

**ExxonMobil Pipeline Company**

**SCAT Area Transition Report  
for C28**

Silvertip Pipeline Incident  
Laurel, Montana

October 29, 2011



## **SCAT Area Transition Report for C28**

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 29, 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.*

<b>1. Executive Summary of Oil Removal Activities</b>	<b>1</b>
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
<b>2. Transition Sign-Off Form</b>	<b>4</b>
<b>Tables</b>	
Table 1 Environmental Sampling Summary	2
<b>Figures</b>	
Figure 1 Aerial Map with Parcel Boundaries	
Figure 2 Wildlife Resources	
Figure 3 Sample Location Map	
Figure 4a Maximum SCAT Observations	
Figure 4b Maximum SCAT Observations	
Figure 5a Final SCAT Observations	
Figure 5b Final SCAT Observations	
<b>Appendices</b>	
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 C28, 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 C28. 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 C28, 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 C28 is 446.5. 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 C28 due to the low level of oiling in Division C. No oiled wildlife was observed or recovered. No Wildlife Priority Cleanup Areas were identified. No active migratory bird nests were identified in Area C28.

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

Table 1 (below) summarizes samples collected within Area C28. 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 C28 are provided on Figure 3.

**Table 1 Environmental Sampling Summary**

Area	Agency	Sample Num	Date	Matrix	Location	Latitude	Longitude
C28		No Samples Collected*					

Appendix A contains a summary of sample results with detections for this sample set. Detections with a result above the screening level are highlighted; for this set, there were no detections because no samples have been collected in this area to date.

**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 C28 are included in Appendix B. Figure 4 provides the maximum oiling zones observed by the SCAT team during the initial surveys of Area C28.

**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. 50](#), [CTR No. 60](#), and [CTR No. 61](#)).

**1.6 Oil Removal Activities**

Oil removal activities were conducted within Area C28 in accordance with the ATMs identified in the CTRs. [Appendix I](#) of the Summary of Assessment and Oil Removal Activities report presents this data including: date range/days worked, average number of people working per day, equipment used, and various types of bags removed: oily debris, personal protective equipment (PPE), plastic, trash, super sacks, wood chips, and contaminated wood.

**1.7 Pre-Inspection Survey Transmittal**

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

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

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

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

Figure 5 shows the oiling conditions within Area C28 following completion of oil removal activities. The SCAT team performed final surveys of the right and left banks within SCAT Area C28 to confirm the agreed-upon cleanup endpoints identified in the applicable CTRs had been achieved. The final SCAT survey documentation is presented in Appendix E.

### **1.10 SCAT Area Conclusions**

Based on the initial SCAT surveys performed within Area C28, no oil was observed on a portion of the island; no further treatment was recommended for the remainder of the island. In addition, no oil was observed on the majority of the right and left banks; no treatment or no further treatment was recommended based on the initial SCAT survey. Natural attenuation was recommended for portions of the right bank where light oiling was observed on vegetation. Based on the final SCAT surveys performed on the right and left banks within Area C28, no further treatment is recommended for both banks. SCAT Segment Sign-Off Forms are included as Appendix F.



**SCAT Area Transition  
Report for C28**

Silvertip Pipeline Incident  
Laurel, Montana

**2. Transition Sign-Off Form**

**SCAT Area Transition Report for C28**

**Prepared for:**

**Unified Command**

---

Date

---

Unified Command – RP



**SCAT Area Transition  
Report for C28**

Silvertip Pipeline Incident  
Laurel, Montana

**SCAT Area Transition Report for C28**

**Prepared for:**

**Unified Command**

---

Date

---

Unified Command – FOSC



**SCAT Area Transition  
Report for C28**

Silvertip Pipeline Incident  
Laurel, Montana

**SCAT Area Transition Report for C28**

**Prepared for:**

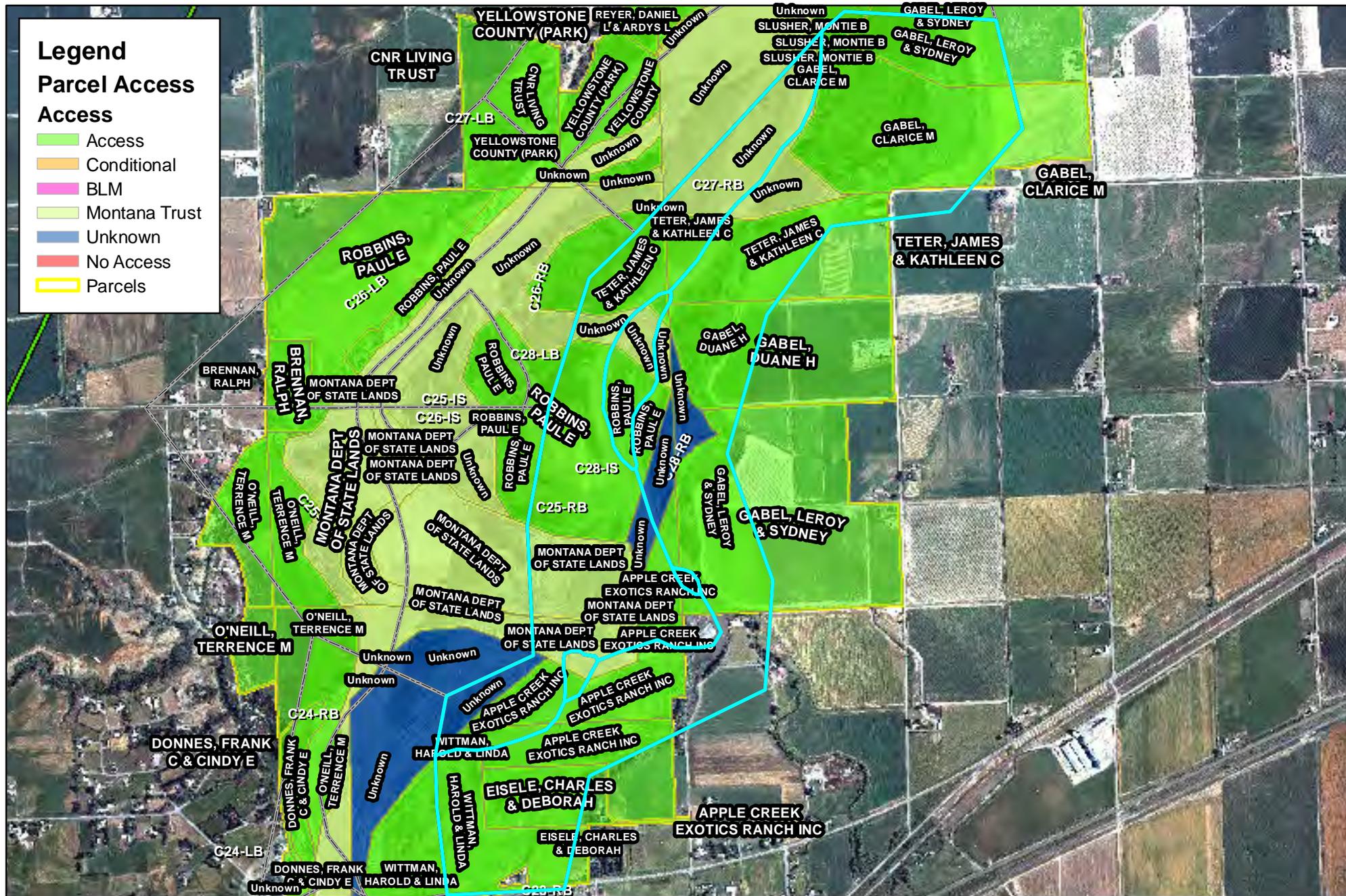
**Unified Command**

---

Date

---

Unified Command – MDEQ



**Legend**

**Parcel Access**

**Access**

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

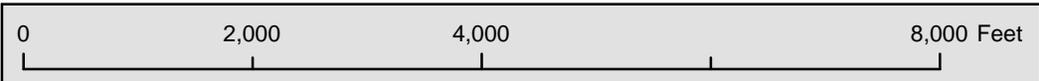
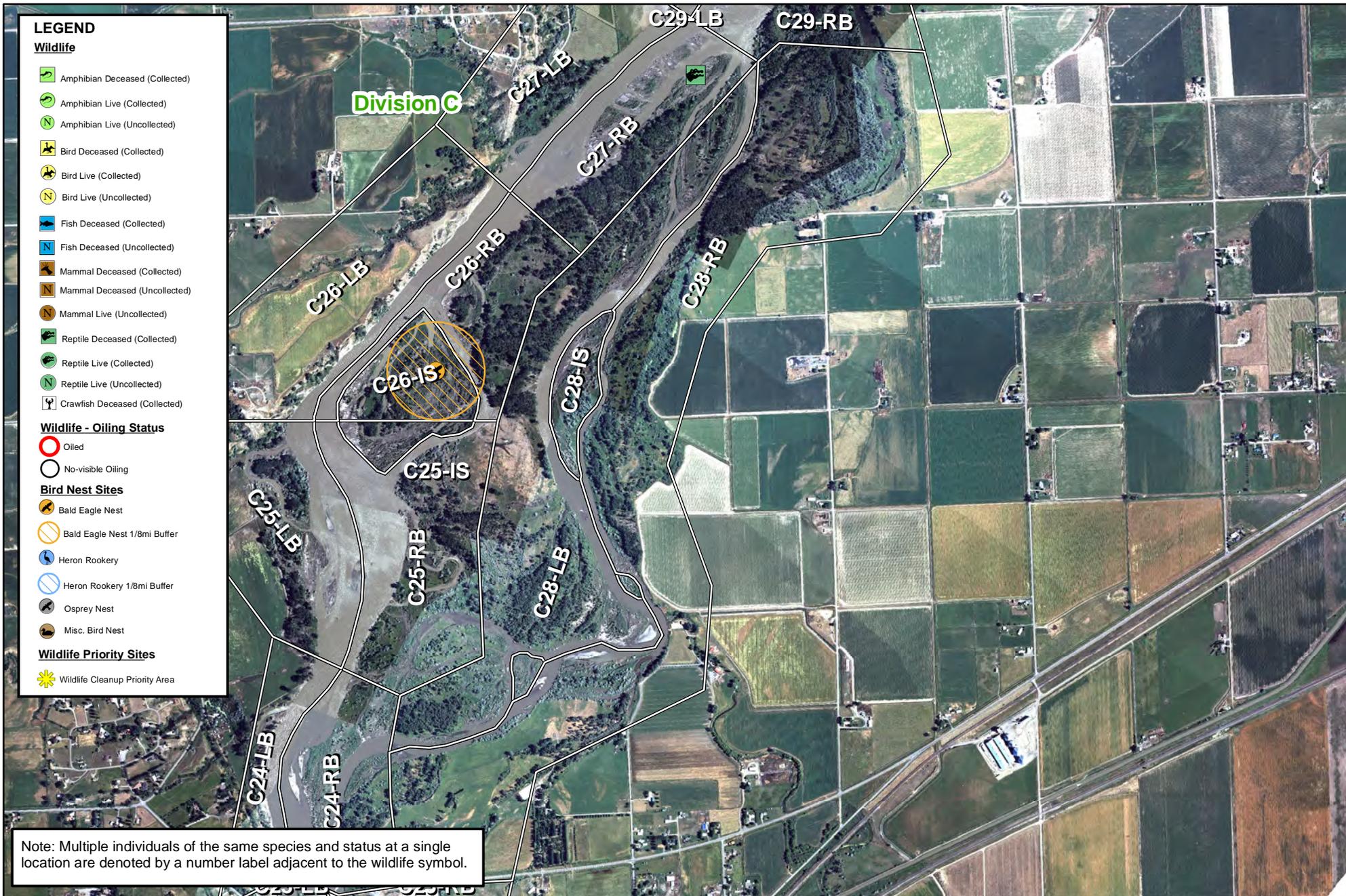


