

ExxonMobil Pipeline Company

**SCAT Area Transition Report for
C49**

Silvertip Pipeline Incident
Laurel, Montana

October 21, 2011



SCAT Area Transition Report for C49

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 21, 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.

1. Executive Summary of Oil Removal Activities	1
1.1 Land Ownership and Access Issues	1
1.2 Cultural, Historic, and Natural Resource Constraints	1
1.3 Summary of Environmental Sampling	1
1.4 Summary of Initial SCAT Surveys	2
1.5 Applicable Compiled Treatment Recommendations	2
1.6 Oil Removal Activities	2
1.7 Pre-Inspection Survey Transmittal	2
1.8 Post-Inspection Survey Transmittal	3
1.9 Summary of Final SCAT Surveys	3
1.10 SCAT Area Conclusions	3
2. Transition Sign-Off Form	4
Tables	
Table 1 Environmental Sampling Summary	2
Figures	
Figure 1 Aerial Map with Parcel Boundaries	
Figure 2 Wildlife Resources	
Figure 3 Sample Location Map	
Figure 4 Maximum SCAT Observations	
Figure 5 Final SCAT Observations	
Appendices	
A Sample Detection Summary	
B Initial SCAT Survey Forms and Sketches	
C Pre-Inspection Survey Transmittal	
D Post-Inspection Survey Transmittal	
E Final SCAT Survey Forms and Sketches	
F Completed SCAT Segment Sign-Off Forms	

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 C49, 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 C49. 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 C49, 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 C49 is 245.6. There were no access issues for this area.

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 C49 due to the low level of oiling in Division C. No oiled wildlife was observed or recovered. No Wildlife Priority Cleanup Areas were identified. Two bald eagle (*Haliaeetus leucocephalus*) nests were identified in Area C49 and buffer zones were provided to Operations to protect the nests.

1.3 Summary of Environmental Sampling

Table 1 (below) summarizes samples collected within Area C49. 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 C49 are provided on Figure 3.

Table 1 Environmental Sampling Summary

Agency	Sample Num	Date	Matrix	Location	Latitude	Longitude
CTEH	WDMT0815DW101	8/15/2011	Water_Drinking	WDMT_541_DW101	45.988880	-108.061947
CTEH	WDMT0815IW102	8/15/2011	Water_Irrigation	WDMT_541_IW102	45.989431	-108.062362

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 this set, there were no detections and therefore no exceedances.

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 C49 are included in Appendix B. Figure 4 provides the maximum oiling zones observed by the SCAT team during the initial surveys of Area C49.

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. 52](#) and [CTR No. 61](#)).

1.6 Oil Removal Activities

Oil removal activities were conducted within Area C49 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, 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 C49 following completion of oil removal activities. The SCAT team performed final surveys of the island, left bank, and right bank within SCAT Area C49 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 final SCAT surveys performed on the island, left bank, and right bank within Area C49, no further treatment is recommended for these segments. SCAT Segment Sign-Off Forms are included as Appendix F.

2. Transition Sign-Off Form

SCAT Area Transition Report for C49

Prepared for:

Unified Command

Date

Unified Command – RP



**SCAT Area Transition
Report for C49**

Silvertip Pipeline Incident
Laurel, Montana

SCAT Area Transition Report for C49

Prepared for:

Unified Command

Date

Unified Command – FOSC



**SCAT Area Transition
Report for C49**

Silvertip Pipeline Incident
Laurel, Montana

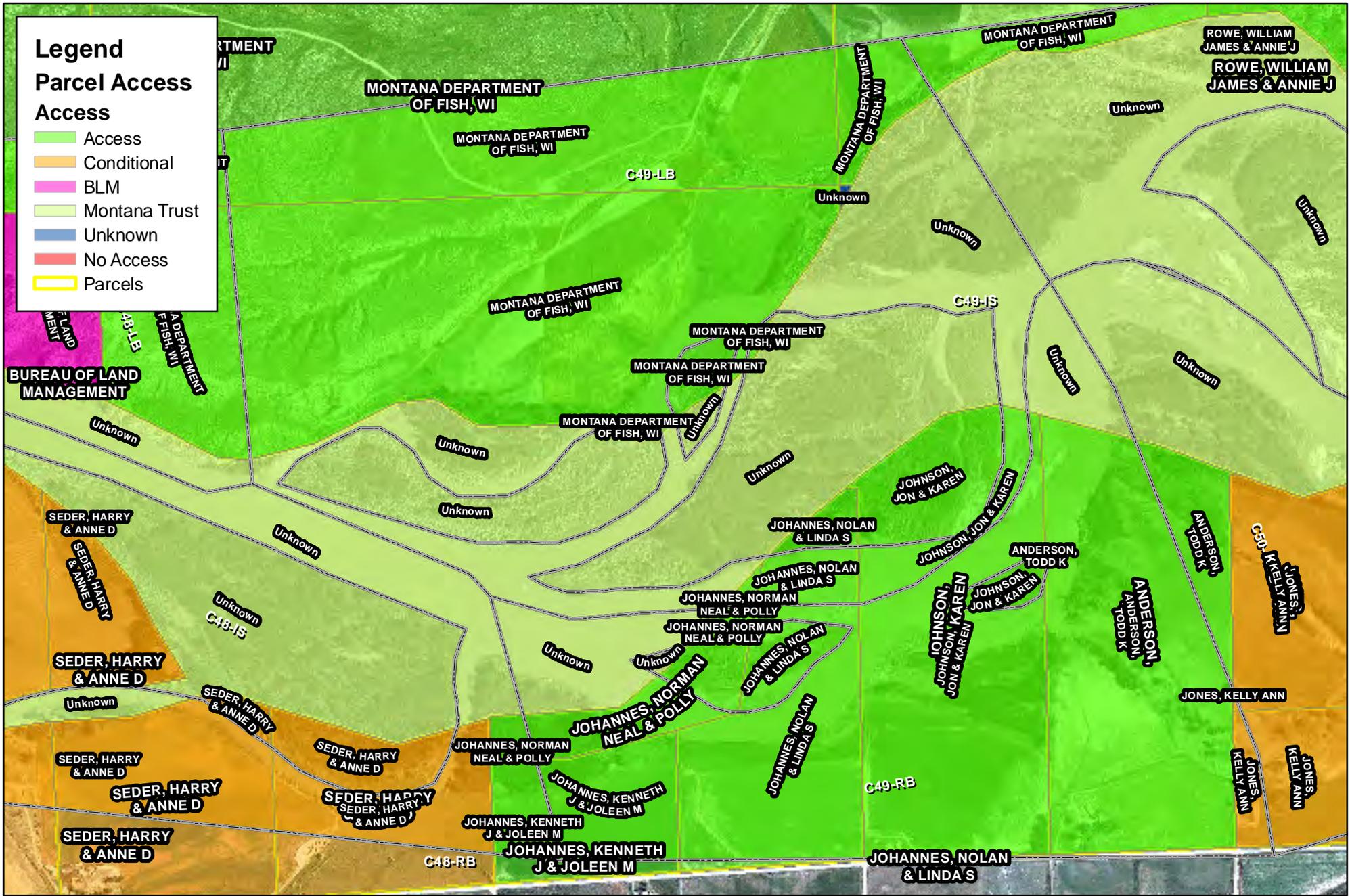
SCAT Area Transition Report for C49

Prepared for:

Unified Command

Date

Unified Command – MDEQ



Legend

Parcel Access

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

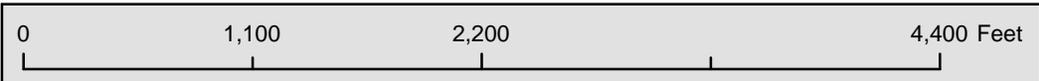


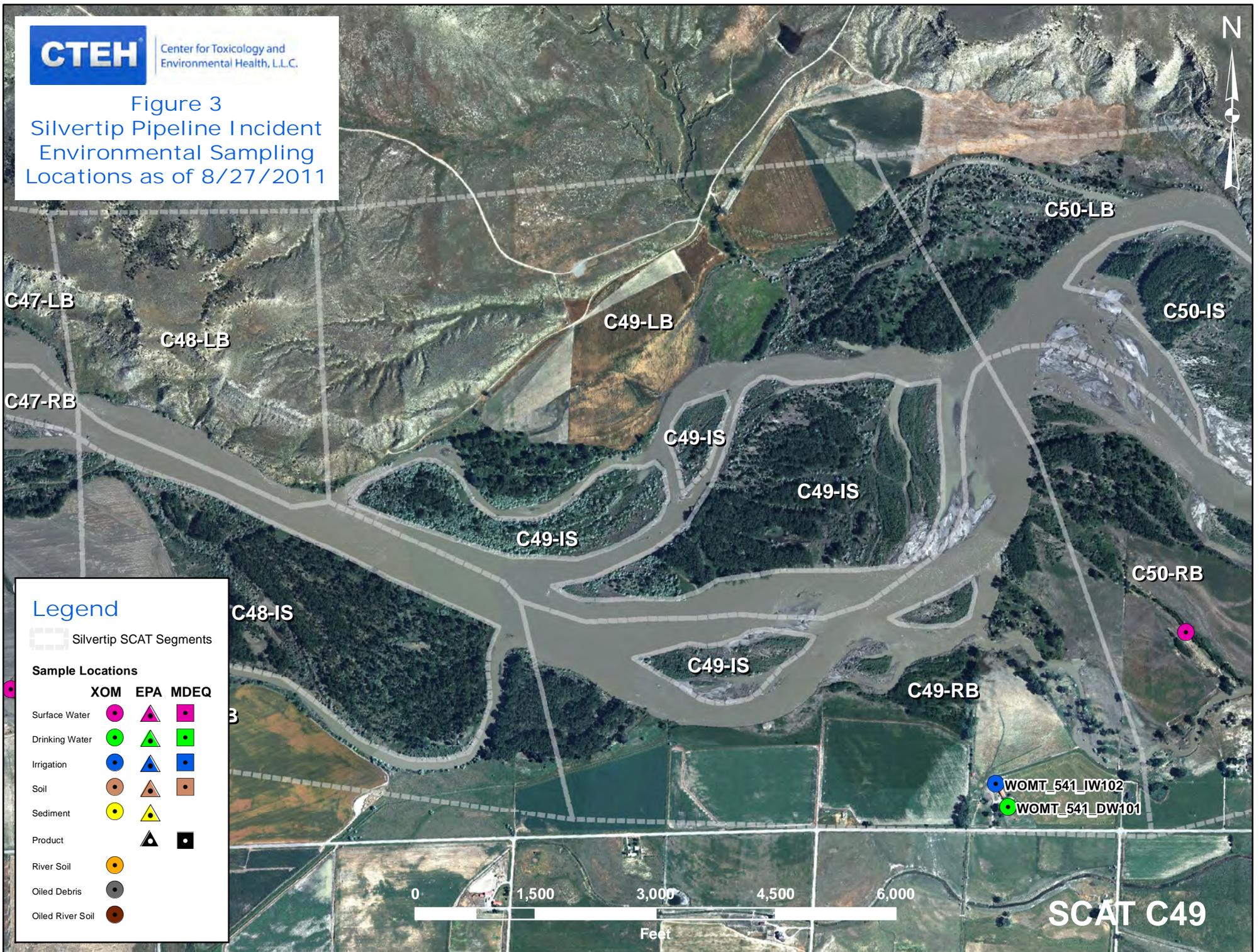
Figure 1





Center for Toxicology and Environmental Health, L.L.C.

