

FROM SOURCE TO SINK WITH ANGEL

By: RON DANIEL



COVER STORY

We wait with anticipation, a sense of adventure tinged with uncertainty. Dawn is breaking as our assorted group stands on a quay-side within the harbour, next to the customs post. We think we are in the right place but where is the ferry to Venezuela?

The day has begun long before the cockerels of Moka have crowed, with a maxi pick-up, a couple of other stops, then the drive south. We weave our way through the suburbs of San Fernando, our driver exuding a reassuring confidence that he knows where we are going. It turns into the first time I have ever been escorted by a police vehicle with flashing lights, the kind officers doing their best to help us find King George IV Dock.

The Orinoco Express arrives with a flourish in a sweeping arc as dawn breaks and our guide and skipper Winston jumps out and ties her up behind the customs post. Passport formalities quickly completed, bags, passengers and life jackets loaded, we are soon on our way, the twin outboard engines of the pirogue taking us towards one of my long-held life goals, a visit to Los Saltos de Angel, or the Angel Falls, Venezuela. The early part of the journey elapses pleasantly enough, taking us past each others' acquaintances, La Brea, the LNG terminal at Pointe Fortin, a Petrotrin jack-up rig, various bits of offshore oilfield infrastructure, and some outstanding geology in the cliffs of the south-west peninsula, glowing yellow and red in the morning sun. A unique view, for me at least.

With a four hour journey slated, we have been at full throttle, then everything changes as we enter la Boca del Serpiente or Devil's Mouth, the 15km or so of water that separates Trinidad from Venezuela across the Gulf of Paria. The sea becomes much more 'disturbed,' our pirogue bucks and pitches, water comes in, and the non-sailors are revealed. I've discovered that I am the only GSTT member and geoscientist present in our complement of 12 but as we go past Soldado Rock and into Venezuelan waters, Winston recalls fond memories of the recent trip to study that feature led by Dr Haseley Vincent.

The Orinoco delta looms closer, a fairly featureless coastline of trees as we head for one of the northern tributaries of the river. I am struck by the abruptness of the colour change from a more marine dark blue to the beige, sediment-laden river water, still several kilometres from shore. Our trip leader Winston is well connected in these parts and arriving at Pedernales, we buy the local equivalent of doubles for breakfast before transferring to a water taxi for the two and a half hour journey up a tributary of the Orinoco to Tucupita. A bright red and white water ambulance sporting Chavista posters catches my eye.

Pedernales reminds me of the re-opening of the Venezuelan oil industry to foreign companies in the early 1990s, following nationalization in 1974, being one of the offerings in a Marginal Fields round. Producing from Pliocene reservoirs on the flank of a shale diaper, it proved a disappointment to those who took it on but is still in production.

The trip upriver is relatively calm compared to the Boca crossing, with rich bird life visible, including flocks of scarlet ibis. It was a surprise to see them feeding very close to villages like a domesticated duck or chicken would, compared to the distant fly-by I had experienced in Caroni. Our transport is another pirogue,

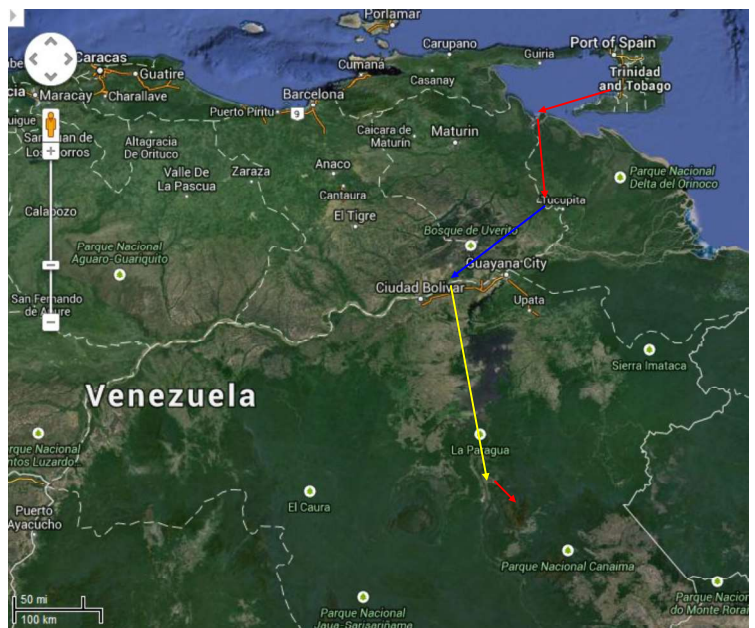


FIGURE 1: Legs of the Sink to Source Adventure (red = boat, blue=road, yellow=plane)