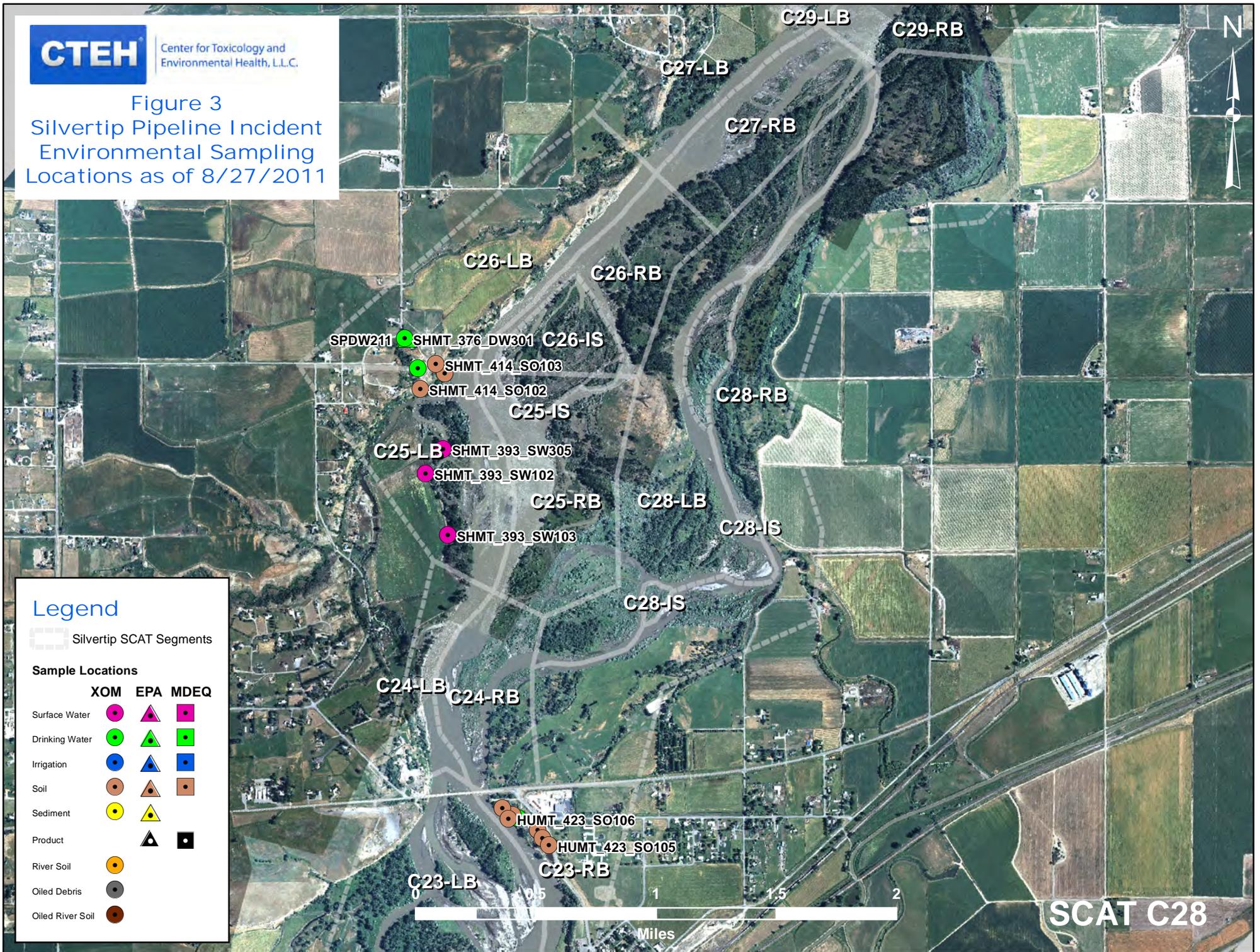
Figure 1

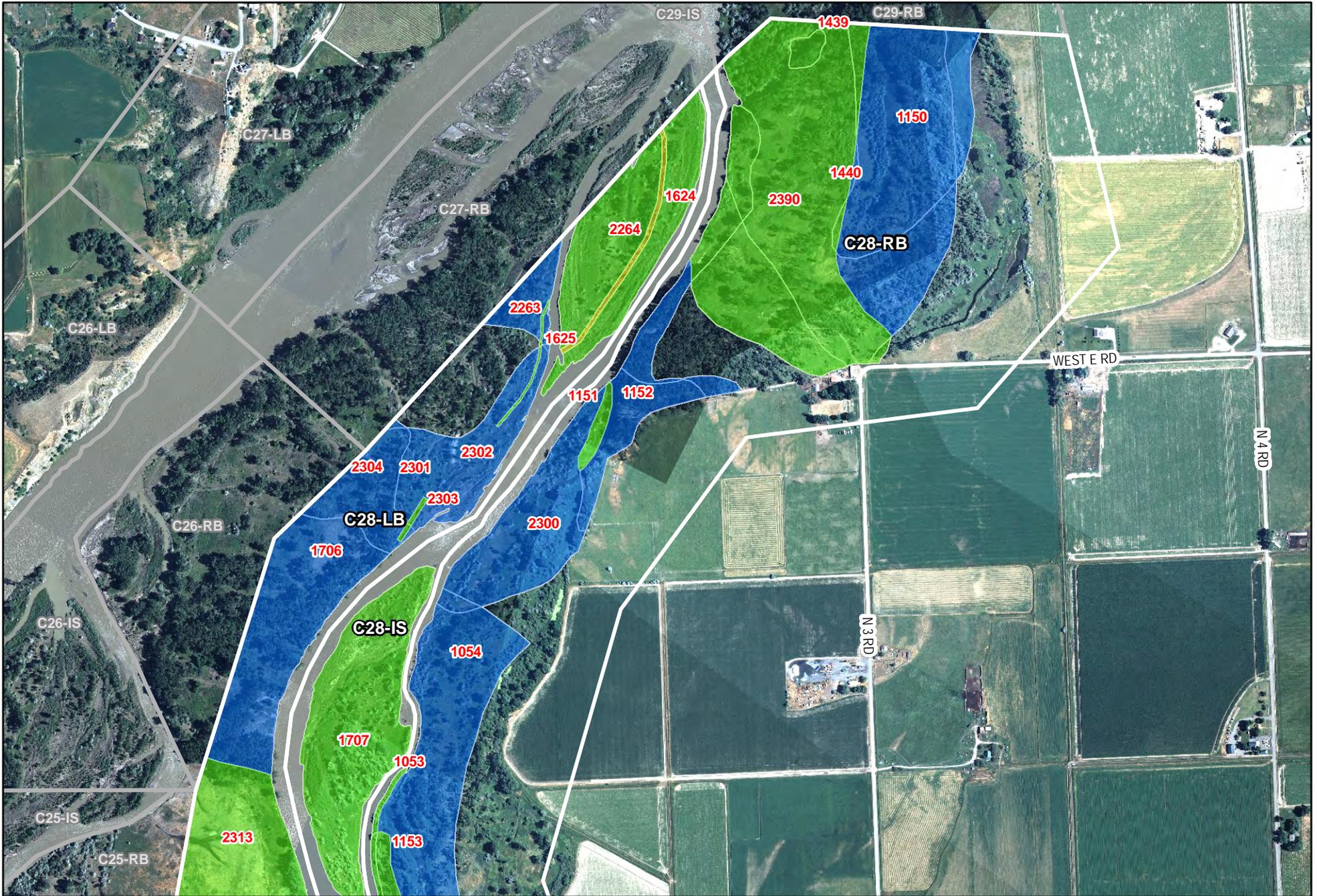




Center for Toxicology and Environmental Health, L.L.C.

