

ExxonMobil Pipeline Company

**SCAT Area Transition Report for
B39**

Silvertip Pipeline Incident
Laurel, Montana

October 20, 2011



SCAT Area Transition Report for B39

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

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Date:
October 20, 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	2
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	1
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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 Detections 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 B39, 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 B39. 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 B39, 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 B39 is 27.8. The right bank is a cliff and could not be surveyed by foot; there were no access issues for the left bank.

1.2 Cultural, Historic, and Natural Resource Constraints

No historic properties or cultural resources have been identified within this segment 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 regular inspections of area B39. No oiled wildlife was observed or recovered. No Wildlife Priority Cleanup Areas were identified. No active migratory bird nests were identified in Area B39.

1.3 Summary of Environmental Sampling

Table 1 (below) summarizes samples collected within Area B39. 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 B39 are provided on Figure 3.

Table 1 Environmental Sampling Summary

Agency	Sample Num	Date	Matrix	Location	Latitude	Longitude
EPA	SPSE117_071411	14-Jul-11	Sediment	SPSE117	45.7606446	-108.4798471

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, no detections are shown.

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 B39 are included in Appendix B. Figure 4 provides the maximum oiling zones observed by the SCAT team during the initial surveys of Area B39.

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. 28](#) and [CTR No. 29](#)).

1.6 Oil Removal Activities

Oil removal activities were conducted within Area B39 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 B39 following completion of oil removal activities. The SCAT team performed final surveys of the left bank within SCAT Area B39 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 left bank within Area B39, no further treatment is recommended for this area. Based on the initial SCAT surveys, no oiling was observed on the right bank of Area B39. A SCAT Segment Sign-Off Form is included as Appendix F.



**SCAT Area Transition
Report for B39**

Silvertip Pipeline Incident
Laurel, Montana

2. Transition Sign-Off Form

SCAT Area Transition Report for B39

Prepared for:

Unified Command

Date

Unified Command – RP



**SCAT Area Transition
Report for B39**

Silvertip Pipeline Incident
Laurel, Montana

SCAT Area Transition Report for B39

Prepared for:

Unified Command

10/11/2011
Date

 S. EVERETT
Unified Command – FOSC



**SCAT Area Transition
Report for B39**

Silvertip Pipeline Incident
Laurel, Montana

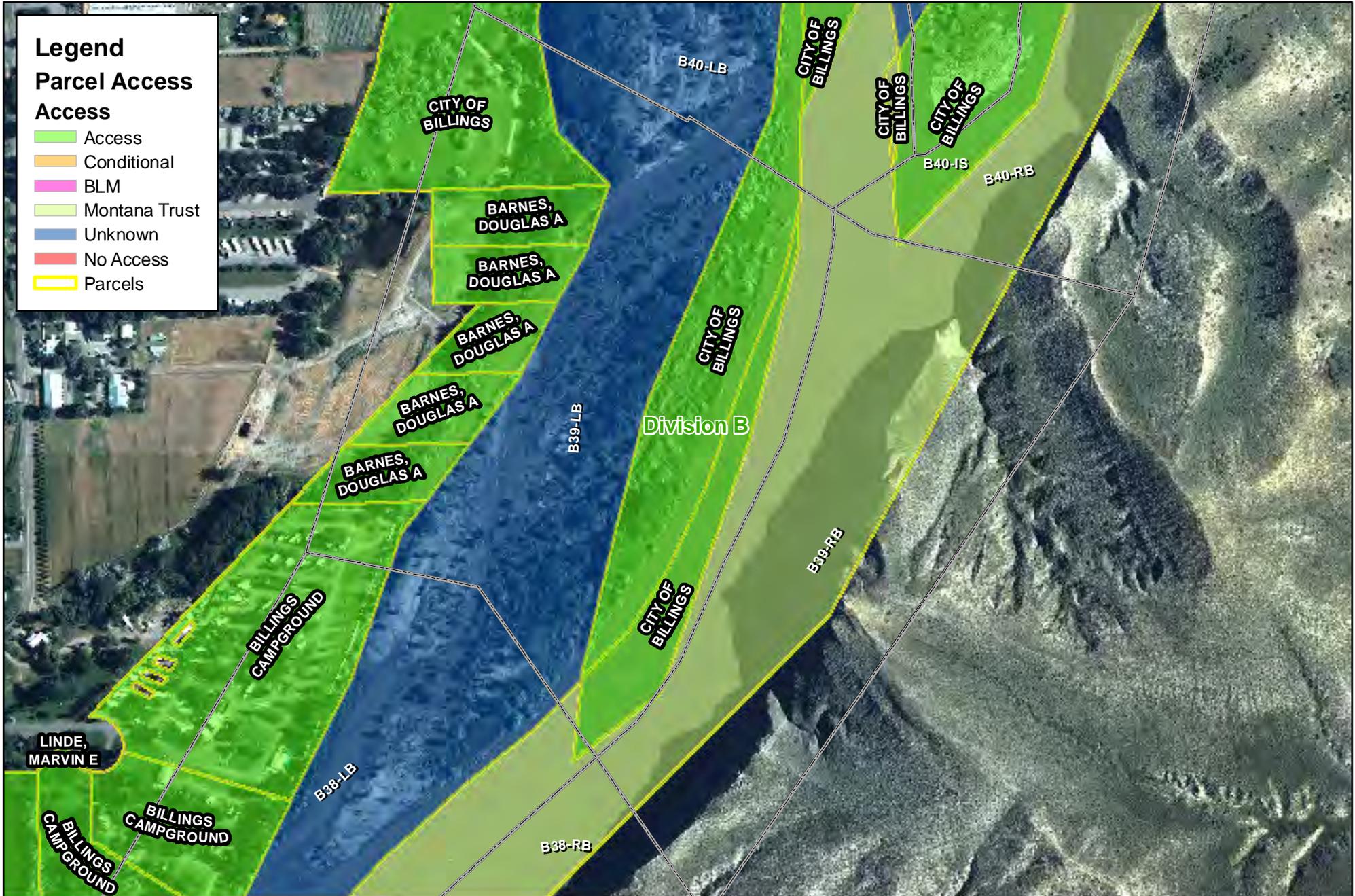
SCAT Area Transition Report for B39

Prepared for:

