Jongensbaai Beleggings

Progress Report – 2 July 2006

Attention Mr. Fanie de Wit
Conradie van Heerden Trust
Kronehof
Durbanville

Activities to date

- 5 potential drill sites were pegged in the field. The access for the drill-rig was restricted to the edges of the property due to the opinion of the Environmental Consultants that we should not create any new tracks.
- Three boreholes were drilled. Two along the bottom of the property adjacent to the beach road. The third was at the top of the property.
- These 3 boreholes were pump-tested, and the testing completed 30 June 2006
- Water samples have been collected and sent for analysis. Field measurements were collected during pump-testing

Drilling results

The figure shows the pegged positions. Note that the area outlined in pink and called “New development Area” may be incorrectly marked. This is to be checked for the final report.

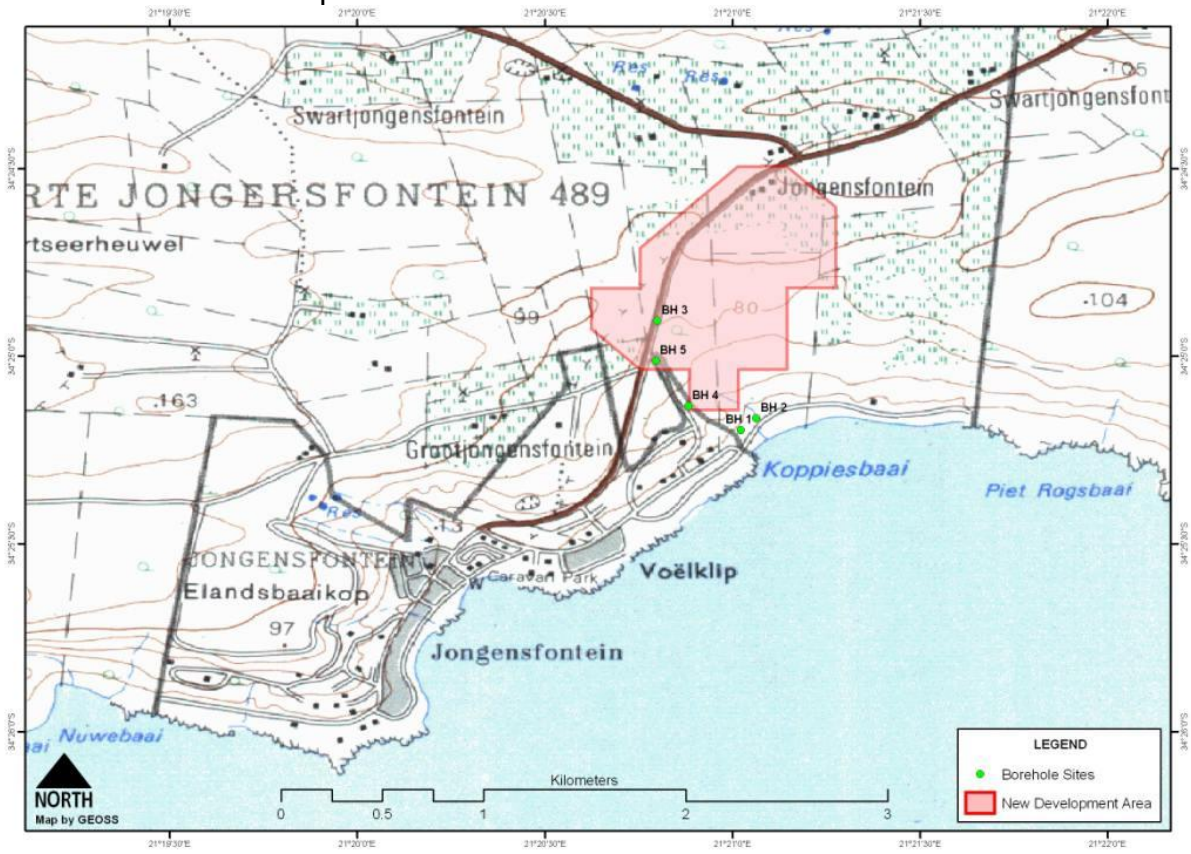


Table 1 Jongensbaai: Drilling results

Borehole number	Depth of Bh	Depth to calcrete quartzite contact	Available drawdown	Airlift yield L/sec
Bh1	10	4	2	1.3
Bh2	14	7	2	0.9
Bh3	61	56	?8?	mist

Available drawdown is the difference between the Static Water Level and the base of the aquifer.