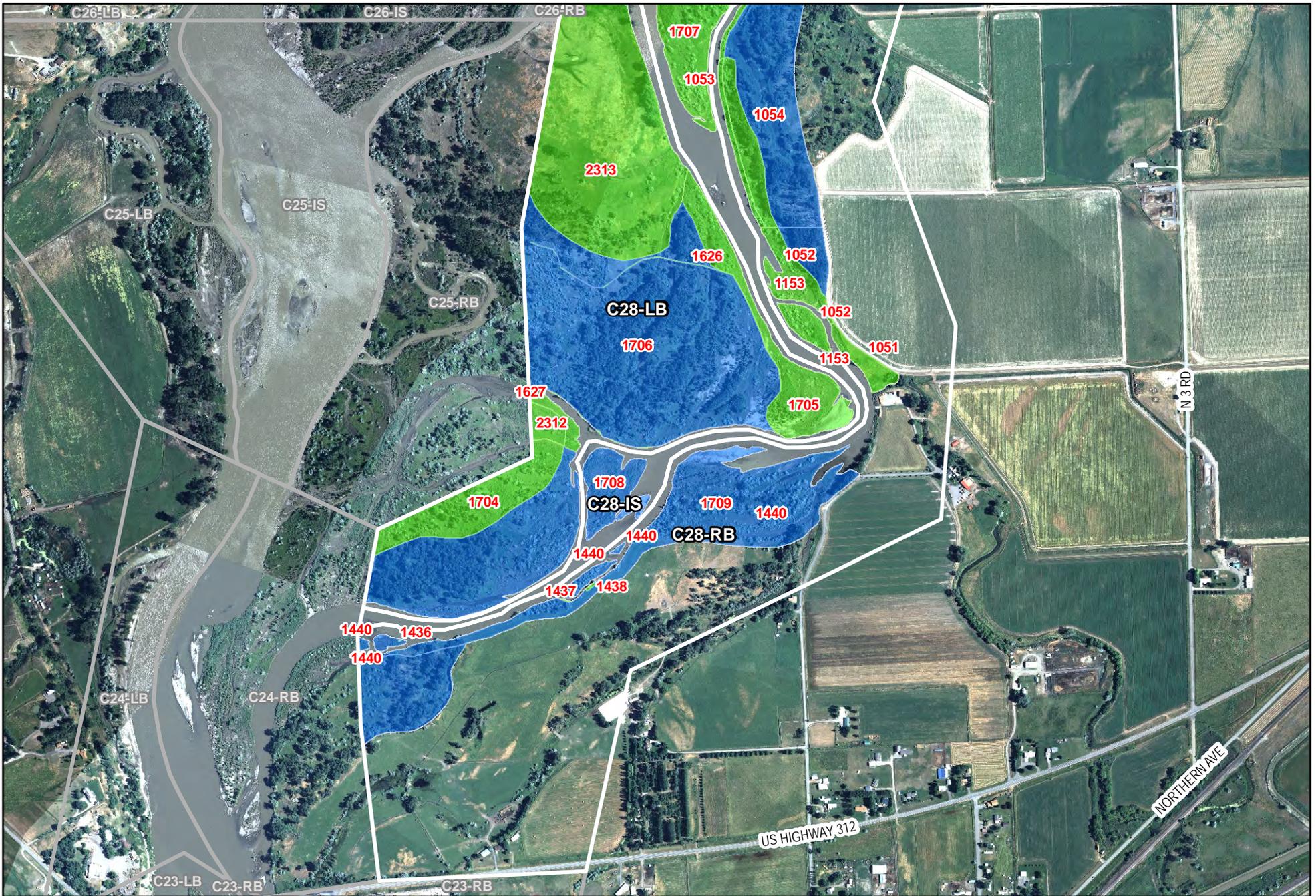
Figure 3  
Silvertip Pipeline Incident  
Environmental Sampling  
Locations as of 8/27/2011





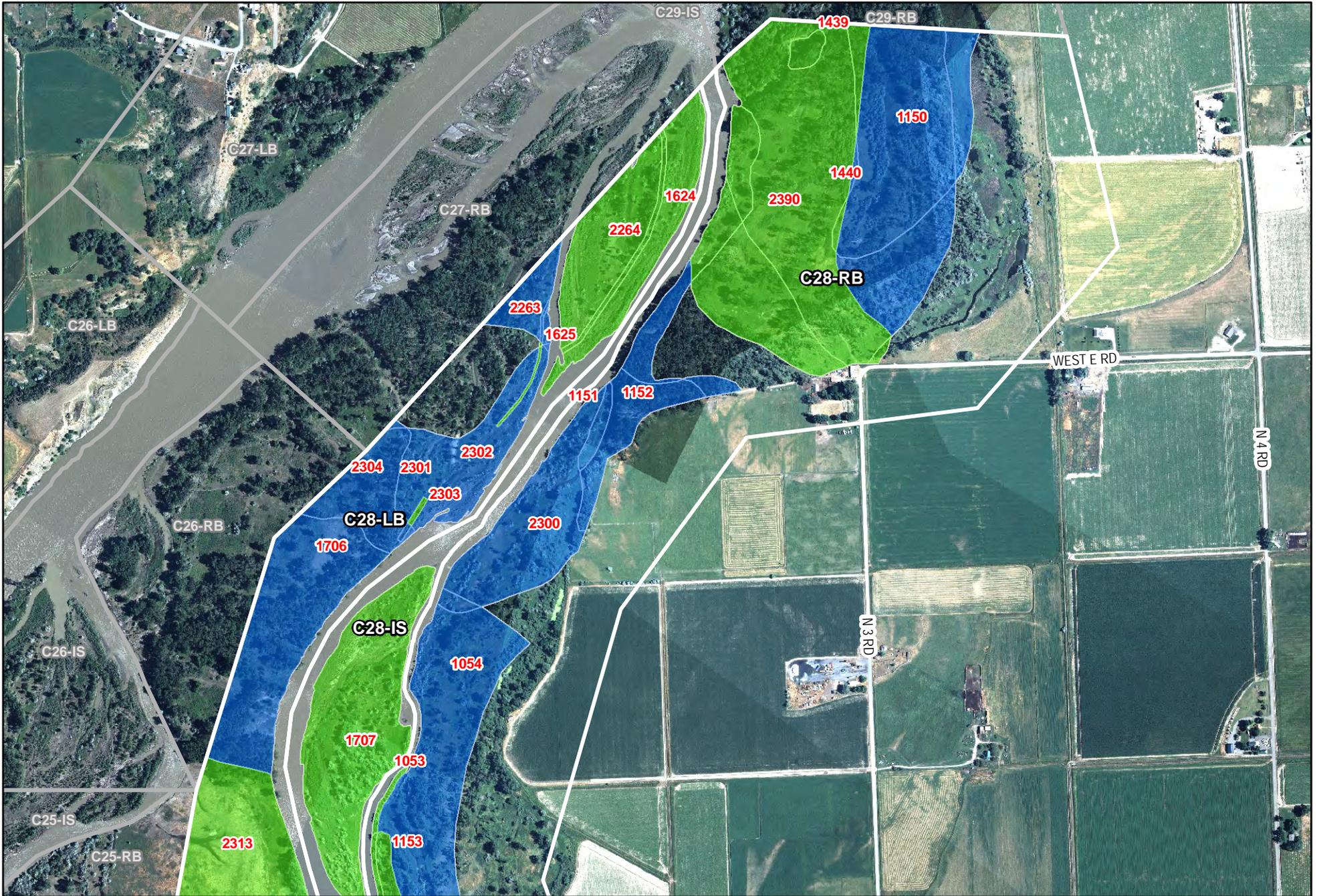
**Figure 4a - Maximum SCAT Observations For SCAT Area:**





	<p><b>9999</b> Oiling Zone ID</p> <p><b>Red</b> Heavy Oiling</p> <p><b>Orange</b> Moderate Oiling</p>	<p><b>Yellow</b> Light Oiling</p> <p><b>Green</b> Very Light Oiling</p> <p><b>Blue</b> No Oil Observed</p>	<p><b>Figure 4b - Maximum SCAT Observations</b></p> <p><b>For SCAT Area: C28</b></p>	
--	---	--	--	---

