

Shoreline Cleanup Assessment Technique (SCAT) and the Silvertip Incident

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N 45° 41' 36"
W 108° 38' 28"

11:48:22 AM
7/11/2011



Montana

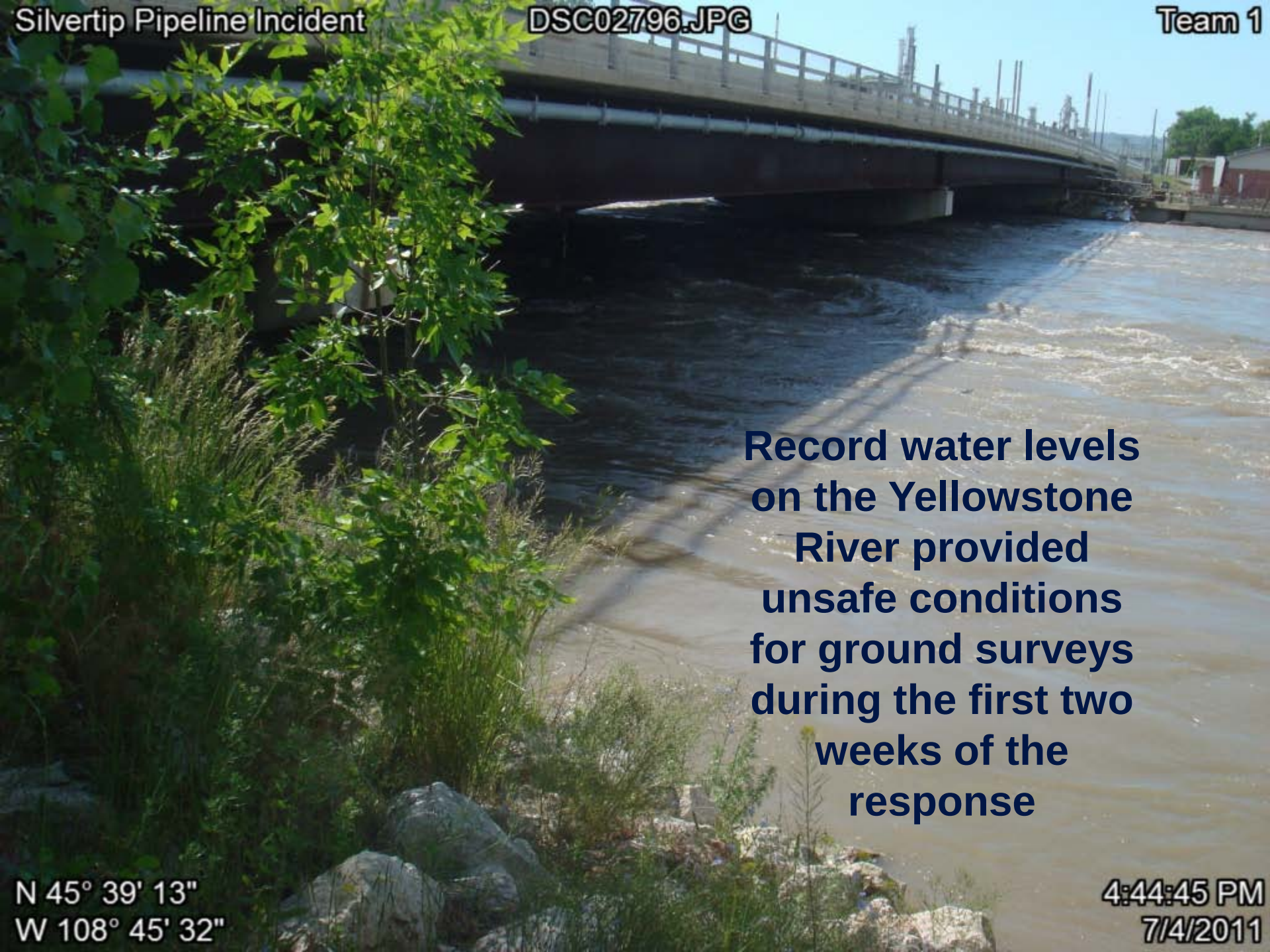


Particulars

- July 2011
- Estimated 1,500 Bbl
- Pipeline rupture at Yellowstone River at Laurel, Montana
- River discharge at extreme high flow
- Visible oil approximately 45 miles downriver
- 7 SCAT teams surveyed 75 miles downriver
- >11,000 acres surveyed
- Surveys terminated September 2011

