



TETRA TECH

SUBJECT Zilica

Clinton

PROJECT _____

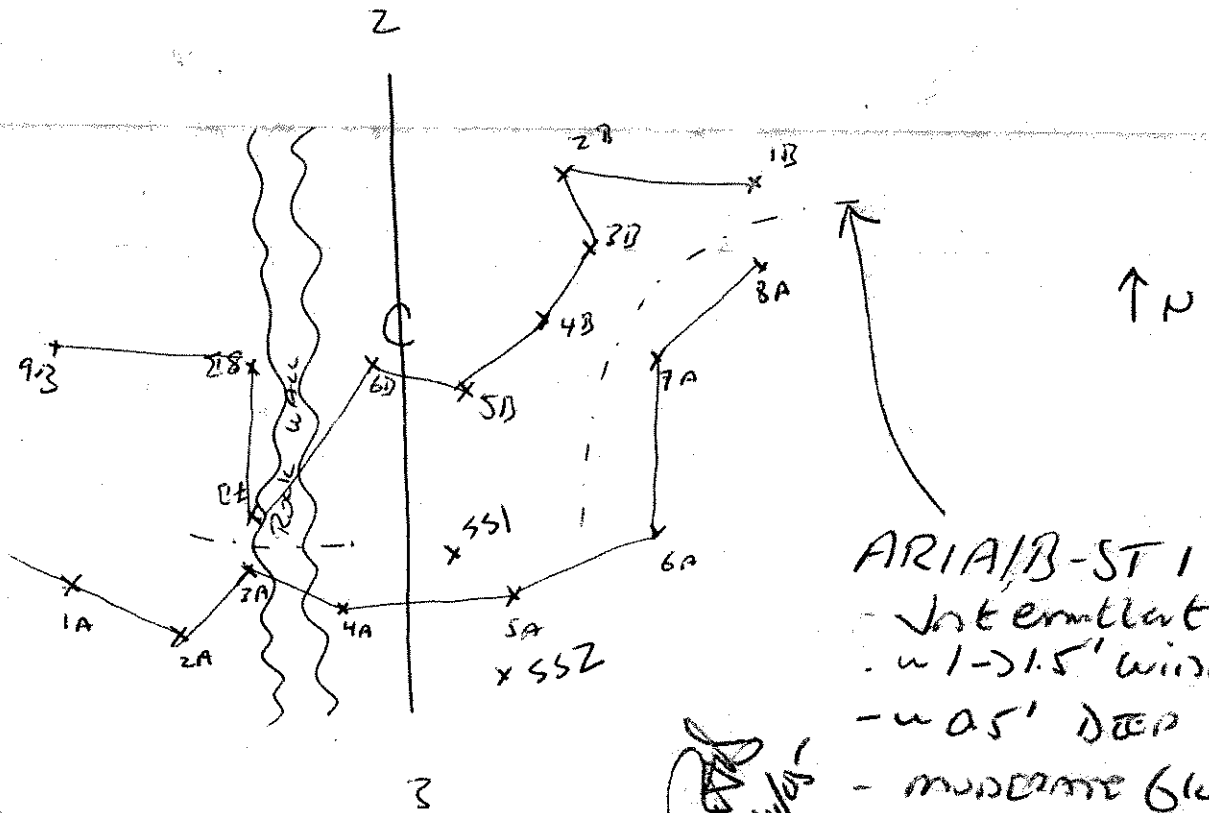
TC/P NO. _____

ORIGINATOR _____ CHECKED _____

DATE 9/19 PAGE 2 OF 5 PAGES

WETLAND btwn TURBINES 3 & 2 (ACCESS ROAD)

WETLAND ARI - A Line & B Line



ARIA/B-ST 1
 - Intermittent
 - w/ 1-2.5' wide
 - w/ 5' deep
 - moderate flow
 - silt substrate
 - flow to east

PSS / PEM

- SHRUBS: ^{Silky}
 - ~~White~~ willow
 - ~~BEAK~~ willow
 - High bush cranberry (*Viburnum trif. trilobum*)

- HERB
 - ~~Wormwood~~ ^{MOORE} (Rush Aster)
 - CAREY LUPINE
 - ARROW LEAF TEARDROP
 - Jewelweed
 - ~~Sensitive fern~~ ^{nettle} ~~chanter~~ Sensitive Fern
 - ~~Wormwood~~ golden rod (Lance-leaved)

STREAM CROSSING DATA FORM

ROUTE: Access Rd below 109' (100)
 LOCATION: ARIA 13
 FIELD CREW: PA, SC

DATE: 7/10/06
 ROLL NO: _____
 FRAMES: 1/3
SSW

STREAM CROSSING DATA

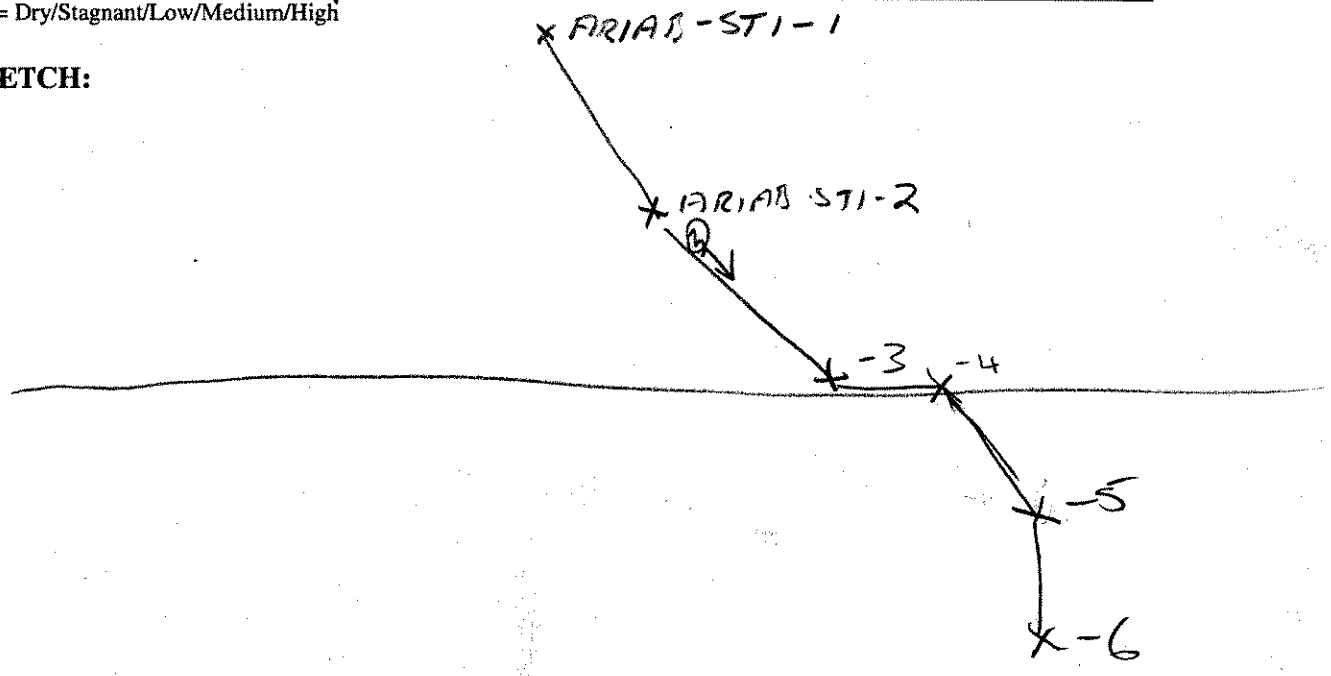
CHANNEL ID	ARIA13-ST1		
NAME (or trib. to)	—		
TYPE OF STREAM			
PEREN/INTERMIT			
WIDTH (obser/ohw)	n/a / 4'		
DEPTH (obser/ohw)	n/a / 1'		
FLOW RATE ¹	n/a		
FLOW DIRECTION	NE		
SUBSTRATE	Silt/DM		
BANK VEGETATION	PEW		

¹ = Dry/Stagnant/Low/Medium/High

SKETCH:



Access Rd.



FISH AND WILDLIFE OBSERVATIONS

NOTES

Int stream associated w/ wetland
ARIA13

STREAM CROSSING DATA FORM

ROUTE: AR 1-AB-ST

DATE: 5/3/07

LOCATION: North of T. 109

ROLL NO: _____

FIELD CREW: JV AP

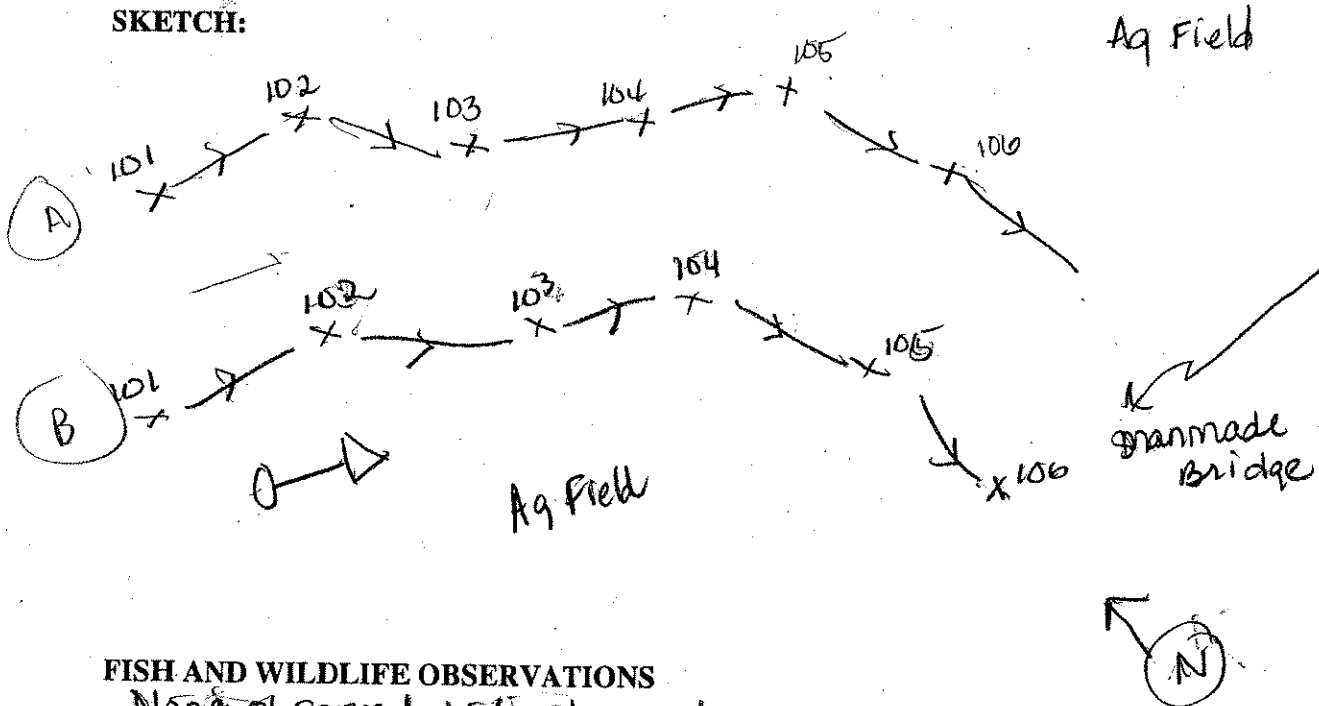
FRAMES: 1 => NE

STREAM CROSSING DATA

CHANNEL ID	AR 1-AB-ST	Vege (Bank)	Vege (Channel)
NAME (or trib. to)		<i>Spiraea tomentosa</i>	<i>Caltha palustris</i>
TYPE OF STREAM		<i>Impatiens capensis</i>	<i>Impatiens capensis</i>
PEREN/INTERMIT	Intermittent?	<i>Salix</i>	<i>Gallium</i>
WIDTH (obser/ohw)	4' / 8'	<i>Aster sp.</i>	
DEPTH (obser/ohw)	8" / 16-20"	<i>Populus</i>	
FLOW RATE ¹	Low	<i>Acer rubrum</i>	
FLOW DIRECTION	N, NE to ESE	<i>Taraxicum</i>	
SUBSTRATE	Silt + Cobble	<i>Gallium</i>	
BANK VEGETATION	PEM / SS		

¹ = Dry/Stagnant/Low/Medium/High

SKETCH:



FISH AND WILDLIFE OBSERVATIONS

None observed w/i channel.

NOTES

STREAM DATA FORM

PROJECT: Clinton Co.
 TURBINE: _____
 LOCATION: _____
 FIELD CREW: KA, GD

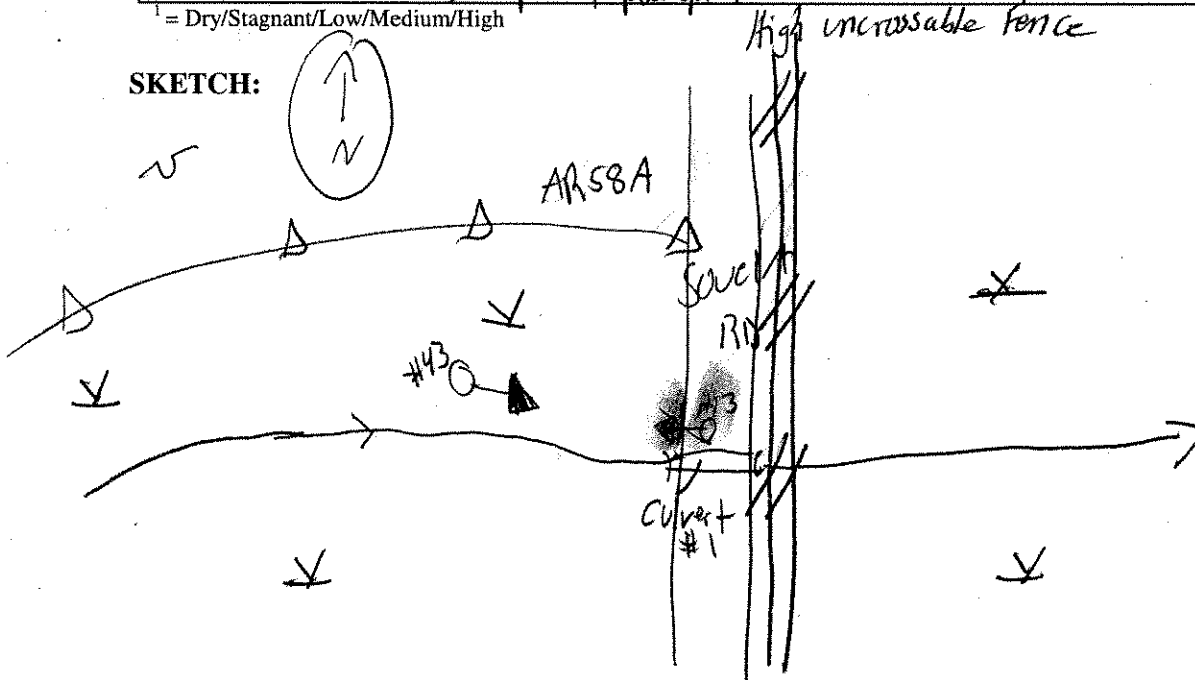
CLIENT: Horizon
 DATE: 10/18/05
 ROLL NO: _____
 FRAMES: #43, Gregg's camera

STREAM CROSSING DATA

CHANNEL ID	AR58A/BS#1/S		
NAME (or trib. to)	unknown		
PEREN/INTERMIT	Intermittent		
WIDTH (obser/ohw)	3-5'		
DEPTH (obser/ohw)	>6"		
FLOW RATE ¹	Low		
FLOW DIRECTION	East		
SUBSTRATE	SAND/gravel		
BANK VEGETATION	Flat top Aster, Sillig willow, pop sp.		

¹ = Dry/Stagnant/Low/Medium/High

SKETCH:



FISH AND WILDLIFE OBSERVATIONS

NOTES

Heavy rains within last 24 hours - Intermittent streams low flow

STREAM CROSSING DATA FORM

ROUTE: _____

DATE: 5/25/07

LOCATION: _____

ROLL NO: _____

FIELD CREW: RTD, AP

FRAMES: _____

STREAM CROSSING DATA

CHANNEL ID	<u>ARSSA-ST</u>		
NAME (or trib. to)			
TYPE OF STREAM			
PEREN/INTERMIT	<u>int</u>		
WIDTH (obser/ohw)	<u>1.5' / 3'</u>		
DEPTH (obser/ohw)	<u>6" / 1.5'</u>		
FLOW RATE ¹	<u>low</u>		
FLOW DIRECTION	<u>ENE</u>		
SUBSTRATE	<u>Gravel & silt</u>		
BANK VEGETATION	<u>Pen/PSS.</u>		

¹ = Dry/Stagnant/Low/Medium/High

SKETCH:

No stream extreme points - within coy dog pen
collected. Reference pt at fence

FISH AND WILDLIFE OBSERVATIONS

NOTES

STREAM DATA FORM

PROJECT: Clinton Co.
 TURBINE: _____
 LOCATION: _____
 FIELD CREW: GD, KA

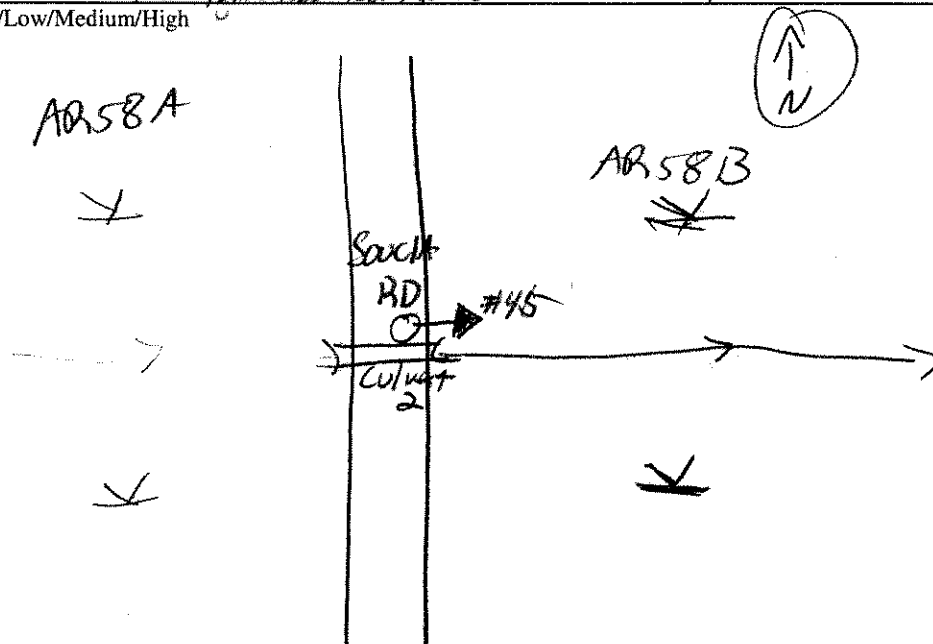
CLIENT: Horizon
 DATE: 10/18/05
 ROLL NO: _____
 FRAMES: Goji's Camera #45

STREAM CROSSING DATA

CHANNEL ID	AR58B <u>St 2</u>		
NAME (or trib. to)	<u>unknown</u>		
PEREN/INTERMIT	<u>Intermit</u>		
WIDTH (obser/ohw)	<u>3-5'</u>		
DEPTH (obser/ohw)	<u>≥ 6 in</u>		
FLOW RATE ¹	<u>Low</u>		
FLOW DIRECTION	<u>EAST</u>		
SUBSTRATE	<u>Gravel</u>		
BANK VEGETATION	<u>corn, soft rush, arrowweed, reed, thornb</u>		

¹ = Dry/Stagnant/Low/Medium/High

SKETCH:



FISH AND WILDLIFE OBSERVATIONS

one frog in road puddle
ravens

NOTES

recent heavy rainfall causing low flow in intermit stream

STREAM CROSSING DATA FORM

ROUTE: _____
 LOCATION: Sacina Rd
 FIELD CREW: _____

DATE: 5/25/07
 ROLL NO: _____
 FRAMES: _____

STREAM CROSSING DATA

CHANNEL ID	AR58B-ST		
NAME (or trib. to)			
TYPE OF STREAM			
PEREN/INTERMIT	int		
WIDTH (obser/ohw)	1' / 2'		
DEPTH (obser/ohw)	4" / 1'		
FLOW RATE ¹	low		
FLOW DIRECTION	NE		
SUBSTRATE	Silt & Gravel		
BANK VEGETATION	PSS / PEN		

¹ = Dry/Stagnant/Low/Medium/High

SKETCH:

NOTE: STREAM AT SACINA RD = flows into
 (westward to west of Sacina Rd)
 Note: Took Reference pt. → AR58B-ST 1

ea
 doof
 pen

no extent to EAST possible

FISH AND WILDLIFE OBSERVATIONS

NOTES

STREAM CROSSING DATA FORM

* NEW STREAM
Crew

ROUTE: _____ DATE: 2/25/07
 LOCATION: Soucia Rd. (south side) ROLL NO: _____
 FIELD CREW: RTH AP FRAMES: _____

STREAM CROSSING DATA

CHANNEL ID	AR60A-ST		
NAME (or trib. to)			
TYPE OF STREAM			
PEREN/INTERMIT	int		
WIDTH (obser/ohw)	1' / 2'		
DEPTH (obser/ohw)	2" / 1'		
FLOW RATE ¹	LOW		
FLOW DIRECTION	EAST		
SUBSTRATE	SILTS		
BANK VEGETATION	PERN		

¹ = Dry/Stagnant/Low/Medium/High

SKETCH:

NOTE: no distinct channel observed to east of Soucia Rd. - no access could be seen

FISH AND WILDLIFE OBSERVATIONS

WOOD FROG
Gray tree frog calls

NOTES

Hydropon continues ESE from
Soucia Rd.

STREAM DATA FORM

PROJECT: _____

CLIENT: Horizon

TURBINE: _____

DATE: 10/19/05

LOCATION: Clinton Co.

ROLL NO: _____

FIELD CREW: KA, GD

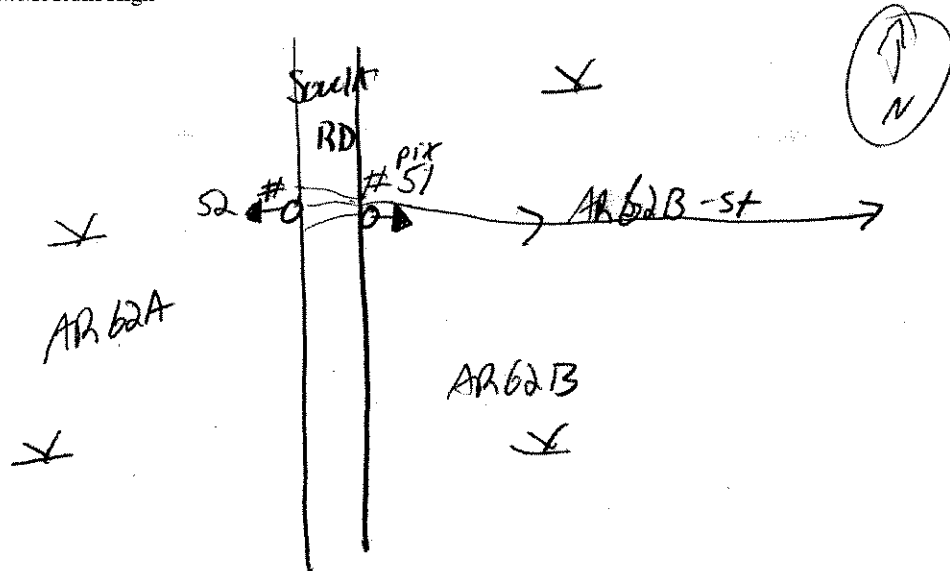
FRAMES: 51, 52 Gregg's Camera

STREAM CROSSING DATA

CHANNEL ID	AR62B-st		
NAME (or trib. to)	Unknown		
PEREN/INTERMIT	Intermit		
WIDTH (obser/ohw)	3-5'		
DEPTH (obser/ohw)	6-8 inches		
FLOW RATE ¹	Med.		
FLOW DIRECTION	East		
SUBSTRATE	Gravel		
BANK VEGETATION	reed canopy, Boneset Beak willow		

¹ = Dry/Stagnant/Low/Medium/High

SKETCH:



FISH AND WILDLIFE OBSERVATIONS

NOTES

recent rainfall within last 72 hours

STREAM CROSSING DATA FORM

ROUTE: _____

DATE: 5/25/07

LOCATION: Soucho Rd.

ROLL NO: _____

FIELD CREW: RMS, AP

FRAMES: _____

STREAM CROSSING DATA

CHANNEL ID	AR62B-ST		
NAME (or trib. to)			
TYPE OF STREAM			
PEREN/INTERMIT	int.		
WIDTH (obser/ohw)	2.5' / 6'		
DEPTH (obser/ohw)	6" / 1'		
FLOW RATE ¹	med		
FLOW DIRECTION	ESE		
SUBSTRATE	Cobble & GRAVEL		
BANK VEGETATION	PERM		

¹ = Dry/Stagnant/Low/Medium/High

SKETCH:

NOTE: EXTERIOR DUG AND EXIST
 SKETCH CORRECT
 STREAM ORIGINATES IN WETLAND
 Collected 1 pt AR62B-ST - START
 ASD REFERENCE

FISH AND WILDLIFE OBSERVATIONS

NOTES

STREAM DATA FORM

PROJECT: Clinton Co.

CLIENT: _____

TURBINE: _____

DATE: 10/19/05

LOCATION: _____

ROLL NO: _____

FIELD CREW: KM, GD, TB

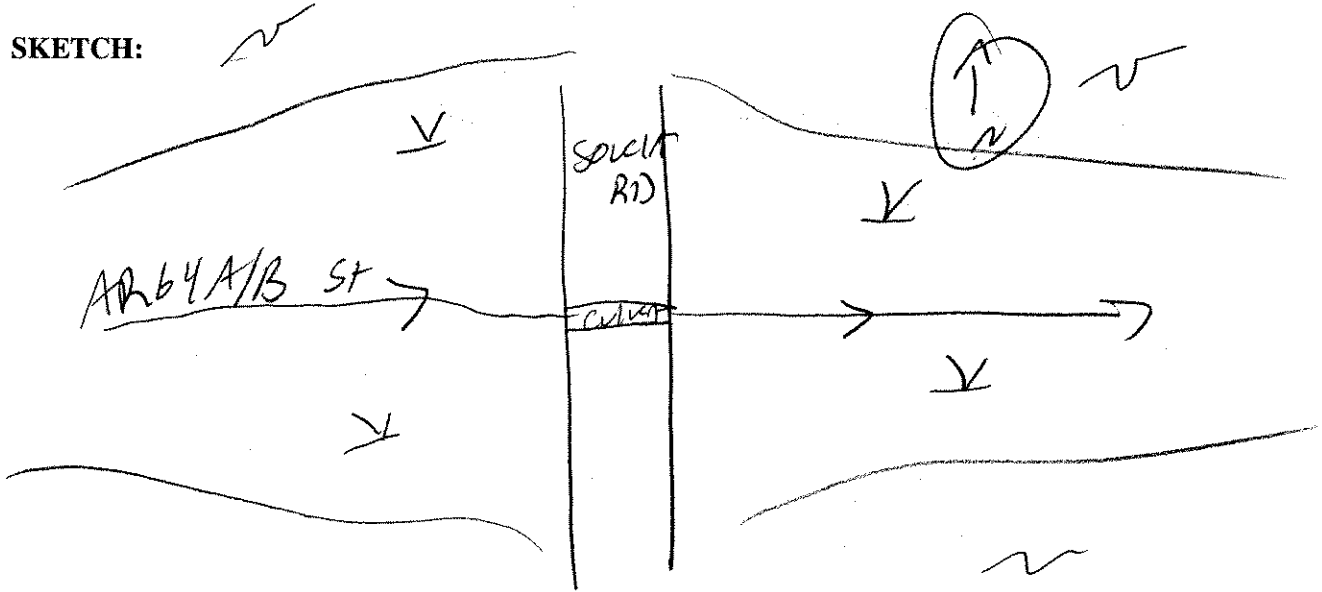
FRAMES: #54 west
#55 East

STREAM CROSSING DATA

CHANNEL ID	AR64A/B-ST		
NAME (or trib. to)	Unknown		
PEREN/INTERMIT	Interm.		
WIDTH (obser/ohw)	5-8'		
DEPTH (obser/ohw)	avg 6 inches		
FLOW RATE ¹	Low		
FLOW DIRECTION	East		
SUBSTRATE	Blue Muck		
BANK VEGETATION	Canary Reed Grass POA palustris		

¹ = Dry/Stagnant/Low/Medium/High

SKETCH:



FISH AND WILDLIFE OBSERVATIONS

One frog
One vole
Ravens
Blue Jay

NOTES

recent rainfall in last 12 hours

STREAM DATA FORM

PROJECT: Clinton Co.
 TURBINE: _____
 LOCATION: _____
 FIELD CREW: KH, RD, JG

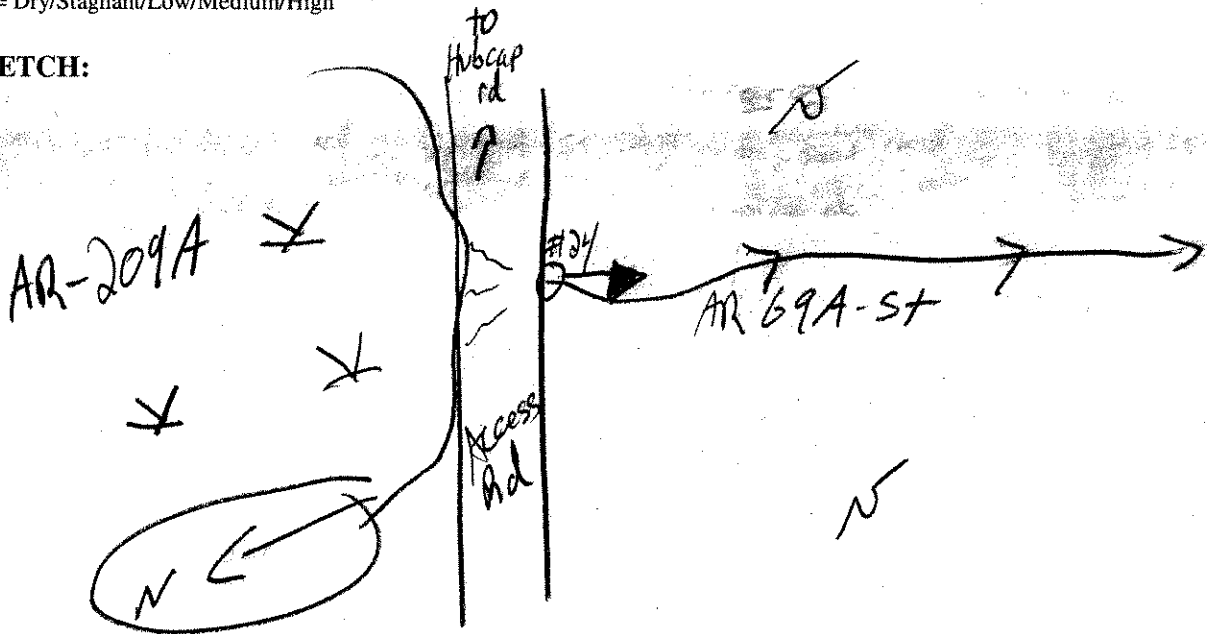
CLIENT: Horizon
 DATE: 10/22/05
 ROLL NO: 5
 FRAMES: 24

STREAM CROSSING DATA

CHANNEL ID	AR 69A-st1		
NAME (or trib. to)	unknown		
PEREN/INTERMIT	Peren		
WIDTH (obser/ohw)	2-3'		
DEPTH (obser/ohw)	5-6"		
FLOW RATE ¹	stagnant		
FLOW DIRECTION	SW		
SUBSTRATE	Muck		
BANK VEGETATION	Poa sp, ^{saliduro} conclusions		

¹ = Dry/Stagnant/Low/Medium/High

SKETCH:



FISH AND WILDLIFE OBSERVATIONS

one frog

NOTES

AR209A
 - Draining under road from wetland N. of road
 - sulfidic odor

STREAM CROSSING DATA FORM

ROUTE: AR69 A ST
 LOCATION: E T. 155
 FIELD CREW: JV AP

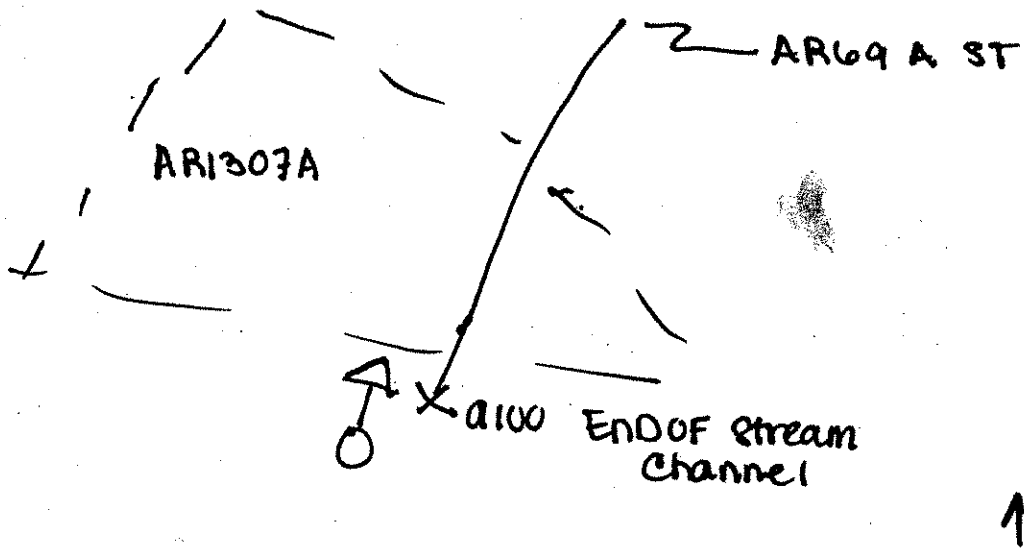
DATE: 5/10/07
 ROLL NO: _____
 FRAMES: 13 = 115

STREAM CROSSING DATA

CHANNEL ID	AR69 A-ST	<i>populus grandidentata</i>	
NAME (or trib. to)		<i>Acer rubrum</i>	
TYPE OF STREAM	Drainage	<i>Ornithogalum sensibile</i>	
PEREN/INTERMIT		<i>Aster</i>	
WIDTH (obser/ohw)	NA / 3'	<i>Maianthemum</i>	
DEPTH (obser/ohw)	NA		
FLOW RATE ¹	low		
FLOW DIRECTION	SW		
SUBSTRATE	Rock/soil		
BANK VEGETATION	PRD1		

¹ = Dry/Stagnant/Low/Medium/High

SKETCH:



FISH AND WILDLIFE OBSERVATIONS

None

NOTES

Stream is actually channel caused from road runoff from Louisa Road. Channel becomes wetland at last point.

STREAM CROSSING DATA FORM

AR79A/B-92

PROJECT: Clinton Co.
 TURBINE: 9, 10
 LOCATION: Robert Pond Rd
 FIELD CREW: KA, AK

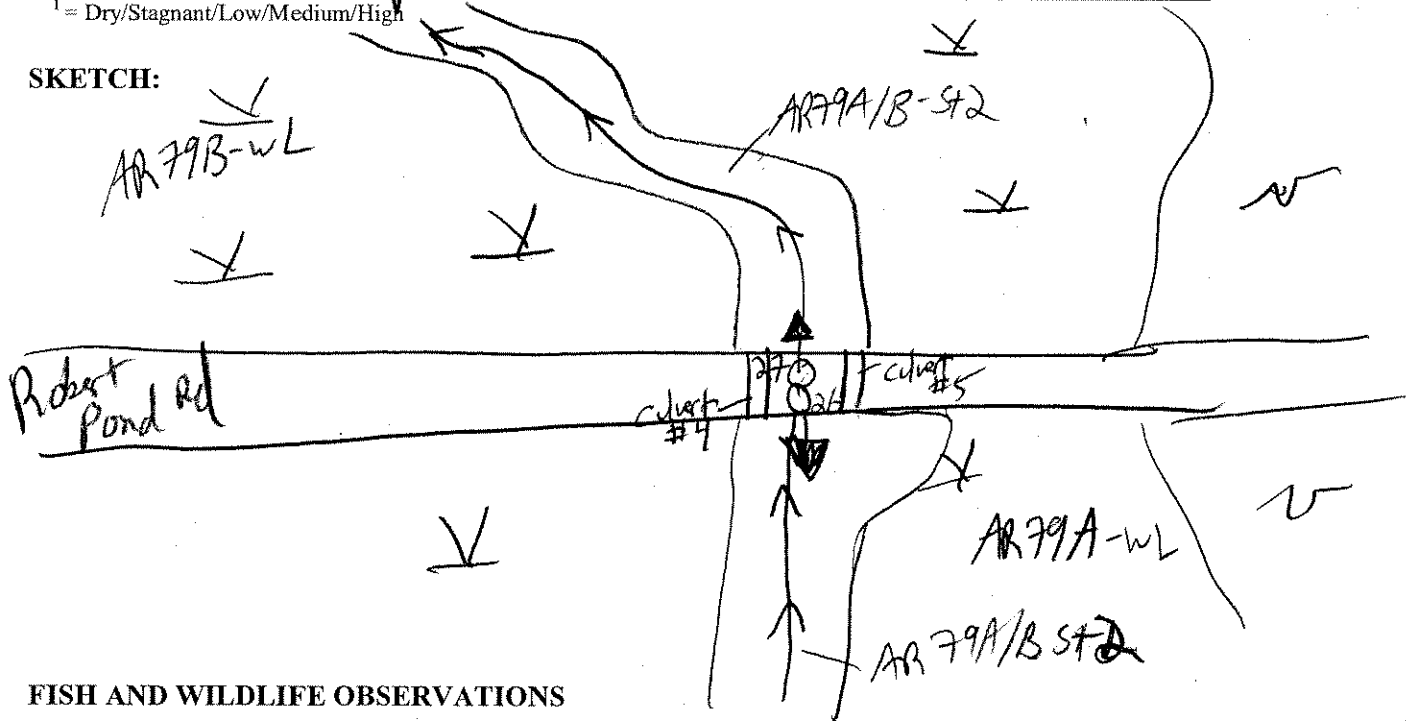
CLIENT: Horizon
 DATE: 10/23/05
 ROLL NO: 6
 FRAMES: 27, 26

STREAM CROSSING DATA

CHANNEL ID	AR 79A/B-92		
NAME (or trib. to)	unknown		
PEREN/INTERMIT	peren		
WIDTH (obser/ohw)	15-20'		
DEPTH (obser/ohw)	12-16"		
FLOW RATE ¹	Medium		
FLOW DIRECTION	S → N		
SUBSTRATE	sand gravel		
BANK VEGETATION	Speckled Alder		

¹ = Dry/Stagnant/Low/Medium/High

SKETCH:



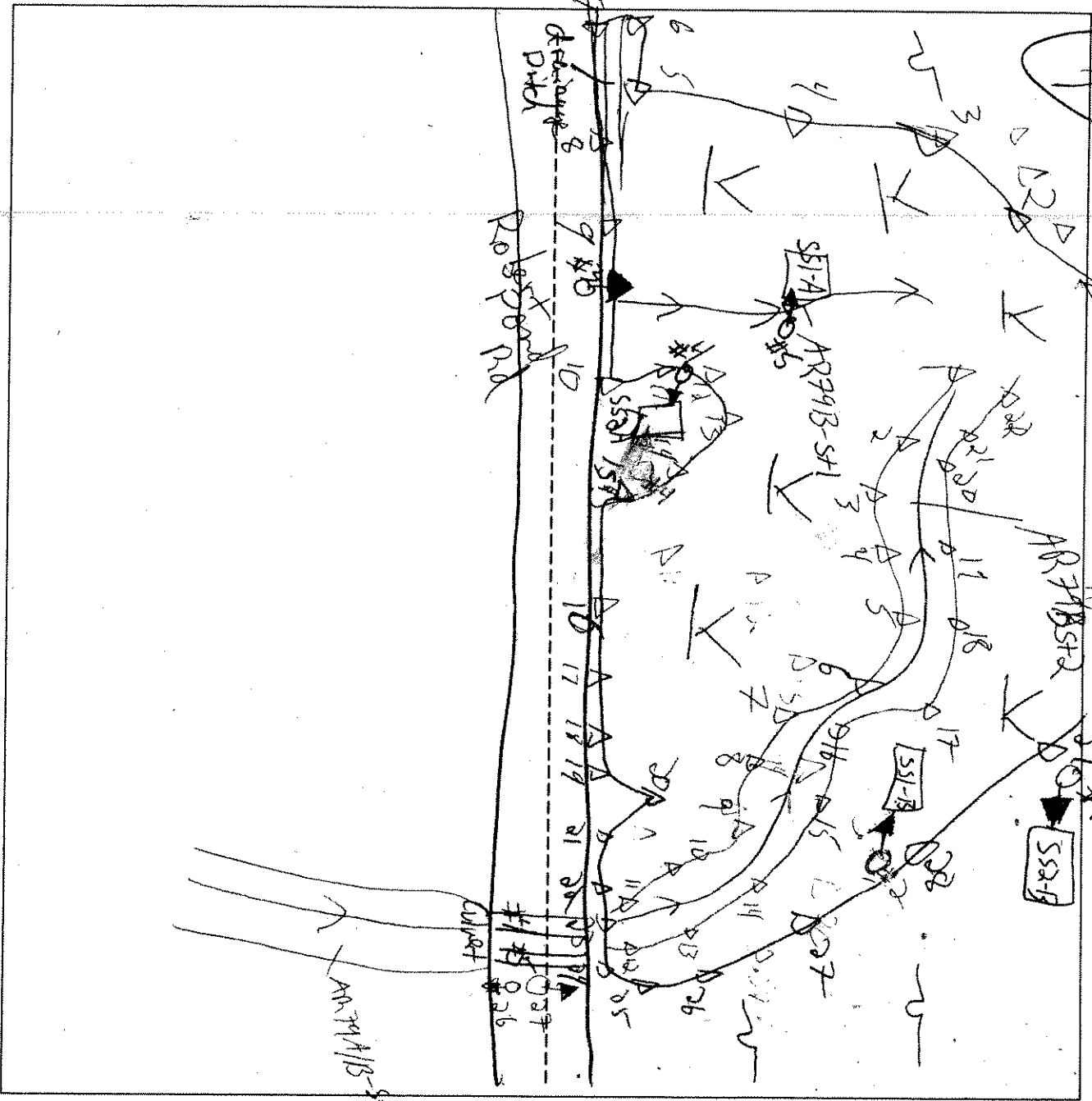
FISH AND WILDLIFE OBSERVATIONS

NOTES

raining during observation

SKETCH FORM

Wetland ID/Route #: AR 79 B / AR 79 B-SH / AR 79 A/B-SH	Date: 10/23/05	Time: 15:00
Initials of Delineators: KAH, AK	Location: Clinton Co.	
Roll #: 5	Frames: 5, 4, 3, 2, 1	Roll # 27 N, 26 S



Legend

Photo Location/Direction	Wetland
Sample Station	Upland
Centerline	Stream
Flag	Intermittent Stream

STREAM DATA FORM

PROJECT: Clinton Co. Wind Farm
 TURBINE: SW of Turbine 52
 LOCATION: Clinton Co.
 FIELD CREW: J. Arnett, S. Ryan

CLIENT: _____
 DATE: 7 Oct. 2005
 ROLL NO: _____
 FRAMES: _____

STREAM CROSSING DATA

CHANNEL ID	AR104AB-ST		
NAME (or trib. to)			
PEREN/INTERMIT	peren		
WIDTH (obser/ohw)	4'		
DEPTH (obser/ohw)	6"		
FLOW RATE ¹	low		
FLOW DIRECTION	North		
SUBSTRATE	hard pan		
BANK VEGETATION	Salix, Typha		

¹ = Dry/Stagnant/Low/Medium/High

Aster umbellata

SKETCH:

See wetland AR104AB

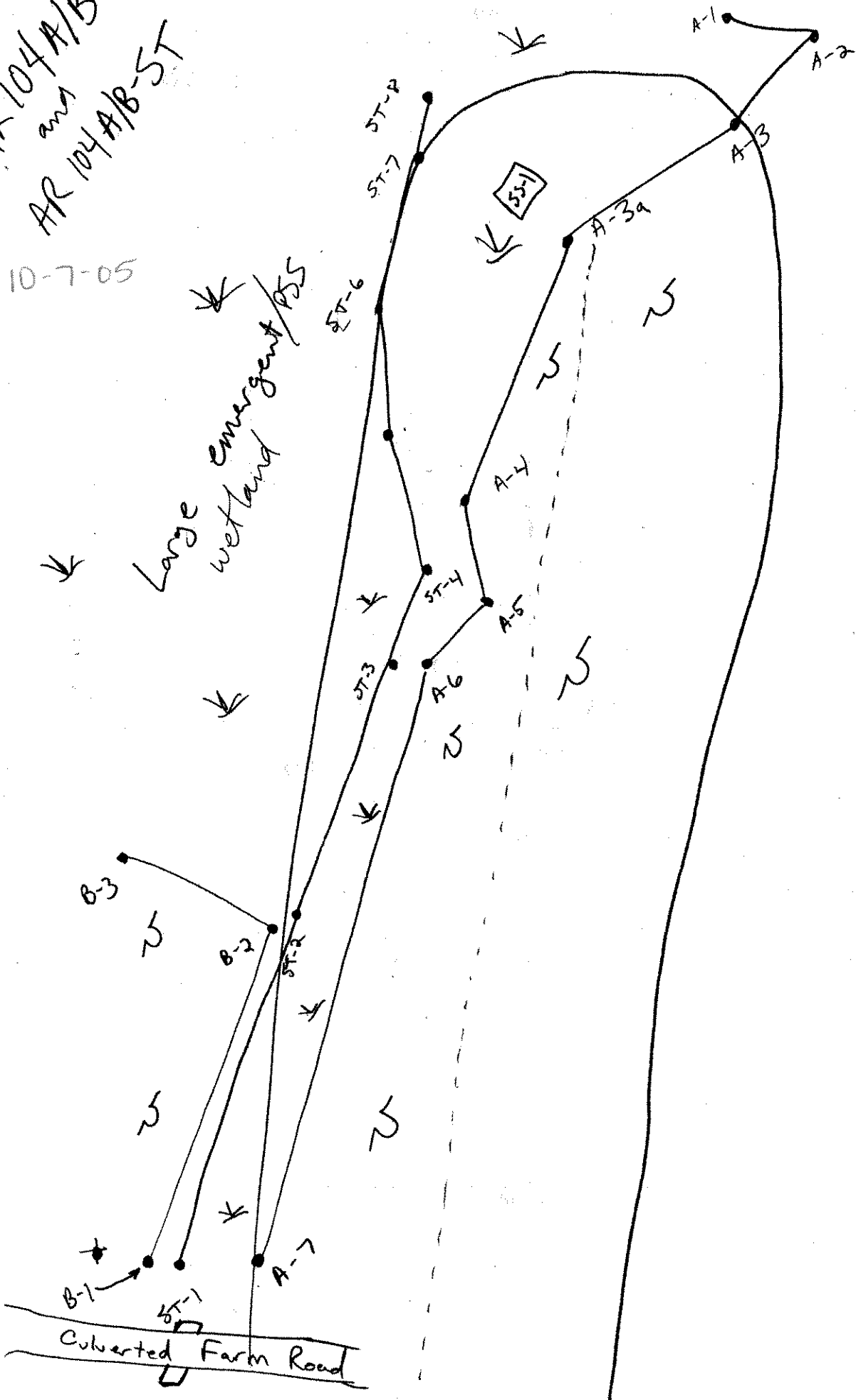
FISH AND WILDLIFE OBSERVATIONS

NOTES

AR 104 A/B
and
AR 104 A/B-ST

10-7-05

Large emergent
wetland / PSS



STREAM DATA FORM

PROJECT: Clinton Co. Wind Farm
 TURBINE: Approach to WTG 80
 LOCATION: AR 113A ST
 FIELD CREW: J. Annett, S. Ryan, J. Farrell

CLIENT: Horizon
 DATE: Oct 10, 2005
 ROLL NO: _____
 FRAMES: _____

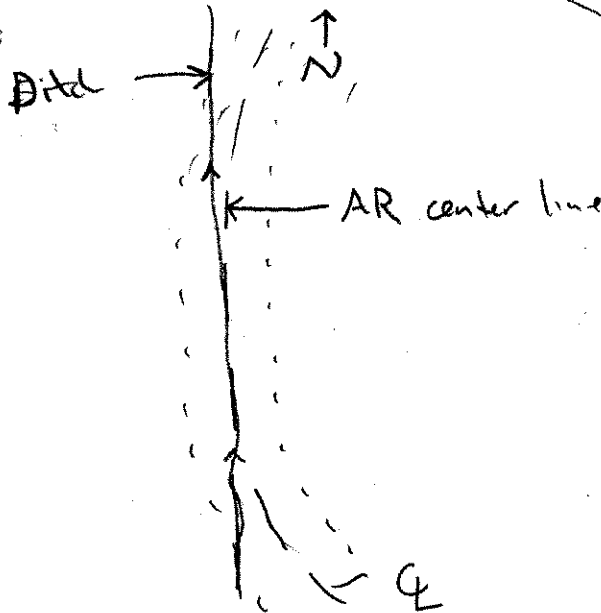
Photo looking N (downstream)

STREAM CROSSING DATA

CHANNEL ID	AR113A ST		
NAME (or trib. to)	—		
PEREN/INTERMIT	Intermitt		
WIDTH (obser/ohw)	2'		
DEPTH (obser/ohw)	1'		
FLOW RATE ¹	medium		
FLOW DIRECTION	N to S		
SUBSTRATE	cobbles/vegetated over cobbles		
BANK VEGETATION			

¹ = Dry/Stagnant/Low/Medium/High

SKETCH:



veg: *Solidago rugosa*
Townsendia affinis
Polygonum hydropiperoides
Phleum pratense
Ranunculus repens

No associated wetlands

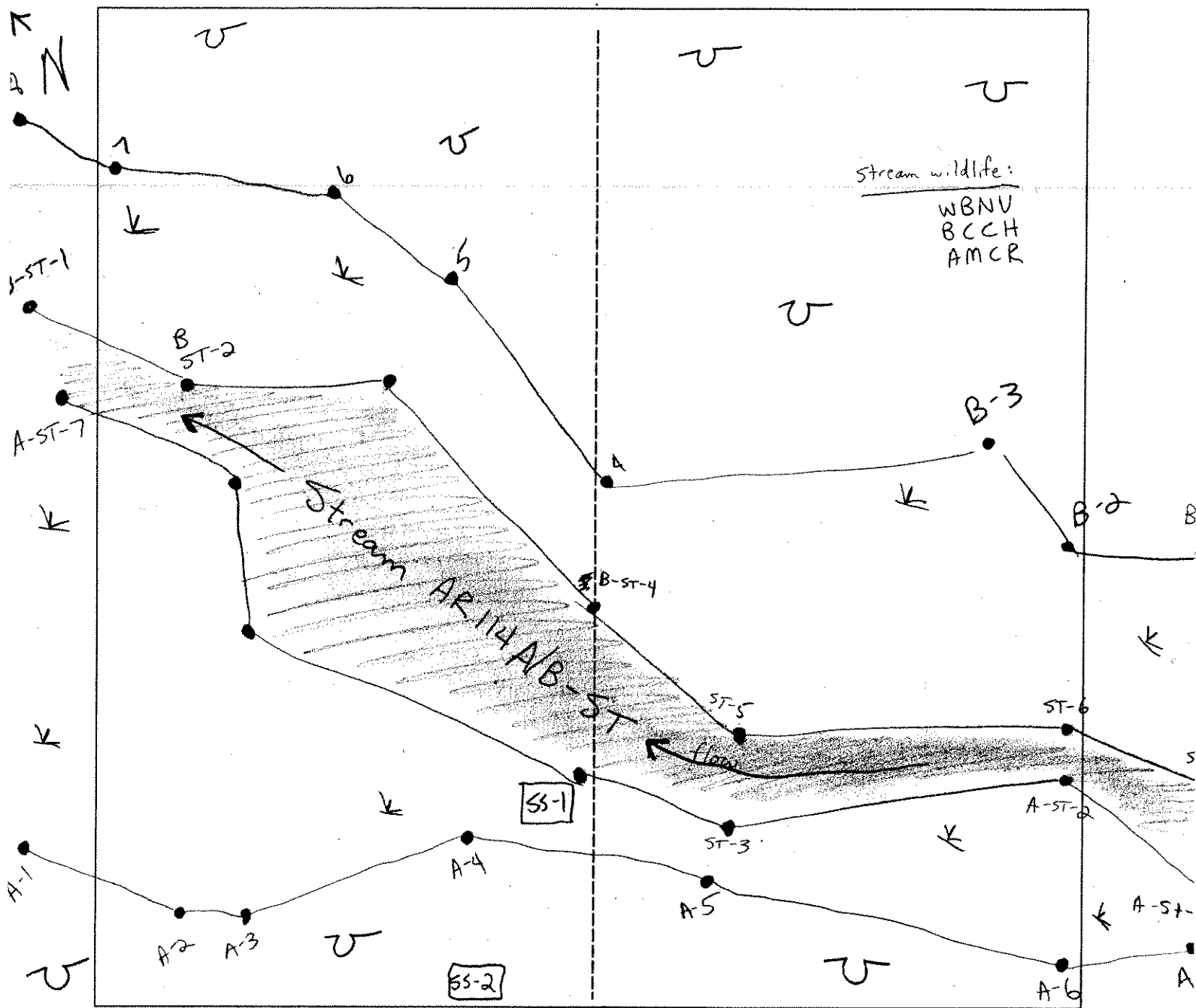
FISH AND WILDLIFE OBSERVATIONS

NOTES

Ditch parallel to gravel road, prob not often flowing
but doing now due to recent heavy rain

SKETCH FORM

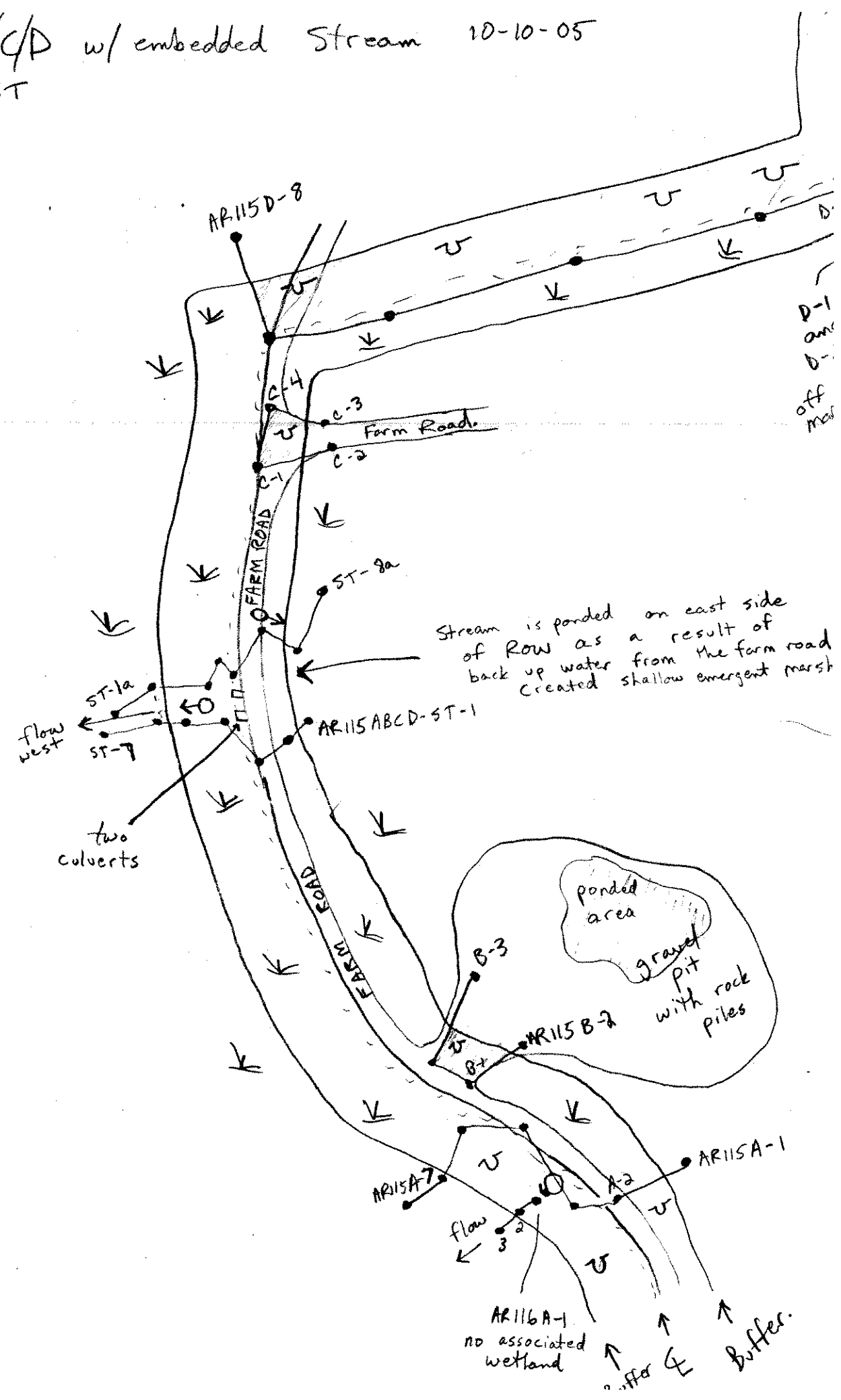
Wetland ID/Route #: AR114 A/B with AR114 A/B-ST	Date: 10-10-05	Time: 12:30 pm
Initials of Delineators: S.R. J.A.	Location: Clinton County Wind Farm	
Roll #: Frames:		



Legend	
○▼ Photo Location/Direction	∟ Wetland
□ Sample Station	▭ Upland
- - - Centerline	— Stream
▷ Flag	- . . Intermittent Stream

AR115 A/B/C/D w/ embedded Stream 10-10-05
 and
 AR116 A-ST

↑
N



STREAM DATA FORM

PROJECT: Clinton County Wind Farm
 TURBINE: Access road to WTG 36
 LOCATION: adjacent to state road
 FIELD CREW: S. Ryan J. Arnett

CLIENT: Horizon
 DATE: 10-11-05
 ROLL NO: _____
 FRAMES: _____

STREAM CROSSING DATA

CHANNEL ID	AR119A/B-ST	AR118A/B-STa	
NAME (or trib. to)	unnamed	unnamed	
PEREN/INTERMIT	perennial	perennial	
WIDTH (obser/ohw)	3 ft.	2 ft.	
DEPTH (obser/ohw)	6 in	3 in	
FLOW RATE ¹	low	low	
FLOW DIRECTION	west	west	
SUBSTRATE	cobble/gravel	gravel/muck	
BANK VEGETATION	typha/sedges/grasses	typha/reed canary grass	

¹ = Dry/Stagnant/Low/Medium/High

SKETCH:

See wetland sketch

FISH AND WILDLIFE OBSERVATIONS

 none observed

NOTES

~~Go~~ streams unite on opposite side
 of state road.

STREAM CROSSING DATA FORM

ROUTE: AR118 A/B ST
 LOCATION: AR by T.
 FIELD CREW: _____

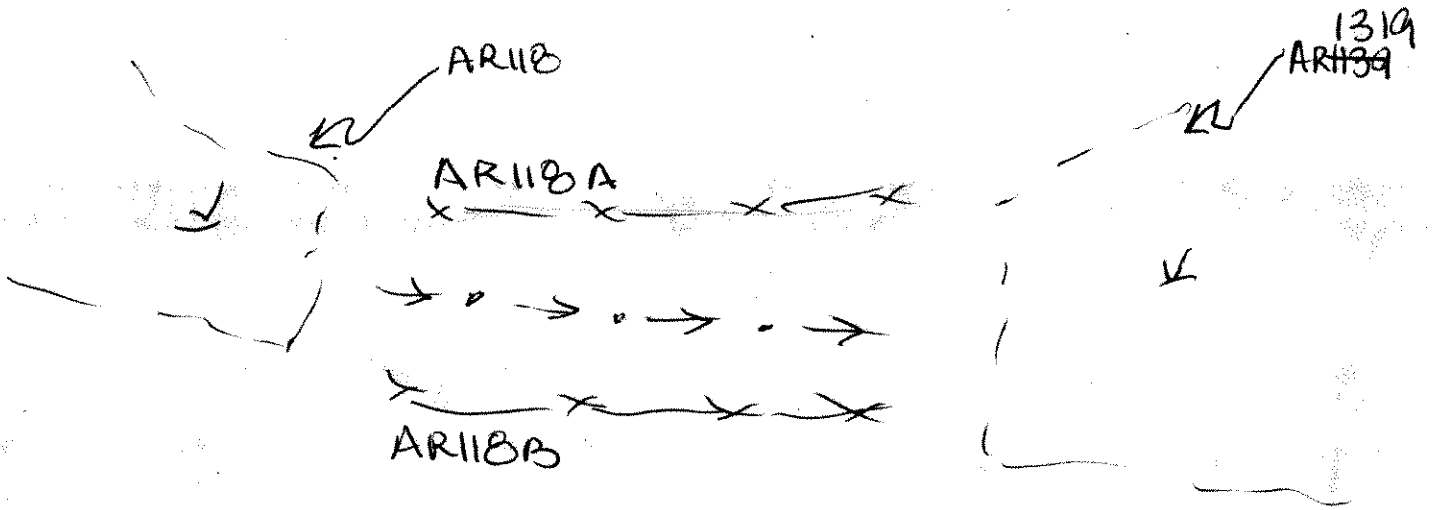
DATE: 10/15/06
 ROLL NO: _____
 FRAMES: _____

STREAM CROSSING DATA

CHANNEL ID	AR118 A/B ST		
NAME (or trib. to)	UNK		
TYPE OF STREAM	—		
PEREN/INTERMIT	Intermit		
WIDTH (obser/ohw)	12-50" / 20-48"		
DEPTH (obser/ohw)	NA / 36"		
FLOW RATE ¹	Dry		
FLOW DIRECTION	East		
SUBSTRATE	Gravel/Cobble		
BANK VEGETATION	Woody/Herbs		

¹ = Dry/Stagnant/Low/Medium/High

SKETCH:



FISH AND WILDLIFE OBSERVATIONS

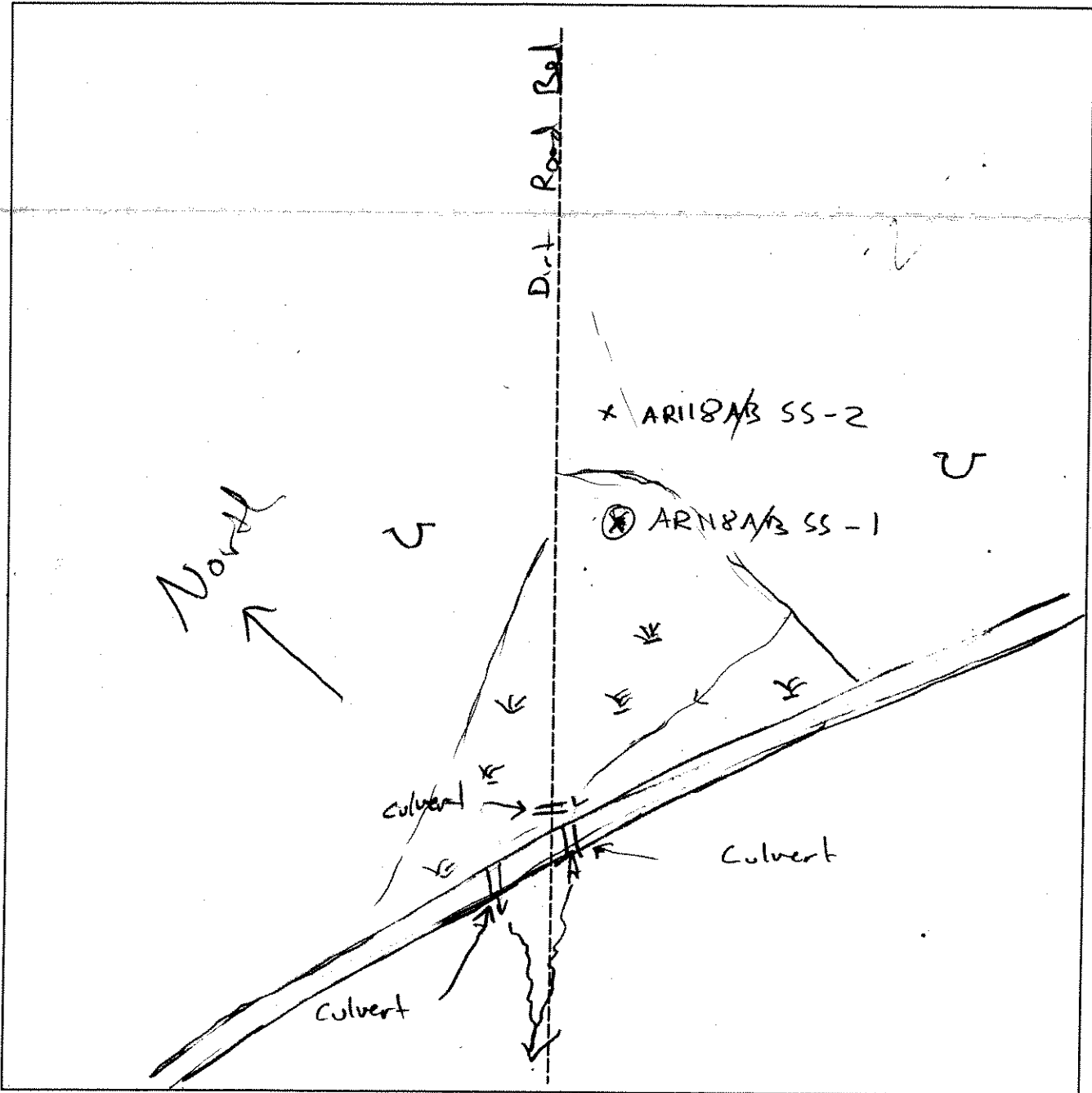
None observed

NOTES

Intermit stream drains results from drainage from W at higher slope.

SKETCH FORM

Wetland ID/Route #: ARI18AB	Date: 11 Oct 2005	Time: 1:00
Intials of Delineators: JA, JF, SR	Location: Clinton County Wind Farm	
Roll #: Photo to NE	Frames:	



Legend			
○ ↗	Photo Location/Direction	∨	Wetland
▭	Sample Station	—	Upland
- - -	Centerline	—	Stream
▷	Flag	- · -	Intermittent Stream

STREAM CROSSING DATA FORM

ROUTE: Accen rd to

DATE: 5/24/07

LOCATION: _____

ROLL NO: _____

FIELD CREW: BTD, AP

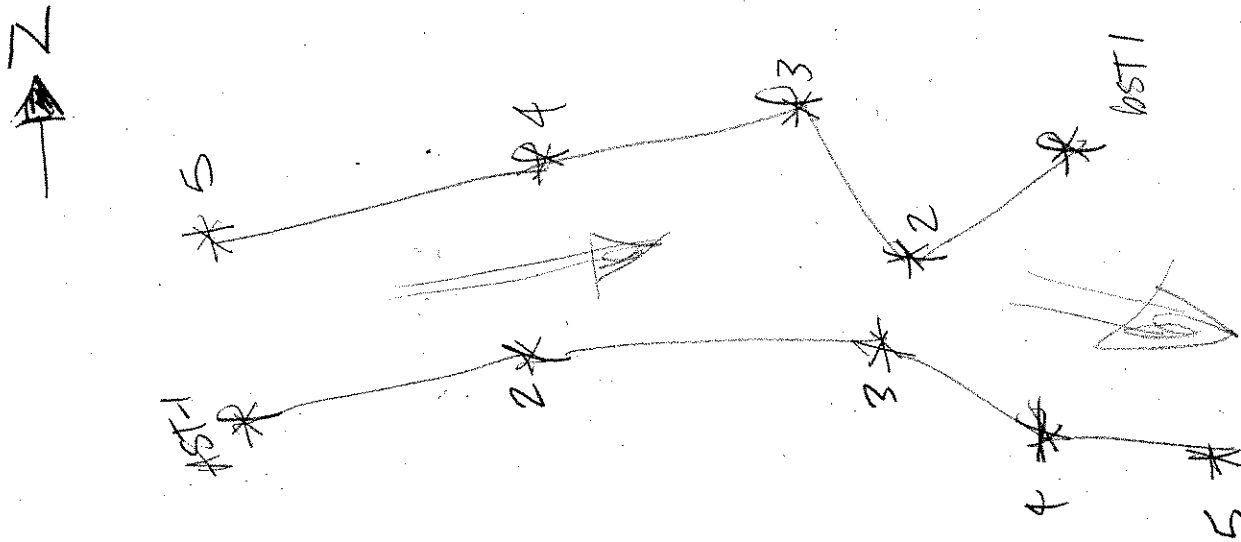
FRAMES: _____

STREAM CROSSING DATA

CHANNEL ID	<u>AR205 A/B-ST</u>	
NAME (or trib. to)		
TYPE OF STREAM		
PEREN/INTERMIT	<u>PEREN</u>	
WIDTH (obser/ohw)	<u>12' / 16'</u>	
DEPTH (obser/ohw)	<u>1' / 3'</u>	
FLOW RATE ¹	<u>MOD</u>	
FLOW DIRECTION	<u>ESE</u>	
SUBSTRATE	<u>Rock & Sand</u>	
BANK VEGETATION	<u>POW</u>	

¹ = Dry/Stagnant/Low/Medium/High

SKETCH:



FISH AND WILDLIFE OBSERVATIONS

Raccoon tracks in mud.
POW.

NOTES



TETRA TECH

SUBJECT AR205 A/B

PROJECT _____

TC/P NO. _____

ORIGINATOR _____ CHECKED _____

DATE 10/17/05 PAGE _____ OF _____ PAGES

STREAM ID: AR205 A/B - STA (All perennial)

- Culverts under Access Road
- 1 30" steel corrugated ; 1 24" plastic corrugated
- Stream flow to east
- ~6' wide
- ~1' deep
- silt & cobble substrate
- Rapid flow

STREAM:
AR205 A/B - STB

- Culverts under Access Rd. -> 1 36" plastic corrugated
- Stream flow to east - Rapid flow
- ~8' wide
- ~1' deep
- silt & cobble substrate

NOTE: Stream A located ~60' north of
Stream B (collect to collect)

Stream channel to east of Access Rd.

STREAM:
AR205 A/B - STC

Bever Pond to west of Access Rd.
{ Origin of stream B & A.



TETRA TECH

SUBJECT AR205A/IS

PROJECT _____

TC/P NO. _____

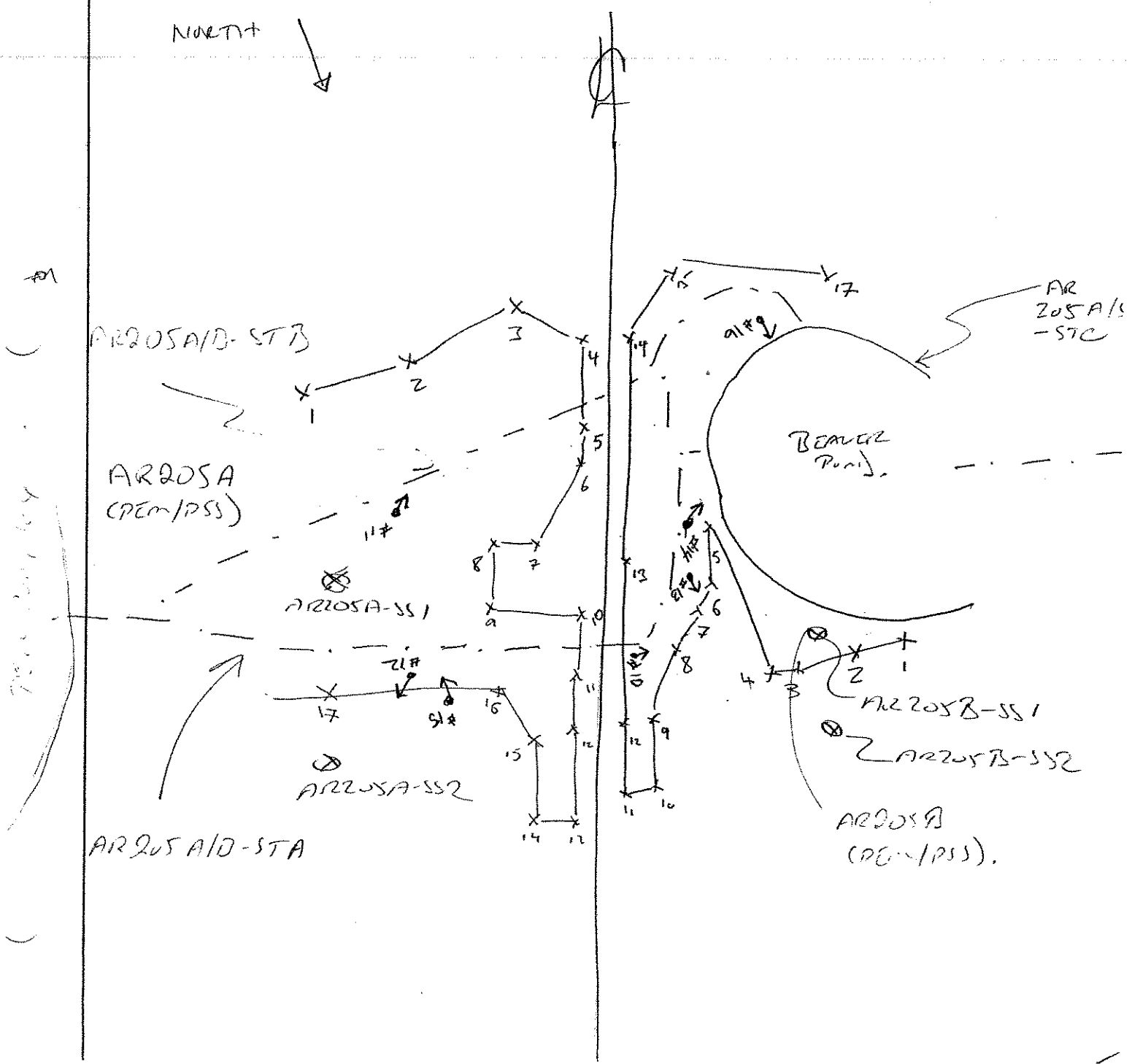
ORIGINATOR _____ CHECKED _____

DATE 11/2/05 PAGE _____ OF _____ PAGES

AR205A/IS
AR205A/B-STAB, 3, C

PHOTOS ROLL 3 - 10, 11, 12, 13, 14, 15, 16

NORTH ↓



STREAM CROSSING DATA FORM

ROUTE: AR 206 STC
 LOCATION: T.155 Wof
 FIELD CREW: JV AP

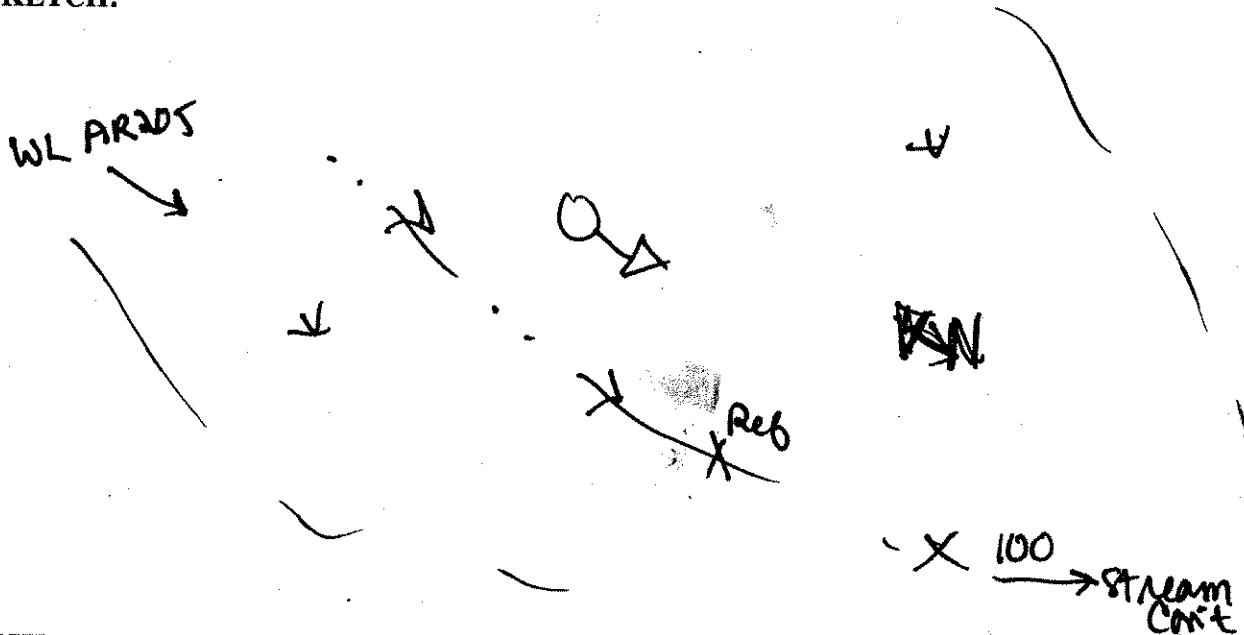
DATE: 5/10/07
 ROLL NO: 25
 FRAMES: _____

STREAM CROSSING DATA

CHANNEL ID	AR 206 ST		
NAME (or trib. to)			Sensitive Fern
TYPE OF STREAM			Solidago
PEREN/INTERMIT			Oster
WIDTH (obser/ohw)	2' - 4' / 3-6'		Equisetum
DEPTH (obser/ohw)	Stagnant 2" / 6"		
FLOW RATE ¹	Stagnant		
FLOW DIRECTION	S		
SUBSTRATE	Sandy silt		
BANK VEGETATION	Pern		

¹ = Dry/Stagnant/Low/Medium/High

SKETCH:



FISH AND WILDLIFE OBSERVATIONS

None observed

NOTES

Associated w/ WL AR205



TETRA TECH

SUBJECT AR206A/B - ST

PROJECT Clatsop Co Wetland

ORIGINATOR _____ CHECKED _____

TC/P NO. 101.615

DATE 10/16/05 PAGE _____ OF _____ PAGES

AR206A/B - STA

- Intermittent

Thick Upland Forest, Pen wet
Substrate - Rock, Cobble - silt/clay
Flow slow to water
~ 1.5' wide & 6" DEEP

AR206A/B - STB

- Intermittent

Thick Upland Forest & Pen wet
~ 1.5' wide
~ 4" DEEP
- silt/clay & rock
Flows to SW & SE



TETRA TECH

SUBJECT AR206 A/B

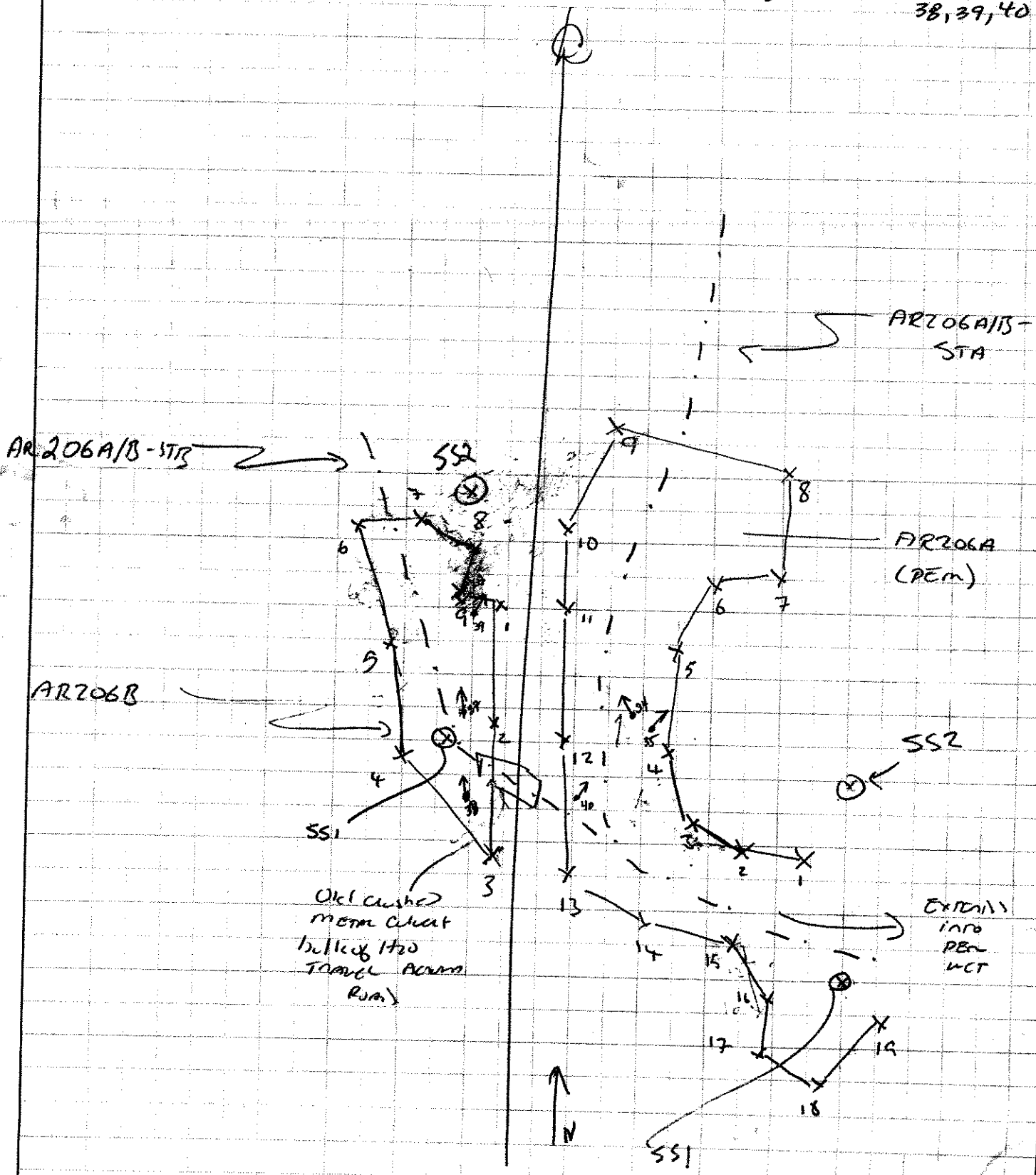
PROJECT _____

TC/P NO. _____

ORIGINATOR _____ CHECKED _____

DATE 10/18/05 PAGE _____ OF _____ PAGES

PHOTOS - DIGITAL FILE
P-101805 FRAMES: 34, 35, 37
38, 39, 40



STREAM CROSSING DATA FORM

PROJECT: Clinton County

CLIENT: Horton

TURBINE: access rd

DATE: 10/19/05

LOCATION: North end of Lucia Rd

ROLL NO: _____

FIELD CREW: PNJ, AK, JF

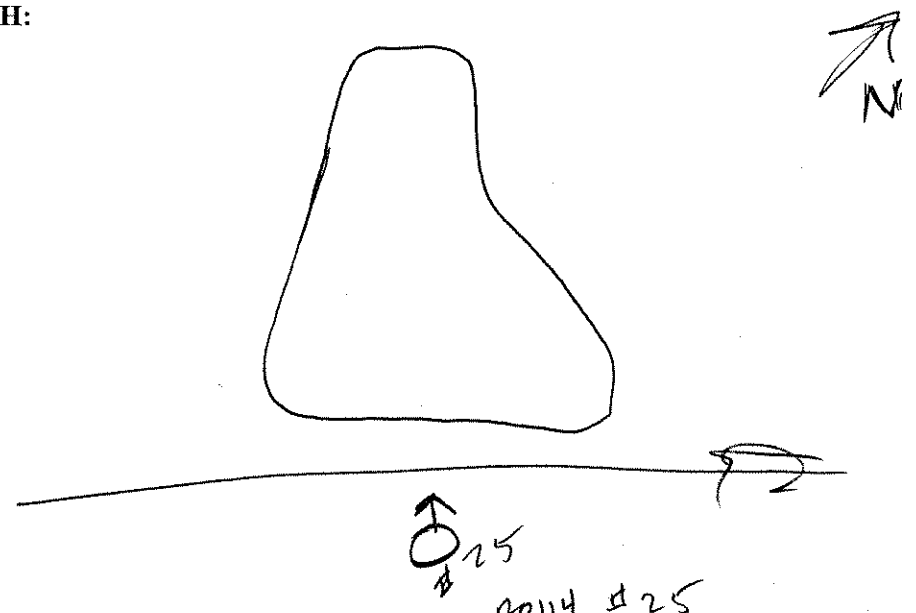
FRAMES: _____

STREAM CROSSING DATA

CHANNEL ID	<u>AR208A-STA</u>		
NAME (or trib. to)	<u>Sm Pond.</u>		
PEREN/INTERMIT			
WIDTH (obser/ohw)	<u>w 7m</u>		
DEPTH (obser/ohw)	<u>w 10m</u>		
FLOW RATE ¹	<u>N/A</u>		
FLOW DIRECTION	<u>N/A</u>		
SUBSTRATE	<u>Silt/LOAM</u>		
BANK VEGETATION	<u>Shrub.</u>		

¹ = Dry/Stagnant/Low/Medium/High

SKETCH:



FISH AND WILDLIFE OBSERVATIONS

NOTES

STREAM CROSSING DATA FORM

PROJECT: Clinton County
 TURBINE: _____
 LOCATION: East of TBC mins of
 FIELD CREW: RA, AK

CLIENT: Horizon
 DATE: 10/19/05
 ROLL NO: _____
 FRAMES: _____

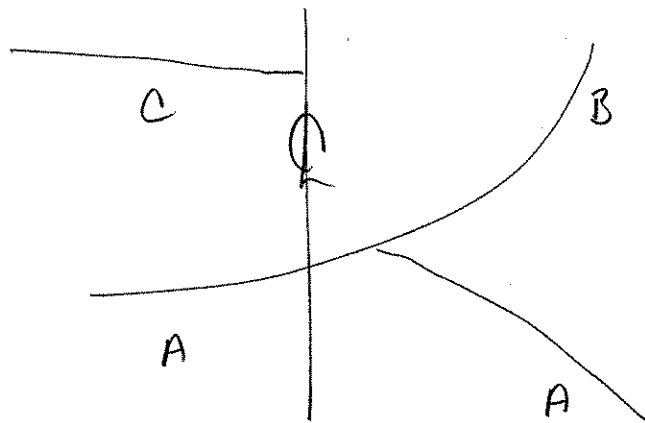
STREAM CROSSING DATA

CHANNEL ID	AR210 A/B/C/D-STA	AR210 A/B/C/D-STB	AR210 A/B/C/D-STC
NAME (or trib. to)	—	—	—
PEREN <u>(INTERMIT)</u>	int.	int.	int.
WIDTH (obser/ohw)	1.5' / 2'	1.5' / 3'	1' / 2'
DEPTH (obser/ohw)	6" / 1'	6" / 1.5'	6" / 1'
FLOW RATE ¹	Slow -> moderate	slow	slow
FLOW DIRECTION	to SSW	to ESE	to SSW
SUBSTRATE	Silt loam/muck	Silt loam/muck	Silt loam/muck
BANK VEGETATION	FORESTED	FORESTED	FORESTED

¹ = Dry/Stagnant/Low/Medium/High

SKETCH:

RETRACTO WELMAN'S SKETCH AR210 A/B/C/D



FISH AND WILDLIFE OBSERVATIONS

NOTES

STREAM CROSSING DATA FORM

PROJECT: Clinton County
 TURBINE: _____
 LOCATION: AR212-STA
 FIELD CREW: JF & JCN

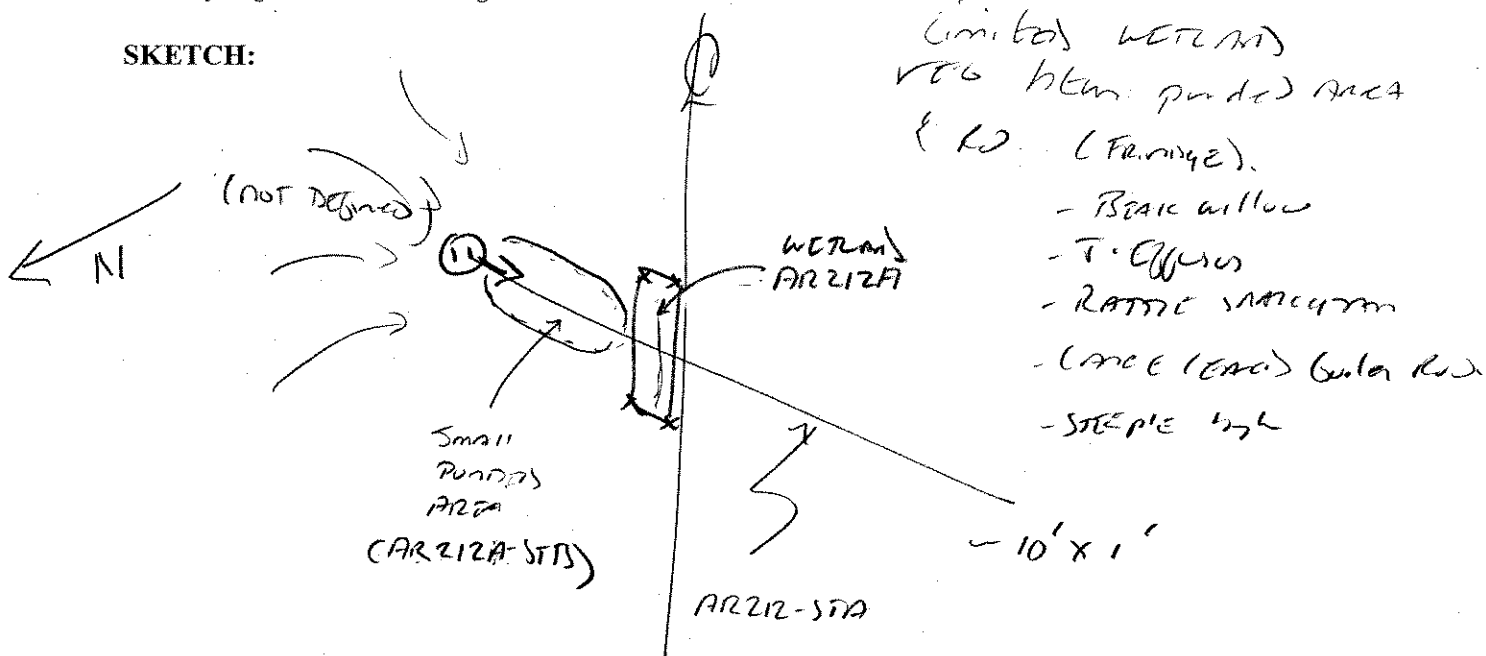
CLIENT: Huron
 DATE: 10/21/05
 ROLL NO: 4
 FRAMES: 11