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



Legend

Silvertip SCAT Segments

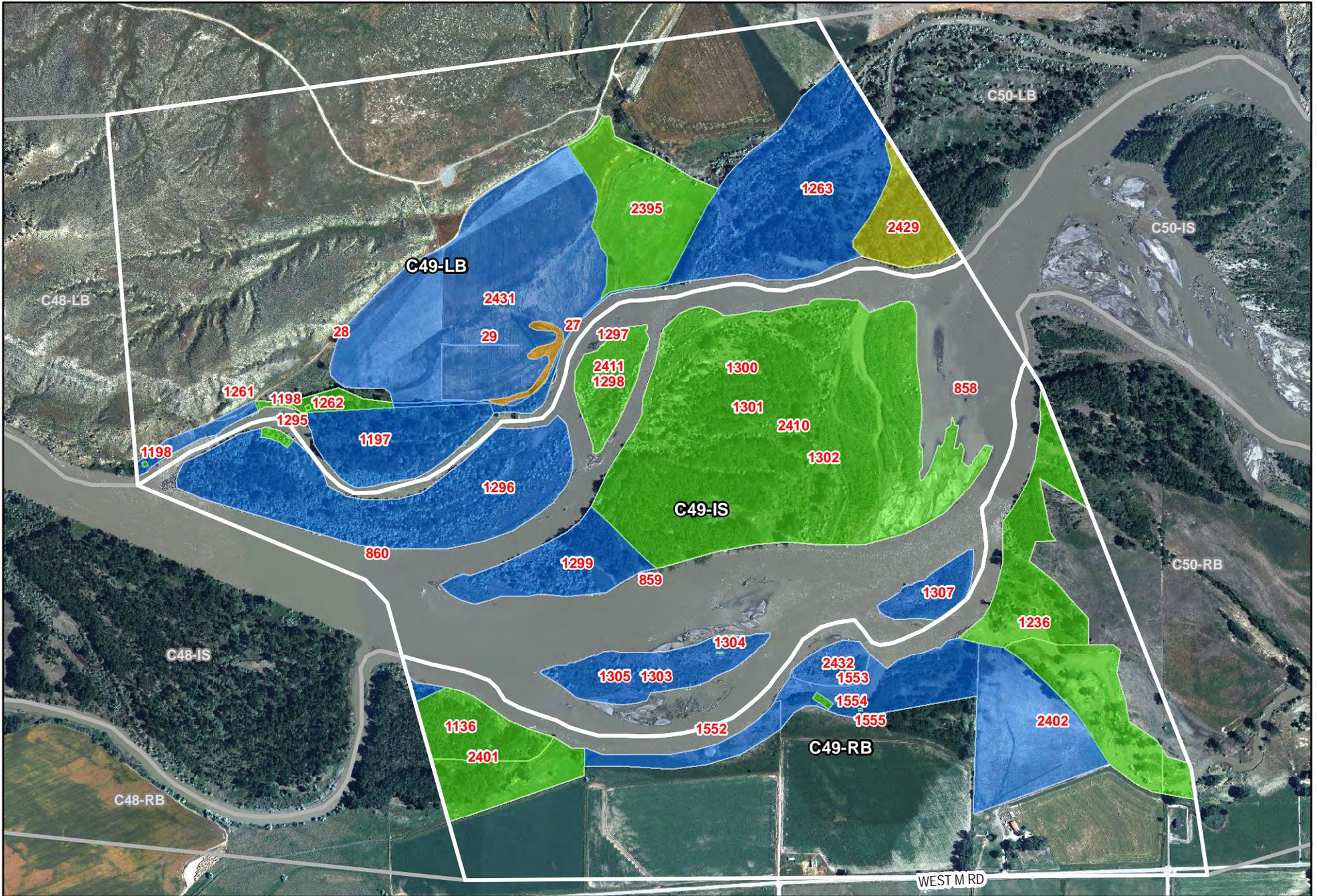
Sample Locations

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

WOMT_541_IW102
WOMT_541_DW101

0 1,500 3,000 4,500 6,000
Feet

SCAT C49

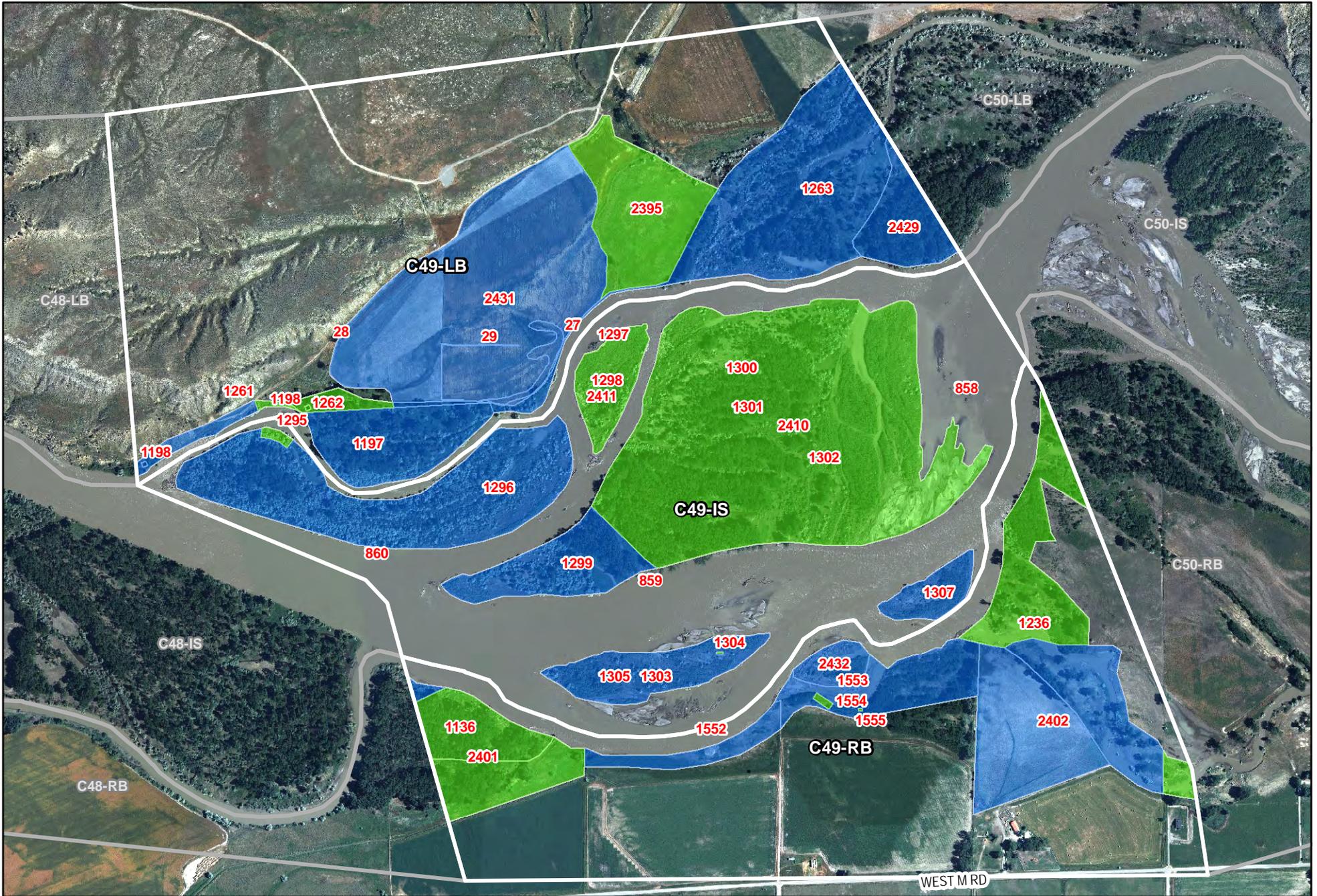


	9999 Oiling Zone ID	Light Oiling
	Heavy Oiling	Very Light Oiling
	Moderate Oiling	No Oil Observed

Figure 4 - Maximum SCAT Observations For SCAT Area: C49

675 0 675 1,350 Feet

POLARIS
APPLIED SCIENCES, INC.



- 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



Appendix B

Initial SCAT Survey Forms and
Sketches

DB/B/S

RIVER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident

1 GENERAL INFORMATION		Date (dd/mm/yy) 26/07/11	Time (24h): std / daylight 1256 hrs to 100 hrs	Water Level low - mean - <u>bankfull</u> - overbank falling - steady - rising
Segment/Reach ID: C <u>49</u> <u>Left Bank</u> / Right Bank / Island				
Operations Division: <u>CR-107/11</u>				
Survey by: Foot / ATV / Boat / Helicopter / Overlook /		Sun / Clouds / Fog / Rain / Snow / Windy / Calm	Air Temp +/- <u>28</u> deg C	

2 SURVEY TEAM # 1	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 <u>2099</u> m	Segment/Reach Length Surveyed <u>2099</u> m
Start GPS: LATITUDE <u>45</u> deg. <u>59.448</u> min.	LONGITUDE <u>108</u> deg. <u>3.778</u> min.	Datum:
End GPS: LATITUDE <u>45</u> deg. <u>59.738</u> min.	LONGITUDE <u>108</u> deg. <u>5.032</u> 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: <u>P</u> Wooded Upland:		

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 <u>X</u>	Forested / Vegetated / Bare

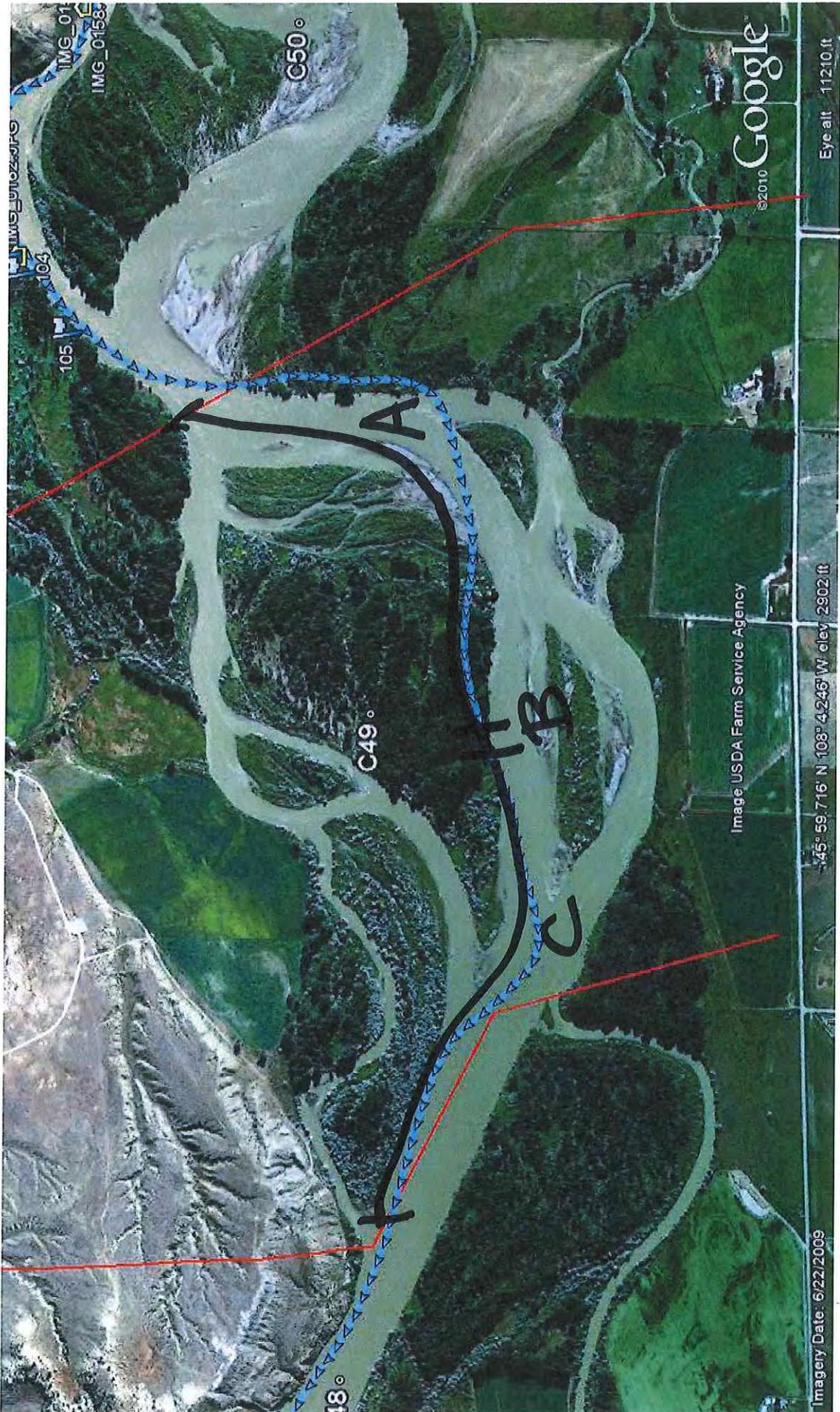
4C RIVER CHANNEL CHARACTER	circle or select as appropriate
est. width: <1m 1-10m 10-100m >100m <u>160m</u> <u>316m</u>	est. water depth: <1m <u>1-3m</u> 3-10m >10m m
shoal(s) present <u>Y/N</u> point bar present <u>Y/N</u>	bar-shoal substrate: silt / sand / gravel / cobble / boulder / bedrock / debris
seasonal water level: low / mean / <u>bank full</u> / overbank flow	est. change over next 7 days: <u>falling</u> - same - rising