Bh1 and Bh2 showed similar results, with Bh2 having a slightly greater depth to the contact zone. Bh3, when developed by airlifting produced only mist. However when a water level was measured at 48 metres below surface, the indication was 8 m of available drawdown. This was very encouraging, as this indicated a high yield potential. The loss of air-lift yield was ascribed to the compressor blowing the water back into the fracture zone.

Test-pumping

A contractor from East London was appointed as the local contractor was not available. A combination of Step and Constant Rate tests were used. Very disappointingly Bh 3 proved to be very low yielding, essentially dry, and the testing was abandoned within 5 minutes of start-up.

Table 2 Jongensbaai: Test-pumping results

Bh number	Test number	Pumping rate (L/sec)	Drawdown at end of test (m)	Recovery duration (minutes)	Residual recovery drawdown
Bh1	Step 1	0.54	1.03	-	-
	Step 2	1.39	5.89	60	0.12
	CD 24hr	1.0	1.85	240	0.00
Bh2	Step 1	0.5	0.5	-	-
	Step 2	1.0	1.07	-	-
	Step 3	1.5	1.99	-	-
	Step 4	2.0	6.7	179	0.04
	CD 36 hr	1.6	3.94	300	0.16
Bh3	Step1	0.5	Suction	n/a	n/a

CD = Constant Discharge test

Water quality

During the test-pumping water was tested for field parameters. The data is shown below. Comparison to the South African domestic water quality standards shows the water is suitable for domestic consumption, classed as “marginal”. Also shown for comparison is Stilbaai tap water, which is in fact not suitable for domestic consumption, classed as “poor”.

Table 3 Jongensbaai: Field measured water quality parameters.

Sample site name	Electrical Conductivity	Total dissolved solids equivalent
Bh1 at 1 hour	270	1370
Bh1 at 6 hours	266	1348

Bh1 at 1 hour	276	1403
Bh1 at 6 hours	240	1213
Bh1 at 12 hours	233	1177
Bh1 at 18 hours	240	1208
Stilbaai tap water	499	2600

Long term sustainable yield
Examining the test-pumping curves the following assessment is made regarding the sustainable yields.

Table 4 Jongensbaai: Sustainable yields of boreholes

Borehole number	Sustainable yield (L/sec)	Sustainable yield (m^3/day)
Bh 1	0.5	43.2
Bh 2	1.0	86.4
Existing borehole[1]	1.0	86.4
Total	**2.5**	**216**

