

Qcf

Chenier Plain, Fresh Marsh — Gray to brown to black clay and silt of high organic content. Area of accretion by longshore currents from major delta complex.

FIGURE 2-1
 GEOLOGIC MAP
 State of Louisiana and Vermilion Parish School Board v Louisiana Land and Exploration et al; Docket No. 82162, Div "D"; 15th JDC
 East White Lake Field, Vermilion Parish, LA

		Date:	DEC 2015
		Source:	
File Name: whitelake2009.dwg Project Number: 9077-041-0100		File Directory:	
Drawn By: GWM			

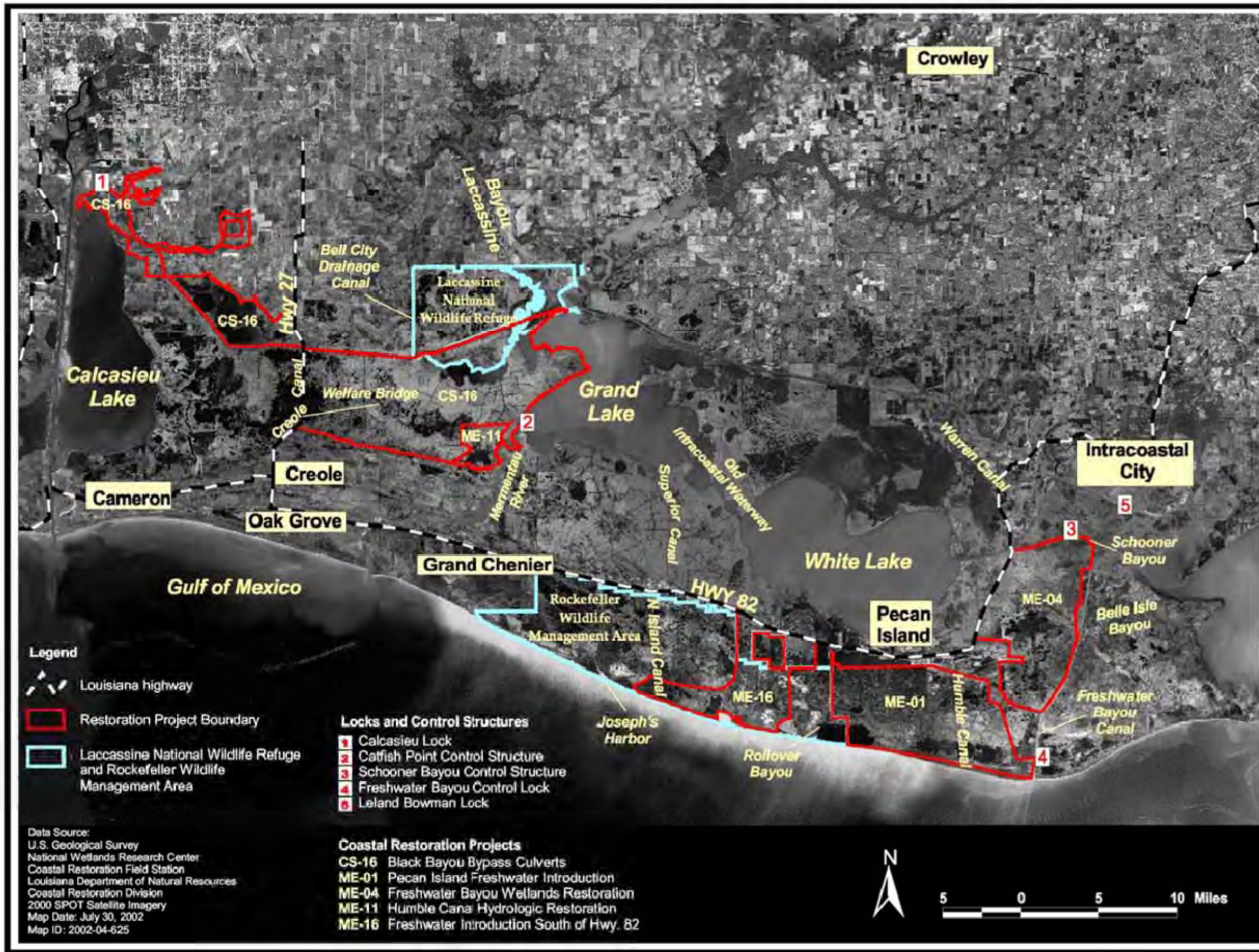


Figure 4. Physical features, locks and control structures, and restoration projects in the Mermentau Basin.

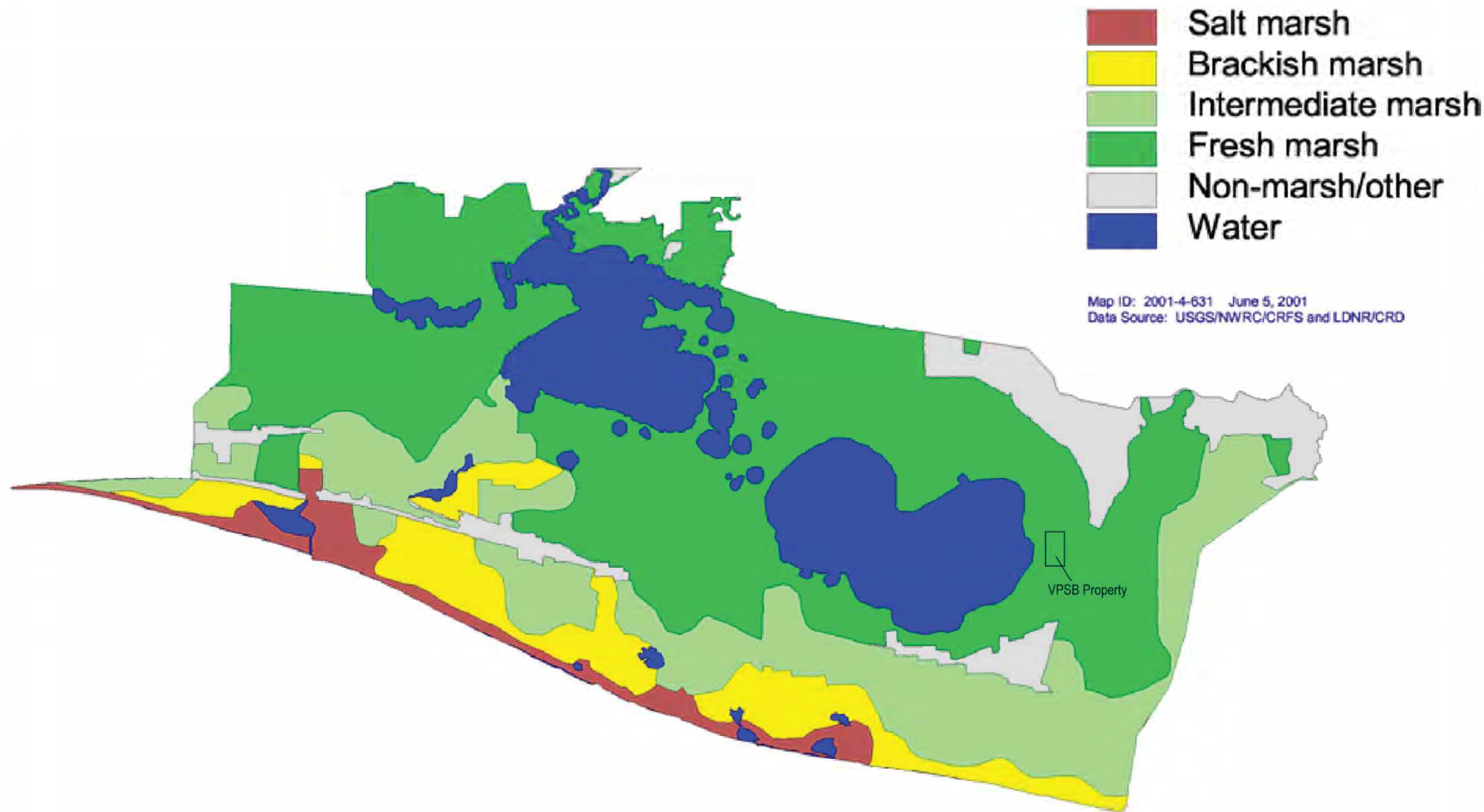


Figure 3. Wetland habitat types in the Mermentau Lakes and Chenier sub-basins (after Chabreck and Linscombe 1997).

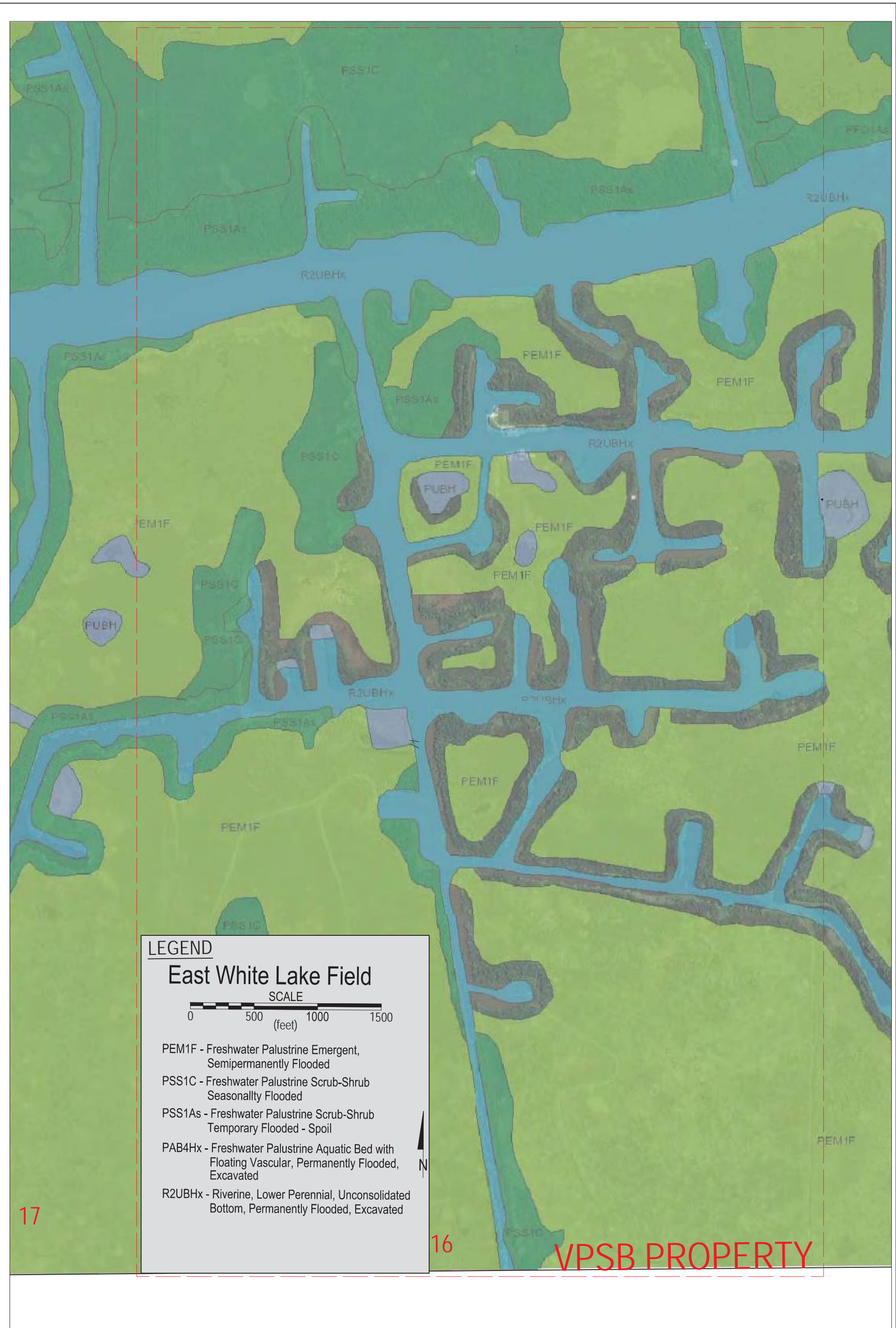


FIGURE 2-4
USFWS WETLANDS MAP
State of Louisiana and Vermilion Parish School Board v Louisiana Land and Exploration et al; Docket No. 82162, Div "D"; 15th JDC
East White Lake Field, Vermilion Parish, LA