730    0    730    1,460  
Feet

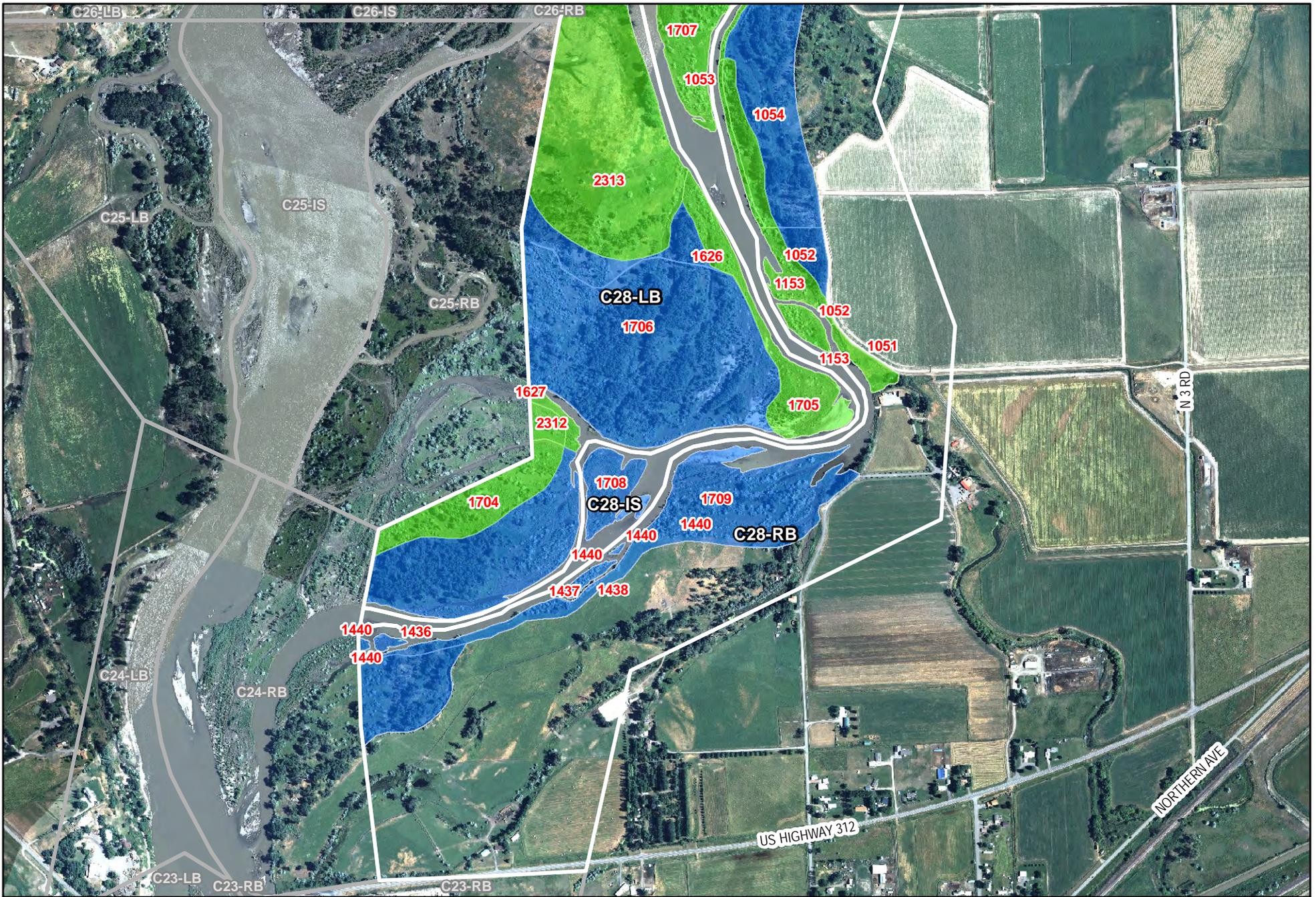


- 9999 Oiling Zone ID
- Heavy Oiling
- Moderate Oiling

- Light Oiling
- Very Light Oiling
- No Oil Observed

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





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

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

730      0      730      1,460  
Feet



## **Appendix A**

Sample Detection Summary



Sample Results For  
SCAT Area C28

Printed 10/13/2011

NA - Not Available

Detected Above Screening Level

Sample Num	Date	Sample Type	Matrix	Analytical Method	Analyte	Detected	Result	Screening Level	Result Qualifier	Units	Above?
------------	------	-------------	--------	-------------------	---------	----------	--------	-----------------	------------------	-------	--------

No Samples Taken



## **Appendix B**

Initial SCAT Survey Forms  
and Sketches

D.B. 6/5

RIVER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident

<b>1 GENERAL INFORMATION</b>		Date (dd/mm/yy) <u>28/07/11</u>	Time (24h): std / daylight <u>0850</u> hrs to <u>1300</u> hrs	Water Level low - mean - <u>bankfull</u> - overbank falling - steady - rising
Segment/Reach ID: <u>C28</u> Left Bank / <u>Right Bank</u> / Island		Operations Division:		
Survey by: <u>Foot</u> / ATV / Boat / Helicopter / Overlook /		<u>Sun</u> / Clouds / Fog / Rain / Snow / Windy / Calm		
Air Temp + / - <u>30</u> deg C				

2 SURVEY TEAM # <u>4</u>	Name	Organization	Signature
	<u>Lori Williams</u>	<u>Cardno ENTRIX</u>	<u>Lori Williams</u>
	<u>John Beach</u>	<u>NS EPA</u>	<u>John Beach</u>
	<u>Joel Boyle</u>	<u>Cardno ENTRIX</u>	<u>Joel Boyle</u>
	<u>Mark Peterson</u>	<u>MT DEQ</u>	<u>Mark Peterson</u>

**3 SEGMENT** Total Segment/Reach Length 3,800 m Segment/Reach Length Surveyed 1,300 m

Start GPS: LATITUDE 45 deg. 54.837 min. LONGITUDE 108 deg. 17.951 min. Datum: WGS84

End GPS: LATITUDE 45 deg. 55.488 min. LONGITUDE 108 deg. 18.008 min.

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

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

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

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

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

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

Sloped: (>5°)(15°)(30°) 45 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 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>1051</u> <u>1052</u> <u>1053</u> <u>1054</u> A		<u>S</u>	<u>P</u>		<u>175</u>	<u>15</u>	<u>5</u>				<u>P</u>		<u>✓</u>								<u>veg.</u>
B		<u>S</u>	<u>P</u>		<u>230</u>	<u>120</u>							<u>✓</u>								<u>NOT</u>
C			<u>P</u>	<u>S</u>	<u>550</u>	<u>10</u>	<u>5</u>				<u>P</u>		<u>✓</u>								<u>veg.</u>
D			<u>S</u>	<u>P</u>	<u>930</u>	<u>160</u>															<u>NOT</u>

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

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

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

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

A - light stain on vegetation, recommended natural attenuation

B - no oil observed

C - Weathered (Paint), Sporadic stain on vegetation, recommend natural attenuation

D - no oil observed (shoreline)

Beginning of zone A (should be re-scattered by boat and the end of C28 needs to be completed. Islands in this area need to be scattered downstream.

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



MONTANA DEPT OF STATE LANDS

ROBEKNS, PAUL E

C28

ZONE C

ZONE D

GABEL, DUANE H

APPLE CREEK EXOTICS RANCH INC

ZONE B

ZONE A

GABEL, LEROY & SYDNEY

TRAUTMAN, GREGORY & KIMBERLEY

TRAUTMAN, GREG A & KIMBERLY S

GREG A & KIMBERLEY S

HUPKA, MYLES D

& KATHLEEN

GABEL, JACK & LISSA

108°18'W

45°54.75'N

108°17.75'W

45°55'N

45°55.5'N 108°18'W

108°17.75'W

45°55.25'N

DB/G

RIVER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident

Page 1 of 1

<b>1 GENERAL INFORMATION</b>		Date (dd/mm/yy) <u>08/03/2011</u>	Time (24h): std <u>(daylight)</u> <u>1030</u> hrs to <u>1420</u> hrs	Water Level low - mean - bankfull - overbank <u>(falling)</u> - steady - rising
Segment/Reach ID: <u>C28</u> Left Bank / <u>(Right Bank)</u> / Island		Operations Division: <u>0</u>		
Survey by: <u>(Foot)</u> ATV / Boat / Helicopter / Overlook /		<u>(Sun)</u> Clouds / Fog / Rain / Snow / Windy / Calm		
Air Temp +/- <u>32</u> deg C				

<b>2 SURVEY TEAM #</b> <u>3</u>	Name	Organization	Signature
	<u>MIKE DIRKS</u>	<u>Corduro ENTRIX</u>	<u>Michael D. Dirks</u>
	<u>MATT KENT</u>	<u>MTDEQ</u>	<u>Matt Kent</u>
	<u>JONATHAN DAVIS</u>	<u>USCG</u>	<u>Jonathan Davis</u>

**3 SEGMENT** Total Segment/Reach Length \_\_\_\_\_ m Segment/Reach Length Surveyed 2265 m

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

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

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

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

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

Sediment Flat: Clay/Mud \_\_\_\_\_ Sand \_\_\_\_\_ Mixed/Coarse 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 (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 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: THICK VEGETATION OBSTRUCTS COMPLETE SURVEY

**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	450	180	0														X	vegetation marsh
B			(X)	X	165	20	21				X			X								GRASS
C			X	(X)	875	165	0														X	GRASS
D			(X)	X	775	95	21			X	(X)			X								GRASS & SHRUBS

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

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

**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: No oiling observed

ZONES B & D: VERY LIGHT OIL STAINING ON VEGETATION, BLADES OF TALL PRAIRIE GRASSES. ZONE ~~B~~ <sup>HAD</sup> ~~HAD~~ <sup>MOD</sup> ~~HAD~~ <sup>08/02/2011</sup> D HAD OIL COATING OVER A 2m X 0.30m band ~ 1m ABOVE GROUND LEVEL ON SCRUB WILLOW BRANCHES GROWING OUT OF A SLOPE STABILIZING, THICK GAUCIE FENCE. REMOVAL WOULD DESTABILIZE THE RIVER BANK.

RECOMMENDATIONS: NO TREATMENT NECESSARY, COMPLETE C28 ISLAND SURVEY, 1 & APPLIE CREEK RANCH PROPERTIES

Sketch Yes/No Photos (Yes) / No Frames \_\_\_\_\_ Photographer MATT KENT / MIKE DIRKS

C29

DSCF0188.JPG

CQ8 RB  
Zone A  
Team # 3  
Mike Dirks  
03/08/11

A

©2010

45°56'07.53" N 108°17'12.71" W elev 2990 ft

1996

C27

(B)

(C)

C28RB  
Zones B+C  
Team #3  
Mike Dirks  
03/08/11

©2010

1996

45°55'46.05" N 108°17'44.15" W elev 2993 ft

CSRB  
Zone D  
Team #3  
Mike Dirks  
# 03/08/11

133

132

131

003

DSCF0189.JPG

002

IMG00015.JPG

130 129

128

127

126

001

124

IMG00014.JPG

125

122

123

©2010

DB/G

RIVER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident

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

<b>1 GENERAL INFORMATION</b>		Date (dd/mm/yy) 11/08/11	Time (24h): std / daylight 0840 hrs to 11:11 hrs	Water Level low - mean - bankfull - overbank falling - steady - rising
Segment/Reach ID: C28 Left Bank / Right Bank / Island		Operations Division:		
Survey by: (Foot) / ATV / Boat / Helicopter / Overlook / _____		Sun / Clouds / Fog / Rain / Snow / Windy / Calm		Air Temp +/- _____ deg C

<b>2 SURVEY TEAM # 5</b>	Name	Organization	Signature
LISA GERENCHER		Cardno ENTRIX	<i>Lisa Gerencer</i>
BETSY HOVDA		DEQ	<i>Betsy Hovda</i>
RON LYNN		USCG	
MATT DELONG		HOT SHOT TEAM LEADER	<i>Matt DeLong</i>

**3 SEGMENT** Total Segment/Reach Length 4000 m Segment/Reach Length Surveyed 2200 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: \_\_\_\_\_

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 2 bags or \_\_\_\_\_ trucks access restrictions OWNER RESTRICTION

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

**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	6	2	41			X	(F)							X			willow
B				X	23	3	1			(F)	X						X				grass, veg
C				X	25	6	41				(X)							X			veg, creek
D				X	80	55	41			(F)	X	X					X	(X)			veg, creek
E		X	X	(X)	2200	290														X	
F				X			41				(X)							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				

**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 - light staining on willows + grass. trace amount. no treatment required located on peninsula on the SW border of C28+C24.