FIGURE 2: Water Ambulance near Pedernales, Venezuela

a water maxi if you will, and the river is the equivalent of the Churchill Roosevelt Highway, with plenty of passing traffic. There are miniature islands of water lilies to be dodged or cut through and moving in the same direction as us, demonstrating that the river is tidal for hundreds of kilometres, despite its massive flux of water. Both the vegetation and style of housing changes gradually, almost imperceptibly as we go upstream, from mangrove and houses on stilts with hammocks and no sides, to the appearance of solid land indicated by proper trees, brick and tin-roofed houses. We stop at one of the fishing communities along the river to... buy fish.

After an hour and a half we drop off two of our passengers, taking advantage of the double Public Holiday at the end of June to fish and relax. Their retreat for the weekend is a thatched roof building by the riverside, partially open-sided, idyllic. We will pick them up on our way back. We see the rain shower several kilometres ahead and certainly know it when we encounter it, plump raindrops hitting our bodies and faces like shrapnel. But I would not exchange it for anything, this once in a lifetime opportunity to travel up the Orinoco by boat, on the way to the Angel Falls.

We reach Tucupita, another Marginal Fields offering from the 90s that jogs my memory. We did not bid on that one either. The football world cup is in full flow and the assorted Trinis, Brits and Canadians support whoever, as the games are shown in the glacial hotel restaurant where we also eat dinner. Fuel is highly subsidised in Venezuela and by my reckoning, much of it is consumed by air conditioning!

The following morning we check out early for a two hour taxi ride to Ciudad Bolivar, from where we will take a flight to the Canaima National Park. Without doubt the scariest car journey I have ever made, the three drivers race each other at speeds up to 160 km/h in the dark on unlit roads. I speak Spanish but appeals to slow down go unheeded and the only respite comes when they stop for strong coffee to keep them awake. An encounter with one of the many mammals that wander the plains would have been catastrophic. The light of daybreak lessens my anxiety somewhat and we are all glad to be dumped at the airport before they race off to their next coffee-fuelled job. The flight to Canaima is serene in a 30 seater turbo-prop and an hour later we are landing on an open landscape, almost lunar in its magnitude.

The lodge in Canaima National Park is a few minutes walk from the airport terminal and rudimentary. The village is located where the Rio Carrao makes a sudden 90 degree turn, branches and widens into a series of spectacular waterfalls and cascades, their frothy white a contrast to the ruby red of the stiller water. I suspect a major geological fault. Leaving at the lodge all but what we need for an overnight expedition, we transfer to a motorised canoe and head up the Carao.

Initially it feels as if we are on a lake within a vast, open landscape, with the tepui or table top mountains, rising abruptly above the plain in the distance. But soon we have to unload because the full canoe cannot navigate some rapids. All of us except our two local guides, who are driving and navigating, walk a mile or so, some taking a cooling plunge in the crystal clear water while we wait to be picked up. The walk allows me time to think about the vast amounts of unconsolidated sand on this highland plateau beneath my feet, the source of what I am exploring for in its sink offshore eastern Trinidad, over 700km away as the crow flies,. The rivers will transport these Roraima Group sediments, estimated to have been deposited 1.5 to 1.9 Billion years ago (yes, Billion!) as far as 1000km away to form part of the Orinoco deep sea fan. The scale of it all in time and space is truly awesome.



