100 years of West Coast diamond prospecting & mining - the legends that shaped the business

Dr John Bristow

6 February 2025

Global Diamond Network

South African West Coast - Worlds Richest Diamond Placers

Century (1925 – 2025) of discoveries, exploration & exploitation

- **1925** - ***Jack Carstens:*** discovers diamonds on ***Port Nolloth Reserve*** - prospecting moves north from *The Cliffs* to the *Orange River Estuary*, with minor activity in the south towards Kleinzee.
- **1926** – ***Dr Hans Merensky's*** group discover rich deposits immediately north of **Alexander Bay**
- **1927 - Government** prohibits any further diamond prospecting on State owned land in Namaqualand
- **1928** - ***State Alluvial Diggings*** *(now* ***Alexkor****)* established between Orange River & Port Nolloth
- **1941** - Prospecting to the south at **Kleinzee** lays foundations for *De Beers Namaqualand Mines*
- **1961-1965** – ***Sammy Collins***, Texan Oil-entrepreneur's ***Marine Diamond Corporation*** initiates off-shore prospecting; impetus for today's marine small-to-medium scale RSA mining operations, and large-scale Namibian exploitation
- **1960 ->** Progressive discovery & exploitation of key inland Orange River (and other) alluvial deposits (e.g. Ochta, Baken, Bonte Koe)
- **2025** - Land-based coastal deposits are largely depleted, exploitation increasingly moving off-shore; mid-sized vessels, improved technology
- **Informal & Illegal mining -** significant challenge on land deposits & old tailing dumps.
- **Pioneers, Legends & Followers** – unlocked ~400kms of Namaqualand coastal strip & feeder-drainages; from Orange River *(north)* to Olifants River/Doring Bay *(south)*

The Diamond Coast of southern Africa

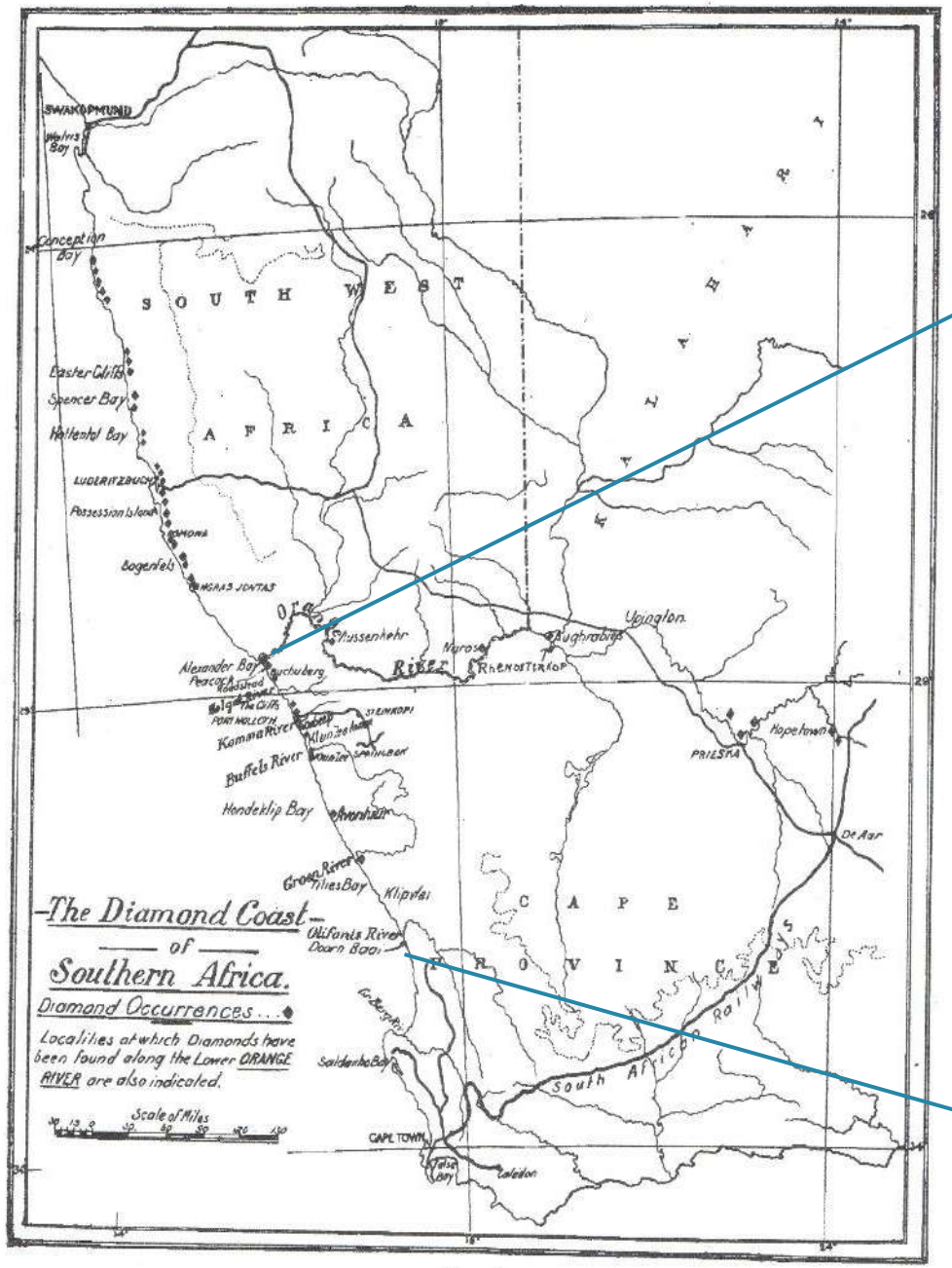


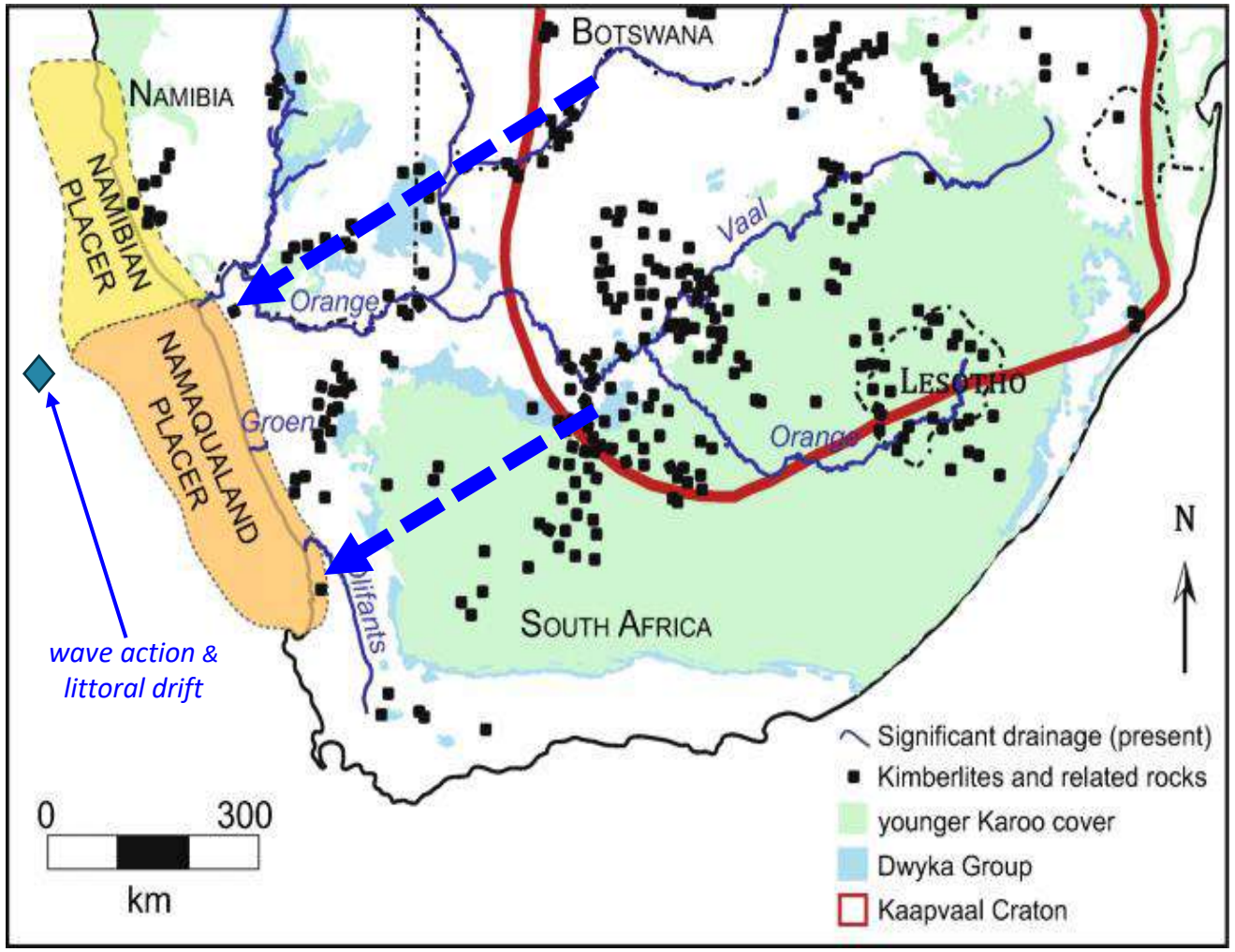
Fig. 1

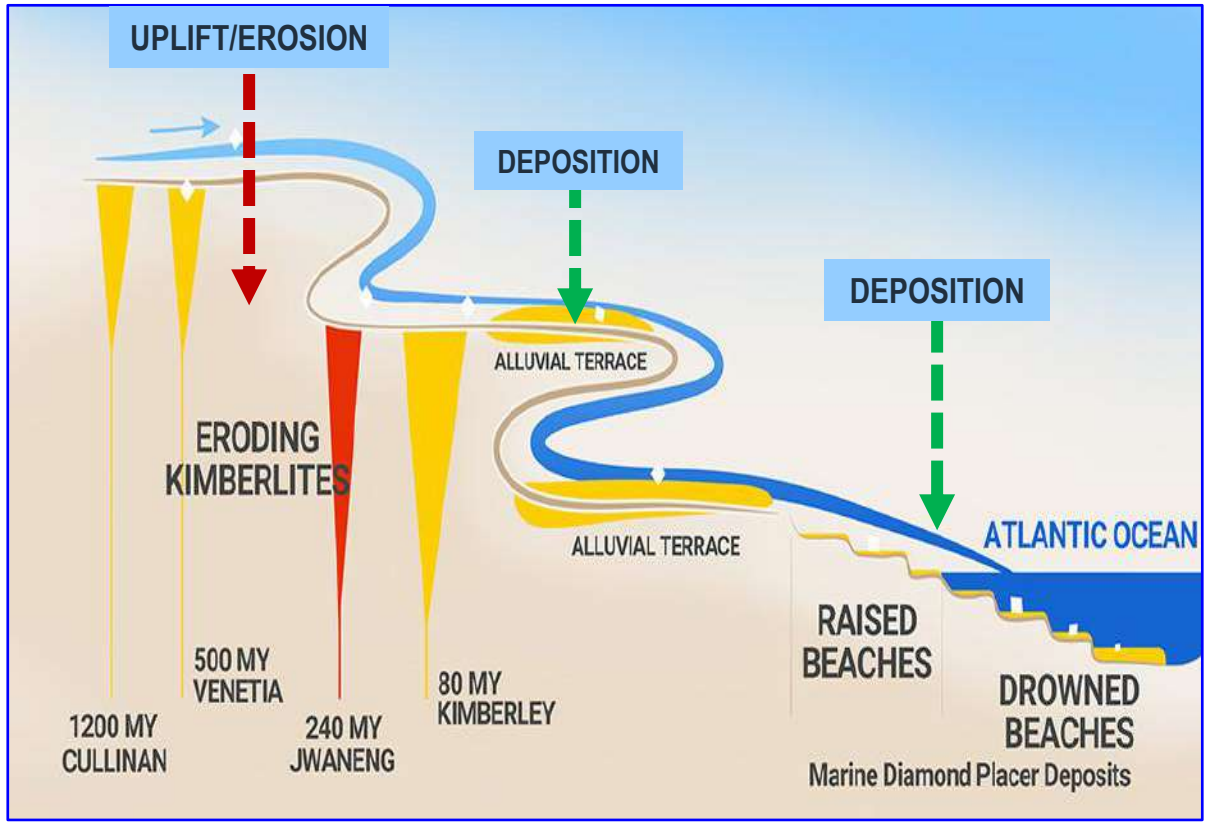
Orange River entering the Atlantic Ocean