Unified Command

Date

Unified Command – MDEQ



Legend

Parcel Access

Access

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

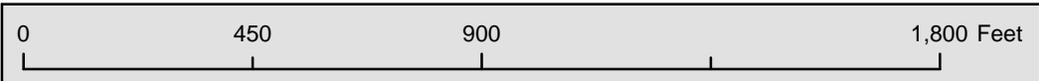
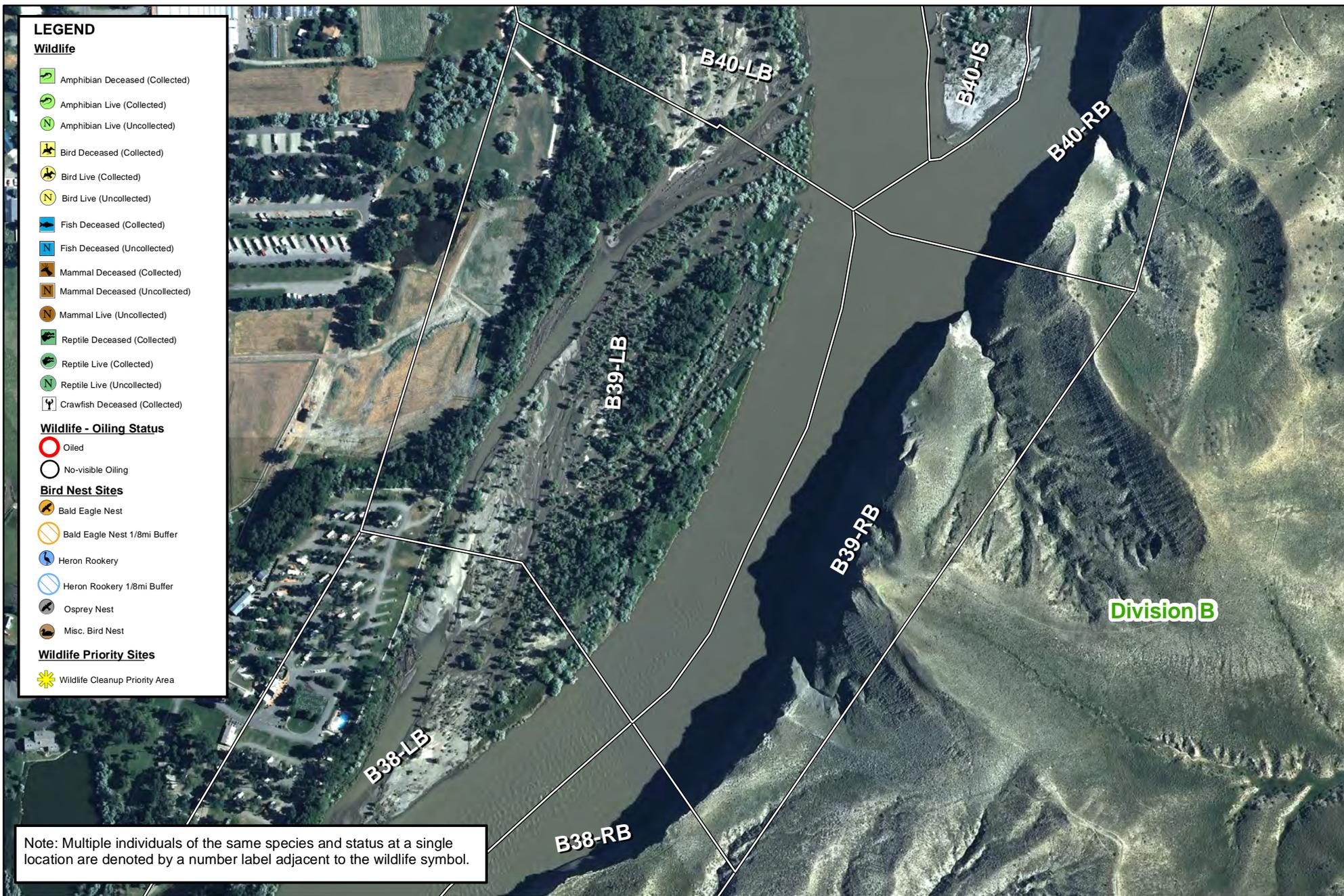


