

**ExxonMobil Pipeline Company**

**SCAT Area Transition Report  
for C48**

Silvertip Pipeline Incident  
Laurel, Montana

October 27, 2011



## **SCAT Area Transition Report for C48**

Silvertip Pipeline Incident  
Laurel, Montana

Prepared for:  
ExxonMobil Pipeline Company

Prepared by:  
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Our Ref.:  
B0085883.1103

Date:  
October 27, 2011

*The observations described in this Report were made exclusively under the conditions at the time and subject to the limitations stated therein. It is understood by Client that ARCADIS has relied on the accuracy of documents, oral information, and other material and information provided by sources documented in this report, including but not limited to information provided by Client and Client's other contractors. ARCADIS has not independently verified any such information. The conclusions presented in the Report are based solely upon the observations and representations made by others.*

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## **1. Executive Summary of Oil Removal Activities**

This Shoreline Cleanup Assessment Technique (SCAT) Area Transition Report provides a summary of the SCAT surveys conducted to determine the extent of oiling along the riverbanks and floodplain within SCAT Area C48, as well as the oil remediation activities completed in this area based on the SCAT Team recommendations. This report also summarizes the environmental samples collected in SCAT Area C48. This report is intended to be read and used in conjunction with the Summary of Assessment and Oil Removal Activities report.

### **1.1 Land Ownership and Access Issues**

Figure 1 provides an aerial map of SCAT Area C48, along with the (a) SCAT Area boundary, (b) parcel boundaries and respective property owners, and (c) access constraints identified during the oil cleanup process. The acreage surveyed in Area C48 is 113.1. There were no access issues for the left and right banks.

### **1.2 Cultural, Historic, and Natural Resource Constraints**

No historic properties or cultural resources have been identified within this area that would affect oil removal activities.

Figure 2 summarizes the natural resources identified in this segment. International Bird Rescue and Resource Advisors from U.S. Fish and Wildlife Service conducted limited inspections of Area C48 due to the low level of oiling in Division C. No oiled wildlife was observed or recovered. No Wildlife Priority Cleanup Areas were identified. A portion of a bald eagle (*Haliaeetus leucocephalus*) nesting buffer zone extended into Area C48 and was provided to Operations to protect the nest.

### **1.3 Summary of Environmental Sampling**

Table 1 (below) summarizes samples collected within Area C48. The analytical results for the samples collected can be accessed through a publicly accessible database on the United States Environmental Protection Agency's (USEPA's) website. The approximate locations of samples collected within Area C48 are provided on Figure 3.

**Table 1 Environmental Sampling Summary**

Area	Agency	Sample Num	Date	Matrix	Location	Latitude	Longitude
C48		No Samples Collected*					

Appendix A contains a summary of sample results with detections for this sample set. Detections with a result above the screening level are highlighted; for Area C48, there were no exceedances because no samples were taken.

**1.4 Summary of Initial SCAT Surveys**

The SCAT teams used systematic evaluation criteria and treatment method tables approved by the National Oceanic and Atmospheric Administration to provide a standard approach for data collection and conducting field surveys. The forms and sketches from the initial SCAT surveys performed along the river bank (water edge) and floodplain within Area C48 are included in Appendix B. Figure 4 provides the maximum oiling zones observed by the SCAT team during the initial surveys of Area C48.

**1.5 Applicable Compiled Treatment Recommendations**

The SCAT team developed compiled treatment recommendations (CTRs) providing approved treatment methods (ATMs) for each oiling zone identified during the initial SCAT surveys ([CTR No. 61](#)).

**1.6 Oil Removal Activities**

Oil removal activities were conducted within Area C48 in accordance with the ATMs identified in the CTRs. [Appendix I](#) of the Summary of Assessment and Oil Removal Activities report presents this data including: date range/days worked, average number of people working per day, equipment used, and various types of bags removed: oily debris, personal protective equipment (PPE), plastic, trash, super sacks, wood chips, and contaminated wood.

**1.7 Pre-Inspection Survey Transmittal**

A Pre-Inspection Survey Transmittal (PIST) was not conducted for this area.

### **1.8 Post-Inspection Survey Transmittal**

A Post-Inspection Survey Transmittal (POST) was not conducted for this area.

### **1.9 Summary of Final SCAT Surveys**

Figure 5 shows the oiling conditions within Area C48 following completion of oil removal activities. The SCAT team performed final surveys of the island and right bank within SCAT Area C48 to confirm the agreed-upon cleanup endpoints identified in the applicable CTRs had been achieved. The final SCAT survey documentation is presented in Appendix E.

### **1.10 SCAT Area Conclusions**

Based on the initial SCAT surveys performed on the left bank, the majority of the island, and the western portion of the right bank within Area C48, no further treatment is recommended for these segments. Based on the final SCAT survey performed on the remaining portions of the island and right bank within Area C48, no further treatment is recommended for these segments except for a small portion of the right bank to be addressed by natural attenuation. SCAT Segment Sign-Off Forms are included as Appendix F.



**SCAT Area Transition  
Report for C48**

Silvertip Pipeline Incident  
Laurel, Montana

**2. Transition Sign-Off Form**

**SCAT Area Transition Report for C48**

**Prepared for:**

**Unified Command**

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Date

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Unified Command – RP

## **SCAT Area Transition Report for C48**

**Prepared for:**

**Unified Command**

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Date

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Unified Command – FOSC



**SCAT Area Transition  
Report for C48**

Silvertip Pipeline Incident  
Laurel, Montana

**SCAT Area Transition Report for C48**

**Prepared for:**

**Unified Command**

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Date

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Unified Command – MDEQ

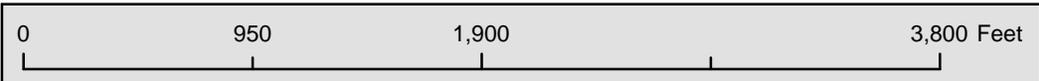
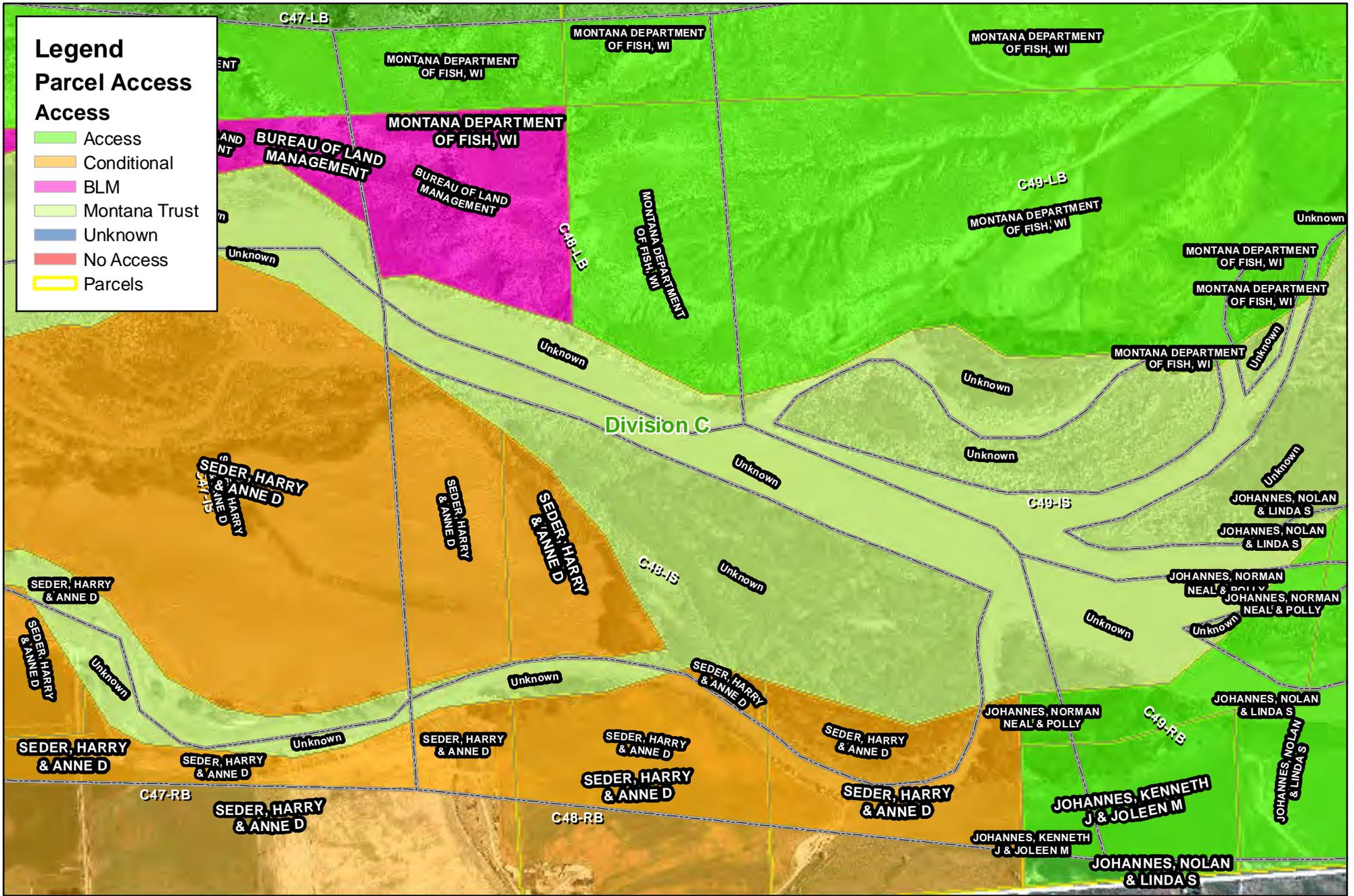
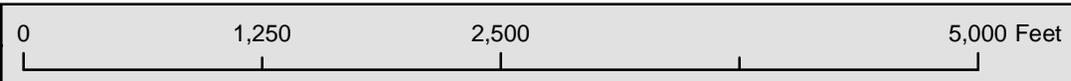


Figure 1



**Figure 2**  
**Wildlife Resources**

Figure 3  
 Silvertip Pipeline Incident  
 Environmental Sampling  
 Locations as of 8/27/2011