Satellite image

- Note the muddy-plume from the Orange River mouth (from flooding or high-rainfall in interior), extending northwards
- Due to wave action and littoral drift, which also played a key role in distributing diamonds northwards along the Atlantic coastline of RSA (from the Olifants River) & Namibia (from the Orange River)
- The northward moving B***enguela Current*** that moves up the West Coast, is an upwelling compensation current and has little impact on the transport of diamonds

Geological setting : W. Coast diamond deposits





West Coast Off-shore Mining Concessions

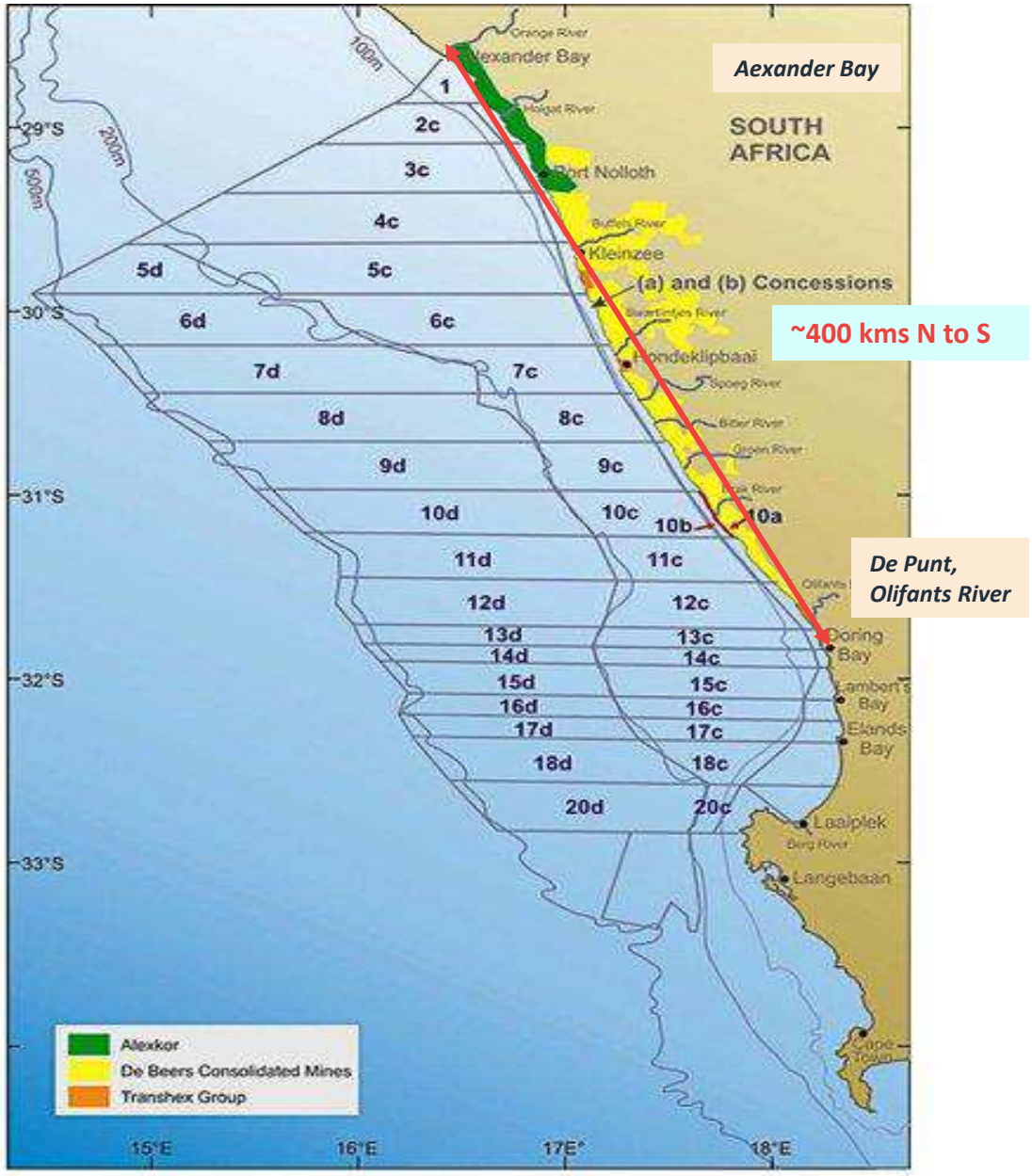
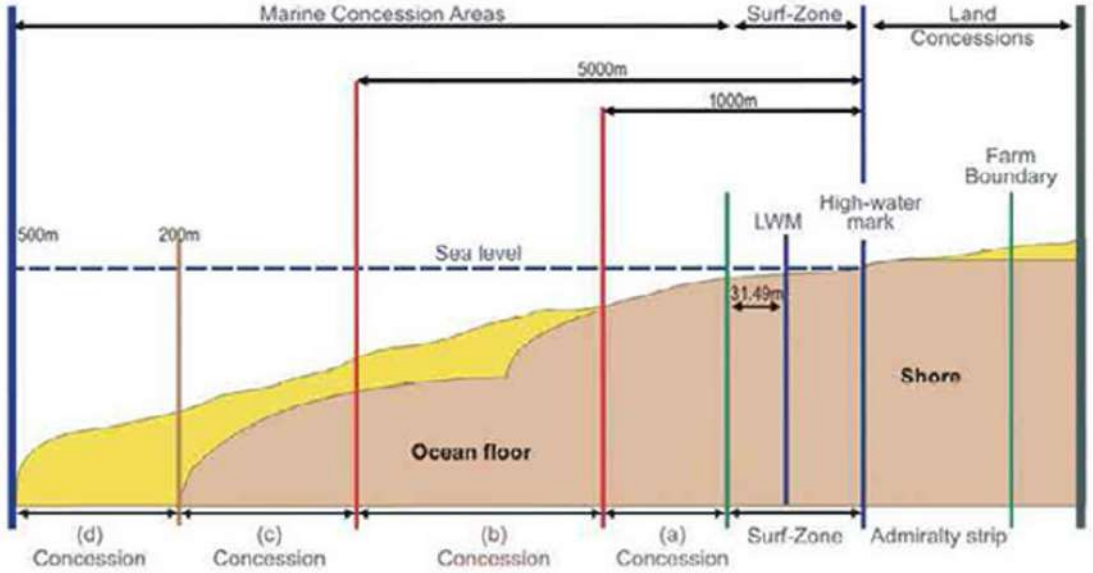


Figure 1. Map of South African coastal and marine diamond mining concession areas, showing position of the 10(a) &10(b) concessions.

Schematic X-section of mining concession parameters



West Coast diamond production - RSA & Namibia

Quality Goods - commercial whites, makeable goods

- Average stone size (*right-hand image*) ~ 0.48 ct/stone due to contribution of bigger sea diamonds
- Well sorted & rounded by millions of years of river, glacial, marine transport (*Benguela Current*), milling & abrasion on ancient beaches and potholes

Mega-Placer Diamond Resource:

- *Two mega-placer deposits - Namaqualand & Namibian coastlines*
- *Estimates - west coast land + marine resources:*
  - Gurney et al. (1991) ~1.5 billion carats (conservative)
  - Schneider, G. (2009) ~3 bn carats
  - De Wit, M. (2024) ~ 1,12 bn carats

- *Carats mined (estimates)*:
  - Gurney J.J.G. (1991) ~150 m carats
  - Schneider G.I.C. (2020) ~ 205 m carats
  - De Wit, M.J. (2024) ~ 200 m carats
  - Bristow, J.W. (2025) ~215 m carats

Estimates of Carats Mined (RSA + Namibia) to date:

- Large uncertainties due to opaqueness of diamond production data
- Significant IDB & 'shrinkage' since earliest years of exploitation
- During SWAPO hostilities, Namibian mines experienced considerable losses
- 'Pigeon-carrier' and 'bicycle-diamonds' an added factor

Alexkor land & sea production; October - November, 2018
(~$500/carat given presence of larger sea goods)

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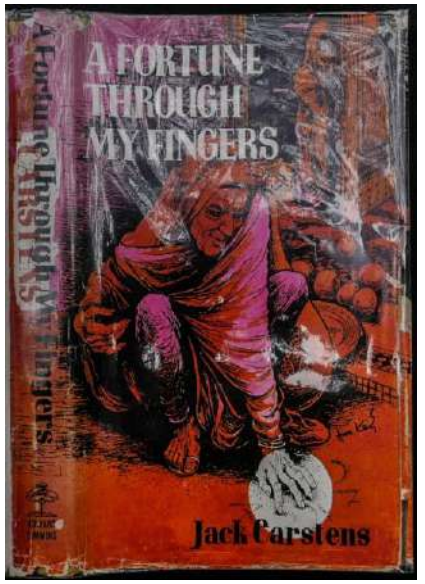
Frederick Carruthers Cornell (OBE)

1867 – 1921

- English soldier, geologist, prospector and author - born in Devon, educated Bedford School (England), best known for war-time activities - *Maritz Rebellion, 1st World War & writing*
- Legend of the Richtersveld; author of ***The Glamour of Prospecting*** **-** he '*knew*' there were treasures somewhere near the Orange River mouth, but they eluded him
- Prospected and "*mucked about in Namaqualand for more than a decade, just one sniff behind the Motherlode*"
- **1921 -** Sailed to England to raise finances for prospecting, killed in an accident with a London taxi while riding his sidecar-motorcycle
- His book intro. reads - "*What gave me 'diamond fever' I don't pretend to say. ….I have no love for the cut and finished article, and nothing would induce me to wear it. But for the rough stone, and for the rough life entailed in searching for it, I have always had a passion*."
- And notes: *"I have been richly compensated for the few discomforts and hardships I have experienced by the glorious freedom and adventure of the finest of outdoor lives, spent in one of the finest countries and climates of the world*."

Jack Carstens

1892 – 1974



- **August 1925** – Son of a Port Nolloth storekeeper, ***Jack Carstens*** found & registered first Namaqualand rough diamond, just south of Port Nolloth while exploring on *Oubeep* farm
- His father, storekeeper & local Reuters correspondent, sent gravel from a riverbed south of Port Nolloth to Dr Marloth, who declared the gravels "*without a doubt diamondiferous*"
- Discovery-news spread fast, thanks to his father's newspaper connections – the rush and hunt for diamonds was on
- Soon prospectors were finding diamonds at other localities between Port Nolloth & Alexander Bay, then northwards
- *Robert Kennedy* an experienced prospector made the next find (14 diamonds) going for a swim in the cold water off "*The Cliffs*', north of Port Nolloth

Port Nolloth (ca. 1906) - Civic Centre & Carstens Trading Store (looking north). At this time, the town & harbour existed primarily due to Copper shipping/export activities.