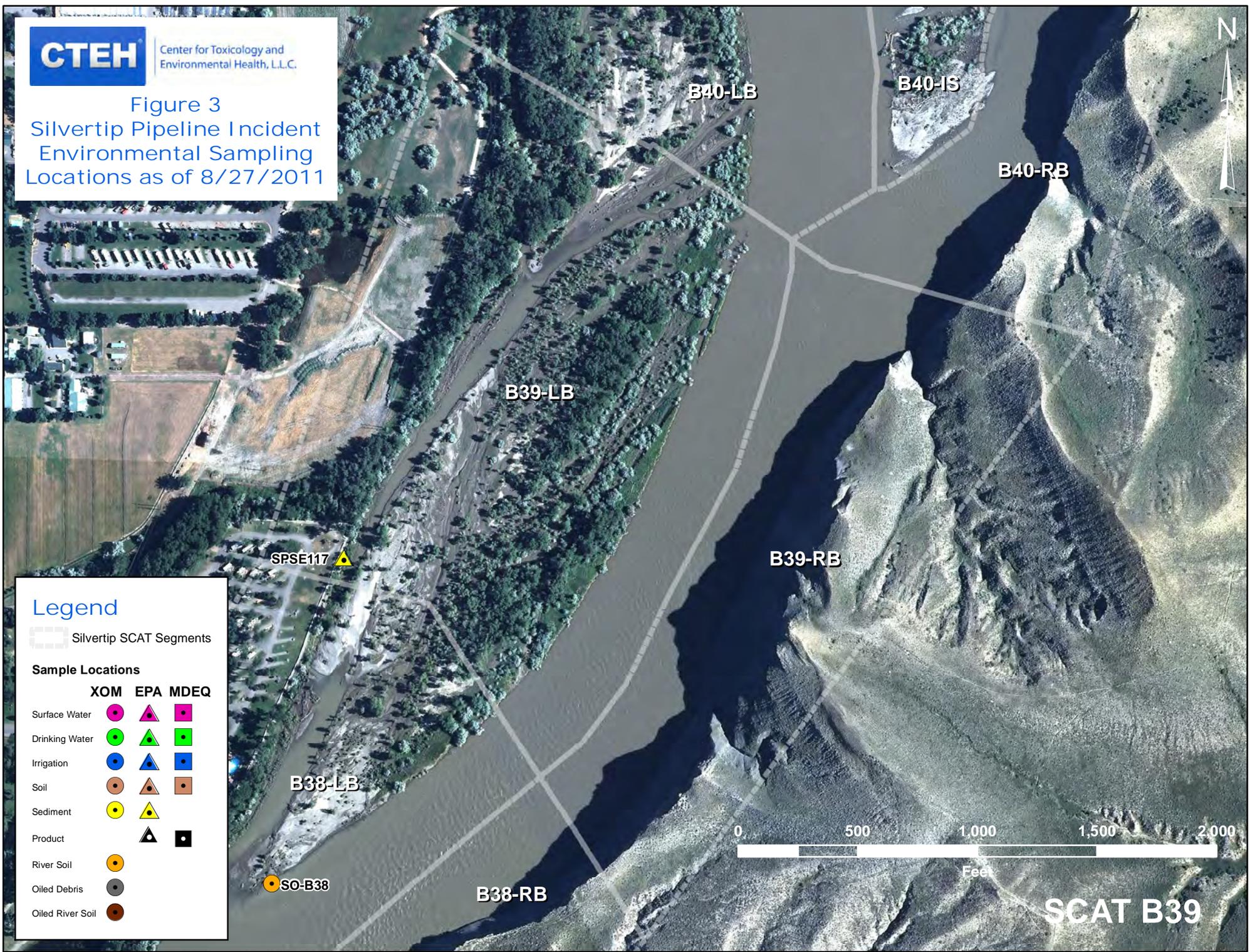
Figure 1





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			

SPSE117

B38-LB

SO-B38

B38-RB

B39-LB

B39-RB

B40-LB

B40-IS

B40-RB



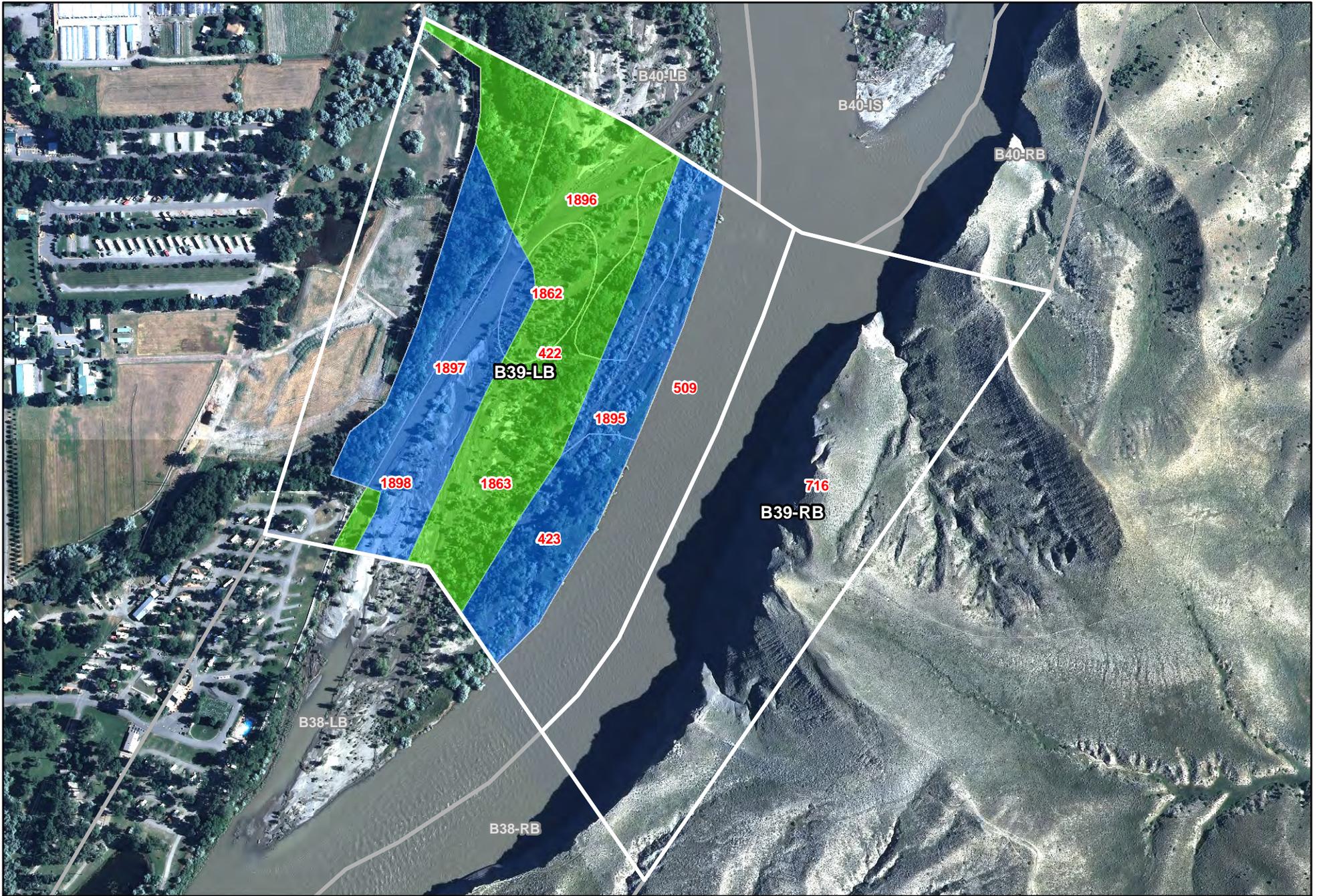
SCAT B39



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

Figure 4 - Maximum SCAT Observations For SCAT Area:





- 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 Detections Summary



Sample Results For SCAT Area B39

Printed 9/8/2011

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 Detections in Field Samples



Appendix B

Initial SCAT Survey Forms and
Sketches

DB/G/S

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>B39</u>	Left Bank / <u>Right Bank</u> / Island	<u>19 / 07 / 11</u>	<u>9:42</u> hrs to <u>9:44</u> hrs	low - mean / <u>bankfull</u> - overbank
Operations Division: <u>B</u>				<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>35</u> deg C	

2 SURVEY TEAM # 5	name	organization	contact phone number
	Bob Nailon	Cardno ENTRIX	713 817 2469
	John Beach	EPA	707 364 0491
	Ken Frazer	FWP	406 247 2961

3 SEGMENT Total Segment/Reach Length 555 m Segment/Reach Length Surveyed 555 m

Start GPS: LATITUDE N deg. _____ min. LONGITUDE W deg. _____ min. Datum: WGS 84

End GPS: LATITUDE N deg. _____ min. LONGITUDE 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 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 _____ m canyon _____ manmade _____ meander X 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 150 m 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 NA bags or NA trucks access restrictions