SCAT Teams

- Teams may include representatives of:
 - State
 - Federal
 - Responsible Party
 - Local Government
 - First Nations / Indigenous Peoples
 - Historical Preservation Officers /Archaeology



**Record water levels
on the Yellowstone
River provided
unsafe conditions
for ground surveys
during the first two
weeks of the
response**

Silvertip Pipeline Incident

IMG_3599.JPG

Team 4



N 45° 41' 36"
W 108° 38' 28"

11:48:22 AM
7/11/2011

**Initial surveys were limited to aerial
platforms and backwater areas**



Methods may be dictated by safety constraints

Ground Surveys

Swift Boat, Small Vessel, Foot



[illegible]

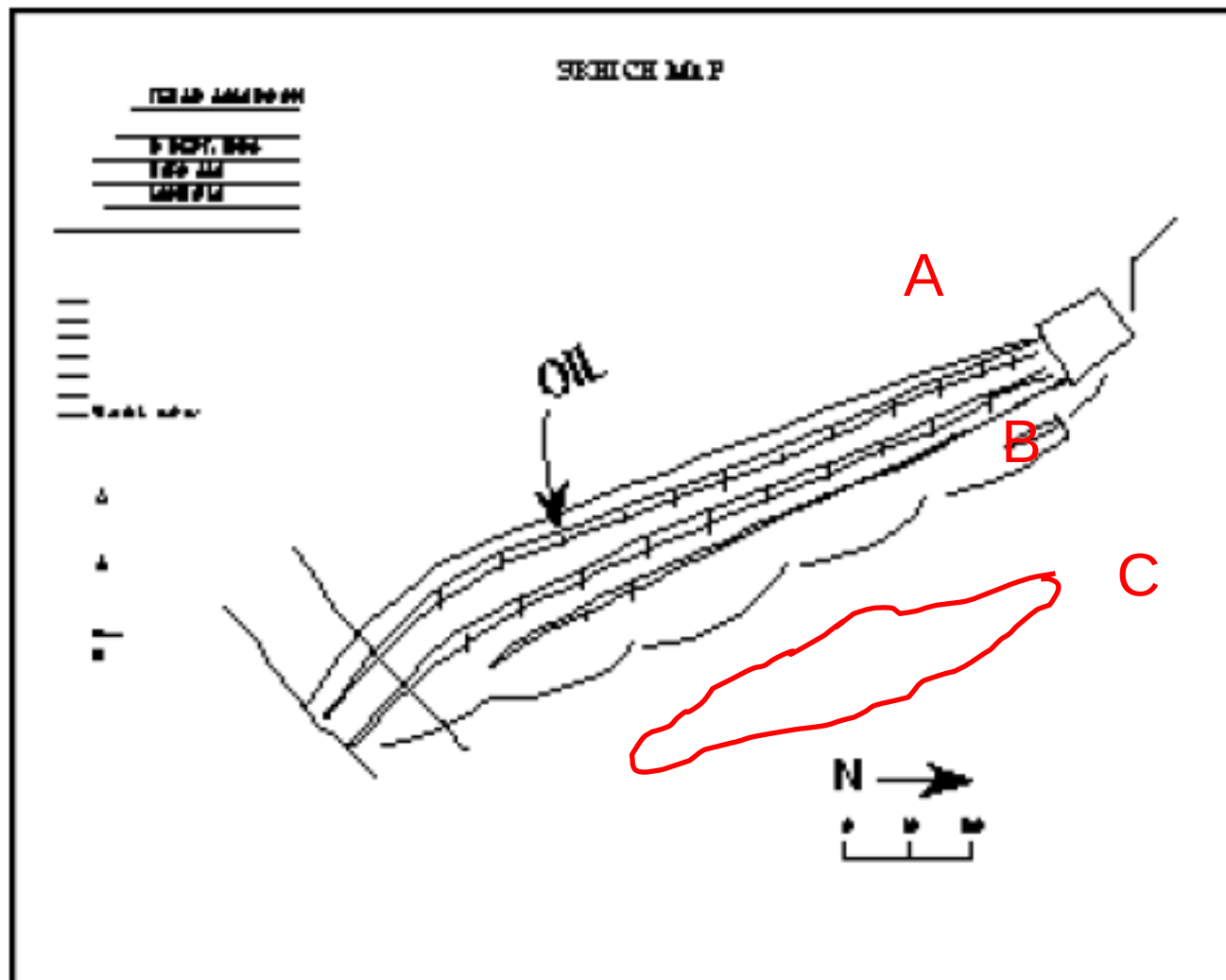


Figure E-2. Example of a field sketch map with outline of surveyed area.









- Due to massive relocation of sediments, large woody debris and land forms, preexisting maps were unreliable