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Dr Hans Merensky

1871 - 1952

- Pioneer, prospector, geologist, scientist, conservationist, philanthropist, famous for his ***Bushveld platinum*** discoveries, joined the fray
- His diamond prospecting group delineated rich-deposits amongst fossilised oyster beds on older raised-terraces close to the mouth of the ***Orange River***
- Claims were registered for which he was eventually paid out £1.25-million
- Recognised that surge of supply from Alexander Bay and surrounds, might cause the value of rough diamonds to collapse
- Undertook the 700km journey from Alexander Bay to Cape Town, engaged with Government & Opposition; a prospecting & mining moratorium was declared on state land
- Fearing an overtraded world market, De Beers bought as many of the Namaqualand diamonds they could; ***Ernest Oppenheimer*** took the long view and remained calm throughout
- Port Nolloth & Springbok operators, expectant of overnight wealth, objected to government intervention; there were mass meetings & threats of armed riots.

Record of Hans Merensky Association Diamond Recoveries From Alexander Bay

Prospector/Formation	Carats May1928–August 1929[86]
Reuning/Oyster Line	178,522
Caplan/River Line	233,133
Papert/Oyster Line Extension	47,690
Gelb/Operculum Beds	1,582
White/Kennedy/Pebbly Limestone	465
Total	**464,393**

THE DIAMOND DEPOSITS ON THE COAST OF LITTLE NAMAQUALAND.

Merensky & Wagener (1928).
Trans. Geol. Soc. South Africa. XXXI.

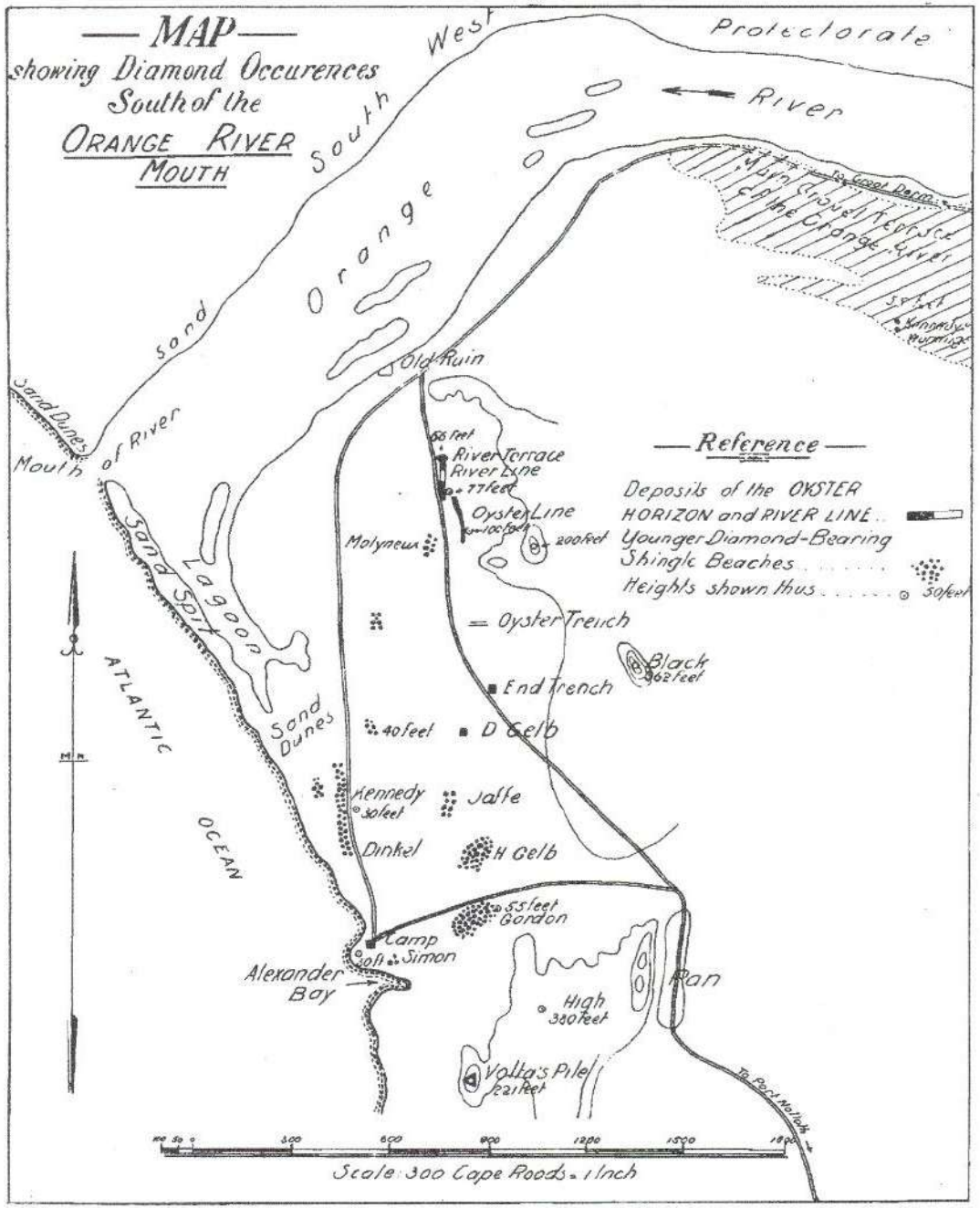


FIG. 2.

Alexander Bay & State Alluvial Diggings (now Alexkor)

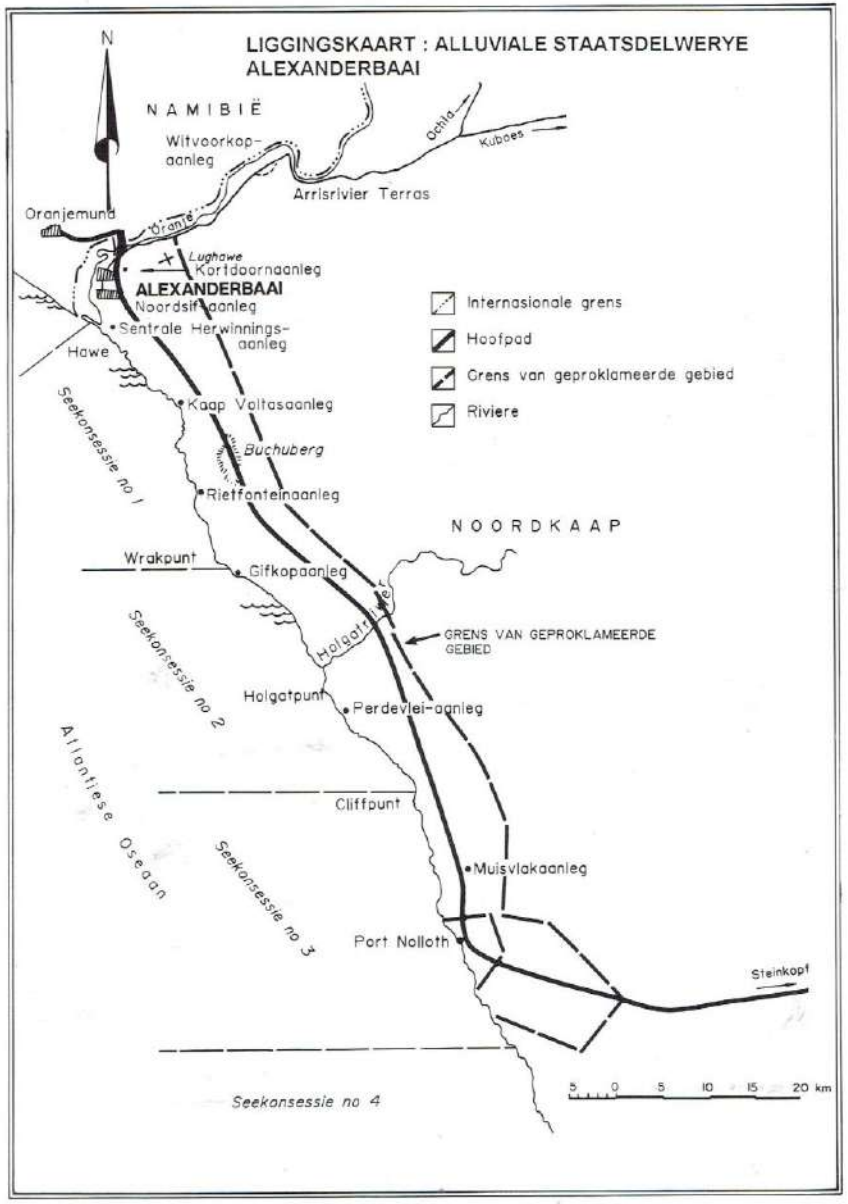
Alexkor's small harbour

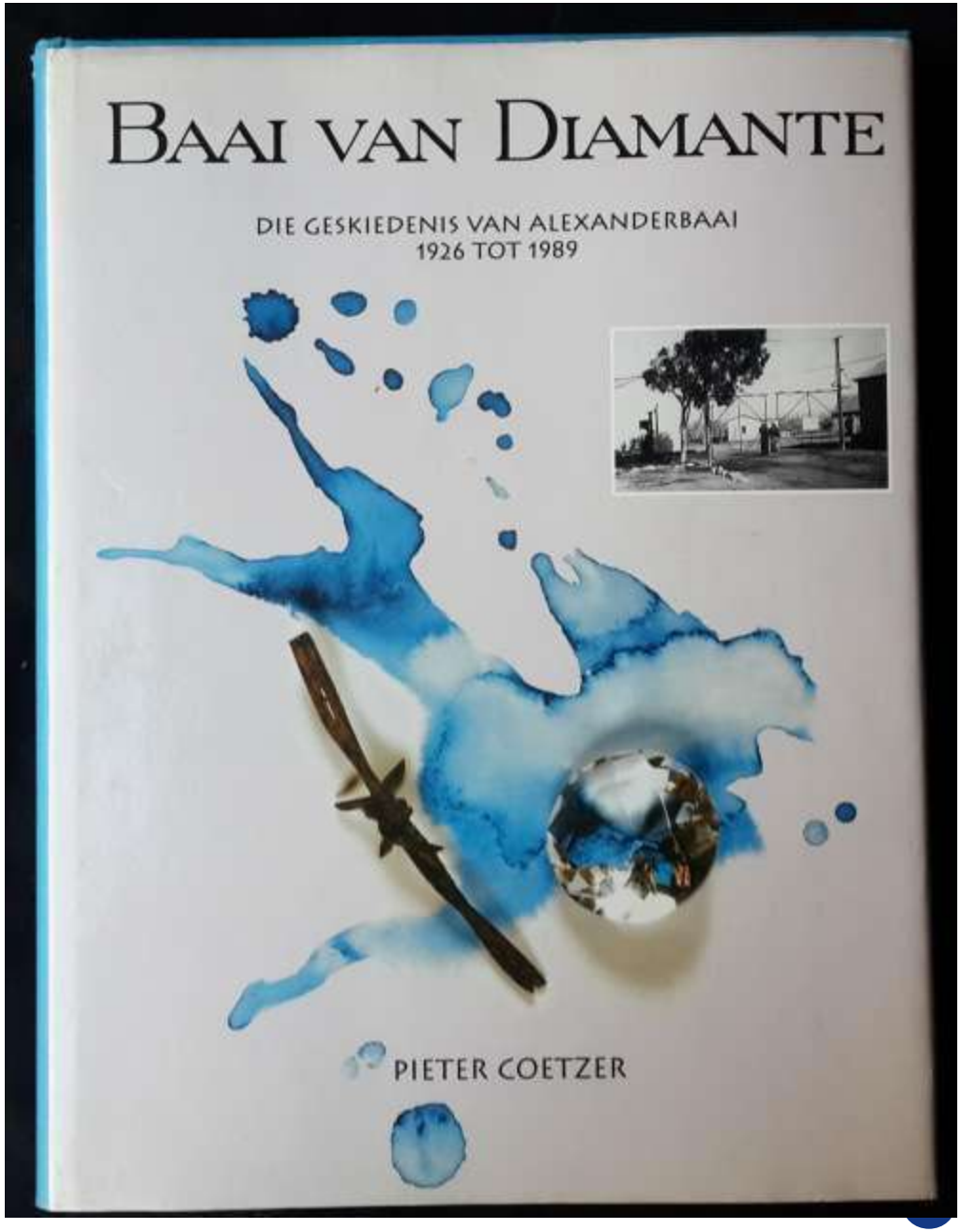
- Alexander Bay has an illustrious & infamous history, in the thick of the 'diamond rush' that gripped the Namaqualand coast following the 1925 discovery of diamonds, with adjacent coastal areas once amongst the richest alluvial diamond deposits in the World