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

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

OIL ZONE ID	RIVER BANK ZONE				OIL COVER			OIL THICKNESS					OIL CHARACTER						SUBST. TYPE(S)			
	MS	LB	UB	OB	Length m	Width m	Distrib. %	TO	CV	CT	ST	FL	FR	MS	TB	PT	TC	SR		AP	NO	
A				X	555																X	talus-scrub
				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

OSR = N OSC SSC

No photographs taken, only oiled areas were photographed

(for ALL sub-segments record: sub-segment ID, length, length surveyed, and GPS start/end fixes)

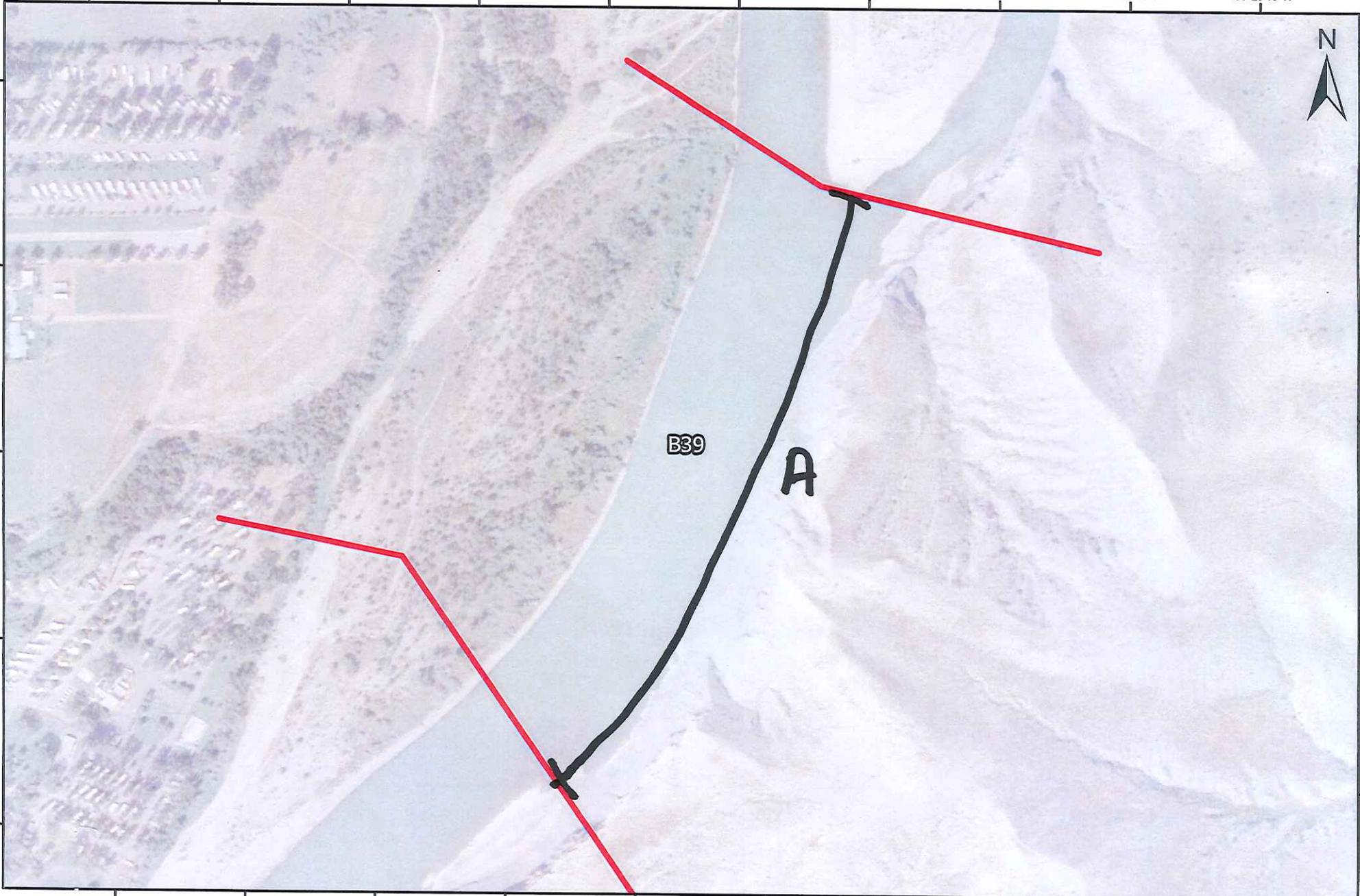
Sketch (Yes/No) Photos (Yes/No) (Roll # _____ Frames _____) Video Tape Yes/No (tape # _____)

OSR ENO

108°28'55"W 108°28'50"W 108°28'45"W 108°28'40"W 108°28'35"W 108°28'30"W 108°28'25"W 108°28'20"W 108°28'15"W 108°28'10"W



45°45'50"N
45°45'45"N
45°45'40"N
45°45'35"N
45°45'30"N

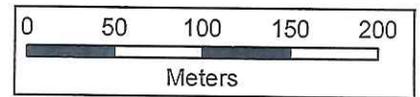


108°28'55"W 108°28'50"W 108°28'45"W 108°28'40"W 108°28'35"W 108°28'30"W 108°28'25"W 108°28'20"W 108°28'15"W 108°28'10"W

B39 -
(L/R/I)??

DATE:
TEAM:

COMMENTS:



DB/G

RIVER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident

1 GENERAL INFORMATION		Date (dd/mm/yy) 19-Jul-2011	Time (24h): std / daylight 0925 hrs to 0930 hrs	Water Level low - mean - bankfull - overbank falling - steady - rising
Segment/Reach ID: B39 <u>Left Bank</u> / Right Bank / Island		Operations Division: B		
Survey by: Foot / ATV / <u>Boat</u> / Helicopter / Overlook / _____		<u>Sun</u> / Clouds / Fog / Rain / Snow / <u>Windy</u> / Calm		Air Temp +/- <u>31</u> deg C

2 SURVEY TEAM # 1	name	organization	contact phone number
Pete Lee	<u>PBL</u>	Polaris	
Larry Alheim	<u>LA</u>	MTDEQ	
Andy Johnson	<u>ANDY WJS</u>	USCG	<u>[Signature]</u>

3 SEGMENT Total Segment/Reach Length _____ m Segment/Reach Length Surveyed 507 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 S (type) Rip Rap _____ Wetland: Swamp _____ Bog/Fen _____ Marsh _____

