

**ExxonMobil Pipeline Company**

**SCAT Area Transition Report  
for C11**

Silvertip Pipeline Incident  
Laurel, Montana

October 24, 2011



## **SCAT Area Transition Report for C11**

Silvertip Pipeline Incident  
Laurel, Montana

Prepared for:  
ExxonMobil Pipeline Company

Prepared by:  
ARCADIS G&M of North Carolina, Inc.  
11000 Regency Parkway  
West Tower, Suite 205  
Cary, North Carolina 27518-8518  
Tel 919.469.1952  
Fax 919.469.5676

Our Ref.:  
B0085883.1103

Date:  
October 24, 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 C11, 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 C11. 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 C11, 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 C11 is 48. There was an access issue for a portion of the right bank but access was granted for an initial SCAT survey at a scheduled time.

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

A previously recorded resource that has been unevaluated, but assumed to be a historic property, was identified during the initial records search through the State Historic Preservation Office. This historic property was not impacted by the spill incident or associated clean-up operations.

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 C11 due to the low level of oiling in Division C. No oiled wildlife was observed or recovered. No Wildlife Priority Cleanup Areas were identified. Portions of two great blue heron (*Ardea herodias*) rookery buffer zones extended into Area C11 and a  $\frac{1}{8}$  mile buffer zone was provided to Operations to protect the nests in the rookery.

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

Table 1 (below) summarizes samples collected within Area C11. 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 C11 are provided on Figure 3.

**Table 1 Environmental Sampling Summary**

Area	Agency	Sample Num	Date	Matrix	Location	Latitude	Longitude
C11		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. However, to date, no samples have been collected in this area.

**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 C11 are included in Appendix B. Figure 4 provides the maximum oiling zones observed by the SCAT team during the initial surveys of Area C11.

**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. 60](#)).

**1.6 Oil Removal Activities**

Oil removal activities were conducted within Area C11 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 C11 following completion of oil removal activities. The SCAT team performed final surveys of the left and right bank(s) within SCAT Area C11 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**

Initial SCATs for the right bank portion with access issues resulted in no further treatment. Based on the final SCAT surveys performed on the left and right bank(s) within Area C11, no further treatment is recommended for these segments. SCAT Segment Sign-Off Forms are included as Appendix F.