B - light coat on willows + vegetation. action required hot shot team to surgically remove oiled vegetation < 1 bag total cleanup. NFT.

C - light silver sheen on back channel. total coverage 25 meters long by 3 centimeters wide. NFT.

D - light to moderate coating on vegetation, grass, and debris. action recommended hot spot cleanup crew to surgically remove vegetation + debris. NFT.

E - no oil found

F - ~~sporadic oiling on grass and vegetation. No treatment required.~~

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

Magnitude

8  
7  
6  
5  
4  
3  
2  
1

Age

Past hour  
Past day  
Past week

Plates

Boundaries  
Convergence

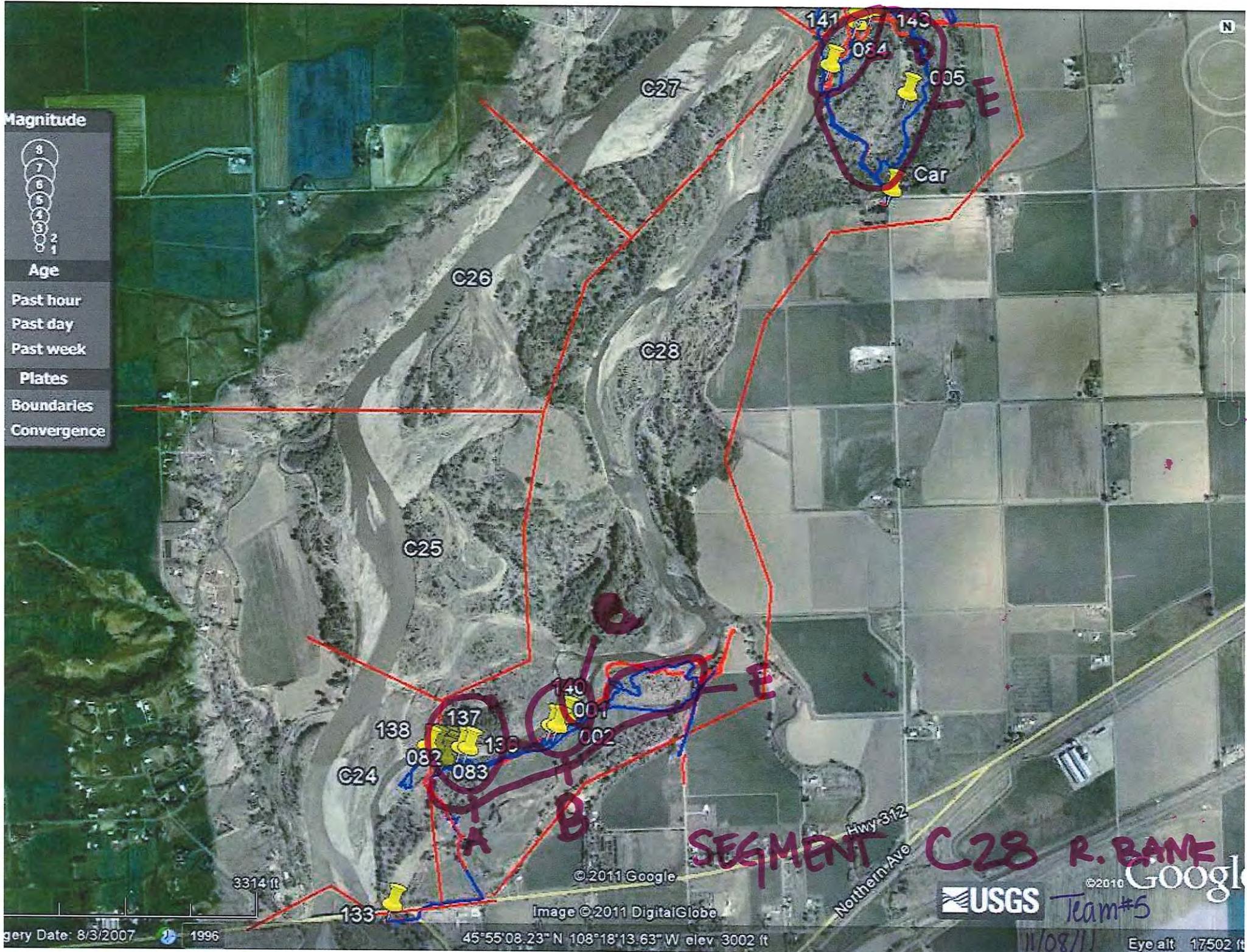


Image Date: 8/3/2007 1996

45°55'08.23" N 108°18'13.63" W elev 3002 ft

USGS Team#5  
11/08/11 Eye alt 17502 ft

DB/G

RIVER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident

Page 1 of 2

<b>1 GENERAL INFORMATION</b>		Date (dd/mm/yy)	Time (24h): std / daylight	Water Level
Segment/Reach ID: <u>C78</u> Left Bank (Right Bank / Island)		<u>17/08/11</u>	<u>0905</u> hrs to <u>0930</u> hrs	low / <u>mean</u> / bankfull - overbank
Operations Division:				falling / steady - rising
Survey by: (Foot) ATV / Boat / Helicopter / Overlook /		(Sun) (Clouds) Fog / Rain / Snow / Windy / Calm		Air Temp +/- <u>30</u> deg C

2 SURVEY TEAM # <u>3</u>	Name	Organization	Signature
	<u>Damien Korte</u>	<u>Cardno Entrix</u>	<u>See Attached</u>
	<u>Louise Richman</u>	<u>EPA</u>	<u>See Attached</u>
	<u>Jeffrey Herrick</u>	<u>DER</u>	<u>See Attached</u>

**3 SEGMENT** Total Segment/Reach Length 3950 m Segment/Reach Length Surveyed 740 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: Grass, trees

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

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

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

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

Debris: Y(N) oiled Y(N) amount \_\_\_\_\_ 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

2300

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>✓</u>	<u>740</u>	<u>160</u>	<u>0</u>														<u>✓</u>	<u>grass, 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)

Zone A - NOO

Instructed to only survey Teter property.

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

SCAT  
Team 3  
8/11/11  
C28-RB



C28

C28N

C28W

C26-RB

C28S

005

004

003

002

002

001

001

© 2011 Google

©2010



1996

45°55'35.88" N 108°18'03.36" W elev 2996 ft



C27RB

Zone A - 1000  
light coat on  
push, NFT

C26RB

C28L  
001 002 003 004 005  
001 002

Zone B  
light coat on  
push, NFT

C28W

C28H

Zone C  
light coat on  
push, NFT

C28  
C28

© 2011 Google  
© 2011 Europa Technologies  
Image USDA Farm Service Agency

©2010



# C 28 - RB



1996

© 2011 Europa Technologies  
© 2011 Google  
Image © 2011 DigitalGlobe

45° 54.879' N 108° 18.326' W elev 3003 ft

Zone A  
1250  
160

DB/G

RIVER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident

<b>1 GENERAL INFORMATION</b>		Date (dd/mm/yy)	Time (24h): std / daylight	Water Level
Segment/Reach ID: <u>C28</u> (Left Bank / Right Bank / Island)		<u>17/08/11</u>	<u>0930</u> hrs to <u>1015</u> hrs	low - mean - bankfull - overbank
Operations Division: <u>C</u>				falling - steady - rising
Survey by: Foot / ATV / Boat / Helicopter / Overlook / _____		(Sun) / Clouds / Fog / Rain / Snow / Windy / Calm		Air Temp +/- <u>30</u> deg C

2 SURVEY TEAM # <u>3</u>	Name	Organization	Signature
	<u>Damian Korte</u>	<u>Cardno Entrix</u>	<u>See Attached</u>
	<u>Lance Richman</u>	<u>EPA</u>	<u>See Attached</u>
	<u>Jeffrey Herick</u>	<u>DEQ</u>	<u>See Attached</u>

**3 SEGMENT** Total Segment/Reach Length 3050 m Segment/Reach Length Surveyed 610 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: Grass, trees

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

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

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

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

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

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

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

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

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

2301  
2302  
2303  
2304

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"/>	610	240	0														<input checked="" type="checkbox"/>	Grass, trees
B				<input checked="" type="checkbox"/>	3	3	<1			P	S						<input checked="" type="checkbox"/>					Shrubs
C				<input checked="" type="checkbox"/>	100	10	<1			P	S						<input checked="" type="checkbox"/>					Shrubs
D				<input checked="" type="checkbox"/>	1	1	<1			S	P							<input checked="" type="checkbox"/>				Grass, sediment

**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 - NOO

Zone B - Very light coat on grass, less than 1%. NFT

Zone C - Very light coat on brush, less than 1%. NFT

Zone D - Very small patch of oiled grass and sediment, less than 1m<sup>2</sup>. NFT

Instructed to only survey Peter property.