Sediment Bank: Clay/Mud _____ Sand _____ 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: 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 100m est. water depth: <1m 1-3m 3-10m >10m _____ m

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

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

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

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

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

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	Width	Distrib.	TO	CV	CT	ST	FL	FR	MS	TB	PT	TC	SR	AP		NO
	m	m	%																		
A				X	507	1														X	Grass, 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	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 band heights: NO

Treatment Recommendations:
 Zone A: No oil observed; no treatment required.
 Zone B: ~~Cut & remove oil coated vegetation smaller than 1" diameter. Wipe larger oil coated vegetation.~~

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

Sketch Yes / No Photos Yes / No Frames None

RIVER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident

1 GENERAL INFORMATION		Date (dd/mm/yy) <u>18 Jul-2011</u>	Time (24h): std / daylight <u>0925 hrs to 0930 hrs</u>	Water Level low - mean - <u>bankfull</u> - overbank falling - steady - rising
Segment/Reach ID: <u>B 39</u> Left Bank / Right Bank / Island				
Operations Division: <u>B</u>				
Survey by: Foot / ATV / <u>Boat</u> / Helicopter / Overlook /		Sun / Clouds / Fog / Rain / Snow / <u>Windy</u> / Calm	Air Temp +/- <u>31</u> deg C	

2 SURVEY TEAM # 1	name	organization	contact phone number
Pete Lee		Polaris	
Larry Alheim		MTDEQ	
Andy Johnson		USCG	

3 SEGMENT Total Segment/Reach Length _____ m Segment/Reach Length Surveyed 480 m 567

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 S (type) Rip Rap _____ Wetland: Swamp _____ Bog/Fen _____ Marsh _____

Sediment Bank: Clay/Mud _____ Sand _____ Mixed S 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 _____ 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 100m 100 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 / bankfull / 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 4 bags or _____ trucks access restrictions _____

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

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

OIL ZONE ID	RIVER BANK ZONE				OIL COVER			OIL THICKNESS					OIL CHARACTER							SUBST. TYPE(S)		
	MS	LB	UB	OB	Length m	Width m	Distrib. %	TO	CV	CT	ST	FL	FR	MS	TB	PT	TC	SR	AP		NO	
A				X	70	1															X	Grass, trees
B				X	30	1	<1			X	X		X									Grass, trees
C				X	390	1															X	Grass, 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					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 band heights: Zone B - 60cm~~

Treatment Recommendations:

Zone A: No oil observed; no treatment required.

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

Zone C: No oil observed; no treatment required.

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

Sketch Yes/No Photos Yes/No Yes Frames 1077-1079 (Lee)

A = 334 + 173



Image © 2011 GeoEye

©2010 Google

Imagery Date: 7/31/2009

45°45'40.56" N 108°28'28.51" W elev 3167 ft

Eye alt 5707 ft

DB/G

RIVER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident

Page _____ of _____

1 GENERAL INFORMATION		Date (dd/mm/yy) <u>22/07/11</u>	Time (24h): std / daylight <u>10:30</u> hrs to <u>11:36</u> hrs	Water Level low - mean - <u>bankfull</u> - overbank <u>falling</u> - steady - rising
Segment/Reach ID: <u>B39</u> (left Bank) / Right Bank / Island		Operations Division: <u>B</u>		
Survey by: <u>Foot</u> / ATV / Boat / Helicopter / Overlook / _____		(<u>Sun</u>) Clouds / Fog / Rain / Snow / Windy / Calm		Air Temp + / - <u>20</u> deg C
2 SURVEY TEAM # <u>2</u>	name	organization	contact phone number	
	<u>Chuck Pons</u>	<u>Canada ENTRYX</u>	<u>813-973-8389</u>	
	<u>Ed Kieley</u>	<u>MDEQ</u>	<u>406-461-5386</u>	
	<u>Petruck Kiske</u>	<u>USCG</u>	<u>415-320-5249</u>	

3 SEGMENT Total Segment/Reach Length 500 m Segment/Reach Length Surveyed 500 m

Start GPS: LATITUDE 45 deg. 68.184 min. LONGITUDE 108 deg. 28.585 min. Datum: WGS84

End GPS: LATITUDE 45 deg. 45.810 min. LONGITUDE 109 deg. 28.608 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 S Pebble/Cobble S Boulder _____ Peat/Organic _____ Vegetated Bank: X Wooded Upland: _____

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

4B RIVER VALLEY CHARACTER select as appropriate

Cliff or Bluff: Est Height _____ m canyon _____ manmade _____ meander _____ confined or leveed _____ Substrate Type: Subst. S. 1

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 200 m est. water depth: <1m 1-3m 3-10m >10m _____ m

shoal(s) present O / N point bar present O / 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 O / N Alongshore from next segment O / N

Debris Y / N oiled Y / N amount 10 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

422
423

OIL ZONE	RIVER BANK ZONE				OIL COVER			OIL THICKNESS					OIL CHARACTER							SUBST. TYPE(S)		
	MS	LB	UB	OB	Length m	Width m	Distrib. %	TO	CV	CT	ST	FL	FR	MS	TB	PT	TC	SR	AP		NO	
A				<u>X</u>	<u>450</u>	<u>185</u>	<u>1</u>		<u>P</u>	<u>P</u>	<u>S</u>		<u>X</u>									<u>Subst. S. 1</u>
B				<u>X</u>	<u>195</u>	<u>100</u>	<u>5</u>			<u>P</u>	<u>S</u>		<u>X</u>									<u>Subst. S. 1</u>