**SCAT Area Transition  
Report for C11**

Silvertip Pipeline Incident  
Laurel, Montana

**2. Transition Sign-Off Form**

**SCAT Area Transition Report for C11**

**Prepared for:**

**Unified Command**

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Date

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Unified Command – RP

## **SCAT Area Transition Report for C11**

**Prepared for:**

**Unified Command**

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Date

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Unified Command – FOSC



**SCAT Area Transition  
Report for C11**

Silvertip Pipeline Incident  
Laurel, Montana

**SCAT Area Transition Report for C11**

**Prepared for:**

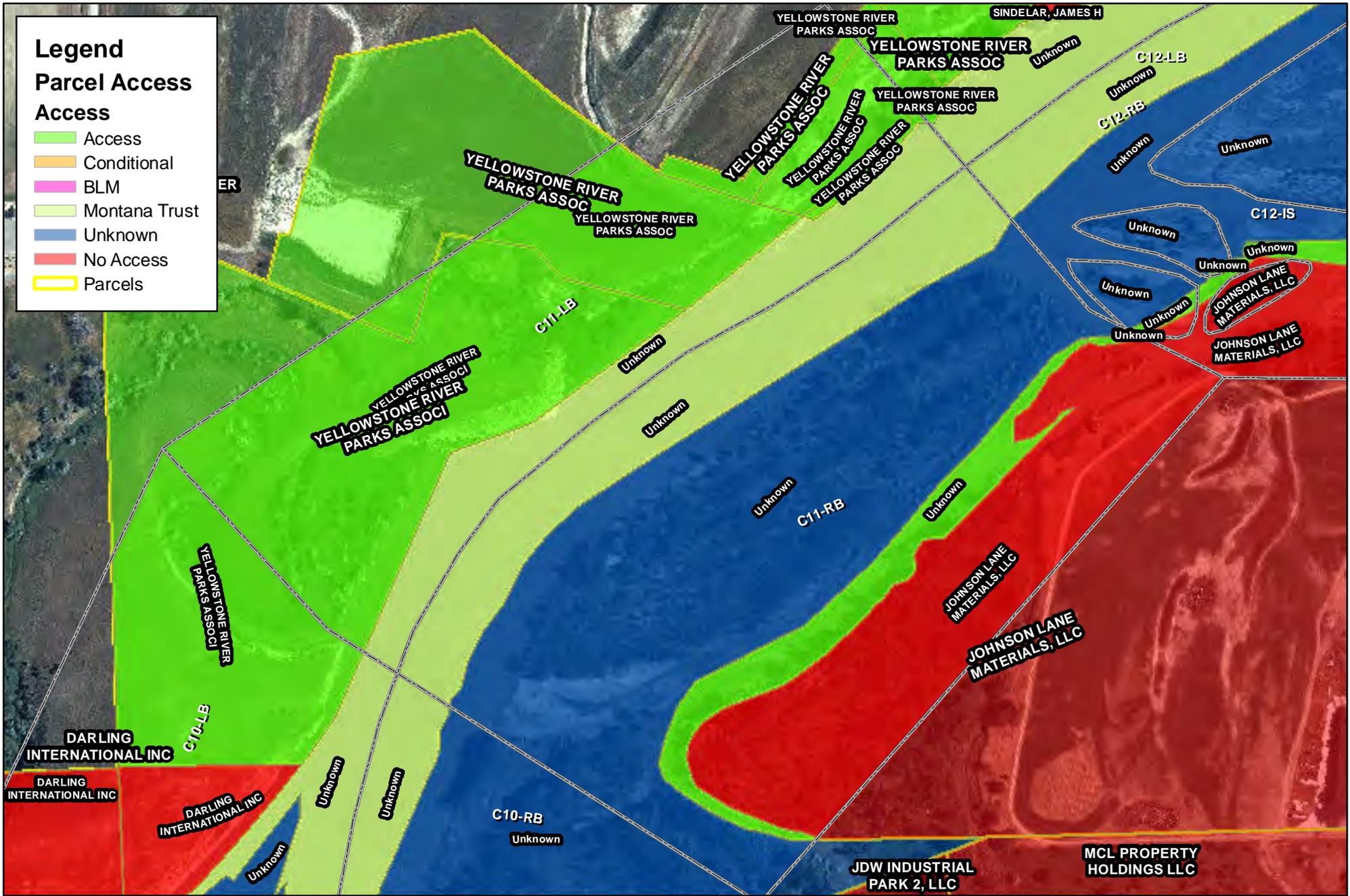
**Unified Command**

---

Date

---

Unified Command – MDEQ



**Legend**

**Parcel Access**

**Access**

- Access
- Conditional
- BLM
- Montana Trust
- Unknown
- No Access
- Parcels

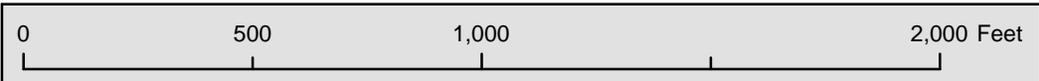
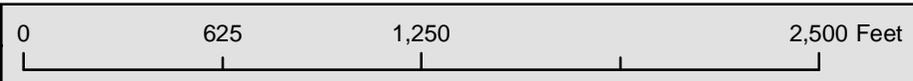
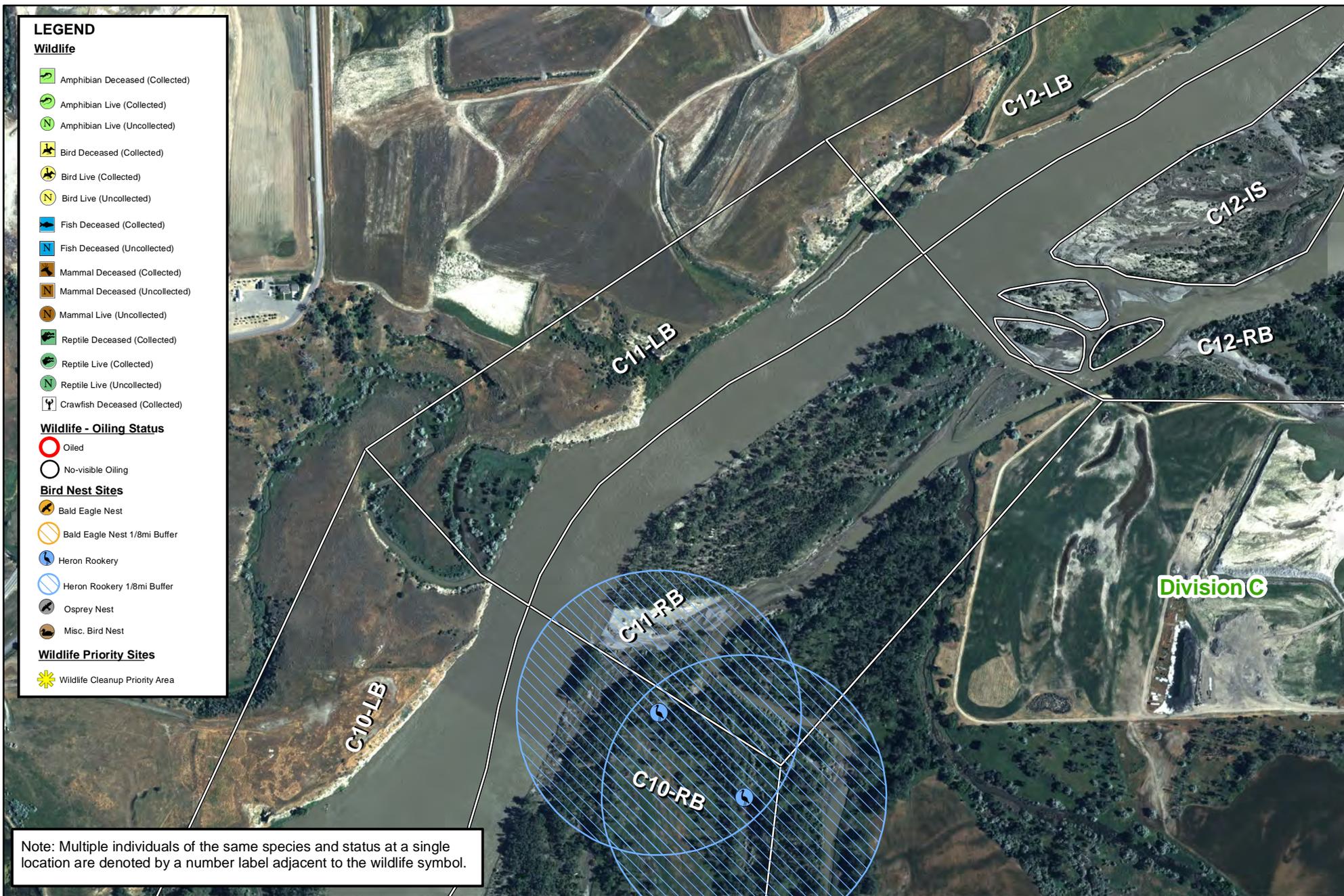
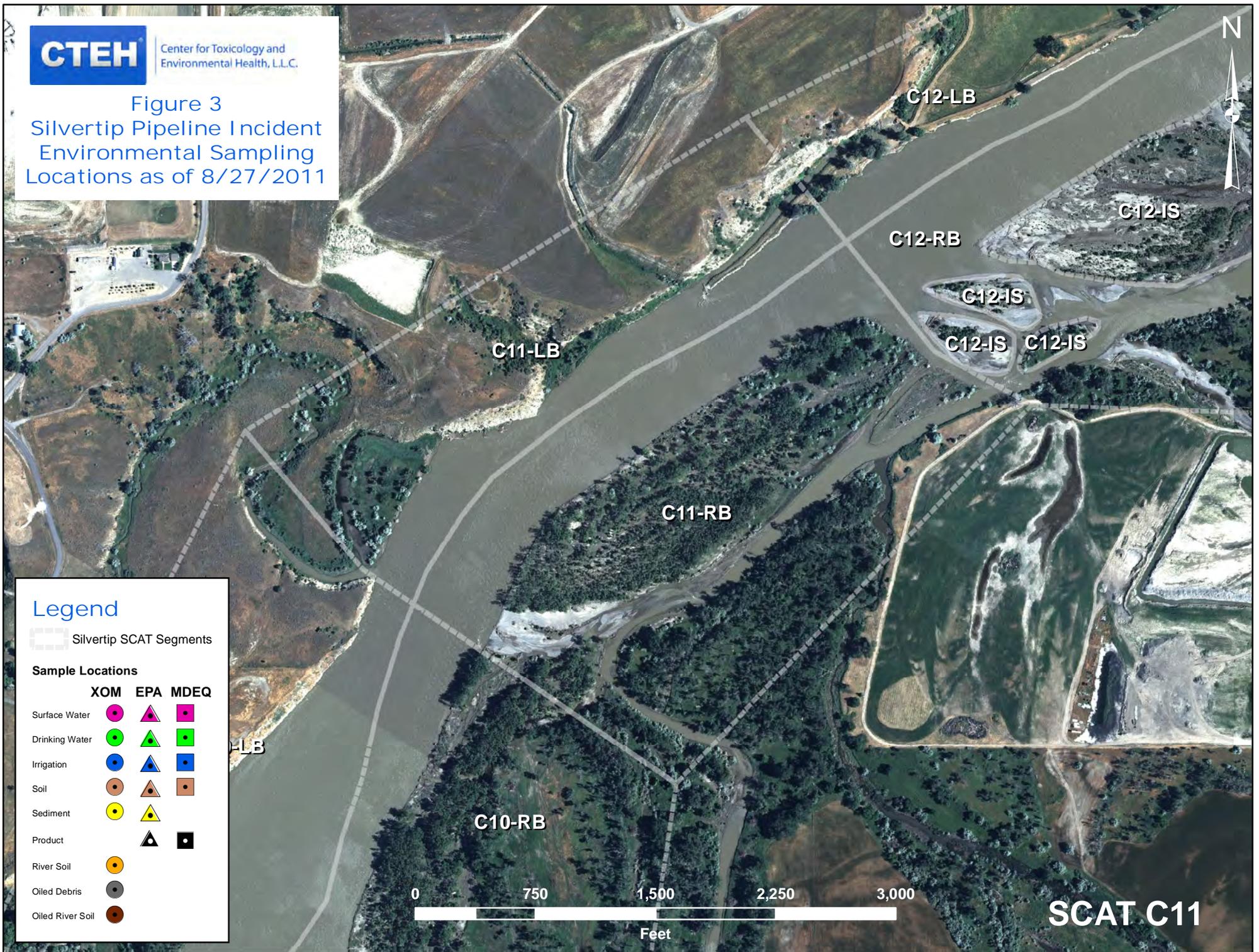