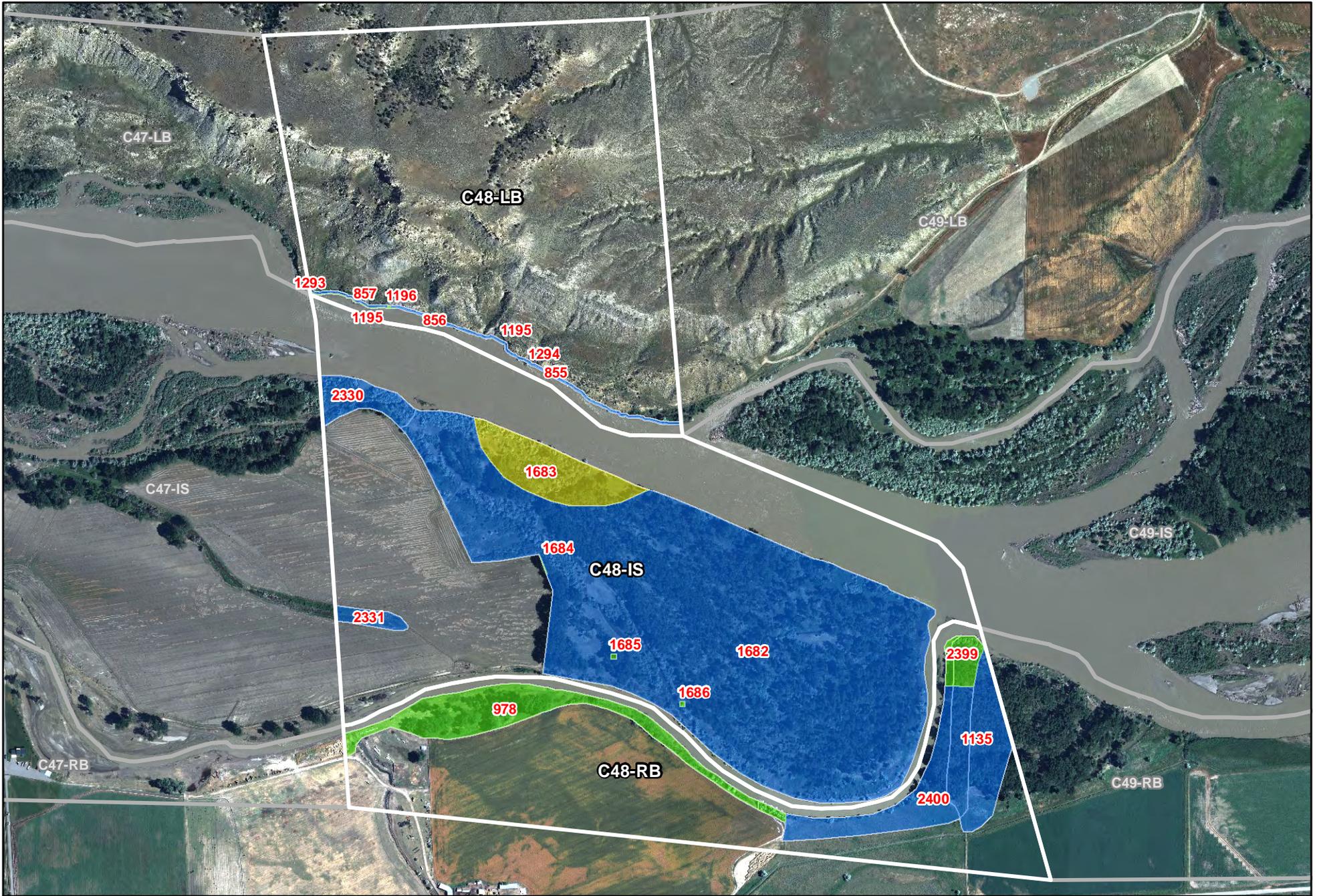
**Legend**

--- Silvertip SCAT Segments

**Sample Locations**

	XOM	EPA	MDEQ
Surface Water			
Drinking Water			
Irrigation			
Soil			
Sediment			
Product			
River Soil			
Oiled Debris			
Oiled River Soil			

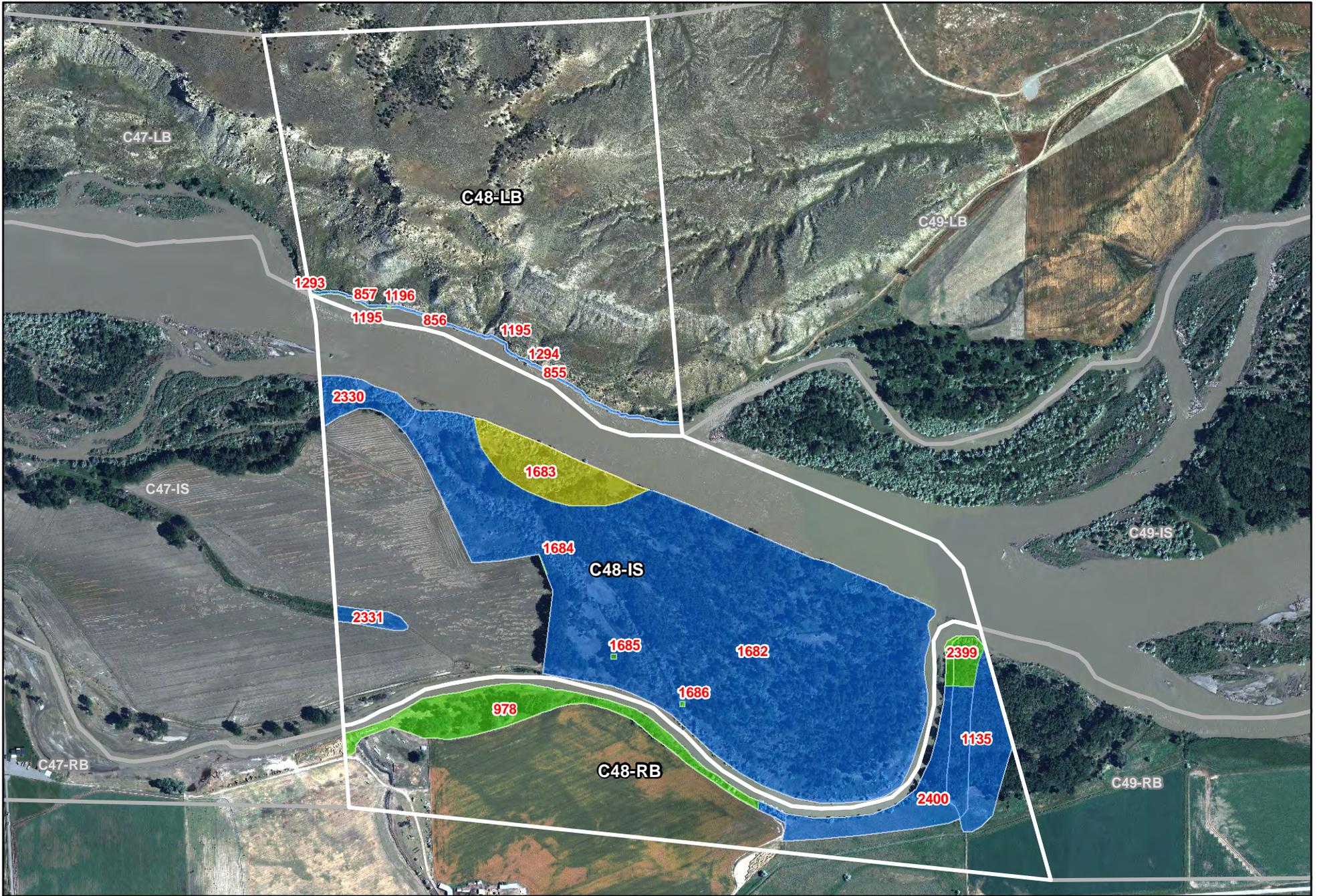
**SCAT C48**



	<b>9999</b> Oiling Zone ID	Light Oiling
	Heavy Oiling	Very Light Oiling
	Moderate Oiling	No Oil Observed

**Figure 4 - Maximum SCAT Observations For SCAT Area: C48**

600    0    600    1,200  
 Feet



- 9999 Oiling Zone ID
- Heavy Oiling
- Moderate Oiling

- Light Oiling
- Very Light Oiling
- No Oil Observed



**Figure 5 - Final SCAT Observations  
For SCAT Area:**





## **Appendix A**

Sample Detection Summary



Sample Results For  
SCAT Area C48

Printed 10/12/2011

NA - Not Available

Detected Above Screening Level

Sample Num	Date	Sample Type	Matrix	Analytical Method	Analyte	Detected	Result	Screening Level	Result Qualifier	Units	Above?
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No Samples Taken



## **Appendix B**

Initial SCAT Survey Forms  
and Sketches

DB/6

RIVER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident

<b>1 GENERAL INFORMATION</b>		Date (dd/mm/yy)	Time (24h): std / daylight	Water Level
Segment/Reach ID: <u>C48</u>	Left Bank / Right Bank ( <u>Island</u> )	<u>20/08/11</u>	<u>1115</u> hrs to <u>1320</u> hrs	low - mean - bankfull - overbank
Operations Division: <u>C</u>				falling - steady - rising
Survey by: ( <u>Foot</u> ) / ATV / Boat / Helicopter / Overlook / _____	( <u>Sun</u> ) / Clouds / Fog / Rain / Snow / Windy / Calm			Air Temp +/- <u>28</u> deg C

<b>2 SURVEY TEAM # <u>4</u></b>	Name	Organization	Signature
	<u>Damien Koste</u>	<u>Cardno Entrix</u>	<u>[Signature]</u>
	<u>Thomas Freeman</u>	<u>Polaris</u>	<u>[Signature]</u>
	<u>Fred Left Hand</u>	<u>Crow Tribe THPO</u>	<u>[Signature]</u>
	<u>Daryl Reed</u>	<u>DEQ</u>	<u>[Signature]</u>
	<u>Bob Habeck</u>	<u>DEQ</u>	<u>[Signature]</u>
	<u>Jackie Richman</u>	<u>EPA</u>	<u>[Signature]</u>

**3 SEGMENT** Total Segment/Reach Length 1275 m Segment/Reach Length Surveyed 1165 m

Start GPS: LATITUDE \_\_\_\_\_ deg. \_\_\_\_\_ min. LONGITUDE \_\_\_\_\_ deg. \_\_\_\_\_ min. Datum: \_\_\_\_\_

End GPS: LATITUDE \_\_\_\_\_ deg. \_\_\_\_\_ min. LONGITUDE \_\_\_\_\_ deg. \_\_\_\_\_ min.

**4A RIVER BANK TYPE** SELECT only one primary (P) shoreline type and any number of secondary (S) types. CIRCLE those OILED

Bedrock: Cliff/Ramp \_\_\_\_\_ Shelf \_\_\_\_\_ Manmade: Solid \_\_\_\_\_ Permeable \_\_\_\_\_ (type) \_\_\_\_\_ Wetland: Swamp \_\_\_\_\_ Bog/Fen \_\_\_\_\_ Marsh \_\_\_\_\_

Sediment Bank: Clay/Mud \_\_\_\_\_ Sand \_\_\_\_\_ Mixed \_\_\_\_\_ Pebble/Cobble \_\_\_\_\_ Boulder \_\_\_\_\_ Peat/Organic \_\_\_\_\_ Vegetated Bank: S Wooded Upland: P

Sediment Flat: Clay/Mud \_\_\_\_\_ Sand \_\_\_\_\_ Mixed/Coarse \_\_\_\_\_ Other: \_\_\_\_\_ If snow and ice use Winter River SOS

**4B RIVER VALLEY CHARACTER** select as appropriate complete for primary

Cliff or Bluff: \_\_\_\_\_ Est Height \_\_\_\_\_ m canyon \_\_\_\_\_ manmade \_\_\_\_\_ meander \_\_\_\_\_ confined or leveed \_\_\_\_\_ Substrate Type: Mixed

Sloped: (>5°)(15°)(30°) straight \_\_\_\_\_ braided \_\_\_\_\_ oxbow \_\_\_\_\_ flood plain valley  Forested  Vegetated  Bare