- New high resolution aerial photos were flown in four color digital formats



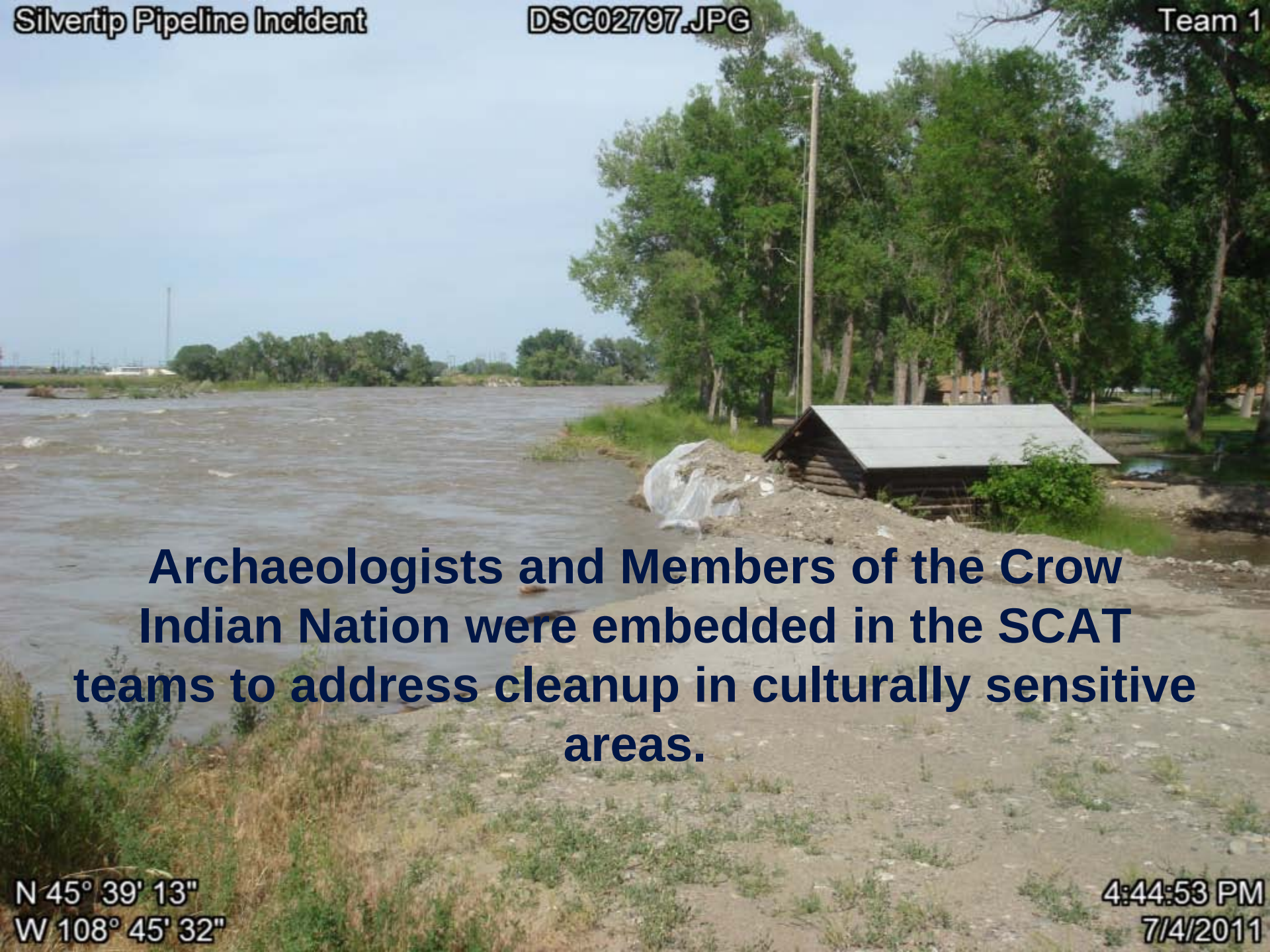


- 9999 Oiling Zone ID
 Heavy Oiling
 Moderate Oiling
 Light Oiling
 Very Light Oiling
 No Oil Observed

Figure 4 - Maximum SCAT Observations

For SCAT Area:



A photograph showing a wide river with a sandy and rocky bank in the foreground. On the bank, there is a small, rustic log cabin with a corrugated metal roof. A tall utility pole stands behind the cabin. The background is filled with lush green trees under a clear sky. The text is overlaid in the center of the image.

Archaeologists and Members of the Crow Indian Nation were embedded in the SCAT teams to address cleanup in culturally sensitive areas.

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- **Adjacent lands in flooded areas were oiled resulting in third party claims**
 - **SCAT-Claims Liaison position created as an interface between private landowner and cleanup operations**

7/5/2011 5:05:49 PM (-6.0 hrs) Lat=45.99103 Lon=-108.10006 WGS 1984



7/5/2011 4:51:27 PM (-5:0 hrs) Lat=45.95123 Lon=-108.27069 WGS 1984



Silvertip Pipeline Incident

IMG_3492.JPG

Team 4



N 45° 39' 07"
W 108° 43' 01"

11:01:58 AM
7/11/2011

Silvertip Pipeline Incident

IMG_3871.JPG

Team 4



N 45° 39' 11"
W 108° 42' 40"