Figure 1



**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 C11**



	<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: C11**



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

**Figure 5 - Final SCAT Observations**  
**For SCAT Area: C11**



## **Appendix A**

Sample Detection Summary



Sample Results For  
SCAT Area C11

Printed 10/13/2011

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/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>C11</u>	<input checked="" type="radio"/> Left Bank / <input type="radio"/> Right Bank / <input type="radio"/> Island	<u>27/07/11</u>	<u>9:35</u> hrs to <u>9:37</u> hrs	low - mean - bankfull - overbank
Operations Division: <u>C</u>				<input checked="" type="radio"/> falling - <input type="radio"/> steady - <input type="radio"/> rising
Survey by: <input checked="" type="radio"/> Foot / <input type="radio"/> ATV / <input type="radio"/> Boat / <input type="radio"/> Helicopter / <input type="radio"/> Overlook /	<input checked="" type="radio"/> Sun / <input type="radio"/> Clouds / <input type="radio"/> Fog / <input type="radio"/> Rain / <input type="radio"/> Snow / <input type="radio"/> Windy / <input type="radio"/> Calm			Air Temp +/- <u>30</u> deg C

2 SURVEY TEAM #	Name	Organization	Signature
<u>1</u>	<u>Chuck Pons</u>	<u>Cardno ENTRIX</u>	<u>[Signature]</u>
	<u>Jay Watson</u>	<u>MFWP</u>	
	<u>Ernie McKenzie</u>	<u>US BLM</u>	

**3 SEGMENT** Total Segment/Reach Length 740 m Segment/Reach Length Surveyed 740 m

Start GPS: LATITUDE 45 deg. 50° 51.60 min. LONGITUDE 108 deg. 24° 51.35 min. Datum: WGS 87

End GPS: LATITUDE 45 deg. 50° 37.97 min. LONGITUDE 108 deg. 25° 17.77 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 S Boulder  Peat/Organic  Vegetated Bank:  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  m canyon  manmade  meander  confined or leveed  Substrate Type:

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  100m 110 est. water depth: <1m  1-3m  3-10m  >10m  m

shoal(s) present  / N point bar present  / 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  / N Access: Direct from backshore  / N Alongshore from next segment  / N

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

Oiled trees/shrubs  / N River Current strong  / 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

931  
932

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	X	100	610/2	0													X	Su/19/5
B			X	X	100	2	60			S	P		X								↓

