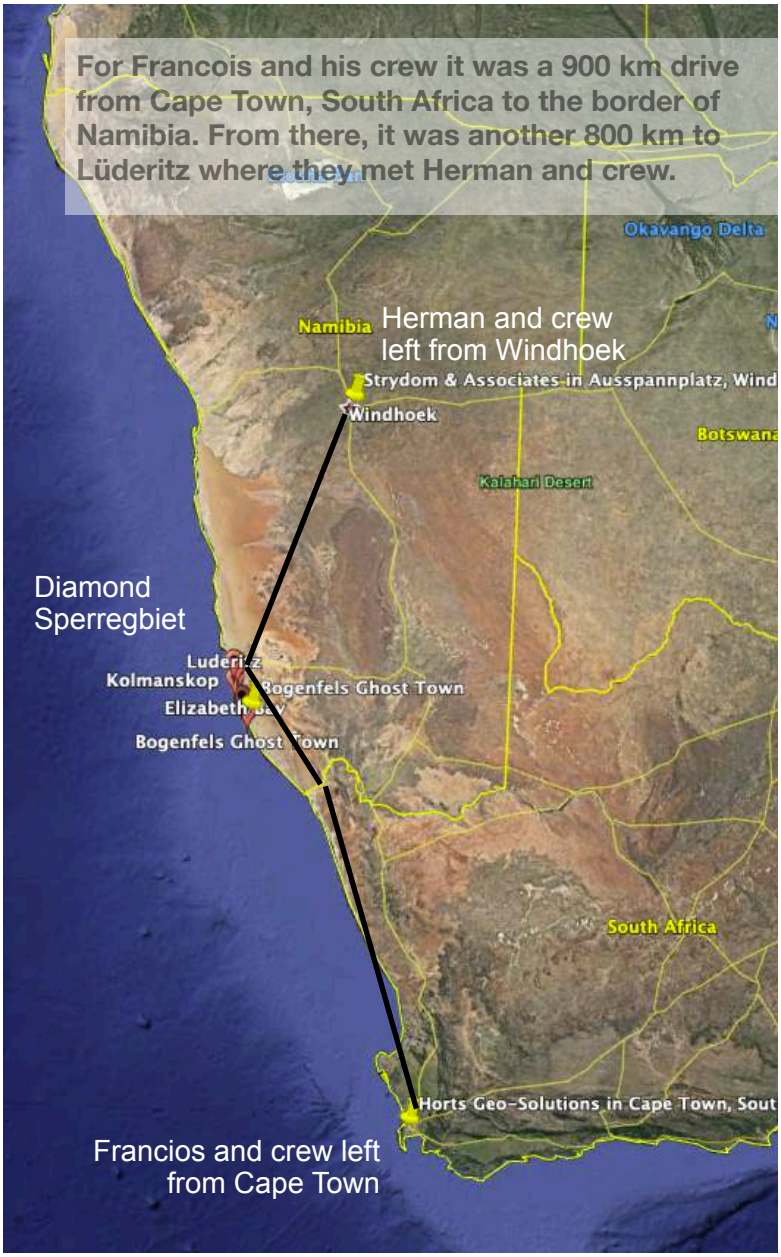
Herman Strydom, of Strydom & Associates in Ausspannplatz, Windhoek and Francois Stroh of Horts Geo-Solutions in Cape Town, South Africa found themselves in a position to collaborate on such a project for the Namibian National Parks programme of the Ministry of Environment & Tourism (MET) of the Republic of Namibia. The work at hand was to create a 3D point-cloud record of several abandoned diamond mine ghost towns scattered along the coast of Namibia, Africa; one of the most remote parts of the world.

Herman Strydom and Guillaume van der Walt, using the RIEGL VZ2000i on the remote Namibia coast.

Herman and Francios put a great deal of thought into how to approach this assignment. Herman owns the most advanced survey operation in Namibia. Francois's company, Horts, provides the latest in LiDAR technology equipment to the industry in the southern area of Africa, including and featuring the RIEGL line of instruments. Horts is a long time RIEGL distribution partner.

The two men have collaborated many times in the past on unique projects, and often they put their heads together to come up with creative ways to get the most out of the equipment.

The purpose of the scans was to document an area that has been largely untouched for the past 100 years. The diamond mines are in an incredibly remote oceanside / desert area that, by design, was inaccessible to anyone on foot, and dangerous to reach even by vehicle. The mines in this region were closed many years ago and a number of the buildings have been weathered over time by the elements of incredible heat and wind, and many years of neglect.



This incredibly beautiful, remote and practically unspoiled natural area on the southwest coast of Africa is on the cusp of a renaissance. Tourism, including ecotourism, is being planned in that area.

Architects wanted to know exactly what structures exist there today, and their condition, so that they can possibly preserve them for future generations and share them with visitors from around the world. The villages have 20 or 30 buildings each, all of which would need to be documented inside and out. Roads and other landmarks were to be included in the data collection.

Meticulous planning was essential, and one can only imagine their anticipation as Herman, Francois and their crews thought about everything necessary for the project, including what equipment they would need. They decided on going for a fusion of three types of collection: aerial and terrestrial LiDAR for the outside

areas, and a smaller scanning unit for the insides of the many deserted houses and other structures.

Above - the famous guys from Horts: Francois Stroh and Guillaume van der Walt.
Below - the scan they did for fun of the famous Bogenfels, a natural rock formation in the Namib Desert.

The *RIEGL* VZ-2000i terrestrial laser scanner (TLS) was provided by Francios, who wanted to demonstrate to Herman the differences of RIEGL's pulse based system vs another system that was phase based. Stroh said, *It was astounding what was possible! With the RIEGL system, mounted on a shock mount we were able to drive, stop, scan for 50 seconds, and repeat every 50 meters*.

