

Project Name:	Suncor Fort Hills: Ore Preparation Plant (OPP) Extraction and Tailings (E&T) Plus Small Various Projects	Client:	Bird Industrial Group Ltd. and Northstar Services Inc.
Location:	90 km North of Fort McMurray RM of Wood Buffalo, AB	Type:	Geotechnical Services and Construction Quality Assurance/ Quality Control Testing & Monitoring
Period:	Ongoing since October 2013	Consulting Fees:	>\$3 Million



Fort Hills is a green field mining oil sands project, located around 90 km north of Fort McMurray, Alberta. The project is co-owned by Suncor Energy Inc., Total E&P Canada Ltd. and Teck Resources Ltd. At an estimated total value of about \$13.4 Billion, Fort Hills is considered to be the largest open-pit mine plan currently under construction in Alberta with a planned peak production of 180,000 bpd. ParklandGEO has been involved in several phases of the project.

From October 2013 to April 2015, ParklandGEO served as the field Geotechnical Engineer of Record for the OPP and E&T projects during the installation of over 3,700 high capacity driven steel piles and 490 steel screw piles. Our project team consisted of up to nine professional engineers, EITs and field technicians. ParklandGEO's scope of work included the field supervision and evaluation of daily construction quality assurance (QA) activities as well as the engineering support, final sign-off and turnover packages for the piling. We performed pre-construction pile drive-ability WEAP studies for approval and selection of driving equipment and installation recommendations. Our QA role included performing a dynamic pile load testing program (PDA) for evaluation of design assumptions and pile acceptance. In total, over 430 PDA tests were performed between the two projects. ParklandGEO also provided steel screw pile and anchor block foundation designs and other geotechnical engineering support services to assess laterally loaded piles and evaluate expected foundation settlements.

Since November 2015, ParklandGEO has undertaken construction testing and monitoring services for several Bird Construction projects at the site including: the Raw Water Intake and Pumphouse, the HV/LV Fueling Depots, the Non Process Building, and the Administration & OPS Building. Services have included: pile inspection and PDA testing; field density testing; and field sampling & lab testing of concrete, grout, aggregates, general fill and clay liner materials.