**4C RIVER CHANNEL CHARACTER** circle or select as appropriate

est. width: <1m 1-10m 10-100m >100m est. water depth: <1m 1-3m 3-10m >10m \_\_\_\_\_ m

shoal(s) present Y N point bar present Y N bar-shoal substrate: silt / sand / gravel / cobble / boulder / bedrock / debris

seasonal water level: low mean / bank full / overbank flow est. change over next 7 days: falling - same - rising

**5 OPERATIONAL FEATURES** Suitable backshore staging Y N Access: Direct from backshore Y N Alongshore from next segment Y N

Debris Y N oiled Y N amount 1 bags or \_\_\_\_\_ trucks access restrictions \_\_\_\_\_

Oiled trees/shrubs Y N River Current strong Y N Other Features: \_\_\_\_\_

**6 SURFACE OILING CONDITIONS** begin with "A" in the lowest tidal zone - circle the zone/s that correspond to primary shoreline type

OIL ZONE ID	RIVER BANK ZONE				OIL COVER			OIL THICKNESS					OIL CHARACTER					SUBST. TYPE(S)				
	MS	LB	UB	OB	Length m	Width m	Distrib. %	TO	CV	CT	ST	FL	FR	MS	TB	PT	TC		SR	AP	NO	
A				<input checked="" type="checkbox"/>	1165	350	0														<input checked="" type="checkbox"/>	
B				<input checked="" type="checkbox"/>	250	60	<1		P	S												Debris
C				<input checked="" type="checkbox"/>	40	1	<1		S	P												Debris
D				<input checked="" type="checkbox"/>	10	10	<1		S	P												Debris
E				<input checked="" type="checkbox"/>	10	10	<1		S	P												Shrub

1682  
1683  
1684  
1685  
1686

**7 SUBSURFACE OILING CONDITIONS** use letter for ZONE location plus Number of pit or trench - e.g., "A1"

TRENCH or PIT NO.	RIVER BANK ZONE				MAX. PIT DEPTH cm	OILED ZONE cm-cm	SUBSURFACE OIL CHARACTER						WATER TABLE cm	SHEEN COLOUR B, R, S, N	CLEAN BELOW Yes / No	SUBST. TYPE(S)
	MS	LB	UB	OB			SAP	OP	PP	OR	OF	TR				

**8 COMMENTS** ecological/recreational/cultural/economic constraints - shorezone biota and wildlife observations - cleanup recommendations

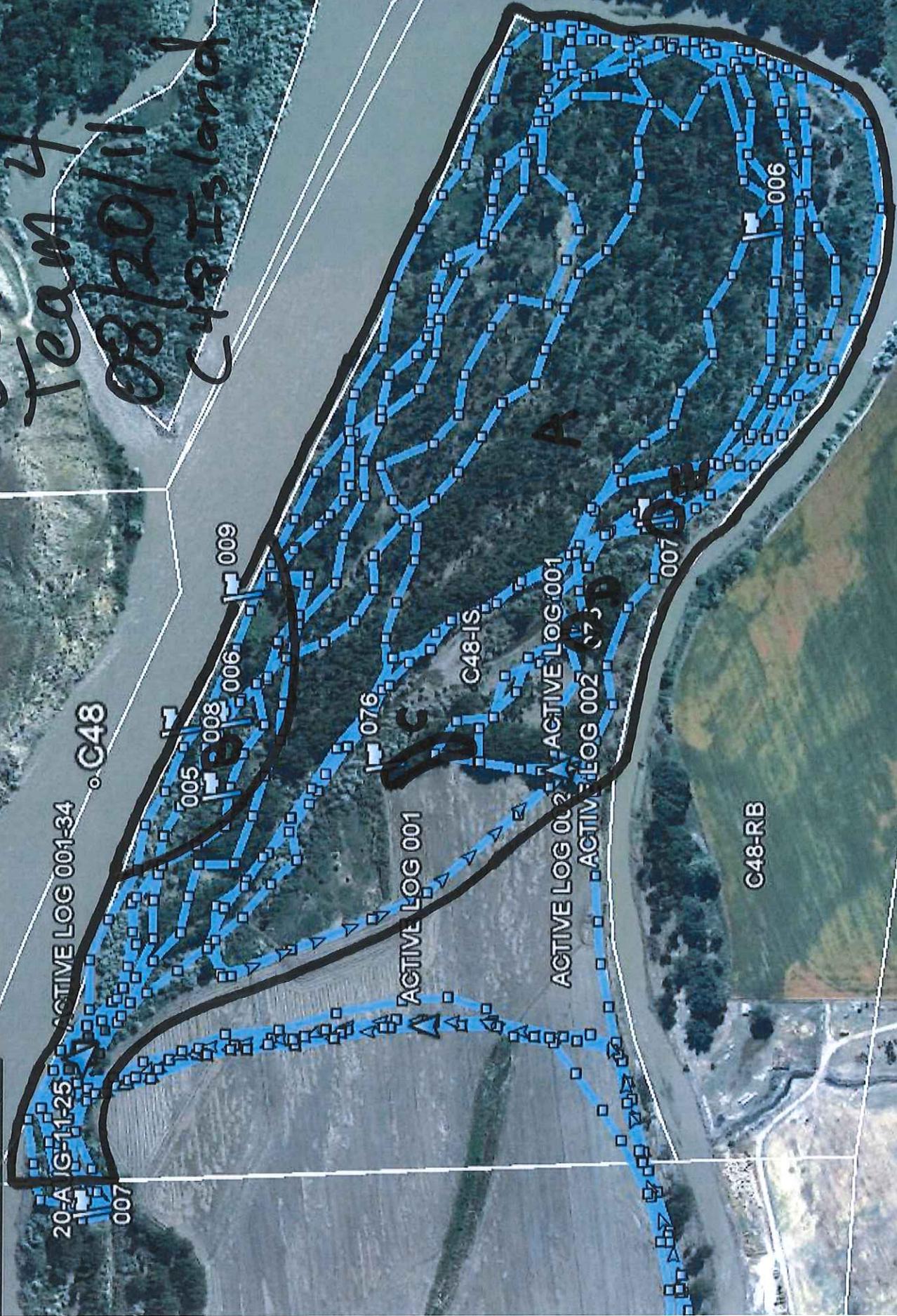
Overbank Survey Required Y N Overbank Survey Completed Y N Shoreline Survey Completed Y N

Zone A - Negligible  
 Zone B - Negligible trace occurrence of small, weathered oil patches on debris, NFT  
 Zone C - Negligible trace distribution of 10-20cm weathered oil patches on alfalfa debris, NFT  
 Zone D - Negligible trace 15x50cm oiled woody debris patch, NFT  
 Zone E - Negligible trace of primarily stain on shrubs, NFT.  
 Operations on site with Claims adjuster.

Sketch Yes / No Photos Yes / No Frames/Photographer: DK

SCAT  
Team 4  
08/20/11  
C48 Island

8/20/2011 3:33 pm  
5 pm



©2010

©2011 Google

1996

45°59'37.02" N 108°05'11.43" W elev 2906 ft

DB/G/S

RIVER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident

<b>1 GENERAL INFORMATION</b>		Date (dd/mm/yy) 26/07/11	Time (24h): std / daylight 1:00 hrs to 1:02 hrs	Water Level low - mean - <u>bankfull</u> - overbank falling <input checked="" type="checkbox"/> steady - rising
Segment/Reach ID: <u>C 48</u> <u>Left Bank</u> / Right Bank / Island		Operations Division:		
Survey by: <u>Foot / ATV / Boat / Helicopter / Overlook /</u>		<u>Sun</u> / Clouds / Fog / Rain / Snow / Windy / Calm		Air Temp +/- <u>28</u> deg C

<b>2 SURVEY TEAM # 1</b>	Name	Organization	Signature
Pete Lee	<u>PBL</u>	Polaris	225.892.6459
John Beach	<u>JFB</u>	US EPA	415.972.3347
Larry Alheim		MT DEQ	406.461.7516

**3 SEGMENT** Total Segment/Reach Length 827 m Segment/Reach Length Surveyed 827 m

Start GPS: LATITUDE 45 deg. 59.738 min. LONGITUDE 108 deg. 5.032 min. Datum: \_\_\_\_\_

End GPS: LATITUDE 45 deg. 59.912 min. LONGITUDE 108 deg. 5.240 min.

**4A RIVER BANK TYPE** SELECT only one primary (P) shoreline type and any number of secondary (S) types. CIRCLE those OILED

Bedrock: Cliff/Ramp P Shelf \_\_\_\_\_ Manmade: Solid \_\_\_\_\_ Permeable \_\_\_\_\_ (type) \_\_\_\_\_ Wetland: Swamp \_\_\_\_\_ Bog/Fen \_\_\_\_\_ Marsh \_\_\_\_\_

Sediment Bank: Clay/Mud \_\_\_\_\_ Sand \_\_\_\_\_ Mixed \_\_\_\_\_ Pebble/Cobble \_\_\_\_\_ Boulder \_\_\_\_\_ Peat/Organic \_\_\_\_\_ Vegetated Bank: (P) Wooded Upland: \_\_\_\_\_

Sediment Flat: Clay/Mud \_\_\_\_\_ Sand \_\_\_\_\_ Mixed/Coarse \_\_\_\_\_ Other: \_\_\_\_\_ If snow and ice use Winter River SOS

**4B RIVER VALLEY CHARACTER** select as appropriate complete for primary

Cliff or Bluff:  Est Height 80 m canyon \_\_\_\_\_ manmade \_\_\_\_\_ meander \_\_\_\_\_ confined or leveed \_\_\_\_\_ Substrate Type: \_\_\_\_\_

Sloped: (-5°)(15°)(30°) >60° straight \_\_\_\_\_ braided \_\_\_\_\_ oxbow \_\_\_\_\_ flood plain valley X Forested / Vegetated / Bare (Bare)

**4C RIVER CHANNEL CHARACTER** circle or select as appropriate

est. width: <1m 1-10m 10-100m >100m 140m est. water depth: <1m (1-3m) 3-10m >10m \_\_\_\_\_ m

shoal(s) present (Y) N point bar present (Y) N bar-shoal substrate: silt / sand / gravel / cobble / boulder / bedrock / debris

seasonal water level: low / mean / bank full / overbank flow est. change over next 7 days: (falling) - same - rising

**5 OPERATIONAL FEATURES** Suitable backshore staging Y / N Access: Direct from backshore Y / N Alongshore from next segment Y / N

Debris: (Y) oiled Y / N amount \_\_\_\_\_ bags or \_\_\_\_\_ trucks access restrictions \_\_\_\_\_

Oiled trees/shrubs (Y) N River Current strong (Y) N Other Features: \_\_\_\_\_

**6 SURFACE OILING CONDITIONS** begin with "A" in the lowest tidal zone - circle the zone/s that correspond to primary shoreline type

OIL ZONE ID	RIVER BANK ZONE				OIL COVER			OIL THICKNESS					OIL CHARACTER						SUBST. TYPE(S)				
	MS	LB	UB	OB	Length m	Width m	Distrib. %	TO	CV	CT	ST	FL	FR	MS	TB	PT	TC	SR		AP	NO		
A		X			605	1															X	veg, cliff	
B		X			5	1	100			X				X								veg	
C		X			207	1																X	veg, cliff

**7 SUBSURFACE OILING CONDITIONS** use letter for ZONE location plus Number of pit or trench - e.g., "A1"

TRENCH or PIT NO.	RIVER BANK ZONE				MAX. PIT DEPTH cm	OILED ZONE cm-cm	SUBSURFACE OIL CHARACTER						WATER TABLE cm	SHEEN COLOUR B, R, S, N	CLEAN BELOW Yes / No	SUBST. TYPE(S)	
	MS	LB	UB	OB			SAP	OP	PP	OR	OF	TR					NO

**8 COMMENTS** ecological/recreational/cultural/economic constraints - shorezone biota and wildlife observations - cleanup recommendations

Overbank Survey Required Y (N) Overbank Survey Completed Y / N Shoreline Survey Completed Y / N

Oil height::

**Treatment recommendations:**

Zone A, C : No oil observed; no treatment required.