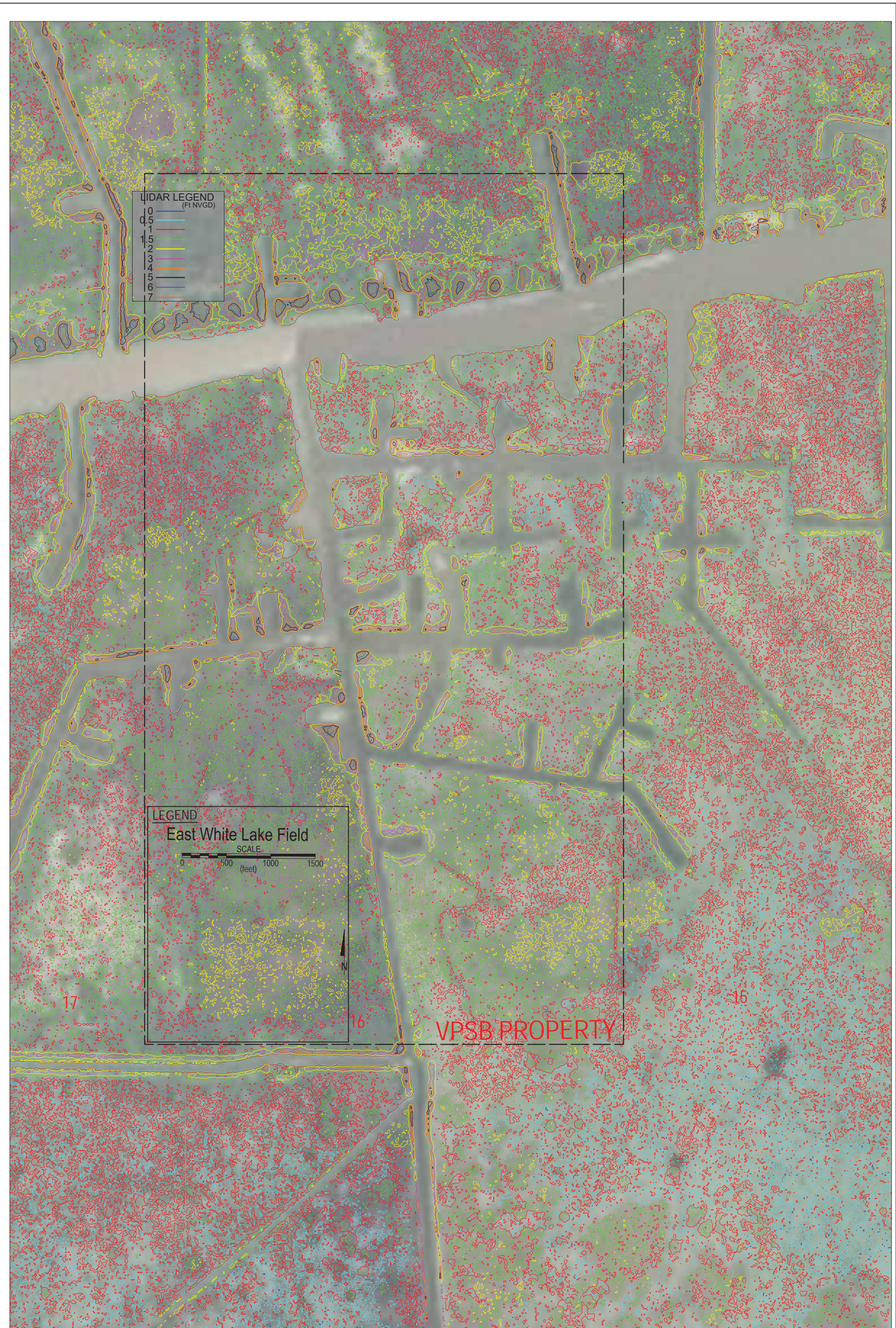


FIGURE 2-5
 TOPOGRAPHIC (LIDAR) CONTOURS
 State of Louisiana and Vermilion Parish School Board v Louisiana Land and Exploration et al; Docket No. 82162, Div "D"; 15th JDC
 East White Lake Field, Vermilion Parish, LA



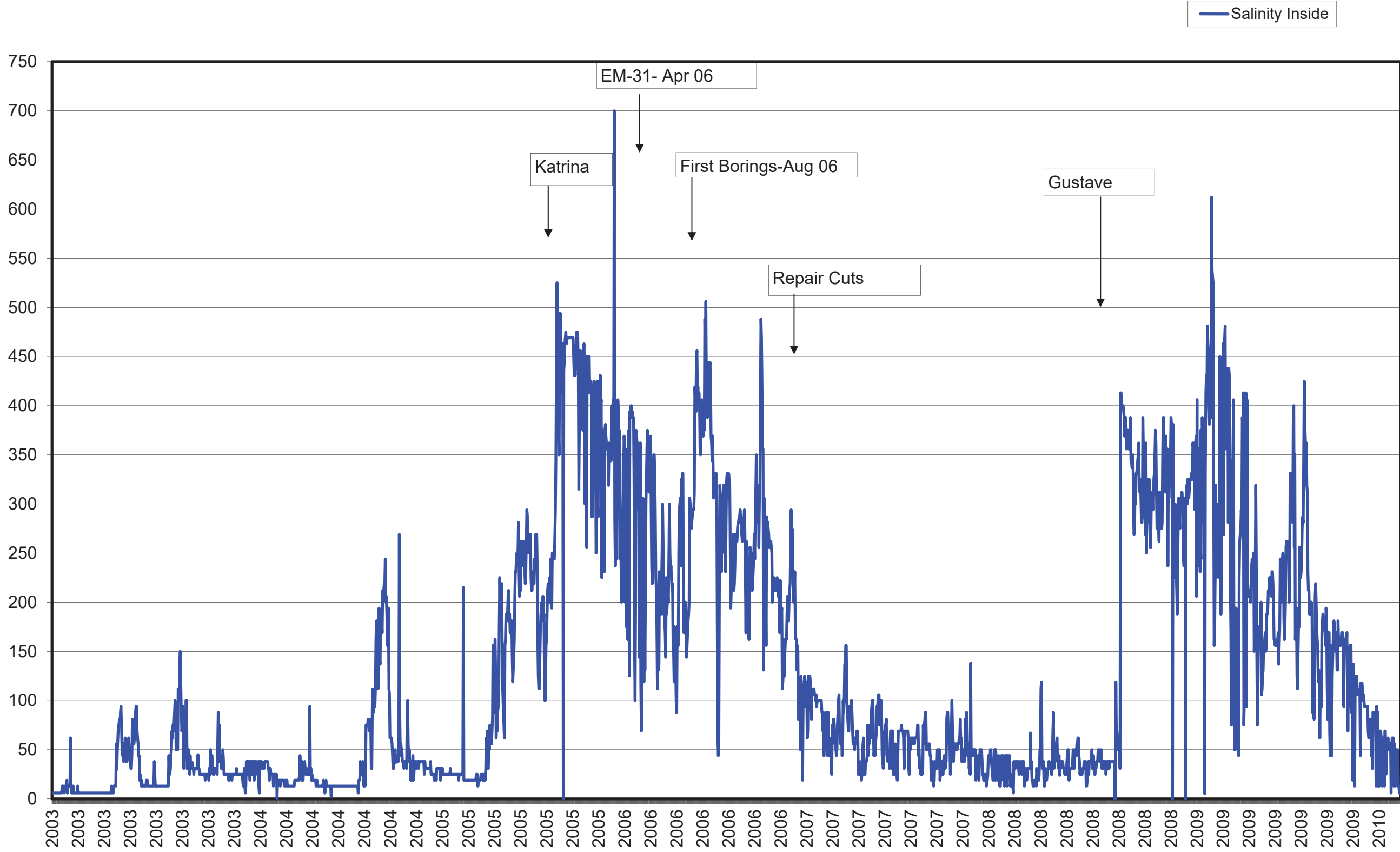
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 214 West Cornerview
 Gonzales, Louisiana 70707

COASTAL MARSHLANDS SAMPLE LOCATIONS AND CHLORIDE CONCENTRATIONS
 State of Louisiana and Vermilion Parish School Board v Louisiana Land and Exploration et al; Docket No. 82162, Div "D"; 15th JDC
 East White Lake Field, Vermilion Parish, LA

FILENAME	REV #
WhatLake XSecs.dwg	
JOB NO. 9130-004-0200	DATE DEC 2015
DIRECTORY Carmouche, VermParish/ELW	FIGURE NO. 2-6

FIGURE 2-7 Schooner Bayou Lock Data - Salinity in Grains per Gallon



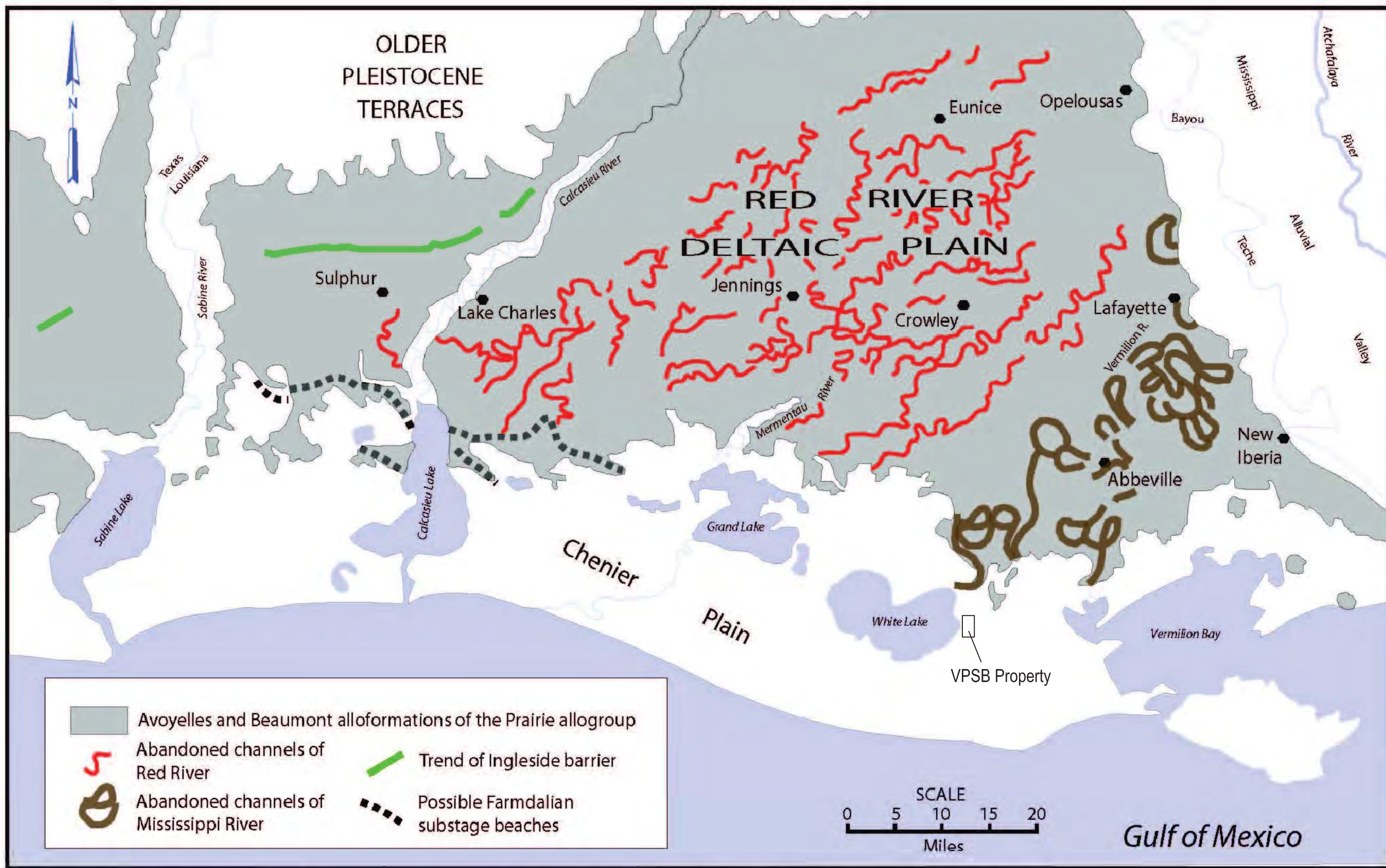


Figure 10: Locations and early interpretations of the ages and origin of fluvial and marine features of the Prairie Complex ("Prairie allogroup" in this report), southwestern Louisiana and adjacent areas of Texas. Modified from Saucier (1994).