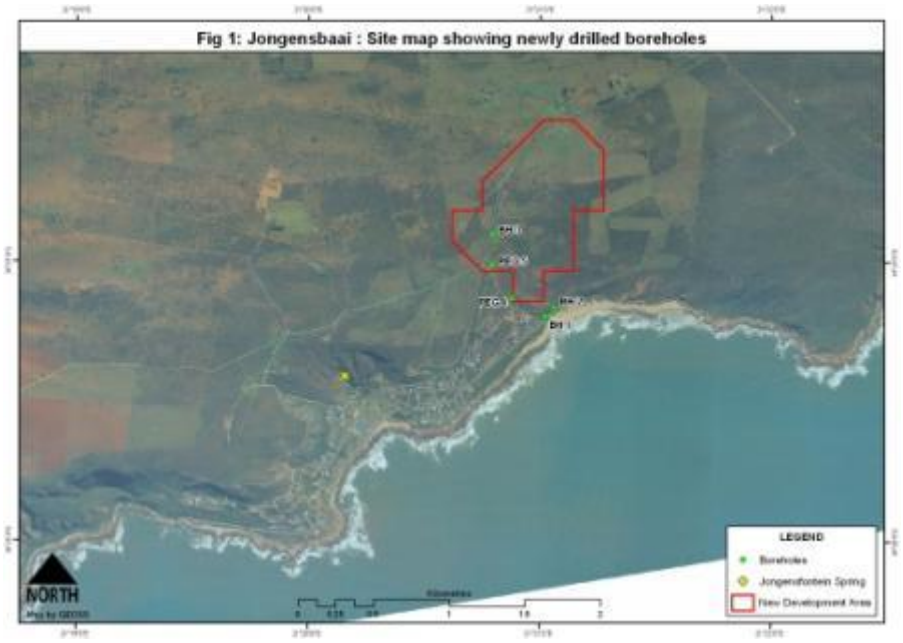
1 Report by Groundwater Consulting Services, 5th August 1995. This report is for the borehole on the property, and is contained in the Ninham Shand report of 2nd November 1995. The borehole is 50 metres deep, and the collar is at +51 mamsl, thus the bottom of the borehole is a metre above sea level. The geology encountered is 0 m to 45 m Bredasdorp, 45 m to 50 m quartzite of the TMG. The water level was at 36.4 m below collar, there is thus an available drawdown of 8.4 metres. Step tests were carried out and the data used to determine the discharge rate for the Constant Discharge Test. The CD was carried out at 1.15 L/sec. Unfortunately no data nor graphs of the data were contained in the report provided, so a re-assesment of the yield recommendations cannot be made. The consultant who supervised the project is reliable, thus their recommended yield of 1.0 L/sec, 24 hours per day, is accepted.

Preliminary conclusions
The water requirement for the full development is 183.6 m^3/day. There is thus sufficient water from the 2 new boreholes, plus the existing borehole, to supply the development.

The 3 boreholes are more than 1500 metres from Stilbaai spring, and are at a similar position on the hydraulic gradient. The expectation is thus that there will be no influence on the spring when these borehole are exploited.

Notes
A final report suitable for presentation to government and the public will be prepared upon my return from Greece on 2nd August 2006.

Could you either email or post me a copy of the outline of the property, so that the map (Figure 1) can be corrected. Secondly, which diagram would you prefer, the topo map as above, or the colour airphoto as below? The image below has been severely compressed to keep the file size low, the actual image that I would use has a much sharper definition.



Should more water be needed, I recommend that boreholes be drilled along the eastern boundary. This will require roads or tracks to be developed.

Yours faithfully
John Weaver
2 July 2006

Nico Cronje
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Posbus 273, Swartwater, Albertinia 6695

Mayborn Investments 20 (Pty) Ltd
6 Monaco Road
Killarney Gardens
7441

20 March 2025

Attention: Mr. T Van der Walt

Re: Borehole cleaning report; Jongensfontein boreholes no.1, 2 and 3

We were contacted by mr Tjaart Van der Walt to have three boreholes cleand and inspected for water quantity.

These three boreholes were drilled and tested about 20 years ago and was never used again. The top opening of the casing of the boreholes were not covered properly and sand, leaves and branches fell into the holes and blocked them at static water level.

Borehole no.3 was cleand first and a lot of branches was taken out.
In the Progress Report dated 2 July 2006 it states that this borehole only produced mist during airlifting development.
During the cleaning procedure we were able to confirm that everything in said report is still the same.
Borehole depth is 61m and did not have enough water to be pump tested.

Borehole no.2 was also cleaned and tested with a 4”bayler. After 90minutes of bayling, taking out 50liters every 30 to 50 seconds the water level dropped 1.2m and recovered within 30seconds to static water level depth. Borehole depth is 14m

Borehole no.1 was also cleand and tested with the same bayler used at borehole no.2. This borehole is 10m deep and the water quantity produced during testing is slightly less than borehole no.2

When I look at the report from 2 July 2006 and compare it to the results of this procedure everything is still the same.