STREAM CROSSING DATA

CHANNEL ID	AR212-STA	AR212-ST17	
NAME (or trib. to)	-	Small ponded area	
PEREN/INTERMIT			
WIDTH (obser/ohw)	N/A / 1'	10'	
DEPTH (obser/ohw)	N/A / 2'	20'	
FLOW RATE ¹	N/A	N/A	
FLOW DIRECTION	TO SW	N/A	
SUBSTRATE	Silt loam	Silt loam	
BANK VEGETATION	UPLAND FOREST	FOREST	

¹ = Dry/Stagnant/Low/Medium/High

SKETCH:



FISH AND WILDLIFE OBSERVATIONS

NOTES

STREAM CROSSING DATA FORM

PROJECT: CLINTO CO WIND FARM
 TURBINE: N/A
 LOCATION: MARTY LAVIN'S PRTY
 FIELD CREW: RD JF

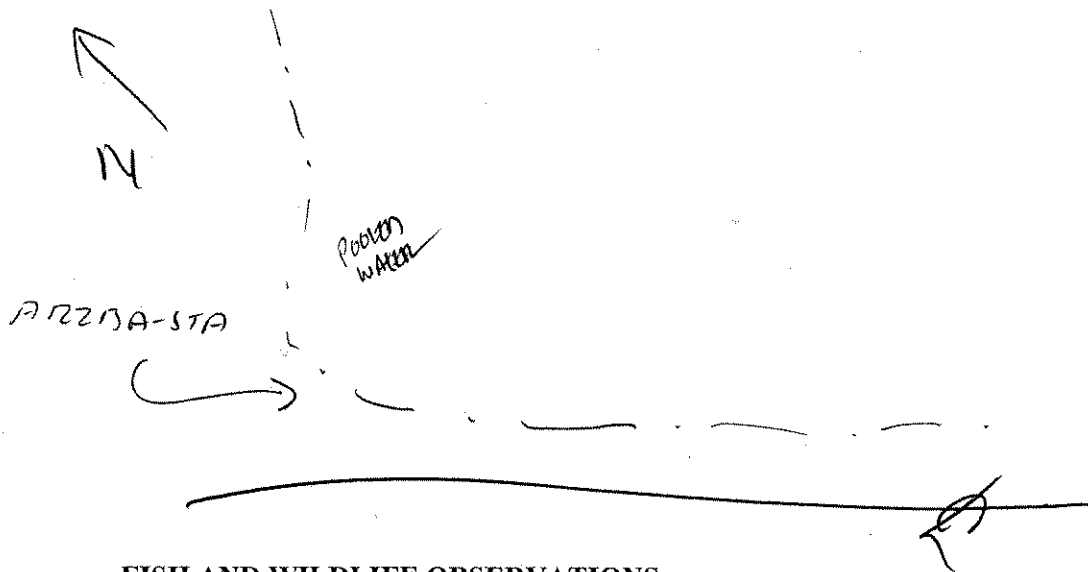
CLIENT: HORIZON
 DATE: 10.21.05
 ROLL NO: 14
 FRAMES: 9,10

STREAM CROSSING DATA

CHANNEL ID	ARZIZA-STA		
NAME (or trib. to)	N/A		
PEREN INTERMIT	INTERMIT		
WIDTH (obser/ohw)	1' w/ohw / 3'		
DEPTH (obser/ohw)	8" / 1'		
FLOW RATE ¹	SLOW-MED		
FLOW DIRECTION	South EAST		
SUBSTRATE	SILT LOAM		
BANK VEGETATION	UPLAND FOREST		

¹ = Dry/Stagnant/Low/Medium/High

SKETCH:



FISH AND WILDLIFE OBSERVATIONS

N/A

NOTES

N/A

STREAM CROSSING DATA FORM

PROJECT: Clinton County, Kentucky
 TURBINE: _____
 LOCATION: near Lewis property
 FIELD CREW: (RTD)

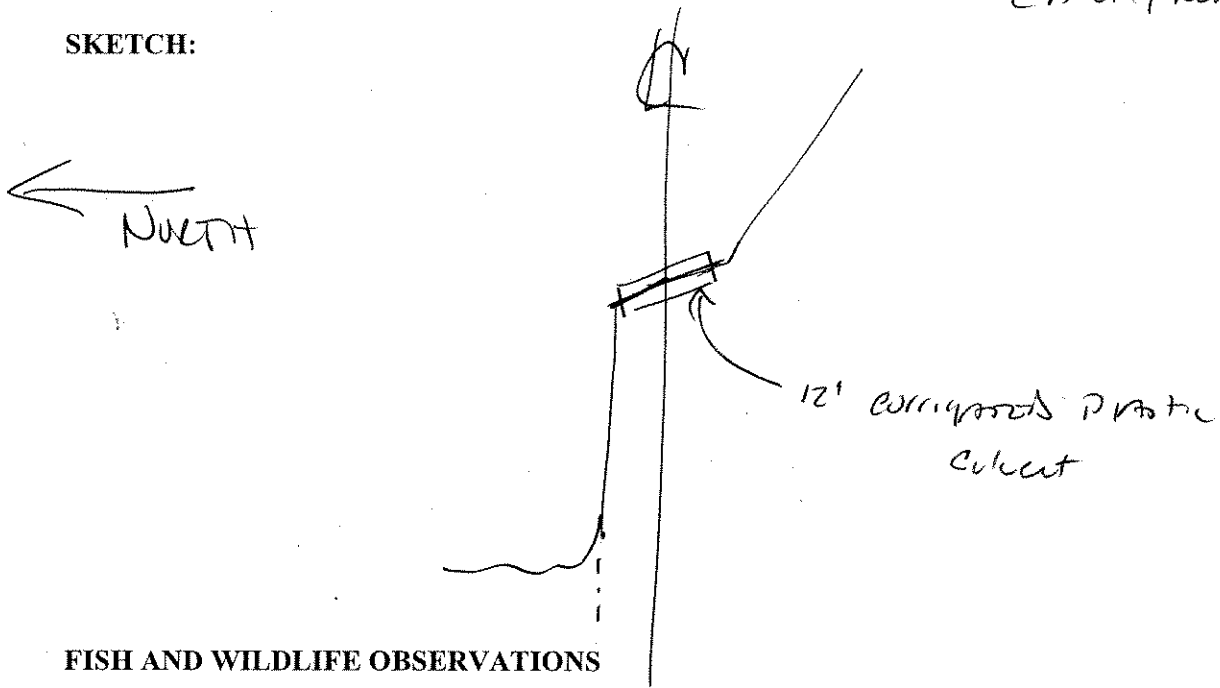
CLIENT: Hamilton
 DATE: 10/2/05
 ROLL NO: 4
 FRAMES: 8

STREAM CROSSING DATA

CHANNEL ID	ARDISA-STA		
NAME (or trib. to)			
PEREN/INTERMIT			
WIDTH (obser/ohw)	(1' / 3')		
DEPTH (obser/ohw)	(4" / 1')		
FLOW RATE ¹	slow		
FLOW DIRECTION	TO ESE		
SUBSTRATE	gravel		
BANK VEGETATION	upland forest	open rocky	seasonal (along runs)

¹ = Dry/Stagnant/Low/Medium/High

SKETCH:



FISH AND WILDLIFE OBSERVATIONS

NOTES

STREAM CROSSING DATA FORM

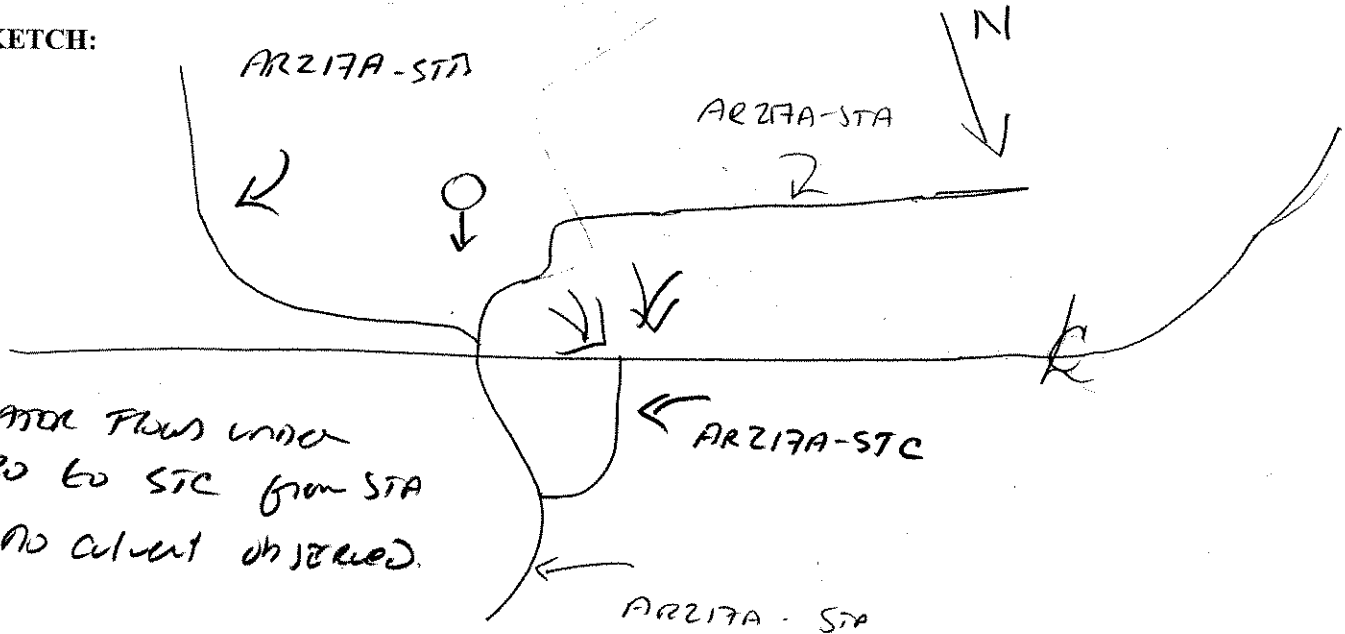
PROJECT: Clinton County CLIENT: Huerfano
 TURBINE: on Route 20 bridge #55 DATE: 10/24/05
 LOCATION: Hobbs Rd (Mary Lavin's) ROLL NO: 6
 FIELD CREW: RAH, KH Property FRAMES: 22

STREAM CROSSING DATA

CHANNEL ID	AR217A - STA	AR217A - STB	AR217A - STC
NAME (or trib. to)			
PEREN/INTERMIT	<u>Int</u>	<u>Int</u>	<u>Int</u>
WIDTH (obser/ohw)	<u>1' / 3'</u>	<u>1' / 4'</u>	<u>1.5' / 3'</u>
DEPTH (obser/ohw)	<u>4" / 8"</u>	<u>6" / 1'</u>	<u>8" / 1'</u>
FLOW RATE ¹	<u>Rapid</u>	<u>Rapid</u>	<u>Moderate</u>
FLOW DIRECTION	<u>NORTH</u>	<u>NORTH</u>	<u>NORTH</u>
SUBSTRATE	<u>LOAM</u>	<u>LOAM</u>	<u>LOAM</u>
BANK VEGETATION	<u>UPLAND FOREST</u>	<u>UPLAND FOREST</u>	<u>UPLAND FOREST</u>

¹ = Dry/Stagnant/Low/Medium/High

SKETCH:



FISH AND WILDLIFE OBSERVATIONS

NOTE: Sphagnum moss in stream beds

NOTES

Roll 6 Photo 22 -> NORTH

STREAM CROSSING DATA FORM

PROJECT Clinton County Watershed
 TURBINE: _____
 LOCATION: Huacan Rd.
 FIELD CREW: ATD, KH

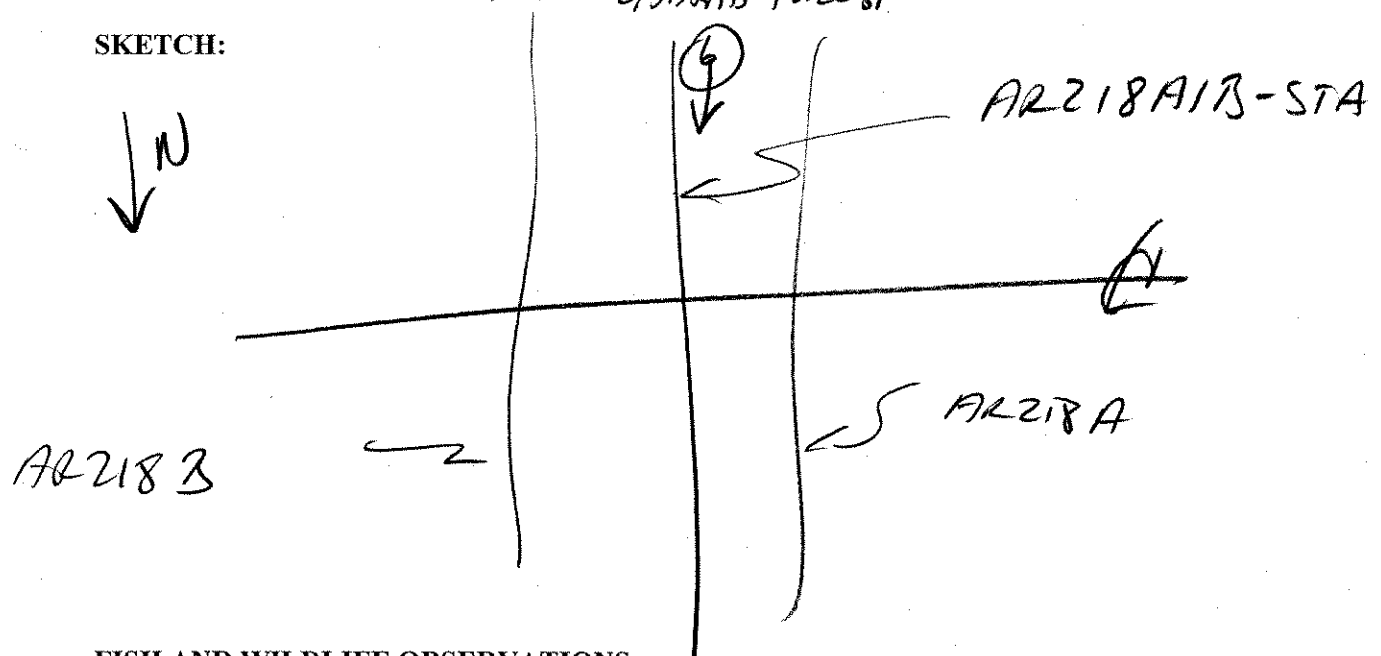
CLIENT: Huacan
 DATE: 10/24/05
 ROLL NO: 6
 FRAMES: 21

STREAM CROSSING DATA

CHANNEL ID	AR218A/B-STA		
NAME (or trib. to)	-		
PEREN/INTERMIT	Int		
WIDTH (obser/ohw)	2' / 5'		
DEPTH (obser/ohw)	8" / 1'		
FLOW RATE ¹	Rapid		
FLOW DIRECTION	North		
SUBSTRATE	Silt/Gravel		
BANK VEGETATION	Per Wet.		

¹ = Dry/Stagnant/Low/Medium/High *then upland forest*

SKETCH:



FISH AND WILDLIFE OBSERVATIONS

NOTES

Line extension

STREAM CROSSING DATA FORM

ROUTE: AR to Turbine 106

DATE: 5/24/07

LOCATION: "

ROLL NO: _____

FIELD CREW: AD A.P.

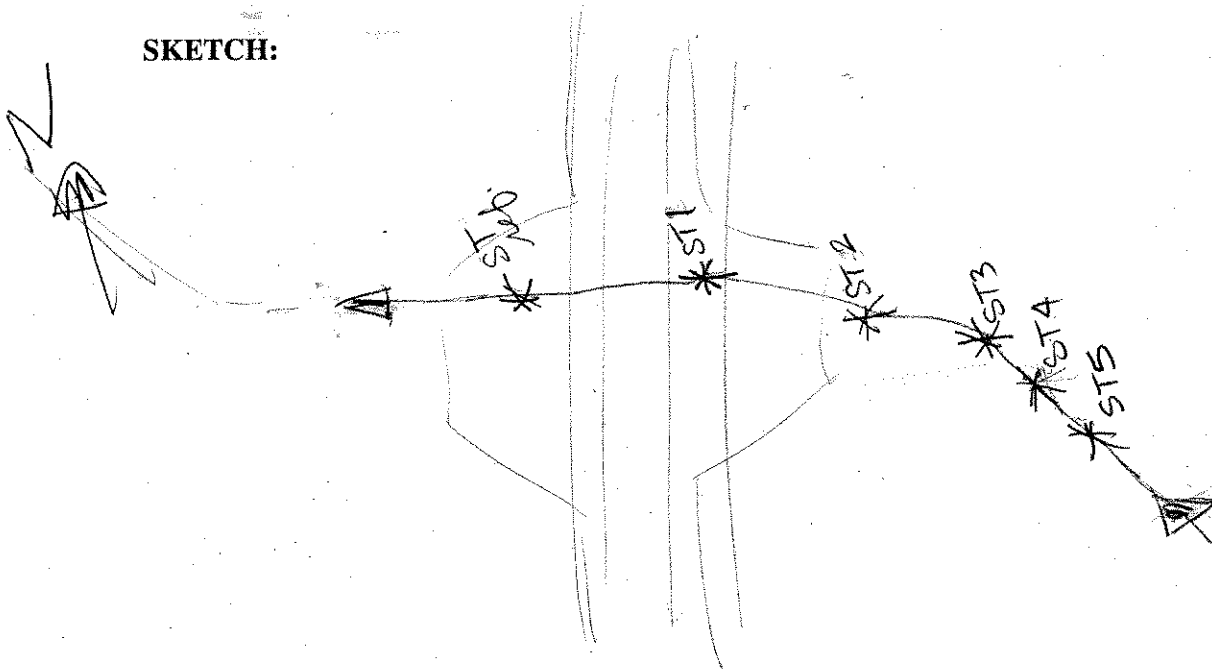
FRAMES: _____

STREAM CROSSING DATA

CHANNEL ID	<u>AR218AIB-ST</u>		
NAME (or trib. to)			
TYPE OF STREAM			
PEREN/INTERMIT	<u>int.</u>		
WIDTH (obser/ohw)	<u>1' / 2'</u>		
DEPTH (obser/ohw)	<u>4" / 1"</u>		
FLOW RATE ¹	<u>low</u>		
FLOW DIRECTION	<u>NW</u>		
SUBSTRATE	<u>Silt</u>		
BANK VEGETATION	<u>PEM</u>		

¹ = Dry/Stagnant/Low/Medium/High

SKETCH:



FISH AND WILDLIFE OBSERVATIONS

Stone Drumming; Frog; mosquitos; Black Flies

NOTES

STREAM DATA FORM

PROJECT: Marble River

CLIENT: Horizon

TURBINE: T. 120

DATE: 10/27/06

LOCATION: T. 120

ROLL NO: to S

FIELD CREW: RD JV

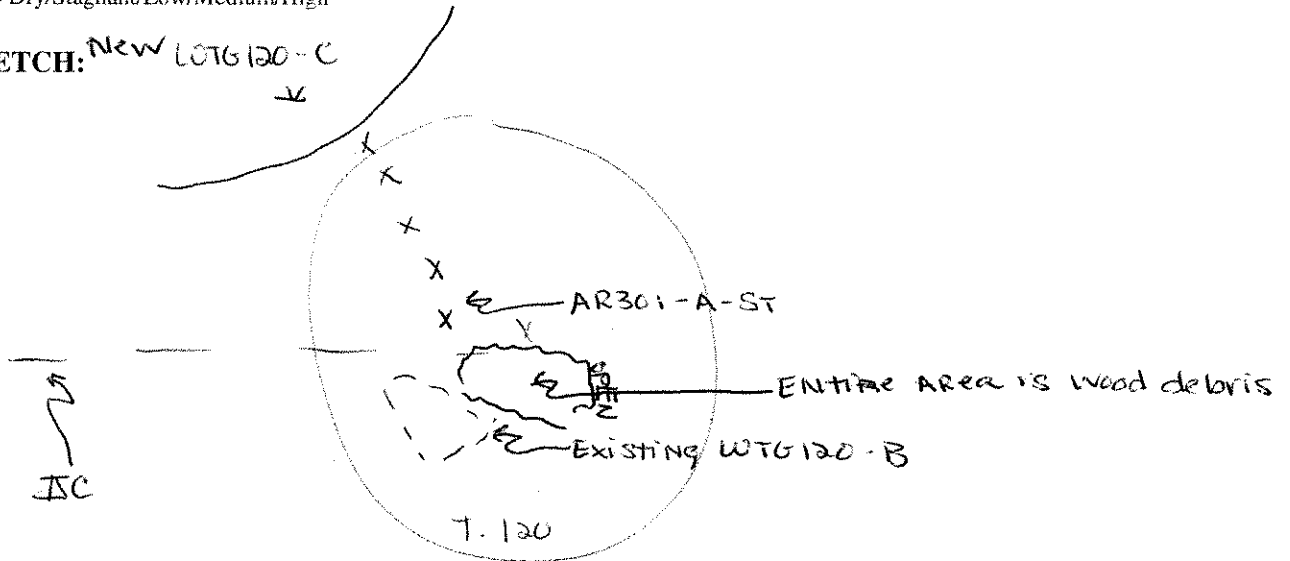
FRAMES: _____

STREAM CROSSING DATA

CHANNEL ID	<u>LOTG AR351-A-ST</u>	
NAME (or trib. to)	<u>NA</u>	
PEREN/INTERMIT	<u>INTERMIT Man made ditch</u>	
WIDTH FROM BANK	<u>48" 36"</u>	
DEPTH (Bank)	<u>12"</u>	<u>4" actual depth</u>
FLOW RATE ¹	<u>Stagnant to Low</u>	
FLOW DIRECTION	<u>N</u>	
SUBSTRATE	<u>Silt Sand</u>	
BANK VEGETATION		

¹ = Dry/Stagnant/Low/Medium/High

SKETCH:



FISH AND WILDLIFE OBSERVATIONS

Raven

NOTES

Surface water flow from WL WTG 120-B flows north
thru channel to WL WTG 120-C.

STREAM DATA FORM

PROJECT: Marble River
 TURBINE: 146R-147
 LOCATION: S. of Abandoned RR
 FIELD CREW: KA, JV

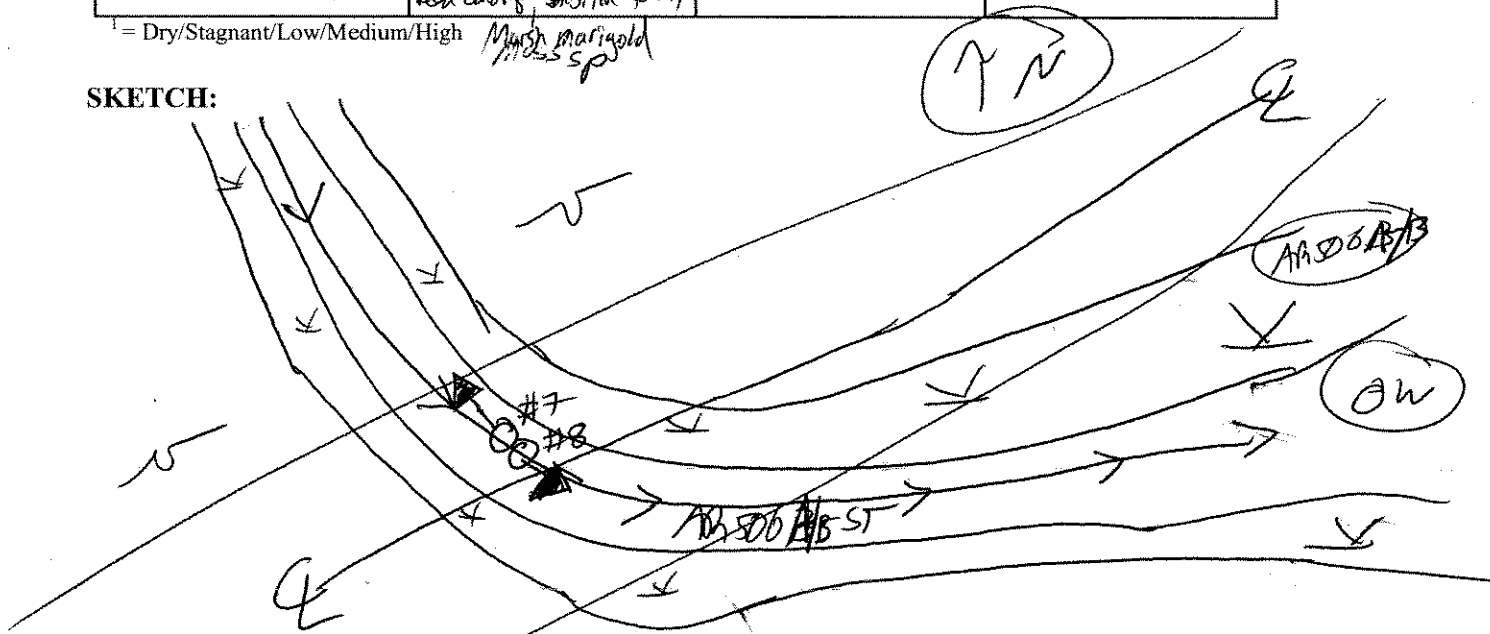
CLIENT: Horizon Wind Power LLC
 DATE: 5/7/06
 ROLL NO: KA
 FRAMES: #7, #8

STREAM CROSSING DATA

CHANNEL ID	<u>AB-ST</u> <u>AD506B-ST</u>		
NAME (or trib. to)	<u>unknown</u>		
PEREN/INTERMIT	<u>Intermit</u>		
WIDTH (obser/ohw)	<u>5-10 ft</u>		
DEPTH (obser/ohw)	<u>6-8 inches</u>		
FLOW RATE ¹	<u>Low</u>		
FLOW DIRECTION	<u>SE</u>		
SUBSTRATE	<u>Sand</u>		
BANK VEGETATION	<u>Red Cedars, sensitive fern, Marsh marigold, grass sp</u>		

¹ = Dry/Stagnant/Low/Medium/High

SKETCH:



FISH AND WILDLIFE OBSERVATIONS

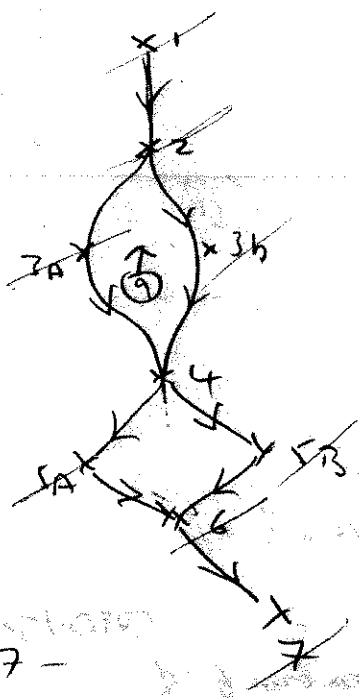
Frogs

NOTES

ARS06A18 ST1 - 1

Flowing ESE AS A consequence to rapid flow
 Substrate - Rock/CUBIC / GRAVEL SANDY WASH

Depth in width for
 3'-6' / 5'
 Depth
 2" / 2'



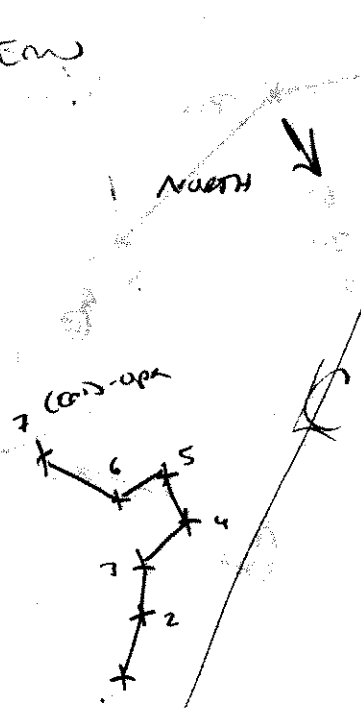
→ NORTH

Roll x photo 9
 ⇒ WEST AT
 ARS06A18-ST1

130 - Hiked to tubino 147 -
 High - 104 - upland PORET

1600
 ARS07A PSS/DEMN

SPICED ACID 5
 GRAY HIGH 5
 GRAY SP 4



NOTE:
 ARS07A
 ROAD W/ RR
 EXIST RR
 Right of way
 300 RAISED
 w/ 15'
 (ROAD ISSUES?)

note photo 8, Roll x
 ⇒ SW AT ARS07A

RR right-of-way

130
 147



TETRA TECH

SUBJECT Human
Chick Co Unroad
ORIGINATOR _____ CHECKED _____

PROJECT _____
TC/P NO. _____
DATE 1/2/05 PAGE 3 OF 4 PAGES

B30 - proceeded to turbine # 146

140

High: low - explain faults - #1146

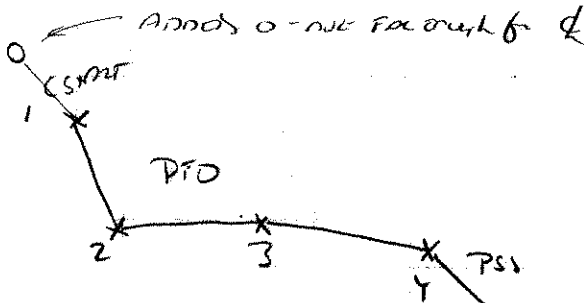
Bike chains	T	
Red map	T/S	
Toothed Area	T	
Grasshopper	T	(few)
Woodpecker	H	
Tree like chubman	H	
Chubman	H	
man	H	

TRC	85 010
Shub	30 010
Hub	1590

- Accept PD items #1146 & 147

1430

Wetland ARSOGA - PFD/PSS/PEM/OW



POX X
Photo 10
=> SC AT wetland

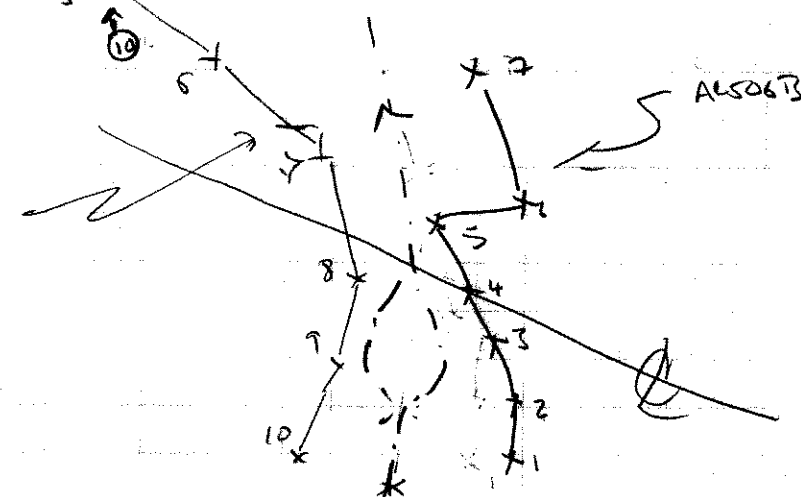
NOTE: Forest area near
- look up narrow
channels.

PFD: Red maple 7/5 tree 60
Grasshopper 7/5 Shub 30
Chubman H hub 20
bram sp H

SPTAN mm H
PSS: speckled oriole 5
speckled 5
SP: hawk 5

PEM: woodpecker H
Creeper chubman
sensitive fern
SPTAN mm

AR SOGA



ALSO 613

STREAM DATA FORM

PROJECT: Clinton, Co.
 TURBINE: AR 534 / ST A/B
 LOCATION: Clinton Co. NY
 FIELD CREW: BZ / RH

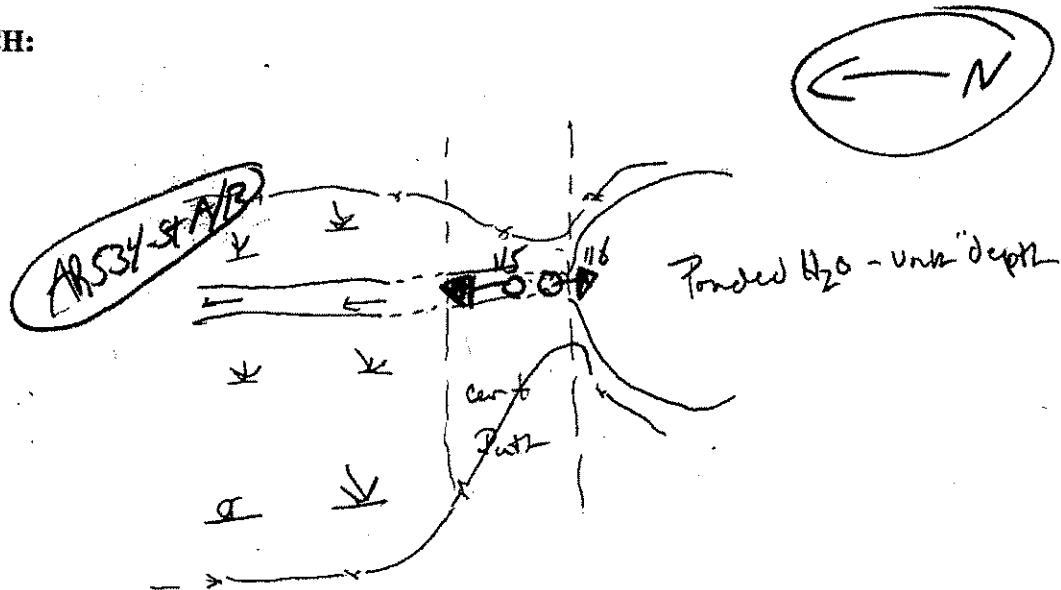
CLIENT: Horizon
 DATE: 12/7/05
 ROLL NO: 116E / 115E
 FRAMES: 6

STREAM CROSSING DATA

CHANNEL ID	Un. Known		
NAME (or trib. to)	Un. Known		
PEREN/INTERMIT	intermit		
WIDTH (obser/ohw)	3-6 ft Wide Varies		
DEPTH (obser/ohw)	4"-1 ft Varies		
FLOW RATE ¹	Unknown		
FLOW DIRECTION	South to North		
SUBSTRATE	Compiles of rocks		
BANK VEGETATION	Blades down		

¹ = Dry/Stagnant/Low/Medium/High

SKETCH:



FISH AND WILDLIFE OBSERVATIONS

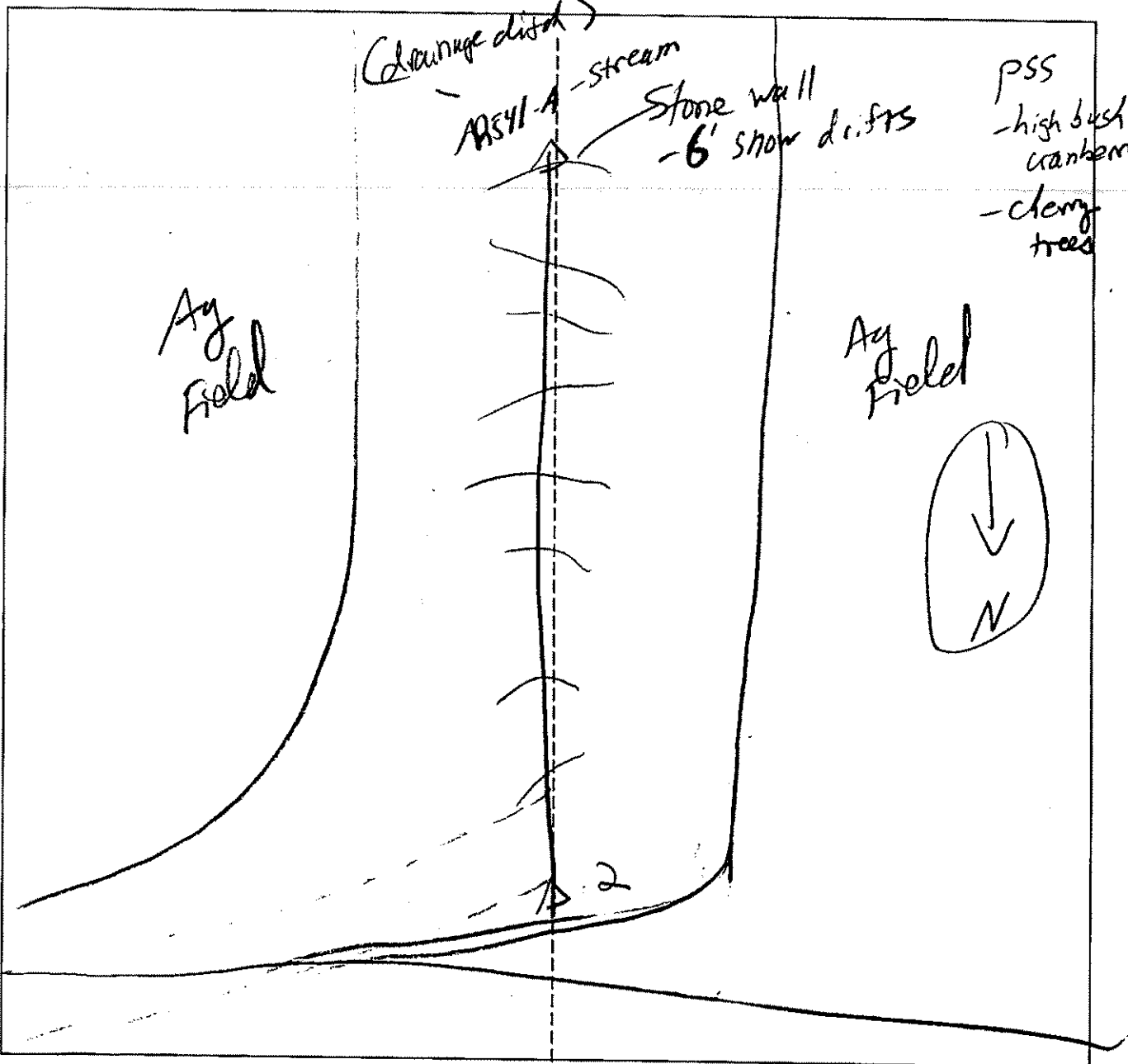
Woodcock in upland adj wetland system that contains stream
Deer tracks; Song birds observed

NOTES

Well defined intermittent stream, flow controlled by up gradient
ponded; stream appears to be routinely disturbed by ATV and
other vehicle traffic; Pond has fringe wetland bordering D.W.

SKETCH FORM

Wetland ID/Route #: <i>AR 541-A-ST (drainage ditch)</i>		Date: <i>12/8/05</i>	Time: <i>13:45</i>
Initials of Delineators: <i>BR, BR</i>		Location: <i>Clinton Co. Star Rd to WTR 200</i>	
Roll #:	Frames:		



Legend	
Photo Location/Direction	Wetland
Sample Station	Upland
Centerline	Stream
Flag	Intermittent Stream
North Arrow	

STREAM CROSSING DATA FORM

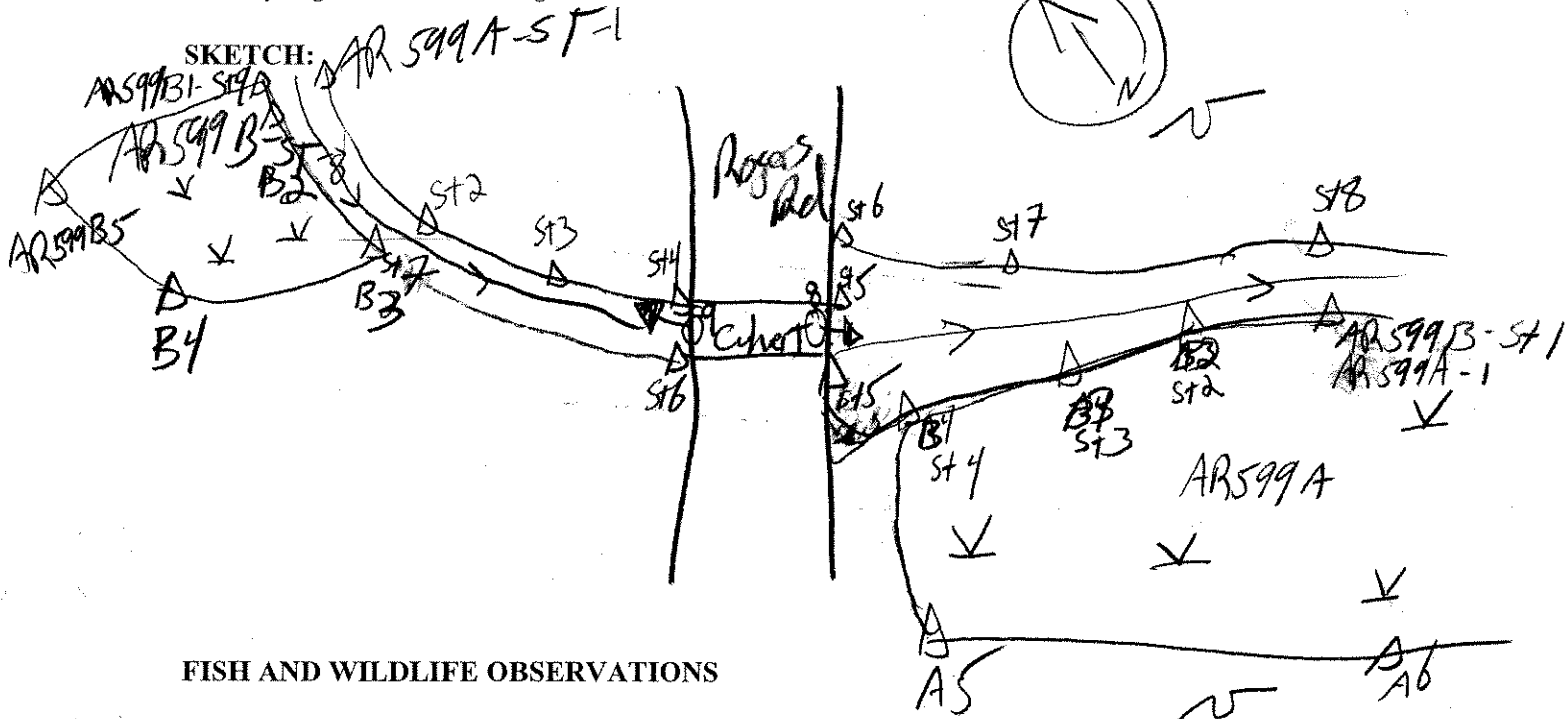
PROJECT: Clinton Co.
 TURBINE: Rogers Rd
 LOCATION: 2
 FIELD CREW: JH, SH

CLIENT: Horizon
 DATE: 11/7/05
 ROLL NO: SH's
 FRAMES: 8 SE
 9 NW

STREAM CROSSING DATA

CHANNEL ID	AR599A/B-ST	
NAME (or trib. to)	unknown	
PEREN/INTERMIT	Perenn	
WIDTH (obser/ohw)	5-10'	
DEPTH (obser/ohw)	2'	
FLOW RATE ¹	Med	
FLOW DIRECTION	SE-S	
SUBSTRATE	cobbles	
BANK VEGETATION	speckled Alder	

¹ = Dry/Stagnant/Low/Medium/High



FISH AND WILDLIFE OBSERVATIONS

NOTES

STREAM CROSSING DATA FORM

ROUTE: access rd, between Turbines
133 & 132
 LOCATION: AR 619 A/B
 FIELD CREW: RD - RJ

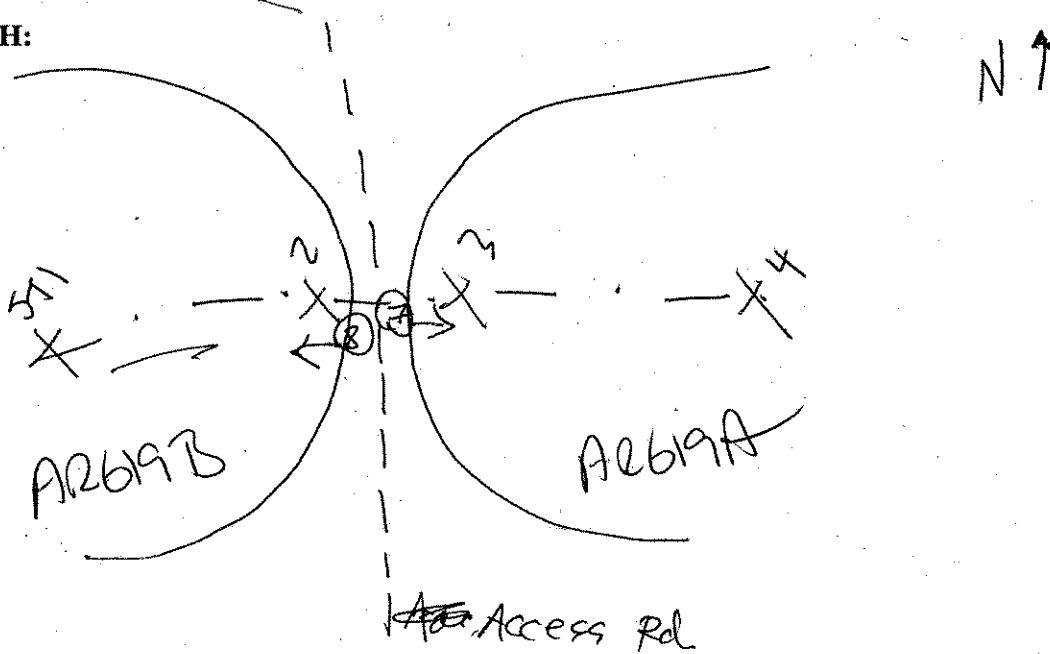
DATE: 5/8/06
 ROLL NO: N/A
 FRAMES: 758
(SEE NOTES)

STREAM CROSSING DATA

CHANNEL ID	AR619-ST		
NAME (or trib. to)			
TYPE OF STREAM	1 st order		
PEREN/INTERMIT	peren.		
WIDTH (obser/ohw)	3 [#] ' (flowing) / 50' max.		
DEPTH (obser/ohw)	6 in.		
FLOW RATE ¹	moderate		
FLOW DIRECTION	NE		
SUBSTRATE	SLT		
BANK VEGETATION	PSS		

¹ = Dry/Stagnant/Low/Medium/High

SKETCH:



FISH AND WILDLIFE OBSERVATIONS

NOTES

flowing H₂O has width of ~ ~~15~~³' (75' NE of AR), w/
 max. width of standing H₂O ~ ~~15~~⁵⁰'
 photo 1 → E } AT AR619ST
 photo 2 → W }

STREAM DATA FORM

PROJECT: Marble R.
 TURBINE: AR 721
 LOCATION: _____
 FIELD CREW: BQ - CJ

CLIENT: _____
 DATE: 5/20/06
 ROLL NO: _____
 FRAMES: West 1 & E
from between
ST 2-3

STREAM CROSSING DATA

CHANNEL ID	AR 721 - ST		
NAME (or trib. to)			
PEREN/INTERMIT	<i>interm.</i>		
WIDTH (obser/ohw)	<i>3-5' / *</i>		
DEPTH (obser/ohw)	<i>5-8" / *</i>		
FLOW RATE ¹	<i>low</i>		
FLOW DIRECTION	<i>W</i>		
SUBSTRATE	<i>mid</i>		
BANK VEGETATION	<i>PFO1</i>		

¹ = Dry/Stagnant/Low/Medium/High

SKETCH:

FISH AND WILDLIFE OBSERVATIONS

excavated ditches to drain ag. field - ditch depth approx. 5'; beds at observed high water

NOTES

STREAM DATA FORM

PROJECT: Maible R.
 TURBINE: _____
 LOCATION: AR724A
 FIELD CREW: BQ-RJ

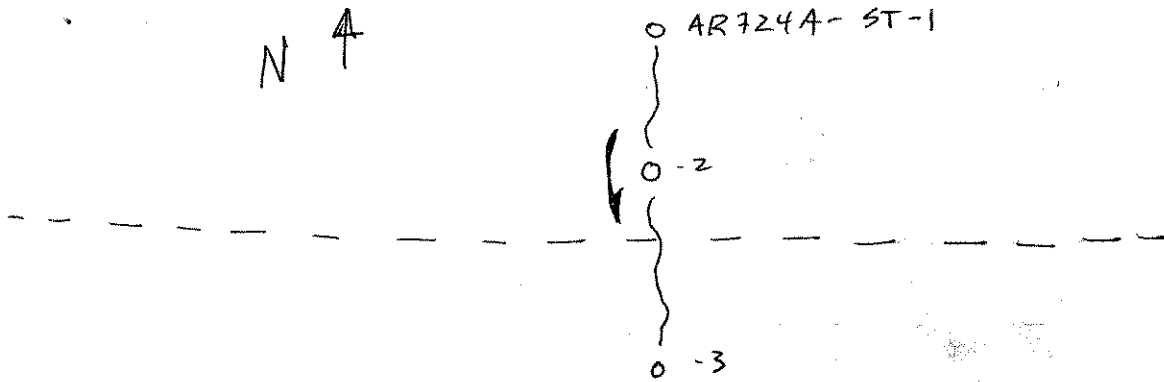
CLIENT: _____
 DATE: 5/21/06
 ROLL NO: _____
 FRAMES: photo 2 & 5
from ST-1

STREAM CROSSING DATA

CHANNEL ID	AR724A-ST		
NAME (or trib. to)			
PEREN/INTERMIT	inter.		
WIDTH (obser/ohw)	1 1' / 2'		
DEPTH (obser/ohw)	1-2" / 6-12"		
FLOW RATE ¹	medium		
FLOW DIRECTION	S		
SUBSTRATE	SAND w/ gr.		
BANK VEGETATION	SS		

¹ = Dry/Stagnant/Low/Medium/High

SKETCH:



FISH AND WILDLIFE OBSERVATIONS

NOTES

observed during high water; situated along W
edge of rock field wall; open hay field to W.