5 OPERATIONAL FEATURES	Suitable backshore staging <u>Y/N</u>	Access: Direct from backshore <u>Y/N</u> Alongshore from next segment <u>Y/N</u>
Debris: <u>Y/N</u> oiled <u>Y/N</u> amount bags or trucks	access restrictions	
Oiled trees/shrubs <u>Y/N</u> River Current strong <u>Y/N</u>	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		
<u>858</u>			<u>X</u>	<u>X</u>	<u>1117</u>																<u>X</u>	<u>veg bank</u>	
<u>859</u>			<u>X</u>	<u>X</u>	<u>2</u>	<u>0.5</u>	<u>25</u>			<u>X</u>			<u>X</u>									<u>"</u>	
<u>860</u>			<u>X</u>	<u>X</u>	<u>980</u>																<u>X</u>	<u>"</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 <u>Y/N</u> Overbank Survey Completed <u>Y/N</u> Shoreline Survey Completed <u>Y/N</u>										
Oil height: <u>CRACK</u> <u>CRACK</u>										
Treatment recommendations:										
Zone <u>A, C</u> : No oil observed; no treatment required.										
Zone <u>B</u> : 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 <u>Yes</u> / No	Photos <u>Yes</u> / No	Frames <u>0028 Beach</u>	Photographer							



IMG_01

IMG_0158

C50°

A

C49°

B

C

48°

Google

©2010

Eye alt: 11210 ft

Image USA Farm Service Agency

45° 59.716' N 108° 42.451' W elev: 2902 ft

Imagery Date: 6/22/2009

DB/G

3

RIVER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident

Page 1 of 2

1 GENERAL INFORMATION		Date (dd/mm/yy) <u>06/08/11</u>	Time (24h): std / daylight <u>1046 hrs to 1505 hrs</u>	Water Level low - mean - bankfull - overbank falling - steady - rising <u>bankfull</u>
Segment/Reach ID: <u>49</u>	Left Bank / Right Bank / Island <u>Island</u>			
Operations Division: <u>C</u>				
Survey by: <u>Foot</u> ATV / Boat / Helicopter / Overlook / _____		Sun / Clouds / Fog / Rain / Snow / Windy / <u>Calm</u>		Air Temp + / - <u>26</u> deg C

2 SURVEY TEAM # <u>142</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>
	<u>Arkun Bausch</u>	<u>Cardno Entrix</u>	<u>Arkun Bausch</u>
	<u>Jack Smith</u>	<u>USCG</u>	<u>Jack Smith</u>
	<u>Betsy Honda</u>	<u>DEQ</u>	<u>Betsy Honda</u>

3 SEGMENT Total Segment/Reach Length 1840 m Segment/Reach Length Surveyed 1705 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 (S) Vegetated (S) 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 2 bags or _____ trucks access restrictions Island

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>1295</u> A			X		60	30	<1				(X)											(Grass) tree
<u>1296</u> B			X	P	871	177	0															veg. tree shrub debris
<u>1297</u> C				X	5	2	<1			(X)	X							X				veg. tree shrub debris
<u>1298</u> D				P	232	123	0															veg. T, S, D
<u>1299</u> E				X	2	2	<1				(X)											(veg) T, S, D
<u>1300</u> F				X	0.3	0.3	50			(X)	X							(X)				veg. T, S, debris
<u>1301</u> G				X	0.3	0.3	50			(X)	X							(X)				veg. T, S, 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

Zones A, C, E, F, G, I, J - NTR

Zones - B, D, H, K, L, M - NOD

Sketch (Y) / No Photos (Y) / No Frames _____ Photographer [Signature]

RIVER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident

DB/6

1 GENERAL INFORMATION		Date (dd/mm/yy)	Time (24h): std / daylight	Water Level
Segment/Reach ID: <u>49</u>	Left Bank / Right Bank / Island	<u>06/08/11</u>	<u>10:16</u> hrs to <u>15:05</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

2 SURVEY TEAM # <u>142</u>	Name	Organization	Signature

3 SEGMENT Total Segment/Reach Length 1840 m Segment/Reach Length Surveyed 1705 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: _____ 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 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

1302
1303
1304
1305
1306
1307

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	GT	ST	FL	FR	MS	TB	PT	TC		SR	AP	NO	
HA			X	R	1114	574	0														✓	veg, J.S., D
I				X	0.15	0.1	50			(X)	X						X					Debris
J			X		15	5	<1			X	(X)		X									(Tree Shrub)
K			Px	Bx	470	166	0														✓	Tree Shrub
L			Px	Bx	195	104	0														✓	Tree Shrub
M			Px	Bx	341	111	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

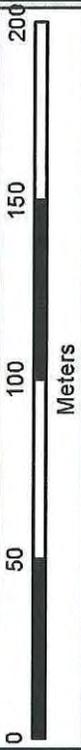
8 COMMENTS ecological/recreational/cultural/economic constraints - shorezone biota and wildlife observations - cleanup recommendations

