Bratcher, Mike, EMNRD

From: Lynn III,John R <JLYNNIII@travelers.com>
Sent: Friday, September 23, 2016 12:05 PM
To: Bratcher, Mike, EMNRD
Cc: Oberding, Tomas, EMNRD; Billings, Bradford, EMNRD; O'Neill,James K; Joe Austin - Earth Measurement Corp. (austin@emcgeophysics.com); Rodney Thomson; Clark,Stefanie A
Subject: Alternative means of delineation Fair Oil Site (Parakeet Federal #29) - FW: Resistivity images
Attachments: Hydrocarbon Plot 2.jpg; Hydrocarbon Plot 1.jpg; Hydrocarbon Plot 3.jpg

Good Morning Mike –

Please find attached example images of an imaged oil spill. Plot 1 and 2 are two different angles of the spill. The computer can image the spill from any direction and provide profile "slices" through it at any point. Plot 3 shows the interface between the spill and the background material. If you have any questions regarding the imaging you can discuss them with Joe Austin at Earth Measurement Corporation (contact information below). Feel free to call me with any other questions. EMC could be available to image the site as early as the first week in October. Best regards,

John

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TRAVELERS

From: Joe Austin [mailto:austin@emcgeophysics.com]
Sent: Friday, September 23, 2016 9:17 AM
To: Lynn III,John R <JLYNNIII@travelers.com>
Cc: Scott Kotara <kotara@emcgeophysics.com>
Subject: Fw: Resistivity images

John

Attached are some examples of what resistivity looks like when tracking a oil spill. For this project we were in a sandy/clay soil so the dispersion of the hydrocarbons was fairly uniform. In a karstic soil environment the results could be the same or if the hydrocarbons hit a fissure to a cavern it could be pooled in one location. You never know until you start exploring what you have.

One thing the images that I am sending has 8 lines, 3 meter spacing of the probes with 112 probes on most lines. The lines were 10 feet apart. All this makes for good resolution of the subsurface.

Let me know what you think.

Joe

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