Zone B : Cut & remove oil coated vegetation smaller than 1" diameter. Remove debris smaller than 4" diameter. Wipe larger oil coated vegetation.

\*Refer to current approved treatment methods #1 (Cutting of Vegetation), #2 (Dead Vegetation and Small Debris), #3 (Large Woody Debris), #6 (Sorbent Use), # (Unconsolidated Sediments)

Sketch (Yes) / No Photos (Yes) / No Frames 029 Beach Photographer \_\_\_\_\_



Google

©2010

Eyealt 5560 ft

Image USDA Farm Service Agency

45° 59.863' N 108° 5.348' W elev 2930 ft

Imagery Date: 6/22/2009

IMG\_0166  
106  
10'

A C48°

B

C

DB / 6

RIVER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident

<b>1 GENERAL INFORMATION</b>		Date (dd/mm/yy) 08/04/2011	Time (24h): std / daylight 1231 hrs to 1309 hrs	Water Level low - mean - <u>bankfull</u> - overbank falling - steady - rising
Segment/Reach ID: C48 <u>Left Bank</u> / Right Bank / Island		Operations Division:		
Survey by: <u>Foot</u> / ATV / Boat / Helicopter / Overlook /		Sun / Clouds / Fog / Rain / Snow / Windy / Calm		Air Temp +/- <u>3.7</u> deg C

<b>2 SURVEY TEAM # 4</b>	Name	Organization	Signature
Bruce Kvam		Polaris	<i>Bruce Kvam</i>
Chris Arredondo		CardnoEntrix	<i>Chris Arredondo</i>
John Davis		USCG	
Jay Watson		FWP	<i>Jay Watson</i>

**3 SEGMENT** Total Segment/Reach Length 772 m Segment/Reach Length Surveyed 772 m

Start GPS: LATITUDE \_\_\_\_\_ deg. \_\_\_\_\_ min. LONGITUDE \_\_\_\_\_ deg. \_\_\_\_\_ min. Datum: \_\_\_\_\_

End GPS: LATITUDE \_\_\_\_\_ deg. \_\_\_\_\_ min. LONGITUDE \_\_\_\_\_ deg. \_\_\_\_\_ min.

**4A RIVER BANK TYPE** SELECT only one primary (P) shoreline type and any number of secondary (S) types. CIRCLE those OILED

Bedrock: Cliff/Ramp \_\_\_\_\_ Shelf \_\_\_\_\_ Manmade: Solid \_\_\_\_\_ Permeable \_\_\_\_\_ (type) \_\_\_\_\_ Wetland: Swamp \_\_\_\_\_ Bog/Fen \_\_\_\_\_ Marsh \_\_\_\_\_

Sediment Bank: Clay/Mud \_\_\_\_\_ Sand \_\_\_\_\_ Mixed P Pebble/Cobble S Boulder \_\_\_\_\_ Peat/Organic \_\_\_\_\_ Vegetated Bank: P Wooded Upland: \_\_\_\_\_

Sediment Flat: Clay/Mud \_\_\_\_\_ Sand \_\_\_\_\_ Mixed/Coarse \_\_\_\_\_ Other: \_\_\_\_\_ If snow and ice use Winter River SOS

**4B RIVER VALLEY CHARACTER** select as appropriate complete for primary

Cliff or Bluff: X Est Height 60 m canyon \_\_\_\_\_ manmade \_\_\_\_\_ meander \_\_\_\_\_ confined or leveed \_\_\_\_\_ Substrate Type: Mixed

Sloped: 60 (>5°)(15°)(30°) straight \_\_\_\_\_ braided X oxbow \_\_\_\_\_ flood plain valley \_\_\_\_\_ Forested / Vegetated / Bare

**4C RIVER CHANNEL CHARACTER** circle or select as appropriate

est. width: <1m 1-10m 10-100m >100m 160m est. water depth: <1m 1-3m 3-10m >10m \_\_\_\_\_ m

shoal(s) present Y / N point bar present Y / N bar-shoal substrate: silt / sand / gravel / cobble / boulder / bedrock / debris

seasonal water level: low / mean / bank full / overbank flow est. change over next 7 days: falling — same — rising

**5 OPERATIONAL FEATURES** Suitable backshore staging Y / N Access: Direct from backshore Y / N Alongshore from next segment Y / N

Debris: Y / N oiled Y / N amount 0 bags or 0 trucks access restrictions \_\_\_\_\_

Oiled trees/shrubs Y / N River Current strong Y / N Other Features: \_\_\_\_\_

**6 SURFACE OILING CONDITIONS** begin with "A" in the lowest tidal zone - circle the zone/s that correspond to primary shoreline type

1195  
1196

OIL ZONE ID	RIVER BANK ZONE				OIL COVER			OIL THICKNESS					OIL CHARACTER						SUBST. TYPE(S)			
	MS	LB	UB	OB	Length m	Width m	Distrib. %	TO	CV	CT	ST	FL	FR	MS	TB	PT	TC	SR		AP	NO	
A				X	767	5															X	
B				X	5	5	<1			X	(X)							X				shrubs

**7 SUBSURFACE OILING CONDITIONS** use letter for ZONE location plus Number of pit or trench — e.g., "A1"

TRENCH or PIT NO.	RIVER BANK ZONE				MAX. PIT DEPTH cm	OILED ZONE cm-cm	SUBSURFACE OIL CHARACTER						WATER TABLE cm	SHEEN COLOUR B, R, S, N	CLEAN BELOW Yes / No	SUBST. TYPE(S)	
	MS	LB	UB	OB			SAP	OP	PP	OR	OF	TR					NO

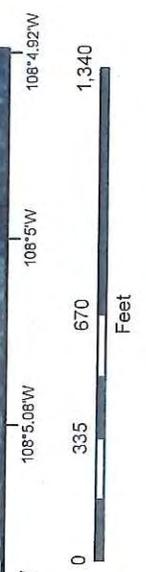
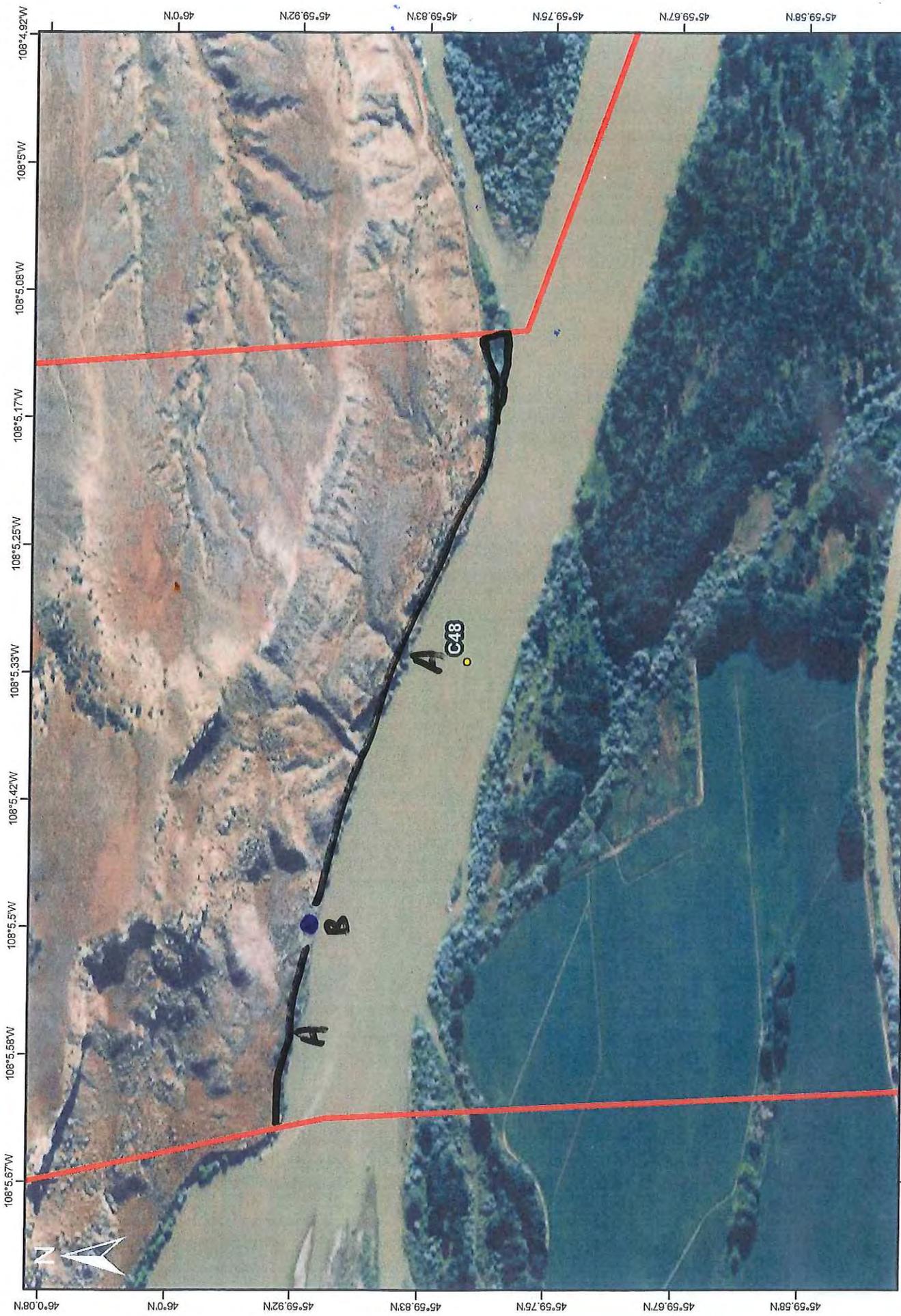
**8 COMMENTS** ecological/recreational/cultural/economic constraints - shorezone biota and wildlife observations - cleanup recommendations

Overbank Survey Required Y / N Overbank Survey Completed Y / N Shoreline Survey Completed Y / N

Zone A: No treatment required.

Zone B: No treatment recommended.

Sketch Yes / No Photos Yes / No Frames \_\_\_\_\_ Photographer Bruce Kvam



108°5.67'W  
108°5.58'W  
108°5.5'W  
108°5.42'W  
108°5.33'W  
108°5.25'W  
108°5.17'W  
108°5.08'W  
108°5'W  
108°4.92'W

46°0.08'N  
46°0'N  
45°59.92'N  
45°59.83'N  
45°59.75'N  
45°59.67'N  
45°59.58'N

C48-L  
(L/R/I)??