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

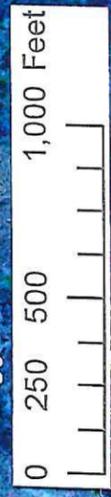
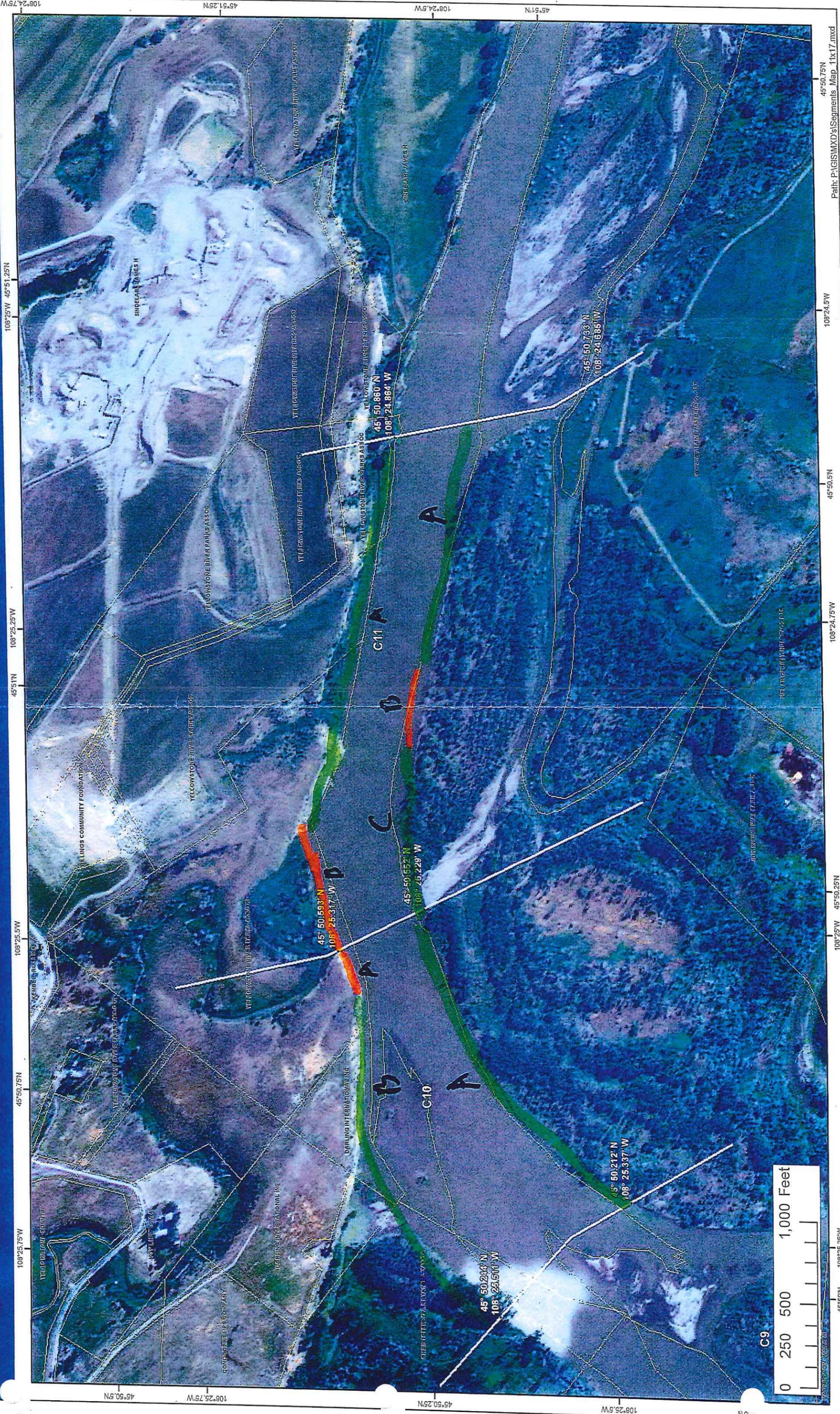
TRENCH or PIT NO.	RIVER BANK ZONE				MAX. PIT DEPTH cm	OILED ZONE cm-cm	SUBSURFACE OIL CHARACTER						WATER TABLE cm	SHEEN COLOUR B, R, S, N	CLEAN BELOW Yes / No	SUBST. TYPE(S)	
	MS	LB	UB	OB			SAP	OP	PP	OR	OF	TR					NO

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

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

Zone B has stand + catch veg (primarily grass)  
Veg needs to be cut and/or trimmed and removed

# SILVERTIP PIPELINE INCIDENT Yellowstone River Map 29



DB/G

RIVER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident PARTIAL SURVEY

<b>1 GENERAL INFORMATION</b>		Date (dd/mm/yy) 11/08/2011	Time (24h): std / daylight 858 hrs to 910 hrs	Water Level low - <u>mean</u> - bankfull - overbank <u>falling</u> - steady - rising
Segment/Reach ID: C11 <u>Left Bank</u> / Right Bank / Island		Operations Division:		
Survey by: <u>Foot</u> / ATV / Boat / Helicopter / Overlook / _____		<u>Sun</u> / Clouds / Fog / Rain / Snow / Windy / Calm		Air Temp + / - <u>25</u> deg C

<b>2 SURVEY TEAM # <u>NA 3</u></b>	Name	Organization	Signature
Richard Marty	Polaris		<i>Richard Marty</i>
Travis Cain	USEPA		<i>Travis Cain</i>
Tom Bovington	State of Montana, DEQ		<i>Tom Bovington</i>

**3 SEGMENT** Total Segment/Reach Length 750 m Segment/Reach Length Surveyed 195 m

Start GPS: LATITUDE 45° 50.807'N deg. \_\_\_\_\_ min. LONGITUDE 108° 24.974'W deg. \_\_\_\_\_ min. Datum: \_\_\_\_\_

End GPS: LATITUDE 45° 50.855'N deg. \_\_\_\_\_ min. LONGITUDE 108° 24.886'W 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 S \_\_\_\_\_ Sand \_\_\_\_\_ Mixed \_\_\_\_\_ 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 X confined or leveed \_\_\_\_\_ Substrate Type: Silt/mud \_\_\_\_\_

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 100 m est. water depth: <1m 1-3 m 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: Must have landowner permission

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	<u>X</u>	125	20	0														X	
B			X		55	0.5	<1				X							X				Vegetation

**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					
None																						

**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 B is trace staining on vegetation. Natural Attenuation is appropriate for this zone.

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

C11LB Partial Survey  
11 August 2011  
Team #3



A = N00 = 12.5m ~~0.5m~~ 20m  
B = Very Light = 55m 0.5m Strain

DB/G/15

RIVER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident

**1 GENERAL INFORMATION**

Segment/Reach ID: C11 (Left Bank) Right Bank / Island  
 Date (dd/mm/yy) 13/08/11  
 Time (24h): std / daylight 0815 hrs to 1000 hrs  
 Water Level low - mean (bankfull) overbank  
 Operations Division: C  
 Survey by: (Foot) ATV / Boat / Helicopter / Overlook / (Sup) / Clouds / Fog / Rain / Snow / Windy / Calm  
 Air Temp +/- 30 deg C

**2 SURVEY TEAM # 4**

Name	Organization	Signature
Nathan Hammond	Cardno Entrix	[Signature]
Damien Korte	Cardno Entrix	[Signature]
John Hunziker	FLWP	[Signature]
Lance Richman	EPA	[Signature]