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

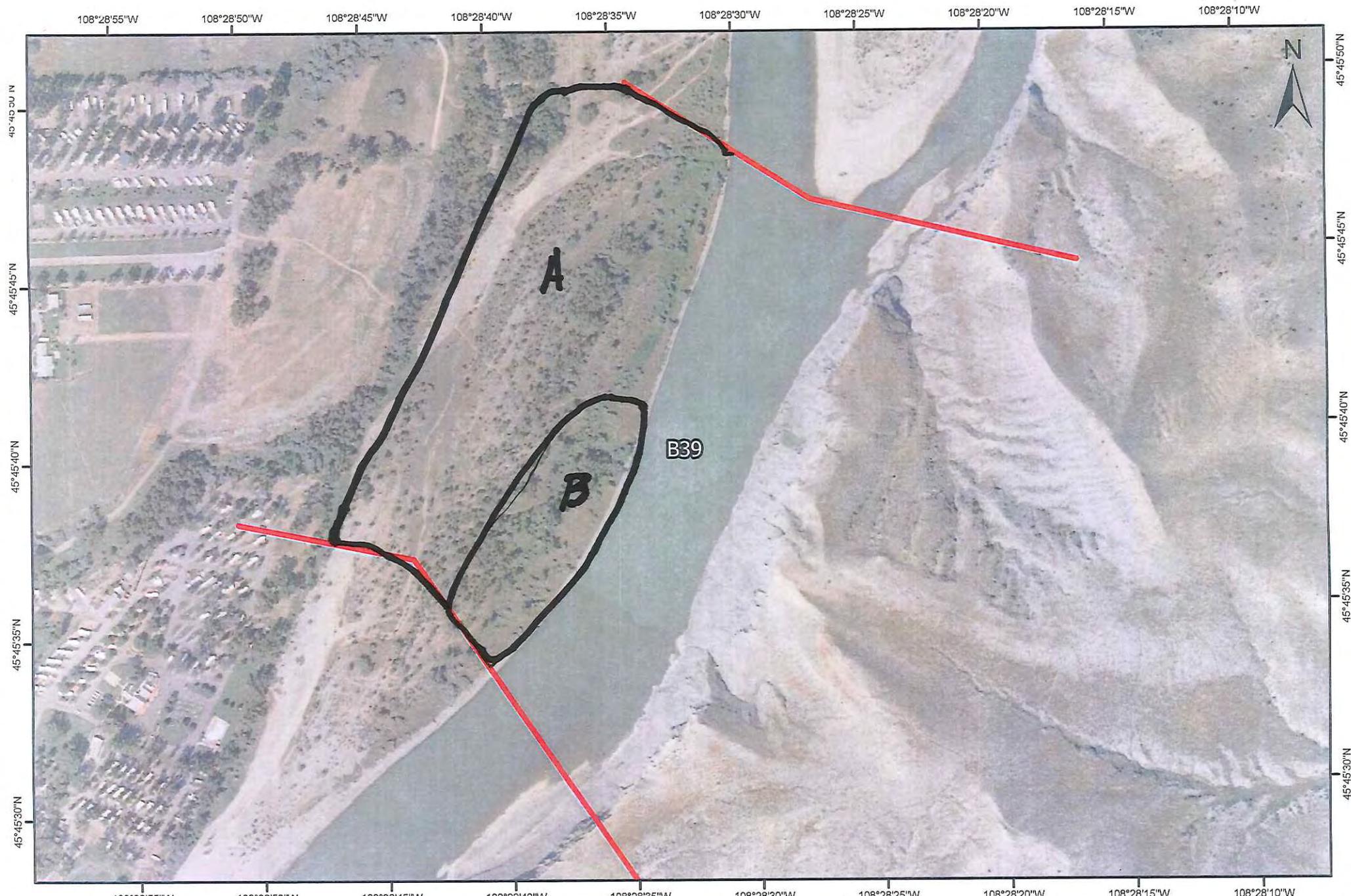
TRENCH or PIT NO.	RIVER BANK ZONE				MAX. PIT DEPTH cm	OILED ZONE cm-cm	SUBSURFACE OIL CHARACTER						WATER TABLE cm	SHEEN COLOUR B, R, S, N	CLEAN BELOW Yes/No	SUBST. TYPE(S)
	MS	LB	UB	OB			SAP	OP	PP	OR	OF	TR				

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

Both zones A+B have coated and stained Veg + Debris.
 Debris needs to be bagged and removed
 Veg needs to be cut or trimmed and removed
 Survey Complete

(for ALL sub-segments record: sub-segment ID, length, length surveyed, and GPS start/end fixes)

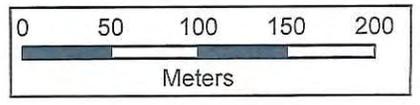
Sketch Yes/No Photos Yes/No (Roll # _____ Frames _____) Video Tape Yes/No (tape# _____)



B39 -
(L/R/I)??

DATE:
TEAM:

COMMENTS:



DB/G

RIVER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident

1 GENERAL INFORMATION		Date (dd/mm/yy) <u>23/08/11</u>	Time (24h): std / daylight <u>1315 DE 8/23/11</u> <u>1430</u> hrs to <u>1415</u> hrs	Water Level low - <u>(mean)</u> - bankfull - overbank falling - steady - rising
Segment/Reach ID: <u>39</u> <input type="radio"/> Left Bank / <input type="radio"/> Right Bank / <input type="radio"/> Island		Operations Division: <u>B</u>		
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>5</u>	Name	Organization	Signature
	<u>DARRICK TURNER</u>	<u>DEQ</u>	<u>[Signature]</u>
	<u>ARIGÉ BLANC</u>	<u>POLTAIS</u>	<u>[Signature]</u>
	<u>DANIEL VIGIANTO</u>	<u>CAADNO - ENTRIX</u>	<u>[Signature]</u>
	<u>MIKE HERMAN</u>	<u>FWP</u>	<u>[Signature]</u>

3 SEGMENT Total Segment/Reach Length 454 m Segment/Reach Length Surveyed 454 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 (S) Boulder _____ Peat/Organic _____ Vegetated Bank: (P) Wooded Upland: S

Sediment Flat: Clay/Mud _____ Sand S Mixed/Coarse (S) 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 P confined or leveed _____

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

Substrate Type: veg

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 segmen Y / N

Debris Y / N oiled Y / N amount 10 bags or _____ trucks access restrictions _____

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

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

OIL ZONE ID	RIVER BANK ZONE				OIL COVER			OIL THICKNESS					OIL CHARACTER					SUBST. TYPE(S)				
	MS	LB	UB	OB	Length m	Width m	Distrib. %	TO	CV	CT	ST	FL	FR	MS	TB	PT	TC		SR	AP	NO	
<u>A</u>				<input checked="" type="checkbox"/>	<u>139</u>	<u>40</u>	<u>1 DE</u>			<input checked="" type="checkbox"/>							<input checked="" type="checkbox"/>					<u>VEG</u>
<u>B</u>				<input checked="" type="checkbox"/>	<u>450</u>	<u>107</u>	<u>DE</u>			<input checked="" type="checkbox"/>							<input checked="" type="checkbox"/>					<u>VEG</u>