STREAM CROSSING DATA FORM

ROUTE: AR 724A-ST

DATE: 7-15-06

LOCATION: Access Road to turbine 73

ROLL NO: _____

FIELD CREW: BD

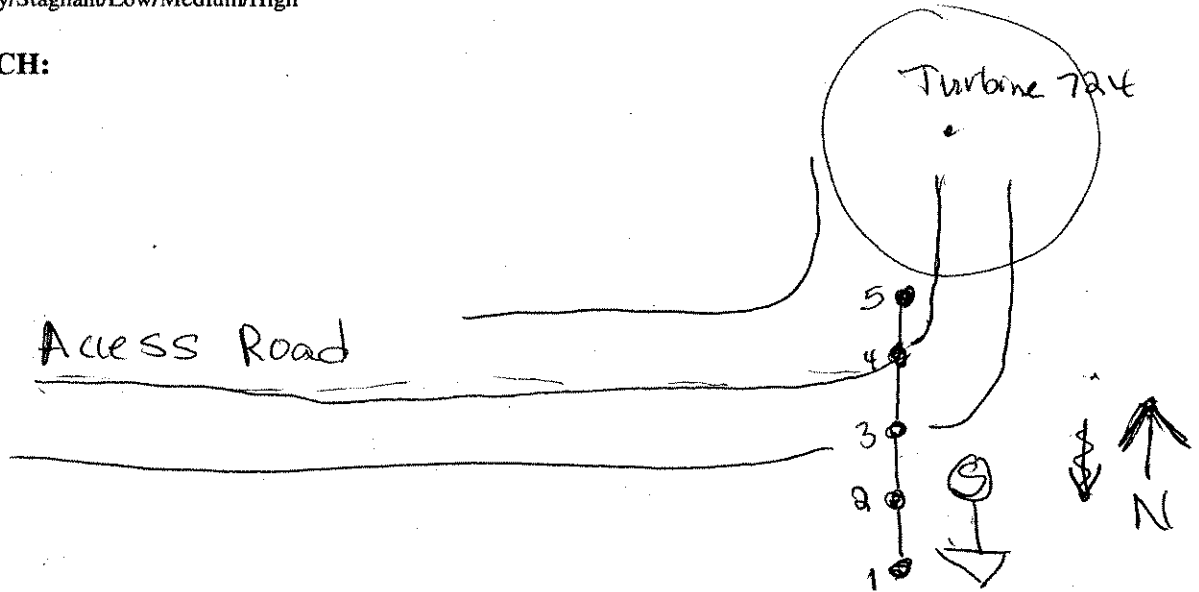
FRAMES: FACING N #5

STREAM CROSSING DATA

CHANNEL ID	AR724A-ST		
NAME (or trib. to)	Un-named		
TYPE OF STREAM	—		
PEREN/INTERMIT	Intermit		
WIDTH (obser/ohw)	N/A / 2-3'		
DEPTH (obser/ohw)	N/A / <1'		
FLOW RATE ¹	Dry		
FLOW DIRECTION	South		
SUBSTRATE	Silt/cobble		
BANK VEGETATION	Wetland herb*		

¹ = Dry/Stagnant/Low/Medium/High

SKETCH:



FISH AND WILDLIFE OBSERVATIONS

NOTES

Previously Flagged; Not on GPS.
 Extended line to North to turbine 73.
 Open Agriculture, deciduous forest (west) (East) ~~drainage~~ feature

*Un. id. Aster w/o. flower
 meadow Sweet
 leaved ...

Aster sp.
 Spirea sp.
 immitans canadensis

STREAM CROSSING DATA FORM

ROUTE: AR803 AB ST
 LOCATION: S OF Clinton Mills Rd
 FIELD CREW: JV AP

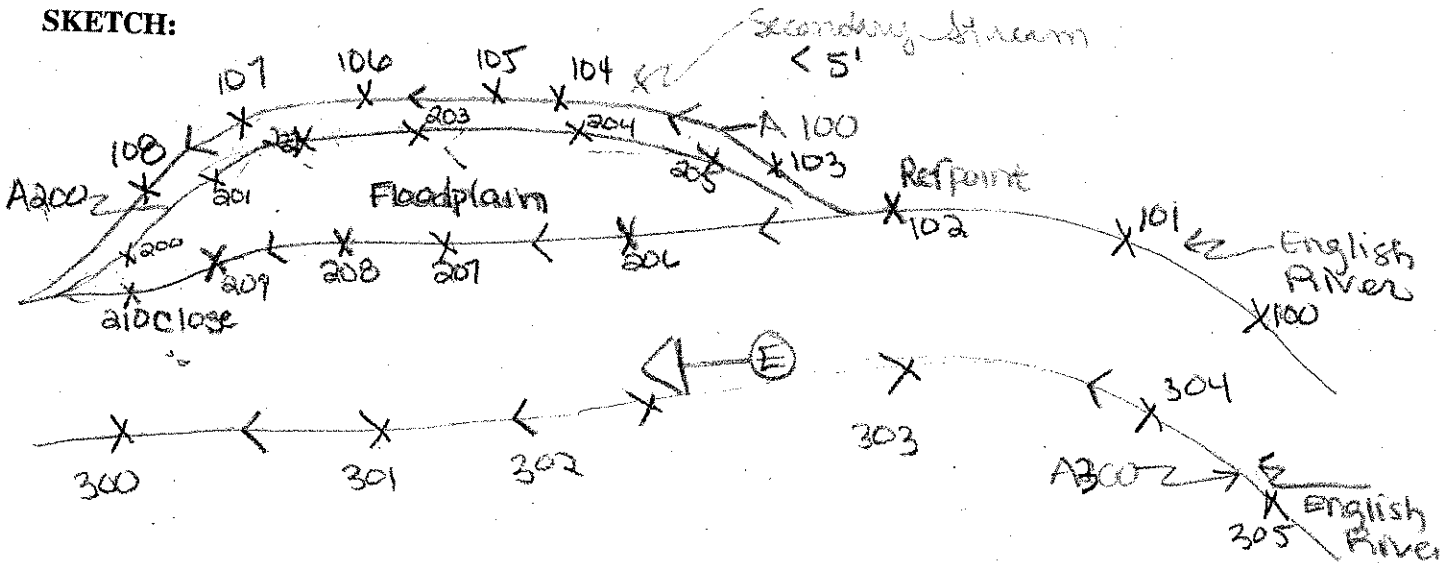
DATE: 5/11/07
 ROLL NO: _____
 FRAMES: = E

STREAM CROSSING DATA

CHANNEL ID	AR803 AB ST	<i>Alnus rugosa</i>	<i>Spirea</i>
NAME (or trib. to)	English River	<i>Betula populifolia</i>	<i>onoclea</i>
TYPE OF STREAM		<i>Amelanchier</i>	<i>carex</i>
PEREN/INTERMIT	Perennial	<i>Aster</i>	<i>Impatiens</i>
WIDTH (obser/ohw)	6-8' / 10'	<i>Rue</i>	<i>Salix</i>
DEPTH (obser/ohw)	4-12" / 12"	<i>Wild Strawberry</i>	<i>Enotherium</i>
FLOW RATE ¹	Medium	<i>Rubus</i>	<i>Falsenette</i>
FLOW DIRECTION	East	<i>Cinnamon Fern</i>	
SUBSTRATE	Rock/Cobble	<i>Taraxicum</i>	
BANK VEGETATION	PFO/PEM	<i>Quercus</i>	

¹ = Dry/Stagnant/Low/Medium/High

SKETCH:



FISH AND WILDLIFE OBSERVATIONS

Deer tracks observed within Floodplain; Frog on bank,
 2 flickers flushed from tree.

NOTES

Stream bank is rocky. Portions of the extension do not
 have discrete floodplain.

STREAM DATA FORM

PROJECT: Marble River
 TURBINE: N of WB 146-R
 LOCATION: Chason Mills Rd
 FIELD CREW: JKH, JV

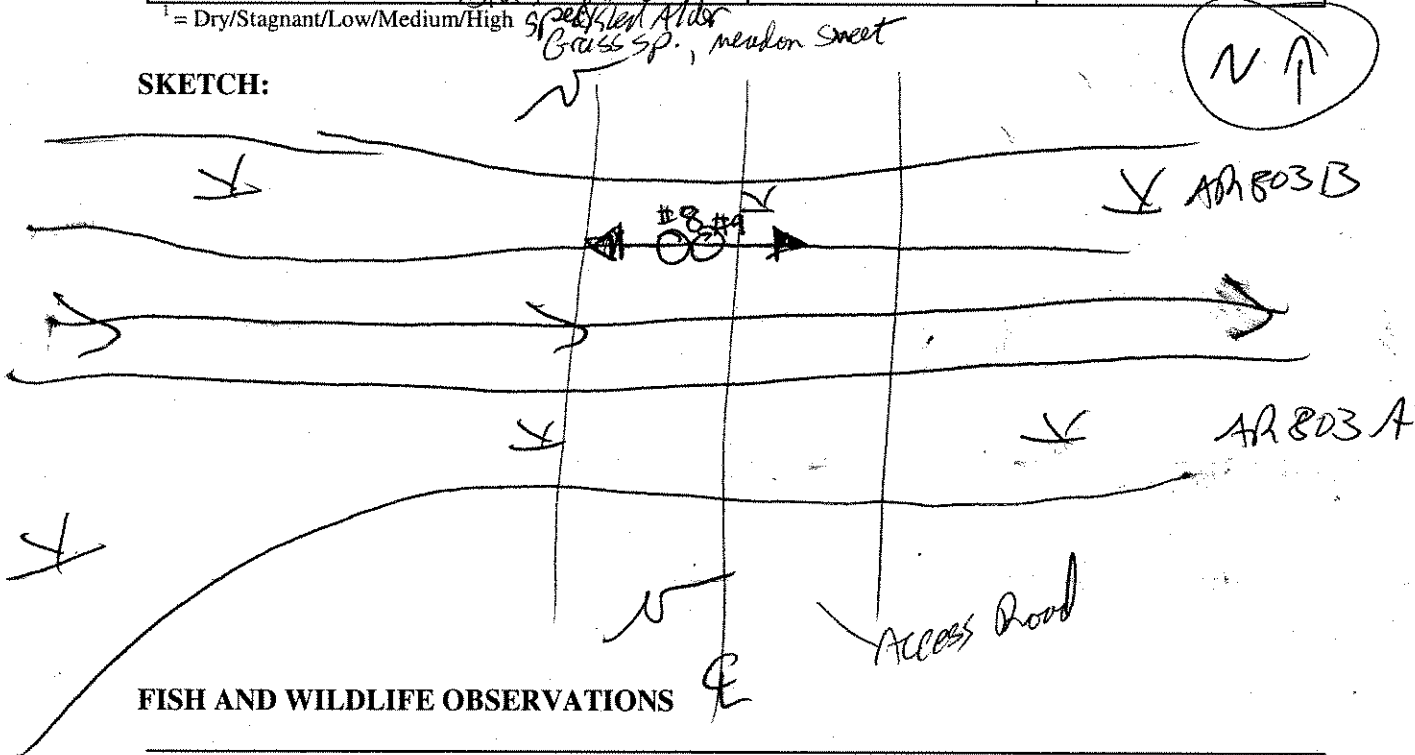
CLIENT: Horizon Wind LLC
 DATE: 4/9/06
 ROLL NO: 2 KH
 FRAMES: 8, 9

STREAM CROSSING DATA

CHANNEL ID	AR803A/B-5T		
NAME (or trib. to)	English River		
PEREN/INTERMIT	Peren		
WIDTH (obser/ohw)	10 ft		
DEPTH (obser/ohw)	12 in		
FLOW RATE ¹	Medium		
FLOW DIRECTION	East		
SUBSTRATE	Boulders/Muck		
BANK VEGETATION	Blue Pine, Iris		

¹ = Dry/Stagnant/Low/Medium/High *species: Alder, Grass sp., meadow Sweet*

SKETCH:



FISH AND WILDLIFE OBSERVATIONS

NOTES

STREAM DATA FORM

PROJECT: Marble River
 TURBINE: AB/Ch junction at Soucia Rd
 LOCATION: Clinton Mills Rd
 FIELD CREW: WA, JV

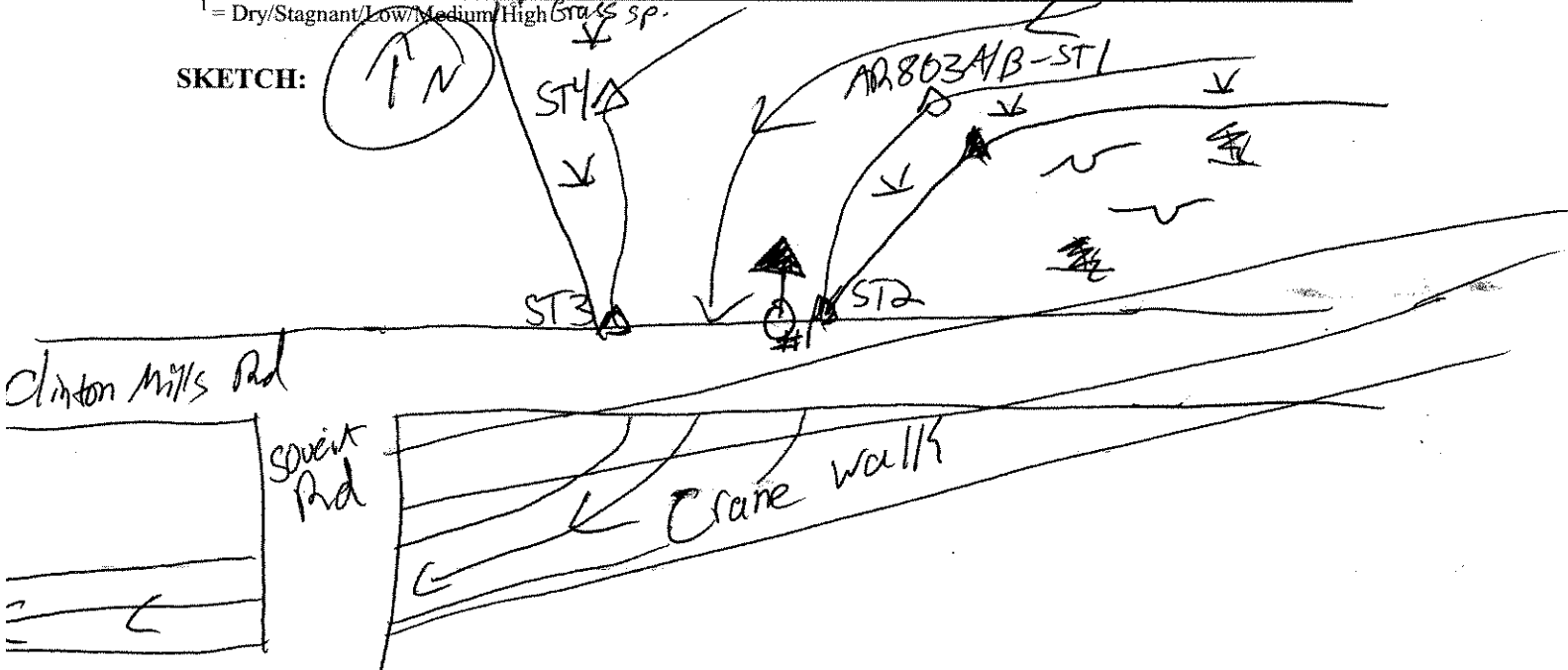
CLIENT: Horizon Wind Power LLC
 DATE: 5/10/08
 ROLL NO: 1514
 FRAMES: 1 - South

STREAM CROSSING DATA

CHANNEL ID	AR803A/B/C-ST	
NAME (or trib. to)	English River	
PEREN/INTERMIT	Peren	
WIDTH (obser/ohw)	10 ft	
DEPTH (obser/ohw)	12 m	
FLOW RATE ¹	Low	
FLOW DIRECTION	N/NE	
SUBSTRATE	sand / Baldess	
BANK VEGETATION	Speckled Alder	

¹ = Dry/Stagnant/Low/Medium/High Grass sp.

SKETCH:



FISH AND WILDLIFE OBSERVATIONS

Frogs

NOTES

Connects through culvert under Clinton Mills Rd to
wetland / stream ID - (SOUCIA - ST) from last October 2005
- wetland and stream flags shared at culvert, AR803A/B-20A/ST2
AR803A/B-21A/ST3

STREAM CROSSING DATA FORM

ROUTE: Access Rd to T. 112
 LOCATION: East of T. 114
 FIELD CREW: Bob, A.P.

DATE: 5/25/07
 ROLL NO: _____
 FRAMES: _____

STREAM CROSSING DATA

CHANNEL ID	AR811 B-ST		
NAME (or trib. to)			
TYPE OF STREAM	Ditch		
PEREN/INTERMIT	intermit		
WIDTH (obser/ohw)	1' / 4'		
DEPTH (obser/ohw)	2" / 1.5'		
FLOW RATE ¹	Stagn.		
FLOW DIRECTION	SW *		
SUBSTRATE	Sandy loam		
BANK VEGETATION	Access Rd to east upland Decid Forest to		

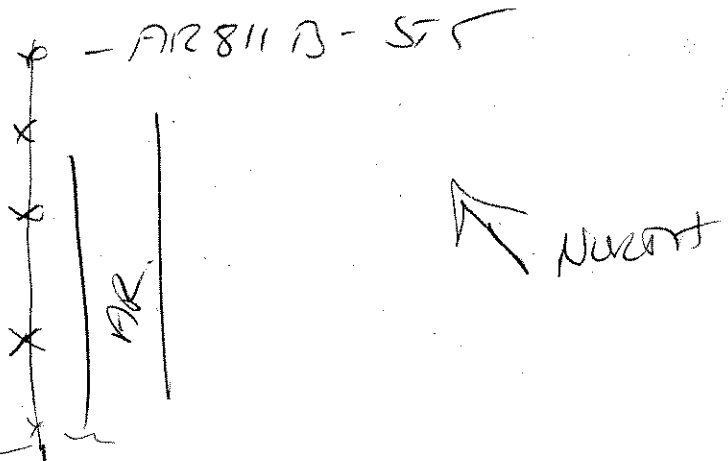
¹ = Dry/Stagnant/Low/Medium/High

*BIBES (in T. 112) 4/11

SKETCH:

Stream extension does not exist
 Re shoe from origin to wooded parcel that

Derives from
 Access Rd.



FISH AND WILDLIFE OBSERVATIONS

Down Robin * - AR811 B-ST 1
PROGS

NOTES

H2O not flow down Access Rd
TO stream (man-made ditch) higher

STREAM CROSSING DATA FORM

ROUTE: AR811B-ST
 LOCATION: Access Road to
 FIELD CREW: RD, JV WTG112+114

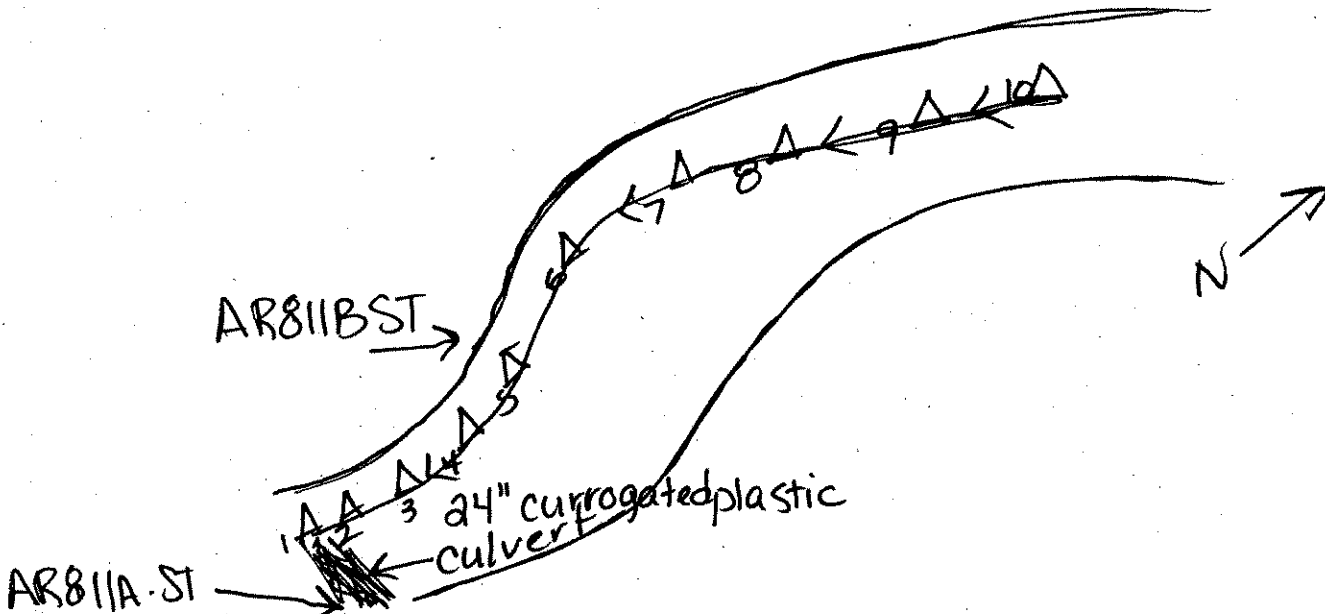
DATE: 5.15.06
 ROLL NO: _____
 FRAMES: See AR811A-ST Data

STREAM CROSSING DATA

CHANNEL ID	AR811B-ST		
NAME (or trib. to)			
TYPE OF STREAM			
PEREN/INTERMIT	Intermittent		
WIDTH (obser/ohw)	1-3' / 3'		
DEPTH (obser/ohw)	2-3" / 1'		
FLOW RATE ¹	Low		
FLOW DIRECTION	South		
SUBSTRATE	Silt		
BANK VEGETATION	Sphagnum, grass		

¹ = Dry/Stagnant/Low/Medium/High

SKETCH:



FISH AND WILDLIFE OBSERVATIONS

Frogs

NOTES

Appears to be roadside ditch heavily carved by drainage

Line Extension

STREAM CROSSING DATA FORM

ROUTE: AR to J1156
LOCATION: EAST of T. 115
FIELD CREW: PTD Ae.

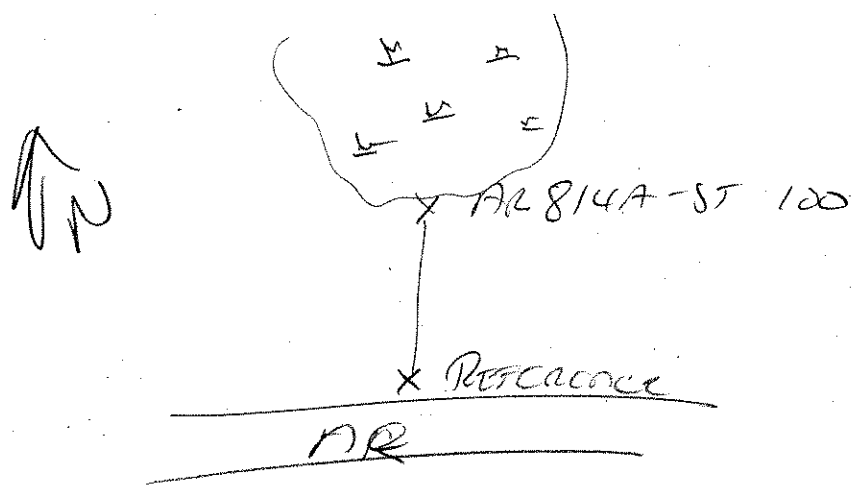
DATE: 5/25/07
ROLL NO: _____
FRAMES: _____

STREAM CROSSING DATA

CHANNEL ID	AL814A-ST		
NAME (or trib. to)			
TYPE OF STREAM			
PEREN/INTERMIT	int		
WIDTH (obser/ohw)	1/5'		
DEPTH (obser/ohw)	4" / 1"		
FLOW RATE ¹	STAG		
FLOW DIRECTION	South		
SUBSTRATE	Silt/oa		
BANK VEGETATION	Wetland Decid Forest		

¹ = Dry/Stagnant/Low/Medium/High

SKETCH:



FISH AND WILDLIFE OBSERVATIONS

NOTES

STREAM DATA FORM

PROJECT: Marble River
 TURBINE: 114 → 156
 LOCATION: Lavin's property
 FIELD CREW: 15H JV

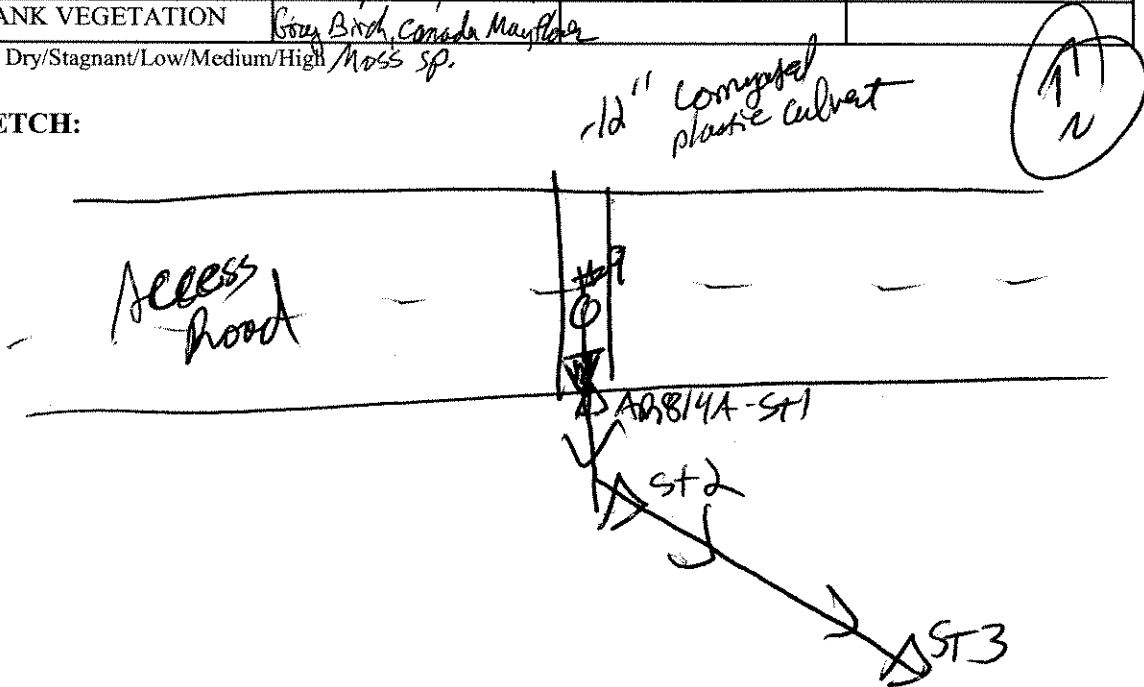
CLIENT: Horizon Wind Power LLC
 DATE: 5/12/06 5/12/06
 ROLL NO: 15H
 FRAMES: 9-South

STREAM CROSSING DATA

CHANNEL ID	<u>A0814A-ST</u>		
NAME (or trib. to)	<u>Unknown</u>		
PEREN/INTERMIT	<u>Intermit</u>		
WIDTH (obser/ohw)	<u>5 ft</u>		
DEPTH (obser/ohw)	<u>4 inch</u>		
FLOW RATE ¹	<u>Dry/stagnant</u>		
FLOW DIRECTION	<u>South</u>		
SUBSTRATE	<u>Cobbles/Sand/Mix/s</u>		
BANK VEGETATION	<u>Grey Birch, Canada Mayflower</u>		

¹ = Dry/Stagnant/Low/Medium/High Moss sp.

SKETCH:



FISH AND WILDLIFE OBSERVATIONS

NOTES

STREAM CROSSING DATA FORM

ROUTE: AR944A/B-ST
 LOCATION: AR To turbine 11a
 FIELD CREW: KH JV

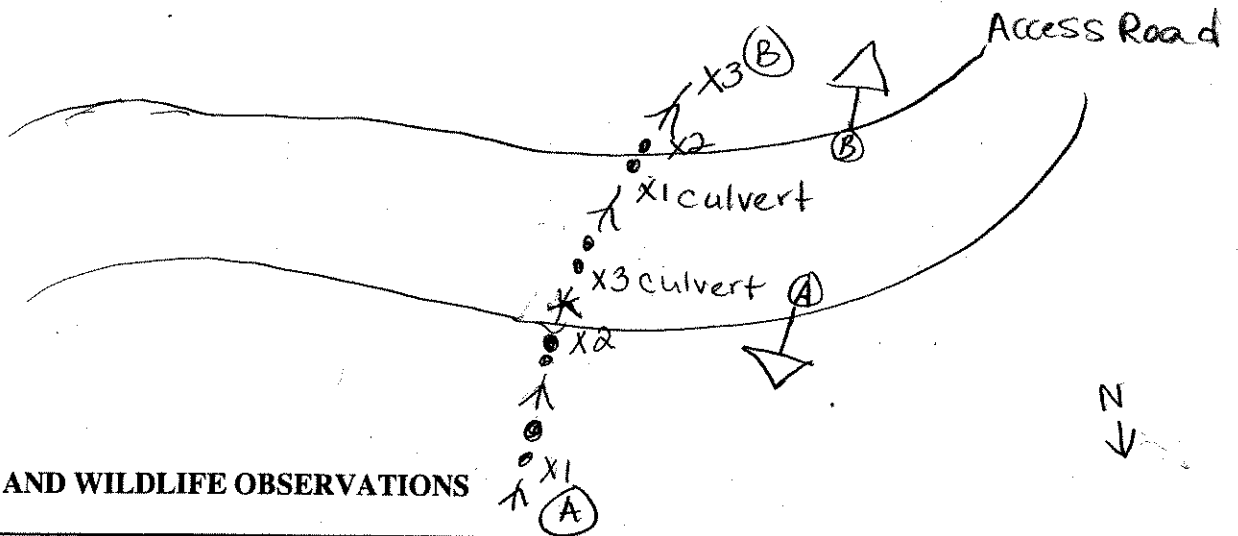
DATE: 7-24-06
 ROLL NO: 3 => N @ A
 FRAMES: 4 => S @ B

STREAM CROSSING DATA

CHANNEL ID	—		
NAME (or trib. to)	un-named		
TYPE OF STREAM	—		
PEREN/INTERMIT	Intermit		
WIDTH (obser/ohw)	2-10' / 4+12'		
DEPTH (obser/ohw)	N/A / 12-48"		
FLOW RATE ¹	Dry		
FLOW DIRECTION	Southwest		
SUBSTRATE	OM / Leaf litter		
BANK VEGETATION	Herb		

¹ = Dry/Stagnant/Low/Medium/High

SKETCH:



FISH AND WILDLIFE OBSERVATIONS

NOTES

Possible drainage; for the culvert crosses road

STREAM CROSSING DATA FORM

ROUTE: AR946A ST
 LOCATION: T. 112
 FIELD CREW: JV AP

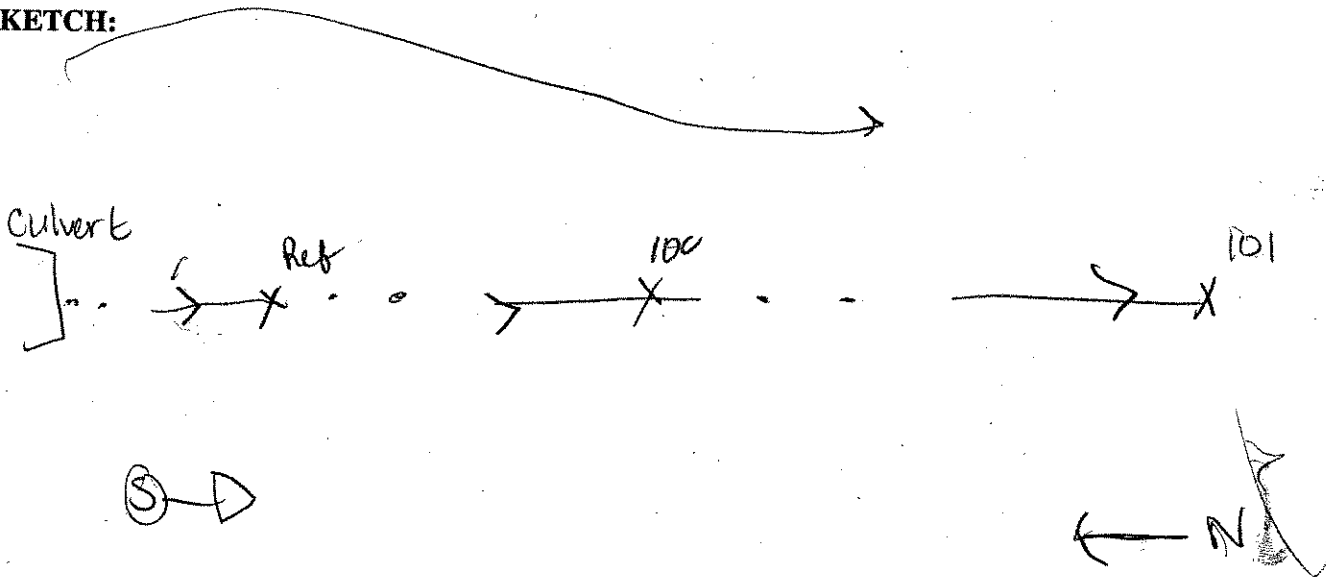
DATE: 5/10/07
 ROLL NO: _____
 FRAMES: _____

STREAM CROSSING DATA

CHANNEL ID	AR946-A ST	(Bank vege)	
NAME (or trib. to)		<i>Alnus rugosa</i>	
TYPE OF STREAM		<i>Ulmus lantago</i>	
PEREN/INTERMIT	Intermit	<i>Betula papyrifera</i>	
WIDTH (obser/ohw)	4' / 5'	<i>Asterichium aquilinum</i>	
DEPTH (obser/ohw)	2" / 8"	<i>Acer rubrum</i>	
FLOW RATE ¹	Stagnant	<i>Sphagnum moss</i>	
FLOW DIRECTION	South		
SUBSTRATE	muck		
BANK VEGETATION	Wooded/Herb UPL		

¹ = Dry/Stagnant/Low/Medium/High

SKETCH:



FISH AND WILDLIFE OBSERVATIONS

Frogs

NOTES

Area adjacent to stream has recently (past 6 months)
been logged. Heavy vehicular traffic.

STREAM CROSSING DATA FORM

ROUTE: AR946A-ST
 LOCATION: AR To turbine 112
 FIELD CREW: KH JV

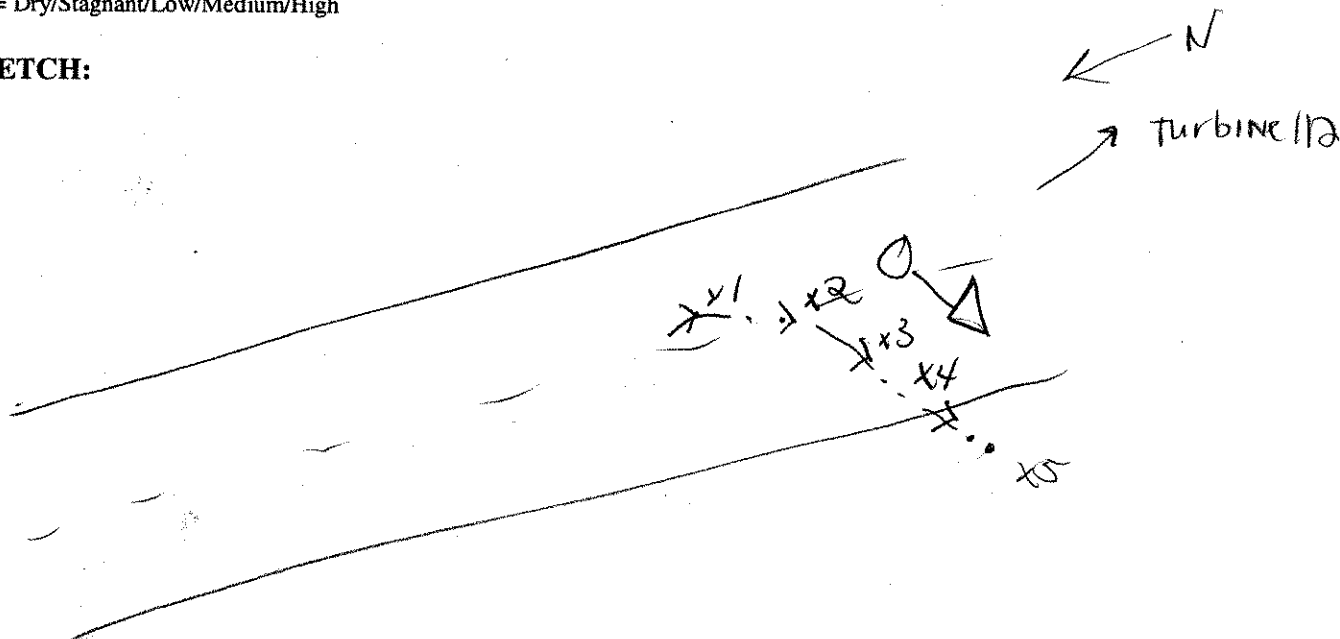
DATE: 7.24.06
 ROLL NO: _____
 FRAMES: => SE #1

STREAM CROSSING DATA

CHANNEL ID	AR946A-ST		
NAME (or trib. to)	Un named		
TYPE OF STREAM			
PEREN/INTERMIT	Intermit		
WIDTH (obser/ohw)	3' / 4'		
DEPTH (obser/ohw)	NA / 12-24"		
FLOW RATE ¹	Dry		
FLOW DIRECTION	South East		
SUBSTRATE	leaf litter / OM		
BANK VEGETATION	Herb (moss/fern)		

¹ = Dry/Stagnant/Low/Medium/High

SKETCH:



FISH AND WILDLIFE OBSERVATIONS

Common Frogs and Garter Snakes

NOTES

Stream begins along side of existing Access road and drains into woods to SE

STREAM CROSSING DATA FORM

ROUTE: AR954B/B-ST
 LOCATION: AR to turbine 138
 FIELD CREW: KH JV

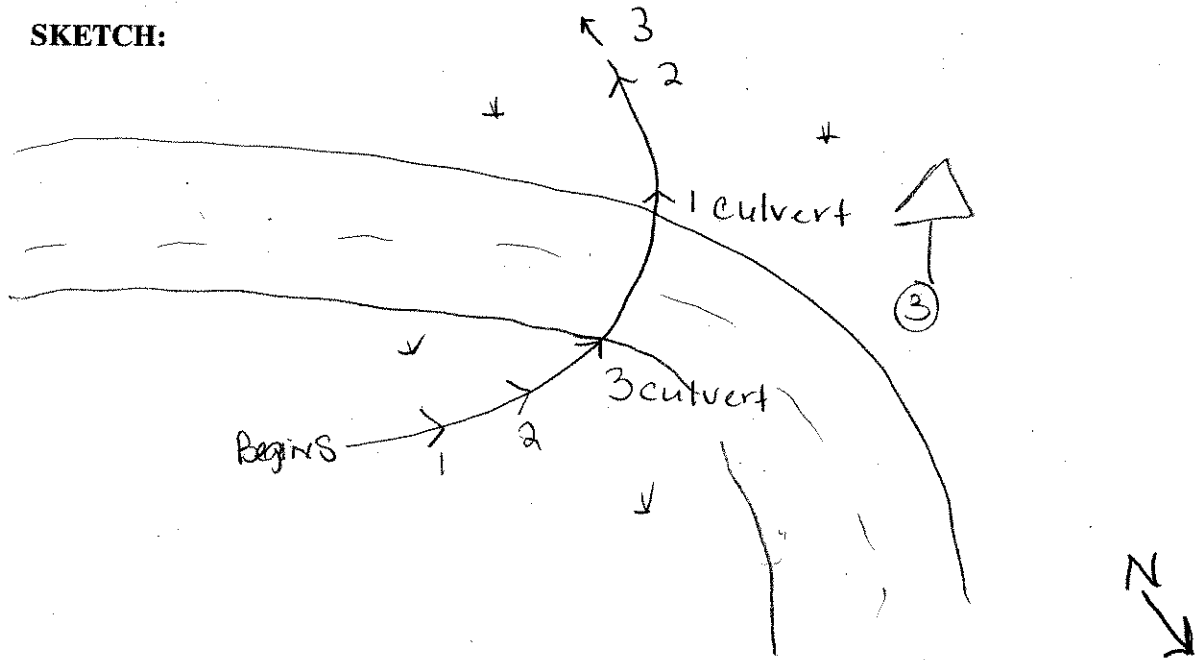
DATE: 7.26.00
 ROLL NO: _____
 FRAMES: 3 => SW

STREAM CROSSING DATA

CHANNEL ID	AR954B/B-ST		
NAME (or trib. to)	Unnamed		
TYPE OF STREAM	—		
PEREN/INTERMIT	Peren		
WIDTH (obser/ohw)	24" / 48"		
DEPTH (obser/ohw)	6-12" / 12"-16"		
FLOW RATE ¹	Low		
FLOW DIRECTION	SW		
SUBSTRATE	Silt + gravel		
BANK VEGETATION			

¹ = Dry/Stagnant/Low/Medium/High

SKETCH:



FISH AND WILDLIFE OBSERVATIONS

Common Frogs, Garter Snakes observed in water and on Bank.