FIGURE 3: Sandstones of the Roraima Group Before Their 1000km Journey to Offshore Trinidad



FIGURE 4: Carao River Near Canaima and Distant Tepui, Venezuela

The journey soon gets more lively as we shoot up our first rapid and we all get drenched as the canoe is expertly maneuvered. We laugh when Winston mentions that there are 21 more rapids between here and our destination, but he is not joking. Although the Orinoco is 16km at its widest point, we are on a highland tributary a few hundred of metres wide initially, each branch getting narrower as we climb. Towards the end of our four hour journey we all have to use our hands against a vertical rock face to get the canoe through a narrow and twisting gap. Although the river levels are low, we've made good time and the weather is fine. What started as glimpses around meanders through the tepui, then a distant hum has become the full majesty of Kerepakupai Vena and alighting on the bank of the river opposite our camp for the night, we make the hour-long trek up to the base of the falls.

As often happens when confronted by the power and beauty of nature, I feel spiritually moved as I look up at this 979m high wonder of the world. The impact is intensified by the appearance of a vast volume of water falling from an apparently small area. What brought me here, apart from the curiosity that drives me as a geologist? In 1998 I attended an introduction to management course (which failed in its main purpose!) but introduced to me the concept of making a life plan, which included your goals and dreams. My first plan, now revised annually, included visiting the Angel Falls, and Petra in Jordan. Some call this a bucket list, or 50 things to do before you're ---- but mine are few, and always too important to be dumped in a bucket.



FIGURE 5: Morning View of Angel Falls from Camp

By nightfall we reach camp, a floor and roof, with hammocks slung between pillars for the night. Our guides have prepared a feast of chicken roast on an open fire and after food and much banter, we retire. The falls look splendid in the soft morning light but the clouds soon close in to portent rain and we decide to break camp and head back to Canaima.