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

9/1/2009

2009

C27RB

C26RB

C28L

C28R

C28W

004

003

002

003

001

002

001

005

Zone 2

C28H

C28  
o  
C28

© 2011 Google

© 2011 Europa Technologies

Image USDA Farm Service Agency

© 2010

1996

45°55'35.81" N 108°18'02.84" W elev 2996 ft

Zone A - 2000  
Yellow grass NFT

Light coat on  
grass, NFT  
Light coat on  
grass, NFT

DB/G

RIVER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident

<b>1 GENERAL INFORMATION</b>		Date (dd/mm/yy)	Time (24h): std / daylight	Water Level
Segment/Reach ID: <u>C28</u> <input checked="" type="radio"/> Left Bank <input type="radio"/> Right Bank <input type="radio"/> Island		<u>18/08/2011</u>	<u>11:00</u> hrs to <u>15:00</u> hrs	low - <u>mean</u> - bankfull - overbank
Operations Division: <u>C28</u>		Sun / Clouds / Fog / Rain / Snow / Windy / Calm		falling / <u>steady</u> / rising
Survey by: <u>(Foot) ATV / Boat / Helicopter / Overlook /</u>				Air Temp +/- <u>80</u> deg C

2 SURVEY TEAM # <u>122</u>		Name	Organization	Signature
		Robert Nailor	Cardno ENTRIX	
		Todd Farrar	Polaris	
		Jay Watson	MT FWP	
		Jessica Ross	MDEQ	
		Alicia Taylor	USCG	
		John Davis	USCG	
		Ariel Blanc	Polaris	

**3 SEGMENT** Total Segment/Reach Length \_\_\_\_\_ m Segment/Reach Length Surveyed 1613 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 5 Sand 5 Mixed \_\_\_\_\_ Pebble/Cobble \_\_\_\_\_ Boulder \_\_\_\_\_ Peat/Organic \_\_\_\_\_ Vegetated Bank: P Wooded Upland: \_\_\_\_\_

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

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

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

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 10 bags or \_\_\_\_\_ trucks access restrictions Island / Boat Access

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		550	9	5		X	<u>(X)</u>	X						X					Veg Bank
B			X		265	5	41%			<u>(X)</u>	X						X					Veg Bank
C			X		850	1	41%			<u>(X)</u>	X						X					Veg Bank
D			X		345	1m	41%			<u>(X)</u>	X						X					Veg Bank

**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

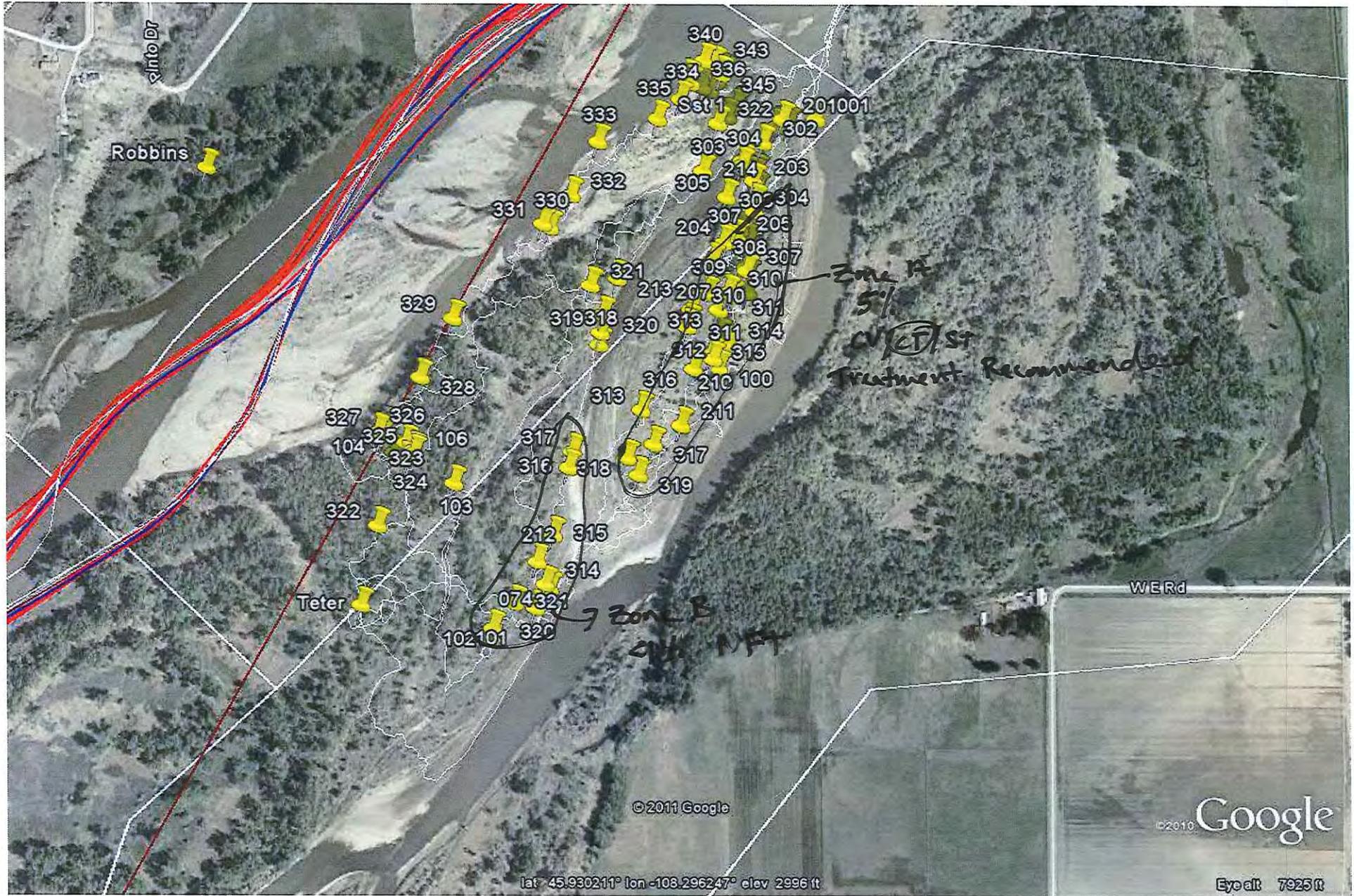
Zones A & D, treatment recommended

Zone A: Small crew, 4-6 workers. Hand tools. Target flagged area and sweep area clip oiled vegetation

Zone D: Small crew, 2 workers. Target 1x1m area w/p. 219 hand tools. Remove oiled debris

Zones B & C, NFT

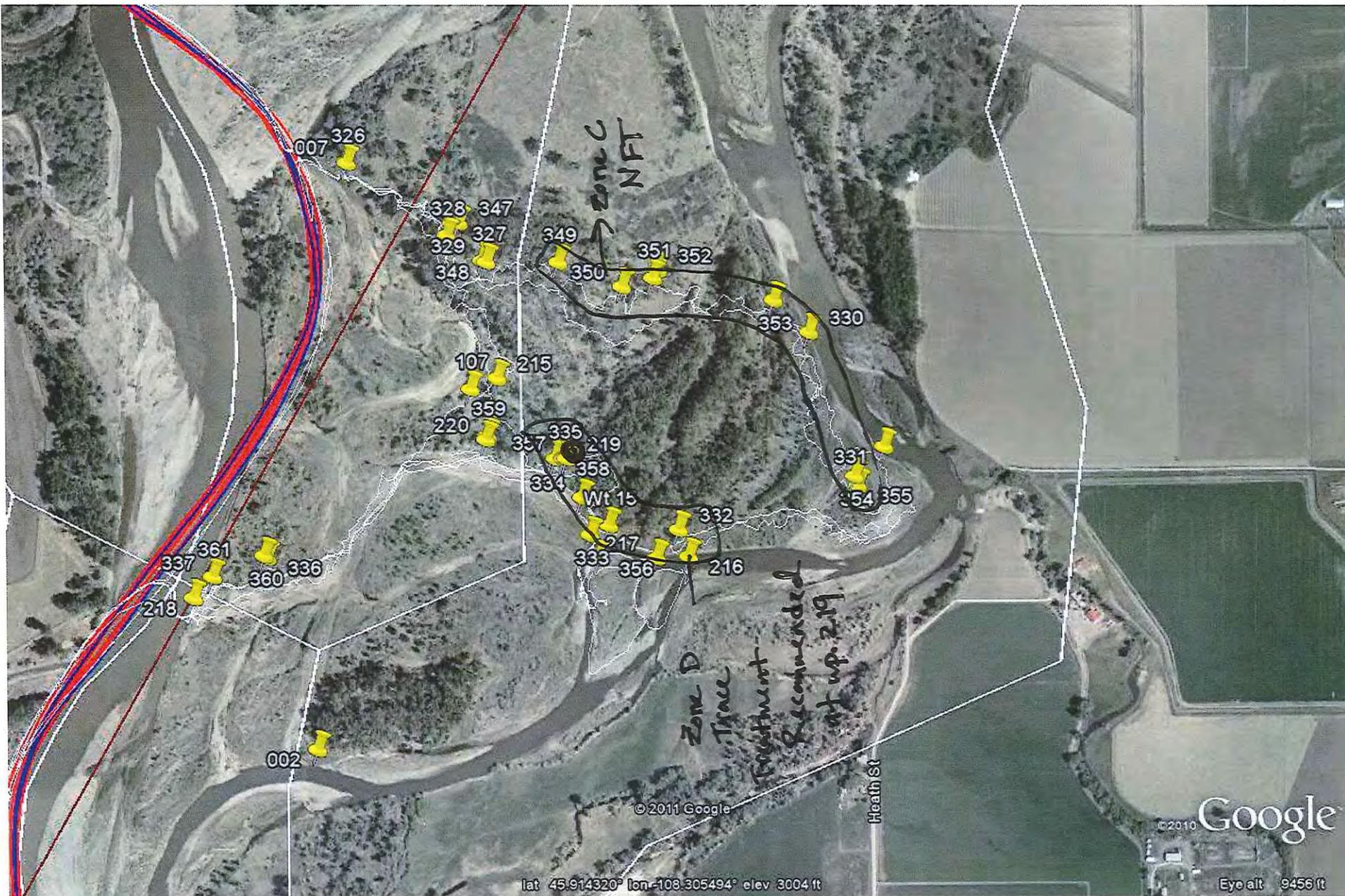
Sketch (Yes/No) Photos (Yes/No) Frames \_\_\_\_\_ Photographer \_\_\_\_\_



