

PEDAL TO THE METAL AT Gamsberg

Construction of the various roads that will serve Vedanta Zinc International's (VZI's) state-of-the-art Gamsberg mine near Aggeneys in the Northern Cape is forging ahead as planned.

They are being built by M&D Construction Group, which also assisted VZI and its engineer, procure, construct (EPC) contractor, ELB Engineering Services, to deliver the mine's concentrator in an extremely short timeframe to ensure the timely supply of a high global demand for zinc.

M&D Construction Group's Roads & Earthworks Division was awarded the contract to construct the external roads in mid-December and it commenced work on this eight month project in February 2018.

The contract was extended in August this year to also include the construction of the internal plant roads and, thereby, increasing its value by 47%.

It includes the construction of the access roads and parking from the N14 highway between Pofadder and Aggeneys to the entrance of the mine. This is in addition to various roads and parking areas along the perimeter of and within the plant area.

Led by Angelo Veli, the Roads & Earthworks team on site comprises about 60 people, including administrative staff and local labour, as well as those men and women from sub-contracting teams.

Head of the division, Chris Porter, says that he is extremely impressed with the progress made by his team, considering the numerous challenges, not least of which is the extreme remoteness of this construction site.

"It is located about 1 000 km from our home base and just under 300 km from Upington, the closest major urban centre in the province. Careful logistical planning is, therefore, required to ensure that the project proceeds according to schedule," Porter says.

Meanwhile, the close proximity of the construction works to an environmentally-sensitive area adds another level of complexity to the project.

Similar to the concentrator construction programme, close coordination is essential among the many contractors that are all working to tight deadlines on this busy construction site.

The Roads & Earthworks team demonstrated its ability to think on its feet when it was discovered that materials from the various borrow pits for the road layer works did not meet the engineering design specification once construction had commenced.

Porter and his team, therefore, proposed a mechanically-blended solution incorporating commercial aggregates, which are sourced from Aroams quarry, located about seven kilometres from the construction site.

He says that three road surfaces have been specified for this project: a Cape Seal is being used on mostly straight sections and a 200 mm thick fibre-reinforced concrete for the heavy-duty access roadways, while an 80 mm-thick interlocking paving is being deployed in the plant areas.

By the time the Roads & Earthworks division has completed the project, it will have undertaken 101 000 m³ of bulk earthworks, and constructed 30 600 m³ of layer works,



12 500 m² of Cape Seal surfacing, 14 900 m² of inter-locking paving and 13 500 m of kerbing.

In addition, 8 850 m³ of concrete roadway is being produced from an M&D Construction Group-owned batch plant on site to ease logistics on this project.

It achieved the daily production requirement of up to 200 m³ of 35 MPa concrete, which is transported to the various construction faces using the company's own three mixer trucks.

The teams on site were fully supported by the M&D Plant Division, which is providing most of the plant and equipment needed to complete the works and at a high availability level.

Rukesh Raghubir, chief-executive officer of M&D Construction Group, says that he is proud of the company's involvement in a project that has also supported so many local businesses and entrepreneurs in the area during the construction cycle.

"BMM/Vedanta's operations have already created livelihoods for about 1500 people, while a further 750 people will be directly and indirectly employed by Gamsberg. This is over-and-above the many employment opportunities that have been created during the construction of this state-of-the-art mine. Gamsberg again demonstrates the critical role that this 'sunrise' industry has to play in socio-economic upliftment," Raghubir concludes. ■