

# Exemption of a Phase 1 Palaeontological Impact Assessment for a proposed pipeline on subdivision 16 & Remain Extent of the farm Jagersfontein no. 14, Kopanong Local Municipality, Free State Province\*.

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Site: Subdivision 16 & Remain Extent of the farm Jagersfontein no. 14

District: Xhariep

Nearest Town: Jagersfontein

Map Reference: 1:50 000 2925CD Jagersfontein

Approximate Start & End Point Coordinates: 29°47'29.79"S 25°26'5.54"E  
29°47'30.69"S 25°26'53.71"E

Jagersfontein Developments (Pty) Ltd is currently reworking the Jagersfontein diamond dumps and has decided to extend an existing pipeline on the mining grounds to the Jagersfontein sewerage plant where treated water is currently fed back into the Riet River water scheme. The development calls for the extension of a 1743 m long, 150 mm diameter pipeline, from a dam on the mining grounds (Subdivision 16 of the farm Jagersfontein No 14) to the Jagersfontein municipal sewerage plant on the remainder extent of the farm Jagersfontein No 14, adjacent to the Prosesspruit and near the town of Jagersfontein (**Fig. 1**). One section of the pipeline will be placed underground in a 600x600 mm trench, while the rest will be located aboveground (**Fig. 2**).

Bedrock geology along the proposed route is characterized by argillaceous rocks of the Tierberg Formation. The formation represents the uppermost unit of the Eccca Group (Karoo Supergroup) and primarily comprises well-laminated, dark shales with abundant carbonate concretions, interbedded by siltstones and fine-grained sandstones. Fish scales and sponge spicules have previously been found in some of the carbonate concretions and trace fossils commonly occur throughout the sequence, but terrestrial vertebrates and plant remains are generally absent from the Tierberg Formation.

Geologically recent sediments overlying the Tierberg Formation are made of Quaternary-aged channel fills and sheet-wash deposits, including unconsolidated wind-blown sands and limited alluvium from the nearby Prosesspruit. Overbank deposits and alluvial terraces of large river courses such as the nearby Riet River have previously yielded numerous

Quaternary vertebrate fossil remains. Unfortunately, vertebrate fossils are usually not well-preserved in shallow alluvial deposits along small river courses and stream beds in the region. The likelihood of palaeontological impact as a result of the proposed development is considered to be extremely low. It is recommended that a Phase 1 Palaeontological Impact Assessment not be required as a prerequisite for the planned development.

Yours truly,

A handwritten signature in black ink, appearing to read 'L Rossouw', written in a cursive style.

Dr Lloyd Rossouw  
National Museum  
PO Box 266  
Bloemfontein 9300  
Tel. 051 4479 609  
Cell. 0842505992  
[lloyd@nasmus.co.za](mailto:lloyd@nasmus.co.za)

\*Report prepared for Jagersfontein Developments (Pty) Ltd, P.O. Box 24, Jagersfontein 9974