9:48:20 AM
7/14/2011

Silvertip Pipeline Incident

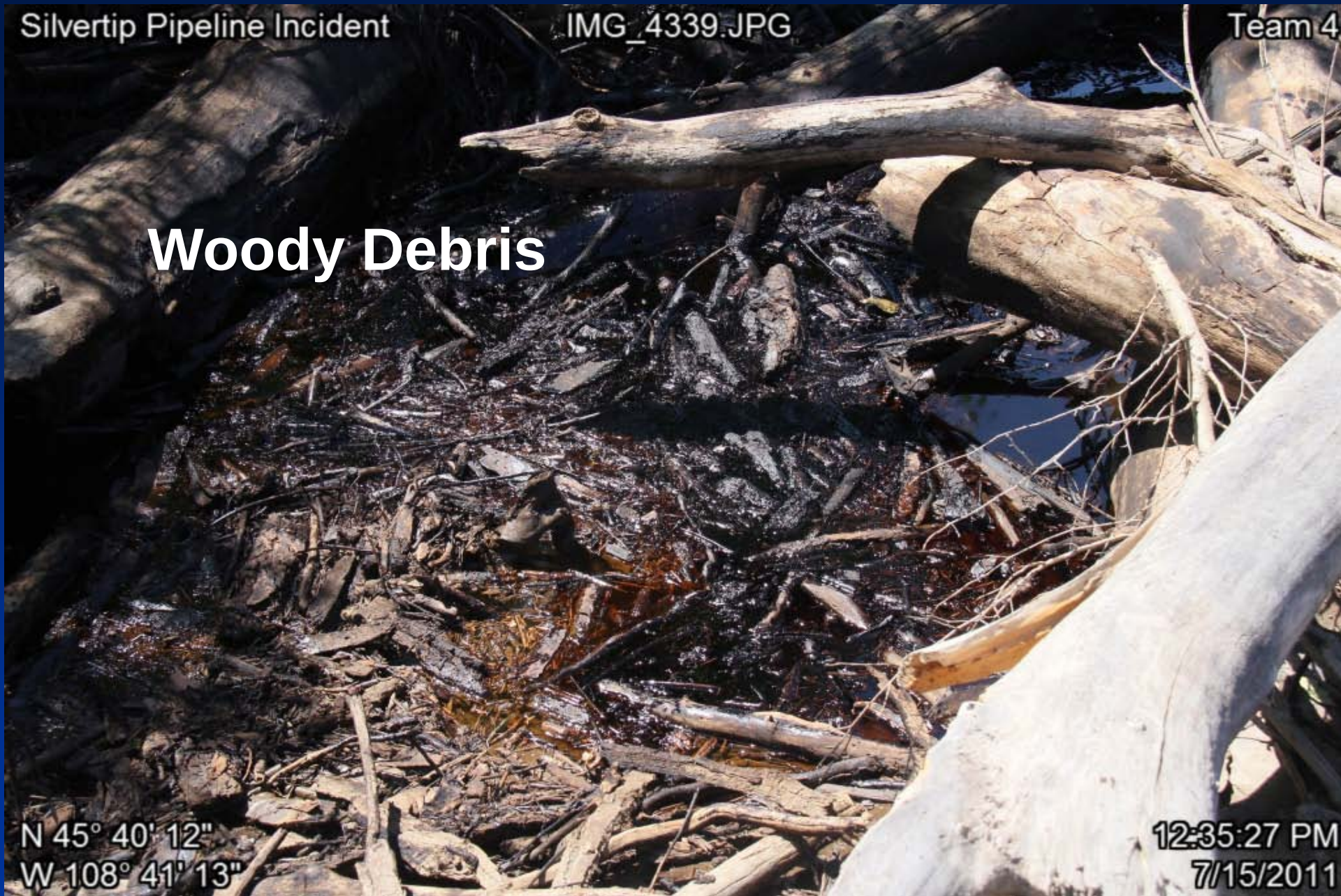
IMG_4339.JPG

Team 4

Woody Debris

N 45° 40' 12"
W 108° 41' 13"

12:35:27 PM
7/15/2011



Silvertip Pipeline Incident

IMG_4343.JPG

Team 4



N 45° 40' 12"
W 108° 41' 13"