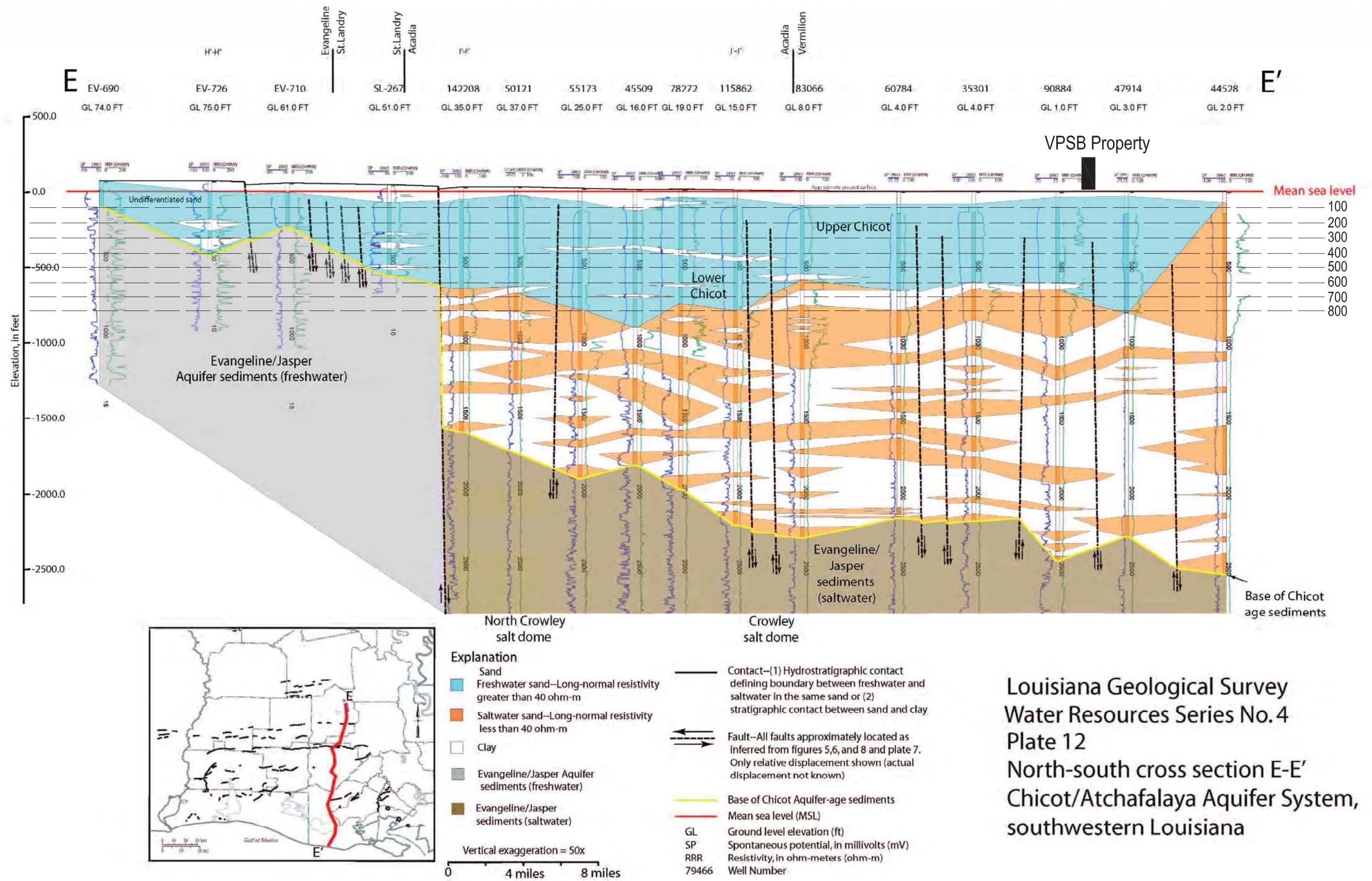


FIGURE 2-9
REGIONAL CROSS SECTION DIAGRAM
State of Louisiana and Vermilion Parish School Board v Louisiana Land and Exploration et al; Docket No. 82162, Div "D"; 15th JDC
East White Lake Field, Vermilion Parish, LA

DEPTH TO TOP OF CHICOT AQUIFER
SHALLOW SAND UNIT
AND/OR SANDS IN CONTACT WITH
AQUIFER (FT BLS)

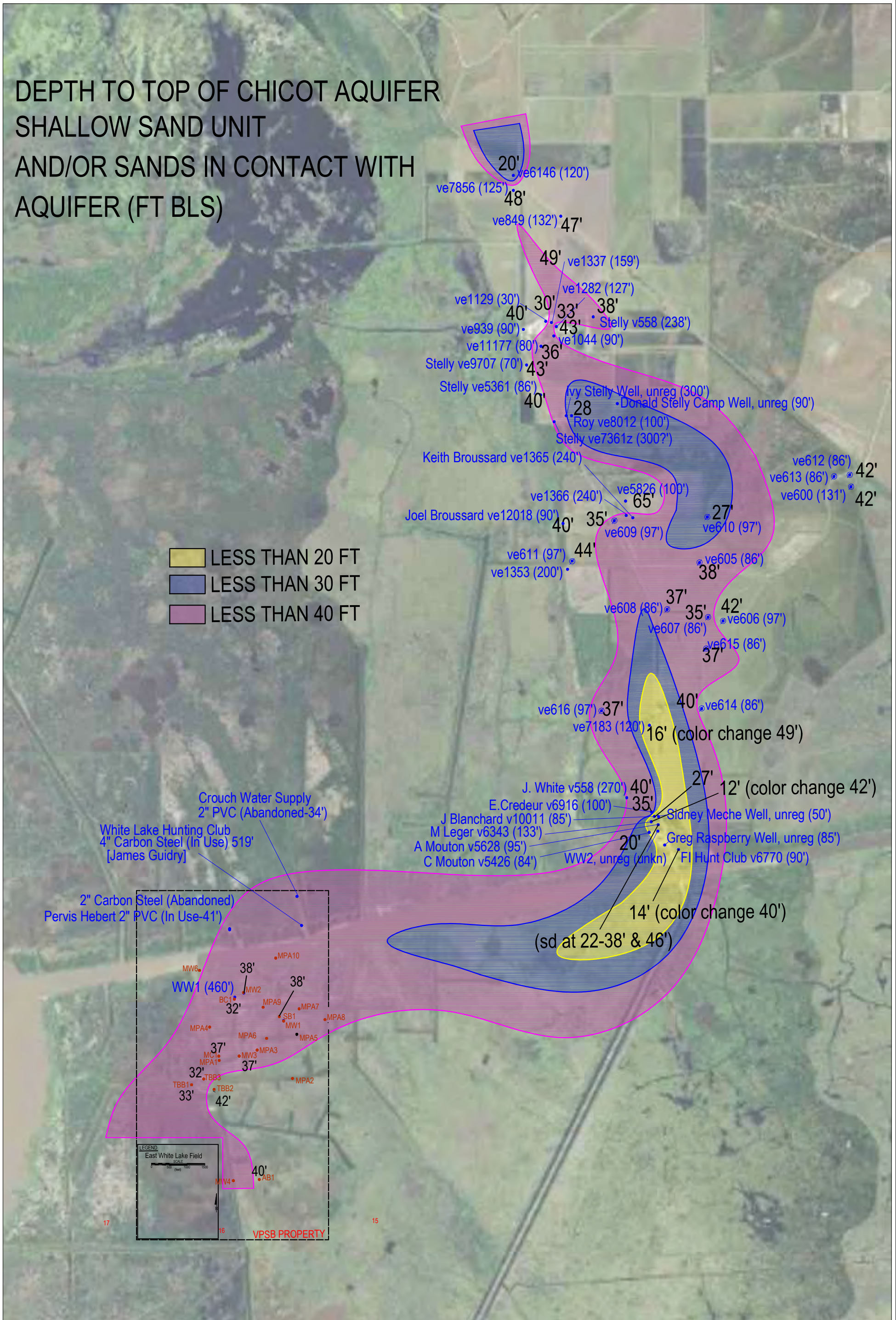


FIGURE 2-10
DEPTH TO THE TOP OF THE CHICOT AQUIFER SHALLOW SAND UNIT (OR SANDS IN CONTACT WITH THE CHICOT)
State of Louisiana and Vermilion Parish School Board v Louisiana Land and Exploration et al; Docket No. 82162, Div "D"; 15th JDC
East White Lake Field, Vermilion Parish, LA

		Date:	Dec 2015
		Figure	2-10
File Name:	whitelake2009.dwg	Drawn By:	GWM
Project Number:	9077-041-0100		
File Directory:			