- Named after Sir James Edward Alexander (1803 - 1885), British officer and explorer, who in 1836 explored Namaqualand and Damaraland as far as Walvis Bay (Namibia) on behalf of the *Royal Geographical Societ*y (which he co-founded) from 8 September 1836 to 21 September 1837

State Alluvial Diggings (SAD - 1928)

Became Alexkor in 1992





State Alluvial Diggings (SAD) – 1972

Student Geological Society Excursion – 53 years ago

Exposed bedrock & gulleys

Stripping sand cover – Mining Block immediately south-east of then Alexkor processing & recovery plant

Excavating sand cover, exposing & excavating gravel layers, gulleys & potholes in strongly foliated bedrock

State Alluvial Diggings (SAD) – 1972

Student Geological Society Excursion – 53 years ago

Extensive east-west parallel gulley system stretching into the Atlantic seaboard

Students recovering diamonds in 'cleaned' gulleys – handed to Security personnel with numbered receptacles

Late Prof Jay Barton inspecting bed-rock sweeping - rather primitive in 1972

State Alluvial Diggings (SAD) – Alexkor

- **'State Alluvial Diggings -** established to counteract certain socio-political & socio-economic conditions experienced on diamond diggings elsewhere in the country (e.g. Lichtenberg, Orange River)

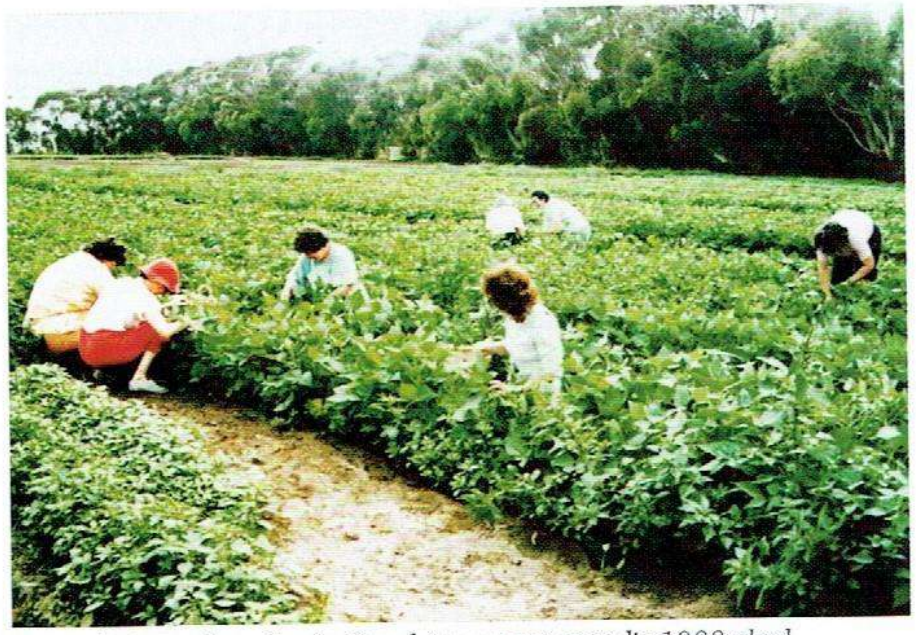
- Private-sector attempts to operate SAD under contract were unsuccessful, because of its strategic location at the mouth of the Orange River & northern RSA border - Government elected to keep Alexander Bay

- SAD rendered certain socio-economic services to isolated areas and Namaqualand residents which could not be performed by the private sector'

  Van Wyk, W. L. (1984). The role of the South African Government in the Mining Industry. Trans. Geol. Soc. S. Afr., 87, 59-67.

- Collective *SAD, CDM & De Beers (Kleinzee)* farming activities on the Orange River *south-bank*, provided fresh-produce from crop farming, orchards, vineyards, dairy, piggery, and ostrich farm, to southern Namibia & northern Namaqualand mines, towns & communities

- Subsequent to the hand-over of the Farms to the local communities post the *Land Restitution Claim & Award* (2007), they are mostly derelict providing little produce to local & regional communities

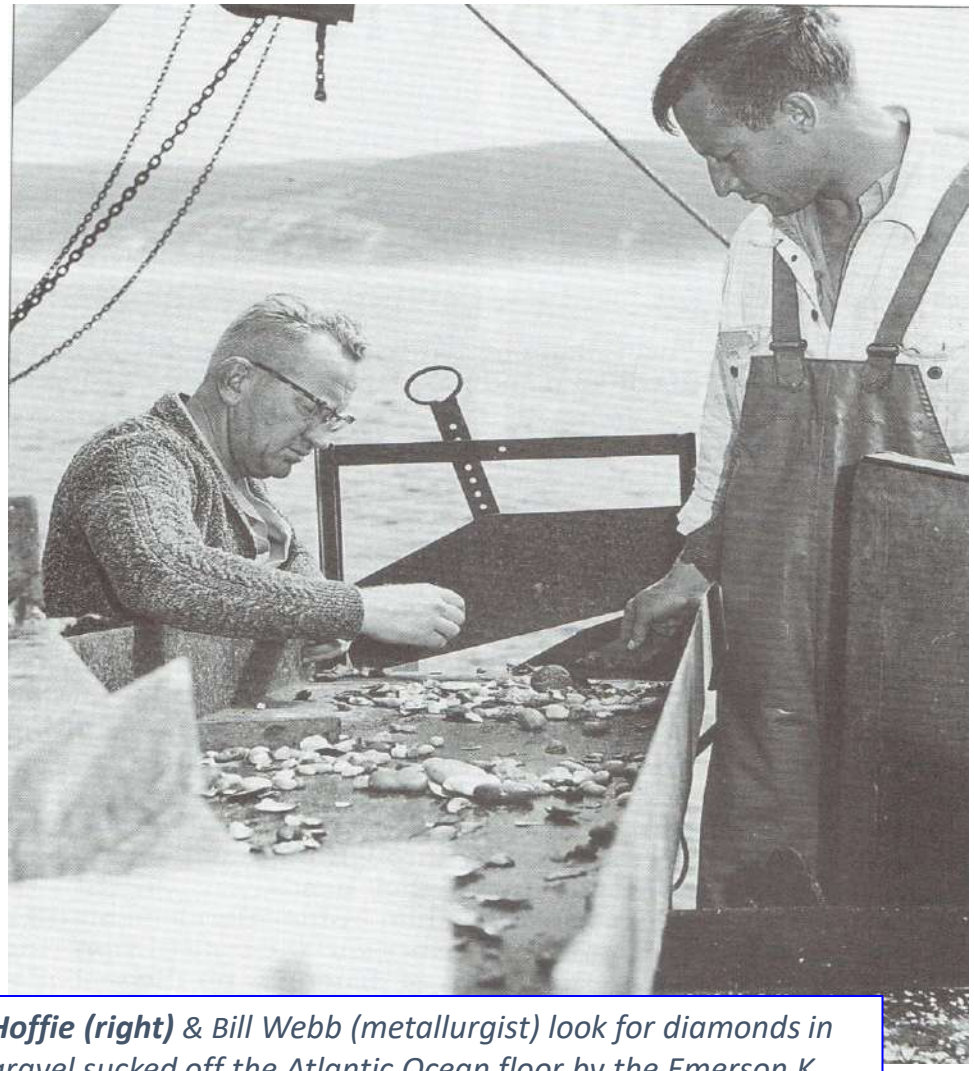


Dames besig om boontjies by Dunvlei te oes net voor die 1988-vloed. (Foto: Alexanderbaai Museum)

François 'Hoffie' Hoffman

1931 – 2012

- **1956 -** BSc Geology (Hons), University Pretoria; then joined Department of Mines, Pretoria.
- Transferred to Alexander Bay (Namaqualand); 2 years exploring & delineating raised-beach deposits south of the Orange River
- **1958** - *Federale Mynbou/General Mining Group* (Gencor) formed a JV with the *Anglo Vaal Group* & *Marine Diamond Corporatio*n (MDC) led by ***Sammy Collins,*** pioneer of marine diamond mining,
- **1959** – Gencor recruited **Hoffie** as Chief Geologist of **MDC** where he spent the next 5 years
- "*Hoffie played a major role in the marine diamond mining industry ...astute and logical geologist, …he worked out where diamonds were likely to be found…started planning geophysical bottom and sub-bottom surveys to produce pictures of the ocean floor*" (Source: *'King of Sea Diamonds* by *Roger Williams; Publisher Flesch,1996*)
- These techniques became primary tools in modern-day marine diamond exploration & delineation; Hoffie noted "*In my first year with MDC I slept at home for a total of 40 nights".*
- **1963** - joined the entrepreneurial founders of *Trans Hex Group* ("THG"); became 2nd largest producer of rough diamonds in South Africa.