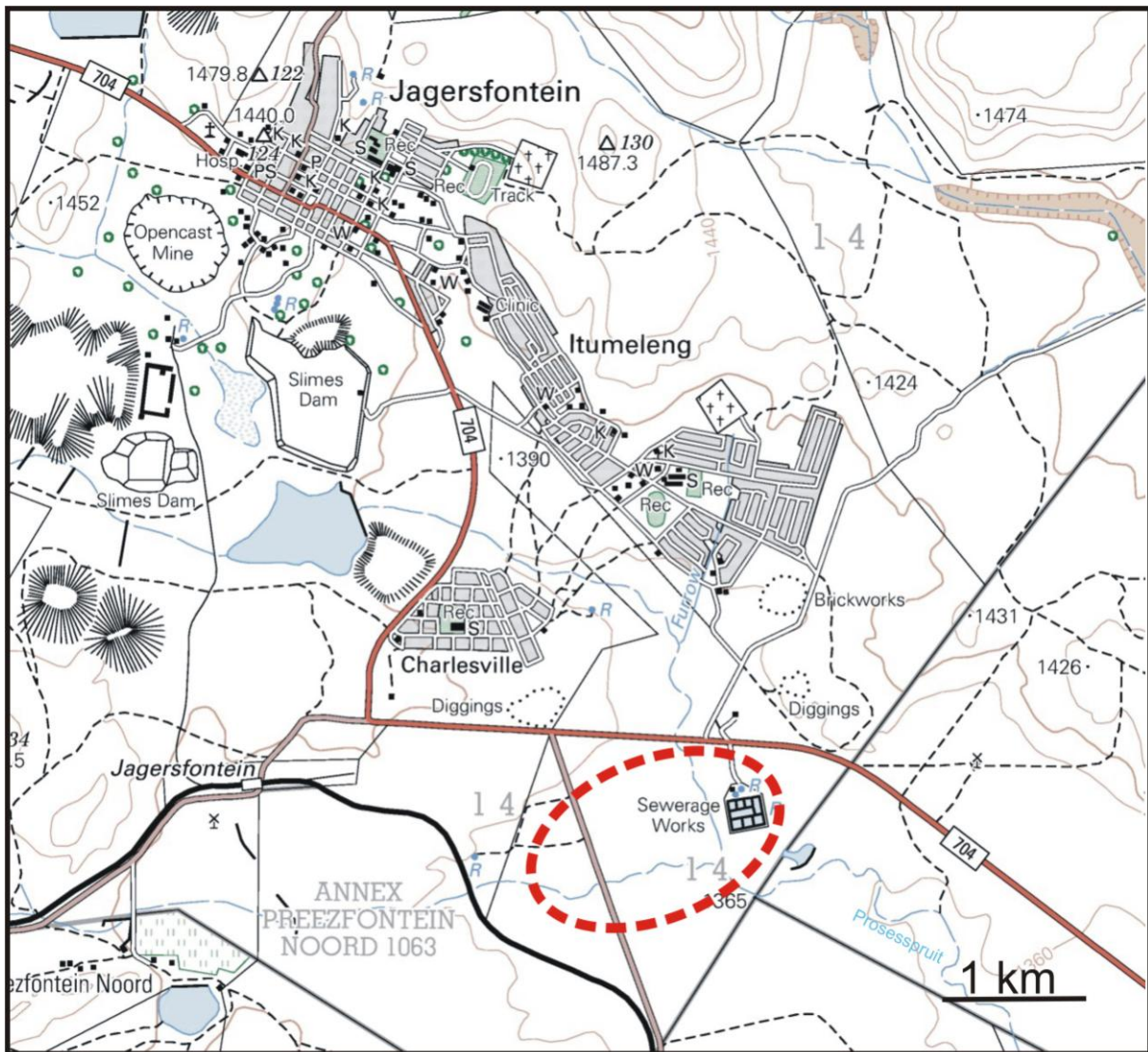
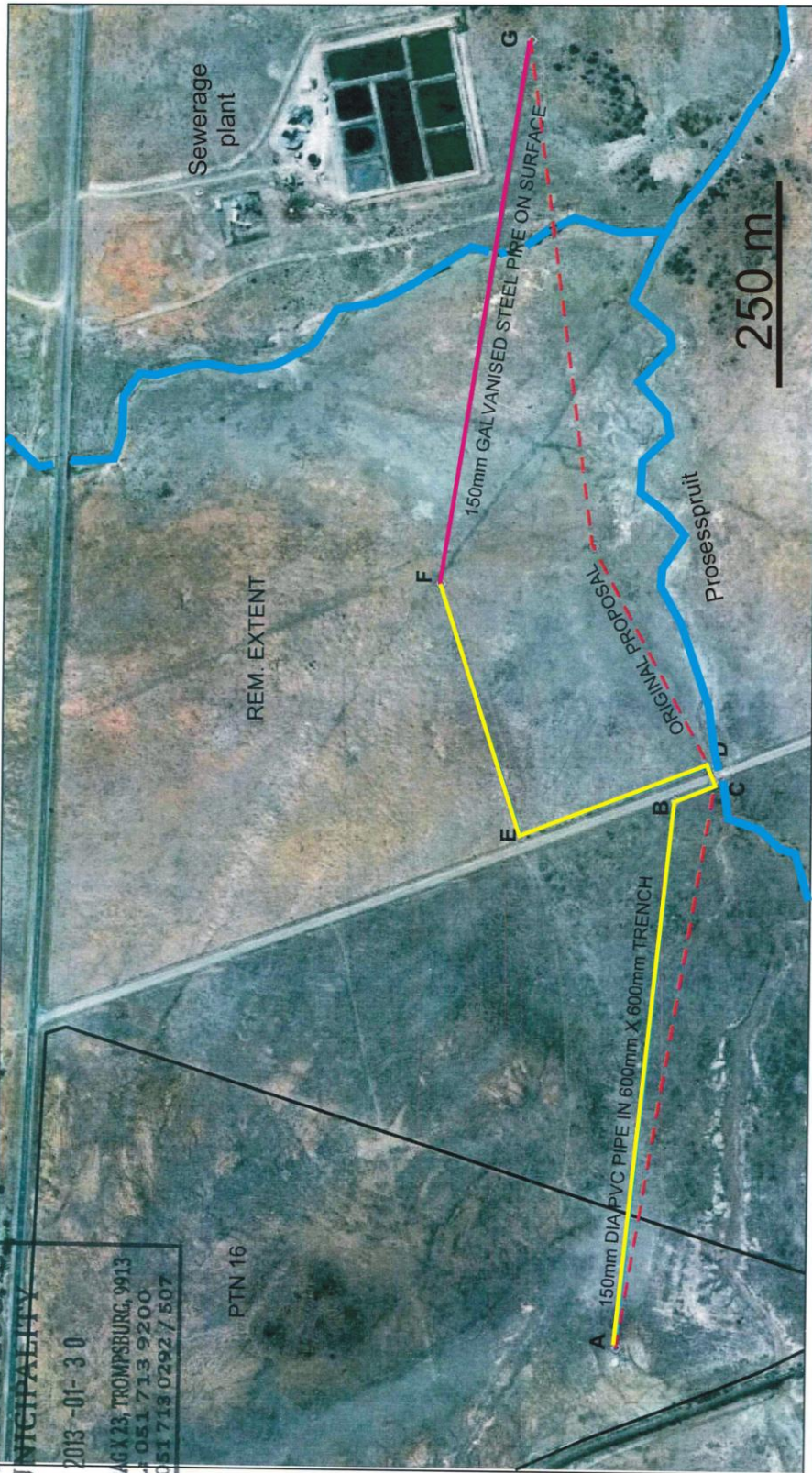