NOTES

Rice cut Grass dominates immediate bank on "C" line. Along with wool grass and Fern sp.
Carex Scoparia and juncus effusus dom. bank on "B" side. Associated w/ AR954A wetland

STREAM CROSSING DATA FORM

ROUTE: AR967-A-ST

DATE: 9/8/06

LOCATION: Turbine 85

ROLL NO: _____

FIELD CREW: IB, JV

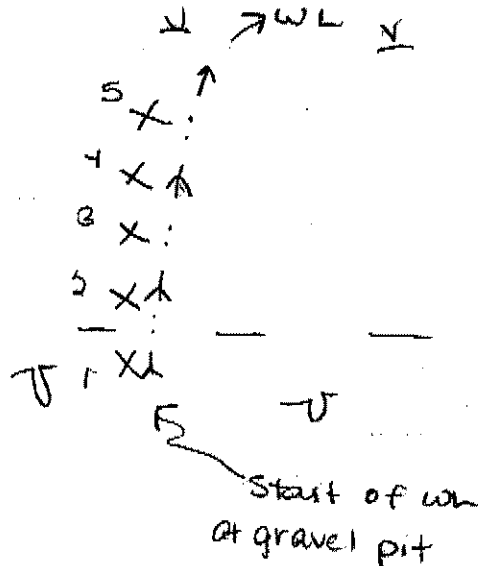
FRAMES: _____

STREAM CROSSING DATA

CHANNEL ID	AR967-A-ST		
NAME (or trib. to)	Wdk		
TYPE OF STREAM	—		
PEREN/INTERMIT	INTERMIT		
WIDTH (obser/ohw)	6-12" / 8-10"		
DEPTH (obser/ohw)	1/4" / 1/2"		
FLOW RATE ¹	Dry		
FLOW DIRECTION	NE		
SUBSTRATE	Silt		
BANK VEGETATION	Herb		

¹ = Dry/Stagnant/Low/Medium/High

SKETCH:



FISH AND WILDLIFE OBSERVATIONS

NOTES

27

STREAM CROSSING DATA FORM

ROUTE: AR1037-SC

DATE: 7/28/06

LOCATION: HARBLE RIVER

ROLL NO: _____

FIELD CREW: BQ / SC

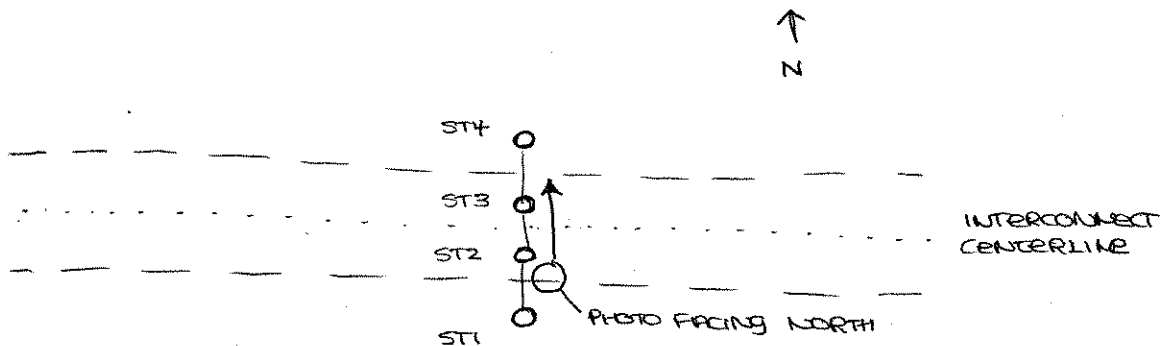
FRAMES: PHOTO FACING NORTH

STREAM CROSSING DATA

CHANNEL ID			
NAME (or trib. to)			
TYPE OF STREAM			
PEREN/INTERMIT	PERENNIAL		
WIDTH (obser/ohw)	3 - 6 FEET		
DEPTH (obser/ohw)	1 - 6 INCHES		
FLOW RATE ¹	MEDIUM		
FLOW DIRECTION	NORTH		
SUBSTRATE	MUD		
BANK VEGETATION	EH / SC-SH		

¹ = Dry/Stagnant/Low/Medium/High

SKETCH:



FISH AND WILDLIFE OBSERVATIONS

FROGS

NOTES

STREAM CROSSING DATA FORM

STREAM EXTENSION

ROUTE: Access Rd
Route to turbine 201
 LOCATION: wetland AR1037ADK
 FIELD CREW: RJD / SC / LP

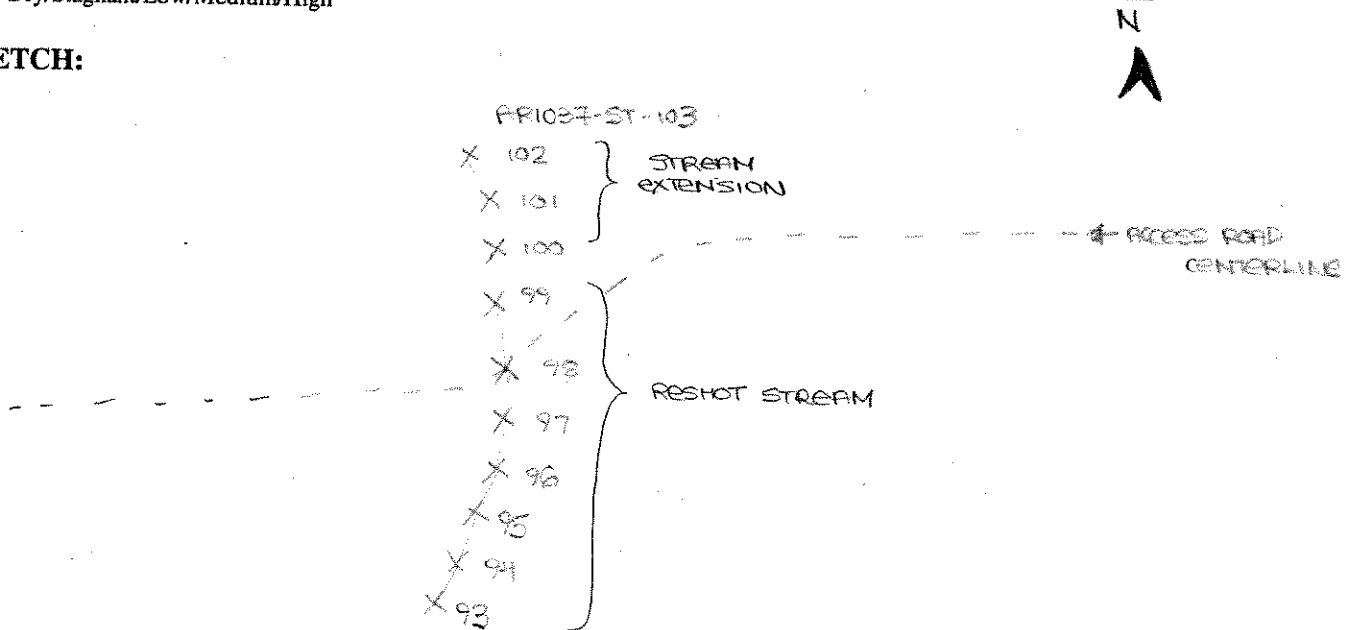
DATE: 5-31-07
 ROLL NO: _____
 FRAMES: Photo 10 Face N

STREAM CROSSING DATA

CHANNEL ID	AR1037-ST		
NAME (or trib. to)			
TYPE OF STREAM			
PEREN/INTERMIT	PEREN		
WIDTH (obser/ohw)	5 ft. / 15 ft.		
DEPTH (obser/ohw)	16" / 4 ft.		
FLOW RATE ¹	LOW		
FLOW DIRECTION	N		
SUBSTRATE	Sand / Rock		
BANK VEGETATION	PEM / PSS		

¹ = Dry/Stagnant/Low/Medium/High

SKETCH:



FISH AND WILDLIFE OBSERVATIONS

bovine

NOTES

bovine disturbance - active cow pasture
extended to the North and reshot entire length.

STREAM CROSSING DATA FORM

ROUTE: AR1308-A-ST
 LOCATION: T.31 + AR
 FIELD CREW: JB UV

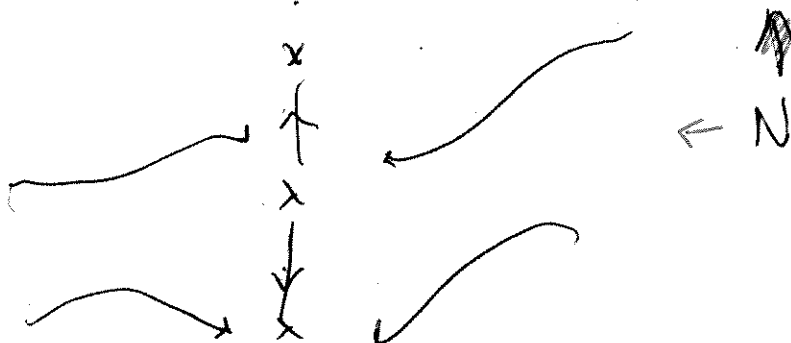
DATE: 10/15/06
 ROLL NO: _____
 FRAMES: _____

STREAM CROSSING DATA

CHANNEL ID	AR1308-A-ST		
NAME (or trib. to)	DIA		
TYPE OF STREAM	Field Drain		
PEREN/INTERMIT	Intermit		
WIDTH (obser/ohw)	48" / 48"		
DEPTH (obser/ohw)	NA / 6-10"		
FLOW RATE ¹	DIA		
FLOW DIRECTION	N + S		
SUBSTRATE	Herbs		
BANK VEGETATION	Herbs		

¹ = Dry/Stagnant/Low/Medium/High

SKETCH:



FISH AND WILDLIFE OBSERVATIONS

None observed

NOTES

Field Drainage - Assoc. w/ WL.

STREAM CROSSING DATA FORM

ROUTE: AR 1317/1318
 LOCATION: T. 206
 FIELD CREW: IB + JV

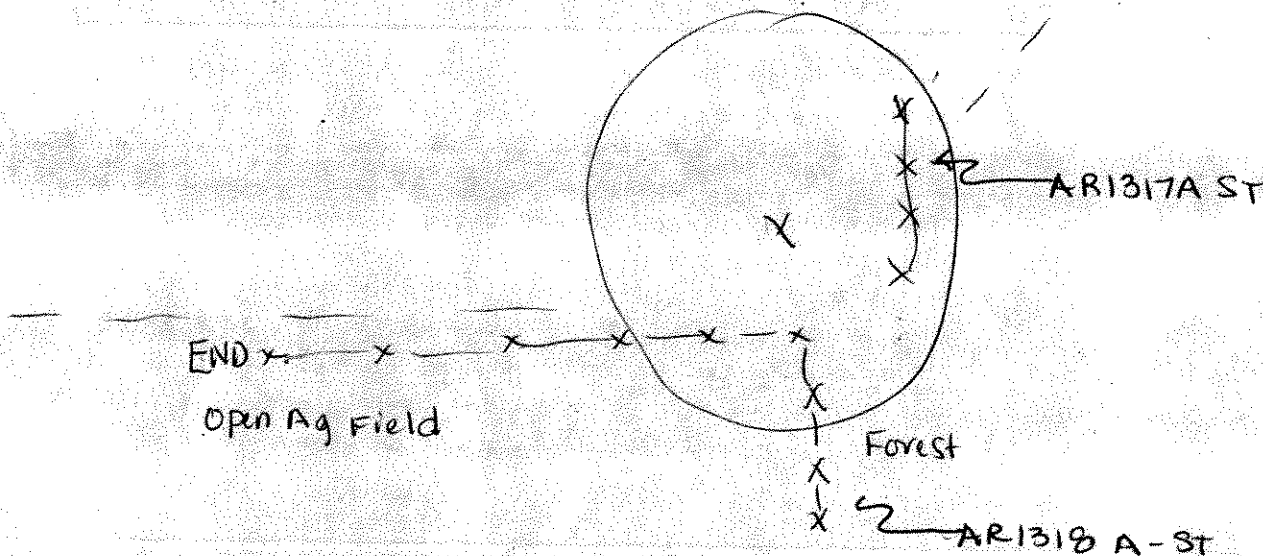
DATE: 10/5/06
 ROLL NO: _____
 FRAMES: _____

STREAM CROSSING DATA

CHANNEL ID	AR1317 A-ST	AR1318-A-ST	
NAME (or trib. to)	NA	NA	
TYPE OF STREAM	Man-made ditch	Man made ditch	
PEREN/INTERMIT	Intermir	Intermit	
WIDTH (obser/ohw)	38" / 28"	58" / 24-36"	
DEPTH (obser/ohw)	NA / 8-10"	NA / 10-16"	
FLOW RATE ¹	Dry	Dry	
FLOW DIRECTION	E/W	N/S	
SUBSTRATE	Soil	N/S	
BANK VEGETATION	Upland woody	Soil / woody Vege woody / Herbs	

¹ = Dry/Stagnant/Low/Medium/High

SKETCH:



FISH AND WILDLIFE OBSERVATIONS

None observed

NOTES

Both streams observed to be man-made ditches. AR1318 borders ag field and forested area. AR1317 observed to be a ditch in forested area.

STREAM CROSSING DATA FORM

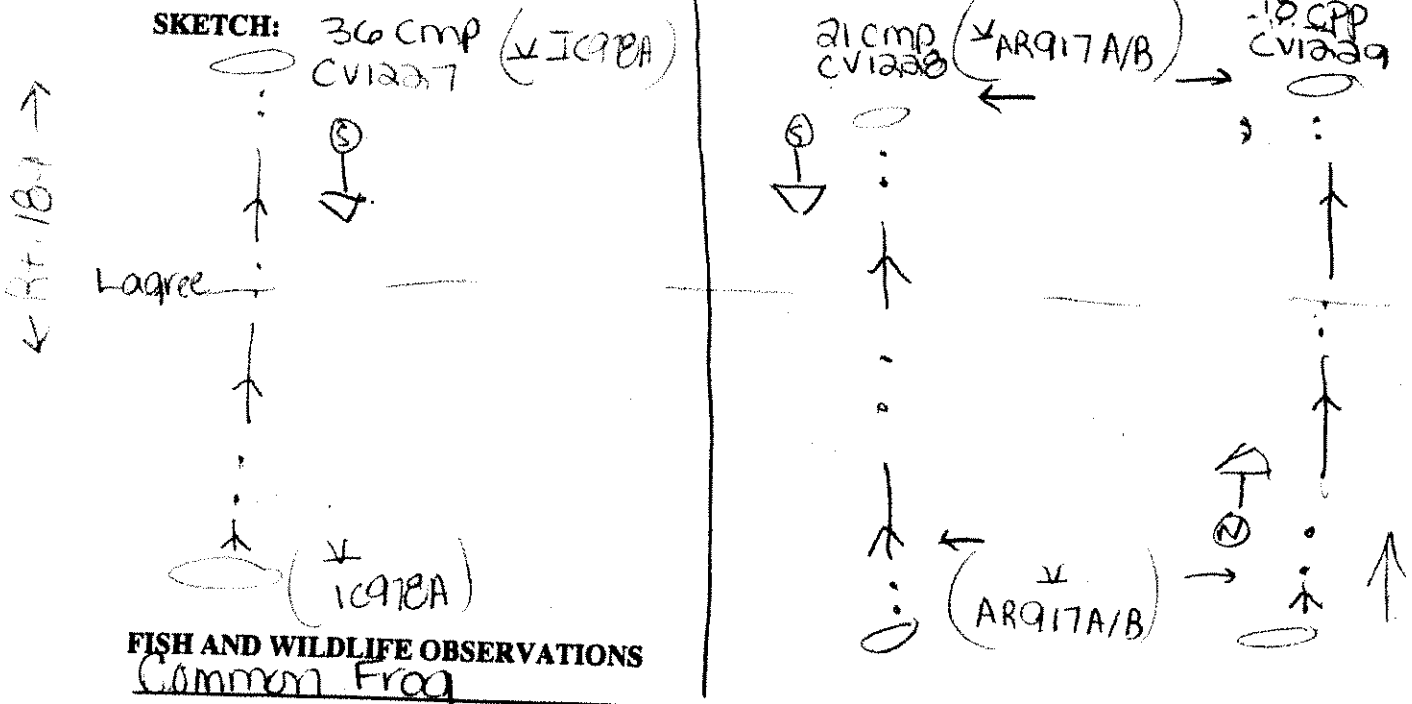
ROUTE: CV1227 1229
 LOCATION: Lagree Rd
 FIELD CREW: UV DO

DATE: 9/18/06
 ROLL NO: _____
 FRAMES: _____

STREAM CROSSING DATA

CHANNEL ID	CV1227 A ST	CV1228 A ST	CV1229 A ST
NAME (or trib. to)	NA	NA	NA
TYPE OF STREAM	WL Culvert	WL Culvert	WL Culvert
PEREN/INTERMIT	NA	NA	NA
WIDTH (obser/ohw)	36 / 12-24"	21 / 10-12"	18 / 10-12"
DEPTH (obser/ohw)	NA / 8-12"	4-6 / 10-12"	4-8 / 10-12"
FLOW RATE ¹	Dry	Low	Low
FLOW DIRECTION	North	North	North
SUBSTRATE	NA	NA	NA
BANK VEGETATION	NA	NA	NA

¹ = Dry/Stagnant/Low/Medium/High



NOTES

CV1227 36 cmp Culvert connects w/ IC978A/B
 CV1228 + 1229
 21 cmp + 18 cpp Assoc. w/ WL AR917A/B (previously flagged): 18 cpp recently replaced

ROUTE: CV1227 A-ST

DATE: 5/6/07

LOCATION: Intersection of Rt 189 + Lagree Rd

ROLL NO: 4 = N

FIELD CREW: Heading North
JV AP

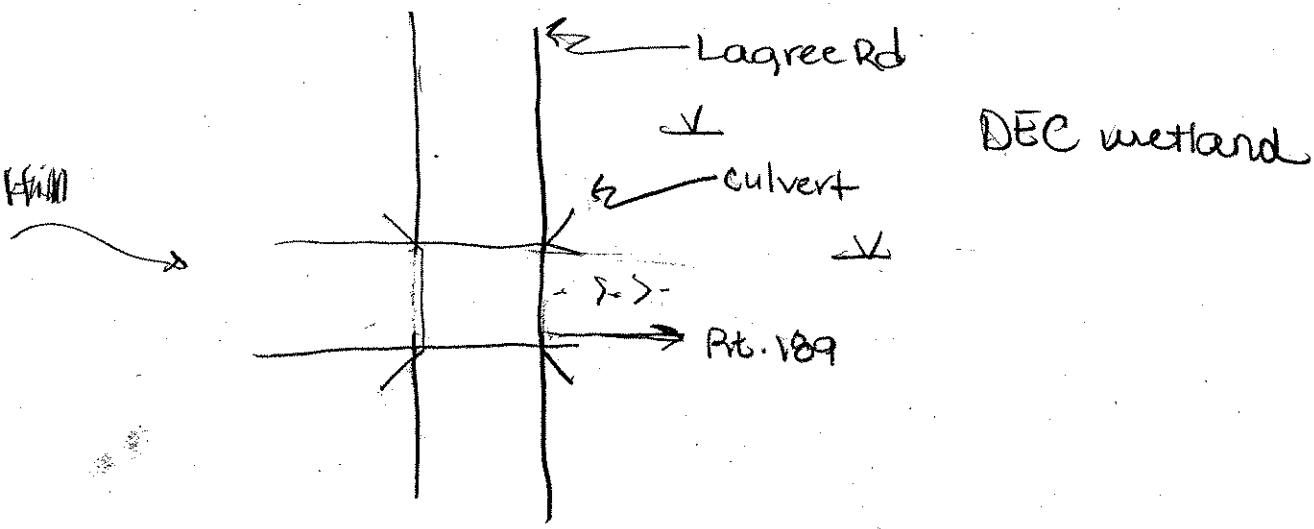
FRAMES: _____

STREAM CROSSING DATA

CHANNEL ID	CV1227-A-ST		
NAME (or trib. to)	NA		
TYPE OF STREAM	NA		
PEREN/INTERMIT	NA		
WIDTH (obser/ohw)	NA		
DEPTH (obser/ohw)	NA		
FLOW RATE ¹	NA		
FLOW DIRECTION	North		
SUBSTRATE	PEM		
BANK VEGETATION	UPL grass/weeds		

¹ = Dry/Stagnant/Low/Medium/High

SKETCH:



FISH AND WILDLIFE OBSERVATIONS

None observed

NOTES

Culvert at intersection and runoff / discharge flow into
DEC wetland to E.
No definite channel or bank.
CV1227 A-ST is actually Wetland 1C97B-E

CV1228-A-ST
CV1229-A-ST

STREAM CROSSING DATA FORM

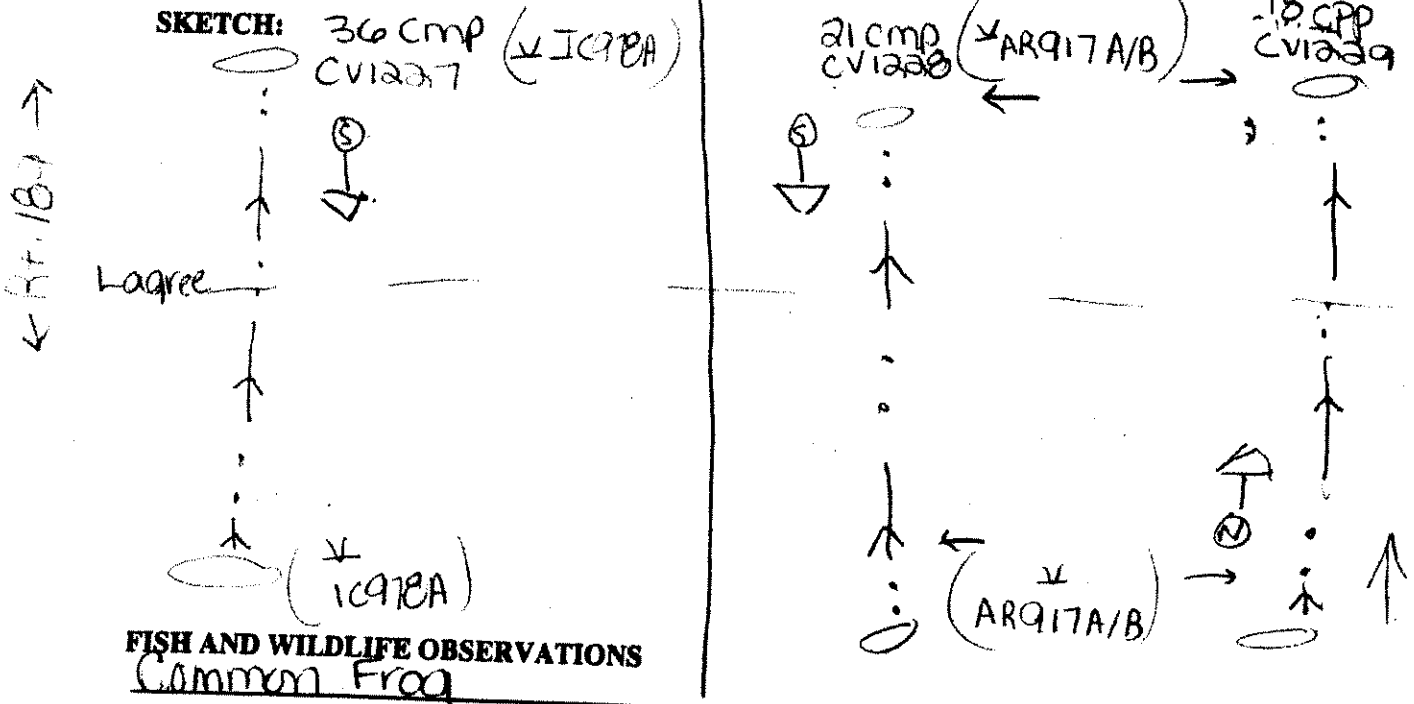
ROUTE: CV1227 + 1229
LOCATION: Lagree Rd
FIELD CREW: UV DU

DATE: 9/18/06
ROLL NO: _____
FRAMES: _____

STREAM CROSSING DATA

CHANNEL ID	CV1227 A ST	CV1228 A ST	CV1229 A ST
NAME (or trib. to)	NA	NA	NA
TYPE OF STREAM	WL Culvert	WL Culvert	WL Culvert
PEREN/INTERMIT	NA	NA	NA
WIDTH (obser/ohw)	36 / 12-24"	21 / 10-12"	18 / 10-12"
DEPTH (obser/ohw)	NA / 8-12"	4-6 / 10-12"	4-8 / 10-12"
FLOW RATE	Dry	Low	Low
FLOW DIRECTION	North	North	North
SUBSTRATE	NA	NA	NA
BANK VEGETATION	NA	NA	NA

* Dry/Stagnant/Low/Medium/High



NOTES

CV1227 36 cmp Culvert connects w/ IC978A/B
CV1228 + 1229
21 cmp + 18 cpp Assoc. w/ WL AR917 A/B (previously flagged). 18 cpp recently replaced

STREAM CROSSING DATA FORM

ROUTE: CV1230 A/B-ST
 LOCATION: Lagree Rd
 FIELD CREW: JV DO

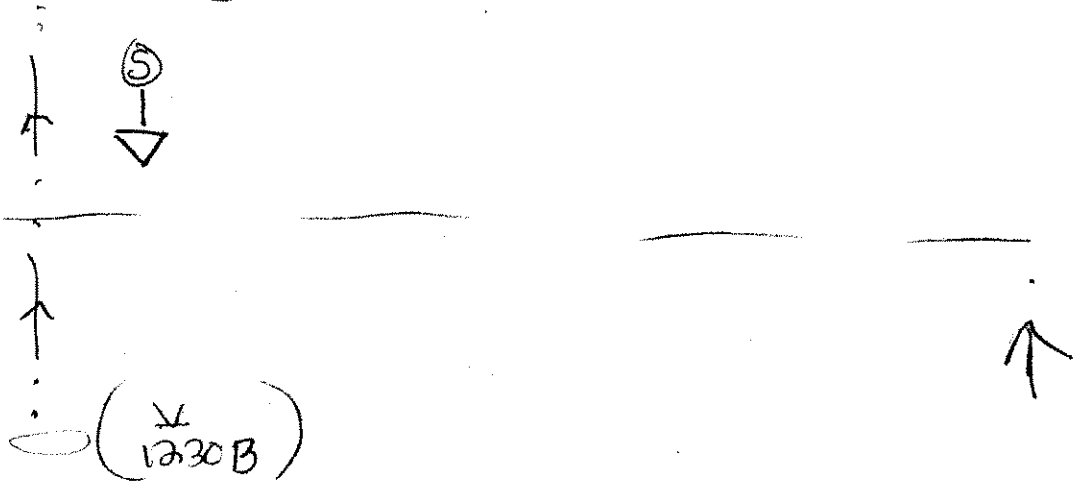
DATE: 9/18/06
 ROLL NO: _____
 FRAMES: _____

STREAM CROSSING DATA

CHANNEL ID	CV1230 A/BST		
NAME (or trib. to)	NA		
TYPE OF STREAM	WL Culvert		
PEREN/INTERMIT	NA		
WIDTH (obser/ohw)			
DEPTH (obser/ohw)			
FLOW RATE ¹			
FLOW DIRECTION			
SUBSTRATE			
BANK VEGETATION			

¹ = Dry/Stagnant/Low/Medium/High

SKETCH: 15 cmp CV1230 (1230A)



FISH AND WILDLIFE OBSERVATIONS

Common Frogs, chipmunk, red squirrel

NOTES

CV1230 15 cmp culverted WL Assoc. w/ AR9168A to N and IC971A to S but IO 1230 AB

AR9168A

IC971A

STREAM CROSSING DATA FORM

ROUTE: BR1231 A/B
 LOCATION: Looby Rd heading South
 FIELD CREW: JV DO

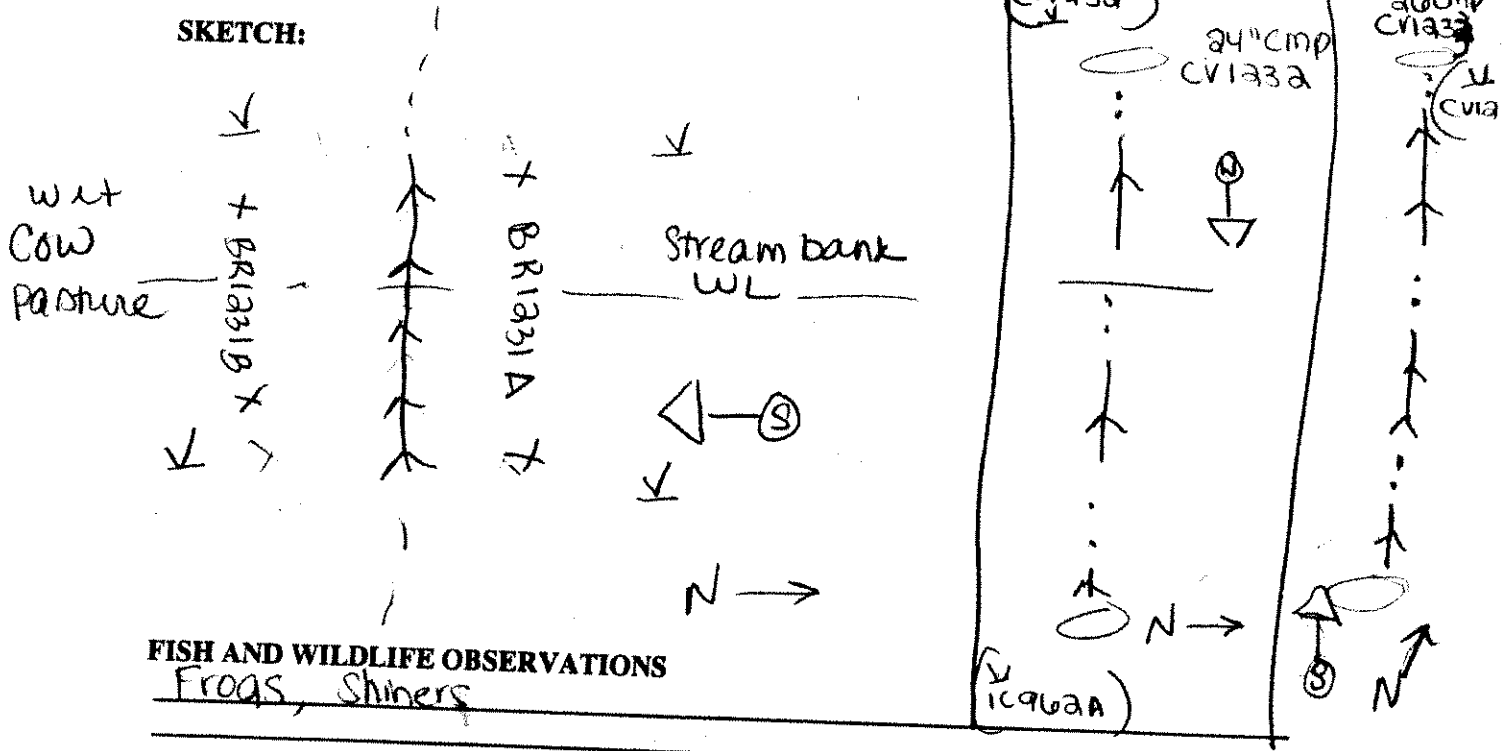
DATE: 9/18/06
 ROLL NO: _____
 FRAMES: _____

STREAM CROSSING DATA

CHANNEL ID	BR1231 A/B ST	CV1232 A-ST	CV1233 A-ST
NAME (or trib. to)	Hinchbrook ?	NA	NA
TYPE OF STREAM	NA	WL/Field drain	WL/Field drain
PEREN/INTERMIT	Peren	Peren	Intermit
WIDTH (obser/ohw)	8'4" / 120"	24" / 12-14"	26" / 10-12"
DEPTH (obser/ohw)	12-18 / 48-60	6" / 10-12"	NA / 8-10"
FLOW RATE	Low	V. low	Dry
FLOW DIRECTION	West	West	North
SUBSTRATE	Rock / silt	NA	NA
BANK VEGETATION	Herbs	NA	NA

= Dry/Stagnant/Low/Medium/High

SKETCH:



FISH AND WILDLIFE OBSERVATIONS

Frogs, Shiners

NOTES

BR1231 Bridge over perennial stream flowing West. WL BR1231 A/B associated only w/ stream bank to W and wet cow pasture to E.
 CV1232 24" cmp previously flanked w/ IC962A to E + CV1232A to W
 CV1233 26" cmp DEC WL to N open cow pasture draining into culvert into DEC WL Assoc. w/ IC962A

CY1244-A1B-ST

STREAM CROSSING DATA FORM

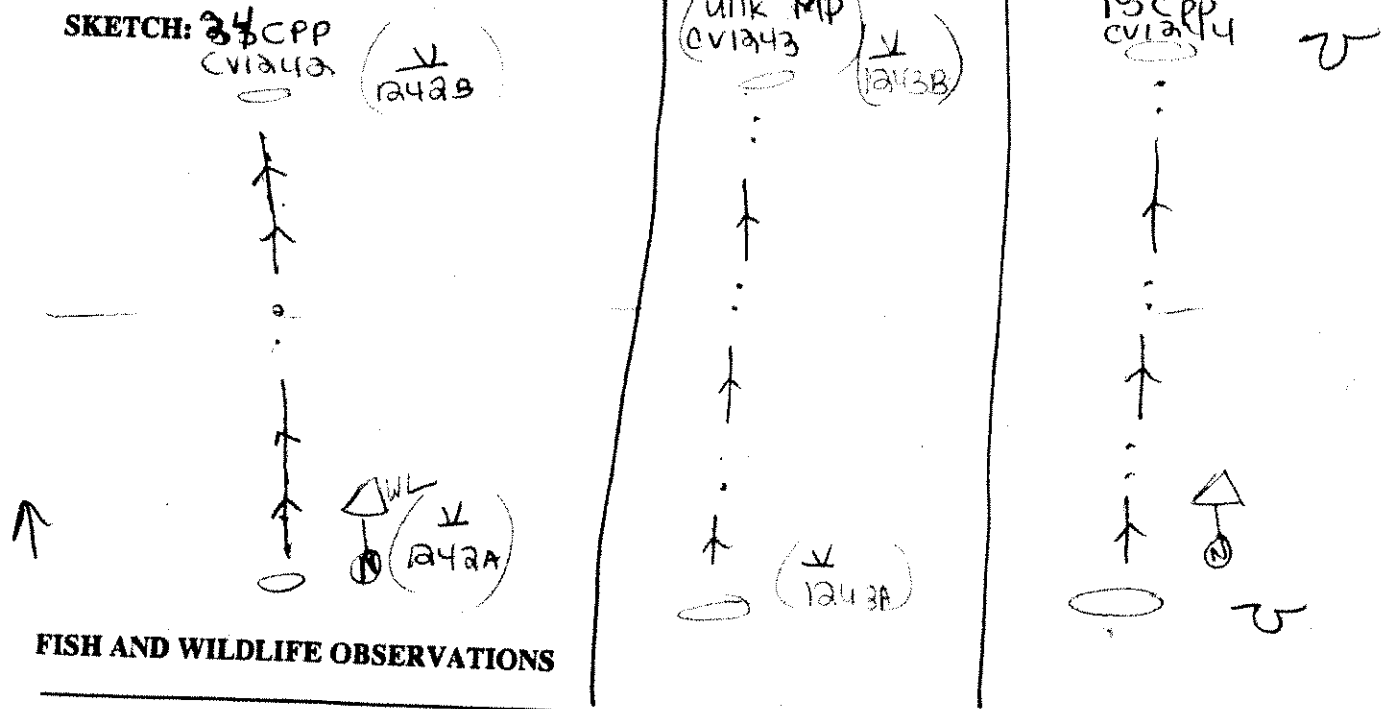
ROUTE: CV1242 - 1244
 LOCATION: Liberty Park Rd
 FIELD CREW: JV DO

DATE: 9/19/06
 ROLL NO: _____
 FRAMES: _____

STREAM CROSSING DATA

CHANNEL ID	CV1242 ST	CV1243 ST	CV1244
NAME (or trib. to)	UNK	UNK	NA
TYPE OF STREAM	Stream passage	Stream passage	Field drainage
PEREN/INTERMIT	Peren	Peren	Intermit
WIDTH (obser/ohw)	48" / 76"	36" / 48"	15 / 6-10"
DEPTH (obser/ohw)	8-16" / 16-43"	10-12" / 12-29"	NA / 8-10"
FLOW RATE ¹	Med	Med	Dry
FLOW DIRECTION	North	North	North
SUBSTRATE	rock/gravel/silt	rock/gravel/silt	NA
BANK VEGETATION	Herbs/woody	Herbs/woody	NA

¹ = Dry/Stagnant/Low/Medium/High



NOTES

- CV1242 34 CPP Peren Stream Flowing N Assoc w/ WL CV1167 (Assume / could not get down slope)
- CV1243 UNK MP Peren Stream Flowing N Assoc w/ WL CV1167 (Not on list)
- CV1244 15 CPP Field drainage to N + Maintained road drain adjacent Residence. No WL Assoc.

ROUTE: CV1249-1251
 LOCATION: Campbell Rd
 FIELD CREW: JV DD

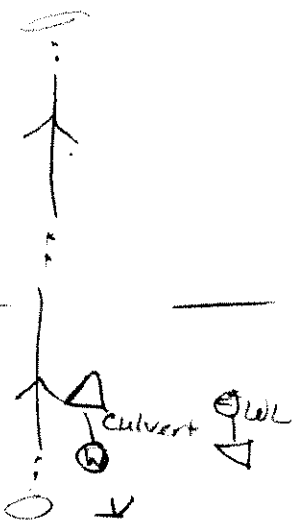
DATE: 9/19/06
 ROLL NO: _____
 FRAMES: _____

STREAM CROSSING DATA

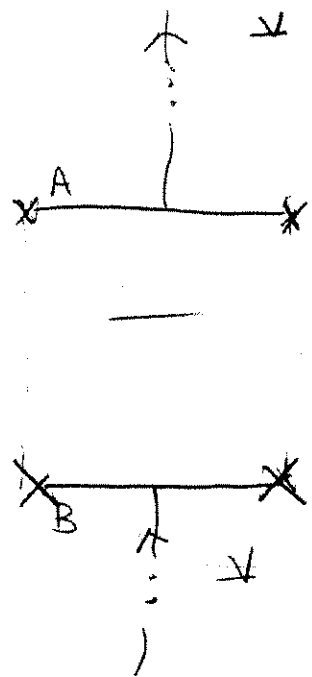
CHANNEL ID	CV1249	BR1250	CV1251
NAME (or trib. to)	Dry Brook	Dry Brook	NA
TYPE OF STREAM	WL Drain	NA	Wetland drain
PEREN/INTERMIT	Intermit	Intermit	Intermit
WIDTH (obser/ohw)	36" / 10-12"	48" / 36-60"	18" / 10-12"
DEPTH (obser/ohw)	NA / 8-10	6-12" / 18-36"	NA / 8-10
FLOW RATE ¹	Dry	Stagnant	Dry
FLOW DIRECTION	West	West	West
SUBSTRATE	NA	Rock/Sand	NA
BANK VEGETATION	NA	Herbs/Shrubs	NA

¹ = Dry/Stagnant/Low/Medium/High

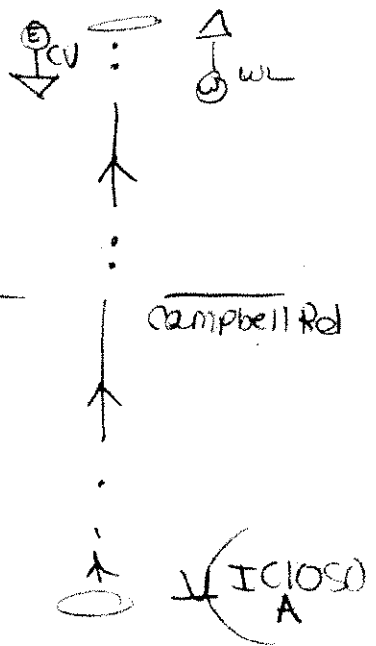
CV1249
 SKETCH: 36 CPP



BR1250



18 CPP
 CV1251



FISH AND WILDLIFE OBSERVATIONS
 Frogs + Fish

NOTES

- CV1249 36 CPP Culvert runs under Campbell Rd connecting DEC WL CV1249 A/B
- BR1250 Bridge - Associated w/ Intermit Stream + DEC WL BR1250 A/B
- CV1251 18 CPP - WL drainage for DEC IC1050 to E + CV1251 to W

STREAM CROSSING DATA FORM

ROUTE: _____
 LOCATION: Wetland CV1400A + B/C
 FIELD CREW: RD/SC/LP

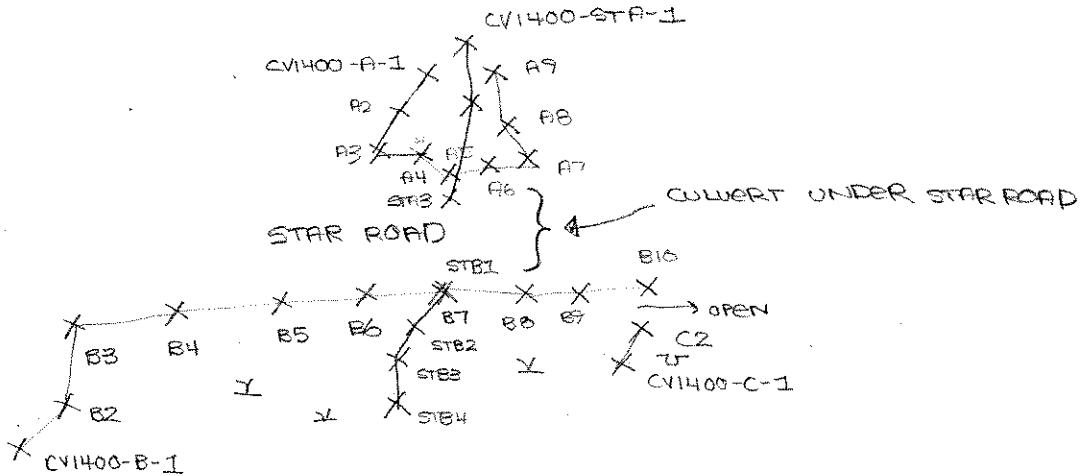
DATE: 5-31-67
 ROLL NO: _____
 FRAMES: Photo 12 face S ← STB
Photo 13 face N ← STA

STREAM CROSSING DATA

CHANNEL ID	CV1400A-STA	CV1400B-ST	
NAME (or trib. to)			
TYPE OF STREAM			
PEREN/INTERMIT	INTERMIT	INTERMIT	
WIDTH (obser/ohw)	6" / 1ft.	1ft / 3ft.	
DEPTH (obser/ohw)	6" / 1ft.	3" / 6"	
FLOW RATE ¹	Stagnant	Stagnant	
FLOW DIRECTION	N	N	
SUBSTRATE	MUCK / ROCK	MUCK	
BANK VEGETATION	PEM Aq	Pasture	

¹ = Dry/Stagnant/Low/Medium/High

SKETCH:



FISH AND WILDLIFE OBSERVATIONS

NOTES

REPRESENTATIVE OF IC 3713-ST
STREAM CROSSING DATA FORM

ROUTE: interconnect Sof star Rd

DATE: 5-31-07

LOCATION: _____

ROLL NO: _____

FIELD CREW: RD / SC / LP

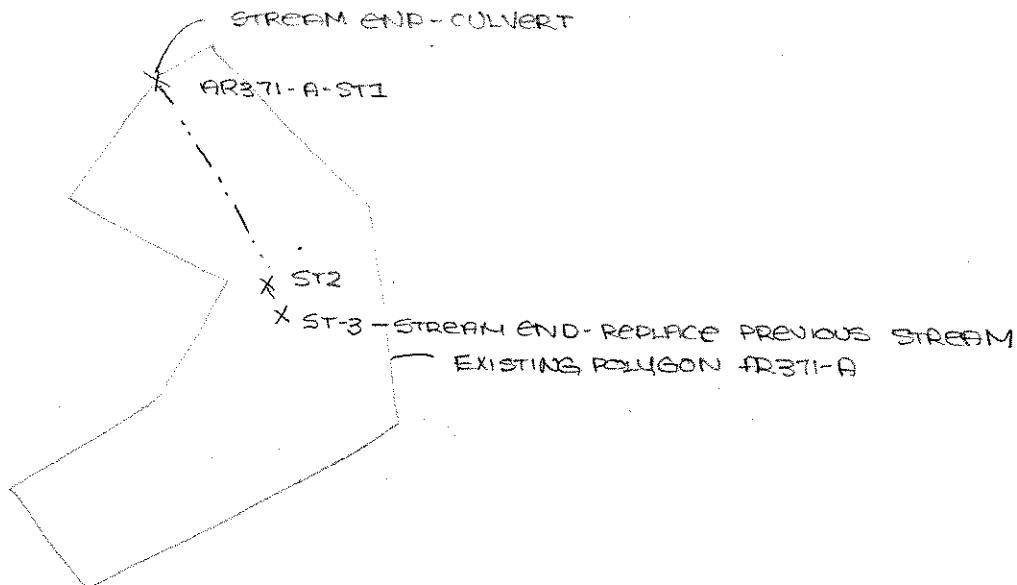
FRAMES: photo 14 face 5

STREAM CROSSING DATA

CHANNEL ID	AR371-A-ST		
NAME (or trib. to)			
TYPE OF STREAM			
PEREN/INTERMIT	INTERMIT		
WIDTH (obser/ohw)	2 ft. / 4 ft		
DEPTH (obser/ohw)	2 1" / 2 ft		
FLOW RATE ¹	Stagnant		
FLOW DIRECTION	N		
SUBSTRATE	Rock, gravel		
BANK VEGETATION	PEM pasture		

¹ = Dry/Stagnant/Low/Medium/High

SKETCH:



FISH AND WILDLIFE OBSERVATIONS

bovine

NOTES

Stream originates at fence line and terminates at road culvert

(REST OF STREAM)

AR371-A-ST

STREAM CROSSING DATA FORM

REPRESENTATIVE OF IC371B - ST

ROUTE: IC371 A-ST

DATE: 12/26/06

LOCATION: Star Rd

ROLL NO: _____

FIELD CREW: RD JV

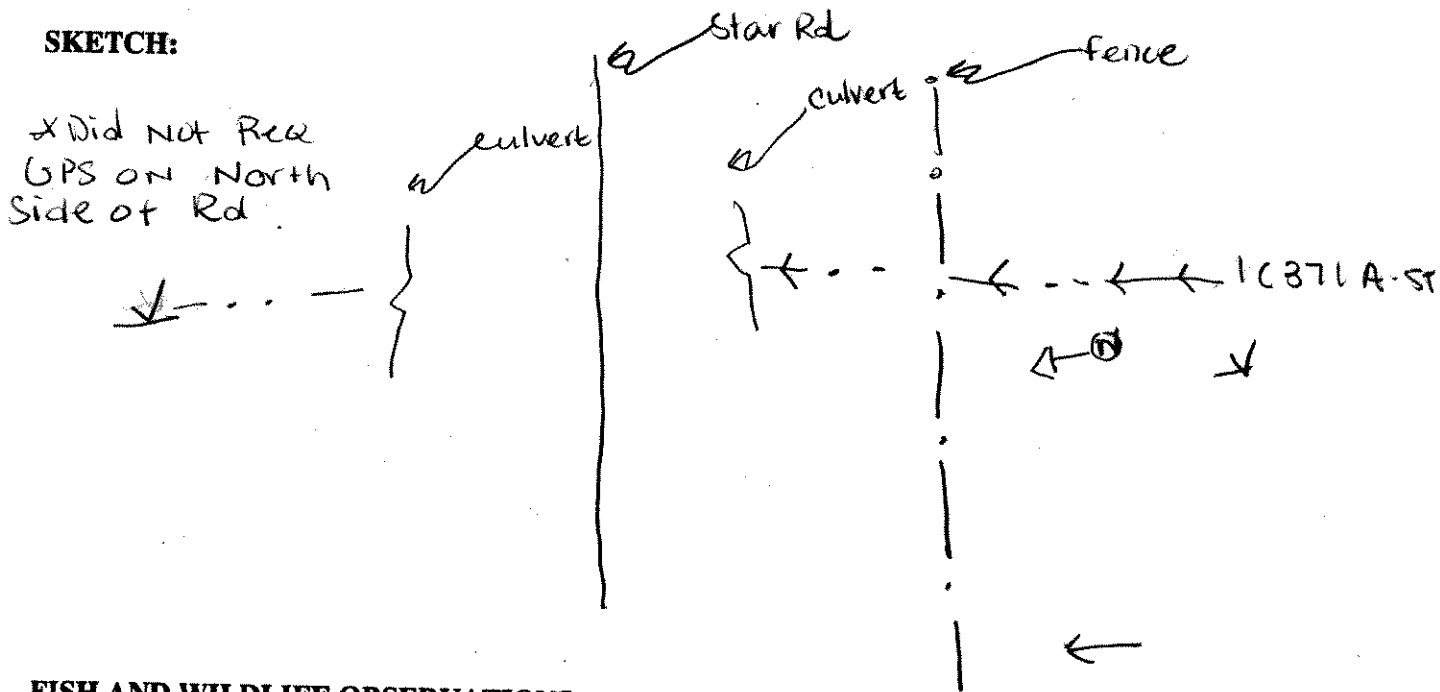
FRAMES: ① => N

STREAM CROSSING DATA

CHANNEL ID	IC371 A-ST		
NAME (or trib. to)			
TYPE OF STREAM			
PEREN/INTERMIT	Intermit		
WIDTH (obser/ohw)	12-24/24"		
DEPTH (obser/ohw)	.5" / 3"		
FLOW RATE ¹	Dry		
FLOW DIRECTION	North		
SUBSTRATE	Silts		
BANK VEGETATION	Herbs		

¹ = Dry/Stagnant/Low/Medium/High

SKETCH:



FISH AND WILDLIFE OBSERVATIONS

NONE

NOTES

Stream occurs within DEC mapped WL.