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

*Zone L moved to be in C49 RB

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





108° 43' 00" W

108° 43' 00" W

108° 44' 00" W

108° 44' 00" W

CYB - LB
6 JUL 11
GRAHAM

RECENTLY
PLANTED
SOY BEANS
Zone B
SURVEY - NOO

WINTER WHEAT

SURVEY - NOO

Zone C

ZONE A

oil band on
winter wheat
1cm - 30cm
ST/CT/ev
10% - 30% - 60%
increasing
to NE

NOO

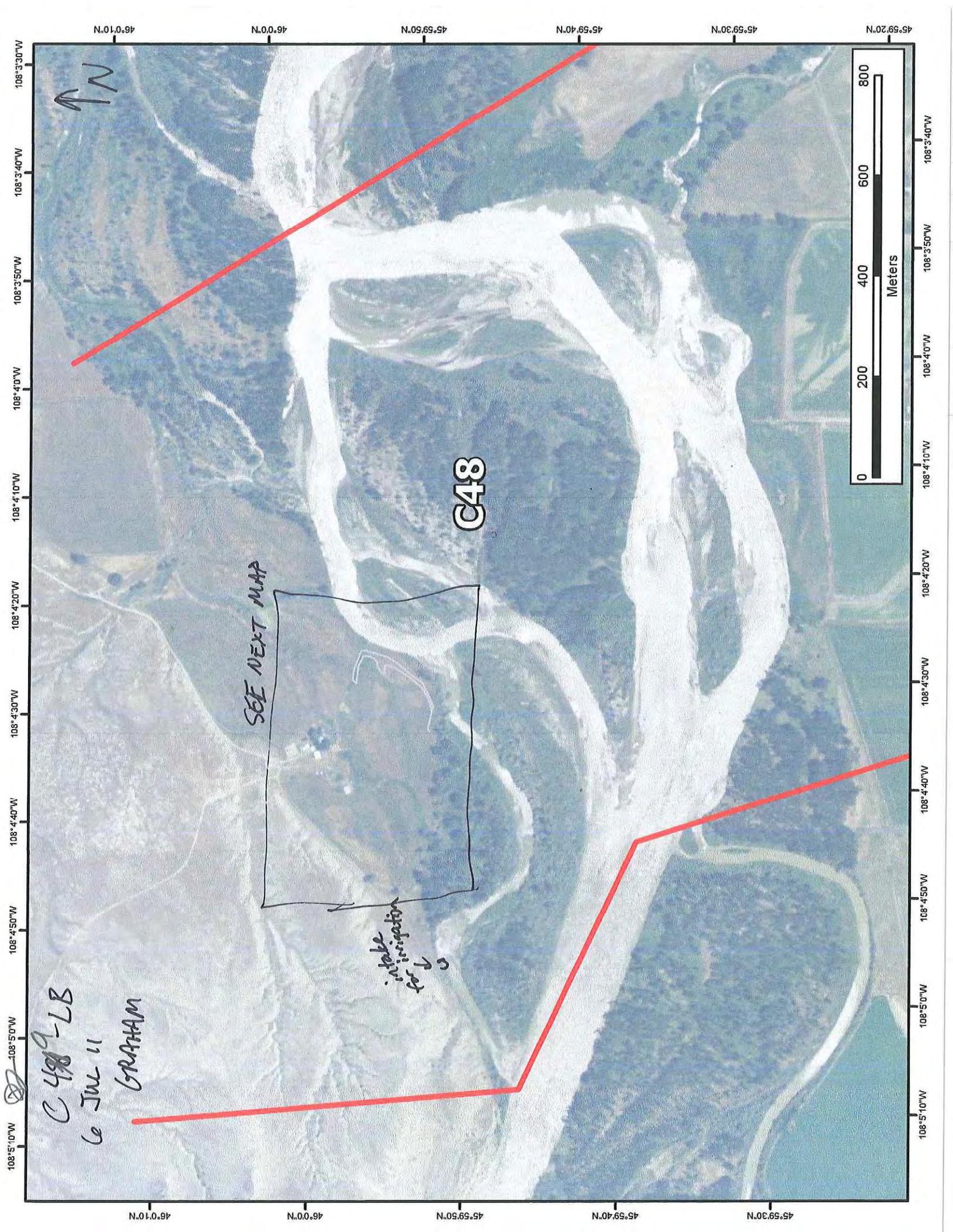
NOO

SURVEY

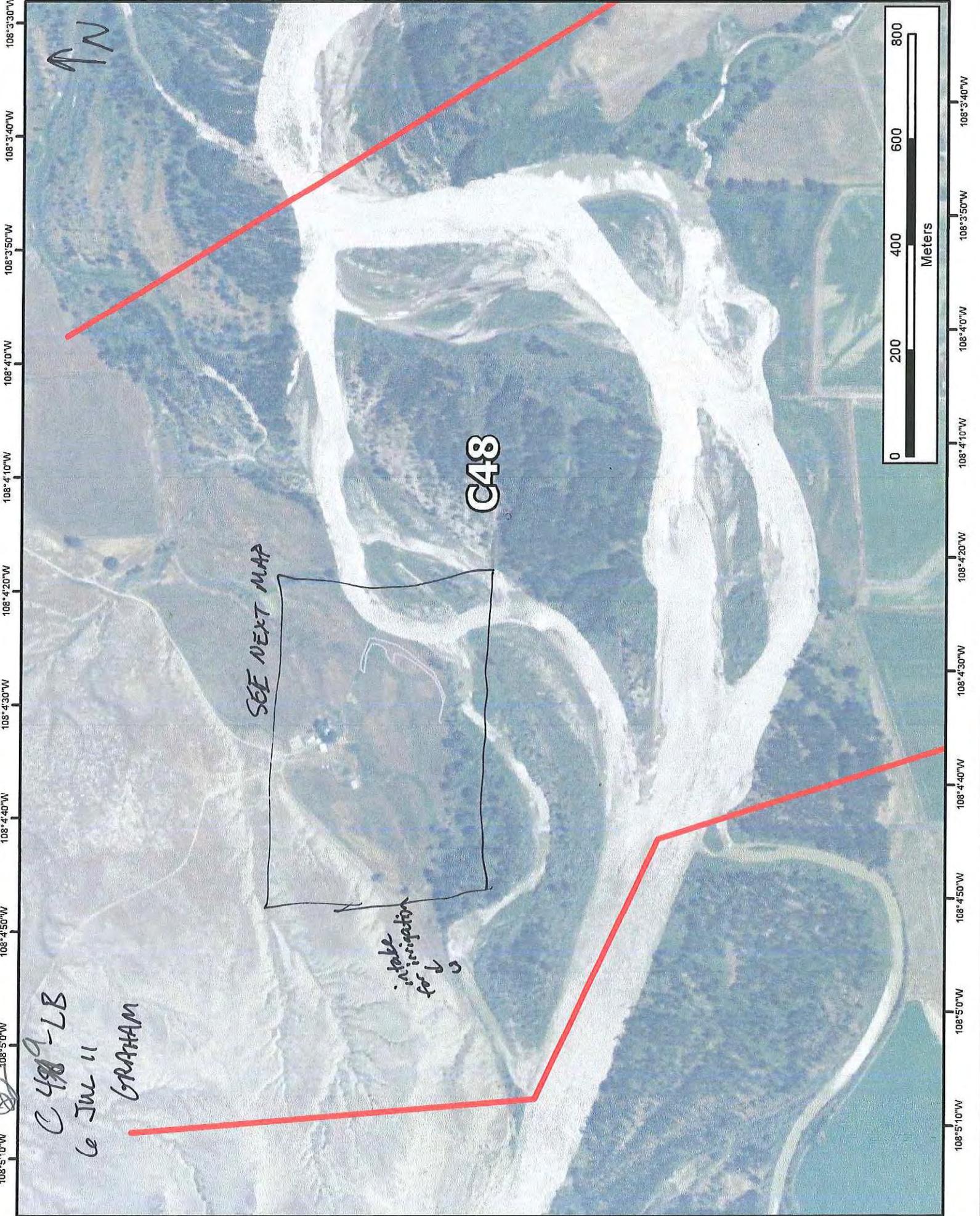
20 cm - 30 cm band
up to 60% CT/W

10 cm band
30% CT

1 cm band
ST
10%



46°01'0"N 46°00'0"N 45°59'50"N 45°59'40"N 45°59'30"N 45°59'20"N



108°51'0"W 108°50'0"W 108°45'0"W 108°40'0"W 108°35'0"W 108°30'0"W

C 48⁹-LB
6 Jul 11
GRAHAM

SEE NEXT MAP

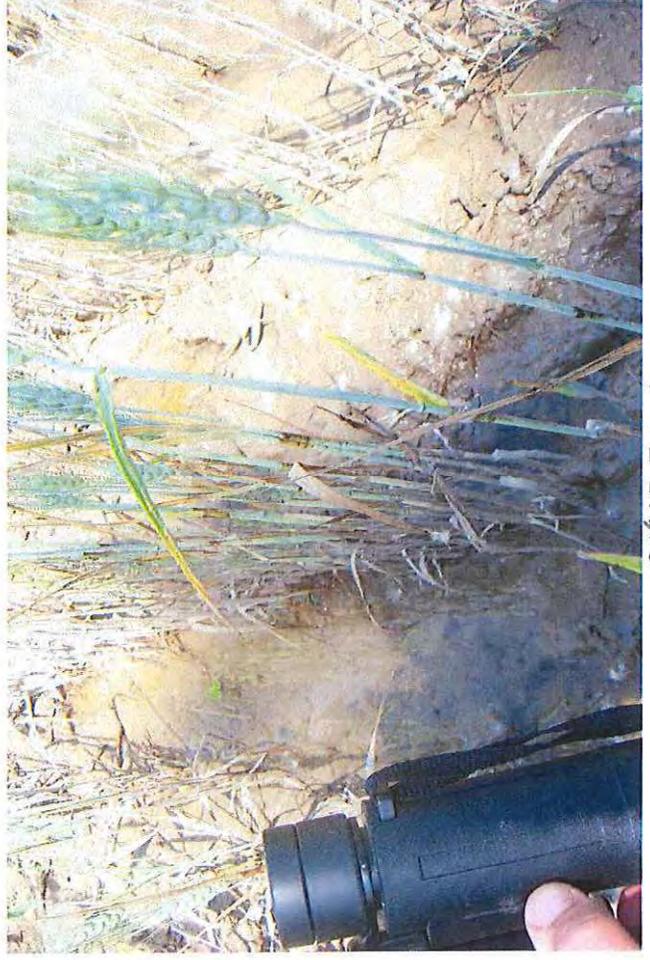
intake
for irrigation

C48

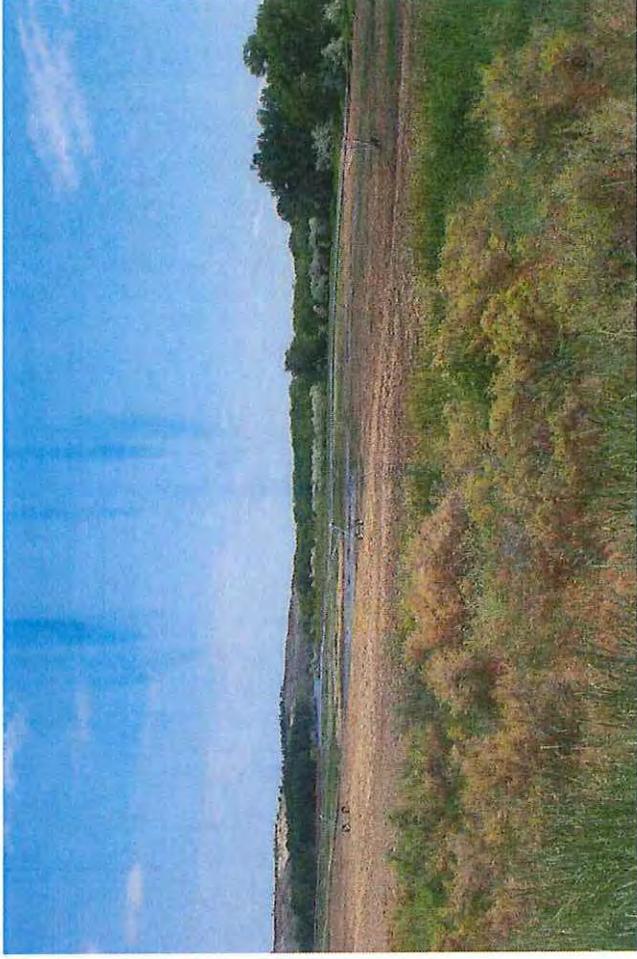




C48-LB, Zone A
49



C48-LB, Zone A
49



C48-LB, back of winter wheat field looking at river
49



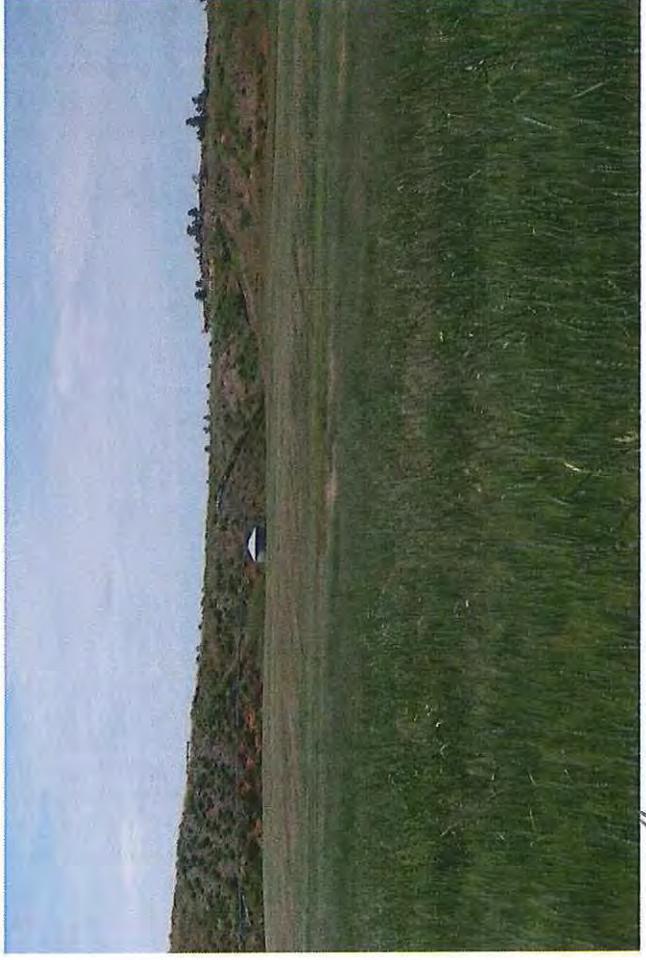
C48-LB, start of Zone A
49



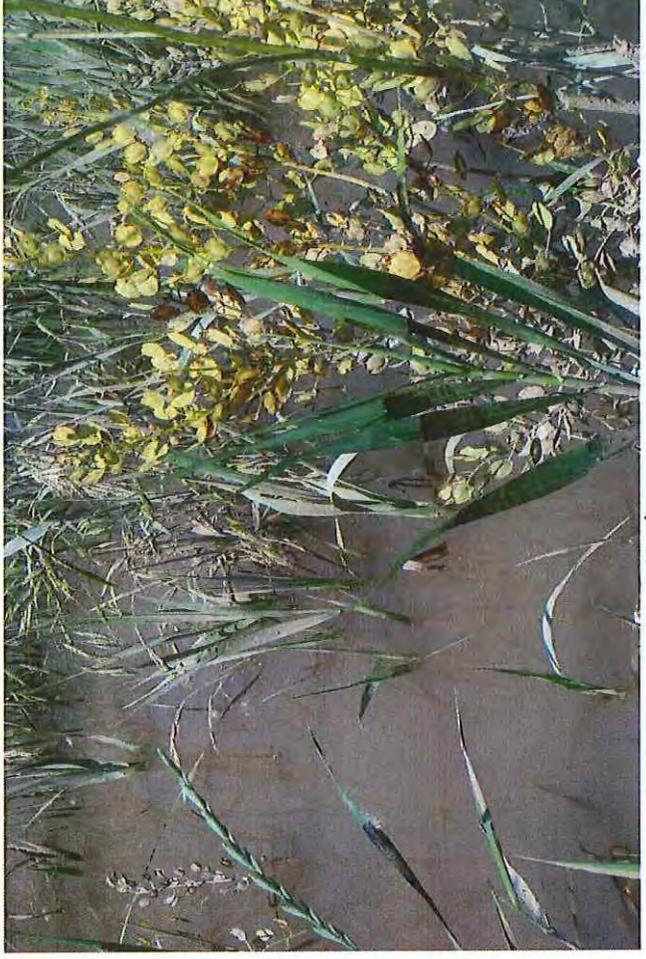
C48-LB, Zone A
49



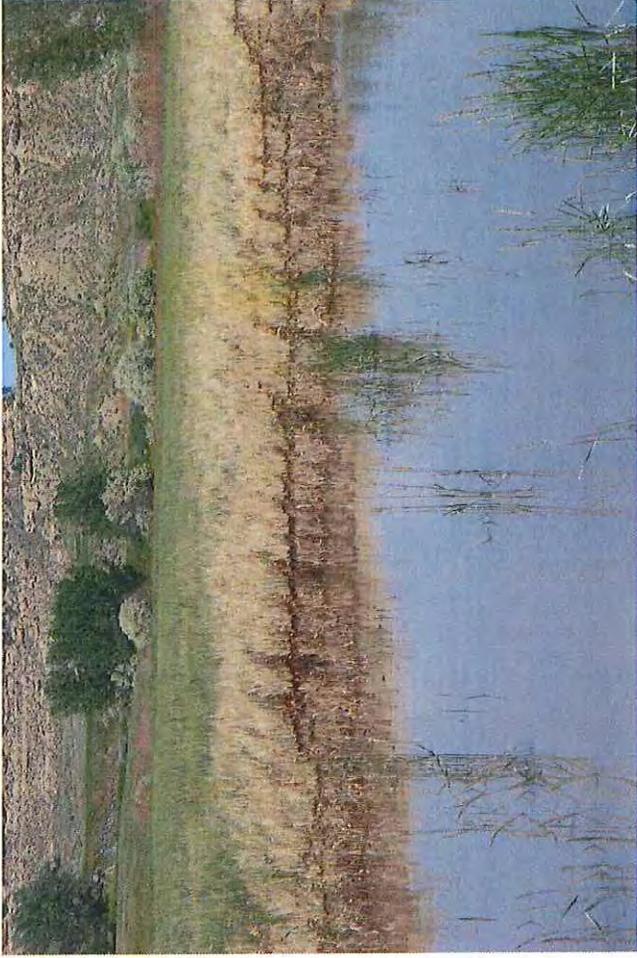
C48-LB, Zone A
49



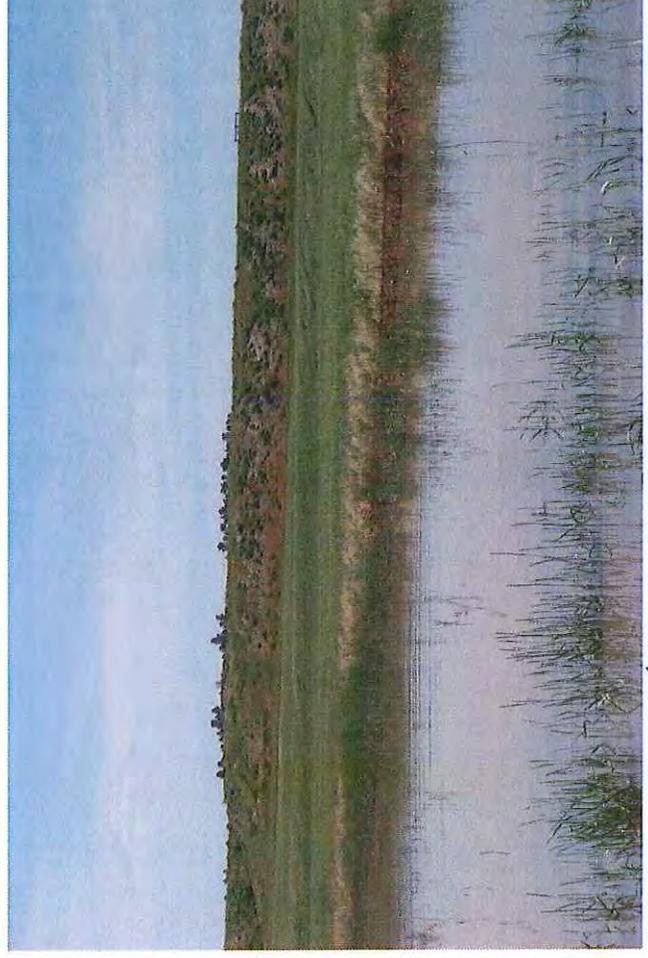
C48-LB, Zone A, in heavier area looking away from river over field
49



C48-LB, Zone A
49



C48-LB, Zone A standing at furthest extend SCATed, heavier area
49



C48-LB, Zone A looking away from river
49

DB/G

RIVER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident

Page _____ of _____

1 GENERAL INFORMATION		Date (dd/mm/yy)	Time (24h): std / daylight	Water Level
Segment/Reach ID: <u>049</u>	<input checked="" type="checkbox"/> Left Bank <input type="checkbox"/> Right Bank / Island	<u>03/08/11</u>	<u>0900</u> hrs to <u>1345</u> hrs	low - mean - bankfull - overbank
Operations Division:				falling - steady - rising
Survey by: <u>Foot / ATV / Boat / Helicopter / Overlook /</u>		Sun / Clouds / Fog / Rain / Snow / Windy / Calm		Air Temp + / - _____ deg C

2 SURVEY TEAM # <u>6</u>	Name	Organization	Signature
	<u>Brandon Owens</u>	<u>Cardno Entrix</u>	<u>See attached</u>
	<u>Courtney Tyree</u>	<u>Montana FWP</u>	
	<u>Dominic Ventura</u>	<u>EPA</u>	

3 SEGMENT Total Segment/Reach Length _____ m Segment/Reach Length Surveyed 290 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: 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: 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 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 50 bags or _____ trucks access restrictions state road. No access if rains prior

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"/>	<u>260</u>	<u>90</u>	<u>5</u>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>						<input checked="" type="checkbox"/>					<u>grass, debris, trees</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

A - Primarily coat/stan, recommend Natural attenuation
 If possible cot + remove (sensitive area)
 No equipment usage!

Split from survey of USOLB to be in correct area.

Sketch Yes / No Photos Yes / No Frames _____ Photographer _____

RIVER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident

1 GENERAL INFORMATION		Date (dd/mm/yy) <u>03/08/11</u>	Time (24h): std / daylight <u>0900</u> hrs to <u>1345</u> hrs	Water Level low - mean - bankfull - overbank falling - steady - rising <u>overbank</u>
Segment/Reach ID: <u>C50</u> (Left Bank / 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 + / - _____ deg C

2 SURVEY TEAM # <u>6</u>	Name	Organization	Signature
	<u>Brandon Owens</u>	<u>Condo ENTRIX</u>	<u>[Signature]</u>
	<u>Courtney Tyree</u>	<u>Montana FWP</u>	<u>[Signature]</u>
	<u>Dominic Ventura</u>	<u>EPA</u>	<u>[Signature]</u>

3 SEGMENT Total Segment/Reach Length 1011 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 X Manmade: Solid _____ Permeable _____ (type) _____ Wetland: Swamp _____ Bog/Fen _____ Marsh _____

Sediment Bank: Clay/Mud _____ Sand _____ Mixed X Pebble/Cobble _____ Boulder _____ Peal/Organic _____ Vegetated Bank: X Wooded Upland: 5

Sediment Flat: Clay/Mud _____ Sand _____ Mixed/Coarse X 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 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 50 bags or _____ trucks access restrictions state RD. no access if rains prior

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	627	2	75					X						X					much