Figure 1. Portion of 1:50 000 topographic map 2925 CD Jagersfontein. Pipeline locality indicated by red circle.

**KOPANONG LOCAL MUNICIPALITY**  
 2013 -01- 30  
 PRIVATE BAG X 23, TROMPSBURG, 9913  
 TEL: 051 713 9200  
 FAX: 051 713 0292 / 507



A	S29.791408	E25.434878
B	S29.792024	E25.440949
C	S29.792398	E25.441152
D	S29.792365	E25.441304
E	S29.790516	E25.440574
F	S29.789763	E25.443399
G	S29.790698	E25.449400

**JAGERSFONTEIN DEVELOPMENTS (Pty) Ltd**  
 LINE A,B,C,D,E,F,G REPRESENTS A PIPELINE FROM A PUMPING STATION ON PTN 16 TO THE CHLORINATOR AT THE SEWAGE PLANT ON REMAINING EXTENT. FROM A-F THE PIPELINE WILL BE 600mm UNDERGROUND. FROM F-G THE PIPELINE WILL BE ON SURFACE. (ORIGINAL PROPOSAL IN RED DOTTED LINE)

A-B	592m
B-C	44m
C-D	16m
D-E	217m
E-F	285m
F-G	589m

**Figure 12: Pipeline route. The red line is the position of the original proposed pipeline. The yellow and magenta lines represent the alternative route for the new pipeline.**