12:36:12 PM
7/15/2011

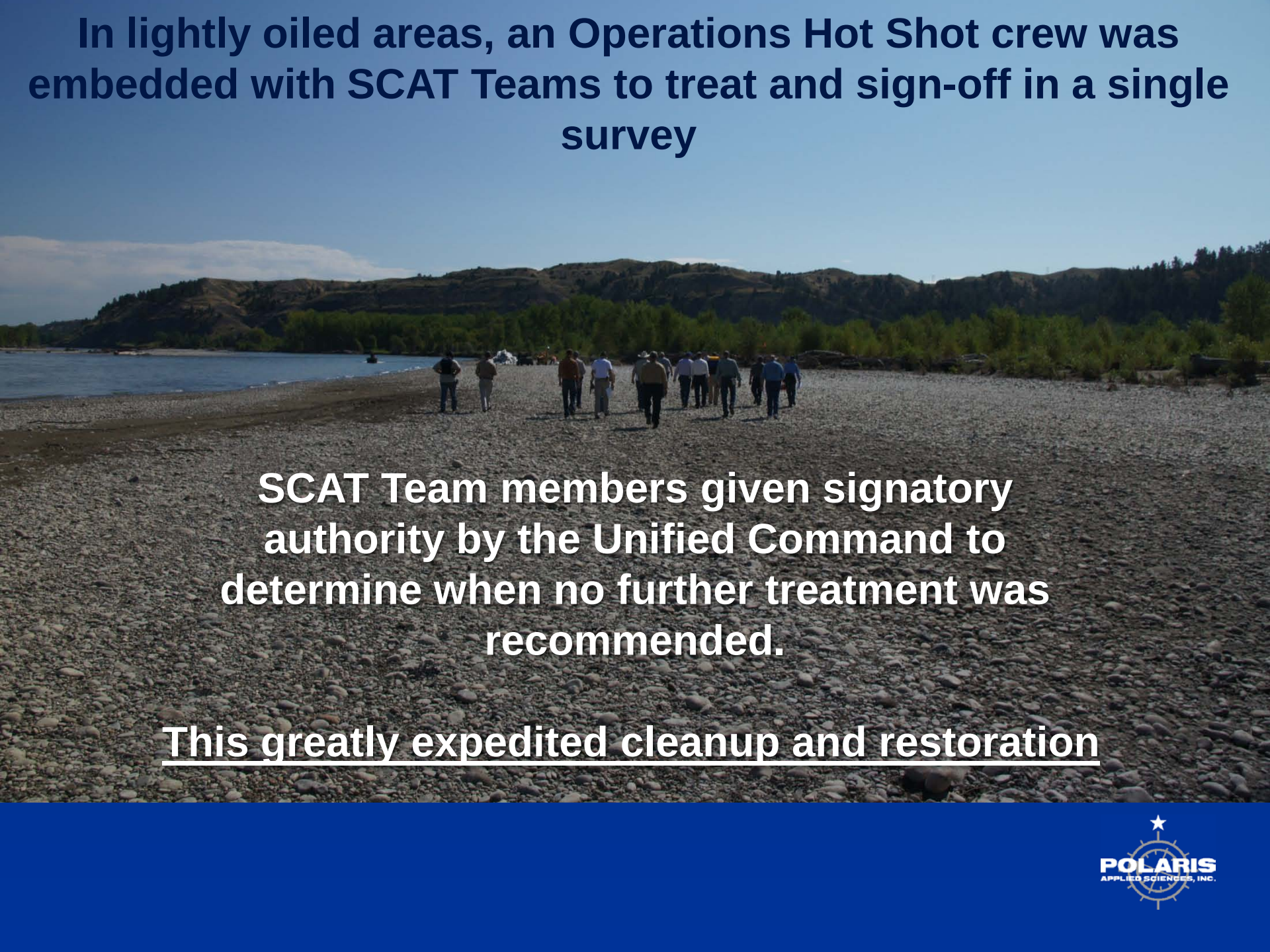
Oil trapped in large debris provided challenges for safe treatment and disposal



High powered jet boats continued to be used to move SCAT teams and operations personnel as water conditions allowed



In lightly oiled areas, an Operations Hot Shot crew was embedded with SCAT Teams to treat and sign-off in a single survey

A group of approximately 15 people, likely the SCAT Team members, are walking away from the camera across a wide, rocky beach. They are dressed in casual work clothes. In the background, there is a calm body of water, a line of green trees, and rolling hills under a clear blue sky.

SCAT Team members given signatory authority by the Unified Command to determine when no further treatment was recommended.

This greatly expedited cleanup and restoration

Challenges

Solutions

Safety

**Expertise
Patience**

Private Property

SCAT Claims/liaison

Cultural Sensitivity

Embedded Representation

Mapping

**Atypical and changing
Shorelines, Debris**

Modified SCAT/GIS Tools

Access

Combined SCAT/OPs/decision-makers