Team #4  
08/04/11

DB/G

RIVER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident

<b>1 GENERAL INFORMATION</b>		Date (dd/mm/yy)	Time (24h): std / daylight	Water Level
Segment/Reach ID: <u>48</u>	<u>Left Bank / Right Bank / Island</u>	<u>06/08/11</u>	<u>0935</u> hrs to <u>1036</u> hrs	low - mean - <u>(bankfull)</u> - overbank
Operations Division: <u>C</u>				<u>(falling)</u> - steady - rising
Survey by: <u>(Foot)</u> / ATV / Boat / Helicopter / Overlook /	<u>(Sun)</u> / Clouds / Fog / Rain / Snow / Windy / <u>(Calm)</u>			Air Temp +/- <u>26</u> deg C
<b>2 SURVEY TEAM #</b> <u>1</u>	Name	Organization	Signature	
	<u>Nathan Hammond</u>	<u>Cardno Entrix</u>	<u>Nathan Hammond</u>	
	<u>Mark Ewanic</u>	<u>DEQ</u>	<u>Mark Ewanic</u>	
	<u>Peter Reich</u>	<u>EPA</u>	<u>Peter Reich</u>	

**3 SEGMENT** Total Segment/Reach Length 718 m Segment/Reach Length Surveyed 718 m

Start GPS: LATITUDE \_\_\_\_\_ deg. \_\_\_\_\_ min. LONGITUDE \_\_\_\_\_ deg. \_\_\_\_\_ min. Datum: \_\_\_\_\_

End GPS: LATITUDE \_\_\_\_\_ deg. \_\_\_\_\_ min. LONGITUDE \_\_\_\_\_ deg. \_\_\_\_\_ min.

**4A RIVER BANK TYPE** SELECT only one primary (P) shoreline type and any number of secondary (S) types. CIRCLE those OILED

Bedrock: Cliff/Ramp \_\_\_\_\_ Shelf \_\_\_\_\_ Manmade: Solid \_\_\_\_\_ Permeable \_\_\_\_\_ (type) \_\_\_\_\_ Wetland: Swamp \_\_\_\_\_ Bog/Fen \_\_\_\_\_ Marsh \_\_\_\_\_

Sediment Bank: Clay/Mud \_\_\_\_\_ Sand \_\_\_\_\_ Mixed X Pebble/Cobble \_\_\_\_\_ Boulder \_\_\_\_\_ Peat/Organic \_\_\_\_\_ Vegetated Bank: (P) Wooded Upland: \_\_\_\_\_

Sediment Flat: Clay/Mud \_\_\_\_\_ Sand \_\_\_\_\_ Mixed/Coarse \_\_\_\_\_ Other: \_\_\_\_\_ If snow and ice use Winter River SOS

**4B RIVER VALLEY CHARACTER** select as appropriate complete for primary

Cliff or Bluff: \_\_\_\_\_ Est Height 20 m canyon \_\_\_\_\_ manmade \_\_\_\_\_ meander - \_\_\_\_\_ confined or leveed \_\_\_\_\_ Substrate Type: \_\_\_\_\_

Sloped: (10) (>5°) (15°) \_\_\_\_\_ straight \_\_\_\_\_ braided X oxbow (8-12) flood plain valley \_\_\_\_\_ Forested / (Vegetated) / Bare

**4C RIVER CHANNEL CHARACTER** circle or select as appropriate

est. width: <1m 1-10m 10-100m (>100m) \_\_\_\_\_ est. water depth: <1m (1-3m) 3-10m >10m \_\_\_\_\_ m

shoal(s) present (Y) point bar present (Y) bar-shoal substrate: silt / sand / gravel / cobble / boulder / bedrock / debris

seasonal water level: low / mean (bank full) / overbank flow est. change over next 7 days: (falling) - same - rising

**5 OPERATIONAL FEATURES** Suitable backshore staging (Y) Access: Direct from backshore (Y) Alongshore from next segment (Y) N

Debris: (Y) N oiled (Y) / N amount \_\_\_\_\_ bags or \_\_\_\_\_ trucks access restrictions \_\_\_\_\_

Oiled trees/shrubs (Y) / N River Current strong (Y) / N Other Features: cliff

**6 SURFACE OILING CONDITIONS** begin with "A" in the lowest tidal zone - circle the zone/s that correspond to primary shoreline type

OIL ZONE ID	RIVER BANK ZONE				OIL COVER			OIL THICKNESS					OIL CHARACTER						SUBST. TYPE(S)			
	MS	LB	UB	OB	Length m	Width m	Distrib. %	TO	CV	CT	ST	FL	FR	MS	TB	PT	TC	SR		AP	NO	
A			X		158	1	<1			X	X		X									Yes, tree shrub, debris
B			X		560	1	0															✓

**7 SUBSURFACE OILING CONDITIONS** use letter for ZONE location plus Number of pit or trench - e.g., "A1"

TRENCH or PIT NO.	RIVER BANK ZONE				MAX. PIT DEPTH cm	OILED ZONE cm-cm	SUBSURFACE OIL CHARACTER						WATER TABLE cm	SHEEN COLOUR B, R, S, N	CLEAN BELOW Yes / No	SUBST. TYPE(S)	
	MS	LB	UB	OB			SAP	OP	PP	OR	OF	TR					NO

**8 COMMENTS** ecological/recreational/cultural/economic constraints - shorezone biota and wildlife observations - cleanup recommendations

Overbank Survey Required (Y) / N Overbank Survey Completed (Y) / N Shoreline Survey Completed (Y) / N

Zone A - NTR

Zone B - NOO

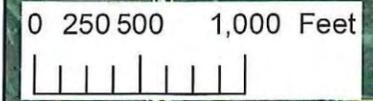
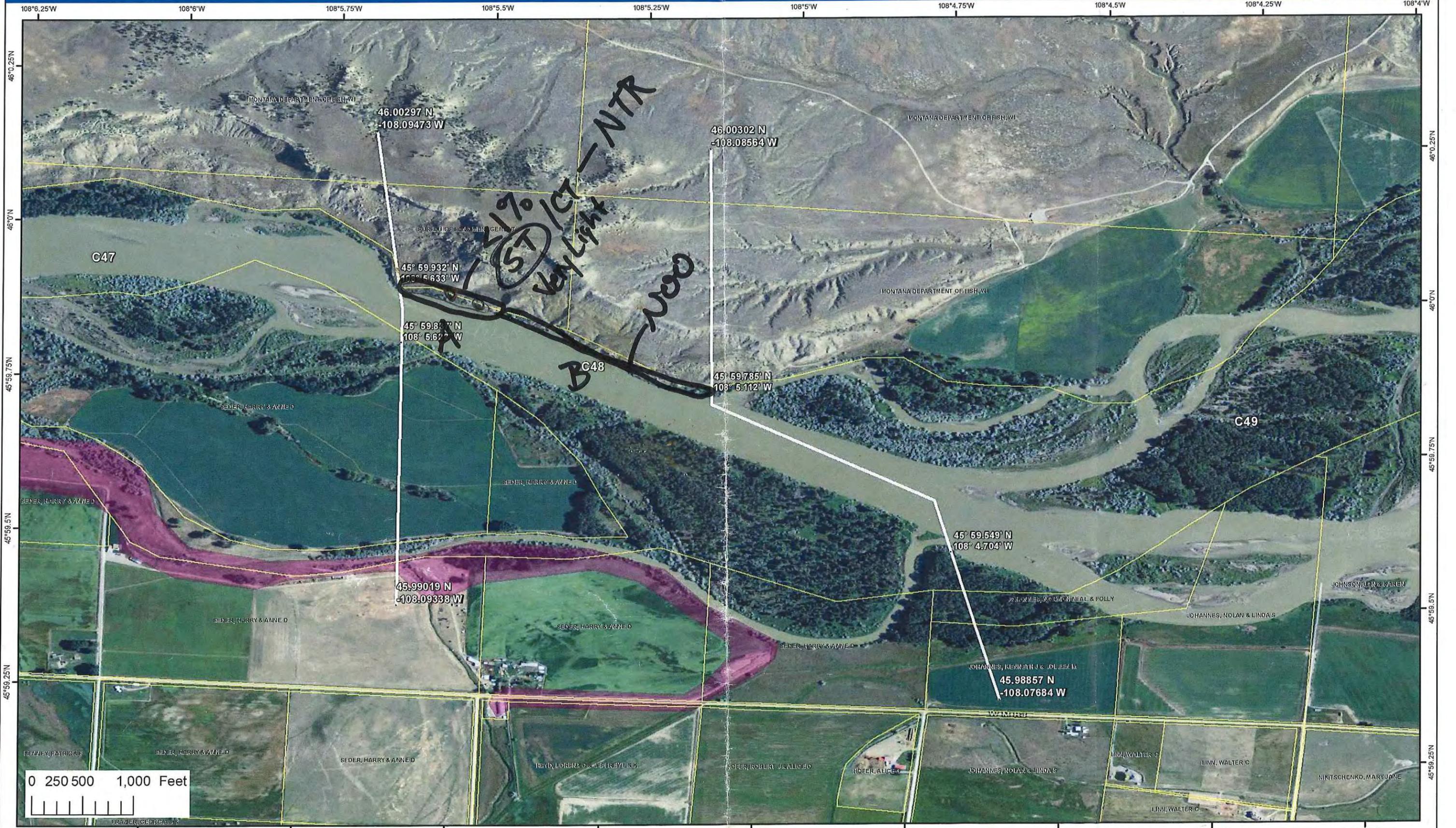
Sketch (Yes) / No Photos (Yes) / No Frames \_\_\_\_\_ Photographer [Signature]



C48LB  
Team 1 06/08/11

SILVERTIP PIPELINE INCIDENT  
Yellowstone River  
Map 55

\*Data Current through 7/30/2011



DB 16/S

RIVER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident

<b>1 GENERAL INFORMATION</b>		Date (dd/mm/yy) <u>29/07/11</u>	Time (24h): std / daylight <u>1145</u> hrs to <u>1245</u> hrs	Water Level low - mean - <u>bankfull</u> - overbank falling - steady - rising
Segment/Reach ID: <u>C48</u> Left Bank / <u>Right Bank</u> / Island		Operations Division:		
Survey by: <u>Foot</u> / ATV / Boat / Helicopter / Overlook /		<u>Sun</u> / Clouds / Fog / Rain / Snow / Windy / Calm		Air Temp + / <u>36</u> deg C

2 SURVEY TEAM # <u>3</u>	Name	Organization	Signature
	<u>Lori Williams</u>	<u>Cardno ENTRIX</u>	<u>Lori Williams</u>
	<u>John Beach</u>	<u>US EPA</u>	<u>John Beach</u>
	<u>Mike Dirks</u>	<u>Cardno ENTRIX</u>	<u>Mike Dirks</u>
	<u>Brandon Owens</u>	<u>Cardno ENTRIX</u>	<u>Brandon Owens</u>
	<u>Aaron Anderson</u>	<u>DEW</u>	<u>Aaron Anderson</u>

**3 SEGMENT** Total Segment/Reach Length 1245 m Segment/Reach Length Surveyed 834 m

Start GPS: LATITUDE 46 deg. 59.486 min. LONGITUDE 108 deg. 4.677 min. Datum: NZGS84

End GPS: LATITUDE 45 deg. 59.377 min. LONGITUDE 108 deg. 4.987 min.

