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Via email: Volker.Schaepe@dm-group.com

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Dear Volker,

DMT Geosciences Ltd., Calgary, Canada, obtained a Summit X One seismic recording system consisting of 350 channel capacity (350 RU's, 7 DC's, 9 reels of 350 m cables) in late 2019. Single component marsh geophones and a computer for recording were purchased separately. Our objective in purchasing the Summit X One was to obtain a lightweight, person-portable, easily transported, flexible seismic system, for 2D surveys that would work with a variety sources. It was required to have a system that could accommodate small engineering surveys of 25 to 100 channels up to larger 2D surveys of 200 plus live channels with 1000 m arrays for high-resolution, 2D, shallow reflection seismic work in Canada's oil sands and for coal exploration.

During this winter season, with daylight limited and temperatures plunging below minus 25° Celsius we completed a 19 km 2D seismic survey in varying terrain with approximately 1,300 .25 to .5 kg explosive charges on 10 lines of varying lengths. The area was forested with a combination of black spruce and poplar and we could only use existing cut lines through the bush.

We found that compared to our older standard 24 channel system that the benefits of the Summit X One were:

- Much less equipment and more than 50% lighter than older system.
- Data quality seems better than what we have seen with no electrical noise.
- Trigger system is much easier to use than previous seismic blasting systems.
- We were told to not leave more than 50-100m of cable on the reel. This was tested by leaving approximately 270m on the reel at the end of the line and it did not seem to cause issues. Regularly left approximately 80m (for 5m x50ch) to 130m (for 40ch) on the reels without issue.
- Many more geophones can be laid out with one DC than with a standard 24 channel system.
- Up to 100 channels possible if using a single DC, would require 4x the equipment plus much heavier cables and data cables for older system of similar survey size

The above benefits allowed operation with a smaller crew, less fatigue, higher productivity and lower cost per channel than the older, standard, 24 channel system. At DMT Geosciences Ltd., we can highly recommend the Summit X One for high resolution 2D seismic with a person-portable system.

Sincerely,

DMT GEOSCIENCES LTD.



Doug McConnell, P.Eng., P.Geoph.
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