Nico Cronje
WG POMPE

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sanas Testing Laboratory T0654

CERTIFICATE OF ANALYSIS

Client	: Nico Cronje	Report No	: WT2025-01948	Order No/Ref	: 25/nc
Address	: Riversdal	Samples	: 2	Delivery Date	: 03/04/2025
Phone	: N/A	Department	: Water		
Contact	: Nico Cronje				
Email	: wgpompe.nc@gmail.com				

Lab number:	WT25-04285
Sampling Date:	01/04/2025
Sampling Time:	
Sampling temperature upon receipt (°C):	10.6
Sampling ID:	Mayborn BH1

Physical & Aesthetic Determinands	Method ID	Unit	Results	UoM %	SANS241:2015 Drinking Water Limits	Compliance Statement
Electrical Conductivity (Titrando)	3777	mS/m (25°C)	124	5.85	≤ 170	Complies
Total Dissolved Solids (Calc) *	Calc	mg/L	809		≤ 1200	Complies
pH (Titrando Method) at 25°C	3777	pH Units	8.4	0.16	≥ 5 to ≤ 9.7	Complies
Carbonate (CO3) as CaCO3 (Titrando)	3777	mg/L	10.0		Not Applicable	NA
Bicarbonate (HCO3) as CaCO3 (Titrando)	3777	mg/L	200	0.06	Not Applicable	NA
Alkalinity as CaCO3 (Titrando)	3777	mg/L	210		Not Applicable	NA
Langelier Index *	Calc		0.8		≥-0.5 to ≤0.5	Oversaturated
Saturation pH (pHs) *	Calc	pH Units	7.6		Not Applicable	NA
Turbidity	6458	NTU	0.4	3.99	≤ 5	Complies
Total Hardness as CaCO3	Calc	mg/L	234		>180 mg/L	Very Hard Water
Sodium Adsorption Ratio (SAR) *	Calc		3.8		Not Applicable	NA

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Lab number:	WT25-04285
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Sampling Time:	
Sampling temperature upon receipt (°C):	10.6
Sampling ID:	Mayborn BH1

Macro Chemical Determinands	Method ID	Unit	Results	UoM %	SANS241:2015 Drinking Water Limits	Compliance Statement
Chloride (Cl) Titrando	3778	mg/L	209	8.00	≤ 300	Complies
Total Ammoniacal Nitrogen (TAN) as N	4511	mg/L	<0.05	6.30	≤ 1.5	Complies
Nitrate (NO3) as N	4511	mg/L	5.2	2.39	≤ 11	Complies
Nitrite (NO2) as N	4511	mg/L	<0.01	1.72	≤ 0.9	Complies
Sodium (Na) Dissolved	3132	mg/L	133	2.18	≤ 200	Complies
Calcium (Ca) Dissolved	3132	mg/L	70.0	2.17	Not Applicable	NA
Magnesium (Mg) Dissolved	3132	mg/L	14.5	2.07	Not Applicable	NA
Potassium (K) Dissolved	3132	mg/L	1.0	4.41	Not Applicable	NA
Sulphur (S) Dissolved	3132	mg/L	13.2	4.28	Not Applicable	NA
Sulphate (SO4) *	Calc	mg/L	39.6	12.82	≤ 500	Complies
Phosphorus (P) Total	3132	mg/L	<0.50	4.36	Not Applicable	NA
Micro Chemical Determinands	**Method ID**	**Unit**	**Results**	**UoM %**	**SANS241:2015 Drinking Water Limits**	**Compliance Statement**
Boron (B) Total	3132	mg/L	<0.10	3.06	≤ 2.4	Complies
Copper (Cu) Total	3132	mg/L	<0.05	2.57	≤ 2	Complies
Iron (Fe) Dissolved	3132	mg/L	<0.10	4.34	≤ 2	Complies
Iron (Fe) Total	3132	mg/L	<0.10	4.34	≤ 2	Complies
Manganese (Mn) Dissolved	3132	mg/L	<0.05	2.77	≤ 0.4	Complies
Manganese (Mn) Total	3132	mg/L	<0.05	2.77	≤ 0.4	Complies
Zinc (Zn) Total	3132	mg/L	<0.20	6.83	≤ 5	Complies
General Chemistry	**Method ID**	**Unit**	**Results**	**UoM %**	**SANS241:2015 Drinking Water Limits**	**Compliance Statement**
Fluoride (F) *	5534	mg/L	<0.20		≤ 1.5	Complies