**3 SEGMENT** Total Segment/Reach Length 770 m Segment/Reach Length Surveyed 650 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 30m canyon \_\_\_\_\_ manmade \_\_\_\_\_ meander \_\_\_\_\_ confined or leveed \_\_\_\_\_ Substrate Type: \_\_\_\_\_  
 Sloped 72 (>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 Agriculture land  
 Oiled trees/shrubs (Y) (N) River Current strong (Y) (N) Other Features: Bluff/Cliffs

**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										SUBST. TYPE(S)					
	MS	LB	UB	OB	Length m	Width m	Distrib. %	OIL CHARACTER															
								TO	CV	CT	ST	FL	FR	MS	TB	PT	TC		SR	AP	NO		
A			P		208	30	<1			S	P			X									Grass Tree Shrub
B			P	S	135	15	0																✓
C			P	S	50	25	0																✓
D			P		60	5	<1			S	P			X									Grass
E			P	S	120	10	0																✓
F			P		25	5	<1			S	P			X									Grass, Trees
G			P	S	212	25	0																✓

1500  
1501  
1502  
1503  
1504  
1505  
1506

**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)

Zones B, C, E and G - NOO  
 Zones A, D, F - ATM 7 => Natural Attenuation  
 Zone B - Cliff area; visually inspected from distance - NOO, but secondary boat scAT may be necessary

Sketch Yes / No Photos Yes / No Frames/Photographer: [Signature]



©2010

© 2011 Google

Image © 2011 GeoEye

45°50'46.77" N 108°25'08.50" W elev 3136 ft

1996

009

DB/16

RIVER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident

Page \_\_\_\_\_ of \_\_\_\_\_

<b>1 GENERAL INFORMATION</b>		Date (dd/mm/yy) 27/10/11	Time (24h): std / daylight 1200 hrs to 1209 hrs	Water Level low - mean - bankfull - overbank falling - steady - rising
Segment/Reach ID: <u>C11</u> Left Bank / <u>Right Bank</u> / Island				
Operations Division: <u>C</u>				
Survey by: Foot / ATV / <u>Boat</u> / Helicopter / Overlook / _____		<u>Sun</u> Clouds / Fog / Rain / Snow / Windy / Calm		Air Temp +/- <u>30</u> deg C

2 SURVEY TEAM #	Name	Organization	Signature
1	Chuck Pons	Cardno ENTRIX	<i>Chuck Pons</i>
	Jay Watson	MFWP	
	Ernie McKenzie	US BLM	

**3 SEGMENT** Total Segment/Reach Length 740 m Segment/Reach Length Surveyed 740 m

Start GPS: LATITUDE 45 deg. 50 48.09 min. LONGITUDE 108 deg. 2428.56 min. Datum: WGS 83

End GPS: LATITUDE 45 deg. 50 32.99 min. LONGITUDE 108 deg. 25 17.22 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 P Mixed \_\_\_\_\_ Pebble/Cobble S Boulder \_\_\_\_\_ Peat/Organic \_\_\_\_\_ Vegetated Bank: Y Wooded Upland: Y

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: Sand

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 100m 110 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

928  
929  
930

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	X	730	2	0														X	Sand		
B			X	X	150	2	60			S	P			X								Sand/Veg		
C			X	X	260	2	0														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

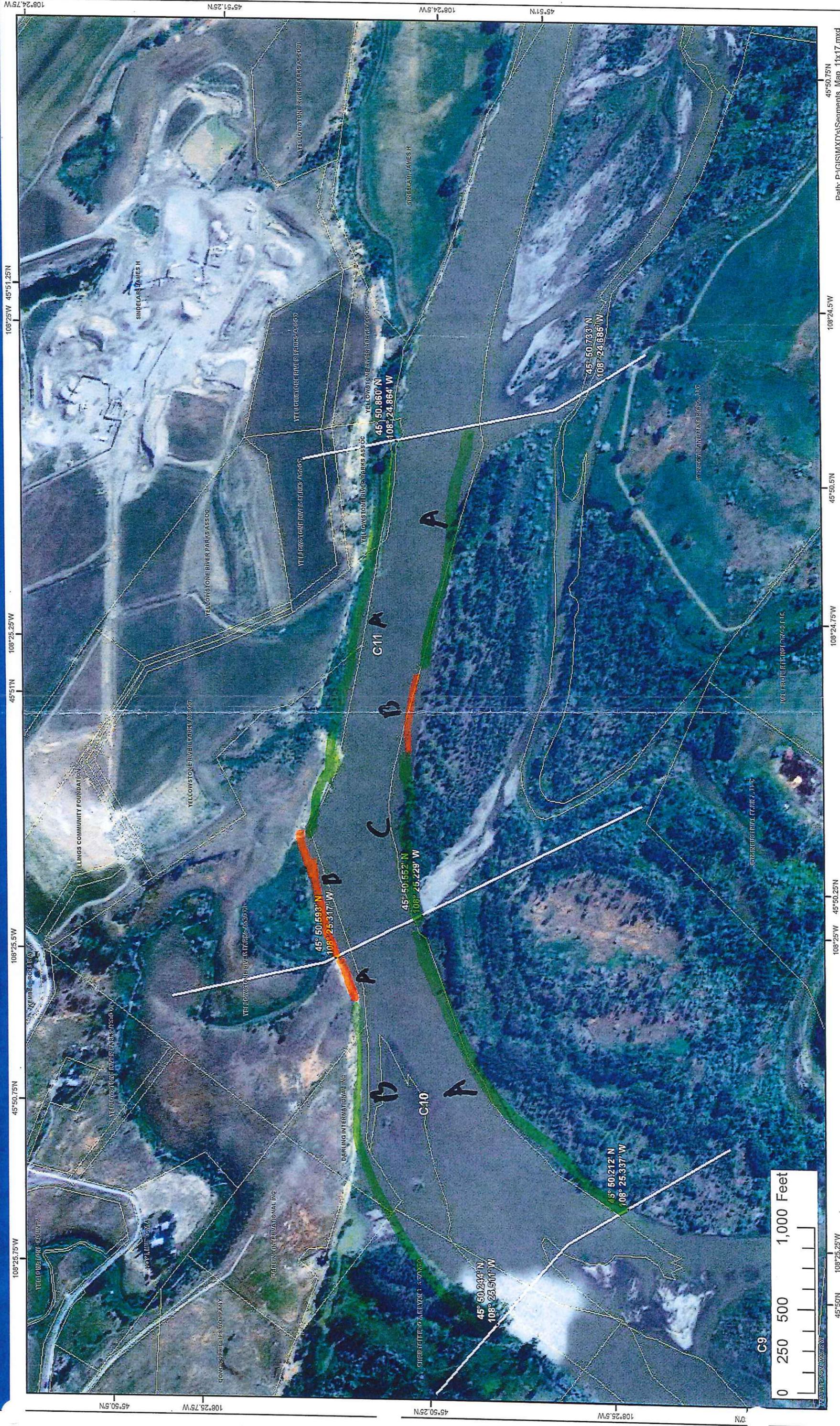
Zone B has stand vegetation (primarily grass)