**4A RIVER BANK TYPE** SELECT only one primary (P) shoreline type and any number of secondary (S) types. CIRCLE those OILED

Bedrock: Cliff/Ramp \_\_\_ Shelf \_\_\_ Manmade: Solid \_\_\_ Permeable \_\_\_ (type) \_\_\_ Wetland: Swamp \_\_\_ Bog/Fen \_\_\_ Marsh \_\_\_

Sediment Bank: Clay/Mud S Sand S Mixed \_\_\_ Pebble/Cobble \_\_\_ Boulder \_\_\_ Peat/Organic \_\_\_ Vegetated Bank (P) Wooded Upland: \_\_\_

Sediment Flat: Clay/Mud \_\_\_ Sand \_\_\_ Mixed/Coarse \_\_\_ Other: \_\_\_ If snow and ice use Winter River SOS

**4B RIVER VALLEY CHARACTER** select as appropriate

Cliff or Bluff: \_\_\_ Est Height \_\_\_ m canyon \_\_\_ manmade \_\_\_ meander Y confined or leveed \_\_\_ Substrate Type: Mixed

Sloped: (>5°) (15°) (30°) straight \_\_\_ braided \_\_\_ oxbow \_\_\_ flood plain valley Y Forested / Vegetated / Bare

**4C RIVER CHANNEL CHARACTER** circle or select as appropriate

est. width: <1m 1-10m (10-100m) >100m 160m est. water depth: <1m 1-3m (3-10m) >10m \_\_\_ m

shoal(s) present Y point bar present Y bar-shoal substrate: silt / sand / gravel / cobble / boulder / bedrock / debris

seasonal water level: low / mean / bank full / overbank flow est. change over next 7 days: (falling) — same — rising

**5 OPERATIONAL FEATURES** Suitable backshore staging (Y) N Access: Direct from backshore (Y) N Alongshore from next segment (Y) N

Debris: (Y) N oiled (Y) N amount \_\_\_ bags or \_\_\_ trucks access restrictions

Oiled trees/shrubs (Y) N River Current strong (Y) N Other Features:

**6 SURFACE OILING CONDITIONS** begin with "A" in the lowest tidal zone - circle the zone/s that correspond to primary shoreline type

OIL ZONE ID	RIVER BANK ZONE				OIL COVER			OIL THICKNESS					OIL CHARACTER						SUBST. TYPE(S)			
	MS	LB	UB	OB	Length m	Width m	Distrib. %	TO	CV	CT	ST	FL	FR	MS	TB	PT	TC	SR		AP	NO	
<u>978</u> A				<u>Y</u>	<u>834</u>	<u>85</u>	<u>1</u>				<u>Y</u>		<u>Y</u>									<u>veg/debris</u>

**7 SUBSURFACE OILING CONDITIONS** use letter for ZONE location plus Number of pit or trench — e.g., "A1"

TRENCH or PIT NO.	RIVER BANK ZONE				MAX. PIT DEPTH cm	OILED ZONE cm-cm	SUBSURFACE OIL CHARACTER						WATER TABLE cm	SHEEN COLOUR B, R, S, N	CLEAN BELOW Yes / No	SUBST. TYPE(S)	
	MS	LB	UB	OB			SAP	OP	PP	OR	OF	TR					NO

**8 COMMENTS** ecological/recreational/cultural/economic constraints - shorezone biota and wildlife observations - cleanup recommendations

Overbank Survey Required Y / (N) Overbank Survey Completed (Y) / (N) Shoreline Survey Completed Y / (N)

Zone A - Very light sporadic oiling throughout segment, ~~1-3~~ 2-5 spots less than 0.5m x 2m. Also a few ~~drops~~ <sup>juj 7/29/11</sup> bands of light staining found on wheat in adjacent field.

~~Return to the Island off.~~ Go back to the end of C48

Sketch (Y) / No Photos (Y) / No Frames \_\_\_\_\_ Photographer \_\_\_\_\_



Date: 7/22/2011 Time: 6:38:25 PM  
Path: P:\GIS\XO\3\Berments\_Map\_11x17.mxd

DB/16

RIVER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident

<b>1 GENERAL INFORMATION</b>		Date (dd/mm/yy)	Time (24h): std / daylight	<b>Water Level</b>
Segment/Reach ID: <u>48</u>	Left Bank / <u>Right Bank</u> / Island	<u>02/08/11</u>	<u>1133</u> hrs to <u>1205</u> hrs	low - mean - <u>bankfull</u> - overbank
Operations Division: <u>C</u>				falling - steady - rising
Survey by: <u>(Foot)</u> / ATV / Boat / Helicopter / Overlook /		<u>(Sun)</u> Clouds / Fog / Rain / Snow / Windy / Calm		Air Temp + / - <u>26</u> deg C

<b>2 SURVEY TEAM #</b> <u>5</u>	Name	Organization	Signature
	<u>Nathan Hammond</u>	<u>Cardno Entrix</u>	<u>Nathan Hammond</u>
	<u>Brandon Owens</u>	<u>Cardno Entrix</u>	<u>Brandon Owens</u>
	<u>Dominic Ventura</u>	<u>EPA</u>	<u>Dominic Ventura</u>
	<u>Ken Frazer</u>	<u>FWP</u>	<u>Ken Frazer</u>
	<u>Jack Smith</u>	<u>USCG</u>	<u>Jack Smith</u>

**3 SEGMENT** Total Segment/Reach Length \_\_\_\_\_ m Segment/Reach Length Surveyed 50 m

Start GPS: LATITUDE \_\_\_\_\_ deg. \_\_\_\_\_ min. LONGITUDE \_\_\_\_\_ deg. \_\_\_\_\_ min. Datum: \_\_\_\_\_

End GPS: LATITUDE \_\_\_\_\_ deg. \_\_\_\_\_ min. LONGITUDE \_\_\_\_\_ deg. \_\_\_\_\_ min.

**4A RIVER BANK TYPE** SELECT only one primary (P) shoreline type and any number of secondary (S) types. CIRCLE those OILED

Bedrock: Cliff/Ramp \_\_\_\_\_ Shelf \_\_\_\_\_ Manmade: Solid \_\_\_\_\_ Permeable \_\_\_\_\_ (type) \_\_\_\_\_ Wetland: Swamp \_\_\_\_\_ Bog/Fen \_\_\_\_\_ Marsh \_\_\_\_\_

Sediment Bank: Clay/Mud \_\_\_\_\_ Sand \_\_\_\_\_ Mixed S Pebble/Cobble \_\_\_\_\_ Boulder \_\_\_\_\_ Peat/Organic \_\_\_\_\_ Vegetated Bank: S Wooded Upland: P

Sediment Flat: Clay/Mud \_\_\_\_\_ Sand \_\_\_\_\_ Mixed/Coarse \_\_\_\_\_ Other: Agriculture \_\_\_\_\_ If snow and ice use Winter River SOS

**4B RIVER VALLEY CHARACTER** select as appropriate complete for primary

Cliff or Bluff: \_\_\_\_\_ Est Height \_\_\_\_\_ m canyon \_\_\_\_\_ manmade \_\_\_\_\_ meander \_\_\_\_\_ confined or leveed \_\_\_\_\_ Substrate Type: \_\_\_\_\_

Sloped: (>5°) (15°) (30°) straight \_\_\_\_\_ braided X oxbow \_\_\_\_\_ flood plain valley \_\_\_\_\_ (Forested) Vegetated / Bare

**4C RIVER CHANNEL CHARACTER** circle or select as appropriate

est. width: <1m 1-10m 10-100m >100m 160m est. water depth: <1m 1-3m 3-10m >10m \_\_\_\_\_ m

shoal(s) present Y (N) point bar present Y (N) bar-shoal substrate: silt / sand / gravel / cobble / boulder / bedrock / debris

seasonal water level: low / mean bank full / overbank flow est. change over next 7 days: falling - same - rising

**5 OPERATIONAL FEATURES** Suitable backshore staging Y (N) Access: Direct from backshore Y (N) Alongshore from next segment Y (N)

Debris: Y (N) oiled Y (N) amount \_\_\_\_\_ bags or \_\_\_\_\_ trucks access restrictions

Oiled trees/shrubs Y (N) River Current strong Y (N) Other Features:

**6 SURFACE OILING CONDITIONS** begin with "A" in the lowest tidal zone - circle the zone/s that correspond to primary shoreline type

OIL ZONE ID	RIVER BANK ZONE				OIL COVER			OIL THICKNESS					OIL CHARACTER							SUBST. TYPE(S)		
	MS	LB	UB	OB	Length m	Width m	Distrib. %	TO	CV	CT	ST	FL	FR	MS	TB	PT	TC	SR	AP		NO	
<u>A</u>			<u>X</u>	<u>X</u>	<u>50</u>	<u>291</u>	<u>0</u>														<u>✓</u>	<u>trees/shrubs</u> <u>grass debris</u>

**7 SUBSURFACE OILING CONDITIONS** use letter for ZONE location plus Number of pit or trench — e.g., "A1"

TRENCH or PIT NO.	RIVER BANK ZONE				MAX. PIT DEPTH cm	OILED ZONE cm-cm	SUBSURFACE OIL CHARACTER					WATER TABLE cm	SHEEN COLOUR B, R, S, N	CLEAN BELOW Yes / No	SUBST. TYPE(S)
	MS	LB	UB	OB			SAP	OP	PP	OR	OF				