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

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

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

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

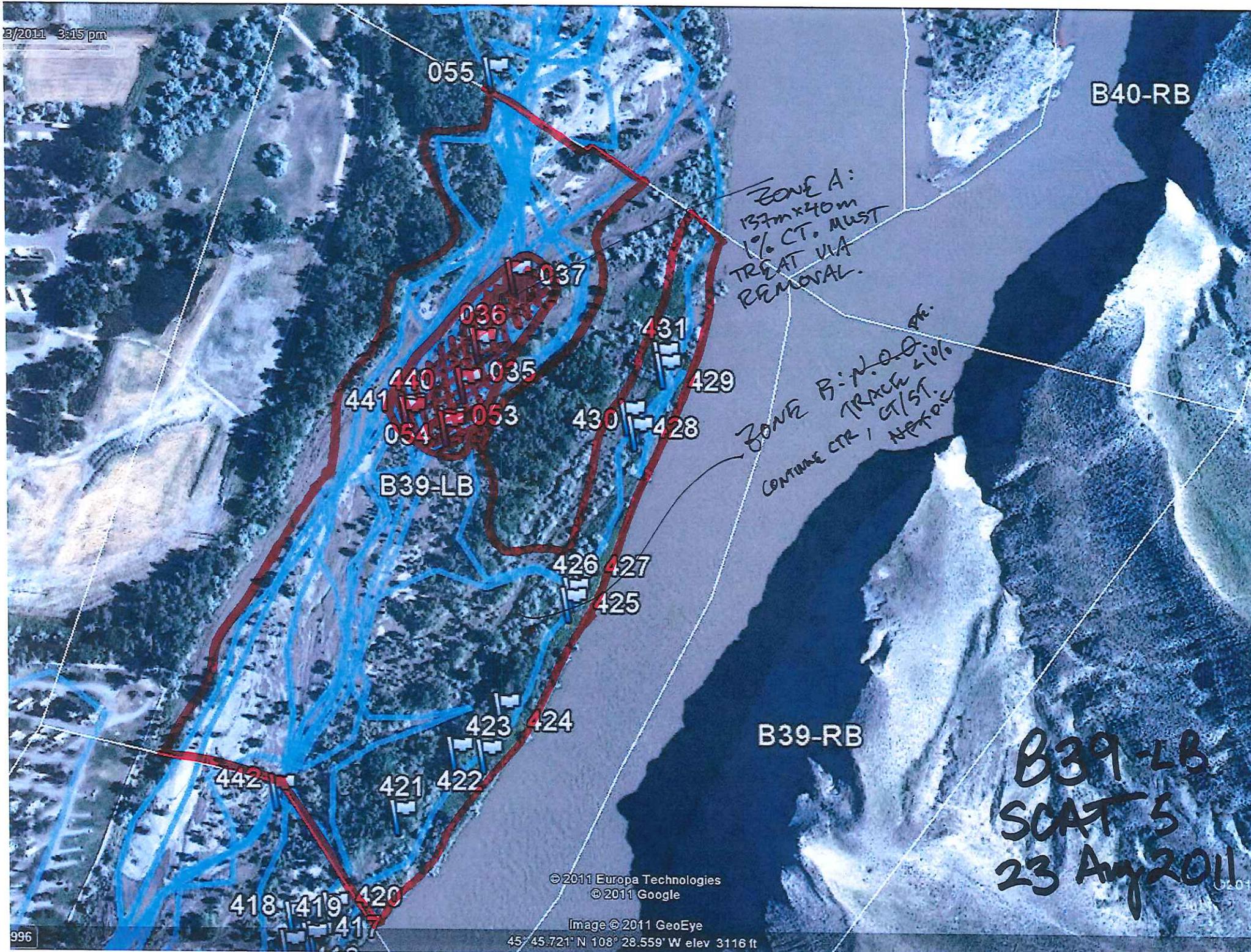
ZONE A: 1% CT, 5 MAN CREW TO REMOVE OILED VEG. (HAND TOOLS ONLY)

ZONE B: N.O.O. TRACK <1% CT/ST, NFF. CTR CONTINUE

PRESCAT w/ HOT > HOT CREW B38, 39, 40 LB 8/25/11 DE

Island comprised of C38, C39, C40 LB -> 1 day for treatment of oil 8/25/11 DE

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



B40-RB

ZONE A:
137m x 40m
1% CT. MUST
TREAT VIA
REMOVAL.

ZONE B: N.O.D.
TRACK 2/0
CONTAIN CTR / 1% CT/ST.
NEXUS

055

037

036

440

035

441

054

053

B39-LB

431

429

430

428

426

427

425

B39-RB

423

424

442

421

422

418

419

420

417

B39-LB
SCAT 5
23 Aug 2011



Appendix C

Pre-Inspection Survey Transmittal

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



Appendix D

Post-Inspection Survey Transmittal

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



Appendix E

Final SCAT Survey Forms and
Sketches

DB/G

RIVER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident

Page _____ of _____

1 GENERAL INFORMATION

Segment/Reach ID: B39 Left Bank / Right Bank / Island

Operations Division: B

Survey by: Foot / ATV / Boat / Helicopter / Overlook / _____ Sup / Clouds / Fog / Rain / Snow / Windy / Calm

Date (dd/mm/yy): 8-26-11

Time (24h): std / daylight

Time (24h): 9:30 hrs to 11:00 hrs

Water Level: low - mean / bankfull - overbank / falling - steady - rising

Air Temp +/- 30 deg C

2 SURVEY TEAM # 1

name	organization	contact phone number
<u>Charles Pen</u>	<u>Canada ENTRIIX</u>	<u>Charles Pen</u>
<u>Justin Hankaluk</u>	<u>MFWP</u>	<u>Justin Hankaluk</u>
<u>Robert Ashton</u>	<u>MDEQ</u>	<u>R. Ashton</u>
<u>Linda R. Watson</u>	<u>EPA</u>	<u>Linda R. Watson</u>

3 SEGMENT

Total Segment/Reach Length 460 m Segment/Reach Length Surveyed 460 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 P Pebble/Cobble S Boulder _____ Peat/Organic _____ Vegetated Bank: S 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 _____ braided X oxbow _____ flood plain valley _____