STREAM CROSSING DATA FORM

ROUTE: IC btw 31 + 36A

DATE: 5-30-07

LOCATION: wetland —

ROLL NO: _____

FIELD CREW: RD/SC/LP

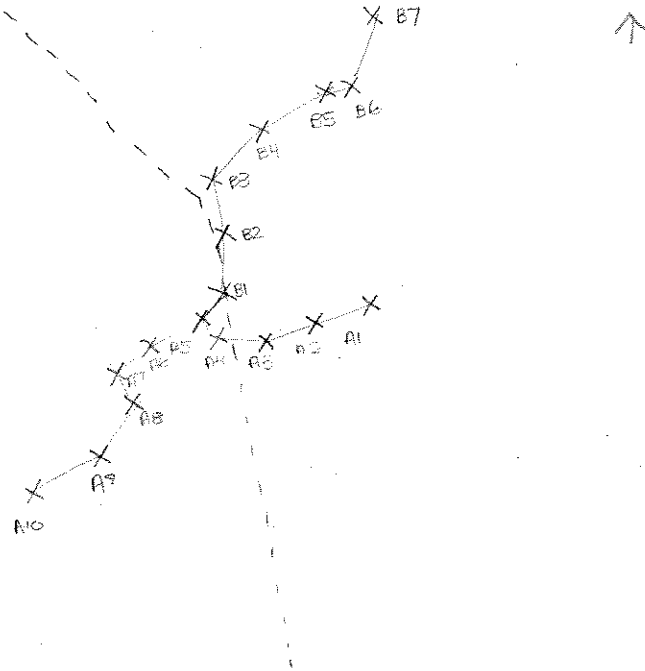
FRAMES: Photo 3 -face SW [ST-A]
Photo 4 face NE [ST-B]

STREAM CROSSING DATA

CHANNEL ID	IC714AB-STA	IC714AB-STB	
NAME (or trib. to)			
TYPE OF STREAM	1		
PEREN/INTERMIT	PBREN	INTERMIT	
WIDTH (obser/ohw)	3ft / 8ft.	2ft / 5ft.	
DEPTH (obser/ohw)	6" / 2ft	4" / 1ft.	
FLOW RATE ¹	Low	Stagnant	
FLOW DIRECTION	SW	SSW	
SUBSTRATE	sand / MUCK	MUCK	
BANK VEGETATION	PSS	PSS	

¹ = Dry/Stagnant/Low/Medium/High

SKETCH:



FISH AND WILDLIFE OBSERVATIONS

Minnows ; green frog ; water striders ; beaver chews ;
raccoon prints

NOTES

STREAM CROSSING DATA FORM

ROUTE: _____

DATE: 5/16/06

LOCATION: IC 714A

ROLL NO: _____

FIELD CREW: BQ-RJ

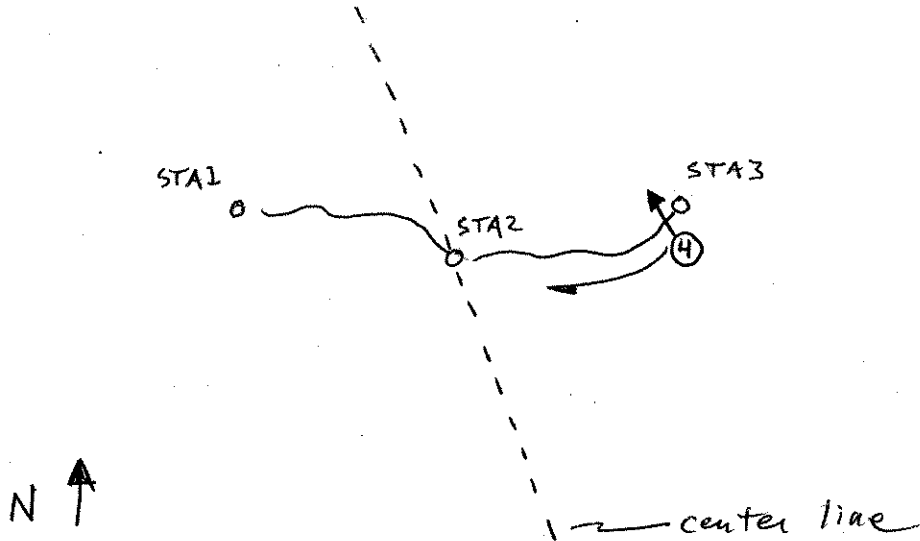
FRAMES: photo 4 facing NNW

STREAM CROSSING DATA

CHANNEL ID	IC 714 A		
NAME (or trib. to)			
TYPE OF STREAM			
PEREN/INTERMIT	peren.		
WIDTH (obser/ohw)	6-8' /		
DEPTH (obser/ohw)	3-4' / 5'		
FLOW RATE ¹	low-medium		
FLOW DIRECTION	W		
SUBSTRATE	S1, SA, gravel		
BANK VEGETATION	scrub scrub		

¹ = Dry/Stagnant/Low/Medium/High

SKETCH:



FISH AND WILDLIFE OBSERVATIONS

beaver lodge on edge of stream; a few beaver chews observed

NOTES

large, slow-moving stream drains large wetland.

STREAM DATA FORM

PROJECT: Marble R.
 TURBINE: _____
 LOCATION: IC 726
 FIELD CREW: BQ-RJ

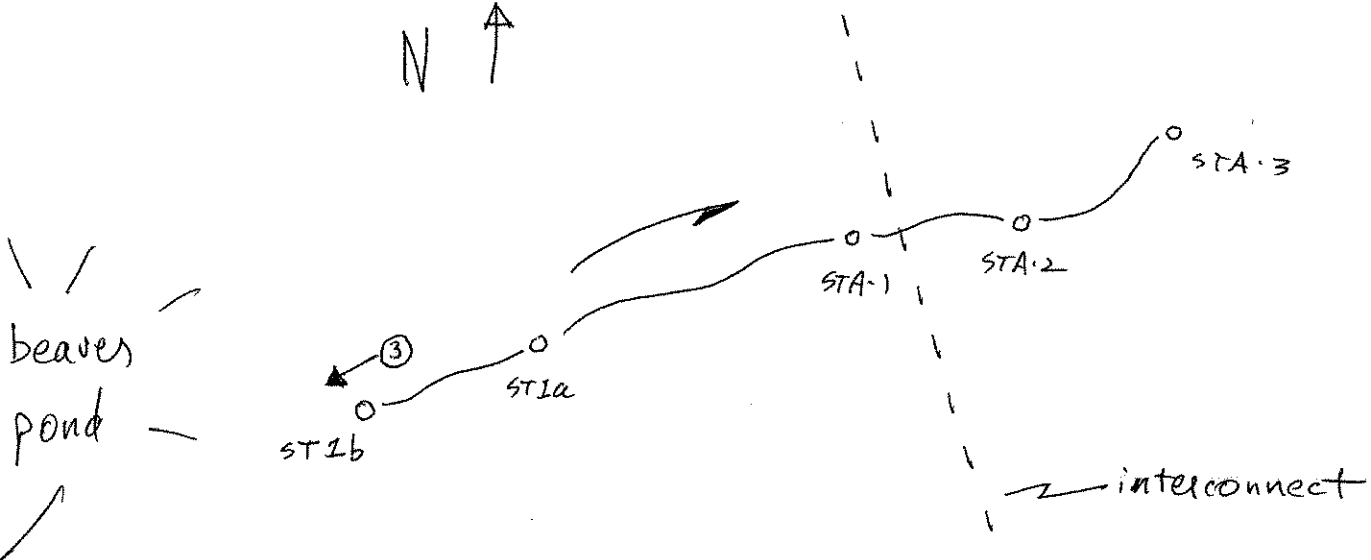
CLIENT: _____
 DATE: 5/22/06
 ROLL NO: _____
 FRAMES: photo 3 & SW

STREAM CROSSING DATA

CHANNEL ID	IC 726 A		
NAME (or trib. to)			
PEREN/INTERMIT	peren.		
WIDTH (obser/ohw)	20-40' (ohw)		
DEPTH (obser/ohw)	1-4' (ohw)		
FLOW RATE ¹	high		
FLOW DIRECTION	E		
SUBSTRATE	gravel/cobbles		
BANK VEGETATION	PFOI		

¹ = Dry/Stagnant/Low/Medium/High

SKETCH:



FISH AND WILDLIFE OBSERVATIONS

4 beaver dams along stream impound large pond.

NOTES

STREAM CROSSING DATA FORM

ROUTE: IC to WB36A
 LOCATION: Marble River
 FIELD CREW: KH, JV

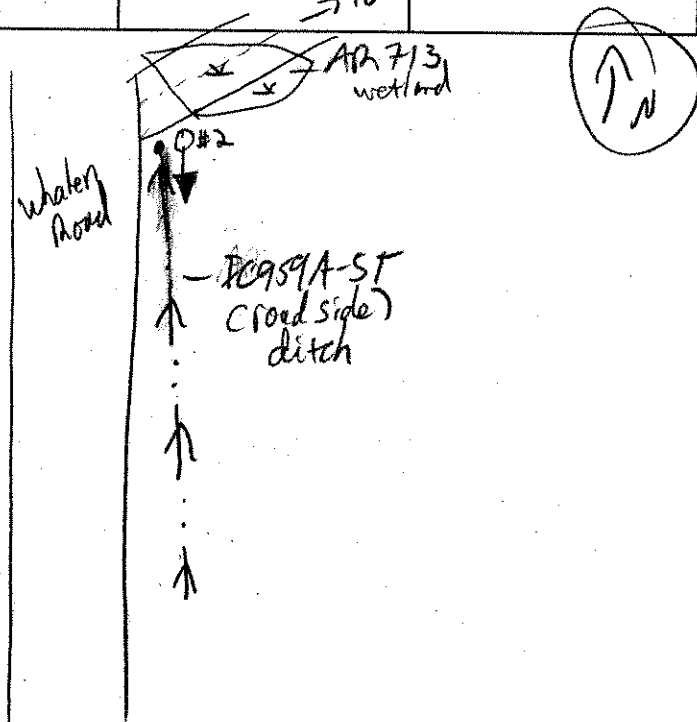
DATE: 7/28/06
 ROLL NO: KA
 FRAMES: 2

STREAM CROSSING DATA

CHANNEL ID	<u>PC959A-ST</u>		
NAME (or trib. to)	<u>—</u>		
TYPE OF STREAM	<u>roadside ditch</u>		
PEREN/INTERMIT	<u>Intermit</u>		
WIDTH (obser/ohw)	<u>2.5 ft</u>		
DEPTH (obser/ohw)	<u>0</u>		
FLOW RATE ¹	<u>Dry</u>		
FLOW DIRECTION	<u>N</u>		
SUBSTRATE	<u>Plant Matter</u>		
BANK VEGETATION	<u>PEM</u>		

¹ = Dry/Stagnant/Low/Medium/High

SKETCH:



FISH AND WILDLIFE OBSERVATIONS

NOTES

STREAM CROSSING DATA FORM

ROUTE: Marble River
 LOCATION: Whalen Rd
 FIELD CREW: KH, JV

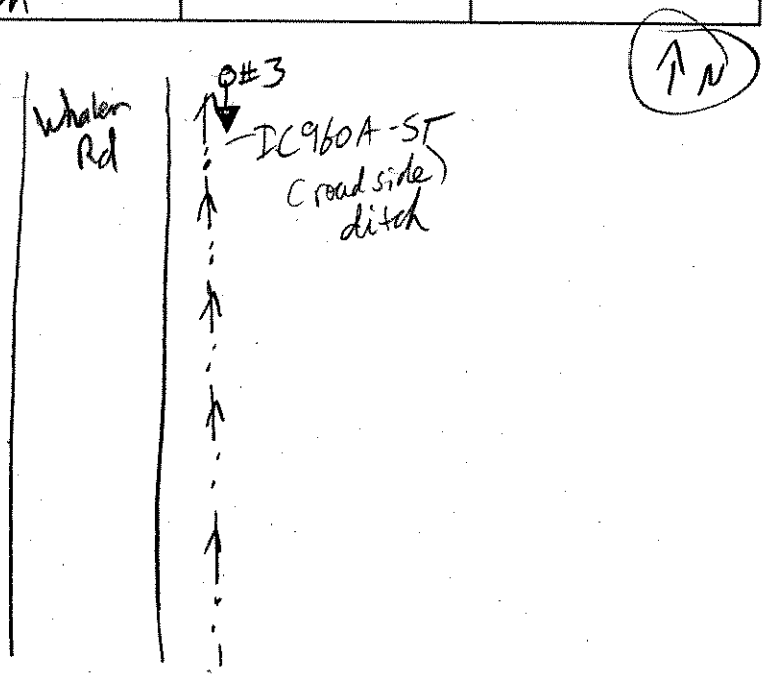
DATE: 7/28/26
 ROLL NO: KH
 FRAMES: 3

STREAM CROSSING DATA

CHANNEL ID	DC-960A-ST		
NAME (or trib. to)	—		
TYPE OF STREAM	roadside ditch		
PEREN/INTERMIT	Intermit		
WIDTH (obser/ohw)	4.5 ft		
DEPTH (obser/ohw)	0		
FLOW RATE ¹	Dry		
FLOW DIRECTION	N		
SUBSTRATE	Plant Matter		
BANK VEGETATION	PEM		

¹ = Dry/Stagnant/Low/Medium/High

SKETCH:



FISH AND WILDLIFE OBSERVATIONS

NOTES

STREAM DATA

PROJECT: Marble River

DATE: 7/28/26

OWNER/APPLICANT: Horizon Wind Power LLC

LOCATION: Looby Rd

FIELD CREW: KH, JV

PHOTO FILE #: KH, 4

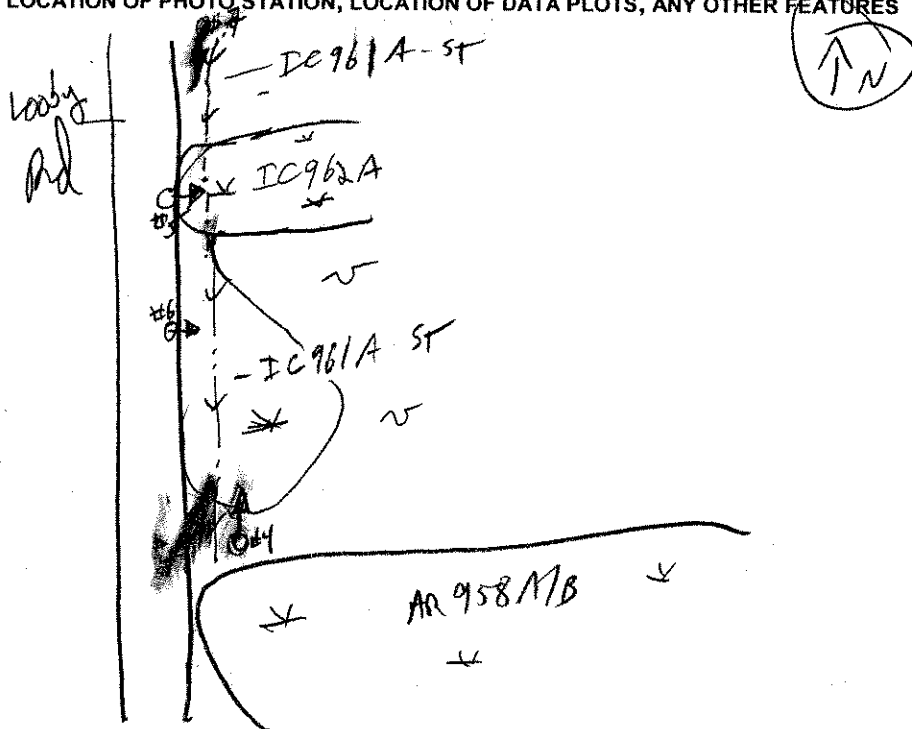
FIELD BOOK AND PAGE: _____

STREAM CROSSING DATA

CHANNEL ID	IC-961A-ST		
NAME (OR TRIBUTORY)			
TYPE OF STREAM	roadside ditch		
PERENNIAL/INTERMIT	Intermit		
WIDTH (OBSERV/OHW)	3-5 ft		
DEPTH (OBSERV/OHW)	2 ft		
FLOW RATE [†]	Stagnant		
FLOW DIRECTION	S		
SUBSTRATE	Fill/gravel		
BANK VEGETATION	PEM		

[†] DRY/STAGNANT/LOW/MEDIUM/HIGH

SKETCH: INCLUDE NORTH, LOCATION OF PHOTO STATION, LOCATION OF DATA PLOTS, ANY OTHER FEATURES



FISH AND WILDLIFE OBSERVATIONS: _____

NOTES: _____

STREAM CROSSING DATA FORM

ROUTE: DC Between 84 → 87 wtb
 LOCATION: Marble River
 FIELD CREW: KH, JV

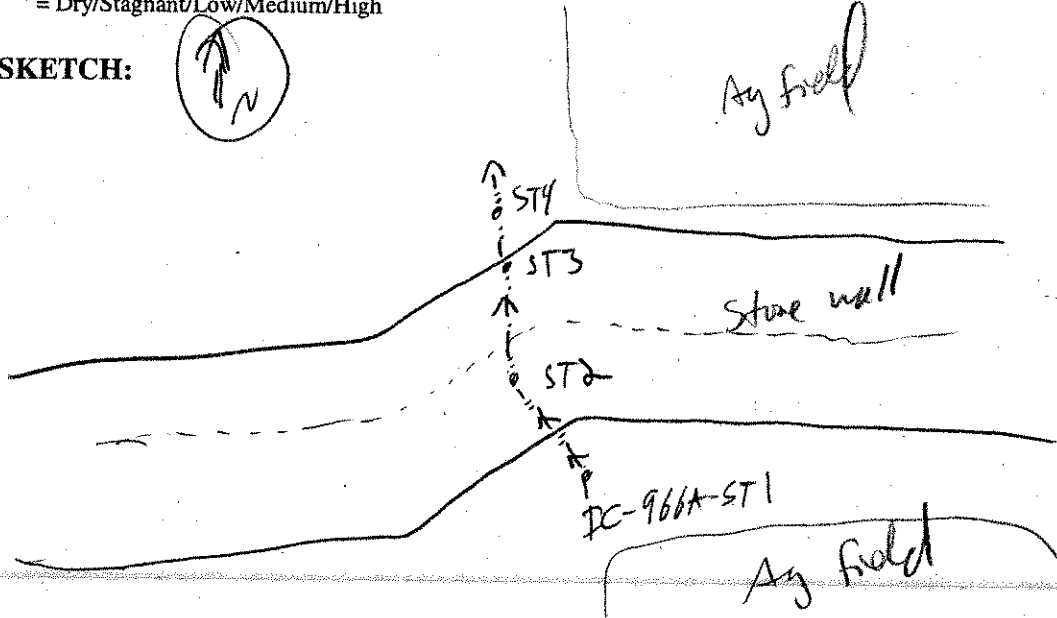
DATE: 7/29/06
 ROLL NO: 144
 FRAMES: 1

STREAM CROSSING DATA

CHANNEL ID	DC-966A-ST		
NAME (or trib. to)	-		
TYPE OF STREAM	Agr field drainage		
PEREN/INTERMIT	Intermit		
WIDTH (obser/ohw)	25 Ft		
DEPTH (obser/ohw)	0		
FLOW RATE ¹	Dry		
FLOW DIRECTION	N		
SUBSTRATE	Organics		
BANK VEGETATION	PEM		

¹ = Dry/Stagnant/Low/Medium/High

SKETCH:



FISH AND WILDLIFE OBSERVATIONS

NOTES

STREAM CROSSING DATA FORM

ROUTE: 10969 AB ST

DATE: 5/7/07

LOCATION: W of T. 85

ROLL NO: _____

FIELD CREW: JV AP

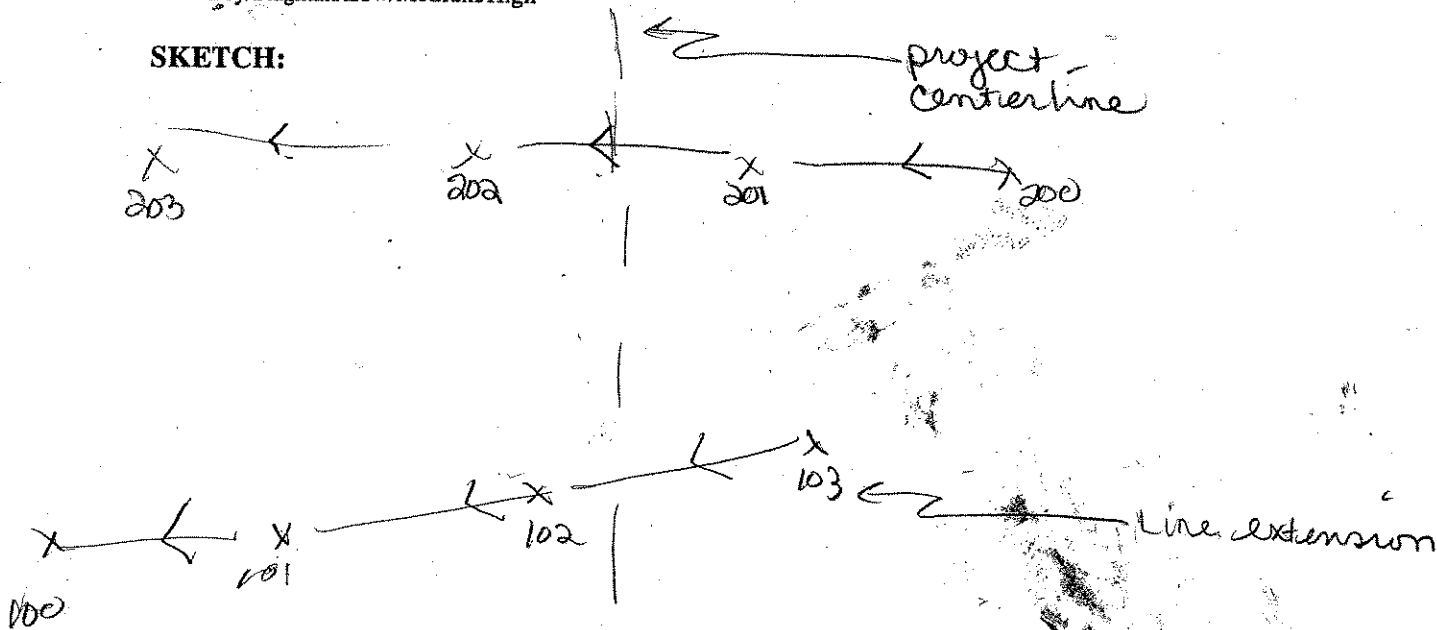
FRAMES: 0 = SW

STREAM CROSSING DATA

CHANNEL ID	10969 AB-ST	Bank vege	
NAME (or trib. to)		Alnus rugosa	
TYPE OF STREAM		aspirea	
PEREN/INTERMIT	Perennial	Cintonia	
WIDTH (obser/ohw)	6-8' / 8'	foliadas	
DEPTH (obser/ohw)	4-8" / 12"	Prunus serotina	
FLOW RATE ¹	Low	Bleeding Heart	
FLOW DIRECTION	N, NE	Viola sp.	
SUBSTRATE	Cobble, silt		
BANK VEGETATION	PFD/PERM		

¹ = Dry/Stagnant/Low/Medium/High

SKETCH:



FISH AND WILDLIFE OBSERVATIONS

Shiner, water skippers

NOTES

Floodplain associated with stream named 10969 AB and mapped Dec 07

STREAM CROSSING DATA FORM

ROUTE: IC-969 A-ST1
 LOCATION: ~~IC 85~~ IC 85 7084
 FIELD CREW: SM/JV

DATE: 8/11/06
 ROLL NO: _____
 FRAMES: 16, ~~15~~

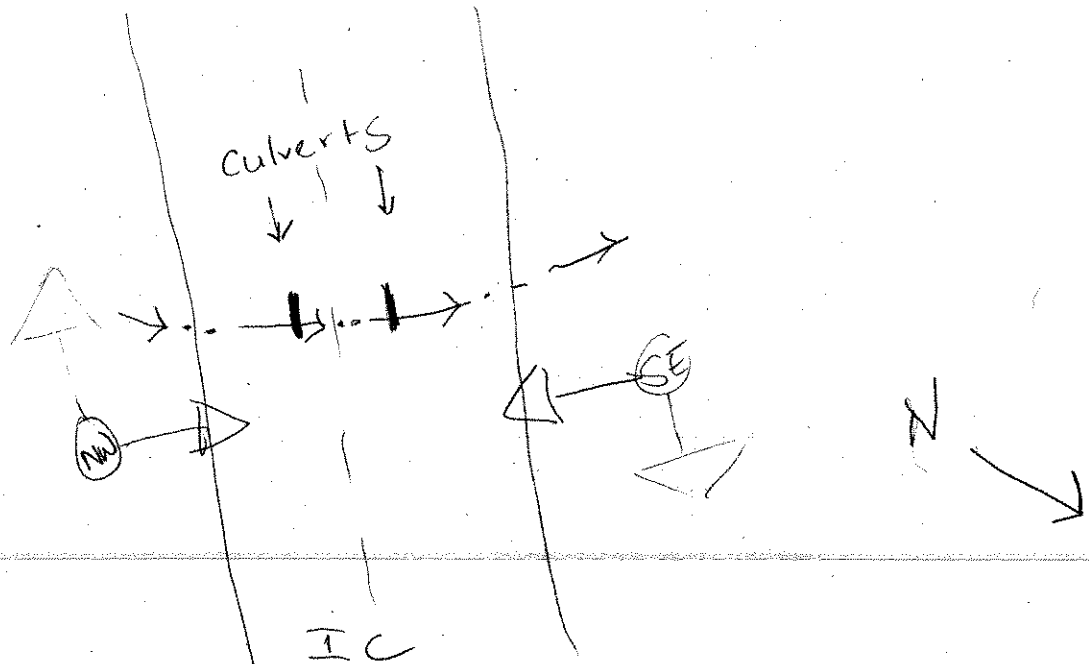
(P 801 0016
P 801 0015) Filename

STREAM CROSSING DATA

CHANNEL ID	IC-969 A-ST1		
NAME (or trib. to)	—		
TYPE OF STREAM	—		
PEREN/INTERMIT	Perennial		
WIDTH (obser/ohw)	5'		
DEPTH (obser/ohw)	6"		
FLOW RATE ¹	Low		
FLOW DIRECTION	NW		
SUBSTRATE	boulders/cobbles/silt		
BANK VEGETATION	Shrub		

¹ = Dry/Stagnant/Low/Medium/High

SKETCH:



FISH AND WILDLIFE OBSERVATIONS

minnows obs. in stream, crossing used extensively by deer. Sharp-shin hawk obs.

NOTES

Shrubs include nannyberry, Steeplebush
Speckled alder. Herbs → Jewelweed,
lance-leaf goldenrod.

Stream is culverted (2 cement 24" culverts)

photo 15 to SE
 16 to NW

STREAM CROSSING DATA FORM

ROUTE: IC972-A-ST

DATE: 9/13/06

LOCATION: Looby/Lagree Intersection

ROLL NO: _____

FIELD CREW: JV DR

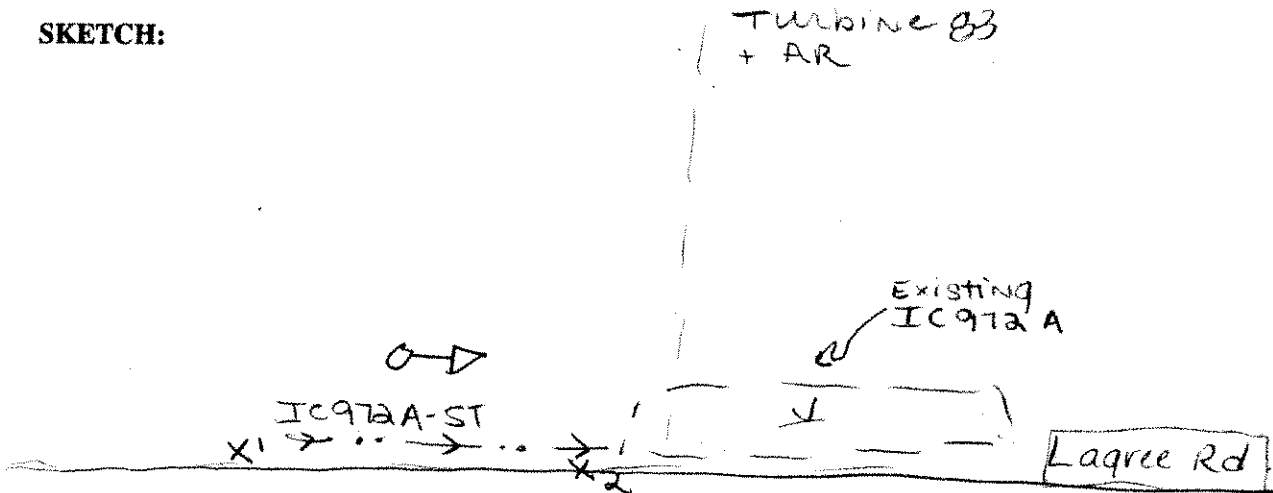
FRAMES: ⇒ > E

STREAM CROSSING DATA

CHANNEL ID	IC972-A-ST		
NAME (or trib. to)	N/A		
TYPE OF STREAM	Road drainage		
PEREN/INTERMIT	Intermit		
WIDTH (obser/ohw)	24-48" / 18-30"		
DEPTH (obser/ohw)	N/A / ~12"		
FLOW RATE ¹	Dry		
FLOW DIRECTION	East		
SUBSTRATE	vegetated		
BANK VEGETATION	Herbs		

¹ = Dry/Stagnant/Low/Medium/High

SKETCH:



FISH AND WILDLIFE OBSERVATIONS

None observed

NOTES

Maintained Road drainage vegetation includes Misc. unk grasses
saxifraga, Spirea, Solidago, plantago, trifolium, pteridium.
Road drainage connects to IC972-A

STREAM CROSSING DATA FORM

ROUTE: IC 977A-ST

DATE: 8-3-06

LOCATION: IC bh turbine 62+206
Along Patnode Rd

ROLL NO: _____

FIELD CREW: Sm JV

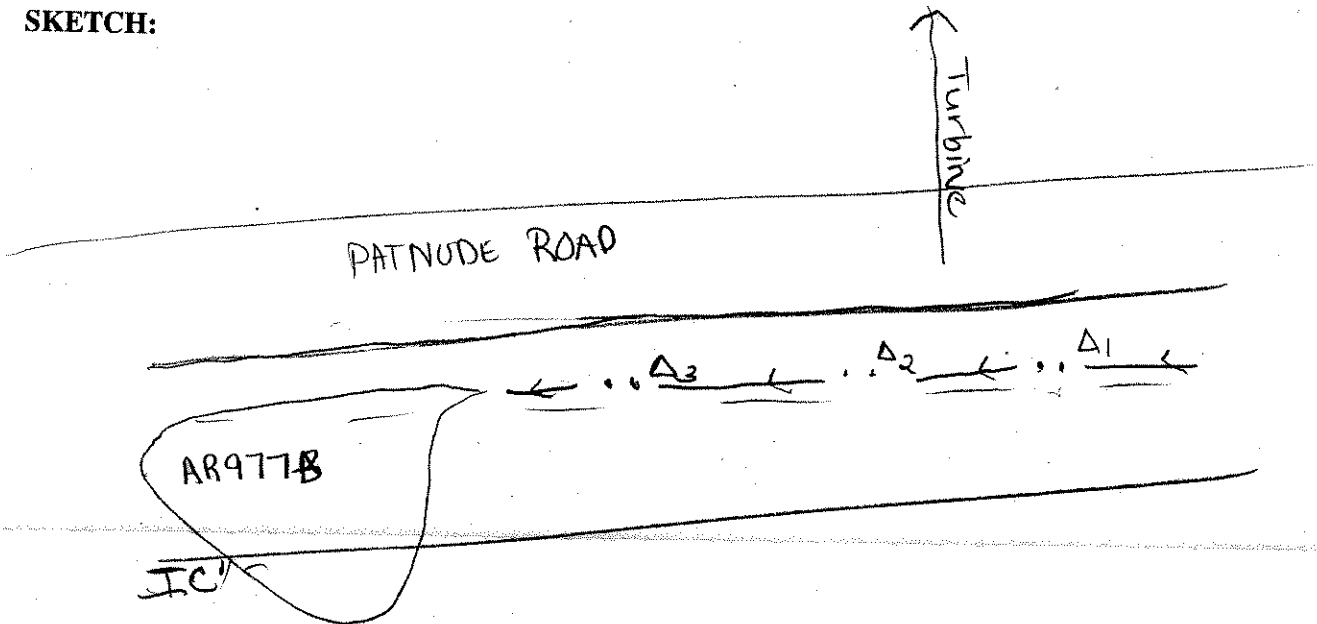
FRAMES: _____

STREAM CROSSING DATA

CHANNEL ID	IC 977A-ST		
NAME (or trib. to)	unnamed		
TYPE OF STREAM	Swail		
PEREN/INTERMIT	Intermit		
WIDTH (obser/ohw)	24" / 48"		
DEPTH (obser/ohw)	NA / 12"		
FLOW RATE ¹	Dry		
FLOW DIRECTION	South		
SUBSTRATE	Sediment/Soil		
BANK VEGETATION	Herb.		

¹ = Dry/Stagnant/Low/Medium/High

SKETCH:



FISH AND WILDLIFE OBSERVATIONS

NOTES

Variety of Grass sp, Impatiens capensis, Onoclea sensibilis

STREAM CROSSING DATA FORM

ROUTE: IC 977C-ST

DATE: 8-3-06

LOCATION: IC B/T turbine 62+206

ROLL NO: _____

AR along Patnode Rd
FIELD CREW: SM JV

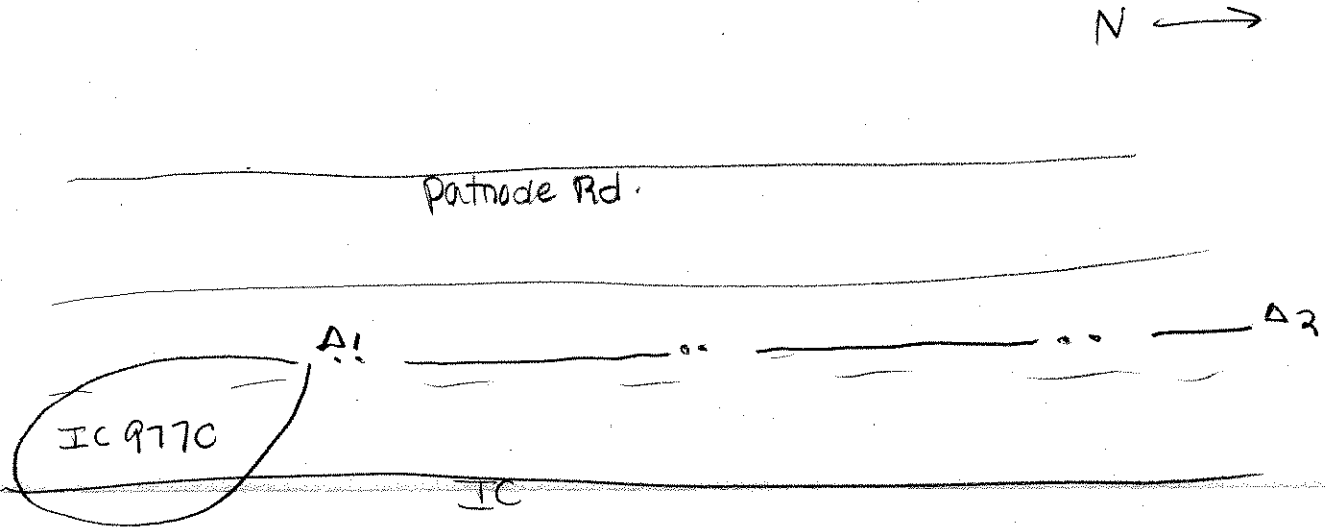
FRAMES: _____

STREAM CROSSING DATA

CHANNEL ID			
NAME (or trib. to)			
TYPE OF STREAM			
PEREN/INTERMIT			
WIDTH (obser/ohw)			
DEPTH (obser/ohw)			
FLOW RATE ¹			
FLOW DIRECTION			
SUBSTRATE			
BANK VEGETATION			

¹ = Dry/Stagnant/Low/Medium/High

SKETCH:



FISH AND WILDLIFE OBSERVATIONS

NOTES

Variety Grass sp., impatiens capensis, onoclea sensibilis

STREAM CROSSING DATA FORM

ROUTE: IC978C-ST

DATE: 8-3-06

LOCATION: IC B/T AR to turbine 48W + 203

ROLL NO: _____

FIELD CREW: SM, JV

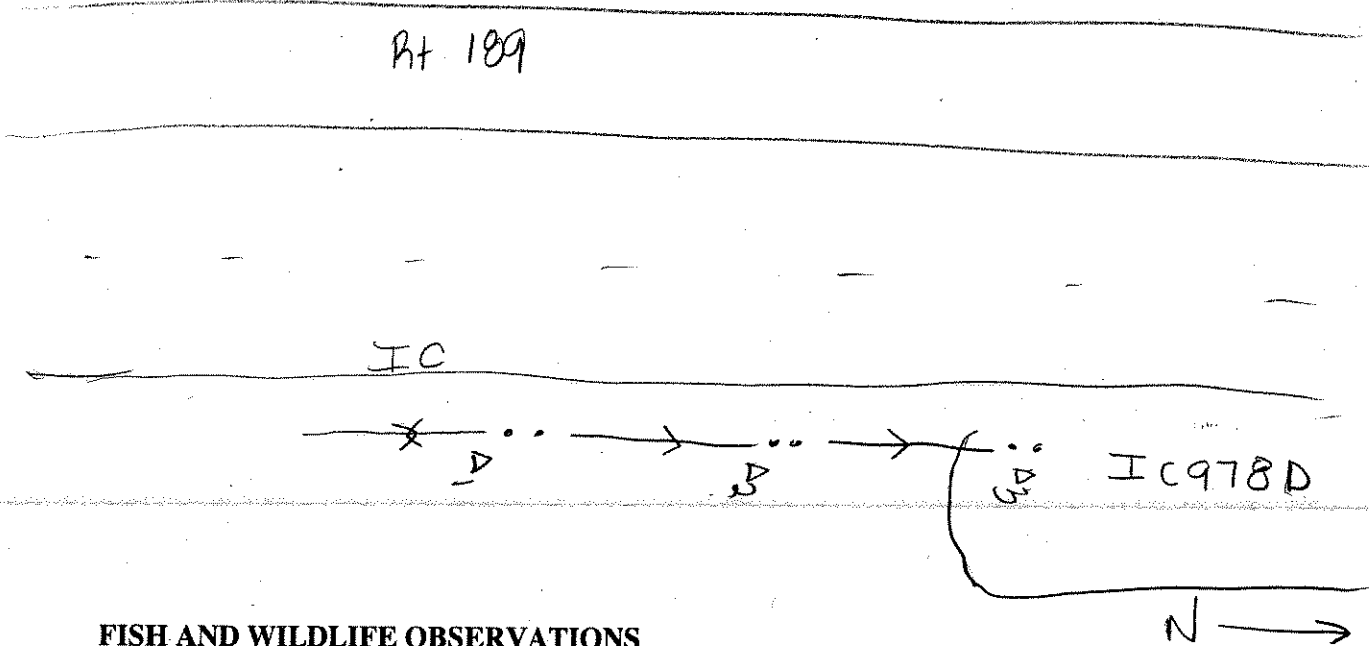
FRAMES: _____

STREAM CROSSING DATA

CHANNEL ID	IC978C-ST		
NAME (or trib. to)	unnamed		
TYPE OF STREAM	_____		
PEREN/INTERMIT	Intermit		
WIDTH (obser/ohw)	24" / 48"		
DEPTH (obser/ohw)	3" / 12" / 16"		
FLOW RATE ¹	Stagnant		
FLOW DIRECTION	North		
SUBSTRATE	Soil		
BANK VEGETATION	Herb		

¹ = Dry/Stagnant/Low/Medium/High

SKETCH:



FISH AND WILDLIFE OBSERVATIONS

Bull Frogs

NOTES

lythra lutea, Phalaris arundinacea, Grass sp, Scirpus atrovirens,
Carex crinita growing in soil.
Bank vegetation consist of Vicia cracca, Daucus carotus, Ranunculus
repens, Taraxacum officinale, Asclepias incarnata

STREAM CROSSING DATA FORM

ROUTE: IC 1006 A-ST
 LOCATION: 0.1 mi East of T. 67-A
 FIELD CREW: JV AP

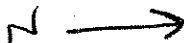
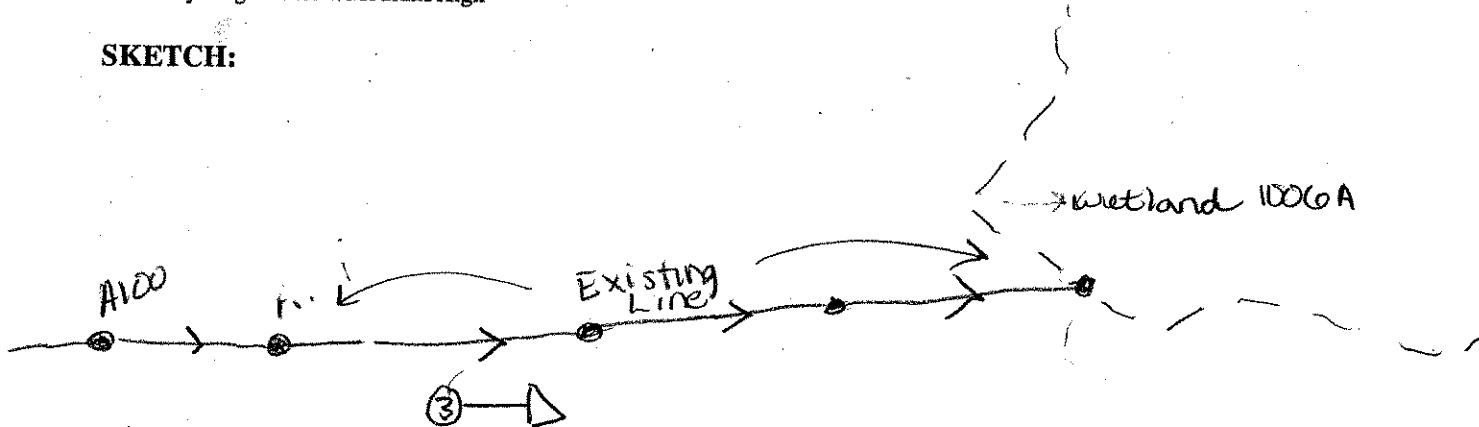
DATE: 5/2/07
 ROLL NO: _____
 FRAMES: 3-7E

STREAM CROSSING DATA

CHANNEL ID	IC1006 A-ST		
NAME (or trib. to)	—		
TYPE OF STREAM			
PEREN/INTERMIT	Intermit		
WIDTH (obser/ohw)	3' / 3'		
DEPTH (obser/ohw)	5" / 4"		
FLOW RATE ¹	Low		
FLOW DIRECTION	North		
SUBSTRATE	Silt		
BANK VEGETATION	NA		

¹ = Dry/Stagnant/Low/Medium/High

SKETCH:



FISH AND WILDLIFE OBSERVATIONS

None observed

NOTES

Vegetation: A. rubrum, B. populifolia, grass w/ Flow regime

STREAM CROSSING DATA FORM

ROUTE: IC btwn Patnode & RR DATE: 7/12/06

LOCATION: _____

ROLL NO: _____

FIELD CREW: RTD SC

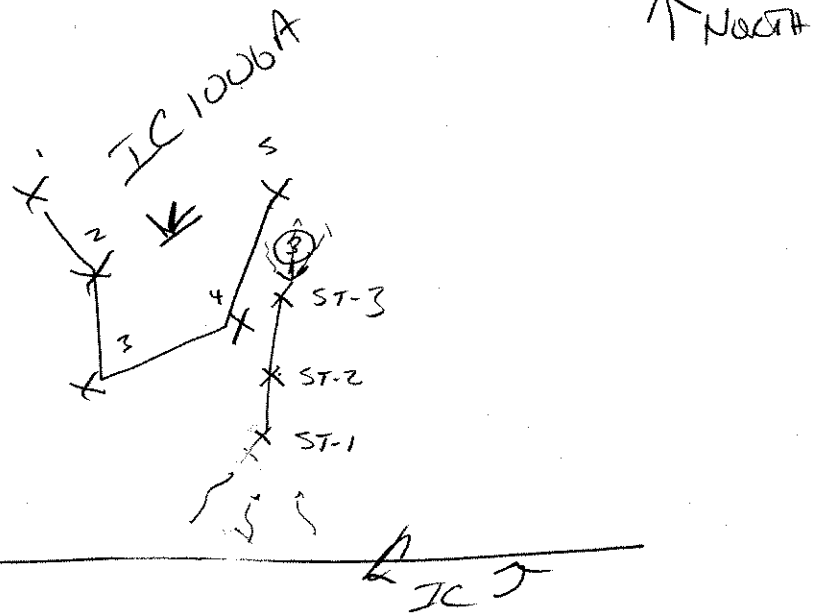
FRAMES: 3 → South

STREAM CROSSING DATA

CHANNEL ID	<u>IC1006A-ST-1</u>	
NAME (or trib. to)		
TYPE OF STREAM		
PEREN/INTERMIT	<u>Int.</u>	
WIDTH (obser/ohw)	<u>N/A / 3'</u>	
DEPTH (obser/ohw)	<u>N/A / 8"</u>	
FLOW RATE ¹	<u>N/A</u>	
FLOW DIRECTION	<u>NORTH</u>	
SUBSTRATE	<u>Silt/loam</u>	
BANK VEGETATION	<u>Forested</u>	

¹ = Dry/Stagnant/Low/Medium/High

SKETCH:



FISH AND WILDLIFE OBSERVATIONS

NOTES

- WASHED OUT AREA NOT DEFINED TO NWS
 - no bed & bank
 - Exposed Roots.
 - 3' feet wide clogs of leaves & Debris

STREAM CROSSING DATA FORM

ROUTE: IC1014 A/B-ST

DATE: 10/12/06

LOCATION: IC N of T. 175

ROLL NO: _____

FIELD CREW: IB JV

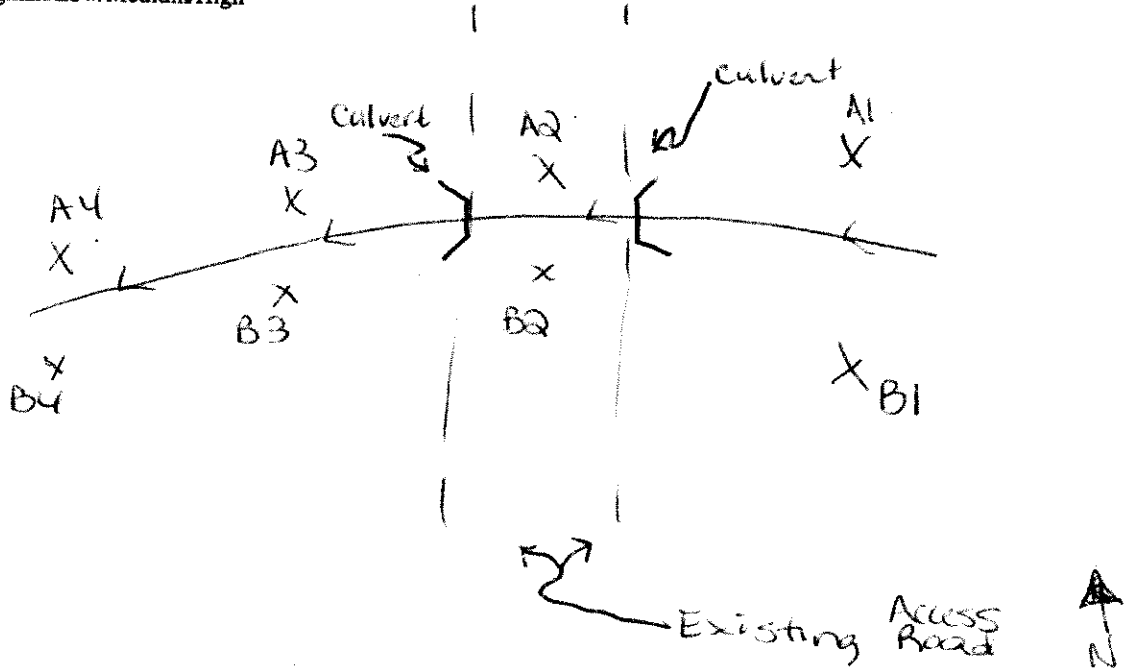
FRAMES: _____

STREAM CROSSING DATA

CHANNEL ID	IC1014 A/B-ST		
NAME (or trib. to)	NA Link		
TYPE OF STREAM	—		
PEREN/INTERMIT	PEREN		
WIDTH (obser/ohw)	12-56" / 18-60"		
DEPTH (obser/ohw)	18-36" / 30-40"		
FLOW RATE ¹	MEDIUM		
FLOW DIRECTION	West		
SUBSTRATE	Sand / gravel		
BANK VEGETATION	Herb / Woody		

¹ = Dry/Stagnant/Low/Medium/High

SKETCH:



FISH AND WILDLIFE OBSERVATIONS

None observed

NOTES

Stream crosses under existing AR + associated w/ WL on E/W sides of culvert.

STREAM CROSSING DATA FORM

ROUTE: IC 1300 A/B - ST
 LOCATION: IC W OF T. 45
 FIELD CREW: JB, JV

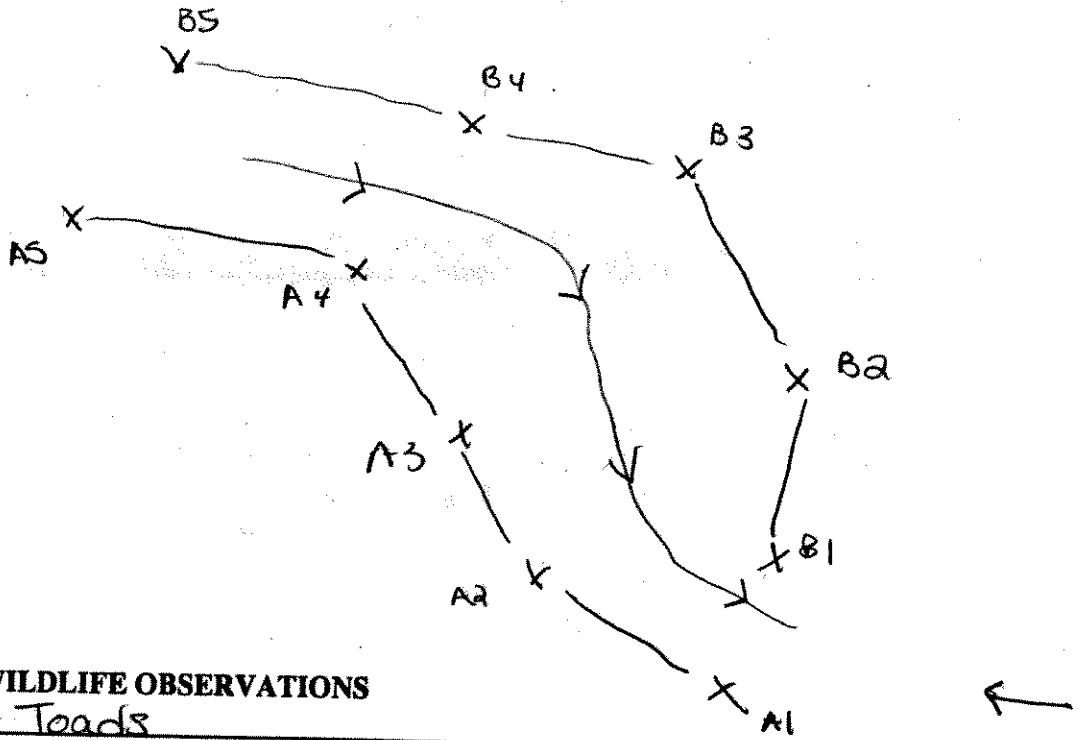
DATE: 10/9/06
 ROLL NO: _____
 FRAMES: _____

STREAM CROSSING DATA

CHANNEL ID	IC 1300 A/B ST		
NAME (or trib. to)	Trib. to Dry Brook		
TYPE OF STREAM	-		
PEREN/INTERMIT	PEREN		
WIDTH (obser/ohw)	36-60" / 24-72"		
DEPTH (obser/ohw)	10-30" / 12-50"		
FLOW RATE ¹	MEDIUM		
FLOW DIRECTION	South		
SUBSTRATE	Cobble/Pebble		
BANK VEGETATION	Woody/Herb		

¹ = Dry/Stagnant/Low/Medium/High

SKETCH:



FISH AND WILDLIFE OBSERVATIONS

Frogs + Toads

NOTES

EUP Mac, Sol veg, Uim rub, Acerub, vib len, Ane tha

STREAM CROSSING DATA FORM

ROUTE: OH1110-A/B-ST

DATE: 9-6-06

LOCATION: OH from LaFrancis to S

ROLL NO: _____

FIELD CREW: DR, BQ, JB, JV

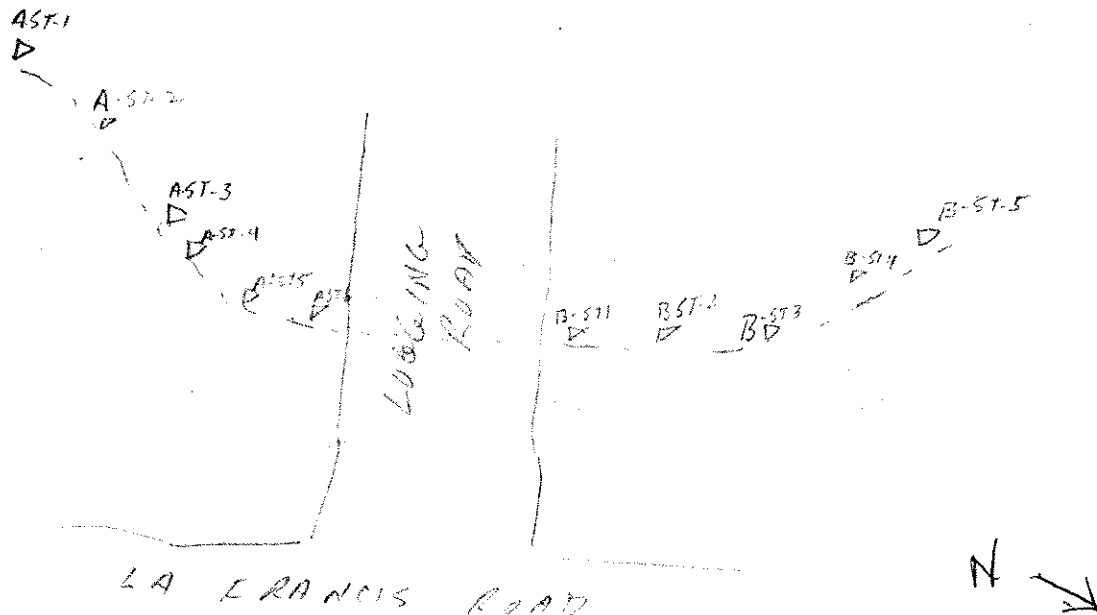
FRAMES: 1 => S 2 => N

STREAM CROSSING DATA

CHANNEL ID	OH1110-A/B-ST	
NAME (or trib. to)	unk	
TYPE OF STREAM	—	
PEREN/INTERMIT	INTERMIT	
WIDTH (obser/ohw)	12-48" / 12-24"	
DEPTH (obser/ohw)	NA / 6-12"	
FLOW RATE ¹	Dry	
FLOW DIRECTION	North	
SUBSTRATE	Cobble + silt	
BANK VEGETATION	Wetland herbs	

¹ = Dry/Stagnant/Low/Medium/High

SKETCH:



FISH AND WILDLIFE OBSERVATIONS

Frog, Toads

NOTES

Eup. Perf, Imp. Cap, Carex intum, ono. sens, Carex vulp, typha lutea, rsm. clac,

STREAM CROSSING DATA FORM

ROUTE: Overhead
 LOCATION: Wetland OH1120-ABCD
 FIELD CREW: RD/SC/LP

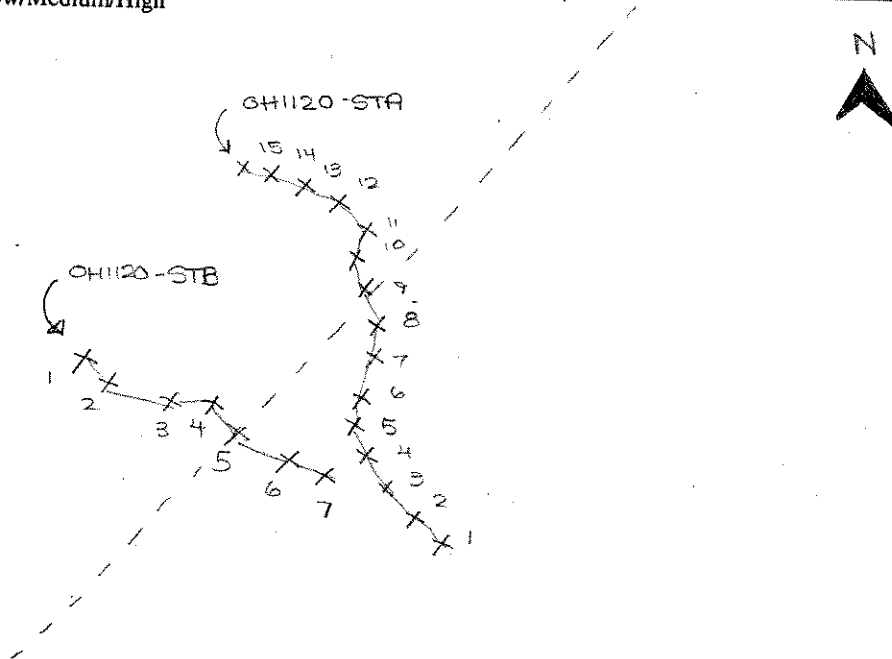
DATE: 5-31-07
 ROLL NO: _____
 FRAMES: Photo 7 face SW
 Photo 8 face W
 9 face NW

STREAM CROSSING DATA

CHANNEL ID	OH1120-STA	OH1120-STB	OH1120-STC
NAME (or trib. to)			
TYPE OF STREAM			
PEREN/INTERMIT	PEREN	INTERMIT	
WIDTH (obser/ohw)	3ft / 5ft	2ft / 4ft	
DEPTH (obser/ohw)	1ft / 1.5ft	4" / 1ft	
FLOW RATE ¹	LOW	Low	
FLOW DIRECTION	N	NW	
SUBSTRATE	Muck	Muck/Rock	
BANK VEGETATION	PSS / PFD	PSS / PFD	

¹ = Dry/Stagnant/Low/Medium/High

SKETCH:



FISH AND WILDLIFE OBSERVATIONS

frogs

NOTES

- STA: } originates at beaver dam (OH1120-STA1)
- } stream terminates at open water end wetland (OH1120-STA15)
- STB: } stream discharges to open water of wetland (OH1120-STB1)
- } reshot all of OH1120-STA; & newly delineated STB / STC
- } stream originates as drainage pattern (Dendritic) (OH1120-STB7)
- } drainage patterns in wetlands (STC)

STREAM DATA FORM

PROJECT: Marble River

CLIENT: Marble River

TURBINE: Transmission Line

DATE: 9-8-06

LOCATION: Linton Co. NC

ROLL NO: —

FIELD CREW: BQ - DR

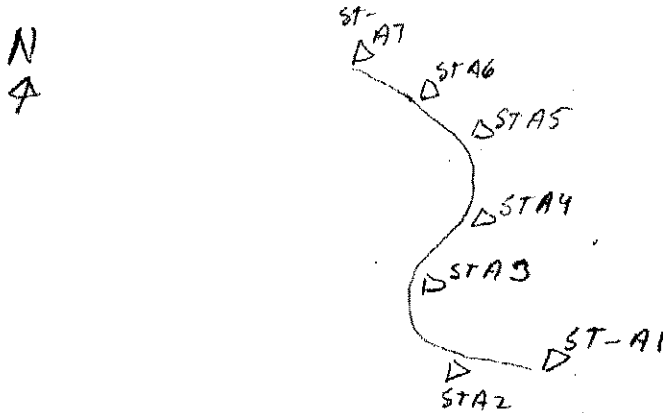
FRAMES: OH 1120 STA - S

STREAM CROSSING DATA

CHANNEL ID	OH 1120 STA		
NAME (or trib. to)	none		
PEREN/INTERMIT	int		
WIDTH (obser/ohw)	3-6 / > 10' *		
DEPTH (obser/ohw)	1'		
FLOW RATE ¹	low		
FLOW DIRECTION	S → N		
SUBSTRATE	md		
BANK VEGETATION	PSS		

¹ = Dry/Stagnant/Low/Medium/High

SKETCH:



FISH AND WILDLIFE OBSERVATIONS

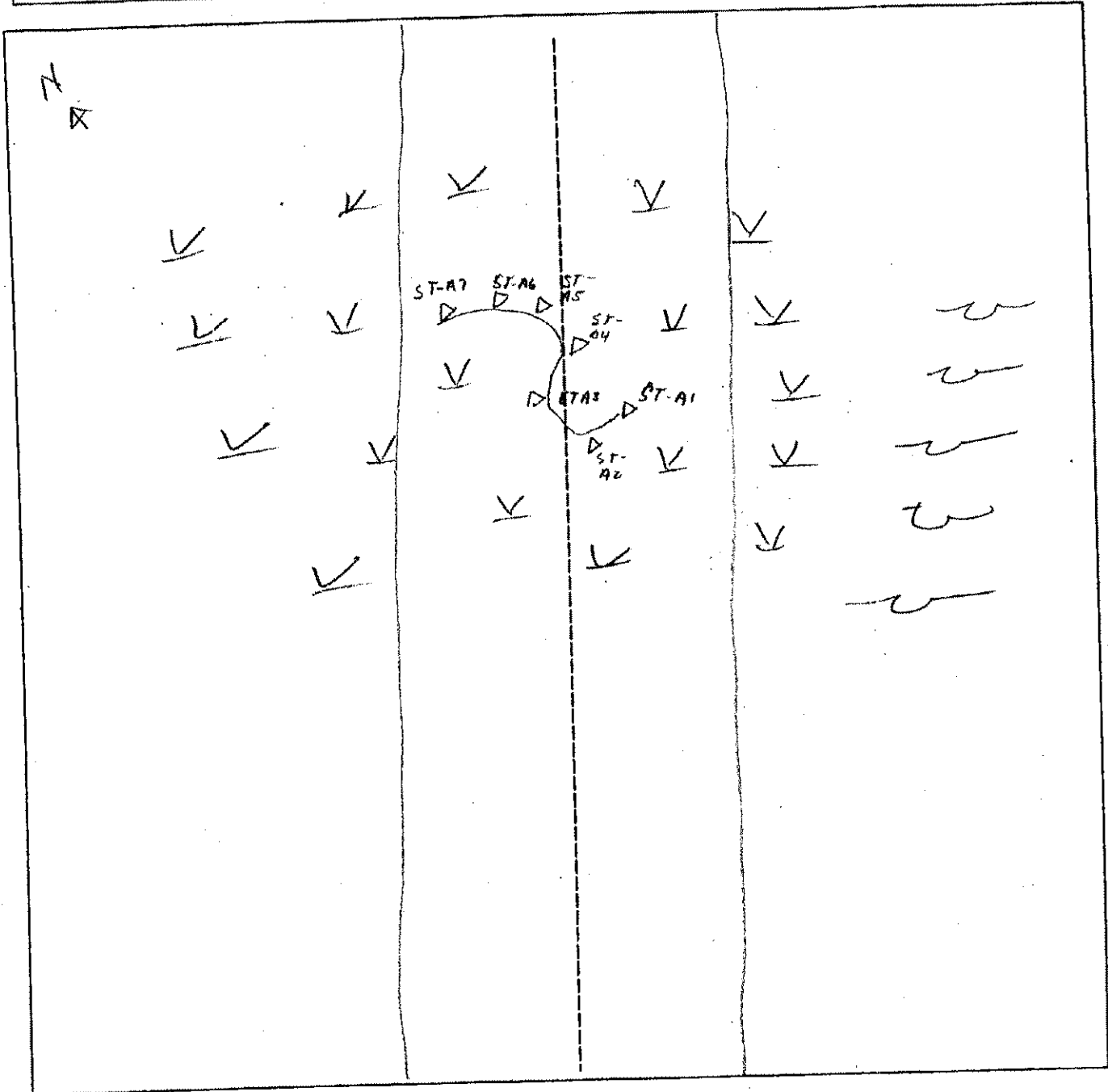
- Frogs
 - gopher

NOTES

* at flood stage large wetland area is flooded

SKETCH FORM

Wetland ID/Route #: <i>OH 1120-ST</i>	Date: <i>9/08/06</i>	Time: <i>5:00</i>
Initials of Delinators: <i>DR/BO</i>	Location: <i>overhead from La Francis ROAD to WT #47</i>	
Roll #:	Frames:	



Legend	
	Photo Location/Direction
	Sample Station
	Centerline
	Flag
	Wetland
	Upland
	Stream
	Intermittent Stream

STREAM CROSSING DATA FORM

ROUTE: DH1322-A-ST

DATE: 10/17/06

LOCATION: OH from Rt. 11 to Pt. 11

ROLL NO: _____

FIELD CREW: 1B JV

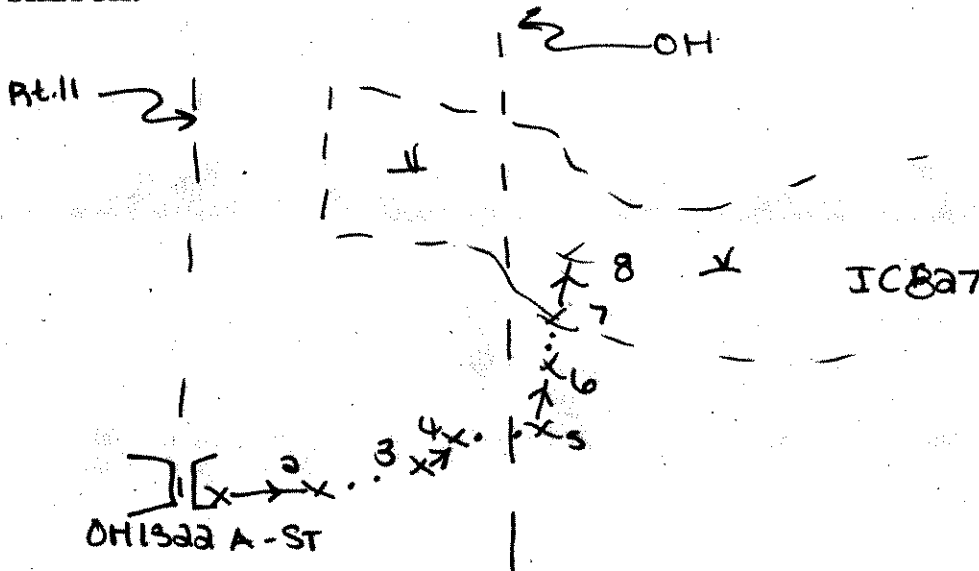
FRAMES: _____

STREAM CROSSING DATA

CHANNEL ID	DH1322-A-ST		
NAME (or trib. to)	UNK		
TYPE OF STREAM	Road drainage		
PEREN/INTERMIT	Intermitt Drainage		
WIDTH (obser/ohw)	12-24" / 18-24"		
DEPTH (obser/ohw)	NA / 8-12"		
FLOW RATE ¹	Dry		
FLOW DIRECTION	North		
SUBSTRATE	Cobble / Herbs		
BANK VEGETATION	Woody / Herbs		

¹ = Dry/Stagnant/Low/Medium/High

SKETCH:



FISH AND WILDLIFE OBSERVATIONS

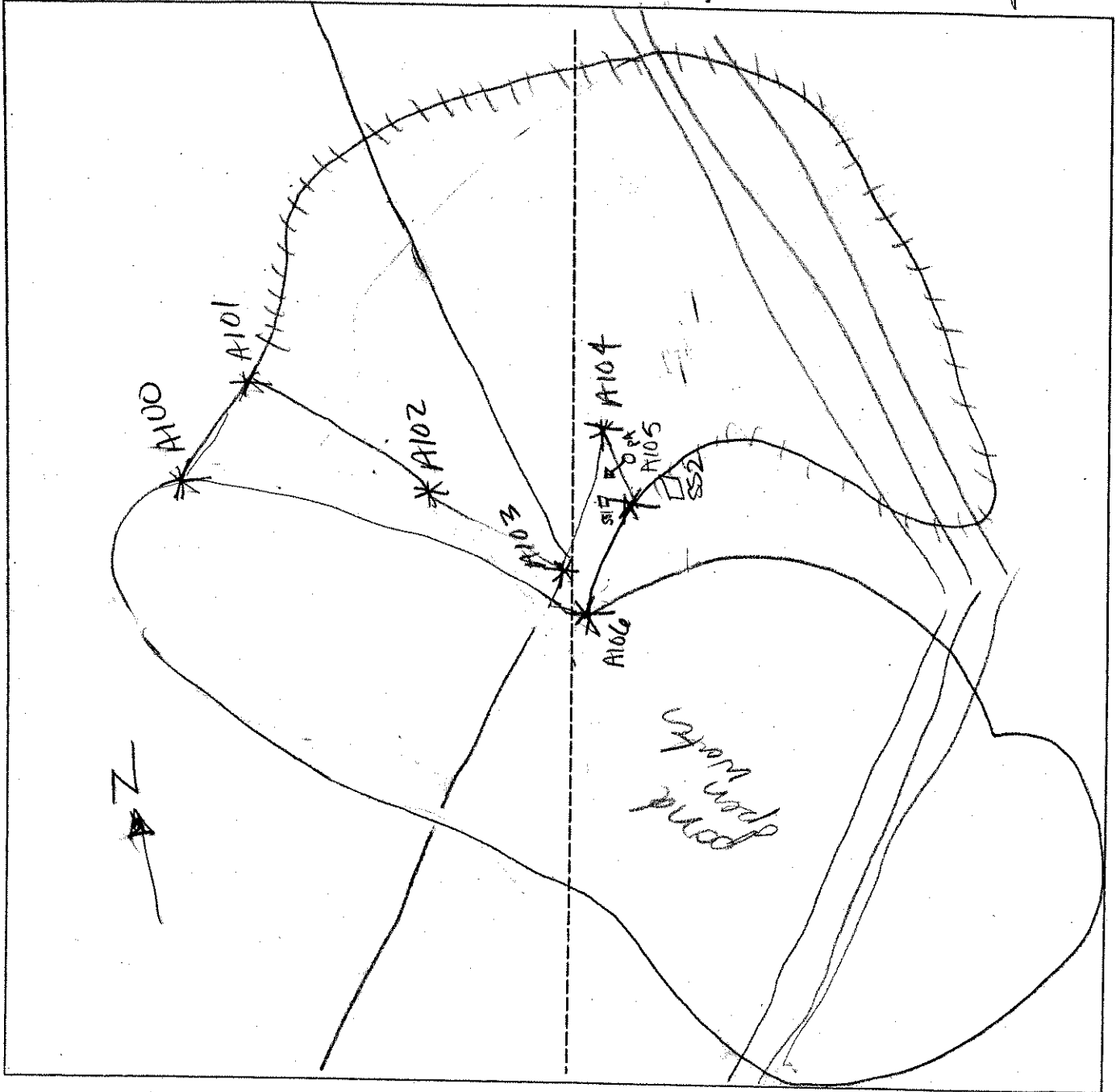
NONE OBSERVED

NOTES

Intermitt road drainage runs under Pt. 11 into existing
WL DATE IC827 A/B/C

SKETCH FORM

Wetland ID/Route #: OH 1401A - ST	Date: 4 May 07	Time:
Initials of Delineators: JV AP	Location: OH 1401A	
Roll #: Frames:	photo 4 by A105 facing West toward pond	

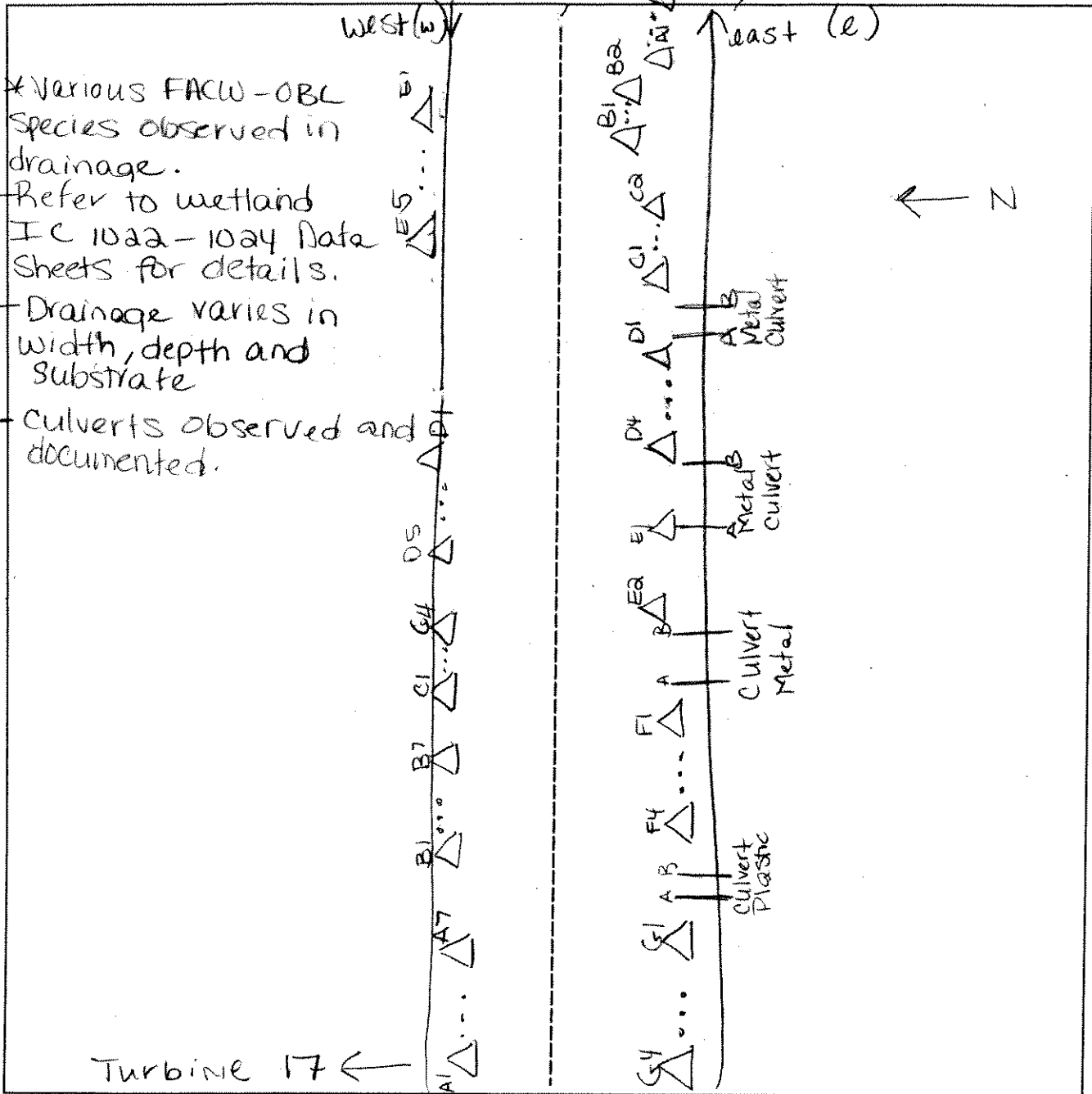


Legend	
P4 ○ ↗	Photo Location/Direction
□	Sample Station
- - -	Centerline
△	Flag
X	Wetland
U	Upland
—	Stream
- . -	Intermittent Stream

RD-3

SKETCH FORM

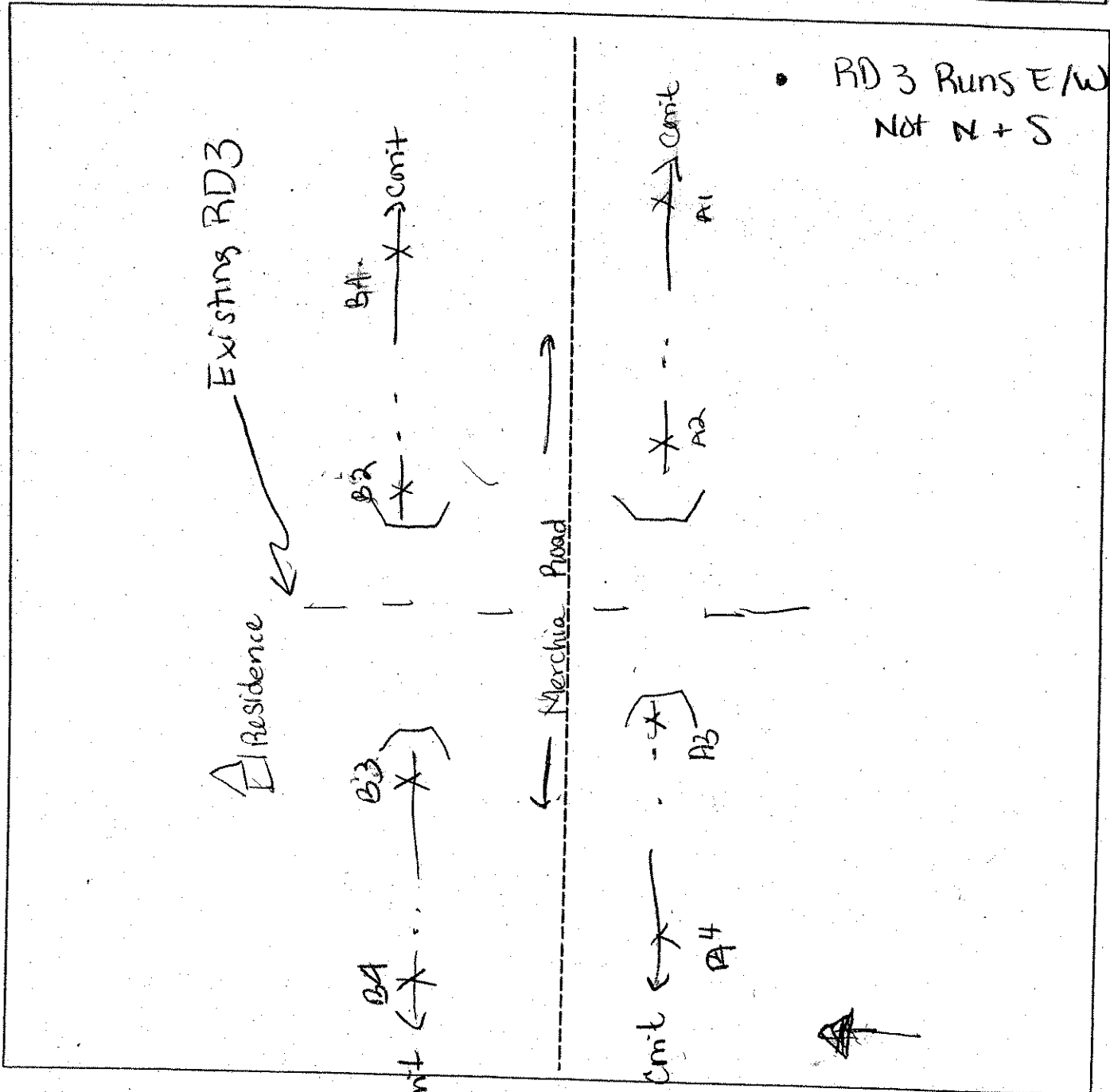
Wetland ID/Route #: RD 3,4,5 e and RD 3,4,5 w	Date: 7-21-06	Time:
Initials of Delineators: JV, BR	Location: Interconnect to turbine 17	
Roll #:	Frames:	



Legend	
	Photo Location/Direction
	Sample Station
	Centerline
	Flag
	Wetland
	Upland
	Stream
	Intermittent Stream

SKETCH FORM

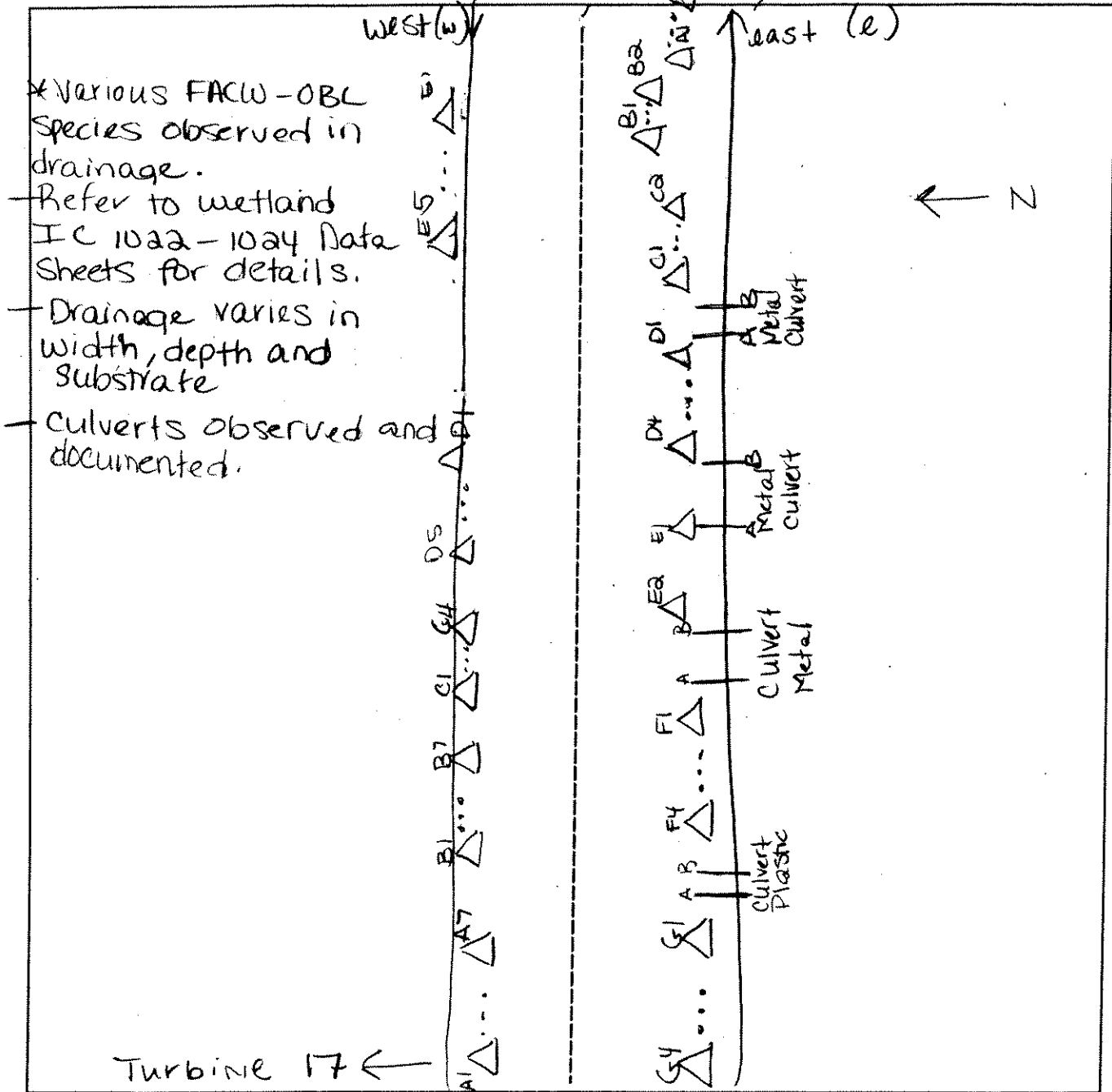
Wetland ID/Route #: RD3	Date: 5/8/07	Time:
Initials of Delineators: JV AP	Location: Merchie Road	
Roll #:	Frames:	



Legend	
	Photo Location/Direction
	Sample Station
	Centerline
	Flag
	Wetland
	Upland
	Stream
	Intermittent Stream

SKETCH FORM

Wetland ID/Route #: RD 3,4,5e and RD 3,4,5w	Date: 7-21-06	Time:
Intials of Delineators: JV, BK	Location: Interconnect to turbine 17	
Roll #:	Frames:	



Legend	
	Photo Location/Direction
	Sample Station
	Centerline
	Flag
	Wetland
	Upland
	Stream
	Intermittent Stream

STREAM CROSSING DATA FORM

ROUTE: RW1163 A/B-ST
 LOCATION: Rt-189 + Liberty Pole Rd
 FIELD CREW: DR, JV

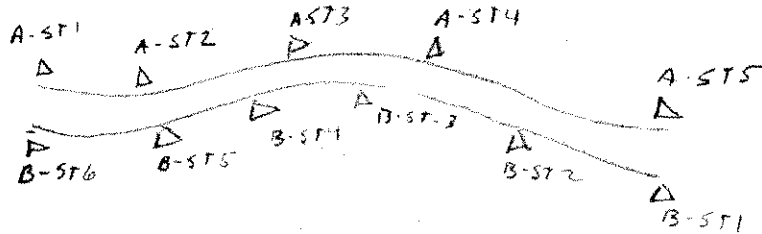
DATE: 9/12/06
 ROLL NO: _____
 FRAMES: _____

