

Introducing the

cobra

LOCATOR GPR



Ground Probing Radar/Antenna system with Rugged PC and Cart ✓

Fully integrated system. Multi Frequency operation: 100-900 MHz ✓

Air/Ground Coupled operation. Multiple Applications. 0-10 m depth range ✓

Real time 2 Depth Range & Channel option. No additional survey needed ✓

Best penetration and data quality in compared head-to-head tests ✓



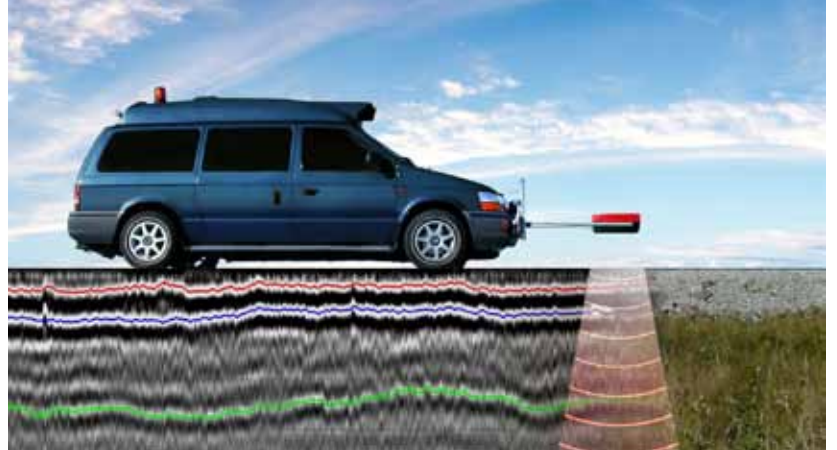
Radarteam

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Cobra Locator GPR applications

Just like X-ray and ultrasound can image the inside of your body, the Cobra Locator GPR can be used to image the inside of different materials and structures.



Infrastructure & utility mapping

Inspect internal structures and identify voids under; roads, airports, bridges, tunnels, railways, dams and buildings. Locate plastic, concrete, clay- or metal pipes. Map concrete before drilling, cutting or coring. Detect obstacles in front of directional drilling operations



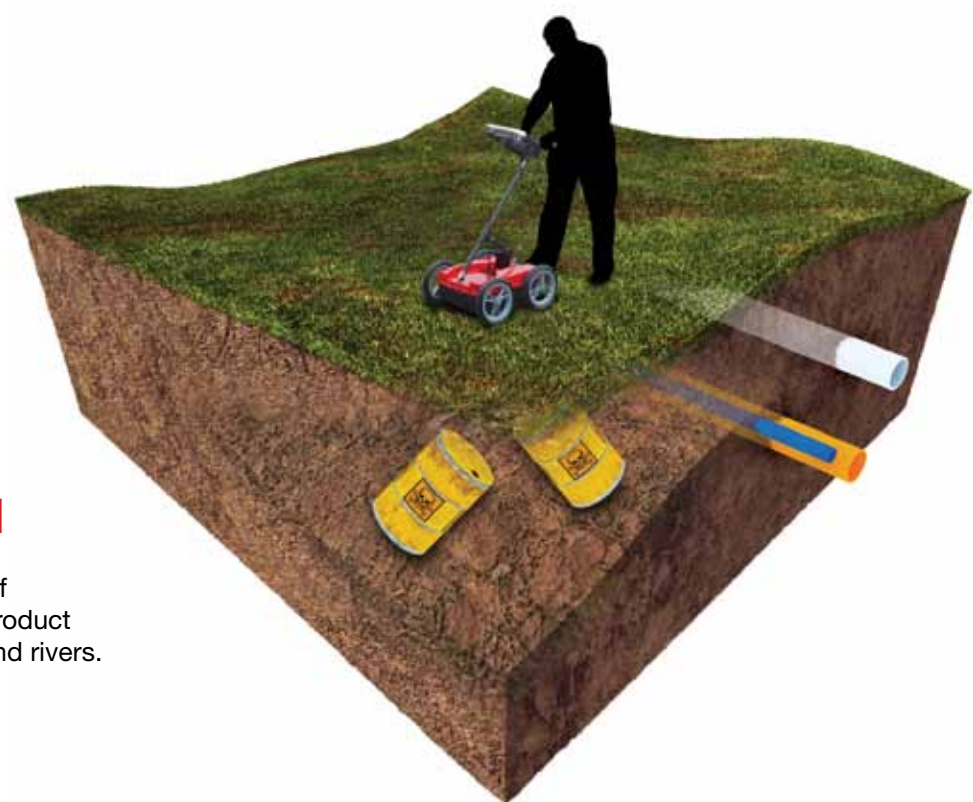
Military and security

Locate tunnels, bunkers, hidden weapons and drugs. Find land mines and unexploded ordnance (UXO). Through wall imaging.



Rescue operations

Locate trapped victims under collapsed buildings and landslides.



Environmental

Locate hazardous waste, UST-location. Delineation of contaminant plumes and product spills. Map shallow lakes and rivers.