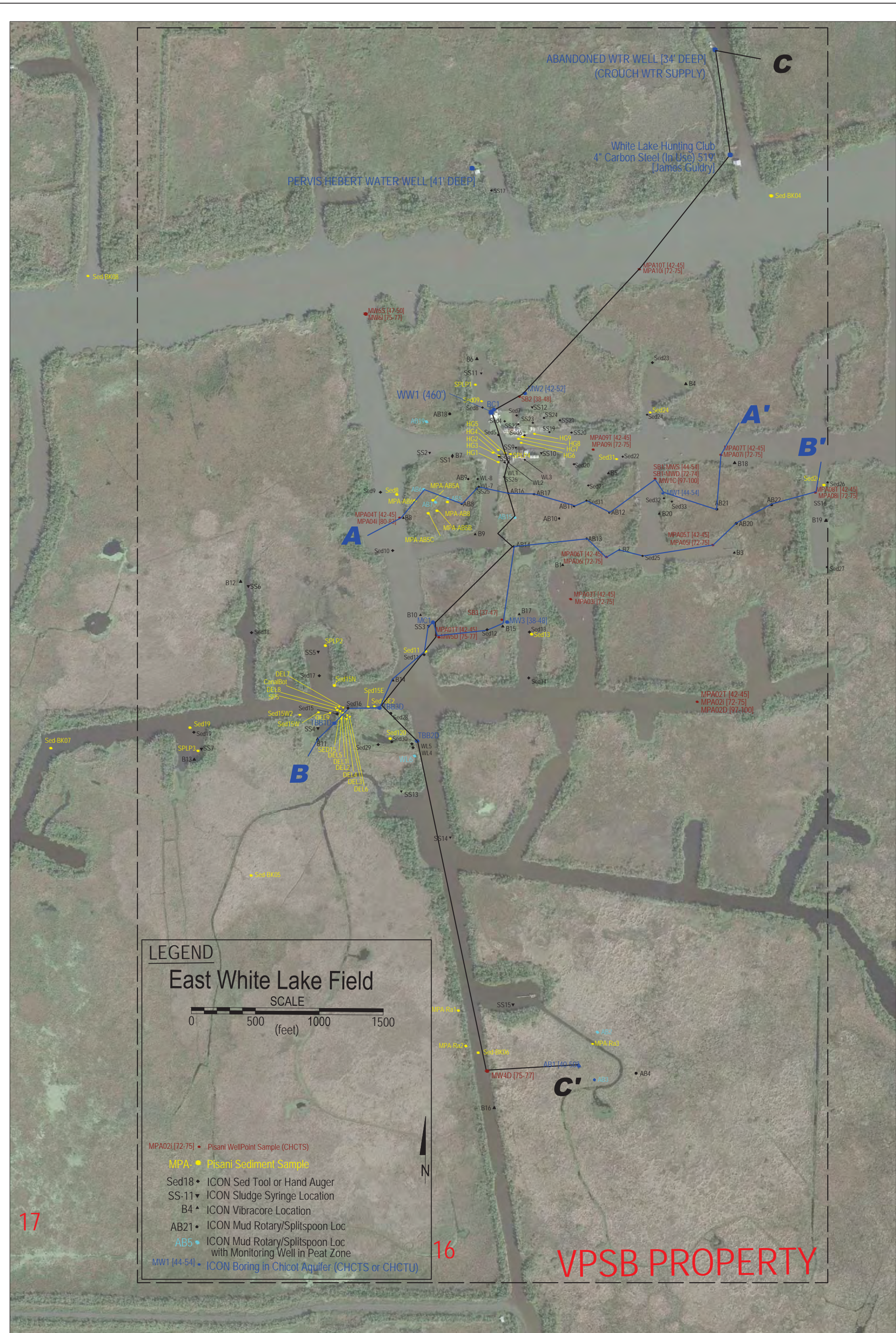
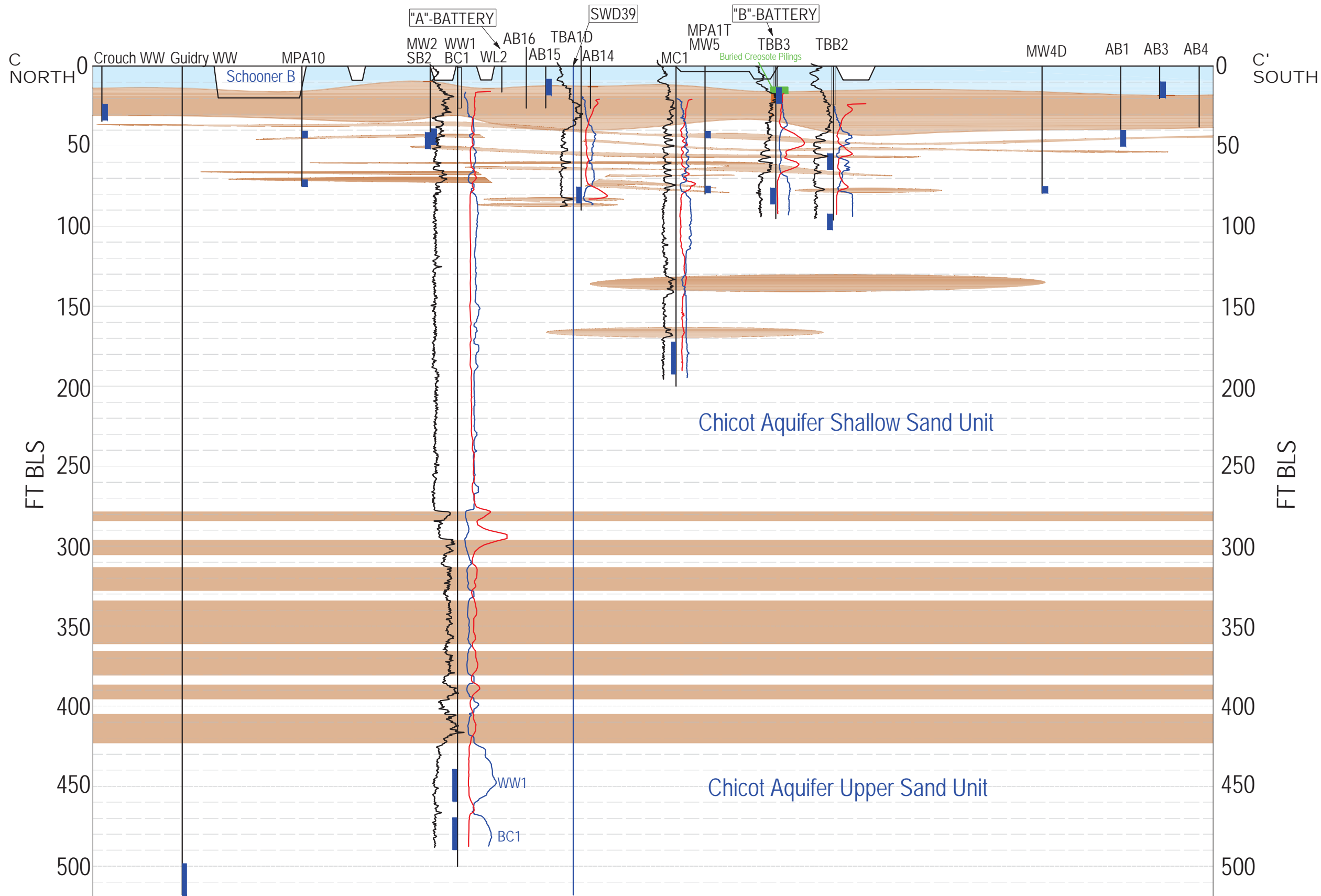
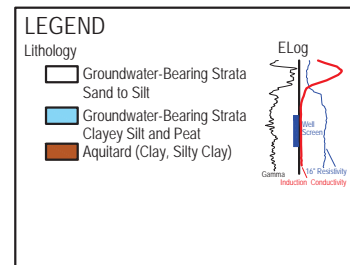


FIGURE 2-11
 CROSS SECTION TRANSECT LOCATIONS
 State of Louisiana and Vermilion Parish School Board v Louisiana Land and Exploration et al; Docket No. 82162, Div "D"; 15th JDC
 East White Lake Field, Vermilion Parish, LA

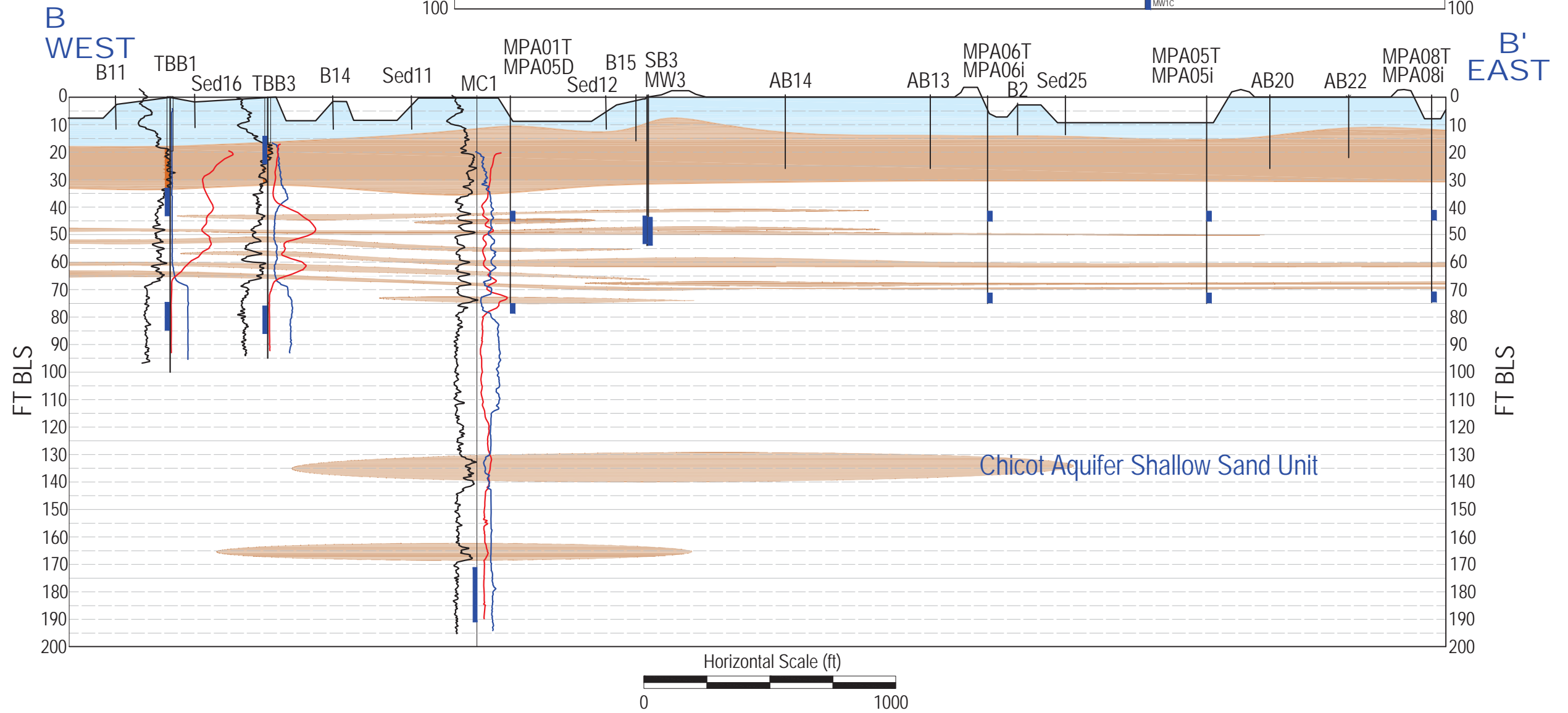
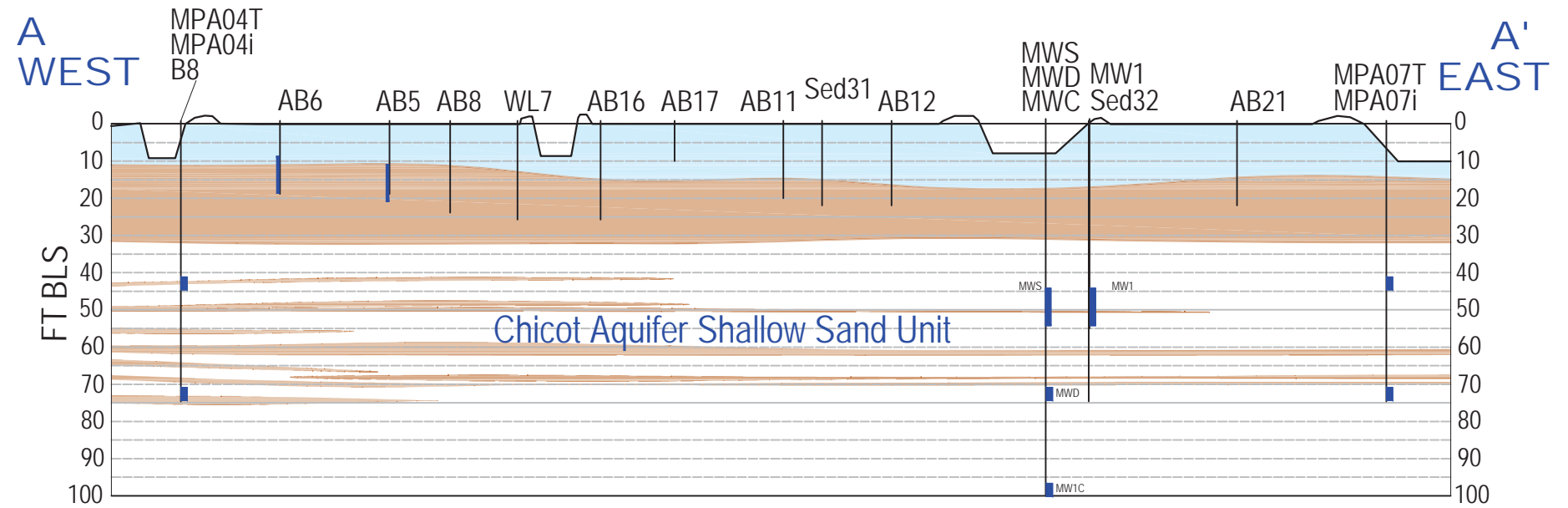
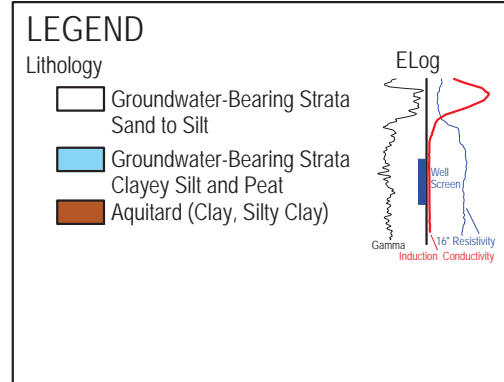