C28  
 SCAT 1+2  
 18 Aug 2011

C28 Page 2 of 3

C28 pt 3 of 3



C28  
SCAT 1+2  
18 Aug 2011



<b>1 GENERAL INFORMATION</b>		Date (dd/mm/yy)	Time (24h): std / daylight	Water Level
Segment/Reach ID: <u>CA8</u> <u>Left Bank / Right Bank / Island</u>		<u>19/08/11</u>	<u>1300</u> hrs to <u>1520</u> hrs	low - <u>mean</u> - bankfull - overbank
Operations Division:				falling - steady - rising
Survey by: <u>(Foot) / ATV (Boat) Helicopter / Overlook /</u>		<u>Sun / Clouds / Fog / Rain / Snow / Windy / Calm</u>		Air Temp + / - <u>26</u> deg C

<b>2 SURVEY TEAM # <u>1 &amp; 3</u></b>	Name	Organization	Signature
	Lisa Gerencher	Cardno ENTRIX	<i>[Signature]</i>
	Joe Busalucci	Cardno ENTRIX	<i>[Signature]</i>
	Jessica Ross	DEQ	<i>[Signature]</i>
	Jon Davis	USCG	<i>[Signature]</i>
	Jeffrey Frank	DEQ <i>[Signature]</i>	<i>[Signature]</i>
	Rachelle Thompson	<del>DEQ</del> EPA <i>[Signature]</i>	<i>[Signature]</i>

**3 SEGMENT** Total Segment/Reach Length \_\_\_\_\_ m Segment/Reach Length Surveyed 2885 m

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

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

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

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

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

Sediment Flat: Clay/Mud \_\_\_\_\_ Sand \_\_\_\_\_ Mixed/Coarse \_\_\_\_\_ Other: \_\_\_\_\_ 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 est. water depth: <1m 1-3m 3-10m >10m \_\_\_\_\_ m

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

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

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

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

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

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

OIL ZONE ID	RIVER BANK ZONE				OIL COVER			OIL THICKNESS					OIL CHARACTER						SUBST. TYPE(S)			
	MS	LB	UB	OB	Length m	Width m	Distrib. %	TO	CV	CT	ST	FL	FR	MS	TB	PT	TC	SR		AP	NO	
1704 1705 1706 A				X	365	60	<1			X	(X)							(X)	X			grass/trees
B				X	580	45	<1			X	(X)							(X)	X			tree/debris
C				X	2000	515															X	

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

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

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

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

Zone A: Sporadic oiling, tar coat primarily on grass and trees, Not easily transferrable. NFT, Zone area 739x150 meters

Zone B: Same as Zone A. Bandwidth across willows 3cm

Zone C: NOD

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

C28-LB  
SCAT 1+3  
19 Aug 2011



C26-RB

C26-IS

C25-IS

Spracklin Island

C25-LB

C25-RB

C27-LB

A

C28-IS

C24-RB

C24-LB

© 2011 Europa Technologies  
© 2011 Google  
Image © 2011 DigitalGlobe

	L	W
A	365	60
B	520	45
C	2000	515

Hwy 3125  
Northern Ave

1996

45° 54.879' N 108° 18.326' W elev 3003 ft

©2

<b>1 GENERAL INFORMATION</b>		Date (dd/mm/yy)	Time (24h): std / daylight	Water Level
Segment/Reach ID: <u>008</u> Left Bank / Right Bank / Island		<u>19/08/11</u>	<u>1300</u> hrs to <u>1520</u> hrs	low - mean - bankfull - overbank
Operations Division:				falling - steady - rising
Survey by: <u>Foot / ATV / Boat / Helicopter / Overlook /</u>		<u>Sun / Clouds / Fog / Rain / Snow / Windy / Calm</u>		Air Temp + / - <u>26</u> deg C

<b>2 SURVEY TEAM #</b> <u>1+3</u>	Name	Organization	Signature
	Lisa Gerencher	Cardno ENTRIX	<i>[Signature]</i>
	Joe Busalucci	Cardno ENTRIX	<i>[Signature]</i>
	Jessica Ross	DEQ	<i>[Signature]</i>
	Jon Davis	USCG	<i>[Signature]</i>
	Jeffrey Frank	DEQ <i>[Signature]</i>	<i>[Signature]</i>
	Rachelle Thompson	<i>[Signature]</i>	<i>[Signature]</i>

**3 SEGMENT** Total Segment/Reach Length 3889 m Segment/Reach Length Surveyed 907 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 5 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 X oxbow \_\_\_\_\_ flood plain valley \_\_\_\_\_ Forested / Vegetated / Bare

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

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

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

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

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

Debris: (Y) / N oiled (Y) / N amount 1 bags or \_\_\_\_\_ trucks access restrictions

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

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

1707  
1708

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	702	190	<1			X	(X)						(X)	X				trees, veg, debris
B				X	205	120														X		

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

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

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

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

Zone A: Sporadic oiling, tar coat primarily on grass, trees, & debris. Light silver sheen along shore (left bank) NFT

Zone B: NOO

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

C28 Island  
SCAT 1-3  
19 Aug 2011



C28-IS

C26-RB

C26-IS

C25-IS

Spraklin Island

C25-LB

C25-RB

C28-LB

C24-RB

C24-LB

	Length	Width
Zone A	702	190
Zone B	205	120

© 2011 Europa Technologies  
© 2011 Google  
Image © 2011 DigitalGlobe

45° 54.879' N 108° 18.326' W elev 3003 ft

1996

Hwy 312  
Northern Ave



## **Appendix C**

Pre-Inspection Survey Transmittal

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



## **Appendix D**

Post-Inspection Survey Transmittal

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



## **Appendix E**

Final SCAT Survey Forms  
and Sketches

DB/6

RIVER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident

<b>1 GENERAL INFORMATION</b>		Date (dd/mm/yy) 25/09/11	Time (24h): std / daylight 0930 hrs to 1230 hrs	Water Level low - <u>mean</u> - bankfull - overbank falling - steady - rising
Segment/Reach ID: C 28 Left Bank / <u>Right Bank</u> / Island		Operations Division: C		
Survey by: <u>Foot</u> / ATV / Boat / Helicopter / Overlook / _____		Sun / Clouds / Fog / Rain / Snow / Windy / Calm		Air Temp + / - <u>32</u> deg C

<b>2 SURVEY TEAM # 3</b>	Name	Organization	Signature
Pete Lee		Polaris	<i>PDLee</i>
Jeffrey Frank Herrick		MTDEQ	<i>Jeffrey Frank Herrick</i>

**3 SEGMENT** Total Segment/Reach Length \_\_\_\_\_ m Segment/Reach Length Surveyed 730 m

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

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

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

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

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

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

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

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

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

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

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

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

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

**5 OPERATIONAL FEATURES**

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

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

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

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

OIL ZONE	RIVER BANK ZONE				OIL COVER			OIL THICKNESS					OIL CHARACTER						SUBST. TYPE(S)				
					Length	Width	Distrib.	TO	CV	CT	ST	FL	FR	MS	TB	PT	TC	SR		AP	NO		
A				<u>X</u>	730	210	<1			<u>S</u>	<u>P</u>						<u>X</u>						Grass, trees, debris

