

Remote Tracking for Multi-Day Pigging Operation



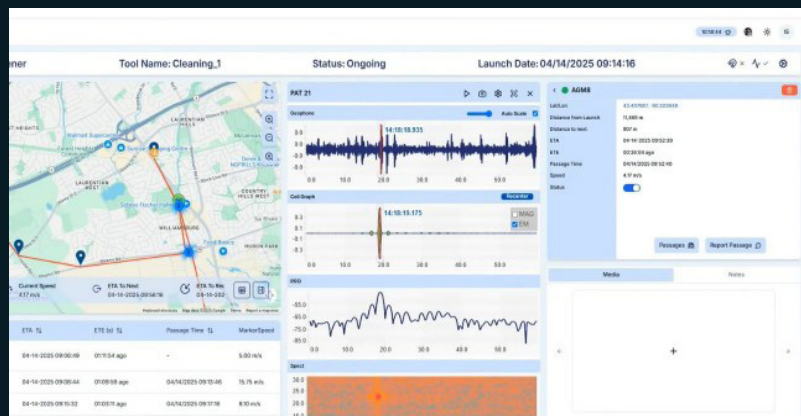
Our partner PigRun was invited to demonstrate the Patriot AGM remote tracking technology during a multi-day pigging operation on a 12 inch Enbridge gas pipeline in Kitchener, Ontario. The pipeline spanned approximately 24 kilometres and involved several cleaning runs over three days. The cleaning program included six pigs of varying types (foam, brush, magnetic) and one gauge plate, as part of a scheduled maintenance operation.

The Patriot's Role

Three cellular-enabled Patriot AGM units were deployed and one remote tracker was assigned to monitor the job. The units were pre-deployed prior to the run and moved strategically along the pipeline to cover approximately 20 marker locations.

Key Details:

- Pig speeds were around 5m/s in the first half of the line and slowed to ~ 1 m/s in the second half
- A combination of field deployment and remote tracking was utilised to minimise field presence and optimise coverage
- All passes were successfully detected and reported in real time



What Sets Patriot AGM Apart

The Patriot AGM is a compact, all-in-one remote tracker designed to simplify fieldwork while maximising sensitivity and performance. Unlike traditional systems that require bulky equipment, Patriot AGM integrates:

- Built-in sensors (electromagnetic and geophone)
- Optional external sensor connections to enhance detection of quieter pigs and challenging EM signals
- Bluetooth and cellular connectivity, enabling both local and remote control

Each Patriot AGM deployed during this operation was able to detect and report all pig passages reliably to the Pat Track Dashboard.

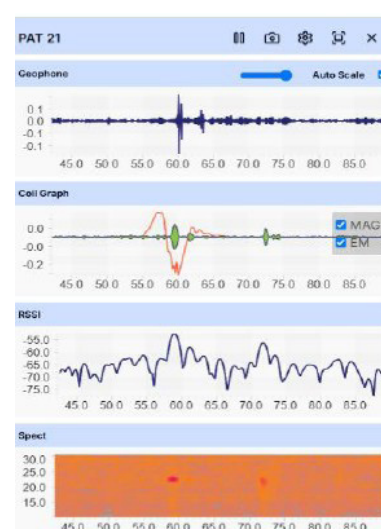
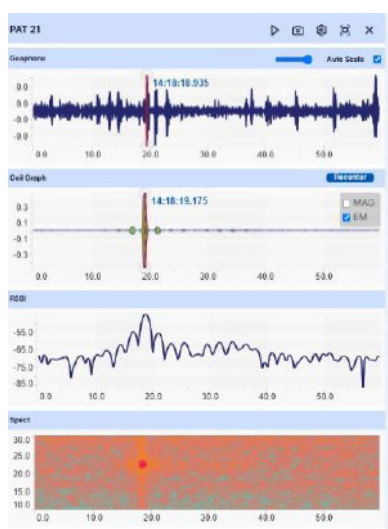


Real-Time Tracking with Pat Track Dashboard

The Pat Track Dashboard enabled the remote tracker to:

- Receive passage alerts within seconds
- View live signals and stream real-time geophone audio
- Track the pig's progress without being physically present at each site

These capabilities significantly improved operational oversight and efficiency, making it easier to adapt to last-minute field changes and challenging terrain.



Interested in hearing more about this,
or other applications?
Contact our IK TRAX specialists at:

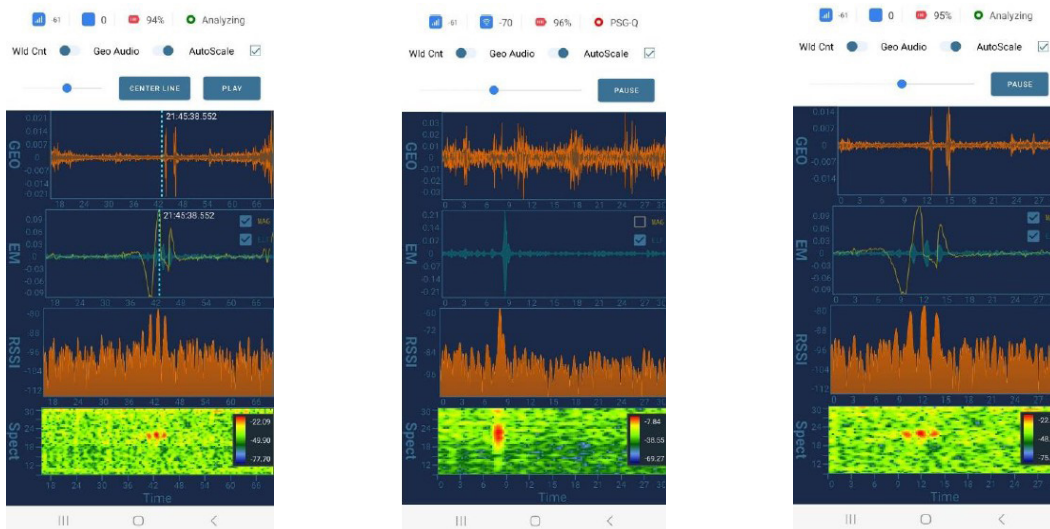
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Powerful Mobile App Support

The Android App, PATCONNECT, played a critical role in supporting local tracking. Key features include:

- Long-range Bluetooth connectivity, often exceeding 100 metres in open environments
- Live geophone audio streaming, accessible via wired headphones or wirelessly through the vehicle's Bluetooth
- Real-time waveform display, aiding quick signal interpretation
- Automatic weld counting, reducing manual tracking effort and human error

This intuitive tool allows field technicians to operate more efficiently, with fewer distractions and less equipment.



Challenges and Lessons Learned

- Some marker locations could not be reached due to road closures and construction. Full pre-deployment would have mitigated this
- A fully pre-deployed setup could have allowed for faster pig launching and less field technician repositioning, improving efficiency, safety and cost-effectiveness

Conclusion

Despite field access limitations, the Patriot AGM units and supporting systems successfully tracked all cleaning pigs and the gauge plate throughout the job. This demonstration validated:

- The reliability and accuracy of Patriot AGM in real-world conditions
- The effectiveness of remote tracking via the Pat Track Dashboard
- The operational benefits of minimising field presence without sacrificing data quality

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