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SITE SPECIFIC NORTH-SOUTH CROSS SECTION DIAGRAM DEPICTING LITHOLOGY
 State of Louisiana and Vermilion Parish School Board v Louisiana Land and Exploration et al; Docket No. 82162, Div "D"; 15th JDC
 East White Lake Field, Vermilion Parish, LA

FILENAME	REV #
WhiteLake_XSec.dwg	
JOB NO.	DATE
9130-004-0200	DEC 2015
DIRECTORY	FIGURE NO.
Carmouche/VermParish/ELW	2-12

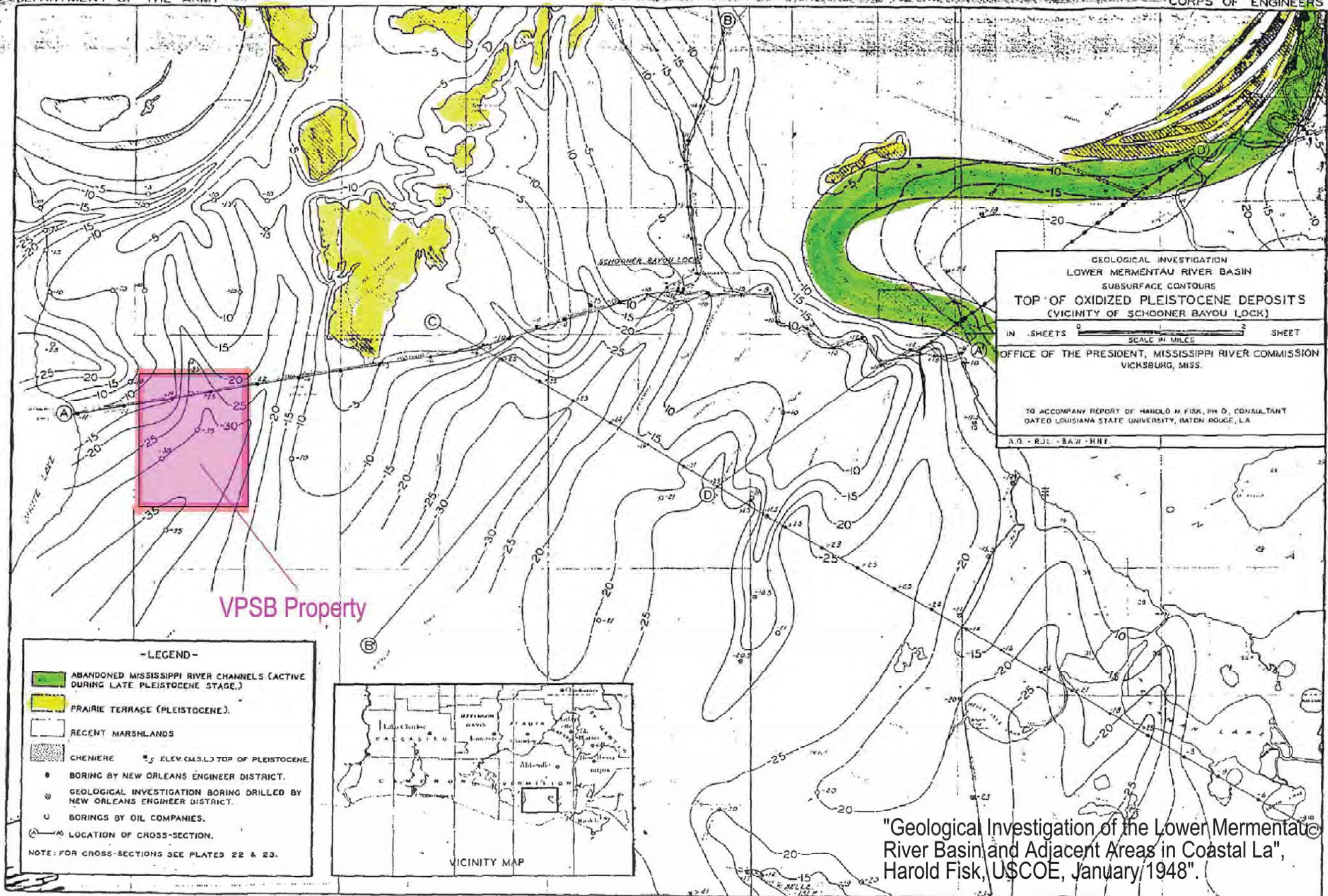


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SITE SPECIFIC EAST-WEST CROSS SECTION DIAGRAMS DEPICTING LITHOLOGY
State of Louisiana and Vermilion Parish School Board v Louisiana Land and Exploration et al; Docket No. 82162, Div "D"; 15th JDC
East White Lake Field, Vermilion Parish, LA

FILENAME	REV #
WhatLake XSecs.dwg	
JOB NO.	DATE
9130-004-0200	DEC 2015
DIRECTORY	FIGURE NO.
Carmouche/VermParish/ELM	2-13

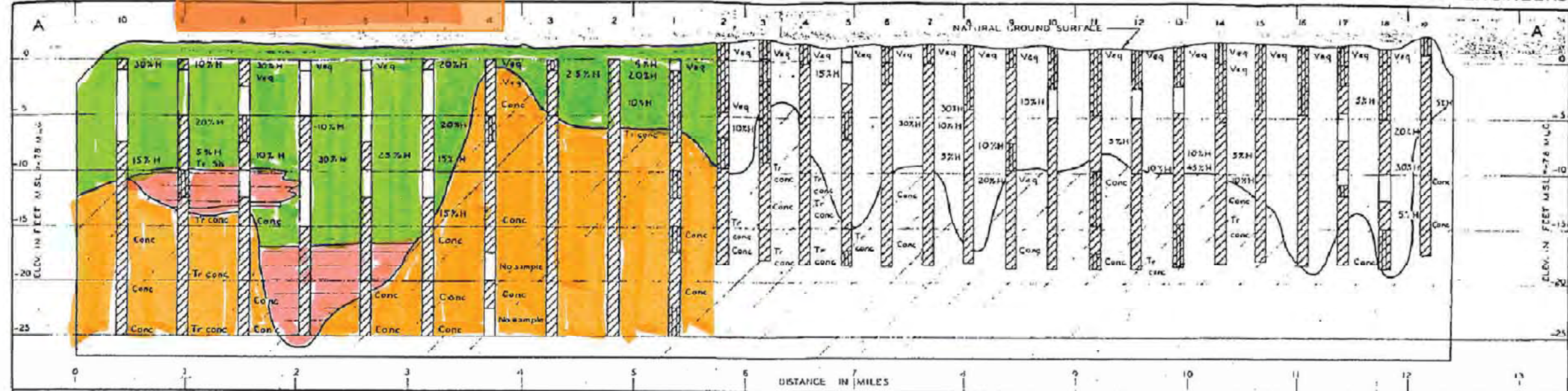


"Geological Investigation of the Lower Mermentau River Basin and Adjacent Areas in Coastal La", Harold Fisk, USCOE, January 1948".

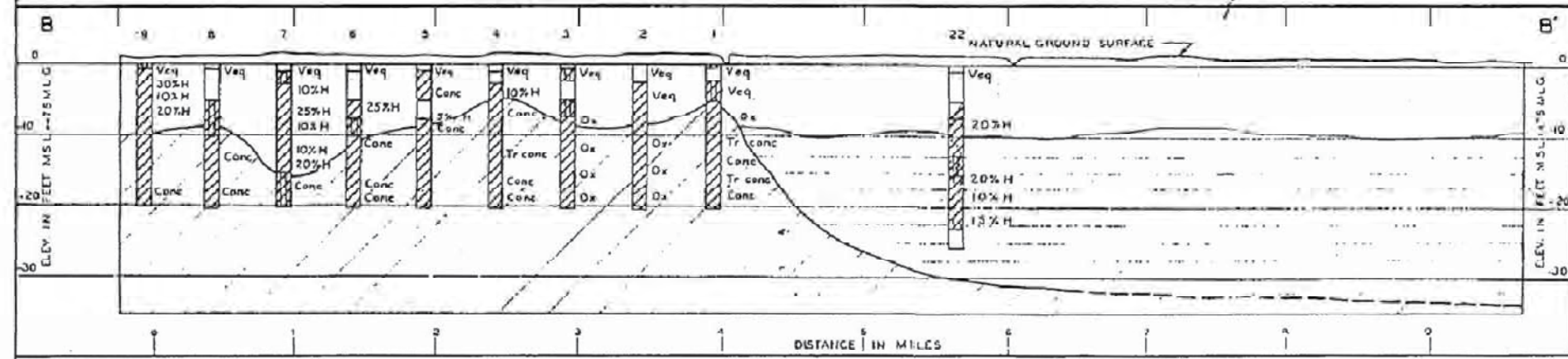
FIGURE 2-14
ELEVATION OF THE TOP OF THE PLEISTOCENE DEPOSITS
State of Louisiana and Vermilion Parish School Board v Louisiana Land and Exploration et al; Docket No. 82162, Div "D"; 15th JDC
East White Lake Field, Vermilion Parish, LA

VPSB Property

DEPARTMENT OF THE ARMY CORPS OF ENGINEERS



SECTION A-A'



SECTION B-B'

TYPES OF DEPOSITS

- RECENT: MARSH (Includes local terraces, lake and river deposits)
- RECENT: LAKE AND BAY (Includes lenses of river sediments)
- PLEISTOCENE: DELTAIC PLAIN (Undifferentiated)

LEGEND

- Clay
- Silty clay
- Humus
- Shells
- Clay silt
- Conc
- Tr
- Veg
- H
- Ox
- Sh
- Concretion
- Trace
- Vegetation
- Humus
- Oxidized
- Shell

Note: For location of cross sections see Plate 21

"Geological Investigation of the Lower Mermentau River Basin and Adjacent Areas in Coastal La", Harold Fisk, USCOE, January 1948"

GEOLOGICAL INVESTIGATION
LOWER MERMENTAU RIVER BASIN, LA.
CROSS SECTIONS A-A' AND B-B'
VICINITY OF SCHOONER BAYOU

IN SHEETS SCALAR AS SHOWN SHEET

OFFICE OF THE PRESIDENT, MISSISSIPPI RIVER COMMISSION
VICKSBURG, MISS.

TO ACCOMPANY REPORT OF HAROLD H. FISK PH. D. CONSULTANT
DAVID LOUISIANA STATE UNIVERSITY, BATON ROUGE, LA.