Hoffie (right) *& Bill Webb (metallurgist) look for diamonds in gravel sucked off the Atlantic Ocean floor by the Emerson K., an Admiralty Tug, converted to prospecting vessel that played a pioneering role in sea diamond prospecting & mining.*

Andries (*An*) J. Cornelissen

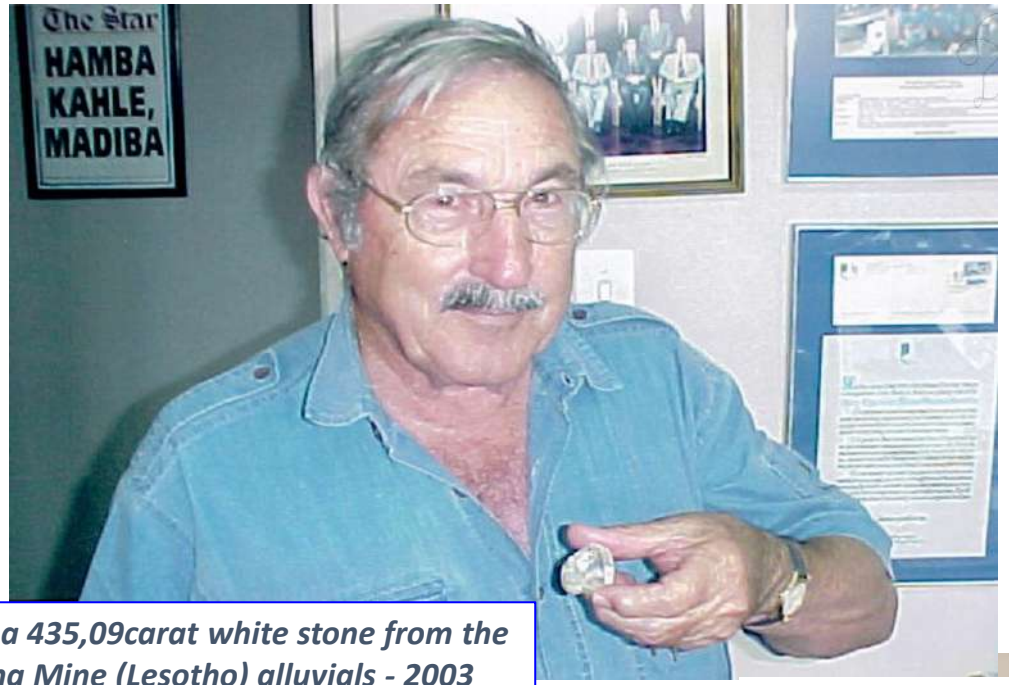
- Born in 1934, ***An*** completed a B.Sc. Geology & MSc Geophysics (Univ. Stellenbosch) and joined *Tsumeb Corporation Namibia* as a geophysicst

- Moved to ***Okiep Copper Company*** to conduct diamond exploration, discovering alluvial diamonds in the Koa River Valley at Galputs, Bitterputs and Bosluispan in Namaqualand.

- ***Tera Marine Mining*** - Chief Geologist, responsible for sea-bed & land exploration, first operator to recover diamonds from west coast marine-deposits economically.

- Consultant - negotiating prospecting contracts with farmers & selling these to Mining companies; these skills led him to join *Anglo American Corporation* to negotiate prospecting contracts with farmers & select exploration targets

- ***Dawn Diamond Company*** – returning to his love of the sea, built and led *Dawn Diamond Company* - 17 mining-boats and +60 diamond divers; pioneered a successful *Diver-owned boat contractor* model to optimise productivity, recoveries & profit sharing.



An with a 435,09carat white stone from the Letseng Mine (Lesotho) alluvials - 2003

Daughter Elizabeth (2024)

Son Courtney, Letseng - 2004

Lourens (Son) & Johan Brink (2024)

Robin Baxter-Brown – Orange River legend

- ***Baxter-Brown*** - Legend & Gentleman, born in the E-Cape (1931), educated at Queens College (Queenstown), and geology degree from Rhodes University (Grahamstown) (**1955)**.
- **1956** – Joined De Beers (4 years) at Oranjemund, Skeleton Coast, Pypklip (Lichtenburg) & Basutoland (*Jack Scott-DeBeers JV);* then resumed studies at Imperial College, London.
- **1960** - with the late ***Hugh Jenner-Clarke***, set-up as independent Consultants in Springbok (Namaqualand), registering *Asam Minerals (Pty) Ltd*. as their consulting vehicle
- Their principal interest, the palaeo-alluvial diamond-deposits associated with ephemeral rivers rising in *Namaqualand's Great Escarpment*, draining west to the Atlantic Ocean, and the T'Auseb that once flowed east-ward into Bushmanland & the Koa Valley
- Alluvial diamond discoveries were made in numerous drainages between Vanrhynsdorp (south) & Alexander Bay (north), including the Zoutrivier, Swartdoring, Buffels Rivers, and Richtersveld Orange River (Octha, Bloeddrif, Baken & Vioolsdrif localities
- Remnant paleo-drainage discovery on the Buffels River at ***Bonte Koe*** (1965), led to a profitable mine upstream of Kleinzee mine (De Beers)
- **Notably,** they recognized the rich deeply buried, palaeo-river channel-gravels, developed into mines at **Octha** & ***Reuning*** (Sendelingsdrif) (1966), **Baken** (1967) & Bloeddrif (1968)
- Baxter subsequently turned to kimberlite & lamproite geology, exploration & development, participating in Australia's Argyle mine discovery (1979), Guaniamo Province (Venezuela) exploration, River Ranch (Zimbabwe) & and Kelsey Lake (USA) mine development.

Ochta Diamond locality – lower Orange River, 1966

Ochta – lower Orange River, 1968

Tati Exploration Camp (Botswana) - 1968

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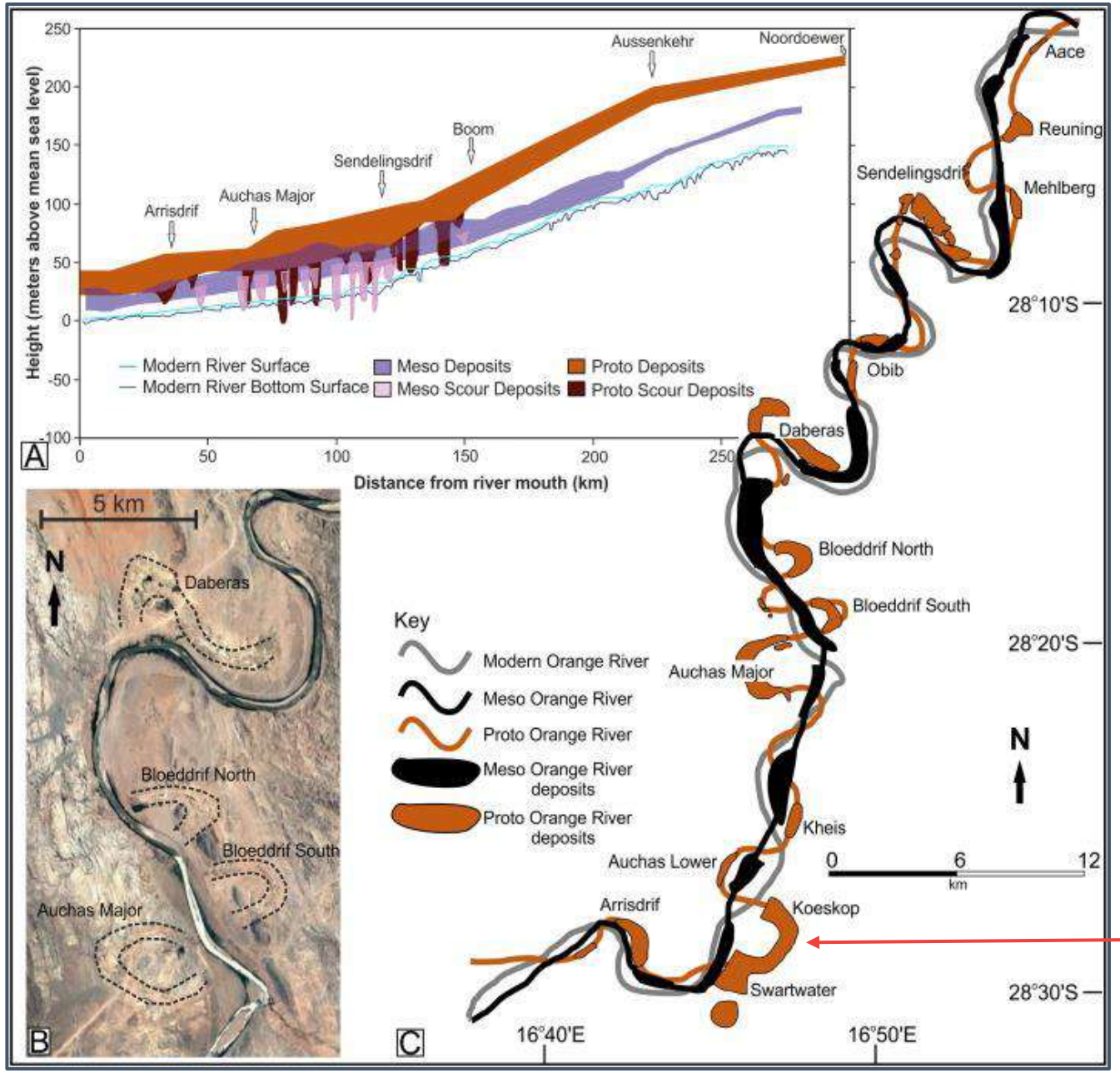
Lower Orange River - mines and prospects



Ochta & Reuning

- Rich deeply-buried, palaeo-river channel-gravels developed into mines
- **Octha** & Reuning (near Sendelingsdrif) (1966)
- **Bloedrif** & **Auchus**
- **Baken** (1967) & Bloeddrif (1968)
- Produced large & exceptional gemstone diamonds (average size ~1.5 carats per stone)

Baken

Hugh Clifford David Jenner-Clarke – gentleman geologist

1929-2016

- ***Hugh*** completed a BSc in geology at London University; after 4 years of prior-study at Chelsea Polytechnic; His career commenced soon afterwards, as a Junior geologist with ***Anglo-American Corporation*** (South Africa)

- He was seconded to *Consolidated Diamond Mines (**CDM*)** of South West Africa* (Namibia) at Oranjemund (1954) & posted to the Sperrgebiet boundary area, including the Obib Dune Field (part of *The Namib Sand Sea*) - ***Darryl Hallam*** & ***Dr Charles Stocken*** his bosses

- This posting was short lived, the geologist in charge of this remote program, showing signs of a nervous breakdown, informed Oranjemund management: "*There are troublesome lions in the area and I'm not going back to work there again*!"

- Hugh struck-up a friendship with ***Baxter-Brown*** who arrived in Orangemund in 1956, later a Consulting partnership was formed; He was transferred to Kleinzee mine in Namaqualand, where he prepared to move from De Beers, doing so in 1958

- After visiting England, he returned to Springbok to meet Gertjie Niemoller of Pofadder, a millionaire, entrepreneur, ***sillimanite miner*** & farmer. He convinced Niemoller of the merits of kimberlite exploration in Bushmanland; a deal & budget followed to sign option agreements with farmers to sample & evaluate kimberlite localities

- Though his dreams of finding diamondiferous kimberlites in Namaqualand were never realised (this was long before the **Clifford-Rule**), Hugh was an integral part of the greater diamond geology fraternity, long term colleague & friend of Baxter-Brown, thoughtful, reserved gentleman of note.

(*** - NAMDEB**)

Janse, A.J.A. (1991). Is Clifford's Rule still valid? Affirmative examples from around the world. 5th Int. Kimb. Conf., Araxa, Brazil

Richard ‘Dick’ Barker - Small-scale mining pioneer

1933 - 2011

- Maverick, innovator & legend of South African small scale diamond operations on the Vaal & Orange Rivers (and small kimberlites).
- Born into a lineage of *1870 Diggers;* a childhood of limited means & opportunities unlocked the best of his ingenuity & resilience
- With no formal education, he mastered *Fitter & Turner* skills at *Kimberley Engineering Works*; innovated designs & efficiency of recovery plants & introduced backhoe excavators on the Diggings
- Unravelling geological subtilities of alluvial gravel deposits was a passion that led to his exceptional self-taught geological expertise
- His insights of rivers & diamond deposits earned the respect of De Beers & other geologists, with whom he readily shared his wisdom & knowledge.
- Embodied the resourcefulness of South Africa’s diamond pioneers, leaving an indelible mark on the industry.

Dick showing his hand at his diamond Sorting-table

Richard Barker
16 June 1933
11 August 2011

Do not stand at my grave and weep
I am not there, I do not sleep.

I am a thousand winds that blow,
I am the diamond glints on snow,
I am the sunshine on ripened grain,
I am the gentle autumn rain.