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Contact	: Nico Cronje				
Email	: wgpompe.nc@gmail.com				

Lab number:	WT25-04285
Sampling Date:	01/04/2025
Sampling Time:	
Sampling temperature upon receipt (°C):	10.6
Sampling ID:	Mayborn BH1

Microbiology Determinands	Method ID	Unit	Results	UoM %	SANS241:2015 Drinking Water Limits	Compliance Statement
Heterotrophic Plate Count	1454	CFU/1mL	51	5.00	≤ 1000	Complies
Total Coliforms (Membrane Filtration)	6386	cfu/100mL	2	4.84	≤ 10	Complies
E coli (Membrane Filtration)	6386	cfu/100mL	Not Detected	14.99	Not detected	Complies

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Phone	: N/A	Department	: Water		
Contact	: Nico Cronje				
Email	: wgpompe.nc@gmail.com				

Lab number:	WT25-04286
Sampling Date:	01/04/2025
Sampling Time:	
Sampling temperature upon receipt (°C):	4.1
Sampling ID:	Mayborn BH2

Physical & Aesthetic Determinands	Method ID	Unit	Results	UoM %	SANS241:2015 Drinking Water Limits	Compliance Statement
Electrical Conductivity (Titrando)	3777	mS/m (25°C)	109	5.85	≤ 170	Complies
Total Dissolved Solids (Calc) *	Calc	mg/L	708		≤ 1200	Complies
pH (Titrando Method) at 25°C	3777	pH Units	8.4	0.16	≥ 5 to ≤ 9.7	Complies
Carbonate (CO3) as CaCO3 (Titrando)	3777	mg/L	10.0		Not Applicable	NA
Bicarbonate (HCO3) as CaCO3 (Titrando)	3777	mg/L	193	0.06	Not Applicable	NA
Alkalinity as CaCO3 (Titrando)	3777	mg/L	203		Not Applicable	NA
Langelier Index *	Calc		0.8		≥-0.5 to ≤0.5	Oversaturated
Saturation pH (pHs) *	Calc	pH Units	7.6		Not Applicable	NA
Turbidity	6458	NTU	0.9	3.99	≤ 5	Complies
Total Hardness as CaCO3	Calc	mg/L	223		>180 mg/L	Very Hard Water
Sodium Adsorption Ratio (SAR) *	Calc		3.2		Not Applicable	NA

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Contact	: Nico Cronje				
Email	: wgpompe.nc@gmail.com				

Lab number:	WT25-04286
Sampling Date:	01/04/2025
Sampling Time:	
Sampling temperature upon receipt (°C):	4.1
Sampling ID:	Mayborn BH2

Macro Chemical Determinands	Method ID	Unit	Results	UoM %	SANS241:2015 Drinking Water Limits	Compliance Statement
Chloride (Cl) Titrando	3778	mg/L	174	8.00	≤ 300	Complies
Total Ammoniacal Nitrogen (TAN) as N	4511	mg/L	<0.05	6.30	≤ 1.5	Complies
Nitrate (NO3) as N	4511	mg/L	4.8	2.39	≤ 11	Complies
Nitrite (NO2) as N	4511	mg/L	<0.01	1.72	≤ 0.9	Complies
Sodium (Na) Dissolved	3132	mg/L	111	2.18	≤ 200	Complies
Calcium (Ca) Dissolved	3132	mg/L	67.8	2.17	Not Applicable	NA
Magnesium (Mg) Dissolved	3132	mg/L	13.1	2.07	Not Applicable	NA
Potassium (K) Dissolved	3132	mg/L	<1.0	4.41	Not Applicable	NA
Sulphur (S) Dissolved	3132	mg/L	10.2	4.28	Not Applicable	NA
Sulphate (SO4) *	Calc	mg/L	30.7	12.82	≤ 500	Complies
Phosphorus (P) Total	3132	mg/L	<0.50	4.36	Not Applicable	NA
Micro Chemical Determinands	**Method ID**	**Unit**	**Results**	**UoM %**	**SANS241:2015 Drinking Water Limits**	**Compliance Statement**
Boron (B) Total	3132	mg/L	<0.10	3.06	≤ 2.4	Complies
Copper (Cu) Total	3132	mg/L	<0.05	2.57	≤ 2	Complies
Iron (Fe) Dissolved	3132	mg/L	<0.10	4.34	≤ 2	Complies
Iron (Fe) Total	3132	mg/L	<0.10	4.34	≤ 2	Complies
Manganese (Mn) Dissolved	3132	mg/L	<0.05	2.77	≤ 0.4	Complies
Manganese (Mn) Total	3132	mg/L	<0.05	2.77	≤ 0.4	Complies
Zinc (Zn) Total	3132	mg/L	<0.20	6.83	≤ 5	Complies
General Chemistry	**Method ID**	**Unit**	**Results**	**UoM %**	**SANS241:2015 Drinking Water Limits**	**Compliance Statement**
Fluoride (F) *	5534	mg/L	<0.20		≤ 1.5	Complies