FILE

PLATE 22

FIGURE 2-15
CROSS SECTION OF THE TOP OF THE PLEISTOCENE DEPOSITS
State of Louisiana and Vermilion Parish School Board v Louisiana Land and Exploration et al; Docket No. 82162, Div "D"; 15th JDC
East White Lake Field, Vermilion Parish, LA

ICON
2049 Commercial Dr., Port Allen, LA 70767
File Name: whitelake2009.dwg Date: DEC 2015
Project Number: 9077-041-0100 Source: 2-15
File Directory
Drawn By: GWM

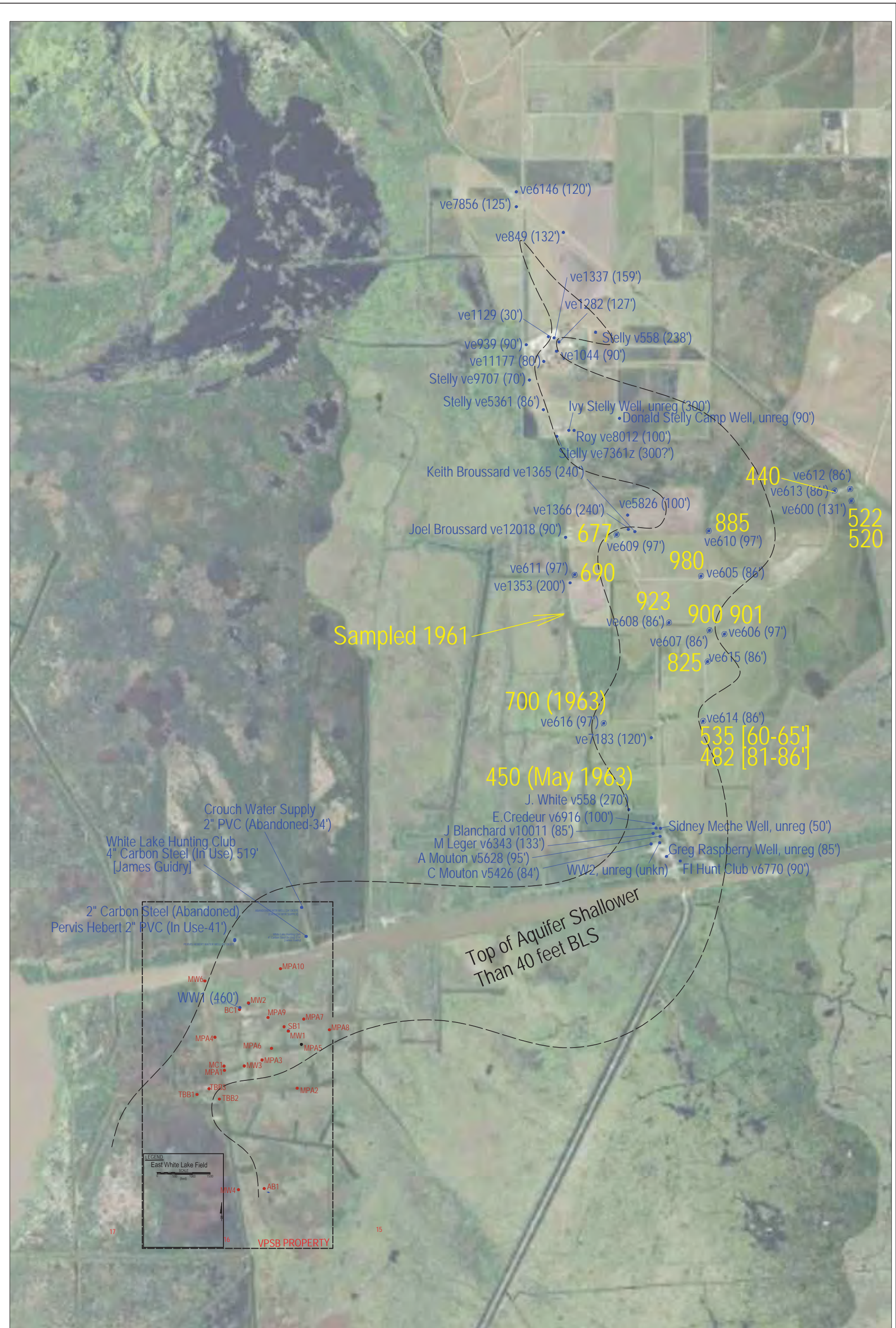


FIGURE 2-16
 GROUNDWATER CHLORIDES IN THE CHICOT AQUIFER SHALLOW SAND UNIT IN THE 1960's
 State of Louisiana and Vermilion Parish School Board v Louisiana Land and Exploration et al; Docket No. 82162, Div "D"; 15th JDC
 East White Lake Field, Vermilion Parish, LA

		Date:	Dec 2015
		Figure	2-16
File Name:	whitelake2009.dwg	Project Number:	9077-041-0100
File Directory:		Drawn By:	GWM

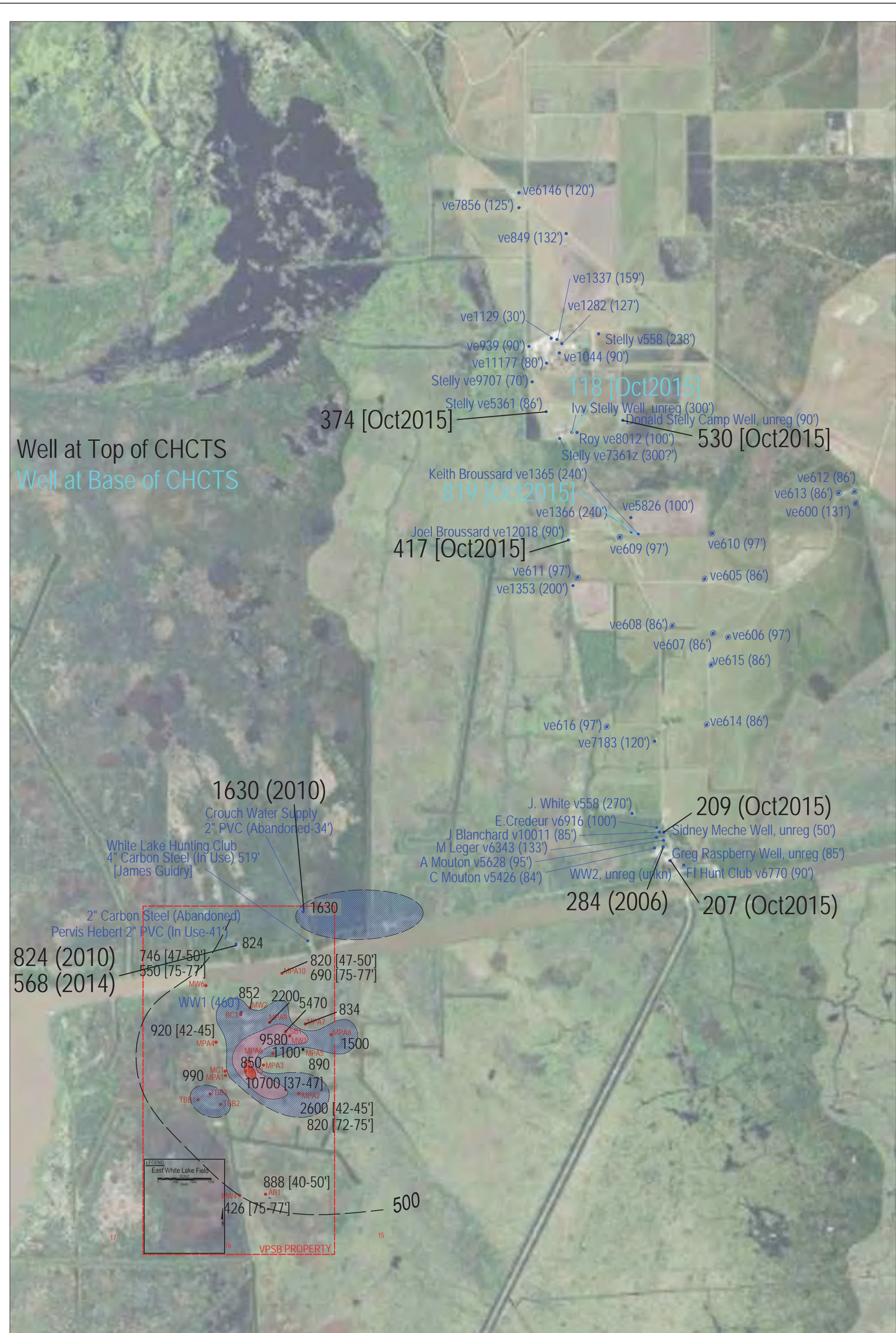


FIGURE 2-17
 GROUNDWATER CHLORIDES IN THE CHICOT AQUIFER SHALLOW SAND UNIT IN RECENT SAMPLES
 State of Louisiana and Vermilion Parish School Board v Louisiana Land and Exploration et al; Docket No. 82162, Div "D"; 15th JDC
 East White Lake Field, Vermilion Parish, LA

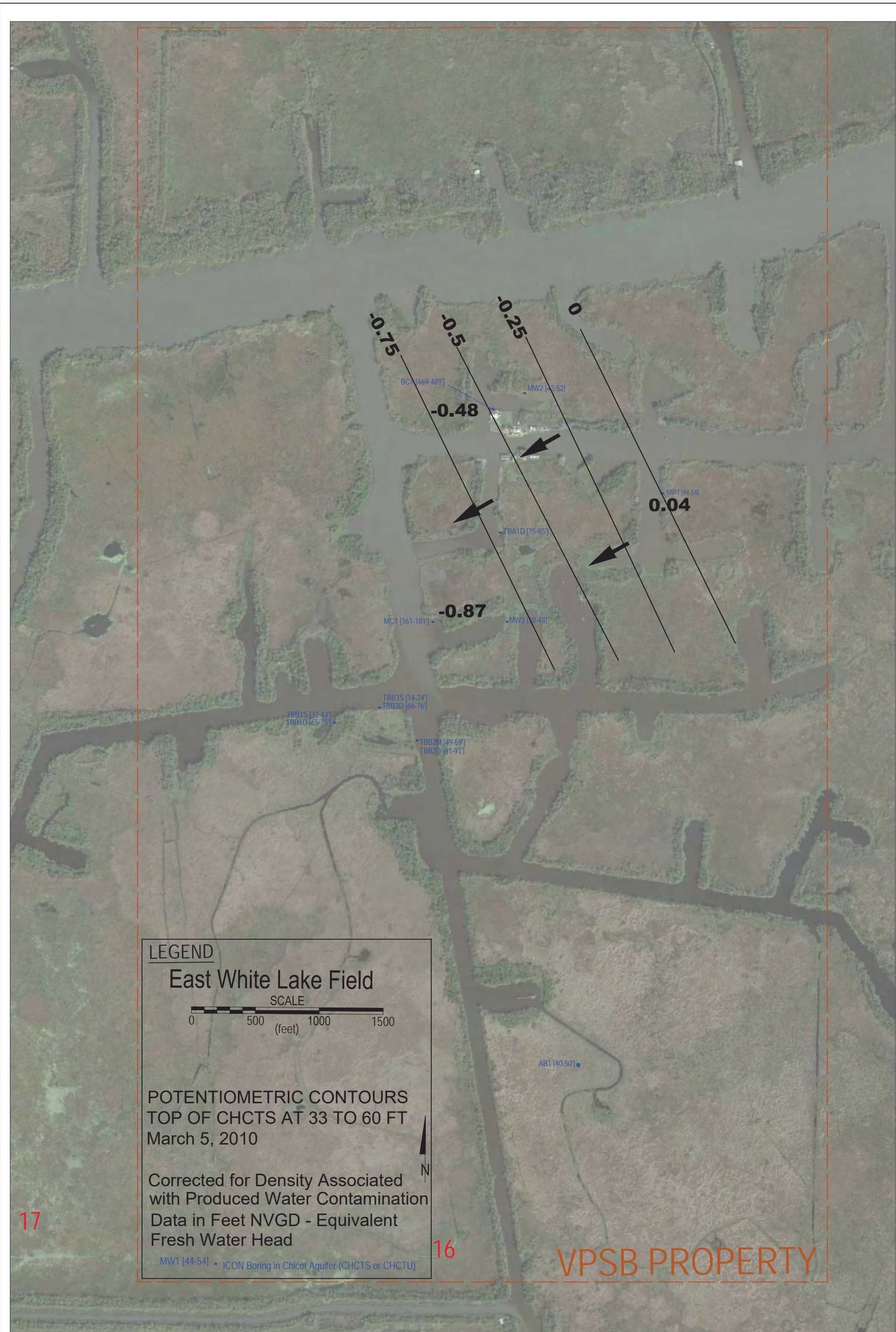


Figure 2-18
 POTENTIOMETRIC CONTOURS FOR THE TOP OF THE CHCTS ON MARCH 5, 2010 (EQUIVALENT FRESH WATER HEAD)
 State of Louisiana and Vermilion Parish School Board v Louisiana Land and Exploration et al; Docket No. 82162, Div "D"; 15th JDC
 East White Lake Field, Vermilion Parish, LA

		Date:	Dec 2015
		Figure	2-18
File Name:	whitelake2009.dwg	File Directory:	
Project Number:	9077-041-0100	Drawn By:	GWM