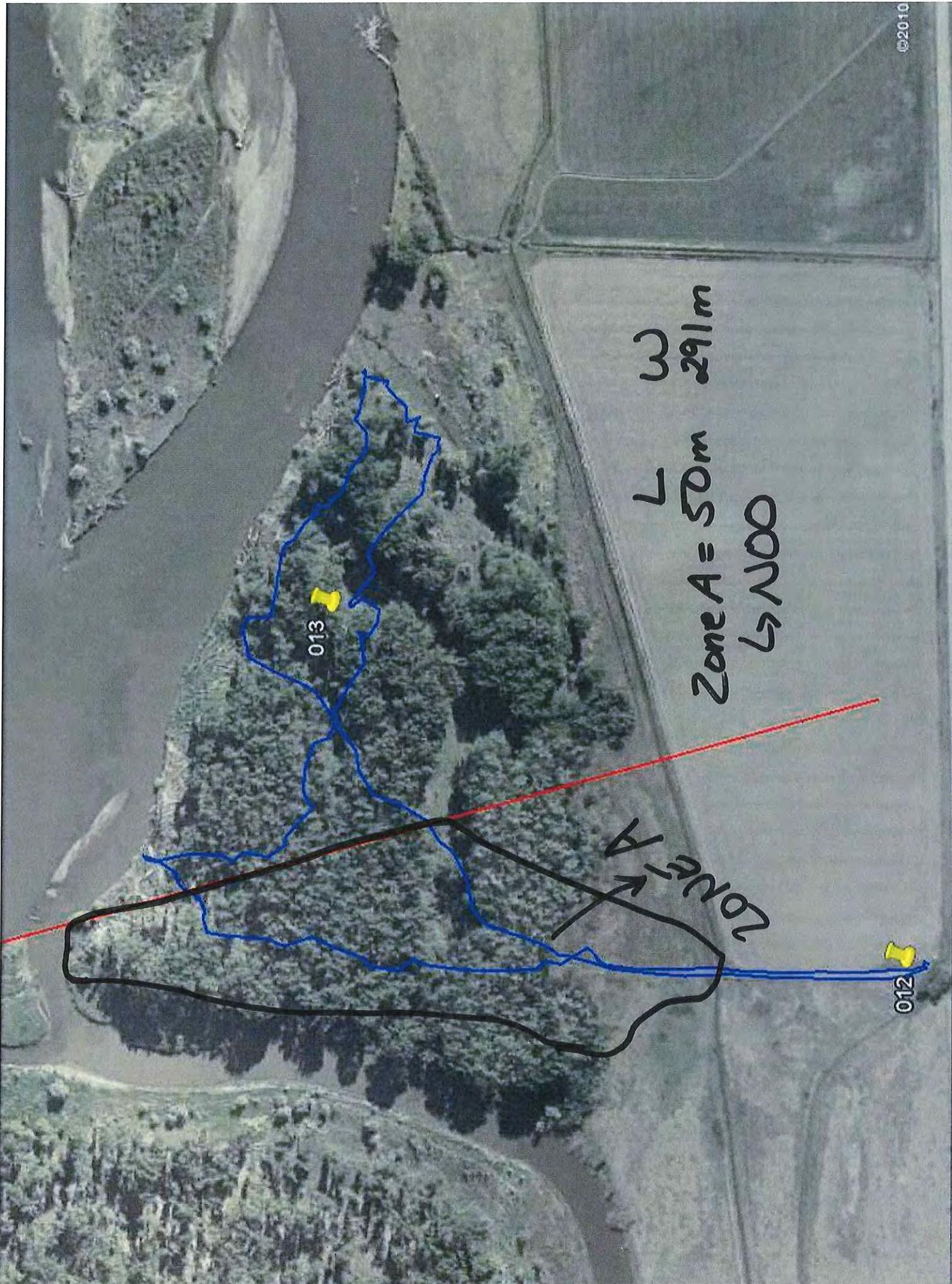
**8 COMMENTS** ecological/recreational/cultural/economic constraints - shorezone biota and wildlife observations - cleanup recommendations

Overbank Survey Required (Y) / N Overbank Survey Completed (Y) / N Shoreline Survey Completed (Y) / N

Zone A - NOO

Note: Visual confirmation of bald eagle habitation.

Sketch Yes / No Photos Yes / No Frames \_\_\_\_\_ Photographer \_\_\_\_\_



013

012

ZONE A

Zone A = 50m  
L  
N00

W

291m



## **Appendix C**

Pre-Inspection Survey Transmittal

**A Pre-Inspection Survey was  
not conducted for this area**



## **Appendix D**

Post-Inspection Survey Transmittal

**A Post-Inspection Survey  
was not conducted for this area**



## **Appendix E**

Final SCAT Survey Forms  
and Sketches

DB / 6

RIVER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident

<b>1 GENERAL INFORMATION</b>		Date (dd/mm/yy)	Time (24h): std / daylight	Water Level
Segment/Reach ID: <u>C48</u> Left Bank / Right Bank <u>(Island)</u>		<u>17/09/11</u>	<u>1215</u> hrs to <u>1445</u> hrs	low - <u>(mean)</u> - bankfull - overbank
Operations Division: <u>C</u>				falling - steady - rising
Survey by: <u>(Foot) / ATV / Boat / Helicopter / Overlook /</u>		<u>(Sun) / (Clouds) / Fog / (Rain) / Snow / Windy / (Calm)</u>		Air Temp + / - <u>23</u> deg C

<b>2 SURVEY TEAM #</b> <u>3</u>	Name	Organization	Signature
	<u>Nathan Hammond</u>	<u>Cardno Entix</u>	<u>[Signature]</u>
	<u>John Brown</u>	<u>DEQ</u>	<u>[Signature]</u>
	<u>Jeffery Frank Herrick</u>	<u>DEQ</u>	<u>[Signature]</u>

**3 SEGMENT** Total Segment/Reach Length 1190 m Segment/Reach Length Surveyed 218 m

Start GPS: LATITUDE \_\_\_\_\_ deg. \_\_\_\_\_ min. LONGITUDE \_\_\_\_\_ deg. \_\_\_\_\_ min. Datum: \_\_\_\_\_

End GPS: LATITUDE \_\_\_\_\_ deg. \_\_\_\_\_ min. LONGITUDE \_\_\_\_\_ deg. \_\_\_\_\_ min.

**4A RIVER BANK TYPE** SELECT only one primary (P) shoreline type and any number of secondary (S) types. CIRCLE those OILED

Bedrock: Cliff/Ramp \_\_\_\_\_ Shelf \_\_\_\_\_ | Manmade: Solid \_\_\_\_\_ Permeable \_\_\_\_\_ (type) \_\_\_\_\_ | Wetland: Swamp \_\_\_\_\_ Bog/Fen \_\_\_\_\_ Marsh \_\_\_\_\_

Sediment Bank: Clay/Mud \_\_\_\_\_ Sand \_\_\_\_\_ Mixed X Pebble/Cobble \_\_\_\_\_ Boulder \_\_\_\_\_ Peat/Organic \_\_\_\_\_ | Vegetated Bank: S | Wooded Upland: (P)

Sediment Flat: Clay/Mud \_\_\_\_\_ Sand \_\_\_\_\_ Mixed/Coarse \_\_\_\_\_ | Other: \_\_\_\_\_ | If snow and ice use Winter River SOS

**4B RIVER VALLEY CHARACTER** select as appropriate complete for primary

Cliff or Bluff: \_\_\_\_\_ Est Height \_\_\_\_\_ m canyon \_\_\_\_\_ manmade \_\_\_\_\_ meander \_\_\_\_\_ confined or leveed \_\_\_\_\_ | Substrate Type: \_\_\_\_\_

Sloped: (>5°)(15°)(30°) straight \_\_\_\_\_ braided X oxbow \_\_\_\_\_ flood plain valley \_\_\_\_\_ | Forested / (Vegetated) / Bare

**4C RIVER CHANNEL CHARACTER** circle or select as appropriate

est. width: <1m 1-10m 10-100m >100m est. water depth: <1m (1-3m) 3-10m >10m \_\_\_\_\_ m

shoal(s) present Y(N) point bar present Y(N) bar-shoal substrate: silt / sand / gravel / cobble / boulder / bedrock / debris

seasonal water level: low / (mean) / bank full / overbank flow est. change over next 7 days: (falling) - same - rising

**5 OPERATIONAL FEATURES**

Suitable backshore staging Y(N) Access: Direct from backshore Y(N) Alongshore from next segment (Y) N

Debris: Y(N) oiled Y(N) amount \_\_\_\_\_ bags or \_\_\_\_\_ trucks access restrictions \_\_\_\_\_

Oiled trees/shrubs Y(N) River Current strong (Y) N Other Features: Island

**6 SURFACE OILING CONDITIONS** begin with "A" in the lowest tidal zone - circle the zone/s that correspond to primary shoreline type

OIL ZONE ID	RIVER BANK ZONE				OIL COVER			OIL THICKNESS					OIL CHARACTER								SUBST. TYPE(S)	
	MS	LB	UB	OB	Length m	Width m	Distrib. %	TO	CV	CT	ST	FL	FR	MS	TB	PT	TC	SR	AP	NO		
A			S	P	218	75	0															✓
B				P	130	45	0															✓

**7 SUBSURFACE OILING CONDITIONS** use letter for ZONE location plus Number of pit or trench - e.g., "A1"

TRENCH or PIT NO.	RIVER BANK ZONE				MAX. PIT DEPTH cm	OILED ZONE cm-cm	SUBSURFACE OIL CHARACTER						WATER TABLE cm	SHEEN COLOUR B, R, S, N	CLEAN BELOW Yes / No	SUBST. TYPE(S)
	MS	LB	UB	OB			SAP	OP	PP	OR	OF	TR				

**8 COMMENTS** ecological/recreational/cultural/economic constraints - shorezone biota and wildlife observations - cleanup recommendations

Overbank Survey Required (Y) N Overbank Survey Completed (Y) N Shoreline Survey Completed (Y) N

Zone A + B - NOO - No Treatment Required.

Sketch (Yes) / No Photos (Yes) / No Frames/Photographer: \_\_\_\_\_

2330  
2331



TEAM 3  
C48IS  
9/17/11

ZONE A  
N00

ACTIVE LOG  
ACTIVE LOG  
ACTIVE LOG

ZONE B  
N00

C48-IS

C48-RB

004

51 am 9/17/2011 3:58 pm 5 pm

Map navigation controls: zoom in (+), zoom out (-), pan (arrow), street view (pegman), and a scale bar.

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1996

45°59'39.29" N 108°05'18.28" W elev 2906 ft

RIVER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident

213/

<b>1 GENERAL INFORMATION</b>		Date (dd/mm/yy) 26/09/11	Time (24h): std / daylight 1330 hrs to 1530 hrs	<b>Water Level</b> low - <u>mean</u> - bankfull - overbank falling - steady - rising
Segment/Reach ID: <u>C48</u>	Left Bank / <u>Right Bank</u> / Island			
Operations Division:				
Survey by: <u>Foot / ATV / Boat / Helicopter / Overlook /</u>		Sun / Clouds / Fog / Rain / Snow / Windy / Calm		Air Temp + / - <u>30</u> deg C

<b>2 SURVEY TEAM # 3</b>	Name	Organization	Signature
Pete Lee		Polaris	<i>P. Lee</i>
Mark Ewanic		MTDEQ	<i>Mark Ewanic</i>

**3 SEGMENT** Total Segment/Reach Length \_\_\_\_\_ m Segment/Reach Length Surveyed 600 m

Start GPS: LATITUDE \_\_\_\_\_ deg. \_\_\_\_\_ min. LONGITUDE \_\_\_\_\_ deg. \_\_\_\_\_ min. Datum: \_\_\_\_\_

End GPS: LATITUDE \_\_\_\_\_ deg. \_\_\_\_\_ min. LONGITUDE \_\_\_\_\_ deg. \_\_\_\_\_ min.