Snow & ice

Airborne mapping of snow- and ice thickness. Find crevasses and avalanche victims. Profile ice roads in detail. Glaciology research.



Agricultural and forestry

Locate agricultural and golf-green drainage tiles. Determine soil water content and conductivity. Map tree roots and rot in wood.



Geology and mining

Locate gemstone pockets in pegmatite. Find kimberlite, lateric nickel. Map internal structures and voids in soil. Locate cracks in bedrock and building stones.



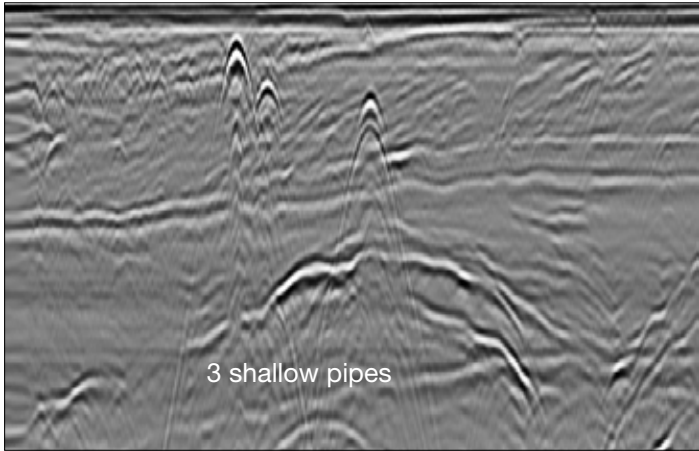
Archaeology & forensics

Pre-excitation mapping of buried structures, foundations, burials and chambers.

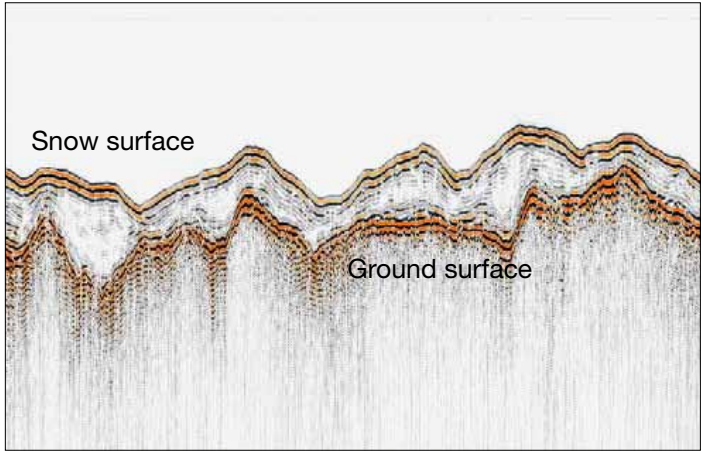
One of Radarteam Sweden AB most famous projects was when we discovered a 20.000 year old woolly mammoth, well preserved in the permafrost ground of Siberia. The project is frequently show cased by Discovery Channel, "Raising the Mammoth".