Veg needs to be cut and/or treated and removed

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



**SILVERTIP PIPELINE INCIDENT**  
Yellowstone River  
Map 29



DB/G/S

RIVER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident

<b>1 GENERAL INFORMATION</b>		Date (dd/mm/yy) 30/07/11	Time (24h): std / daylight 0915 hrs to 1220 hrs	Water Level low - mean - bankfull - overbank falling - steady - rising
Segment/Reach ID: C11 Left Bank / Right Bank / Island				
Operations Division:				Air Temp +/- 2.5 deg C
Survey by: Foot / ATV / Boat / Helicopter / Overlook /		Sun / Clouds / Fog / Rain / Snow / Windy / Calm		
<b>2 SURVEY TEAM # 3</b>	Name	Organization	Signature	
	John Bauer	Polaris		
	Mark Ewanic	MT DEQ		
	Gary Riley	EPA		
	Travis Cain	EPA		
	Josh Hofkes	Cardno Entrix		

**3 SEGMENT** Total Segment/Reach Length 700 m Segment/Reach Length Surveyed 700 m

Start GPS: LATITUDE 45 deg. 50.552 min. LONGITUDE 108 deg. 25.229 min. Datum: WGS 84

End GPS: LATITUDE 45 deg. 50.733 min. LONGITUDE 108 deg. 24.685 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 Boulder Peat/Organic Vegetated Bank: S Wooded Upland:

Sediment Flat: Clay/Mud s 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: Sand/Silt

Sloped: (>5°)(15°)(30°) straight S braided S oxbow S flood plain valley P 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 30 bags or      trucks access restrictions: Need approval to enter from

Oiled trees/shrubs Y/N River Current strong Y/N Other Features: Wetland and Manure

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

989  
990  
991  
992

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"/>	<input checked="" type="checkbox"/>	130	60															<input checked="" type="checkbox"/>	
B				<input checked="" type="checkbox"/>	300	30	<1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>						<input checked="" type="checkbox"/>					veg
C				<input checked="" type="checkbox"/>	521	65											<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>	
D				<input checked="" type="checkbox"/>	37	37	<1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>						<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>	veg

**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  / N Overbank Survey Completed  / N Shoreline Survey Completed  / N

Oil band heights:

**Treatment Recommendations:**  
 Zone : A & C: No oil observed, No cleaning required  
B & D: Remove oiled debris and 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  / No Photos  / No Frames \_\_\_\_\_ Photographer \_\_\_\_\_



DB/G

RIVER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident

<b>1 GENERAL INFORMATION</b>		Date (dd/mm/yy) 06/09/2011	Time (24h): std / daylight 817 hrs to 905 hrs	<b>Water Level</b> low - mean - <u>bankfull</u> - overbank falling - steady - rising
Segment/Reach ID: C11 Left Bank / <u>Right Bank</u> / 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 #</b> <u>NA</u>	Name	Organization	Signature
	Richard Marty	Polaris	<i>Richard Marty</i>
	<del>John Davis</del> <u>Ernie McKenzie</u>	US Bureau of Land Management	<i>Ernie McKenzie</i>
	Lee Burroughs	Montana FWP	<i>Lee Burroughs</i>

**3 SEGMENT** Total Segment/Reach Length \_\_\_\_\_ m Segment/Reach Length Surveyed 890 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 S Sand \_\_\_\_\_ Mixed \_\_\_\_\_ 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 p confined or leveed \_\_\_\_\_ Substrate Type: mud/sand/grvl

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

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

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

2139  
2135

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	650	180	0														x	All
B				x	240	100	<1			P								P				Debris

**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					
None																						

**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

SCAT Survey of land owned by Johnson Lane Materials LLC.