B	X				361	65																X	gravel, cobble
C				X	650	340	5			(X)	X							X					gravel, debris trees

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 → Brown oil + rainbow sheen observed on water surface
 → recommend absorbents to remove oil
 → wildlife noticed dying in oil, wood ducks, carp, birds spp.
 → WMA, + park

Zone B → NOO

Zone C → primarily coat/stain, recommend Natural Attenuation,
 If possible cut + remove (sensitive area), NO Equipment usage!

Sketch Yes / No Photos Yes / No Frames _____ Photographer _____

→ Zone C split into C50LB and C49LB



08/16

RIVER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident

1 GENERAL INFORMATION		Date (dd/mm/yy) 08/04/2011	Time (24h): std / daylight 1400 hrs to 1443 hrs	Water Level low - mean - <u>bankfull</u> - overbank (falling) steady - rising
Segment/Reach ID: C49 <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 +/- 37 deg C

2 SURVEY TEAM # 4	Name	Organization	Signature
Bruce Kvam		Polaris	
Chris Arredondo		CardnoEntrix	
Mark Denny		Crow Tribal Representative	
John Davis		USCG	
Jay Watson		FWP	

3 SEGMENT Total Segment/Reach Length 1745 m Segment/Reach Length Surveyed 436 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 P Sand _____ Mixed _____ Pebble/Cobble S 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: Clay/Mud

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 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

1197
1198

OIL ZONE	RIVER BANK ZONE				OIL COVER			OIL THICKNESS					OIL CHARACTER						SUBST. TYPE(S)				
					Length	Width	Distrib.	OIL THICKNESS					OIL CHARACTER										
	ID	MS	LB	UB	OB	m	m	%	TO	CV	CT	ST	FL	FR	MS	TB	PT	TC		SR	AP	NO	
A				X	426	404																X	
B				X	10	10	<1			X	(X)							X					Small Woody 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

Zone A: No treatment required.

Zone B: No treatment recommended.

Sketch Yes / No Photos Yes / No Frames _____ Photographer Bruce Kvam

DB/G

RIVER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident

Page _____ of _____

1 GENERAL INFORMATION		Date (dd/mm/yy)	Time (24h): std / daylight	Water Level
Segment/Reach ID: <u>L49</u> Left Bank / Right Bank / Island		<u>06/03/11</u>	<u>0745</u> hrs to <u>1205</u> hrs	low - mean - bankfull - overbank
Operations Division:		<u>Sun</u> / <u>Clouds</u> / Fog / Rain / Snow / Windy / Calm		falling - steady - rising
Survey by: <u>Foot</u> / <u>LATV</u> / Boat / Helicopter / Overlook / _____				Air Temp +/- <u>29</u> deg C

2 SURVEY TEAM # <u>2</u>	Name	Organization	Signature
	<u>Adam Bausch</u>	<u>Cardon ENTRIX</u>	<u>[Signature]</u>
	<u>Jack Smith</u>	<u>USCG</u>	<u>[Signature]</u>
	<u>Betsy Horda</u>	<u>DEQ</u>	<u>[Signature]</u>
	<u>[Signature]</u>	<u>Not part of SCAT</u>	<u>[Signature]</u>

3 SEGMENT Total Segment/Reach Length _____ m Segment/Reach Length Surveyed 1854 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 160m 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: N oiled 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

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"/>		215	25	0															<input checked="" type="checkbox"/>
B				<input checked="" type="checkbox"/>	250	30	<1			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>									<input checked="" type="checkbox"/>
C			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	1359	273	0															<input checked="" type="checkbox"/>

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 N Overbank Survey Completed N Shoreline Survey Completed N

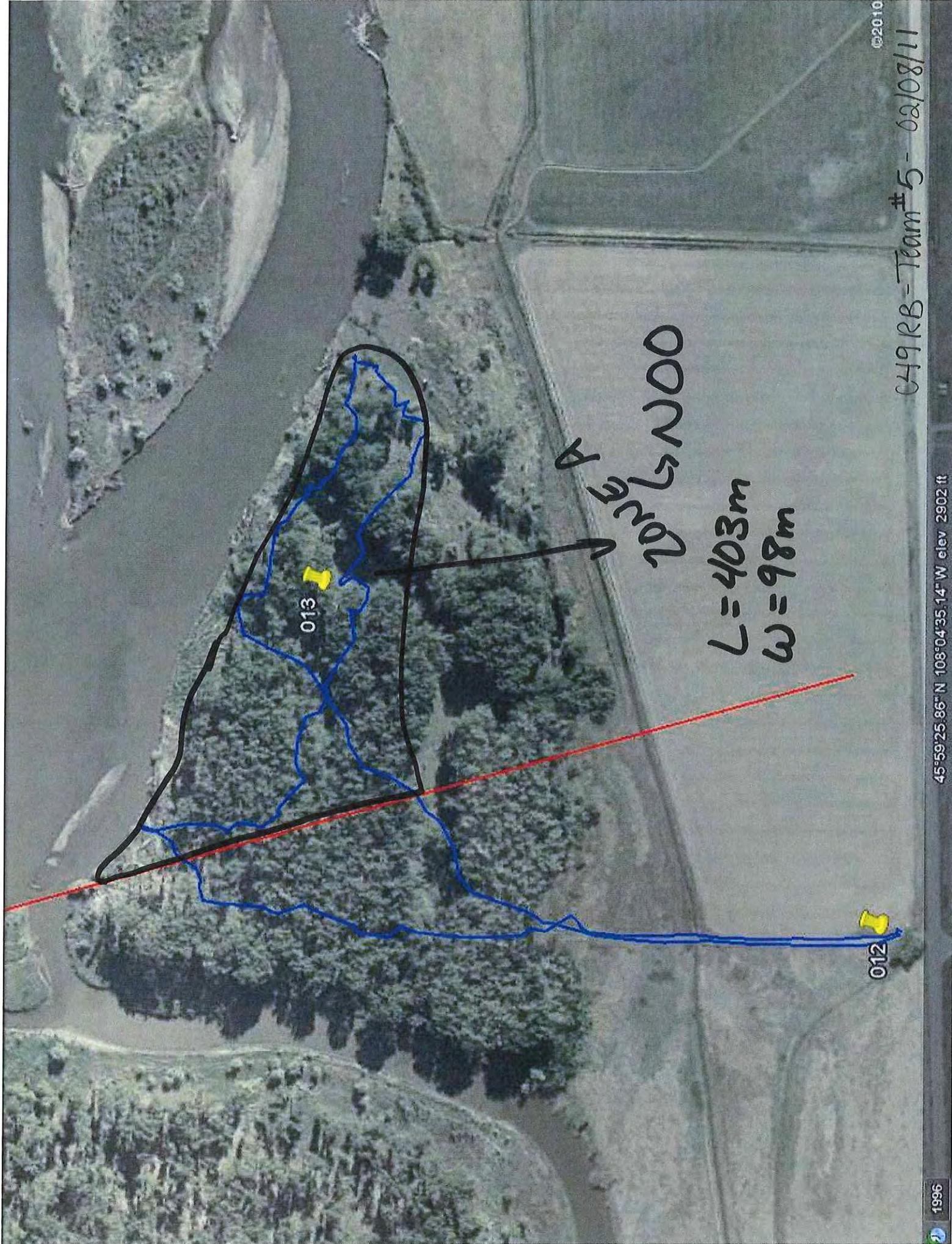
Zones - A, C - NOO
Zone B - NTR

Sketch Yes / No Photos Yes / No Frames _____ Photographer _____



A - MOC
B - NTR
C - MOC

C49 LB
Team #2
06/08/11



013

012

L = 403m
W = 98m

Dore A

©2010

CH9RB-Team#5 - 02/08/11

45°59'25.86" N 108°04'35.14" W elev 2902 ft

1996

DB/G

RIVER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident

1 GENERAL INFORMATION		Date (dd/mm/yy) <u>08/08/11</u>	Time (24h): std / daylight <u>1330</u> <u>1200</u> ⁸⁰ hrs to <u>1445</u> hrs	Water Level low - mean - bankfull <u>overbank</u> falling - steady - rising
Segment/Reach ID: <u>C49</u> Left Bank / Right Bank / Island		Operations Division: <u>C</u>		
Survey by: <u>Foot / ATV / Boat / Helicopter / Overlook /</u>		Sun / <u>(Clouds)</u> / Fog / Rain / Snow / Windy / Calm		Air Temp +/- <u> </u> deg C

