



TUNISIA - CHOTT EL JERID
2D acquisition
using explosives
Summer 2022

Chott El Jerid 2D project: 840 km explosives – 210 km vibroseis



Overall project area:

- 1,600 km² of sebkhah covered with explosives
- 1,000 km² of sand dunes covered with vibrators



Main challenges:

- Logistics in sebkhah for equipment and personnel transportation
- Number of drilling teams (20 drilling teams to supply)
- Water management for drilling teams
- Uneven ground conditions and inaccessible areas



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Project figures: drilling

- 20 drilling teams
- 220 points drilled per day (average)
- 16,800 points drilled
- 220,000 meters drilled
- 235,000 meters of casing used



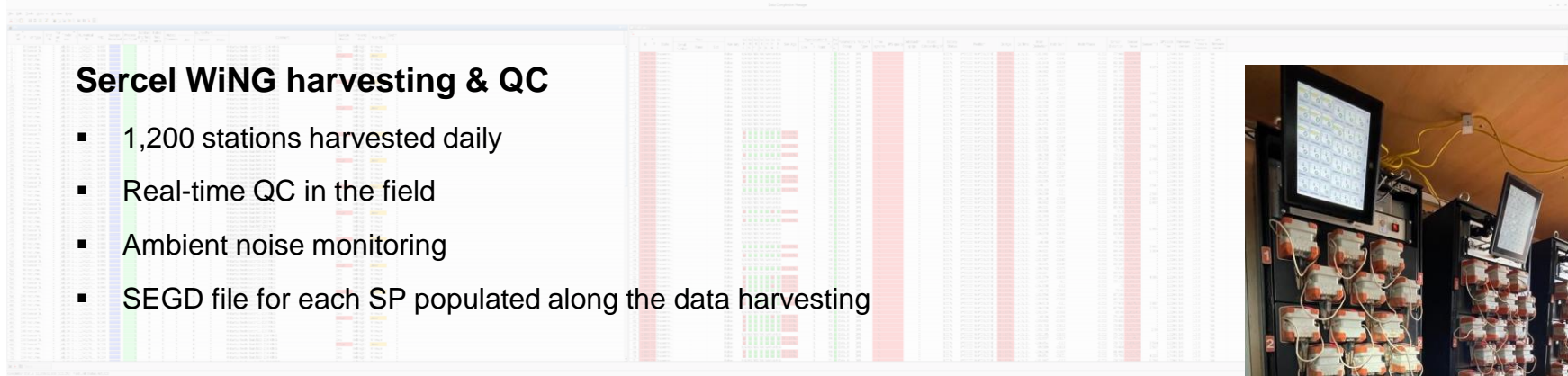
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Project figures: SP acquisition

- Autonomous shooting technique (time slot)
- 6 loading teams
- 6 shooting teams
- 240 SP per day
- 50 tons of explosives used

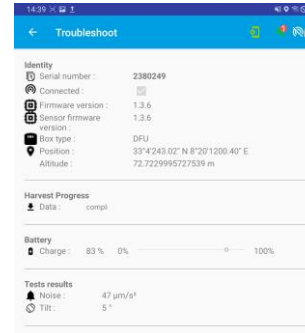
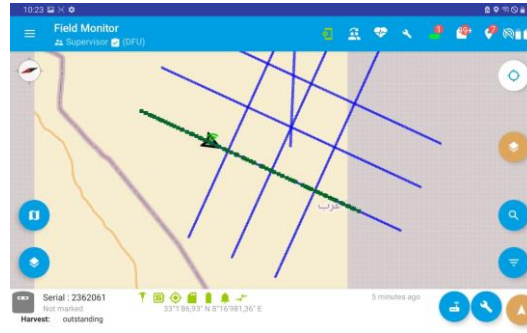


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Sercel WING harvesting & QC

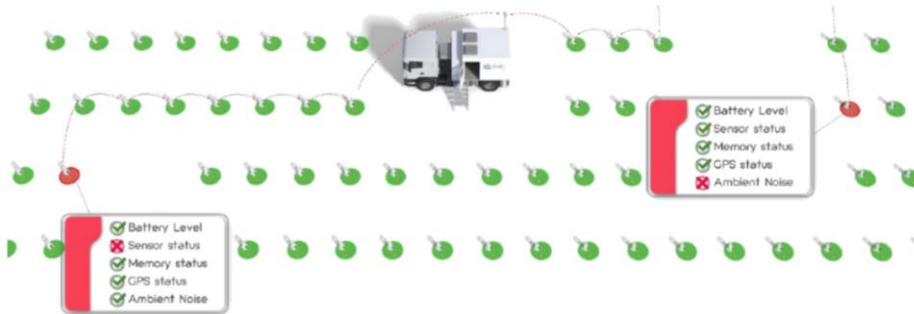
- 1,200 stations harvested daily
- Real-time QC in the field
- Ambient noise monitoring
- SEG-D file for each SP populated along the data harvesting



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Project figures: acquisition

- Sercel WiNG Nodal system
- Highest sensitivity system (max offset 9,000 m)
- Real-time QC in the field
- 86,000 receiver stations laid out
- 1200 stations laid out & picked up daily
- 6000 WiNG nodes on crew



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Project figures: VP acquisition & Uphole

- Sand dunes area, 100% line clearing required
- 2 fleets of 2 vibrators
- 380 VP per day
- 5 upholes drilled with Fraste drilling rig



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Equipment:

Acquisition system: Sercel WiNG nodal system (6000 channels)

Light drilling: 16 Balco 500 tractor, 10 Balco 200 tracks mounted

Heavy drilling (Up hole): 1 Fraste drilling rig

Vibro: 5 Sercel Nomad 65 Neo equipped with Sercel VE 464

Specific vehicles: 10 buggy 4x4, 10 Kubota on tracks, 15 Polaris

Vehicles: 5 Buses 4x4 and 30 light vehicles

Staging Camp: offices, clinic, workshops, water & diesel storage

Operation:

Drilling: 20 teams (Balco 500 Tractor + Balco 200C) – 220 hole/d

Explosive: 6 loading teams + 6 shooting teams – 240 SP/d

Vibro: 2 fleets of 2 N65 (flip-flop) – 380 VP/d

Uphole & LVL: 10



Personnel:

Expat International: 10 => Crew manager, HSE Advisor, Chief Observer, Geophysicist, drilling supervisor (Ex CGG)

Local Senior Staff: 25 => Tunisian experienced senior staff (Ex CGG)

Local labors: 155 => Employed locally (including subcontracted)

Total 190



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Quite variable field conditions

- Field conditions change along the day according to temperature
- Identifying and mapping the whole surface conditions
- Dispatching resources according to ground conditions
- Using wooden planks to move equipment
- Special teams to recover vehicles stuck