**4A RIVER BANK TYPE** SELECT only one primary (P) shoreline type and any number of secondary (S) types. CIRCLE those OILED

Bedrock: Cliff/Ramp \_\_\_\_\_ Shelf \_\_\_\_\_ Manmade: Solid \_\_\_\_\_ Permeable \_\_\_\_\_ (type) \_\_\_\_\_ Wetland: Swamp \_\_\_\_\_ Bog/Fen \_\_\_\_\_ Marsh \_\_\_\_\_

Sediment Bank: Clay/Mud \_\_\_\_\_ Sand \_\_\_\_\_ Mixed X Pebble/Cobble \_\_\_\_\_ Boulder \_\_\_\_\_ Peat/Organic \_\_\_\_\_ Vegetated Bank: P Wooded Upland: S

Sediment Flat: Clay/Mud \_\_\_\_\_ Sand \_\_\_\_\_ Mixed/Coarse \_\_\_\_\_ Other: \_\_\_\_\_ If snow and ice use Winter River SOS

**4B RIVER VALLEY CHARACTER** select as appropriate complete for primary

Cliff or Bluff: \_\_\_\_\_ Est Height \_\_\_\_\_ m canyon \_\_\_\_\_ manmade \_\_\_\_\_ meander \_\_\_\_\_ confined or leveed \_\_\_\_\_ Substrate Type: \_\_\_\_\_

Sloped: (>5°)(15°)(30°) straight \_\_\_\_\_ braided X P oxbow \_\_\_\_\_ flood plain valley X Forested / Vegetated / Bare

**4C RIVER CHANNEL CHARACTER** circle or select as appropriate

est. width: <1m 1-10m 10-100m >100m m est. water depth: <1m 1-3m >10m \_\_\_\_\_ m

shoal(s) present (N) point bar present Y (N) bar-shoal substrate: silt (sand / gravel / cobble) boulder / bedrock / debris

seasonal water level: low (mean) bank full / overbank flow est. change over next 7 days: falling — same — rising

**5 OPERATIONAL FEATURES** Suitable backshore staging (Y) / N Access: Direct from backshore (Y) / N Alongshore from next segment (Y) / N

Debris (Y) / N oiled (Y) / N amount \_\_\_\_\_ bags or \_\_\_\_\_ trucks Access restrictions:

Oiled trees/shrubs (Y) / N River Current strong Y / N Other Features:

**6 SURFACE OILING CONDITIONS** begin with "A" in the lowest tidal zone - circle the zone/s that correspond to primary shoreline type

OIL ZONE	RIVER BANK ZONE				OIL COVER			OIL THICKNESS					OIL CHARACTER					SUBST. TYPE(S)				
	MS	LB	UB	OB	Length m	Width m	Distrib. %	TO	CV	CT	ST	FL	FR	MS	TB	PT	TC		SR	AP	NO	
A				X	110	35	<1			3	P						X					Grass, trees, debris
B				X	490	75															X	

**7 SUBSURFACE OILING CONDITIONS** use letter for ZONE location plus Number of pit or trench — e.g., "A1"

TRENCH or PIT NO.	RIVER BANK ZONE				MAX. PIT DEPTH cm	OILED ZONE cm-cm	SUBSURFACE OIL CHARACTER						WATER TABLE cm	SHEEN COLOUR B, R, S, N	CLEAN BELOW Yes / No	SUBST. TYPE(S)	
	MS	LB	UB	OB			SAP	OP	PP	OR	OF	TR					NO

**8 COMMENTS** ecological/recreational/cultural/economic constraints - shorezone biota and wildlife observations - cleanup recommendations

Overbank Survey Required Y / (N) Overbank Survey Completed (Y) / N Shoreline Survey Completed (Y) / N

Oil height: 30 cm

Treatment recommendations:

Zone A : Treated by Hot Shot Ops crew; No Further Treatment (NFT)

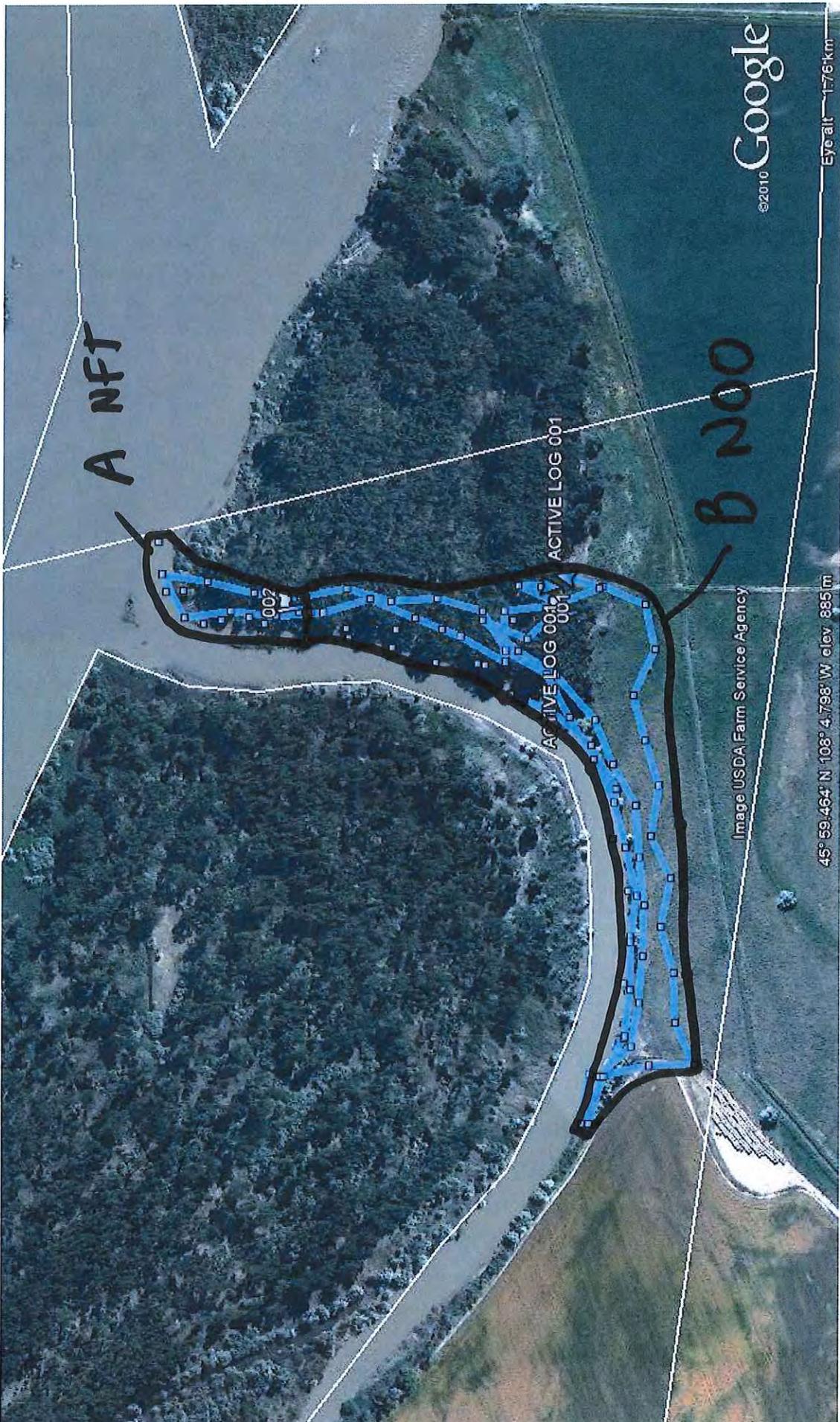
Zone B : NOO

Partial Segment Fill-in

Sketch Yes / No Photos Yes (No) Frames \_\_\_\_\_ Photographer \_\_\_\_\_

2399  
2400

P20t2



C48 RB Partial (Fill-in)

T3 9/26/11



## **Appendix F**

Completed SCAT Segment  
Sign-Off Forms

# SCAT SEGMENT OPERATIONS COMPLETION SIGN-OFF SHEET

## SILVERTIP PIPELINE RELEASE

Segment C48 IS

Date of Survey 9/17/11

Dates of Initial SCAT Assessments

20 Aug 2011 

(to be filled out by SCAT Data Management)

CTR(s) Associated with SCAT Segment

61

Segment has been treated by Operations or an Operations Hotshot Team

YES

NO

Segment Assessment Complete<sup>1</sup>

Partial Segment Assessment

*The undersigned are in agreement that the above segment or partial segment meets the Approved Treatment Methods Target Endpoints.*

This Segment is Conditionally Approved   
(See attached Post Inspection Survey Transmittal (POST))

*The undersigned are in agreement that the above segment meets the Approved Treatment Methods Target Endpoints conditional upon completion of the treatment identified in the attached Post Inspection Survey Transmittal (POST).*

No Federal Representative

Sign Name \_\_\_\_\_ Print Name/ Affiliation \_\_\_\_\_ Date \_\_\_\_\_  
**Federal Representative (EPA/USCG)**

John Brean John Brean MDEQ 9/17/11  
Sign Name \_\_\_\_\_ Print Name/ Affiliation \_\_\_\_\_ Date \_\_\_\_\_  
**State Representative (DEQ/FWP)**

Nathan Hammond Nathan Hammond/Carbo Entix 9/17/11  
Sign Name \_\_\_\_\_ Print Name/ Affiliation \_\_\_\_\_ Date \_\_\_\_\_  
**RP Representative (SCAT RP Representative)**

Once all applicable SCAT Segments (i.e. LB, RB, and IS) within a particular SCAT Area (i.e. A21) have been successfully signed-off during a formal SCAT Assessment, the SCAT Area will achieve the Response Endpoints and an Area Transition Report will be completed and submitted to EPA and DEQ.

<sup>1</sup> A Segment Sign-Off Assessment is considered complete when all accessible lands that have not already been signed-off by a claims liaison have been surveyed. If any previous SCAT Assessments were conducted, all lands that were originally recommended for treatment must be re-surveyed in the Sign-Off Assessment. If the conducted survey does not meet these conditions it is considered a Partial Assessment. Multiple Partial Assessments that meet the conditions of a Complete Assessment may together constitute a Complete Sign-Off Assessment.

# SCAT SEGMENT OPERATIONS COMPLETION SIGN-OFF SHEET

## SILVERTIP PIPELINE RELEASE

Segment C48 RB Date of Survey 9/26/11

Dates of Initial SCAT Assessments 29 Dec 11 (B)  
(to be filled out by SCAT Data Management)

CTR(s) Associated with SCAT Segment 61

Segment has been treated by Operations or an Operations Hotshot Team  YES  NO

Segment Assessment Complete<sup>1</sup>   
 Partial Segment Assessment

*The undersigned are in agreement that the above segment or partial segment meets the Approved Treatment Methods Target Endpoints.*

This Segment is Conditionally Approved   
(See attached Post Inspection Survey Transmittal (POST))

*The undersigned are in agreement that the above segment meets the Approved Treatment Methods Target Endpoints conditional upon completion of the treatment identified in the attached Post Inspection Survey Transmittal (POST).*

*No Federal Rep Present*

\_\_\_\_\_  
 Sign Name Print Name/ Affiliation Date  
**Federal Representative (EPA/USCG)**

Mark Ewanic MARK EWANIC / MT DEQ 9/26/11  
 Sign Name Print Name/ Affiliation Date

**State Representative (DEQ/FWP)**

PB Lee Pete Lee / Polaris 9/26/11  
 Sign Name Print Name/ Affiliation Date

**RP Representative (SCAT RP Representative)**

Once all applicable SCAT Segments (i.e. LB, RB, and IS) within a particular SCAT Area (i.e. A21) have been successfully signed-off during a formal SCAT Assessment, the SCAT Area will achieve the Response Endpoints and an Area Transition Report will be completed and submitted to EPA and DEQ.

<sup>1</sup> A Segment Sign-Off Assessment is considered complete when all accessible lands that have not already been signed-off by a claims liaison have been surveyed. If any previous SCAT Assessments were conducted, all lands that were originally recommended for treatment must be re-surveyed in the Sign-Off Assessment. If the conducted survey does not meet these conditions it is considered a Partial Assessment. Multiple Partial Assessments that meet the conditions of a Complete Assessment may together constitute a Complete Sign-Off Assessment.