2 SURVEY TEAM # <u>6</u>	Name	Organization	Signature
	<u>Brandon Owens</u>	<u>Cardno ENTRIX</u>	<u>[Signature]</u>
	<u>Dominic Ventura</u>	<u>EPT</u>	<u>[Signature]</u>
	<u>Seremiah Wood</u>	<u>MTFWP</u>	<u>[Signature]</u>

3 SEGMENT Total Segment/Reach Length 3057 m Segment/Reach Length Surveyed 910 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 X Shelf Manmade: Solid Permeable (type) Wetland: Swamp Bog/Fen Marsh

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

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 confined or leveed Substrate Type: Mixed

Sloped: (>5°) (15°) (30°) straight braided P 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 -1 bags or trucks access restrictions

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

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		910	232	-1			X	(X)						X				mixed

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

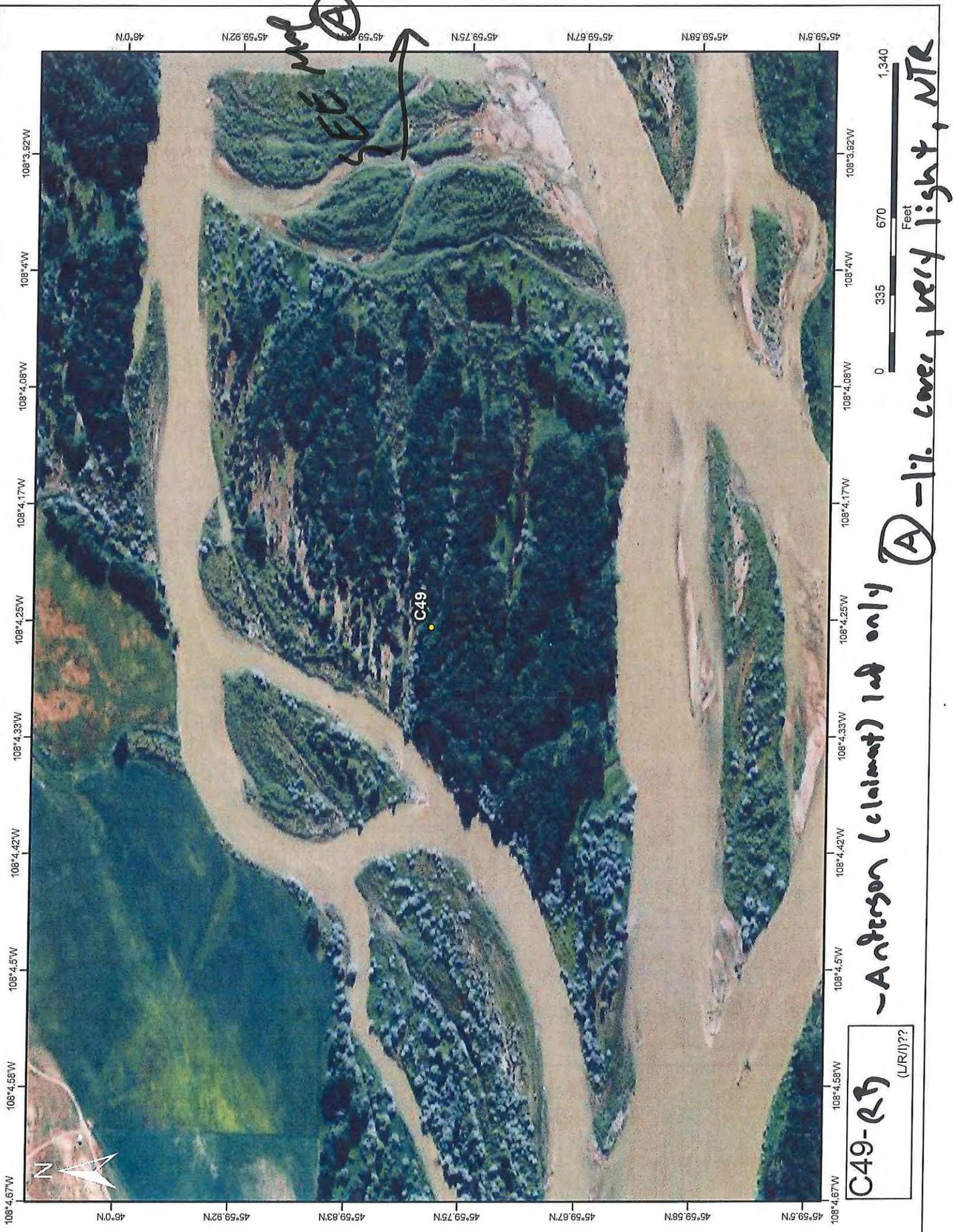
8 COMMENTS ecological/recreational/cultural/economic constraints - shorezone biota and wildlife observations - cleanup recommendations

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

Zone A: -1% cover, primarily staining, recommending Natural Attenuation.

NTR

Sketch Yes / No Photos Yes / No Frames Photographer



C49-(R7)
(LRI)??

-Anderson (claimant) 1st only

A

-1/2 cover, very light, NTR



108°4.67'W 108°4.56'W 108°4.42'W 108°4.33'W 108°4.25'W 108°4.17'W 108°4.08'W 108°3.92'W

45°59.5'N 45°59.58'N 45°59.67'N 45°59.75'N 45°59.83'N 45°59.92'N 46°0'N

EE rd A



SILVERTIP PIPELINE INCIDENT
Yellowstone River
Map 57

Vary Light (trace)
NTR

*Data Current through 7/30/2011



RIVER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident

Page _____ of _____

1 GENERAL INFORMATION		Date (dd/mm/yy)	Time (24h): std / daylight	Water Level
Segment/Reach ID: <u>C49</u>	Left Bank (Right Bank) / Island	<u>06/08/11</u>	<u>1046</u> hrs to <u>1505</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 +/- _____ deg C

2 SURVEY TEAM # <u>1+2</u>	Name	Organization	Signature
	<u>Nathan Hammond</u>	<u>Cardno Entrix</u>	<u>[Signature]</u>
	<u>Mark Ewanic</u>	<u>DEQ</u>	<u>[Signature]</u>
	<u>Peter Reich</u>	<u>EPA</u>	<u>[Signature]</u>
	<u>Adam Bausch</u>	<u>Cardno Entrix</u>	<u>[Signature]</u>
	<u>Jack Smith</u>	<u>DSCG</u>	<u>[Signature]</u>
	<u>Betsy Hovda</u>	<u>DEQ</u>	<u>[Signature]</u>

Attached

3 SEGMENT	Total Segment/Reach Length _____ m	Segment/Reach Length Surveyed <u>195</u> 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 <u>X</u> Pebble/Cobble _____ Boulder _____ Peat/Organic _____	Vegetated Bank: <u>S</u>		Wooded Upland: <u>P</u>
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 <u>X</u> oxbow _____ flood plain valley _____	Forested / Vegetated / Bare

4C RIVER CHANNEL CHARACTER	circle or select as appropriate
est. width: <1m 1-10m <u>10-100m</u> >100m 160m	est. water depth: <1m <u>1-3m</u> 3-10m >10m _____ m
shoal(s) present <u>Y/N</u>	point bar present <u>Y/N</u>
seasonal water level: low / mean / bank full / overbank flow	bar-shoal substrate: silt / sand / gravel / cobble / boulder / bedrock / debris
	est. change over next 7 days: <u>falling</u> - same - rising

5 OPERATIONAL FEATURES	Suitable backshore staging <u>Y/N</u>	Access: Direct from backshore <u>Y/N</u> Alongshore from next segment <u>Y/N</u>
Debris: <u>Y/N</u> oiled <u>Y/N</u> amount _____ bags or _____ trucks	access restrictions <u>Island</u>	
Oiled trees/shrubs <u>Y/N</u> River Current strong <u>Y/N</u>	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>2432</u> A			<u>P</u>	<u>S</u>	<u>195</u>	<u>104</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				

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

A=NOO

* Split from survey done on C49 IS AA 10/9/11

Sketch Yes/No _____ Photos Yes/No _____ Frames _____ Photographer _____



C49-IS

C49-RB

A

DB/6

RIVER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident

1 GENERAL INFORMATION		Date (dd/mm/yy)	Time (24h): std / daylight	Water Level
Segment/Reach ID: <u>49</u>	Left Bank / Right Bank / <u>Island</u>	<u>06/08/11</u>	<u>1046</u> hrs to <u>1505</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 / <u>Calm</u>			Air Temp +/- <u>26</u> deg C

2 SURVEY TEAM # <u>142</u>	Name	Organization	Signature

3 SEGMENT Total Segment/Reach Length 1840 m Segment/Reach Length Surveyed 1705 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: _____ 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 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

302
303
304
305
306
307

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	
HA			X	R	1114	574	0														✓	veg, T.S., D
I				X	0.15	0.1	50			(X)	(X)						X					Debris
J			X		15	5	<1			X	(X)		X									(veg shrub)
K			Px	Bx	470	1660	0														✓	tree shrub
L			Px	Bx	195	104	0														✓	Debris veg
M			Px	Bx	241	111	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

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



0 250 500 1,000 Feet

9/1/2009
2009
2 x

AT 14
08/14/14

C49 - C49

C49 RB

Zone B N00

Agriculture land

Zone debris
Died



© 2011 Google

W.M. Rd

Image USDA Farm Service Agency

45°59'33.78" N 108°04'05.69" W elev 2906 ft

1996

©2010



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

DD/G

RIVER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident

1 GENERAL INFORMATION		Date (dd/mm/yy)	Time (24h): std / daylight	Water Level
Segment/Reach ID: <u>C49</u>	Left Bank / Right Bank / Island	<u>28/09/2011</u>	<u>9:30</u> hrs to <u>13:00</u> hrs	<u>low</u> - mean - bankfull - overbank
Operations Division:				<u>falling</u> - steady - rising
Survey by: <u>Foot / ATV / Boat / Helicopter / Overlook /</u>	<u>Sun</u> / Clouds / Fog / Rain / Snow / Windy / Calm			Air Temp <u>9</u> / <u>28</u> deg C

2 SURVEY TEAM # <u>142</u>	Name	Organization	Signature
	<u>Todd FARRAR</u>	<u>POLARIS</u>	<u>Todd F</u>
	<u>LAUREN Glushik</u>	<u>POLARIS</u>	<u>LAUREN G</u>
	<u>Matthew Kent</u>	<u>DEQ</u>	<u>Matthew K</u>
	<u>Herlo GAUVREAU</u>	<u>POLARIS</u>	<u>Herlo G</u>
	<u>Michelle Leonard</u>	<u>ENTRIX</u>	<u>Michelle L</u>
	<u>MARK EWANIC</u>	<u>DEQ</u>	<u>Mark E</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 S Mixed S 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 P 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 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