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

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

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

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

Oil height: 60-200 cm

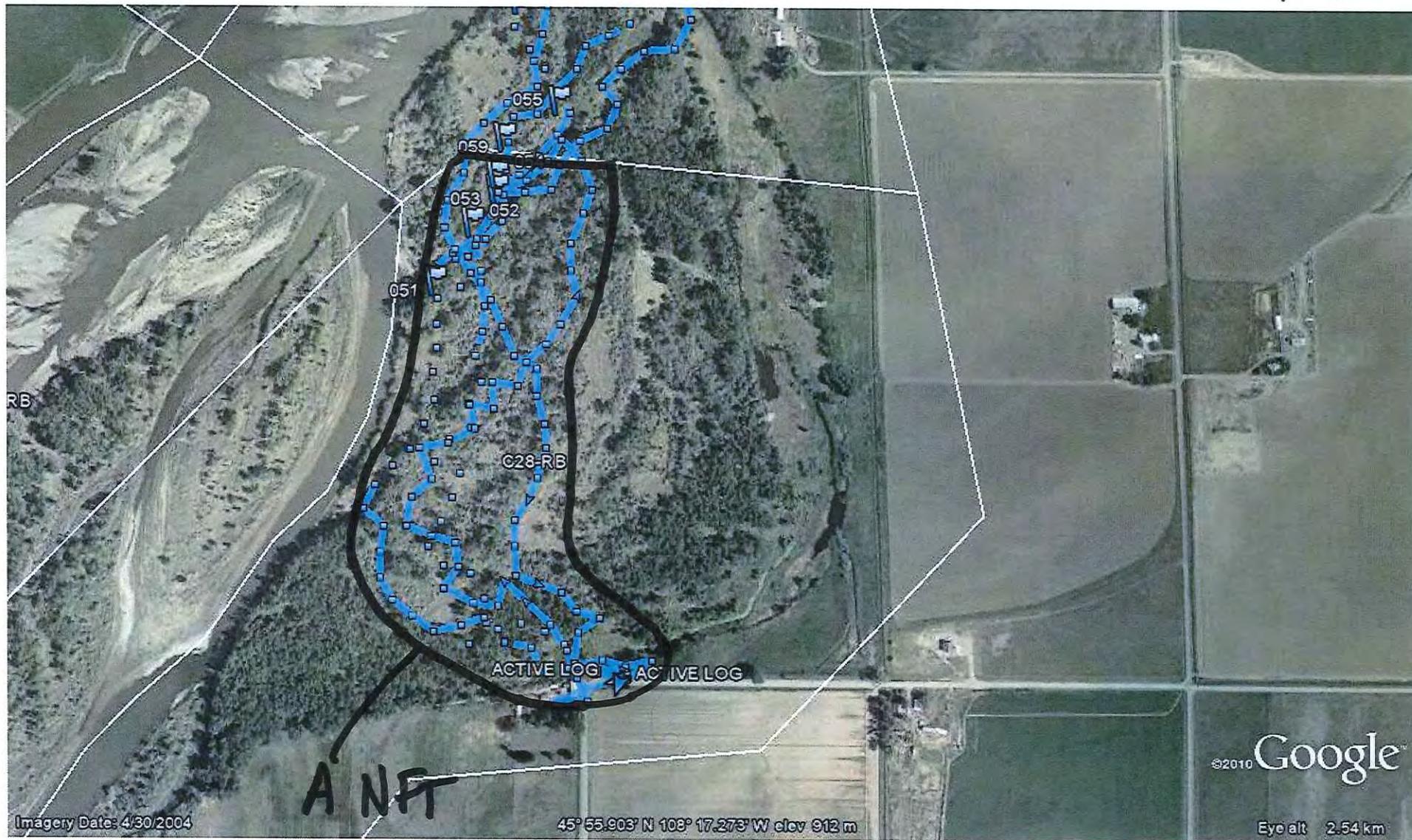
Treatment recommendations:

Zone A : Treated by Hot Shot Ops crew; removed oil-coated

Zone : woody debris and shrubs; No Further Treatment

Partial Segment Fill-in

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



C28 RB FILLIN  
T3 9/25/11

DB/G

<b>1 GENERAL INFORMATION</b>		Date (dd/mm/yy) <u>11/09/11</u>	Time (24h): std / daylight <u>0815</u> hrs to <u>1145</u> hrs	Water Level low <input type="radio"/> mean <input checked="" type="radio"/> bankfull - overbank (falling) steady - rising
Segment/Reach ID: <u>C28</u> (Left Bank / Right Bank / Island)				
Operations Division: <u>C</u>				
Survey by: <u>Food</u> / ATV <u>Boat</u> / Helicopter / Overlook / _____		<u>Sun</u> / Clouds / Fog / Rain / Snow / Windy <u>Calm</u>	Air Temp +/- <u>25</u> deg C	

2 SURVEY TEAM # <u>5</u>	Name	Organization	Signature
	<u>Nathan Hammond</u>	<u>Cardno Entrix</u>	<u>Nathan Hammond</u>
	<u>Marcile Sigler</u>	<u>DEO</u>	<u>Marcile Sigler</u>

**3 SEGMENT** Total Segment/Reach Length 3141 m Segment/Reach Length Surveyed 717 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

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

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

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

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

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

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

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

Debris Y(N) oiled Y(N) amount 2 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>2263</u> <u>2264</u> A			<u>P</u>	<u>S</u>	<u>227</u>	<u>105</u>	<u>0</u>														<input checked="" type="checkbox"/>	
B			<u>P</u>	<u>S</u>	<u>700</u>	<u>200</u>	<u>&lt;1</u>			<u>S</u>	<u>P</u>						<u>X</u>					<u>veg, debris</u>

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

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

**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 Oil Observed - No Treatment Required.

Zone B - ATM1, ATM2, ATM9 utilized by hot shot crew - 2 bags removed. No Further Treatment.

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

55 am 9/11/2011 2:35 pm  
3 pm

ACTIVE LOG-90  
C27-RB

ZONE A - NOU

ZONE B - VERY LIGHT

Team 5  
9/11/11  
C28-LB

C28-RB

Image ©2011 DigitalGlobe

©2011 Google

©2010

1996

45°55'52.90" N 108°17'46.57" W elev 2996 ft

DB/

RIVER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident

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

<b>1 GENERAL INFORMATION</b>		Date (dd/mm/yy)	Time (24h): std / daylight	Water Level
Segment/Reach ID: <u>C28</u> <input type="radio"/> Left Bank / <input type="radio"/> Right Bank / <input type="radio"/> Island		<u>15/09/11</u>	<u>1300</u> hrs to <u>1500</u> hrs	low - mean - bankfull - overbank
Operations Division: <u>C</u>		<input checked="" type="radio"/> Sun	<input type="radio"/> Clouds / <input type="radio"/> Fog / <input type="radio"/> Rain / <input type="radio"/> Snow / <input type="radio"/> Windy / <input type="radio"/> Calm	<input checked="" type="radio"/> falling / <input type="radio"/> steady - rising
Survey by: <input checked="" type="radio"/> Foot / <input type="radio"/> ATV / <input type="radio"/> Boat / <input type="radio"/> Helicopter / <input type="radio"/> Overlook / _____				Air Temp +/- <u>26</u> deg C

<b>2 SURVEY TEAM #</b> <u>1</u>	Name	Organization	Signature
	<u>Todd Farvar</u>	<u>Polaris</u>	<u>[Signature]</u>
	<u>Jessica Ross</u>	<u>DEA</u>	<u>[Signature]</u>

**3 SEGMENT** Total Segment/Reach Length 422 m Segment/Reach Length Surveyed 422 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 S Boulder \_\_\_\_\_ Peat/Organic \_\_\_\_\_ Vegetated Bank: P Wooded Upland: \_\_\_\_\_

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

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

Cliff or Bluff: S Est Height 5 m canyon \_\_\_\_\_ manmade \_\_\_\_\_ meander \_\_\_\_\_ confined or leveed \_\_\_\_\_ Substrate Type: silt

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

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

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

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

Debris: Y  N oiled Y / N amount \_\_\_\_\_ bags or \_\_\_\_\_ trucks access restrictions Water Access only

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

2312  
2313

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	100	142	<1			S	P						P					WV
B				X	322	460	<1			S	P						P					WV

**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  N Shoreline Survey Completed Y / N

This survey completes a portion of the segment which was not previously surveyed due to access restrictions. Zones A & B had coat a stain sporadically distributed throughout the area. We had a hot shot crew that removed or treated the oiled vegetation - No further Treatment (NFT)

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



C25-RB  
SCAT Team  
1  
9/15/11  
C28 LB

Zone  
A

Zone  
B

C28-IS

C28-LB

C28

Image © 2011 DigitalGlobe

© 2010

© 2011 Google

45°55'02.60" N 108°18'21.68" W elev 3002 ft



## **Appendix F**

Completed SCAT Segment  
Sign-Off Forms

# SCAT SEGMENT OPERATIONS COMPLETION SIGN-OFF SHEET

## SILVERTIP PIPELINE RELEASE

Segment 028 RB Date of Survey 9/25/11

Dates of Initial SCAT Assessments 28 Jul 2011 (IS)  
(to be filled out by SCAT Data Management)

CTR(s) Associated with SCAT Segment 50

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

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

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

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

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

No Federal Rep Present

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

Sign Name Philip Frank Herrick Print Name/ Affiliation Philip Frank Herrick Date 25 Sept 2011  
**State Representative (DEQ/FWP)** MT DEQ

Sign Name PB Lee Print Name/ Affiliation Pete Lee / Polaris Date 9/25/11  
**RP Representative (SCAT RP Representative)**

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

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

# SCAT SEGMENT OPERATIONS COMPLETION SIGN-OFF SHEET

## SILVERTIP PIPELINE RELEASE

Segment C28LB

Date of Survey 9/11/11

Dates of Initial SCAT Assessments

18 AUG 11 (FD)  
(to be filled out by SCAT Data Management)

CTR(s) Associated with SCAT Segment

60

Segment has been treated by Operations or an Operations Hotshot Team

YES

NO

Segment Assessment Complete<sup>1</sup>

Partial Segment Assessment

*Previous SCAT reports along with this sign off - complete this segment.*

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

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

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

No Federal Representative

Sign Name

Print Name/ Affiliation

Date

**Federal Representative (EPA/USCG)**

Marcie Sigler

Marcie Sigler / AEC

9/11/11

Sign Name

Print Name/ Affiliation

Date

**State Representative (DEQ/FWP)**

Nathan Hammond

Nathan Hammond / Cardno Entix

9/11/11

Sign Name

Print Name/ Affiliation

Date

**RP Representative (SCAT RP Representative)**

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

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

# SCAT SEGMENT OPERATIONS COMPLETION SIGN-OFF SHEET

## SILVERTIP PIPELINE RELEASE

Segment C-28 LB Date of Survey Sept 15, 2011

Dates of Initial SCAT Assessments 17 Aug 2011   
(to be filled out by SCAT Data Management)

CTR(s) Associated with SCAT Segment 61

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

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

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

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

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

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

[Signature] \_\_\_\_\_ Jessica Ross / DEQ \_\_\_\_\_ 9/15/11  
Sign Name \_\_\_\_\_ Print Name/ Affiliation \_\_\_\_\_ Date \_\_\_\_\_  
**State Representative (DEQ/FWP)**

[Signature] \_\_\_\_\_ Todd Farrar / Polaris \_\_\_\_\_ 9/15/11  
Sign Name \_\_\_\_\_ Print Name/ Affiliation \_\_\_\_\_ Date \_\_\_\_\_  
**RP Representative (SCAT RP Representative)**

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

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