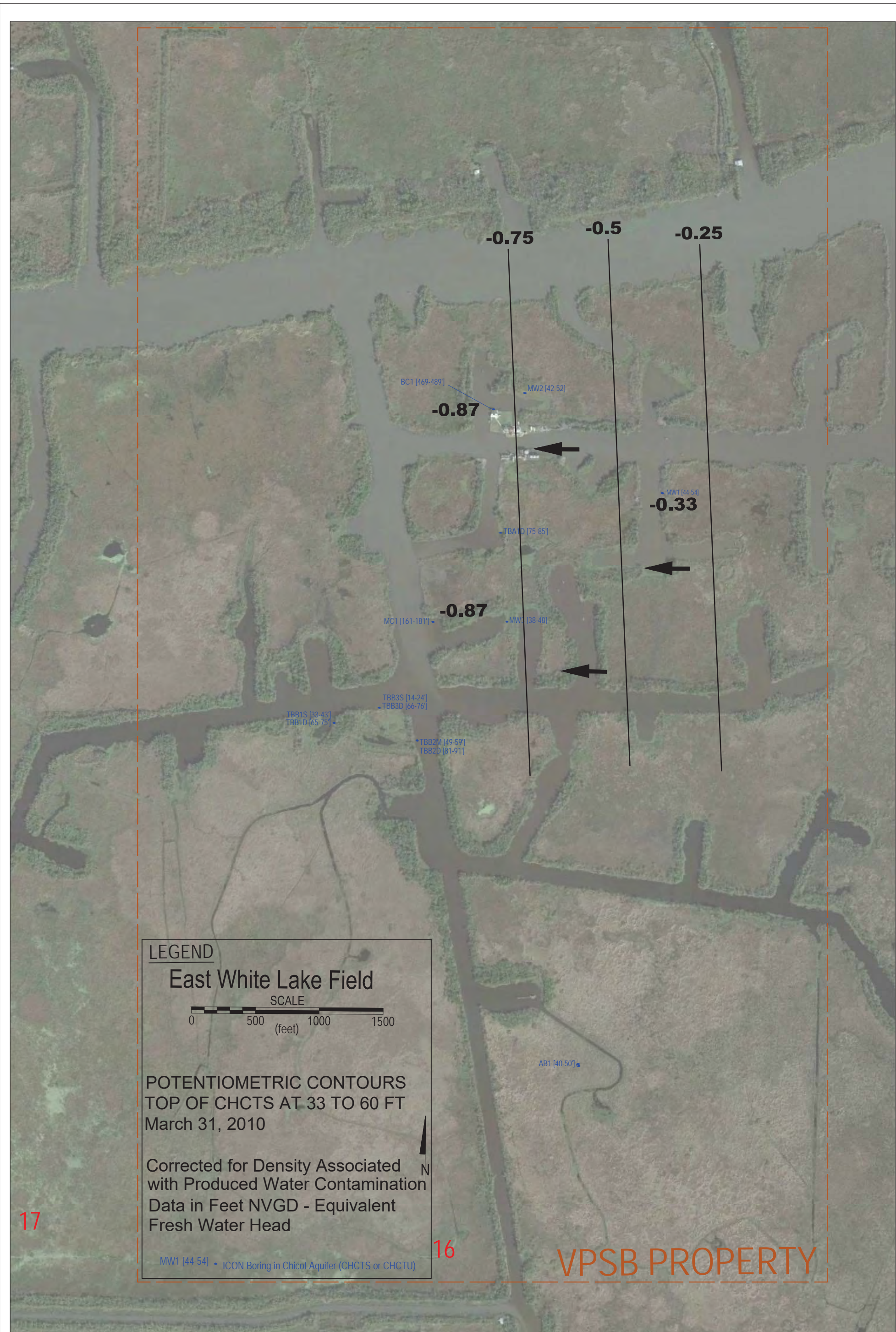


Figure 2-19
 POTENTIOMETRIC CONTOURS FOR THE TOP OF THE CHCTS ON MARCH 31, 2010 (EQUIVALENT FRESH WATER HEAD)
 State of Louisiana and Vermilion Parish School Board v Louisiana Land and Exploration et al; Docket No. 82162, Div "D"; 15th JDC
 East White Lake Field, Vermilion Parish, LA

		Date:	Dec 2015
		Figure	2-19
File Name:	whitelake2009.dwg	File Directory:	
Project Number:	9077-041-0100	Drawn By:	GWM

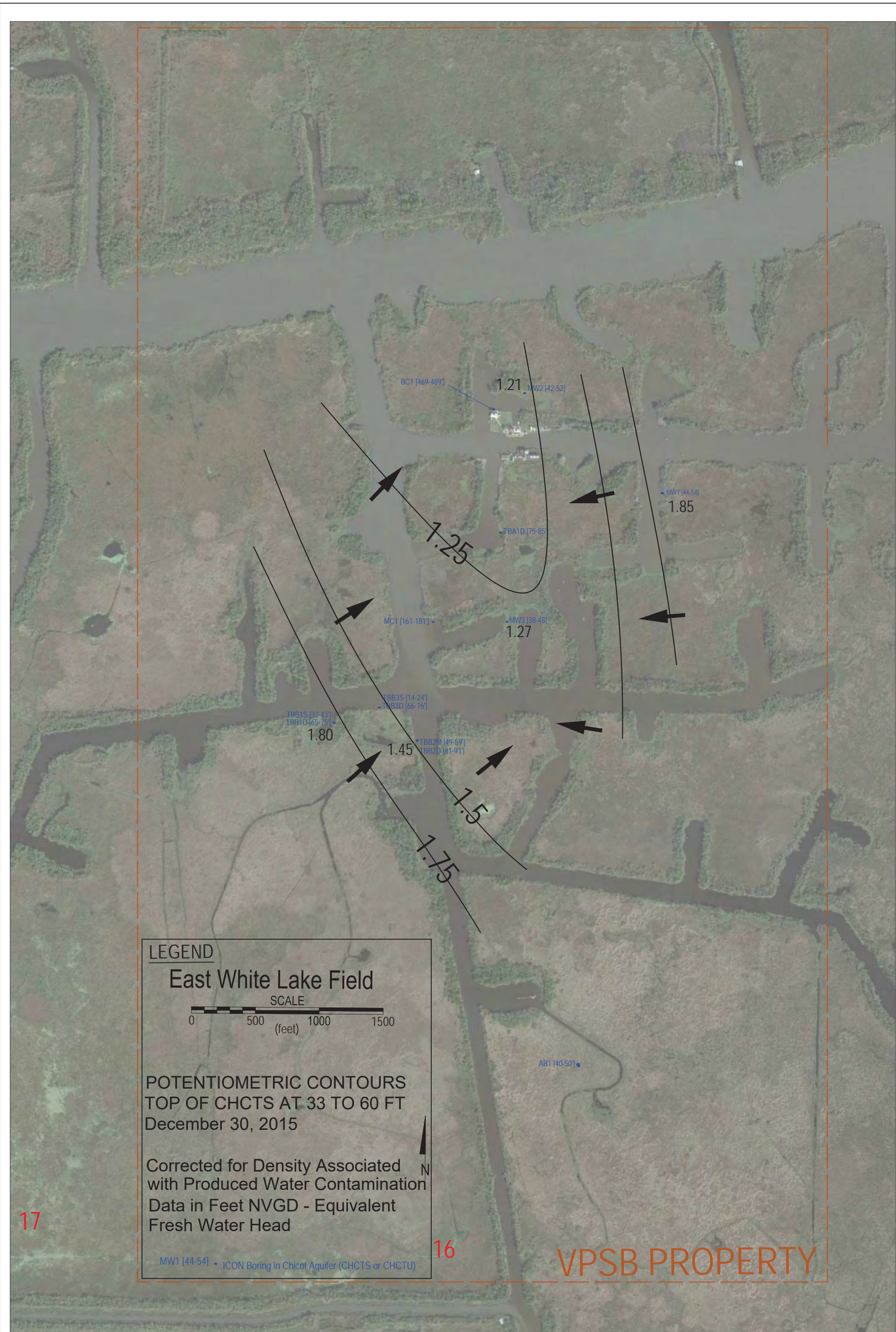


Figure 2-20
 POTENTIOMETRIC CONTOURS FOR THE TOP OF THE CHCTS ON MARCH 31, 2010 (EQUIVALENT FRESH WATER HEAD)
 State of Louisiana and Vermilion Parish School Board v Louisiana Land and Exploration et al; Docket No. 82162, Div "D"; 15th JDC
 East White Lake Field, Vermilion Parish, LA

		Date:	Dec 2015
		Figure	2-20
File Name:	whitelake2009.dwg	File Directory:	
Project Number:	9077-041-0100	Drawn By:	GWM

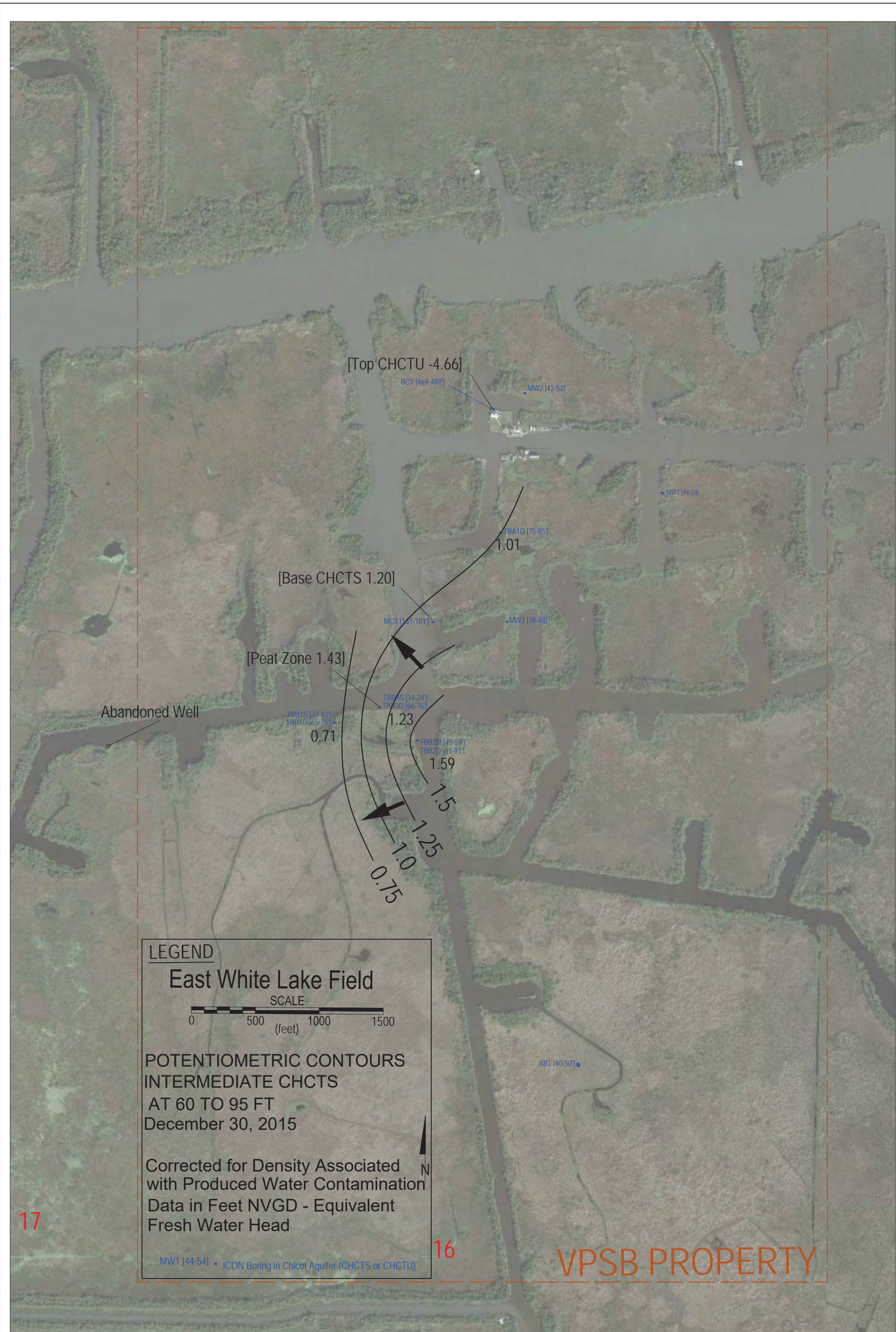
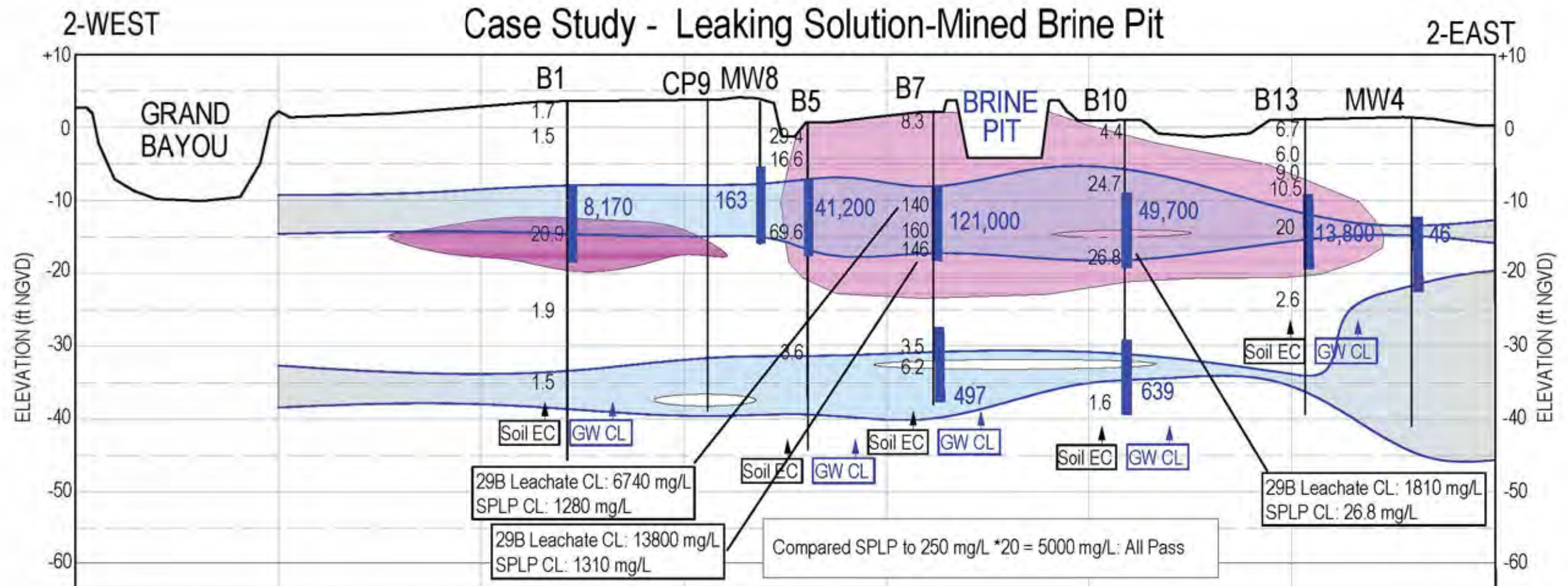