2410
2411

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>718</u>	<u>495</u>	<u><1</u>			<u>S</u>	<u>P</u>										<u>X</u>	<u>kg, Db</u>
<u>B</u>				<u>X</u>	<u>275</u>	<u>128</u>	<u><1</u>			<u>S</u>	<u>P</u>										<u>X</u>	<u>kg, Db</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

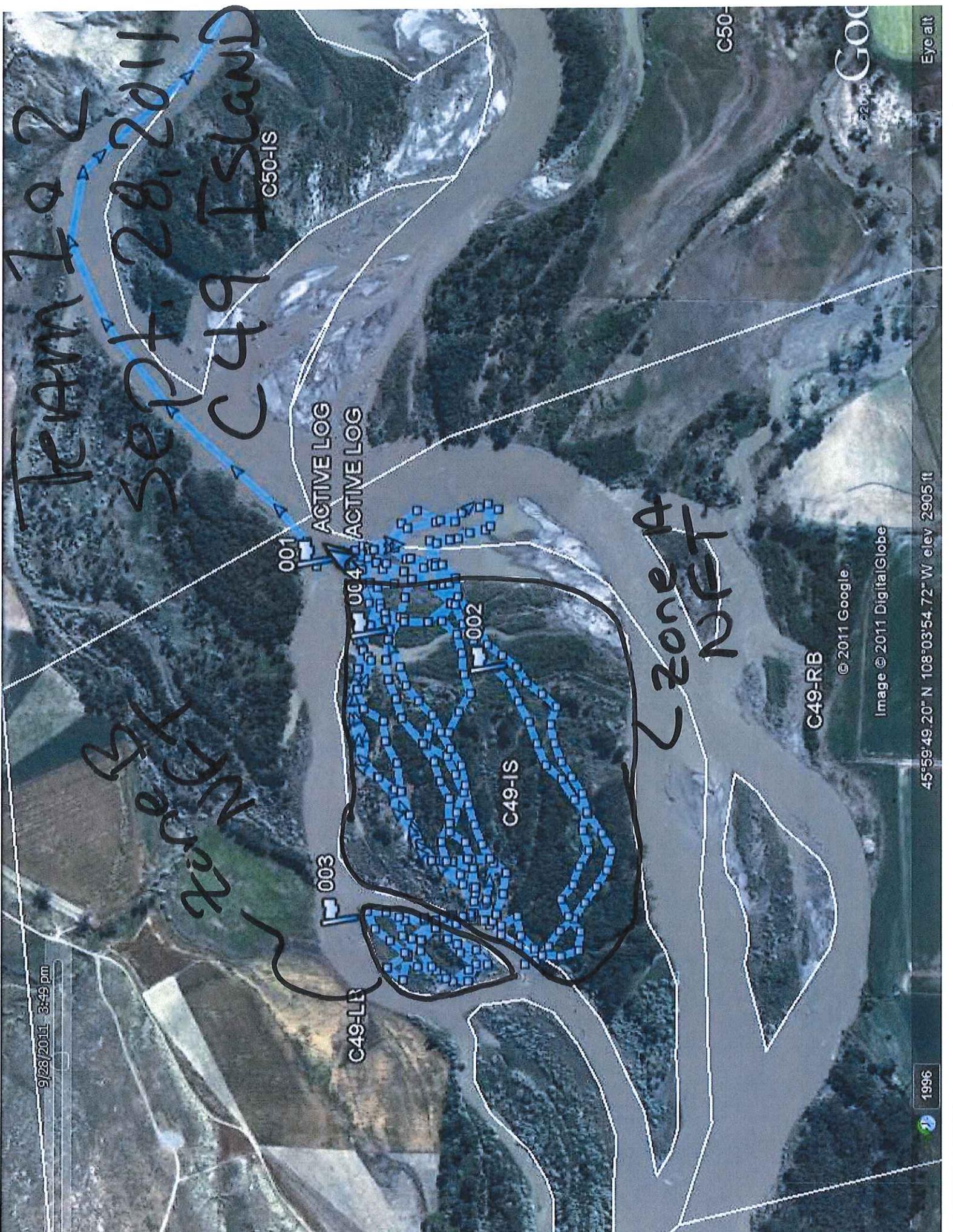
8 COMMENTS ecological/recreational/cultural/economic constraints - shorezone biota and wildlife observations - cleanup recommendations

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

A: RESCAT for fill-ins with Ops Hot Shots
Stain on trees and vegetation, treated by Hot Shots
Meet the conditions of the CTR, NFT

B: Stain on trees and vegetation treated by Hot Shots
Meet the conditions of the CTR, NFT

Sketch Yes / No Photos Yes / No Frames _____ Photographer _____



Team 7 a 2

sept. 28, 2011

C49 Island

Zone B

ACTIVE LOG

ACTIVE LOG

001

004

002

003

C49-IS

C49-LR

C49-RB

Zone A

NET

© 2011 Google

Image © 2011 DigitalGlobe

45°59'49.20" N 108°03'54.72" W elev 2905 ft

1996



Eye alt

GOO

C50-

12016

RIVER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident

1 GENERAL INFORMATION		Date (dd/mm/yy)	Time (24h): std / daylight	Water Level
Segment/Reach ID: <u>C49</u> Left Bank / Right Bank / Island		<u>25/09/2011</u>	<u>15:00</u> hrs to <u>16:00</u> hrs	<u>low</u> mean - bankfull - 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 / Calm		Air Temp <u>11</u> - <u>35</u> deg C

2 SURVEY TEAM # <u>2</u>	Name	Organization	Signature
	<u>Herlo Gaudreau</u>	<u>TOURIS</u>	<u>[Signature]</u>
	<u>Bob Roll</u>	<u>DEQ</u>	<u>[Signature]</u>

3 SEGMENT Total Segment/Reach Length 1648 m Segment/Reach Length Surveyed 825 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 S Mixed S 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: Fixed

Sloped: (>5°)(15°)(30°) straight P 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 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	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>B</u>			<u>S</u>	<u>P</u>	<u>825</u>	<u>350</u>	<u><1</u>			<u>S</u>	<u>P</u>							<u>X</u>			<u>Ug, Db</u>
					<u>235</u>	<u>208</u>															
<u>A</u>			<u>S</u>	<u>P</u>	<u>437</u>	<u>160</u>															<u>✓</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				

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

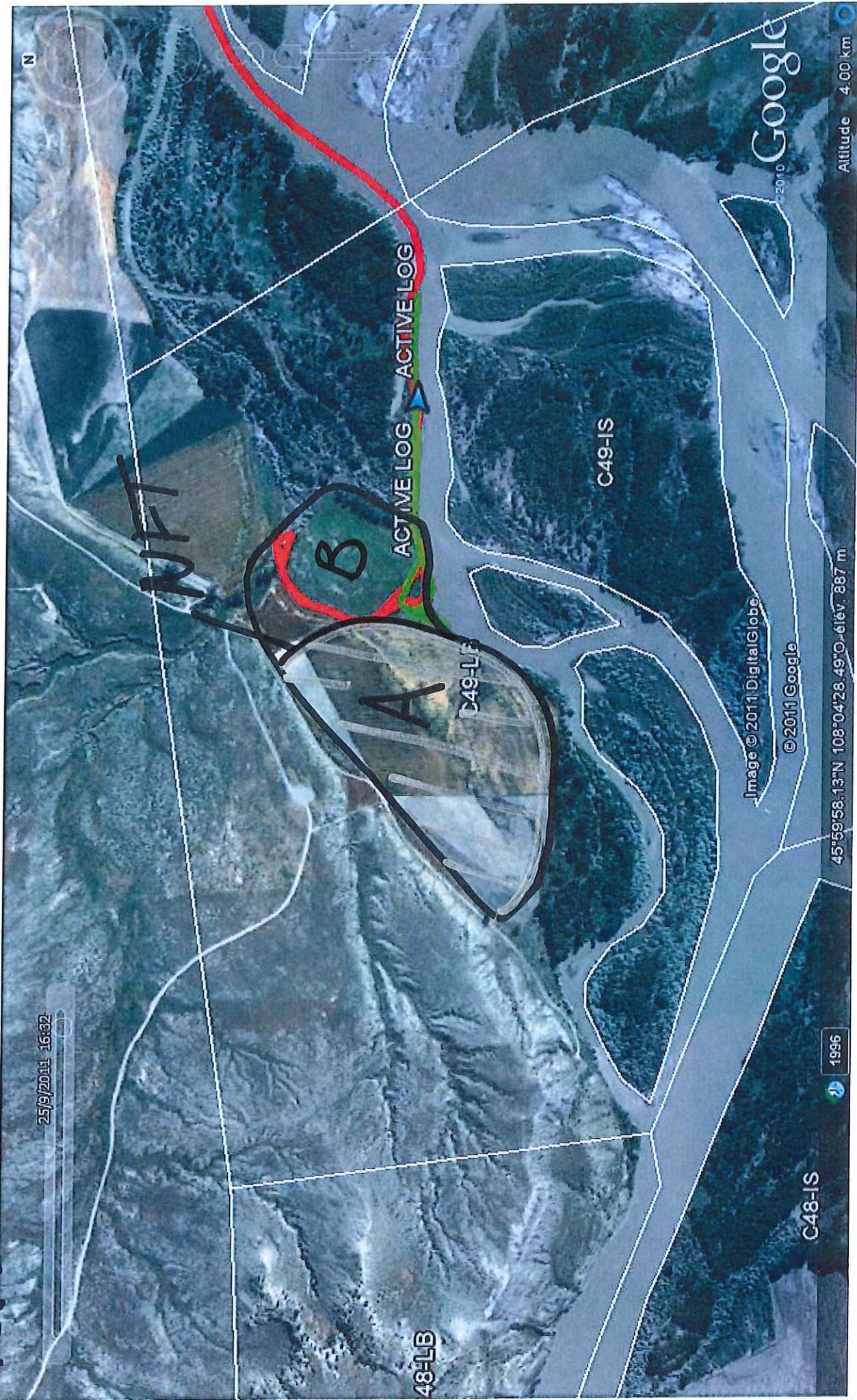
B: Re SCAT with Ops Hot Shots
 stain on shrubs, ops cleaned the segment

A: The zone on the map with strips have been tilled by the owner
 there no trace of oil in this area
 Meet the conditions of the CTR, NPT

Sketch Yes / No Photos Yes / No Frames _____ Photographer _____

25/C7/2011 ReSCAT C-49LB
Team #2

2/2



17B/6

1 GENERAL INFORMATION		Date (dd/mm/yy)	Time (24h): std / daylight	Water Level
Segment/Reach ID: <u>C49</u> (Left Bank / Right Bank / Island)		<u>25/09/2011</u>	<u>15:00</u> hrs to <u>16:00</u> hrs	<u>low</u> - mean - bankfull - overbank
Operations Division: <u>C</u>		<u>Sun</u> Clouds / Fog / Rain / Snow / Windy / Calm		<u>falling</u> - steady - rising
Survey by: <u>Foot</u> / ATV / Boat / Helicopter / Overlook /				Air Temp: <u>17</u> / <u>35</u> deg C

2 SURVEY TEAM # <u>2</u>	Name	Organization	Signature
	<u>Herlo GAWREAU</u>	<u>Polaris</u>	<u>[Signature]</u>
	<u>Bob Roll</u>	<u>DEB</u>	<u>[Signature]</u>

3 SEGMENT Total Segment/Reach Length 1648 m Segment/Reach Length Surveyed 825 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 S Mixed S 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

Cliff or Bluff: _____ Est Height _____ m canyons _____ manmade _____ meander _____ confined or leveed _____ / Substrate Type: Mixed

Sloped: _____ (>5°)(15°)(30°) straight P 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 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		
A			<u>S</u>	<u>P</u>	<u>825</u>	<u>350</u>	<u>LT</u>			<u>S</u>	<u>P</u>								<u>X</u>			<u>Ug, Db</u>

