

NELSON

Case Study · Energy, Oil and Gas

3D GPS guided excavation, Southern Alberta.

96,000 tonnes of impacted soil removed from slopes of up to 40 degrees, guided by a sub-surface 3D GPS model, while protecting a wellhead and an artesian spring.

WELL SITE · SOUTHERN ALBERTA

96K t
Impacted soil excavated and hauled

40 °
Maximum slope worked

0
Lost time injuries

THE WORK

GPS-equipped excavators followed the client's 3D delineation model, cutting the frequency and duration of sampling. Off-highway trucks moved soil off the slope to a purpose-built containment area and transload facility.

Site procedures accounted for grizzly bears and wildfire risk. Backfill came from neighbouring properties in consultation with local communities, with local employment for Indigenous stakeholders.

PROJECT RECORD

CLIENT	Major oil and gas producer (confidential)
SITE	Steep-slope well site, Southern Alberta
EQUIPMENT	3D GPS excavators, off-highway haul trucks, soil containment and transload facility
COMPLETED	2024

NELSON ROLE	General contractor: management, crew, equipment and trucking
CONTAMINANTS	Hydrocarbons, salts, metals and other substances in soil
VOLUME	~96,000 t excavated, hauled and disposed
RESULT	Wellhead and spring drainage protected; final site grading complete