When you awaken in the morning’s hush,
I am the swift uplifting rush
Of quiet birds in circled flight,
I am the soft stars that shine at night.

Do not stand at my grave and cry
I am not there, I did not die.
[Mary Frye]

Dick Barker - the legend at work

Showing his Son Maurice (left), a seasoned diamond expert & valuator, how to sort alluvial concentrate !

Dick (*2nd from left*) with two of his proteges, John Ward & Mike DeWit (De Beers geologists then) and Prof Brian Bluck (*far left*), internationally recognised sedimentologist from Glasgow University, solving the Orange River diamond transport model

Christo Wiese (& Johan De Villiers)

Ochta diamond mine, lower Orange River – where he began

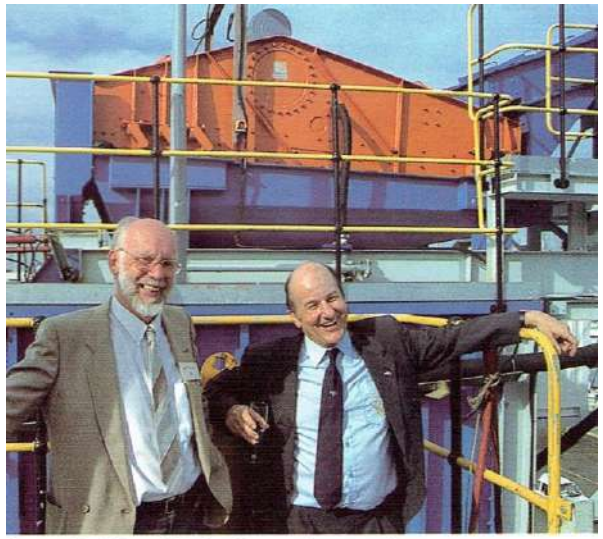
- Born the son of a sheep & cattle farmer in Upington, like most wealthy entrepreneurs Wiese's journey to the top has been one of triumph & controversy
- ***1976 -*** he entered the world of diamonds investing in the ***Ochta mine***, discovered by ***Baxter Brown***, a deal initiated by colourful character, Johan De Villiers
- A fascinatingly rich alluvial *plunge-pool deposit* on an ancient ***Orange River*** channel in the Richterveld, sought after at one point by Harry Oppenheimer
- De Villiers, a young articled clerk doing the annual audit for Ochta, eventually hightailed it to the USA, Wiese stayed & made the money
- The Ochta venture was Wiese's first foray into the real world of business, a success to boot; from there he kept rising making strategic decisions step at a time
- ***1990's*** - Never far from diamonds, Wiese famously out-foxed Remgro chairman, Johann Rupert, for a stake in *Ocean Diamond Mining* (ODM) in the 1990's
- And in ***August 2016,*** Christo Wiese returned to diamonds with a consortium & long-term plan to revive ***Trans Hex*** as a private entity with Son-in-law Marco Wentzel, a successful rugby player, focussing on west coast marine deposits.

'I've always been fascinated by diamonds because it's that amazing industry where you plod along and then one day stumble on a big stone that can change your whole life,'

Christo Wiese: The story of where it all began – told by Magnus Heystek. Editor BizNews, 30th March, 2021.

John Gurney – '*Mr Diamond*' *(1940 - 2019)*

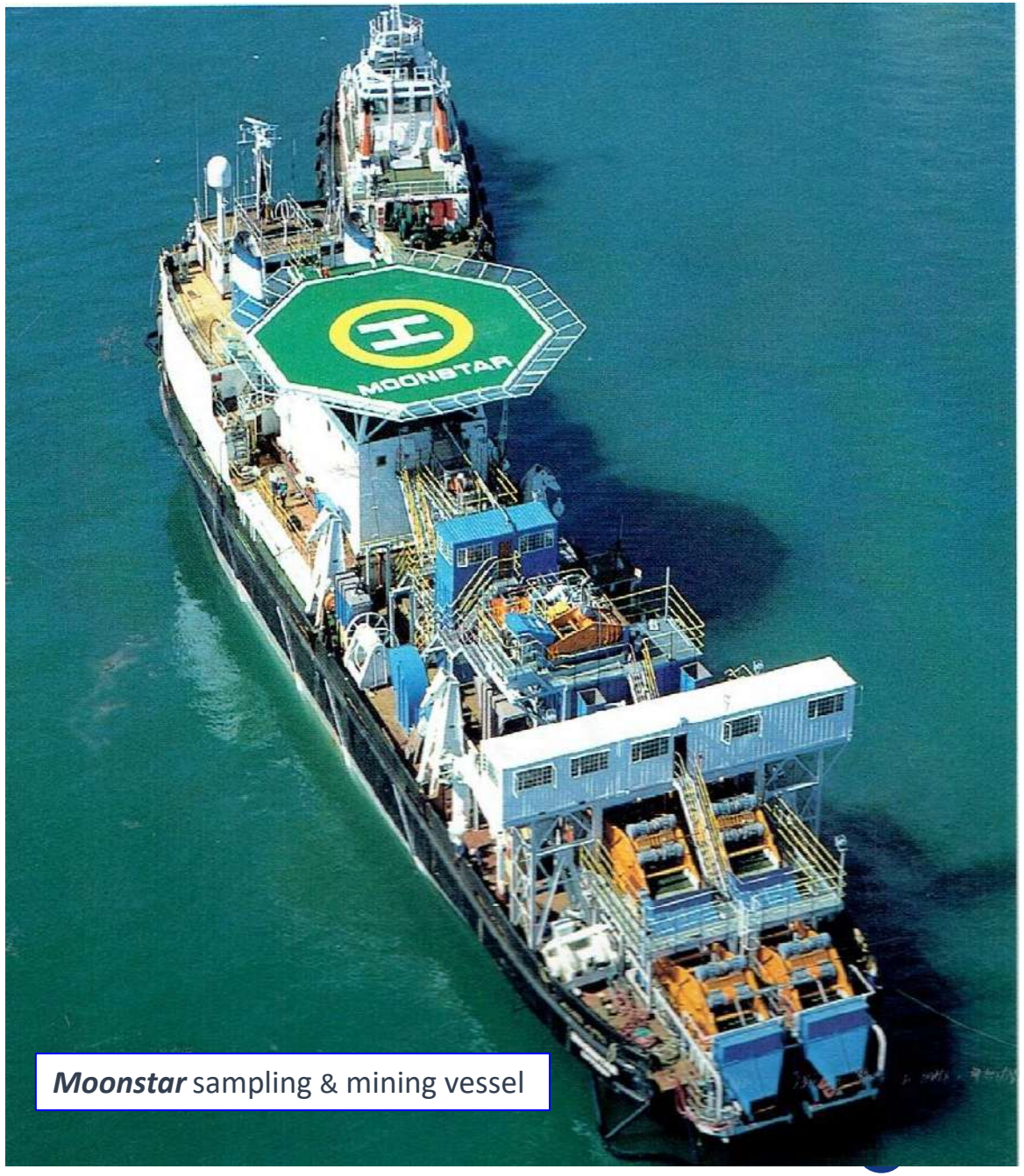
Benco – Moonstone JV 1997



Stuart Smith and John Gurney inspect the Moonstar as she is readied for sea trials.

Parcel of concession 2(b) diamonds recovered by the Moonstar.

- ***Dr John Gurney*** **-** UCT Professor of Geochemistry, world renowned diamond & mantle researcher, competitive sportsman, and passionate diamond diver
- Created ***Benguela Concessions*** (Benco), with local financial & business support
- ***Benco – Moonstone*** (ASX) **JV** – constructed a midwater mining vessel, commissioned November 1997; funded by an Arab Sheik (Bahrain) for $10 m
- Initial sampling of Concession-2B utilised Bauer Tool technology



Moonstar sampling & mining vessel

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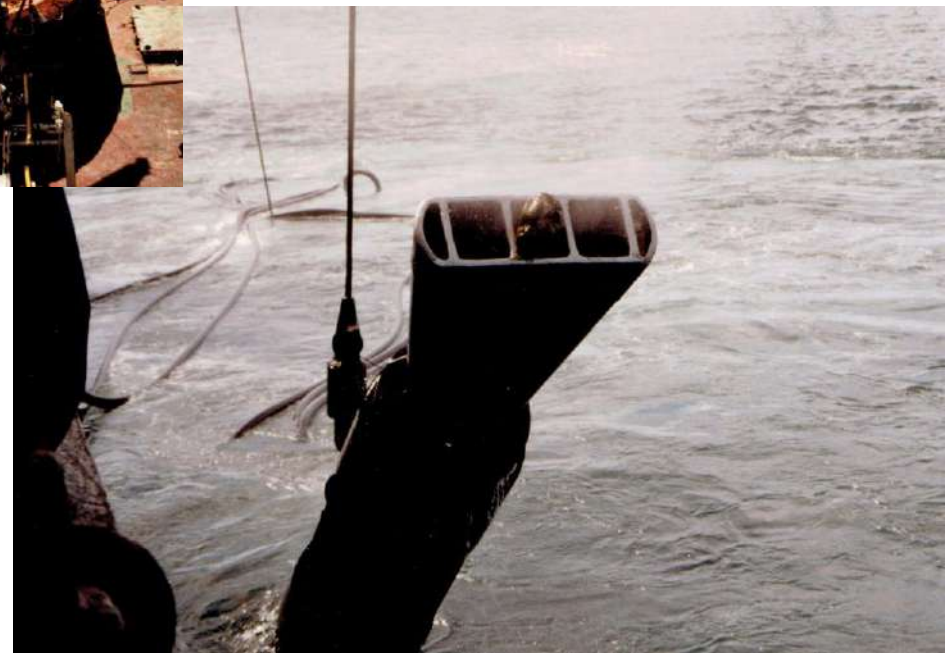
Benco – Moonstone JV (1997 – 2001)

The *Moonstar* vessel - mining in Concession-2B

Moonstar rig & pulleys *(left)* to deploy the ***Air-lift*** mining-head (*below*) operating in Concession-2B, off-shore of Alexkor



- A single-vessel sampling & mining had limitations
- Bed-rock irregularity, inefficient floor-cleaning (air-lift mining technology vs Bauer tool sampling) reduced recoveries
- A 'Rivetted-hull' added challenges given processing plant vibrations & deck-load
- Decommissioned in early-2001

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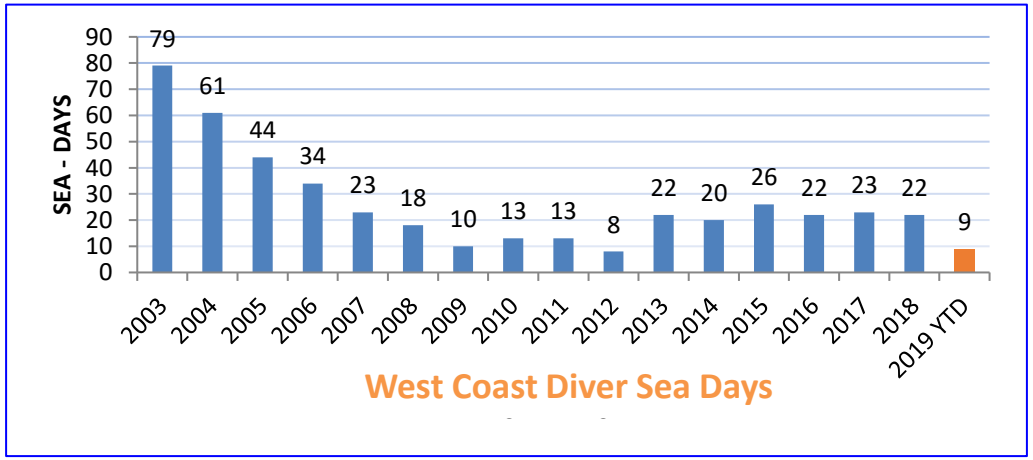
Port Nolloth – Harbour town