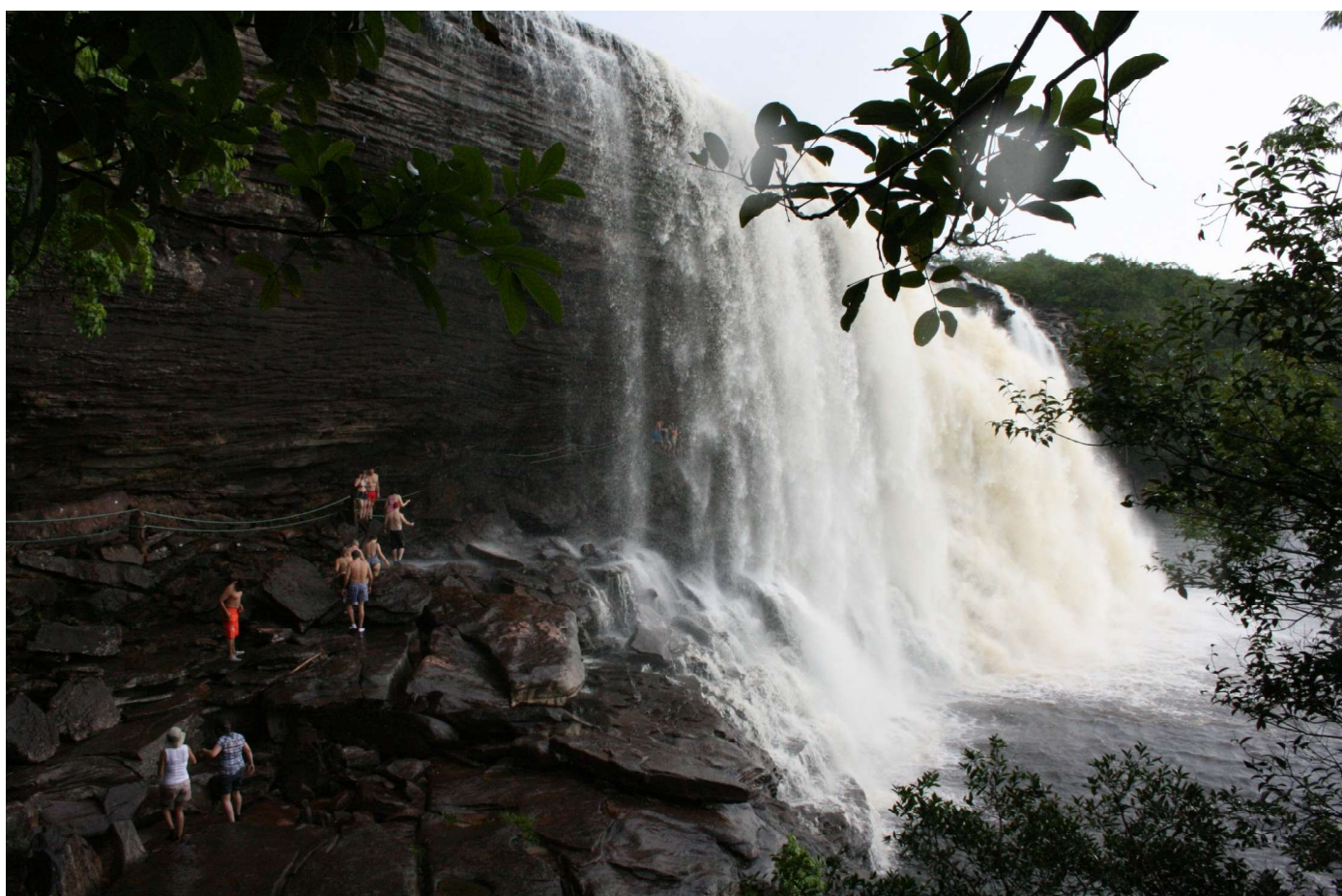


FIGURE 6: Going Behind Sapó Falls, Canaima, Venezuela

There is not much sitting around on this trip and back in Canaima, Winston hires a canoe to take us to Sapó and Hacha Falls; the frothy ones on the Carao that are wide rather than high. This provides an unexpected thrill that is almost as great as seeing the Angel Falls, walking behind the curtain of millions of litres of water cascading down, getting drenched and emerging on the far side 200m away to experience the waterfall at close hand, front and back.

The rain had reached Canaima by nightfall and the body called for rest but being Saturday night, some of us limered with the locals at the local tourist trap and did some comparative research on the quality of Venezuelan Cacique rum (very favourable I concluded). To no one's surprise my planned 'brick' triathlon training session of run and swim in the Carao river on Sunday morning did not happen. We flew back to Ciudad Bolívar and fortune smiled on us because none of those jet-propelled taxis were available and remarkably, Winston was able to rustle up and charter a luxury coach to take us back to Tucupita. In the hour it took him to do this, we were able to pose like proper tourists next to Angel's plane at the front of the airport terminal. Although Kerepakupai Vena was long known to and venerated by the local peoples, and even Sir Walter Raleigh may have set eyes on them, most people around the world know them by the name derived from an American playboy Jimmie Angel; probably because he made the news by crash landing his plane on the top of the tepuy in 1933 and taking 11 days walking to reach 'civilization.'

Our second night in Tucupita included a lengthy power cut and some rum fish, which combined with the extended motion of boats and planes, caused some of our party to reach for the Gravel before crossing the Boca del Serpiente on the way back to Trinidad. When we picked up our two fishermen, a brisk trade in handicrafts took place with the local indigenous people and I learnt that for



FIGURE 7: Refurbished Version of Jimmie Angel's Monoplane, Ciudad Bolivar Airport

some reason, they do not eat any part of the coconuts which grow abundantly there. Being a Monday, the river is very busy and several of the water taxis are the equivalent of school buses, ferrying uniformed children. After a brief encounter with a tempest in the Gulf of Paria, the Orinoco Express docked serenely back in San Fernando.

It would have been easier and more comfortable to get on a plane at Piarco and perhaps be at the Angel Falls a few hours later but I would not have exchanged the river route for anything, especially the extended companionship, the slow burn approach that allowed anticipation to build, and a sense of having done something rather special. Many thanks to the GSTT for making one of my dreams come true, to Winston for being such an excellent facilitator, and to my co-adventurers for during the trip of a lifetime.



GSTT PARTNERS WITH PETROLEUM HISTORICAL SOCIETY



Members,

The Geological Society of Trinidad and Tobago (GSTT) is pleased to announce its affiliation with the Petroleum Historical Society (PHS) of Trinidad and Tobago. Both societies propose to work together towards the re-establishment of a Petroleum Historical Museum and Park and are committed to the promotion of our Petroleum heritage.

Both, President of the PHS, Mr. Victor Young On and GSTT President, Mr. Xavier Moonan, agreed that the goals and ambitions of both societies were aligned and working jointly on this project will only yield positive results for both parties.

Xavier Moonan
GSTT President