VOID
split into two zones

7 SUBSURFACE OILING CONDITIONS Number of pit or trench - e.g., "A1"

TRENCH or PIT NO.	RIVER BANK ZONE				MAX. PIT DEPTH cm	OIL			WATER TABLE cm	SHEEN COLOUR B, R, S, N	CLEAN BELOW Yes/No	SUBST. TYPE(S)
	MS	LB	UB	OB		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

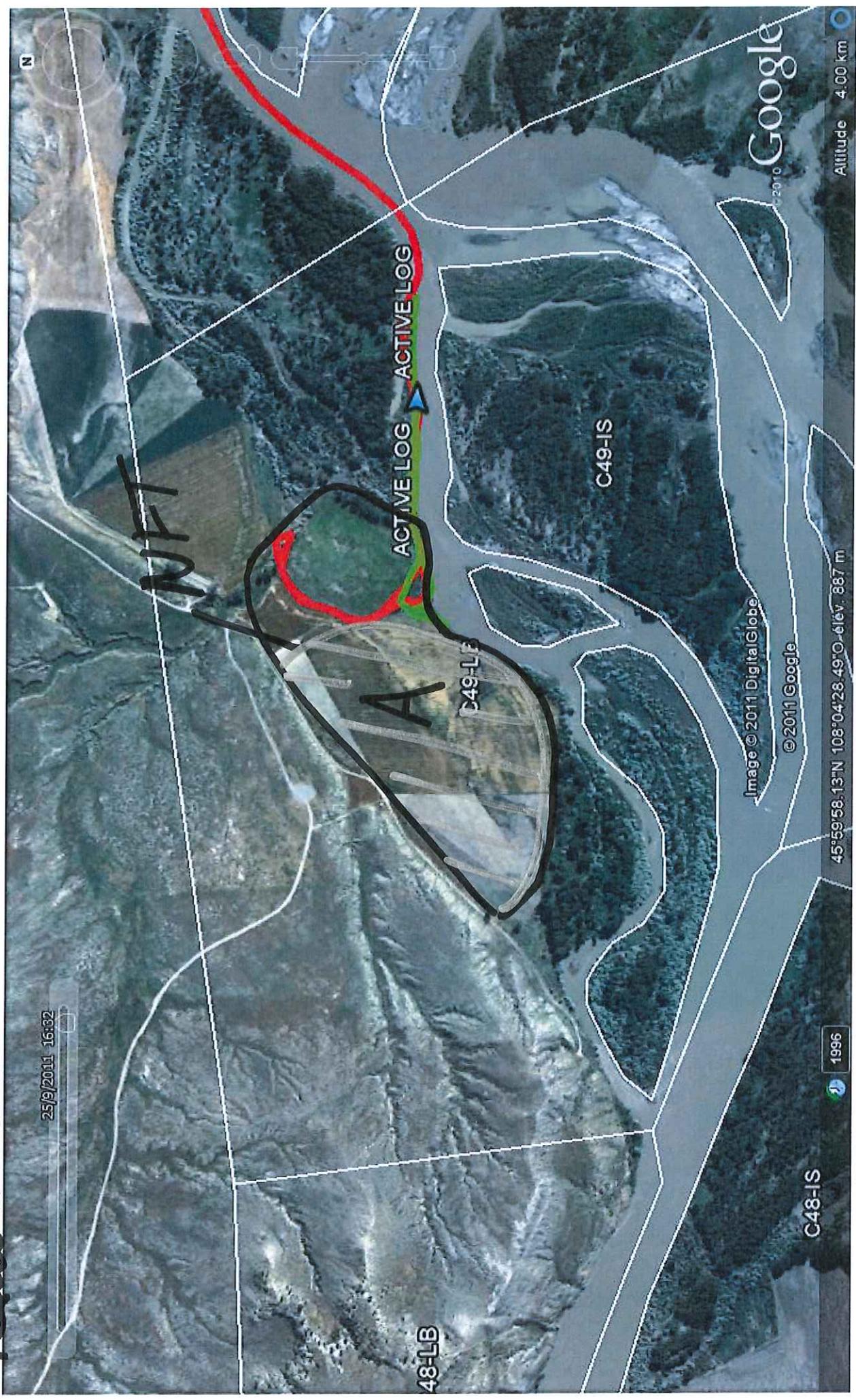
A: Re SCAT with 3 ps Hot Shots
stain on shrubs, ops cleaned the segment
The zone on the map with strips have been tilled by the owner
there no trace of oil in this area
Meet the condition of the CTR, NFT

2325

Sketch Yes / No Photos Yes / No Frames _____ Photographer _____

25/09/2011 ReSCAT C-49LB
Team #2

2/2



DB/B

RIVER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident

1 GENERAL INFORMATION		Date (dd/mm/yy)	Time (24h): std / daylight	Water Level
Segment/Reach ID: <u>C49</u>	Left Bank / Right Bank / Island	<u>26/09/2011</u>	<u>10:30</u> hrs to <u>12:00</u> hrs	<input checked="" type="radio"/> low - mean - bankfull - overbank
Operations Division: <u>C</u>				<input checked="" type="radio"/> falling - steady - rising
Survey by: <input checked="" type="radio"/> Foot <input type="radio"/> ATV / Boat / Helicopter / Overlook /		<input checked="" type="radio"/> Sun <input type="radio"/> Clouds / Fog / Rain / Snow / Windy / Calm		Air Temp: <u>29</u> deg C

2 SURVEY TEAM # <u>2</u>	Name	Organization	Signature
	<u>Herlo GAVUREAN</u>	<u>POLARIS</u>	<u>[Signature]</u>
	<u>Tom Bowington</u>	<u>DECO</u>	<u>[Signature]</u>

3 SEGMENT Total Segment/Reach Length 1535 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 P 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

Cliff or Bluff: _____ Est Height _____ m canyon _____ manmade _____ meander _____ confined or leveed _____

Sloped: (>5°)(15°)(30°) straight S braided P oxbow _____ flood plain valley _____

Substrate Type: Clay

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

2401
2402

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				<u>X</u>	<u>280</u>	<u>260</u>	<u><1</u>			<u>S</u>	<u>P</u>										<u>X</u>					<u>Ug Db</u>
B				<u>X</u>	<u>355</u>	<u>326</u>																			<u>X</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

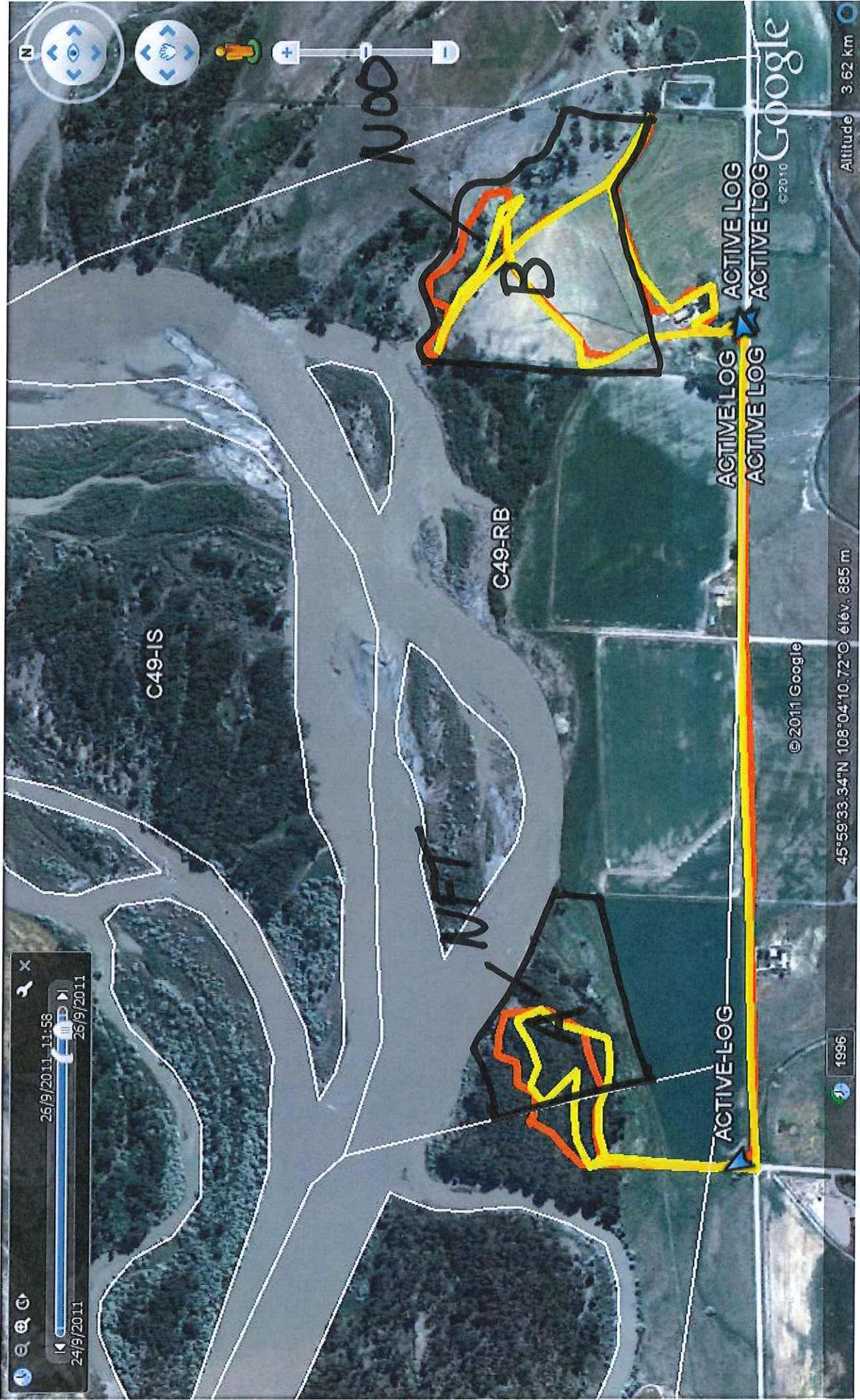
Overbank Survey Required Y / N Overbank Survey Completed Y / N Shoreline Survey Completed Y / N

A: Fill-In SCAT with Ops Hot Shots
Stain on vegetation and debris, the hot shots cleaned the oiled area. Meet the condition of the CTR, NFT

B: NOO

Sketch Yes / No Photos Yes / No Frames _____ Photographer _____

26/09/2011 RESCAT
Team #2 C49-RB





Appendix F

Completed SCAT Segment Sign-Off
Forms

SCAT SEGMENT OPERATIONS COMPLETION SIGN-OFF SHEET

SILVERTIP PIPELINE RELEASE

Segment CH9 IS Date of Survey 28/09/2011

Dates of Initial SCAT Assessments 06 AUG 2011
(to be filled out by SCAT Data Management)

CTR(s) Associated with SCAT Segment 52

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

Segment Assessment Complete¹

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 Einar MARK EWANIC/MT DEQ 9/28/11
Sign Name _____ Print Name/ Affiliation _____ Date _____
State Representative (DEQ/FWP)

[Signature] Herlo Gauvreaux, Polaris 28/09/2011
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.

¹ 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 CH9LB Date of Survey 25/09/2011

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

CTR(s) Associated with SCAT Segment 52

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

Segment Assessment Complete¹

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)

Robert S. Roll Robert Roll / DEQ 9/26/11
Sign Name Print Name/ Affiliation Date
State Representative (DEQ/FWP)

[Signature] Herb Gaudreau, Polis 25/09/2011
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.

¹ 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 C49RB

Date of Survey 26/09/2011

Dates of Initial SCAT Assessments

02 Aug 11 (13)
(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 Complete¹



Partial Segment Assessment



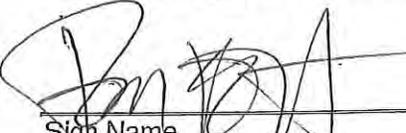
The undersigned are in agreement that the above segment or partial segment meets the Approved Treatment Methods Target Endpoints.

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)

 _____ Thomas P Bovington _____ 09/26/2011 _____
Sign Name _____ Print Name/Affiliation _____ Date _____
State Representative (DEQ/FWP)

 _____ Peter G Lawrence, Police _____ 26/09/2011 _____
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.

¹ 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.