Substrate Type: Silt

Forested / Vegetated / Bare

4C RIVER CHANNEL CHARACTER circle or select as appropriate

est. width: <1m 1-10m 10-100m 100m 370m 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 4 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	
1895	A			<u>X</u>	<u>460</u>	<u>100</u>	<u>0</u>														<u>X</u>	<u>Silt</u>
1896	B			<u>X</u>	<u>175</u>	<u>180</u>	<u>cl</u>			<u>S</u>	<u>P</u>							<u>P</u>				<u>Silt</u>
1897	C			<u>X</u>	<u>275</u>	<u>70</u>	<u>0</u>											<u>Silt</u>			<u>X</u>	<u>Silt</u>
1898	D			<u>X</u>	<u>55</u>	<u>3</u>	<u>cl</u>					<u>P</u>						<u>P</u>				<u>Silt</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

Zone A+C - No oil observed

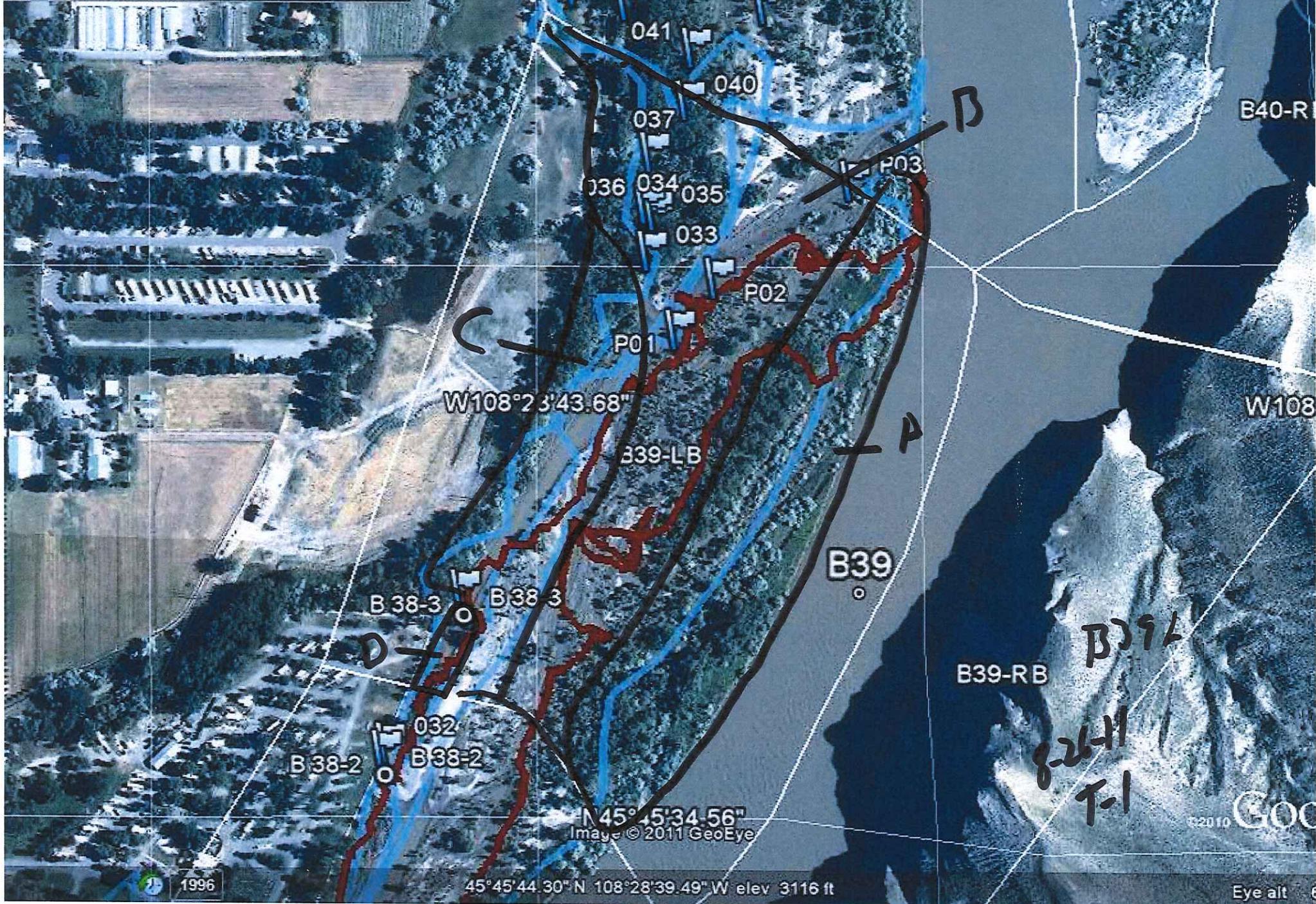
Zone B - had sparse stained + coated veg + debris. All coated material picked up by Hot Shot crew

Zone D - small shallower channel with standing water covered with or broken up and oil shown

(for ALL sub-segments record: sub-segment ID, length, length surveyed, and GPS start/end fixes)

Sketch Yes/No Photos Yes/No (Roll # _____ Frames _____) Video Tape Yes/No (tape# _____)

8/26/2011 10:01 am 8/26/2011 4:58 pm
4 pm



$W108^{\circ}23'43.68''$

$N45^{\circ}45'34.56''$
Image © 2011 GeoEye

45°45'44.30" N 108°28'39.49" W elev 3116 ft

8-26-11
T-1

©2010 Goo

Eye alt



Appendix F

Completed SCAT Segment Sign-Off
Forms

COMPLETED

Silvertip Pipeline Spill SCAT Segment Sign-Off Sheet

Operations Division: A	B X	C
SCAT Area Number (i.e. A12): B39L		
SCAT Segment Number (i.e. A12-LB/IS/RB): B39LB		

- Check if Complete:
1. Completion Date for Initial SCAT Assessment: 22 JUL 11 IC
 2. Combined Treatment Recommendations (CTRs) Developed/Issued: Yes/No
List CTRs Applicable to SCAT Segment: 28
 3. Clean-Up Operations Conducted:
 4. Meets Qualitative Approved Treatment Methods Target Endpoints: Yes/No
 5. SCAT Reassessment:

<u>Linda R. Blat</u>	<u>Linda B. Watson</u>	<u>8/26/11</u>
Sign Name	Print Name	Date
Federal Representative (EPA/USCG)		

<u>Justin Hawke</u>	<u>Justin Hawke</u>	<u>8/26/11</u>
Sign Name	Print Name	Date
State Representative (DEQ/FWP)		

<u>Charles Poni</u>	<u>Charles Poni</u>	<u>8-26-11</u>
Sign Name	Print Name	Date
RP Representative (SCAT Contractor)		

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 Reassessment, the SCAT area will achieve the response endpoints and an Area Transition Report will be completed and submitted to EPA and DEQ upon completion.