STREAM CROSSING DATA

CHANNEL ID	RW1163 A/B-ST		
NAME (or trib. to)			
TYPE OF STREAM	—		
PEREN/INTERMIT	Peren		
WIDTH (obser/ohw)	24-48" / 48-56"		
DEPTH (obser/ohw)	6-10" / 12-24"		
FLOW RATE ¹	Low		
FLOW DIRECTION	West		
SUBSTRATE	Cobble + silt		
BANK VEGETATION	Woody / Herb		

¹ = Dry/Stagnant/Low/Medium/High

SKETCH:



FISH AND WILDLIFE OBSERVATIONS

Common Frog

NOTES

Bank Vegetation includes Alnus, Salix, Iris, Myosotis, Lobelia cardinalis, Bidens cernua, Eupatorium, Polygonum

STREAM CROSSING DATA FORM

ROUTE: WTG 5A

DATE: 5/13/06

LOCATION: Stream w/ 200 ft setback of

ROLL NO: _____

FIELD CREW: BZ / BO WTG 5A

FRAMES: #90 look East

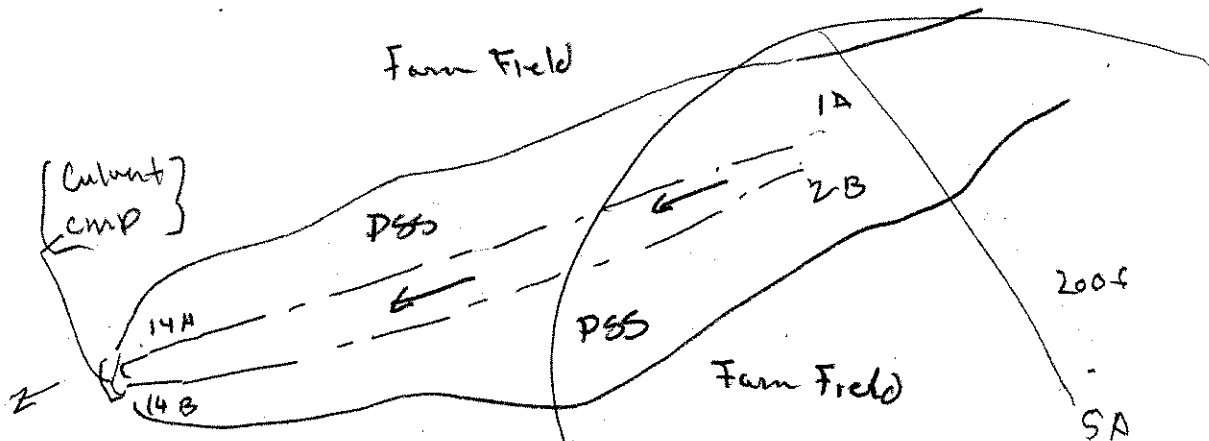
STREAM CROSSING DATA

CHANNEL ID	WTG 5A 1A / 1B		
NAME (or trib. to)	Unk		
TYPE OF STREAM			
PEREN/INTERMIT	Intermit		
WIDTH (obser/ohw)	3-6 ft wide		
DEPTH (obser/ohw)	6" - 1.5 ft deep		
FLOW RATE ¹	med		
FLOW DIRECTION	E to West		
SUBSTRATE	Rock/Cobble		
BANK VEGETATION	PSS		

¹ = Dry/Stagnant/Low/Medium/High

SKETCH:

- Flagged both sides of bank w/ orange flagging
 ↙ WTG 5A 1A / 1B thru WTG 5A 14A / 14B



FISH AND WILDLIFE OBSERVATIONS

Potential habitat of small wildlife and song birds, could provide corridor for wildlife utilizing the farm fields; provide edge & sanctuary
 Obs: song birds only - chickadee, no fish observed

NOTES

Typical med. PSS stream dominated by Alder w/ few sections of PSS (Elderberry) and PEM (Reed Canary), few rills & pools; site visit occurred after storm event flow was high, expect that stream dries out during the low flow periods in late summer

STREAM CROSSING DATA FORM

ROUTE: WTG 115B-ST

DATE: 7.25.06

LOCATION: Turbine 115

ROLL NO: _____

FIELD CREW: KH JV

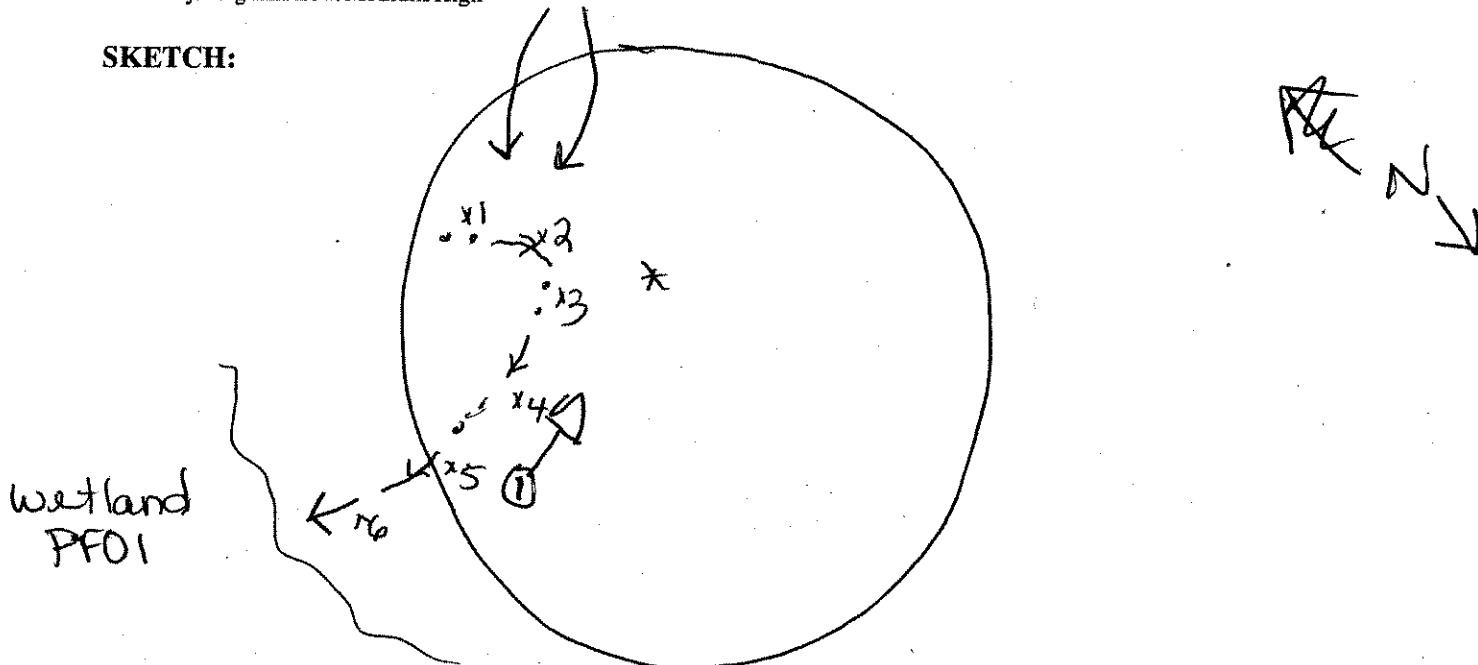
FRAMES: 1 => NE

STREAM CROSSING DATA

CHANNEL ID	WTG 115B-ST		
NAME (or trib. to)	unnamed		
TYPE OF STREAM	_____		
PEREN/INTERMIT	Intermit		
WIDTH (obser/ohw)	24" - 4' / 24" - 4'		
DEPTH (obser/ohw)	NA / 24"		
FLOW RATE ¹	Dry		
FLOW DIRECTION	South		
SUBSTRATE	OM / Leaf litter		
BANK VEGETATION	N/A		

¹ = Dry/Stagnant/Low/Medium/High

SKETCH:



FISH AND WILDLIFE OBSERVATIONS

None

NOTES

Drainage feature from North topo. Drainage feature flows into wetland located outside turbine buffer. Observed drainage patterns throughout feature

STREAM CROSSING DATA FORM

ROUTE: WTB-155
 LOCATION: Turbine 155
 FIELD CREW: (RTD), JV

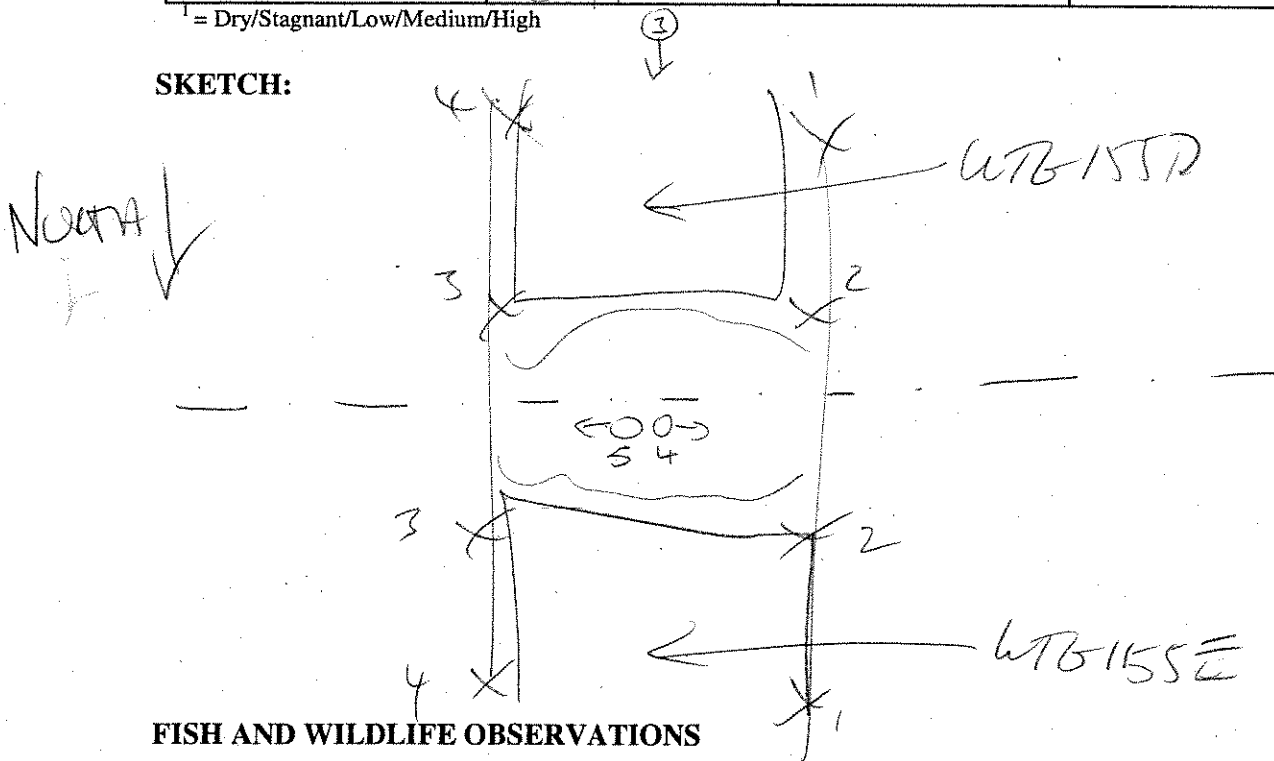
DATE: 10/27
 ROLL NO: _____
 FRAMES: 3 → N
 4 → W
 5 → E

STREAM CROSSING DATA

CHANNEL ID	WTB-155B-ST		
NAME (or trib. to)			
TYPE OF STREAM	Pond outfall		
PEREN/INTERMIT			
WIDTH (obser/ohw)	1-2		
DEPTH (obser/ohw)	6"-12"		
FLOW RATE ¹	Med		
FLOW DIRECTION	E → W		
SUBSTRATE	Sand/Rock		
BANK VEGETATION	Pem/PSS		

¹ = Dry/Stagnant/Low/Medium/High

SKETCH:



FISH AND WILDLIFE OBSERVATIONS

NOTES

MAN-MADE drainage channel
 through wetland
 (paved) out access rd for wetland

STREAM DATA FORM

PROJECT: Marble River
 TURBINE: WTB 208
 LOCATION: _____
 FIELD CREW: BR, KH

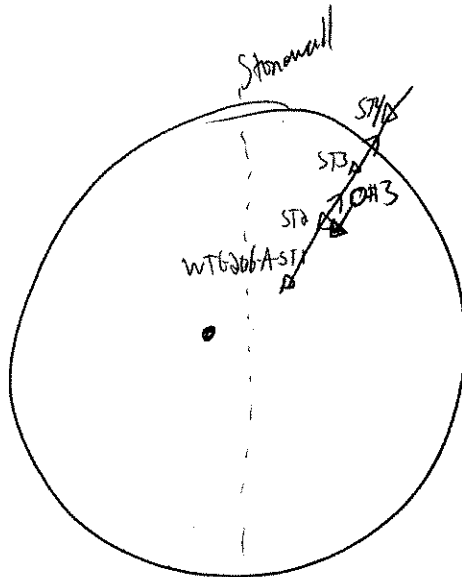
CLIENT: Horizon Wind Power LLC
 DATE: 5/21/06
 ROLL NO: KH
 FRAMES: 3X

STREAM CROSSING DATA

CHANNEL ID	WTB208-A-ST		
NAME (or trib. to)	Unknown		
PEREN/INTERMIT	Intermit		
WIDTH (obser/ohw)	< 5 ft		
DEPTH (obser/ohw)	< 1 inch		
FLOW RATE ¹	stagnant		
FLOW DIRECTION	NE		
SUBSTRATE	Organics/leaves		
BANK VEGETATION	Manna Berry, Gray Birch		

¹ = Dry/Stagnant/Low/Medium/High flow velocity

SKETCH:



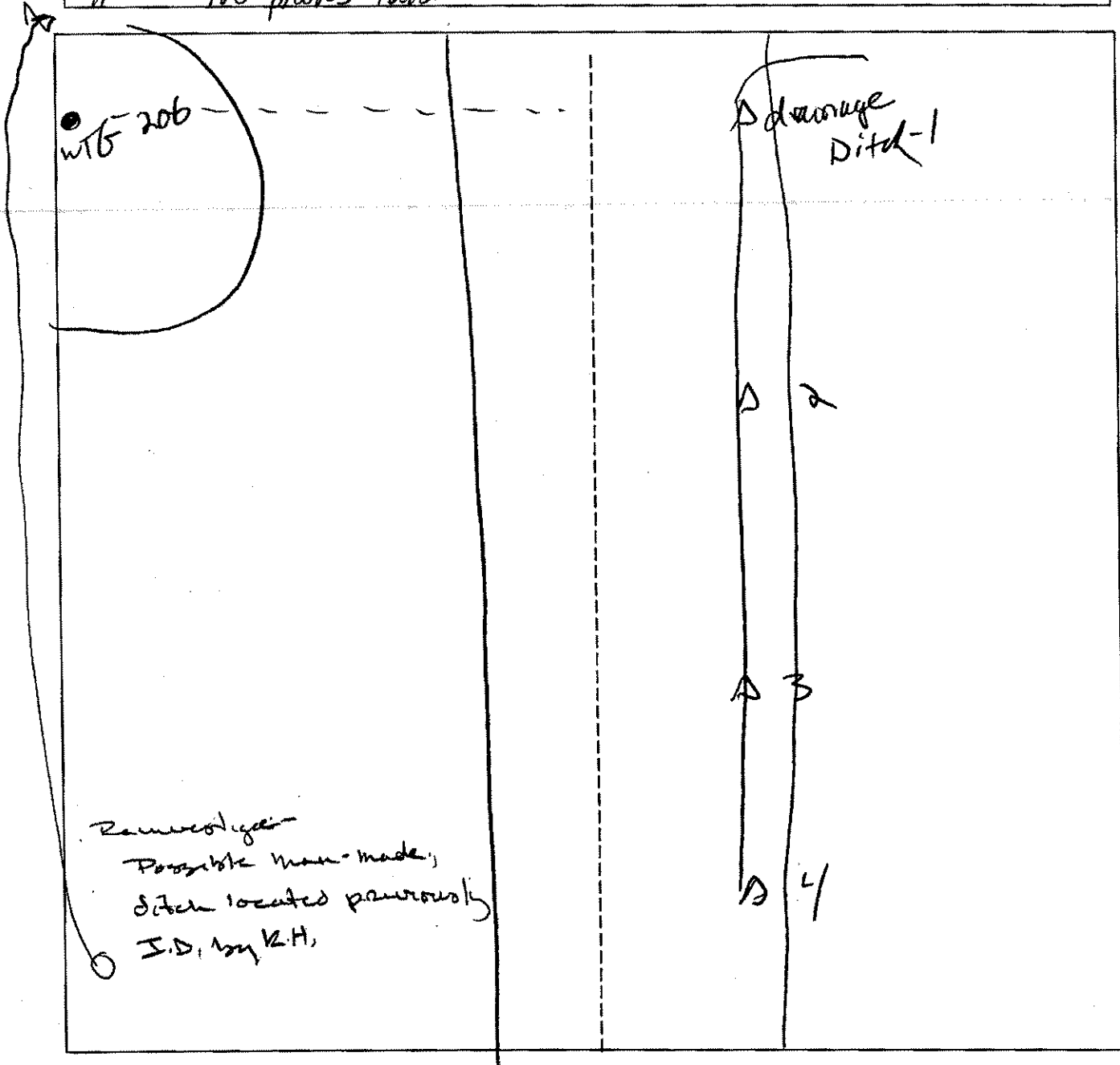
FISH AND WILDLIFE OBSERVATIONS

NOTES

Man made ditch, after a week of rain still not pooling
much water.

SKETCH FORM

Wetland ID/Route #: <i>WTB-206 - drainage ditch</i>	Date: <i>12/7/05</i>	Time: <i>15:40</i>
Initials of Delineators: <i>BK/KH</i>	Location: <i>Patnode Rd - Clinton Co</i>	
Roll #: <i>#</i>	Frames: <i>No photos taken</i>	



Legend	
Photo Location/Direction	Wetland
Sample Station	Upland
Centerline	Stream
Flag	Intermittent Stream
North Arrow	

STREAM CROSSING DATA FORM

ROUTE: Accom Rd to MET TOWER
 LOCATION: WEST of Turbine ST.
 FIELD CREW: PRD, SSC

DATE: 8/2/07
 ROLL NO: N/A
 FRAMES: _____
 Photo 0782 => south
 photo 0783 => north

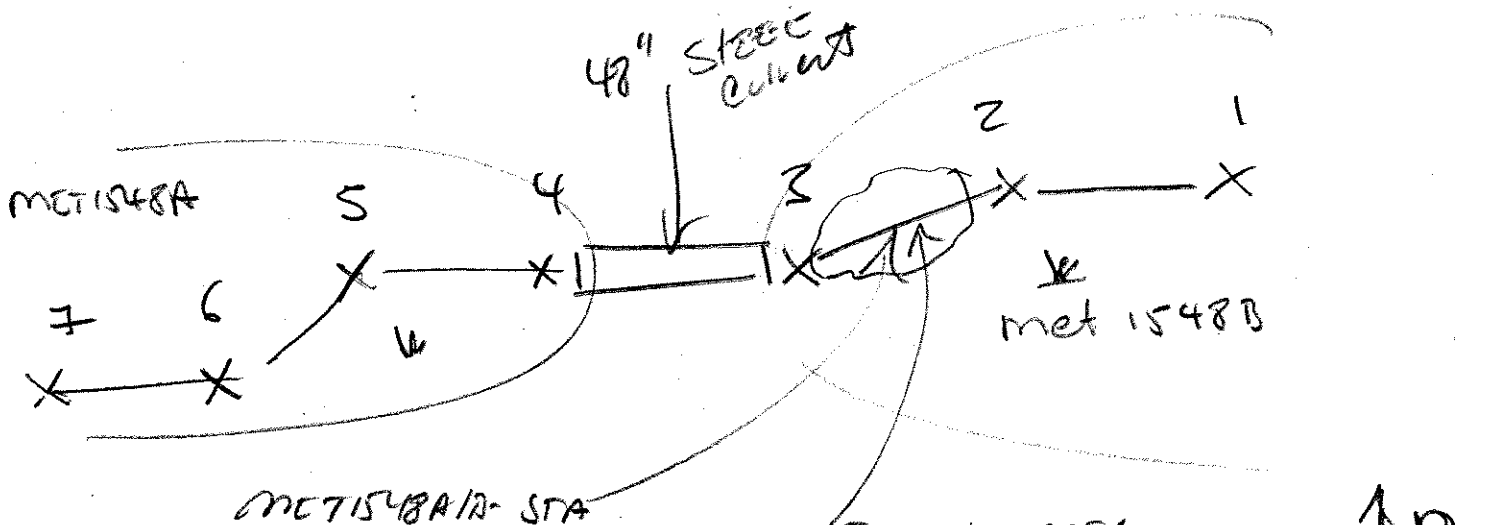
STREAM CROSSING DATA

CHANNEL ID	MET 1548A/B-STA	
NAME (or trib. to)	N/A	
TYPE OF STREAM	culverted stream	
PEREN/INTERMIT	PEREN	
WIDTH (obser/ohw)	4' / 8'	
DEPTH (obser/ohw)	6" / 2'	
FLOW RATE ¹	LOW	
FLOW DIRECTION	NORTH	
SUBSTRATE	SAND, rock? gravel	
BANK VEGETATION	PER *	

¹ = Dry/Stagnant/Low/Medium/High

SKETCH:

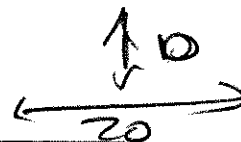
* wetland MET 1548A & MET 1548B



FISH AND WILDLIFE OBSERVATIONS

Minnaw
FROGS

POOLED AREA
 10' x 20'



NOTES

4' culvert (CORRUGATED STEEL)
BENEATH existing 15' ACCUM POND

STREAM CROSSING DATA FORM

ROUTE: MET TOWER Access Rd.
 LOCATION: Campbell Rd.
 FIELD CREW: ATI, SSC

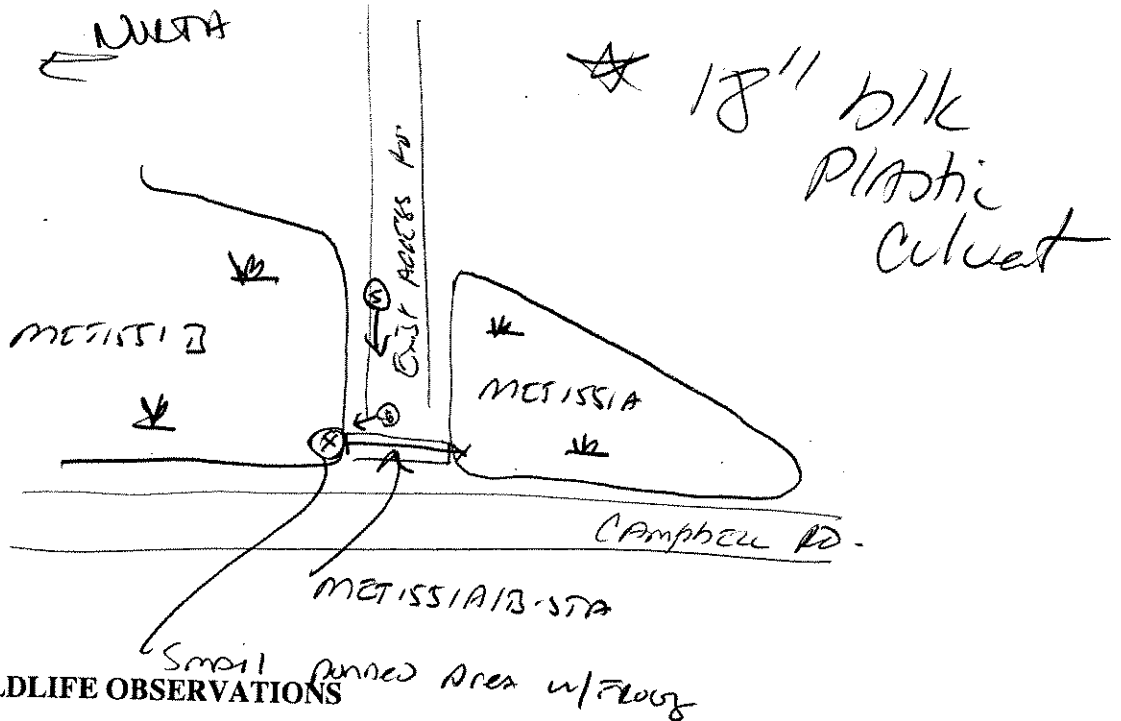
DATE: 8/13/07
 ROLL NO: _____
 FRAMES: photo 5
(0788) → west

STREAM CROSSING DATA

CHANNEL ID	METISSIA1B-STA	photo 6	→ north
NAME (or trib. to)	N/A		
TYPE OF STREAM	Culvert (Passing Ditch)		
PEREN/INTERMIT	Intermittent		
WIDTH (obser/ohw)	2 feet		
DEPTH (obser/ohw)	1 foot		
FLOW RATE ¹	Stagnant / Dry		
FLOW DIRECTION	N/A		
SUBSTRATE	Silt & Cobble		
BANK VEGETATION	PEM		

¹ = Dry/Stagnant/Low/Medium/High

SKETCH:



FISH AND WILDLIFE OBSERVATIONS

FROGS.

NOTES

STREAM CROSSING DATA FORM

ROUTE: OH WEST of LA Francis

DATE: 7/17/07

LOCATION: _____

ROLL NO: N/A

FIELD CREW: RTS, SC

FRAMES: photo 6 (0733) => E^F

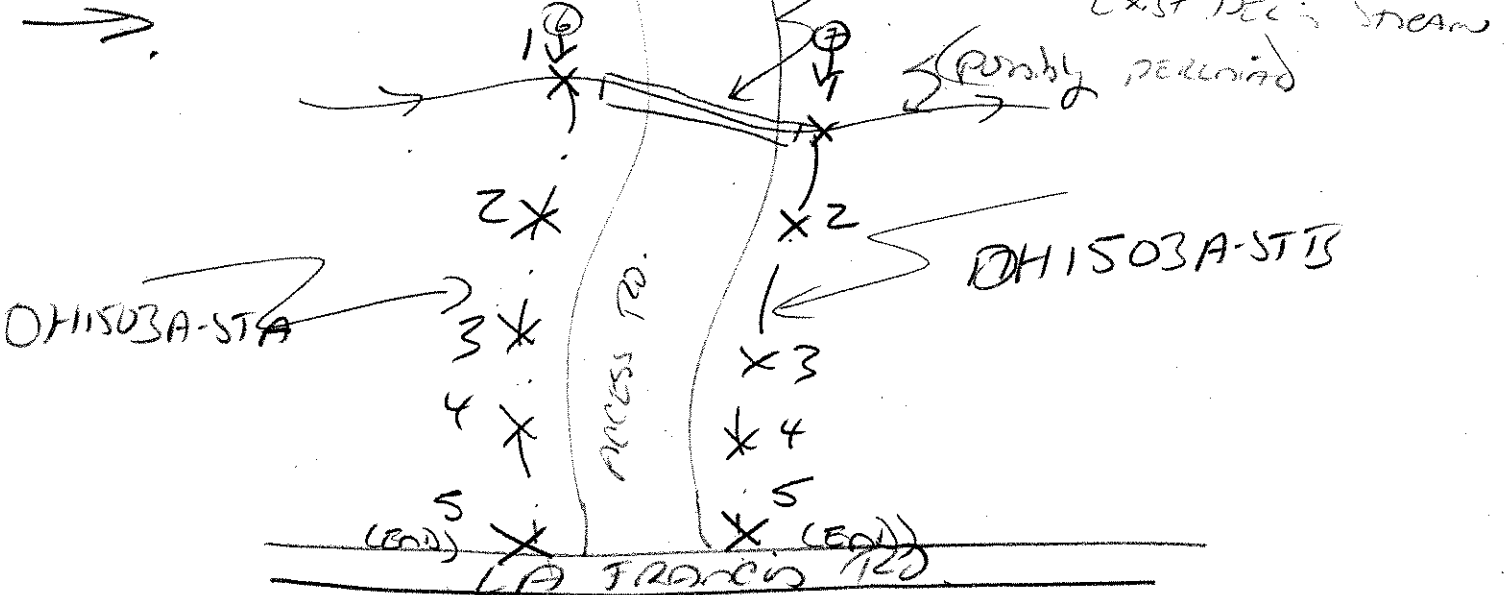
photo 7 (0734) => E^F_B

STREAM CROSSING DATA

CHANNEL ID	<u>DHISO3A-STA</u>	<u>DHISO3A-STB</u>
NAME (or trib. to)	<u>N/A</u>	<u>N/A</u>
TYPE OF STREAM	<u>Roadside ditch</u>	<u>Roadside ditch</u>
PEREN/INTERMIT	<u>Int</u>	<u>Int</u>
WIDTH (obser/ohw)	<u>2' / 4'</u>	<u>1' / 2'</u>
DEPTH (obser/ohw)	<u>6" / 1'</u>	<u>2" / 1'</u>
FLOW RATE ¹	<u>STAGNANT</u>	<u>STAGNANT</u>
FLOW DIRECTION	<u>WEST</u>	<u>WEST</u>
SUBSTRATE	<u>Muck</u>	<u>Muck</u>
BANK VEGETATION	<u>PEM</u>	<u>PEM</u>

¹ = Dry/Stagnant/Low/Medium/High

NURSA SKETCH:



FISH AND WILDLIFE OBSERVATIONS

NOTES

PEM veg includes - Bone Set; St. Johns Wort;
S. Elymus; Woolgrass; Carex hirsuta; NATALS (T. Angustifolia)
Carex Oenantha; Arrow leaf Goldenrod; Teardrop;
Green hallrush; Carex vulpinoidea; JOE PYLE weed.

STREAM CROSSING DATA FORM

ROUTE: Access Road to Tubine 133
 LOCATION: Dick Cole Property
 FIELD CREW: RTD, SSC

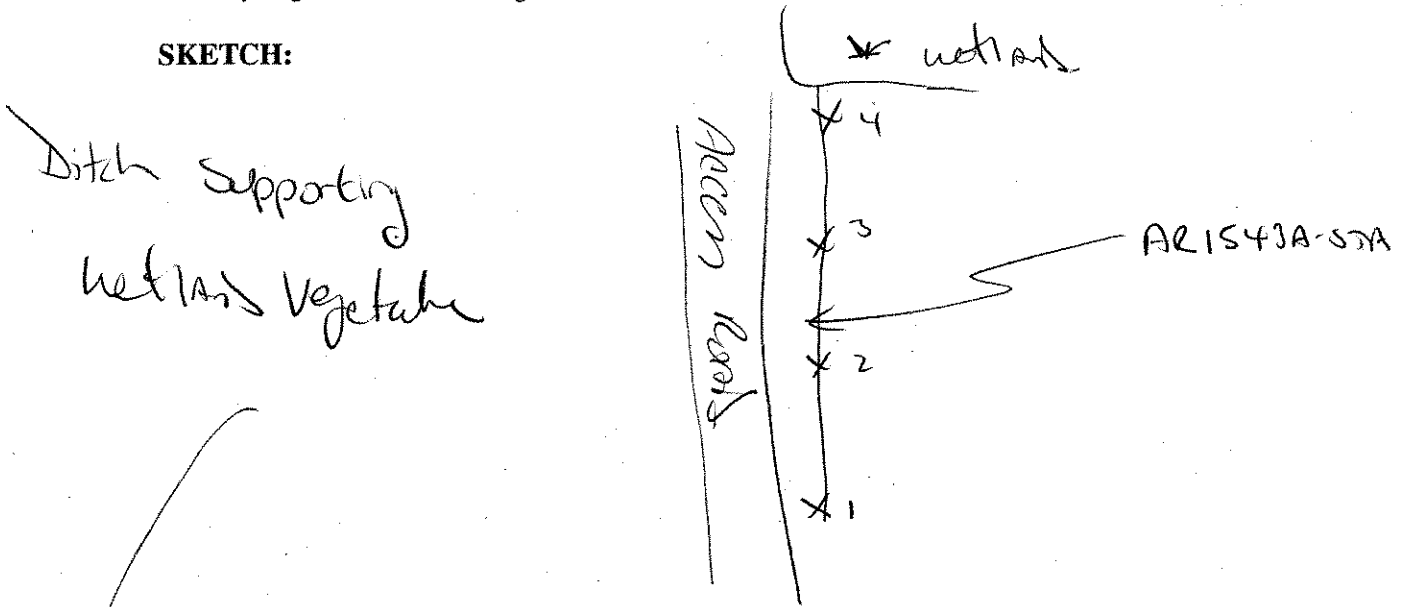
DATE: 8/2/07
 ROLL NO: N/A
 FRAMES: photo 3 (0776)
→ Santa

STREAM CROSSING DATA

CHANNEL ID	AR1543A-STA		
NAME (or trib. to)	unnamed		
TYPE OF STREAM	roadside ditch		
PEREN/INTERMIT	intermit		
WIDTH (obser/ohw)	1'-2' / 3'-4'		
DEPTH (obser/ohw)	0-10" / 1.5'-2'		
FLOW RATE ¹	STAGNANT		
FLOW DIRECTION	S (based on topo)		
SUBSTRATE	MUCK		
BANK VEGETATION	early successional		

¹ = Dry/Stagnant/Low/Medium/High

SKETCH:



FISH AND WILDLIFE OBSERVATIONS

NOTES

WETLAND VEG includes: TYPHA LATIFOLIA,
SCIRPUS ATROVIRENS, SCIRPUS CYPERINUS, JUNCUS EFFUSUS,
SILKY WILLOW, EUPATORIUM PERFOLIATUM,

STREAM CROSSING DATA FORM

ROUTE: CV1218-1220

DATE: 9/18/06

LOCATION: Patnode Rd (north) heading north

ROLL NO: _____

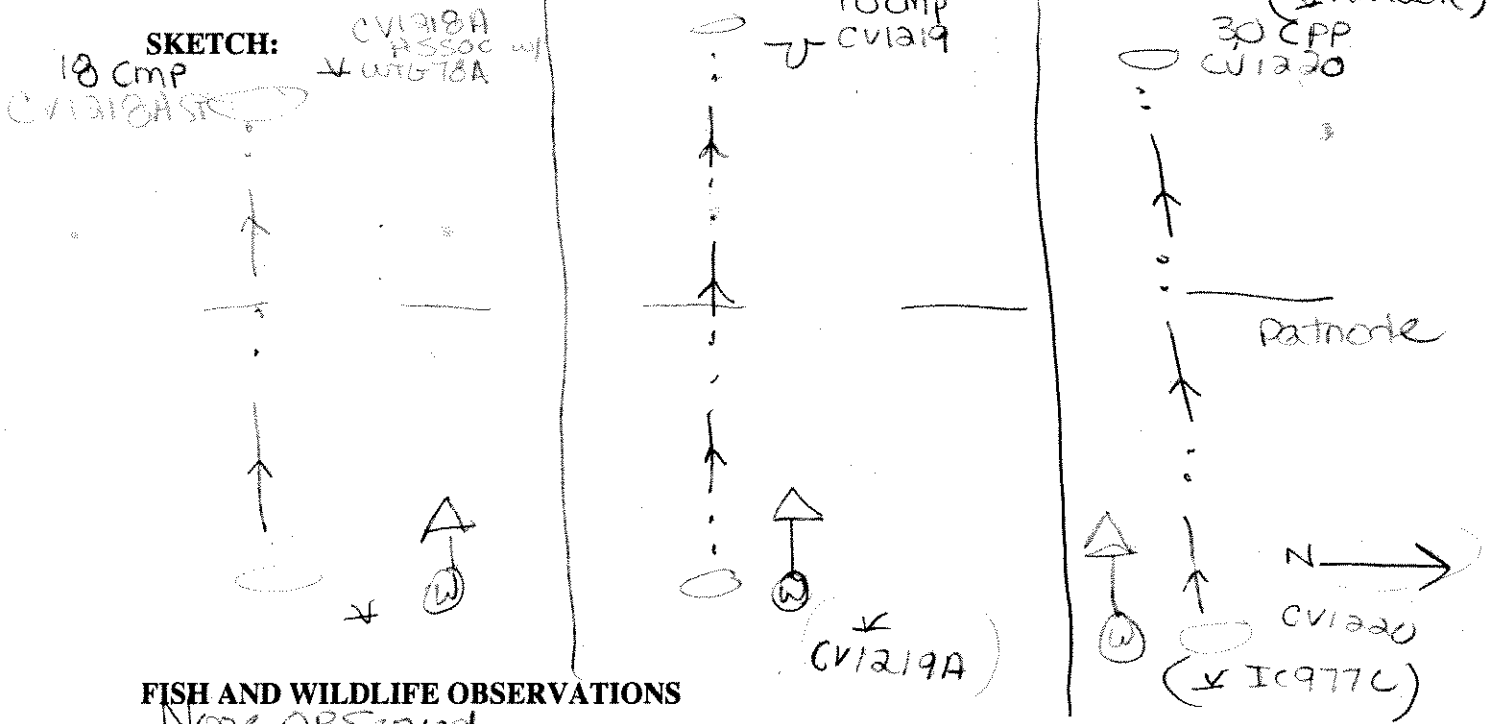
FIELD CREW: JV DO

FRAMES: _____

STREAM CROSSING DATA

CHANNEL ID	CV1218-A-ST	CV1219A-ST	CV1220-A-ST
NAME (or trib. to)	NA	NA	NA
TYPE OF STREAM	WL Culvert	WL Culvert	Field/Road drain
PEREN/INTERMIT	Intermit	NA	NA
WIDTH (obser/ohw)	18" / 10-12"	18" / 10-12"	30" / 10-12"
DEPTH (obser/ohw)	NA / 8-10"	NA / 8-10"	NA / 8-10"
FLOW RATE ¹	Dry	Dry	Dry
FLOW DIRECTION	West	West	West
SUBSTRATE	NA	NA	NA
BANK VEGETATION	NA	NA	NA

¹ = Dry/Stagnant/Low/Medium/High



FISH AND WILDLIFE OBSERVATIONS

None OBSERVED

NOTES

CV1218 18 cmp runs E/W under patnode Rd. Assoc. w/ WL W1678A to W + culverted to E (Not on list)

CV1219 18 cmp runs E/W under patnode Rd. Assoc w/ DEC WL CV1219A to E

CV1220 30 cpp runs E/W under patnode Rd. Assoc w/ IC977C to E and AR720A to W. WL Boundaries already exist

STREAM CROSSING DATA FORM

ROUTE: CV1173

DATE: 9/15/08

LOCATION: JONES + Looby

ROLL NO: _____

FIELD CREW: JV DL

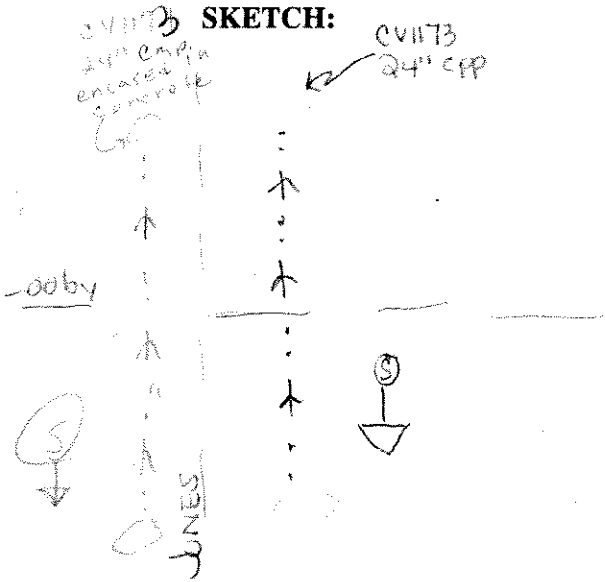
FRAMES: _____

STREAM CROSSING DATA

CHANNEL ID	CV1173A-ST	CV1173 BT	
NAME (or trib. to)	N/A	N/A	
TYPE OF STREAM	Road drainage	Road Drainage	
PEREN/INTERMIT	Intermitt	Intermitt	
WIDTH (obser/ohw)	24" / 8-10"	24" / 8-10"	
DEPTH (obser/ohw)	N/A / 6-10"	NA / 6-10"	
FLOW RATE ¹	Dry	Dry	
FLOW DIRECTION	South	South	
SUBSTRATE	N/A	N/A	
BANK VEGETATION	N/A	N/A	

¹ = Dry/Stagnant/Low/Medium/High

SKETCH:

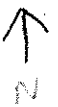


FISH AND WILDLIFE OBSERVATIONS

NONE OBSERVED

NOTES

CV1173 24" cpp runs N/S on E side of Jones Rd under Looby Rd - WL Assoc at S
 CV1173 24" cpp runs N/S on W side of Jones Rd under Looby Rd -



STREAM CROSSING DATA FORM

ROUTE: CV1170 A ST, CV1171A-ST
CV1172A ST
 LOCATION: Merchia Rd + Jones Rd
 FIELD CREW: Intersection
JV DR

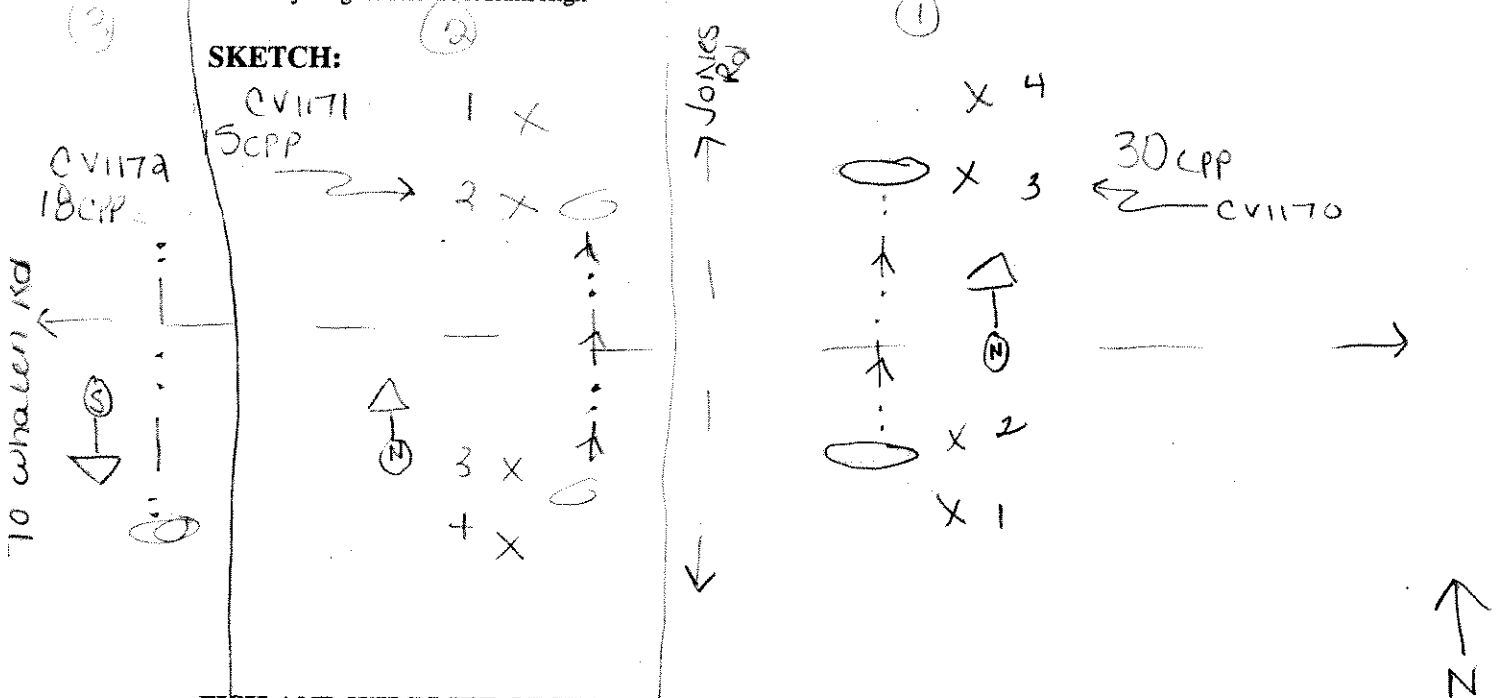
DATE: 9/14/06
 ROLL NO: N
 FRAMES: _____

STREAM CROSSING DATA

CHANNEL ID	CV1170 A ST	CV1171 AST	CV1172 AST
NAME (or trib. to)	N/A	NA	NA
TYPE OF STREAM	Road drainage	Road drainage	Road drainage
PEREN/INTERMIT	INTERMIT	Intermit	Intermit
WIDTH (obser/ohw)	18" / 12"	15" / 12"	18" / 8-10"
DEPTH (obser/ohw)	NA / 6-10"	NA / 6-10"	NA / 6-10"
FLOW RATE ¹	Dry	Dry	
FLOW DIRECTION	North	North	North
SUBSTRATE	N/A	N/A	N/A
BANK VEGETATION	N/A	N/A	N/A

¹ = Dry/Stagnant/Low/Medium/High

SKETCH:



FISH AND WILDLIFE OBSERVATIONS

None Observed

NOTES

- CV1170 30" corrugated plastic pipe runs N/S under Merchia Rd.
- CV1171 15" c. plastic pipe runs N/S under Merchia Rd.
 Both side of pipe is encased in concrete
- CV1172 18" c.p.p runs N/S under gravel portion of Merchia Rd.