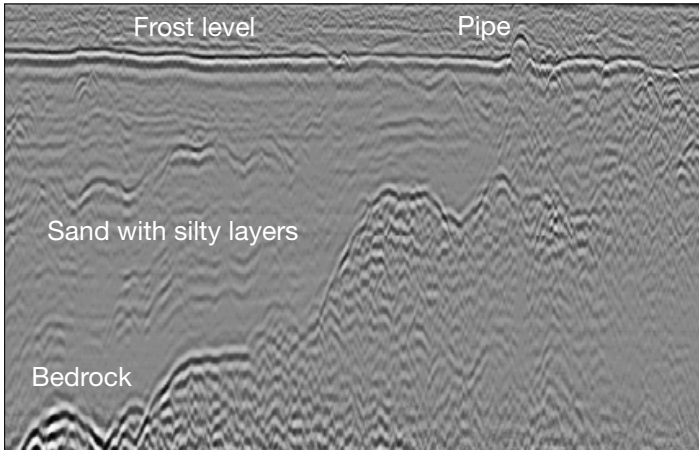
Best possible data quality



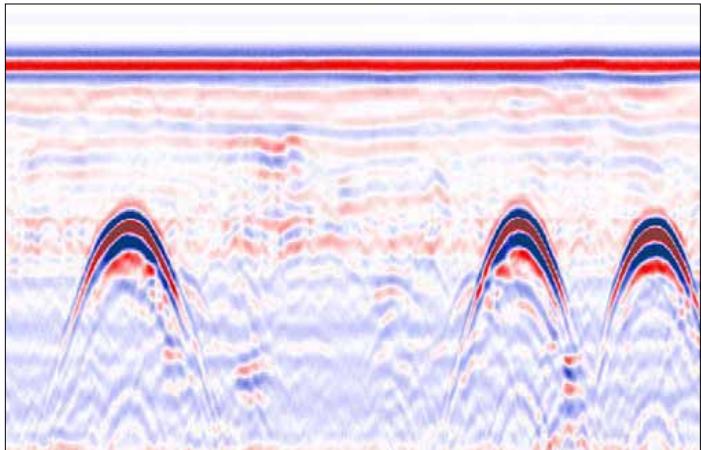
High resolution capacity



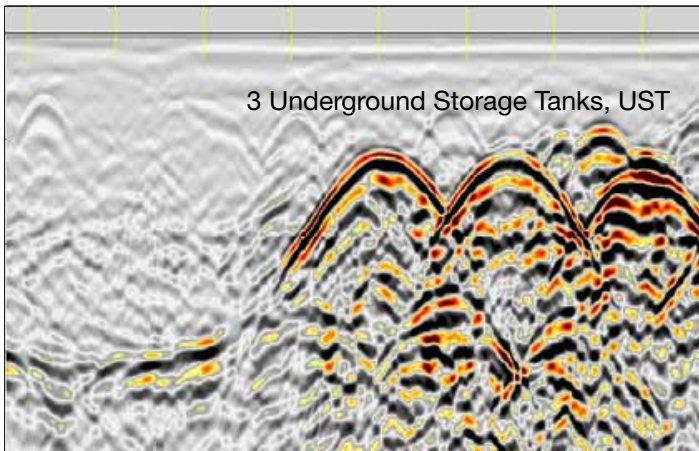
Airborne snow survey, raw data



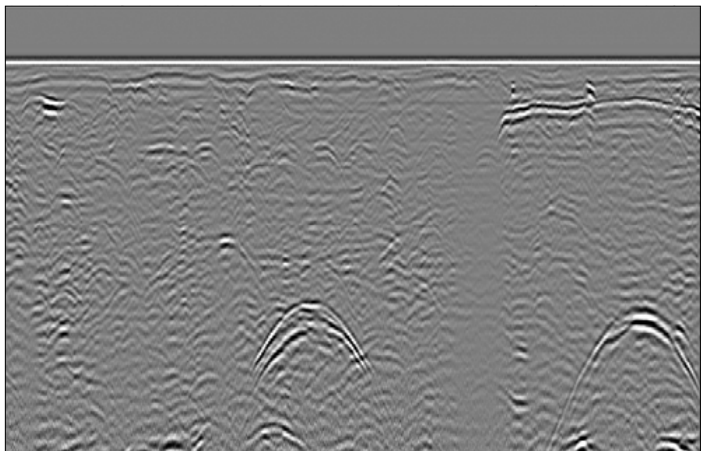
High penetration (9 m in silty sand)



Large diameter concrete pipes



UST - Underground storage tanks



Road culverts at 6 meter depth

Technical specifications

ANTENNA / GPR Antenna type Peak frequency Operating bandwidth System performance Applied voltage Sample rate Scan rate Sample output	Dual shielded antennas with integrated 2 channel Ground Penetrating Radar system Cylindrical Butterfly Dipole (CBD-antenna), resistively loaded. Both air/ground-coupled operation. 250 MHz 100 - 900 MHz 174 dB 100 V 100,000 samples/s 1-100 scans/s @ 512 samples/scan 16 bit digital raw data
CONTROL UNIT / CU Data format Data channels Vertical filters Horizontal filters Gain points Gain levels Data storage Data file size	Rugged, MIL-STD-810F, water- and dust resistant, Panasonic Toughbook CF-19 laptop with bundled data acquisition, DAQ- software, for control, display, processing and storage of GPR-data. Geoscanners Data Format (.gsf) 1 or 2 with individual settings for depth, filter and gain (2 optional) Low-pass and High-pass FFT (Boxcar 1st order) Stacking, background removal 1 - 2 Linear gain -20 to +60 dB Raw or Processed realtime data storage. Auto save or save on command. Limited only by available HDD-space (80 GB for Control Unit)
SURVEY CART	Integrated cart with mounting bracket for CU. 12" removable non-inflatable wheels with SW-encoder.
ENVIROMENTAL Temperature Humidity Ingress protection	-20°C to 40°C 96% non-condensing IP68 (Power, USB, SW-encoder connectors)
MECHANICAL Size (L x W x H) Weight	52 x 40 x 19 cm (20 x 16 x 7,5 in) 16 kg (36 lbs)
OPERATING Operating platforms Battery Operating time Operating mode GPS positions Operating depth	Airborne operation, high speed air-coupled operation, ground-coupled operation External Li Ion: 10,8V (6,6 Ah), 71 Wh 6 - 8 hours Time (1-100 scans/s), Distance (SW-encoder) GPS positions integrated with GPR-data for every scan in both time- and distance mode Shallow - Medium - Deep range (32, 64, 128 ns). 2,5 - 5 - 10 m @ $v=0,15 \text{ m/ns}$ ($\epsilon_r=4$)
ACCESSORIES Hardware Software	Helicopter survey kit, High speed road/Railway kit, Rugged terrain kit GPRSoft Post processing software for Cobra Locator Data (.gsf-format) DAQ-2 channel, 3D-Module



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