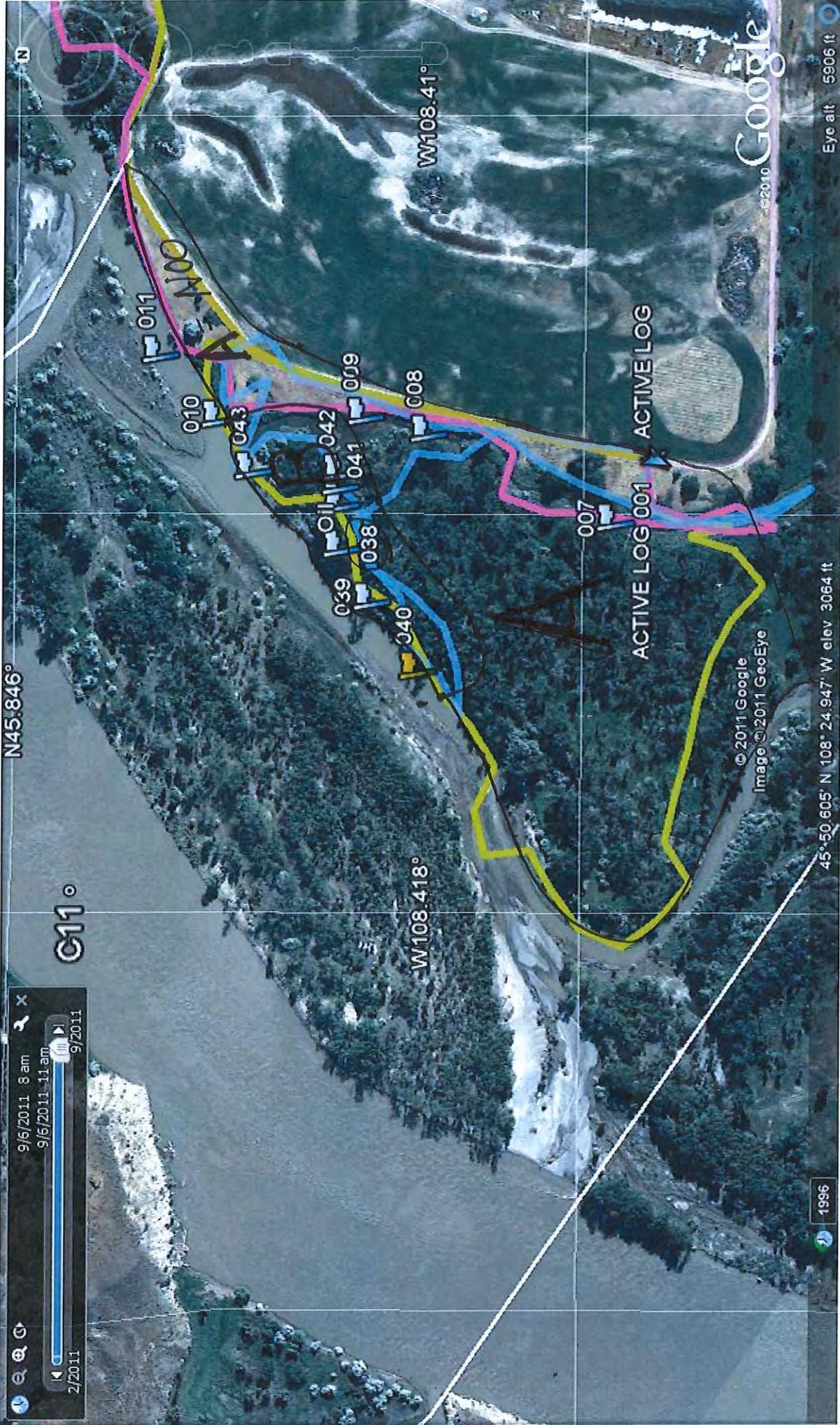
A - No Treatment Required  
B - Natural Attenuation

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

Img - 0651 to - 0657

C11 L

August 2011 6 September 2011  
Team 2



A = N00  
B = Very Light



## **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



9/6/2011 5:14 pm  
9/6/2011

Team 6  
C11-LB  
9/6/11

006

007

008

C11-LB

Current Track: 06 SEP 2011 08:38

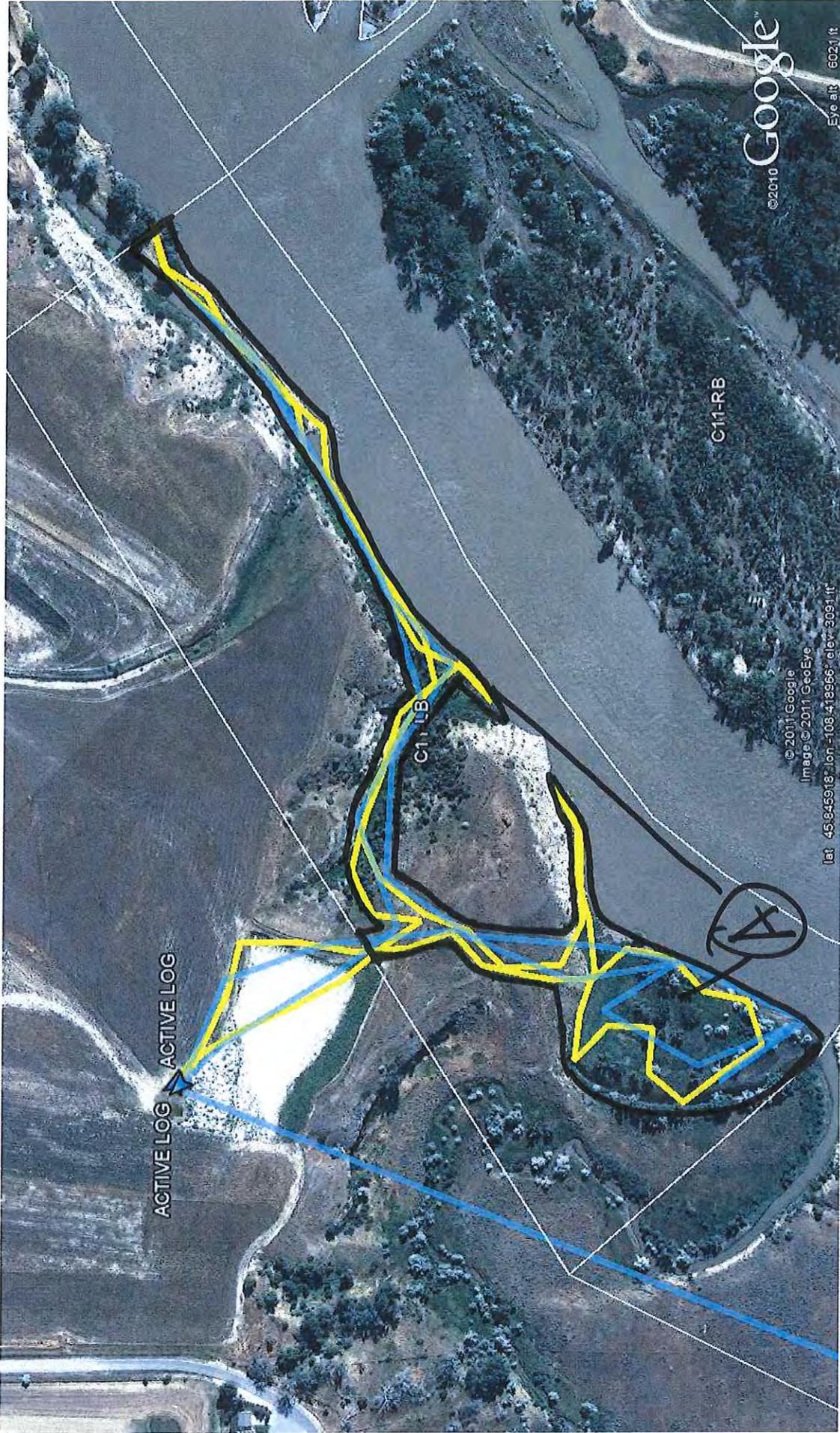
ZONE A  
TRACE

0300

© 2011 Google  
Image © 2011 GeoEye  
45°50'46.10" N 108°25'07.65" W elev 3119 ft