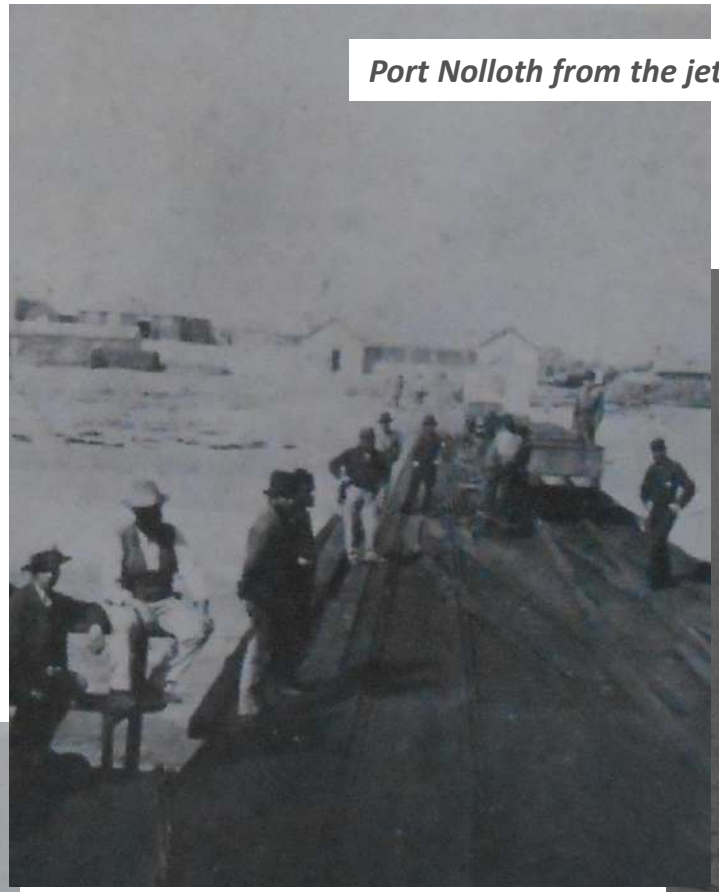
- Located in far north-west of Namaqualand, 140 km north from Springbok; discovered by James Alexander (1855)
- Originally named ***Aukwatowa*** after legend of "*where the water took away the old man*"; later *Robbe Baai* (Seal Bay) then renamed in honour of surveyor Captain M.S. Nolloth
- Initially **export harbo**ur for copper from Okiep mine (Springbok); the quay accommodated horses & carts carrying copper; a railway line (95kms) replaced the horses in 1876
- Ships risked colliding with dangerous reefs due to frequent wild seas, some driven ashore; exports moved to Bitterfontein in southern Namaqualand
- Loss of ship-traffic from Port Nolloth impacted an initially bustling settlement
- Discovery of alluvial diamonds(**1925**) along the coast revitalised the Town; became a key harbour for diamond boats & divers.

Cormorant-bedecked diamond boats - Port Nolloth harbour



Old Port Nolloth – copper export harbour

The town from the lighthouse looking south c1905



Port Nolloth from the jetty c1880

Rol-vaatjie - Port Nolloth

Basket used for raising passengers to the pier at Port Nolloth

Diamond Divers – the *Cowboys* of Port Nolloth

The real workers – diamond divers moving boulders , recovering diamondiferous gravel on the Atlantic sea-bed

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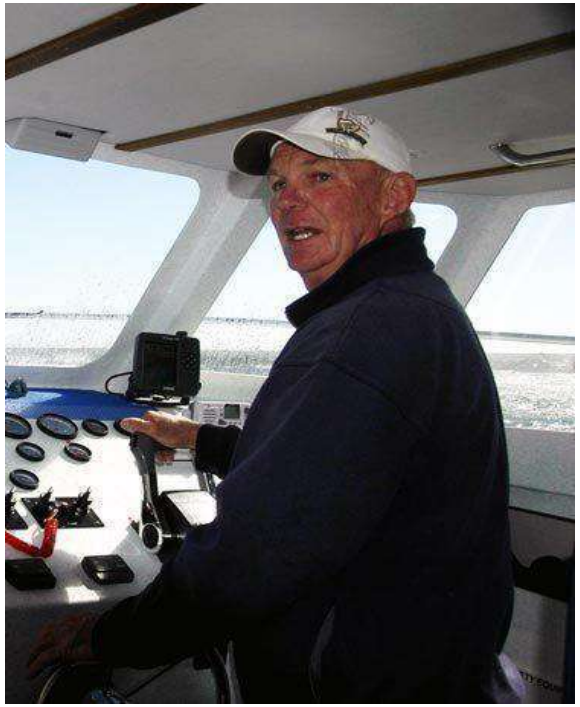
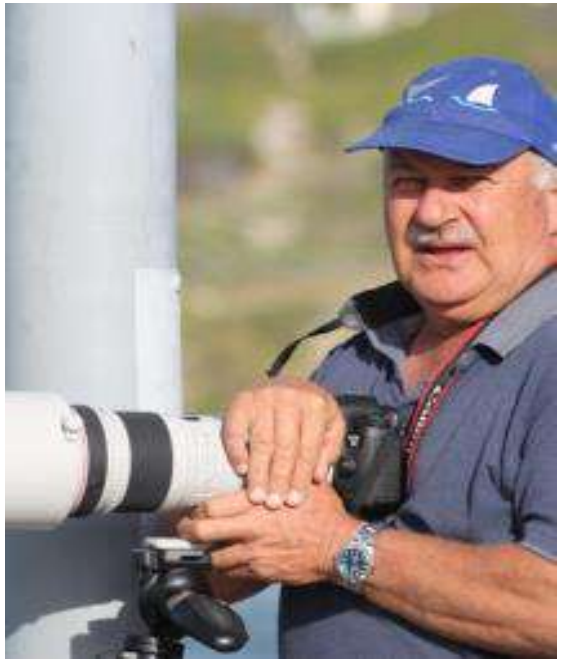
The Overstrand & Walker Bay Connection

- **Peter Hodgskin ('Dizzy) –** successful west coast diamond diver
- Consumate 'hacker''
- Founder of "*Hands Off Fernkloof Nature Reserve*" campaign
- Dedicated to biodiversity & conservation in the Overstrand area, S Cape.

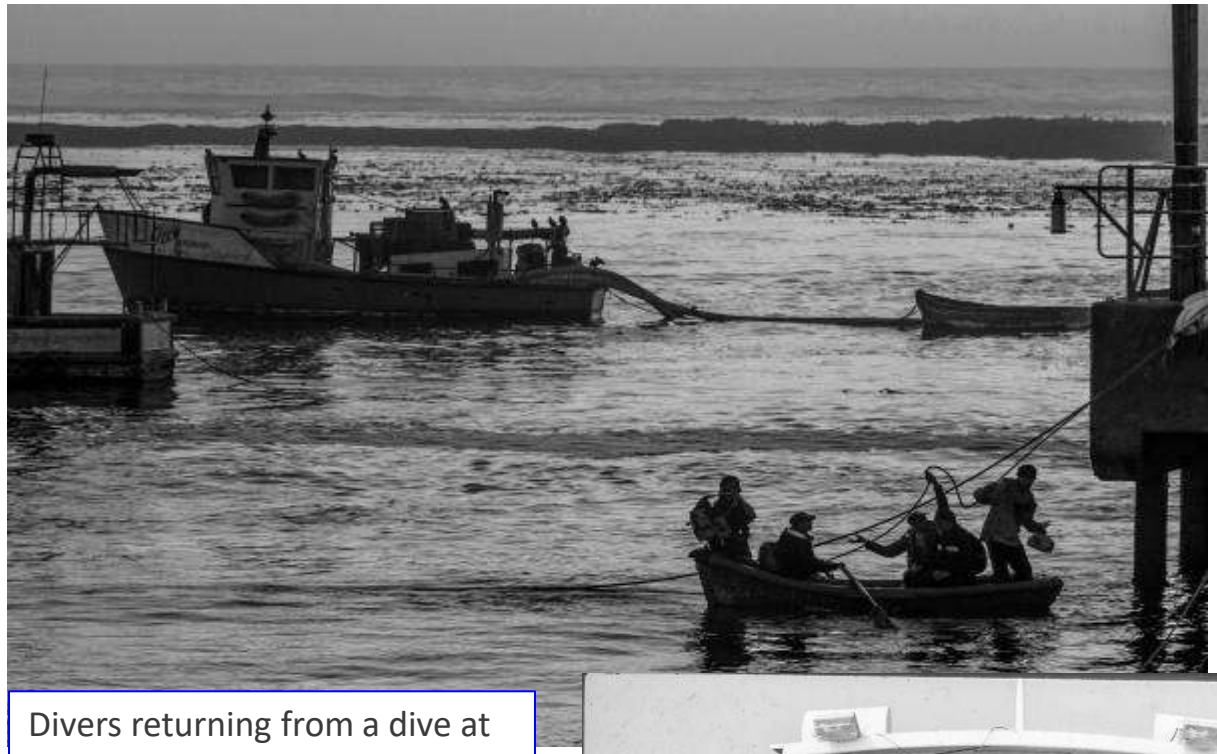


- **Brian McFarlane –** raconteur, great story-teller, grew up "*in, on and under the sea*" around Walker Bay
- Family were pioneers of Perlemoen farming, in his SACS school years he generated 'pocket money' diving for perlemoen and crayfish
- Successful diamond & shipwreck diver, shark cage diving business owner.



- **Wilfred Chivell** - Big, bluff & burly, lost everything back in 1998
- *A Gansbaai* native, initial career in SA Police & diamond diving on the West Coast
- Returning home with R2 000 and assisted by one man, he mixed cement for builders
- A successful company owner, active in marine conservation & tours (*Dyer Island Trust, Marine Dynamics*)

Port Nolloth in the 70/80's



Divers returning from a dive at the end of a calm good-dive day

Parcel of gem diamonds recovered off Port Nolloth by ***Dizzy*** (1982)

A young ***Dizzy*** kitting-up for a dive

Global Diamond Network

George Moyses

Port Nolloth diving legend

"In the late 1950s, someone was granted a diving concession near Luderitz, but didn't know how to exploit it, …. he hired Navy divers from Simonstown".