Stroh continued, *The sheer volume of precise data we were able to collect in such a short period of time was mind blowing. We collected the data several times faster than the other system that was used on the interiors.*

Scans with the *RIEGL* system took 50 seconds each, including photos. The other system took just short of two minutes to scan, and another two to three minutes to take the photos.

Strydom added, *The RIEGL VZ-2000i was perfect for getting the exteriors. It was fast and incredibly precise. We had aerial capabilities but the level of precision we needed on the ground made the VZ-2000i the instrument of choice.* He continued, *The aerial work was performed in one day, and the on-the-ground work with the RIEGL TLS was performed in a day and a half and provided much more, and much more detailed data.*

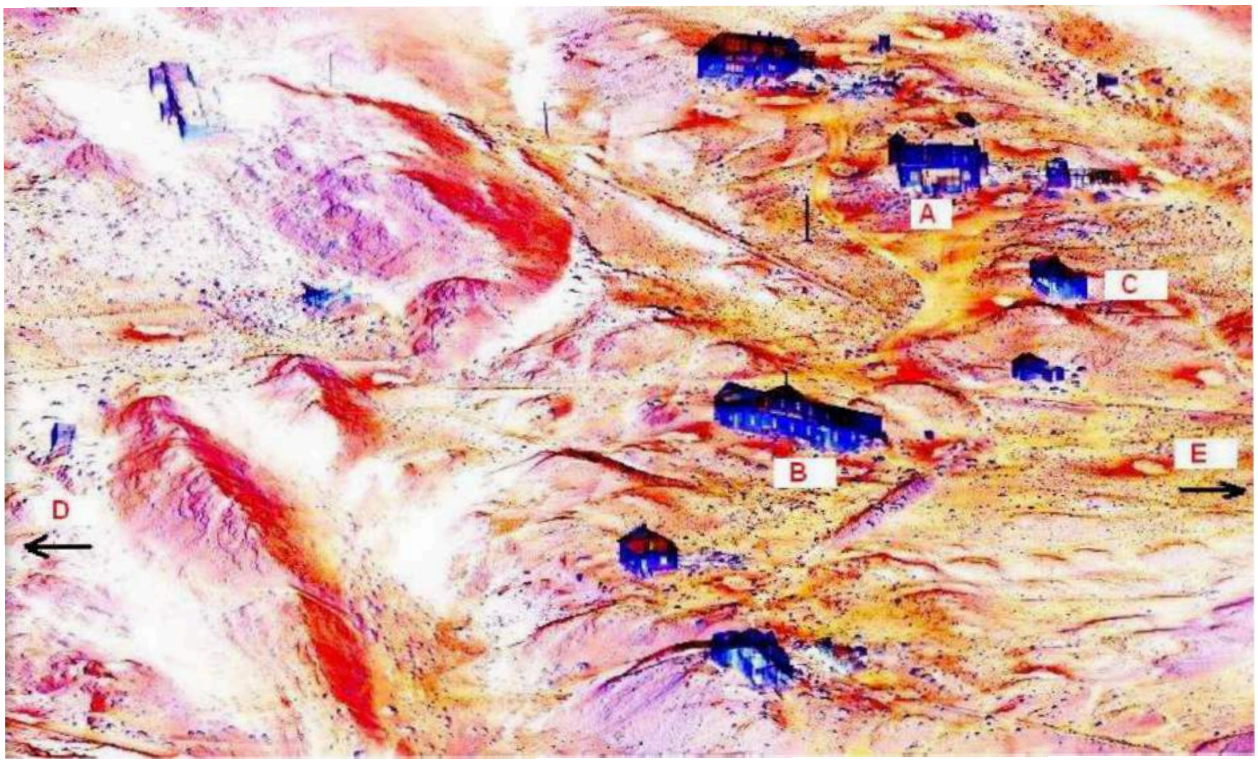
The set-up for the exterior collection with the VZ-2000i included a vehicle with a shock mount and a two-person crew to operate. *It could have been performed with only one person, with controls inside the cab,* said Stroh. *But we wanted to move fast and also bring along a few of our colleagues who we thought would enjoy the experience.*

The expedition took a week. Camping. Grilling over an open fire. A dip in the ocean now and then. And lots of hard work mixed with exhaustion and laughter.

If a man's treasure were measured in satisfying experiences, one could say that this adventure was probably worth much more than (almost) any diamond ever found in the Sperrgebiet!

#End#

Camping for a week in the dessert, with an ocean to the west, and good friends to share the work and laughs.



From the Surveyor Report: Figure 1 – Selected area of Pomona , showing the Directors house (A), School & Quest house (C) & , Administration building (B) , done with a Riegl VZ2000i long range scanner

WRITER'S ADDITIONAL NOTES AND BONUS OUTTAKES

The solitude drives you crazy. **Pictured: Francois Stroh.**

Quotable Quotes During the Interview - Too Good To Leave Out

Francois lending the TLS VZ to do a real time demonstration: Francois' hand is open… this (experiment w the RIEGL VZ) never would have happened otherwise. It's his way of doing business. His attitude. - Herman

You feel very alone here. As they say in Africa, it's a good place to die. - Herman

We enjoy standing in the sun. Back to the boardroom. - Francois

Field of Dreams for LiDAR. Mind blowing. - Herman

The boer makes a plan. - Herman

Astounded by what is possible. - Herman

The future lies in the fusion of technologies. - Francois

Sperrgebiet

The Sperrgebiet is a diamond mining area in southwestern Namibia, in the Namib Desert. It spans the Atlantic Ocean-facing the coast from Oranjemund on the border with South Africa, to around 72 kilometres north of Lüderitz, a distance of 320 km north. Wikipedia