1996





C11L  
09/07/11 ZONE A: NFT.  
SCAT 4

DB 16

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>C 11</u> Left Bank (Right Bank) / Island		<u>12/09/11</u>	<u>09:20</u> hrs to <u>12:45</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 / <u>Calm</u>	Air Temp +/- <u>26</u> deg C	

<b>2 SURVEY TEAM #</b> <u>4</u>	Name	Organization	Signature
	<u>Nathan Hammond</u>	<u>Cardno Entix</u>	<u>Nathan Hammond</u>
	<u>Marcile Sigler</u>	<u>DEQ</u>	<u>Marcile Sigler</u>

**3 SEGMENT** Total Segment/Reach Length 715 m Segment/Reach Length Surveyed 715 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) N

Debris: (Y) N oiled (Y) N amount 6 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			S	P	715	125	<1			S	P							X						veg; Debris

**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 - ATM 1, ATM 2, ATM 9 Utilized by hot shot crew to collect 6 bags of oiled material, No Further Treatment.

ResCAT

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

22 am 9/12/2011 5:40 pm 6 pm

C11-LB

TEAM 4  
C11 RB  
9/12/11

ZONE A  
VERY LIGHT

004

005

006

007

C11-RB

001

002

© 2011 Google

Image © 2011 GeoEye

1996

45°50'40.05" N 108°24'57.50" W elev 3062 ft

00010



23/6

RIVER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident

<b>1 GENERAL INFORMATION</b>		Date (dd/mm/yy) 23/09/11	Time (24h): std / daylight 1230 hrs to 1400 hrs	Water Level low - <u>mean</u> - bankfull - overbank falling - steady - rising
Segment/Reach ID: C 11 Left Bank / <u>Right Bank</u> / Island		Operations Division: C		
Survey by: <u>Foot / ATV / Boat</u> / Helicopter / Overlook /		Sun / Clouds / Fog / Rain / Snow / Windy / Calm		Air Temp +/- 36 deg C

<b>2 SURVEY TEAM # 1</b>	Name	Organization	Signature
Todd Farrar		Polaris	<i>Todd Farrar</i>
Pete Lee		Polaris	<i>P Lee</i>
Jeffrey Frank Herrick		MTDEQ	<i>Jeffrey Frank Herrick</i>

**3 SEGMENT** Total Segment/Reach Length \_\_\_\_\_ m Segment/Reach Length Surveyed 680 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 \_\_\_\_\_ 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 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	RIVER BANK ZONE				OIL COVER			OIL THICKNESS					OIL CHARACTER						SUBST. TYPE(S)					
					Length	Width	Distrib.	TO	CV	CT	ST	FL	FR	MS	TB	PT	TC	SR		AP	NO			
ID	MS	LB	UB	OB	m	m	%																	
A				X	680	330	<1			S	P							X						Grass, trees, debris

**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: 30-60 cm

Treatment recommendations:

Zone A : Sporadic CT / (ST) on woody debris and shrubs. Hot Shot

Zone : Ops crew treated oiled material; No Further Treatment (NFT)

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

9/23/2011 4:23 pm

TEAM 1  
C11 RB  
Sept. 23, 2011

Bone P

C11-LB

ACTIVE LOG 006-195

C11-RB

001

002

ACTIVE LOG 001

046

©2010 Google

Image © 2011 GeoEye  
© 2011 Google

45°50'41.04" N 108°24'57.88" W elev 3062 ft

1996



B

Eye alt



## **Appendix F**

Completed SCAT Segment  
Sign-Off Forms

# SCAT SEGMENT OPERATIONS COMPLETION SIGN-OFF SHEET

## SILVERTIP PIPELINE RELEASE

Segment C11 LB Date of Survey 9/6/11

Dates of Initial SCAT Assessments 275611  
(to be filled out by SCAT Data Management)

CTR(s) Associated with SCAT Segment N/A

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).*

Austin West AUSTIN WEST USCG 9/6/11  
Sign Name Print Name/ Affiliation Date  
**Federal Representative (EPA/USCG)**

Betsy Hovda Betsy Hovda DEQ 9/6/11  
Sign Name Print Name/ Affiliation Date  
**State Representative (DEQ/FWP)**

Nathan Hammond Nathan Hammond/ Cardno Entrix 9/6/11  
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 0111B Date of Survey 09/07/11

Dates of Initial SCAT Assessments \_\_\_\_\_  
(to be filled out by SCAT Data Management)

CTR(s) Associated with SCAT Segment 60

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).*

  
Sign Name \_\_\_\_\_ Print Name/ Affiliation JAMEL H. DALLAS Date 9/7/11  
**Federal Representative (EPA/USCG)**

  
Sign Name \_\_\_\_\_ Print Name/ Affiliation BRAD OLSEWSKI / FWP Date 9/7/11  
**State Representative (DEQ/FWP)**

  
Sign Name \_\_\_\_\_ Print Name/ Affiliation MICHAEL DIERS / Corduro ENTRIX Date 09/07/11  
**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 CIIRB Date of Survey 9/12/11

Dates of Initial SCAT Assessments 27 JUL 11 (EC)  
(to be filled out by SCAT Data Management)

CTR(s) Associated with SCAT Segment 60

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.

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

Marcile Siga Marcile Siga/DEQ 9/12/11  
Sign Name \_\_\_\_\_ Print Name/Affiliation \_\_\_\_\_ Date \_\_\_\_\_  
**State Representative (DEQ/FWP)**

Nathan Hammond Nathan Hammond/Cardno Entix 9/12/11  
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 C11-RB Date of Survey Sept. 23, 2011

Dates of Initial SCAT Assessments 27 Jul 2011 (IS)  
(to be filled out by SCAT Data Management)

CTR(s) Associated with SCAT Segment 60

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)**

Sign Name Jeffrey Frank Herrick Print Name/ Affiliation DEQ Date 23 Sep 2011  
**State Representative (DEQ/FWP)**

Sign Name Todd Farrar Print Name/ Affiliation Todd Farrar / Polaris Date 9/23, 2011  
**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.