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Contact	: Nico Cronje				
Email	: wgpompe.nc@gmail.com				

Lab number:	WT25-04286
Sampling Date:	01/04/2025
Sampling Time:	
Sampling temperature upon receipt (°C):	4.1
Sampling ID:	Mayborn BH2

Microbiology Determinands	Method ID	Unit	Results	UoM %	SANS241:2015 Drinking Water Limits	Compliance Statement
Heterotrophic Plate Count	1454	CFU/1mL	14	5.00	≤ 1000	Complies
Total Coliforms (Membrane Filtration)	6386	cfu/100mL	Not Detected	4.84	≤ 10	Complies
E coli (Membrane Filtration)	6386	cfu/100mL	Not Detected	14.99	Not detected	Complies

Terms and Conditions

Recommendations included with this report are based on the assumption that the samples were representative of the source from which they were taken. To ensure sample integrity - Water samples are only stored for two weeks after release of the report, thereafter they are disposed of and a fresh sample will be required if additional analyses are requested. The information supplied by the client (or lack thereof) may affect the validity of the results. This information includes but is not limited to client details, sample reference, the date and time of sampling, the sampler, and transportation of the sample to the testing laboratory.

Results marked with "Not SANAS Accredited" or "Subcontracted" in this report are not included in the SANAS Schedule of Accreditation for this laboratory. Opinions and interpretations expressed herein are outside the scope of SANAS accreditation. These results relate to the items tested. This test report shall not be reproduced except in full, without written approval of the laboratory. Uncertainty of Measurement and method references available on request.

We hereby consent to the processing of the information supplied herein in terms of the Protection of Personal Information Act (2013) for the purposes of this request. All processing of personal information takes place according to the terms and conditions of the Privacy Policy of Bemlab (Pty) Limited which can be found on our website at www.bemlab.co.za.

Sample condition:

Samples for analysis must be kept cool (<10°C) and reach the laboratory within 24 hours of sampling. Chemical parameters that can be affected by exceeded temperature and sampling times includes: Acidity, Alkalinity, BOD, CO2, Chlorine, Chlorophyll, Cyanide, Chromium VI, Dissolved Oxygen, Odor, pH & Turbidity. The effect on the microorganisms is unknown, treat microbiological results with reserve.

Additional Information including: Testing date & time for all analysis are available on request

**** - Not SANAS Accredited*** ***** - Outstanding*** ****** - Insufficient Sample*** ***# - Subcontracted***

UoM - Uncertainty of Measurement ***Not Detected* = <1 cfu's /mL or <1 MPN/100mL was detected**

(R) - Test parameter has been Repeated to confirm value

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Lab number:	WT25-04286
Sampling Date:	01/04/2025
Sampling Time:	
Sampling temperature upon receipt (°C):	4.1
Sampling ID:	Mayborn BH2

Samples Registered by: Gail Samuels

Andrew

Technical Signatory
(Soil, Plant ,Fruit and Water)

Michelene Gail Ernstzen

Technical Signatory
Microbiology