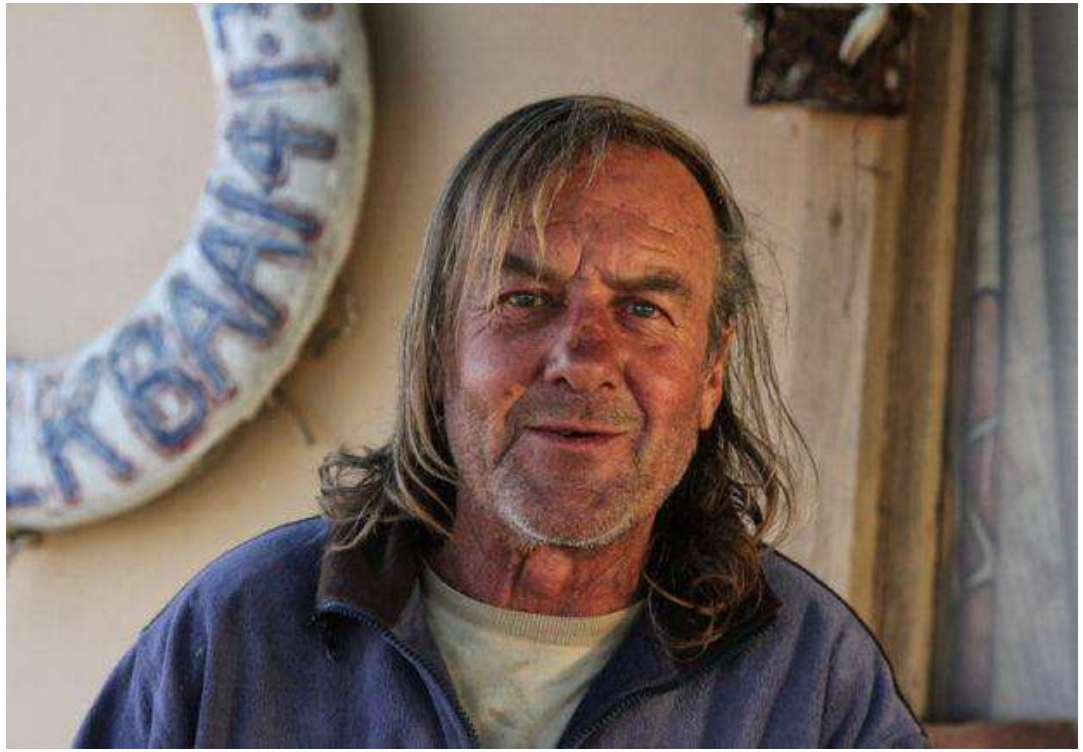
"They went down with hard hats (old-time diving bells), scooped gravel into galvanised buckets with their hands. The first diver came up with 22 carats, the game was on."

His West Coast adventures began at the SA Navy Diving School in Simon's Town where he qualified – job options were limited at that time

"A friend had hit it big at Holgat north of Port Nolloth. From nothing, suddenly big bucks… plus, you work so little. Just 40 days a year''.

"I ended up at Doring Bay. It was my first experience of diamond diving. I was used to the discipline of the navy. But here the skipper was drunk, there was Pratley putty on the air receiver !".

Passed-away 30 September, 2022 - still mourned by his community and the travellers who visited him at the Museum – RIP George.



Geological Survey Marine Geology Unit – UCT

Research and Technical Support Staff – 19??

Back Row:
Ted Mills, Technical Assistant? , Russel Herbert

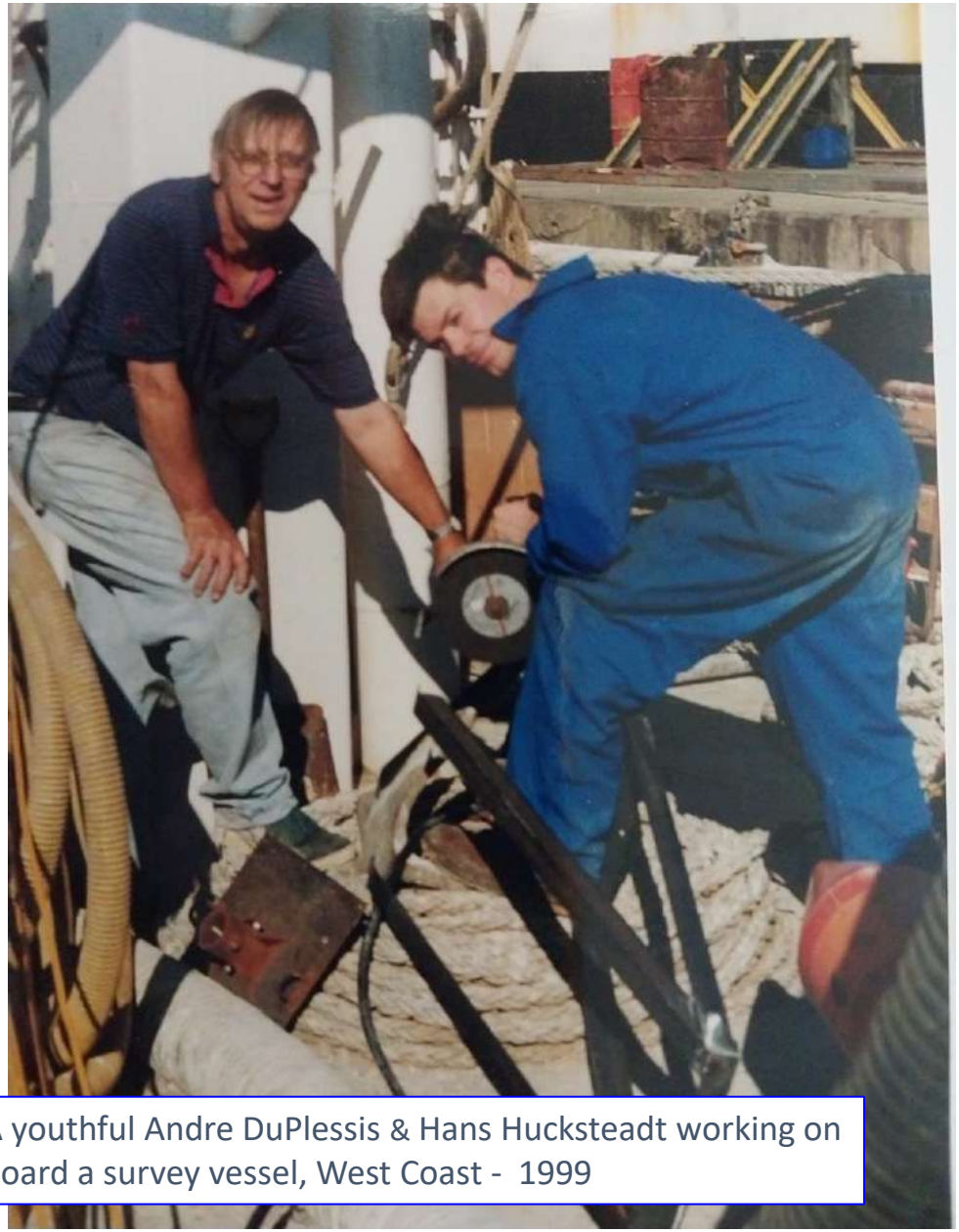
Middle Row:
Roddy Sauls, Lizette Arends, Cathy ?, Judy Woodford, Mike Woodborne, Richard Day, Kim Lord

Front Row:
Bob De Decker, drJohn Rogers, Phyllis Emery, prof K.O. Emery, Grace Krummeck, prof Zvi Ben-Avraham, dr Mike Bremner

Geological Survey Marine Geology Unit – UCT

West Coast research & development

The young guns – Mike Woodborne, Charles Maxwell and Bob De Decker - pushing back the frontiers of marine geology 1992-1997



A youthful Andre DuPlessis & Hans Huckstеadt working on board a survey vessel, West Coast - 1999

West Coast Survey Work

The Alexkor Survey Vessel *Seedelwer IX*– a stable platform for surveys in rough seas, but very uncomfortable for the personnel (1998)

Later years - Bob DeDecker & Mike Woodborne of *Marine & Coastal Geo-Consulting (1991 – 2004)*

Kleinzee mining operations - 1998

Aerial views enroute to Alex Bay airstrip

Stripping thick-overburden at Kleinzee mine - 1998

Kleinzee Dragline - sold at Kleinzee mine Clearance Auction (*Creamer Media, Mining Weekly, 17 September, 2014)*

- Efforts were made on more than one occasion, to facilitate a JV whereby mining fleet ex-Kleinzee, could be utilized to strip & mine deeply covered beach-deposits in southern sections of Alexkor
- <u>Unsuccessfully</u>

Kleinzee – the future ?

Once the world's largest land-based alluvial diamond mine

- **2009** – payable resources exhausted after ~60 years of operation; ***down-scaling*** followed
- **2013 -** changed from closed mining-town to civilian-town; properties & houses auctioned off, initially to employees; second auction followed in 2013/14 for residents of the Namaqualand area
- **2017/18** - Chaos when restrictions on ownership were lifted, informal-miners (Zama Zama's) moved in with negative impacts on property, the environment and informal operators - an ongoing challenge
- **Tourism future** – the local townsfolk pursuing Tourist Town option - Shipwreck, daisies, birding and diamond route tours
- **Kleinzee's sea-water Dam** – is used to grow oysters for export; an abalone aquaculture project creates jobs for the local community
- **Abundant fauna & flora** - Buffels River estuary at Kleinzee attracts birders; Large seal colony just north of the beach with some 350 000 animals, the largest on-land colony in the country attracts tourists.

Kleinzee - more than a diamond, West Coast Hourna, 1 January, 2020. *https://www.westcoastjournal.co.za/one/kleinzee*

Mining Legacies – Kleinzee & surrounds

Joblessness, poverty + the 'Resource Curse'

Andrew Cloete, diamond miner and activist for mining rights, in his shack in a squatter camp at the Nuttabooi mine in Namaqualand

Kim Cupito, lives with her husband in a derelict building left behind by De Beers, lost her job during the pandemic

Source: *Trenchard, T. (2022). Diamond diggers in South Africa's deserted mines break the law — and risk their lives. NPR Health (November 27, 2022)*

Illegal Mining (Zama Zama) scourge

Members of an illegal mining collective look down a mineshaft at the Nuttabooi mine

Zama Zama Jefferson Ncube - illegal diamond miner from Zimbabwe, working on a tunnel at the abandoned De Beers mine near Kleinzee, South Africa. A university graduate, unable to find employment

Source: *Trenchard, T. (2022). Diamond diggers in South Africa's deserted mines break the law - and risk their lives. NPR Health (November 27, 2022)*

The world of IDB - How to Steal a Diamond !

Diamonds on the soles of her shoes, Paul Simon (Graceland)
https://www.youtube.com/watch?v=FAb2Mu0CRk4

- **Port Nolloth** – ever since the discovery of diamonds on the West Coast, Port Nolloth has been infamous for it's **IDB** (*Illicit Diamond Buying*) trade

- Frikkie Mostert, recovery-plant operator for the Trans Hex Group in the 1990's noted: '*God put the diamonds here, and He put nothing else. People here think the diamonds belong to them*'.

- **Diamond security** – De Beers & many other mining companies spend *$ Millions* maintaining, developing systems & technology to detect & minimise shrinkage
- None are fool-proof, human ingenuity is profound !

- **Scannex** – De Beers developed full-body, low-dosage X-ray scanner; has many applications in the security sector (eg. airports), medical profession and other uses.

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Spring 2005

- *'A homing pigeon sits in swirling mist on a road near Alexander Bay, looking up to the Richtersveld skies - pleading eyes & flapping his wings - carrying 50 rough diamonds taped around his chest, his flying muscles can't manage the extra weight'*
- *''approaching fast is the security man, you can hear his heavy tread on the tarmac. The bird, with more than R150,000 worth of stones, is the picture of guilt and anxiety .....'*

West Coast & Namaqualand attributes

Open spaces and natural beauty

Global Diamond Network

THANK YOU

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'Diamonds are a girls best friend'
*https://www.youtube.com/watch?v=knLd8bfe*WtI

Global Diamond Network

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- John Ward
- Urban Burger
- Ian Corbett
- Andy Moore
- Pierre De Jager
- Lyndon De Meillon
- Mike DeWit
- Daniel Nathan
- Norman Lock
- Andre van der Merwe
- Derek Lahee
- Gregory Katz
- Mervyn Carstens
- Raygen Phillips
- Grant Ziegler
- Marilyn Bristow
- Assie van der Westhuizen (*deceased*)

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