Figure 2-21
 POTENTIOMETRIC CONTOURS AT INTERMEDIATE CHCTS ON DECEMBER 30, 2015 (EQUIVALENT FRESH WATER HEAD)
 State of Louisiana and Vermilion Parish School Board v Louisiana Land and Exploration et al; Docket No. 82162, Div "D"; 15th JDC
 East White Lake Field, Vermilion Parish, LA

		File Name: whitelake2009.dwg	Date: Dec 2015
		Project Number: 9077-041-0100	Figure: 2-21
File Directory		Drawn By: GWM	



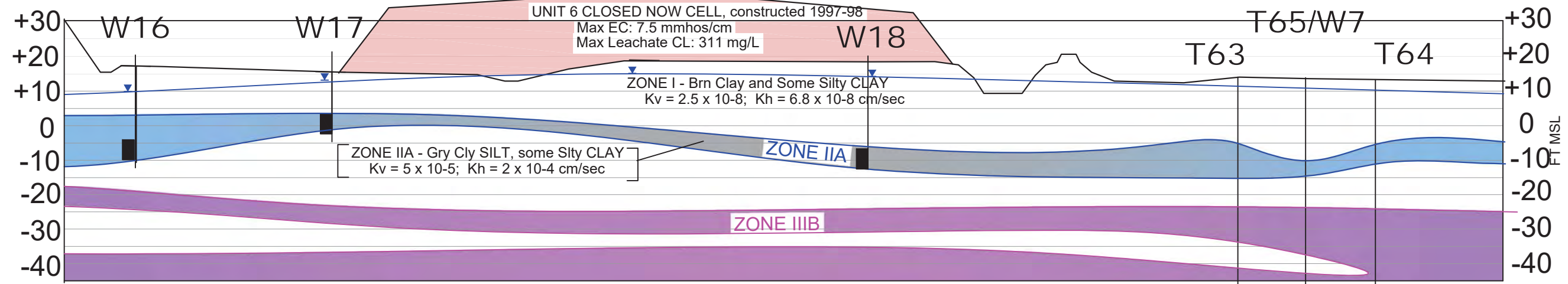
Aug 2013
Liner
Inspection
Photos

1973	Began operations, pit installed
6/11/1978	Installed FRP liner in 2 million gallon brine pond, Kote-Line, Inc, Odessa Tx
	Ltr to GP: "attempt made once again to have 90% proctor - original liner had no leak detection system to remove fresh wtr accumulation from under liner. New liner will have leak detection system so that we could monitor quality of fresh water beneath liner, as well as determine if the liner had holes in it"
7/12/1978	Visual inspection, "major maintenance repair work needed to stay in compliance with the State of Louisiana regulators regarding pits"
5/26/1987	Repaired cracks in FG liner, coat with 7 mil carboline 133-HB Polyurethane.
9/10/1987	removed brine, repaired 3 cracks on N side. Leak detect density increasing. Left 18" sludge in place
3/1/1990	Repaired 2 splits in FG brine pit liner on N side. 8 ft long. bled gas from BW1
11/30/1990	Clean brine pond, repair liner, leak detect density reached 85%. Removed 1250 yds sludge from pit. Crack on N side 3ft long, crack near discharge pipe into pit 12" long, 2 cracks 1" long near concrete sump pump
3/31/1992	Brine pond liner repaired
4/16/1992	Sump pump cant keep up with leak rate
7/22/1996	repaired 150 leaks in liner, quote is \$20,000
9/4/1996	fiberglass liner split second time on bottom.
9/21/1996	Spent \$47207 repairing liner
9/30/1996	fiberglass liner split third time on bottom
10/3/1996	Leaks in brine pit liner, need to repair to comply with 29B, est cost \$30,000 - ltr to Shelly Nettler at GG
5/2/1998	Shelly Nettler called asked about replacing pit with a tank.
5/31/1998	repair brine pit
9/19/1998	completed repairs, after filling, pit still leaks
7/20/2001	Leaks in brine liner, need repair, estimated cost \$5952
	Phase I questionnaire: Scott Whiteley, Operator - ESH, Houston Tx. Question: are you aware of any current or past leakages of the brine pit? Answer: "No"
4/15/2002	Comparison of estimate for brine pond liner repair and actual cost by TB personnel and B&B Labor, estimate of \$33050, actual cost of \$13584
8/30/2002	THE ONLY TBC PIT TO NOT UTILIZE RECOMPACTED CLAY BENEATH SYNTHETIC LINER IS AT GG GRAND BAYOU, WHERE WE DID NOT HAVE CLAY PRESENT. TX PRC REQUIRES 3 SYNTHETIC LINERS. (Jimmy Tichenor to Jeff McCartney)
7/21/2005	Quote ISFI Constructors to repair FRP liner on walls and bottom using up to 1 drum resin, trench anchor ditch, install 1500 linear feet of 12"x1" drainage structure on 25' grid pattern over FRP liner, install 4" PVC leak detection pipe, install 36000 sf of 10 oz geomembrane over FRP, install 33000 sf of new 60 mil polypropylene membrane top liner. \$86,630
2/2/2012	PO to Eco Seal LLC for repair of brine liner, coat 100 sq ft of damaged liner with EcoSeal 400 pit liner membrane, \$11,450
4/18/2012	

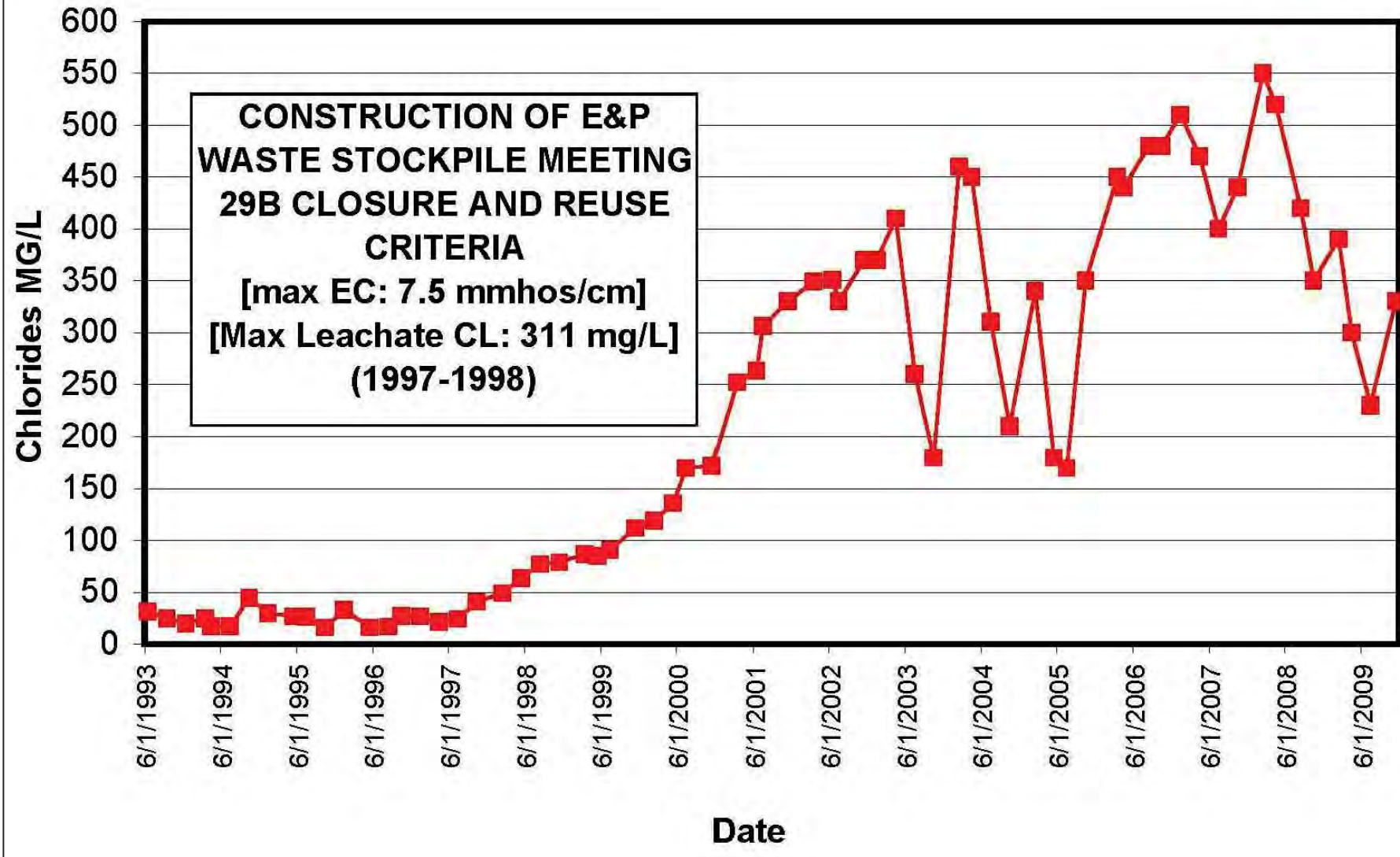
Leak Record

A (WEST)

A' (EAST)



Groundwater Chlorides in Monitoring Well Adjacent to Closed Stockpile



Layer V



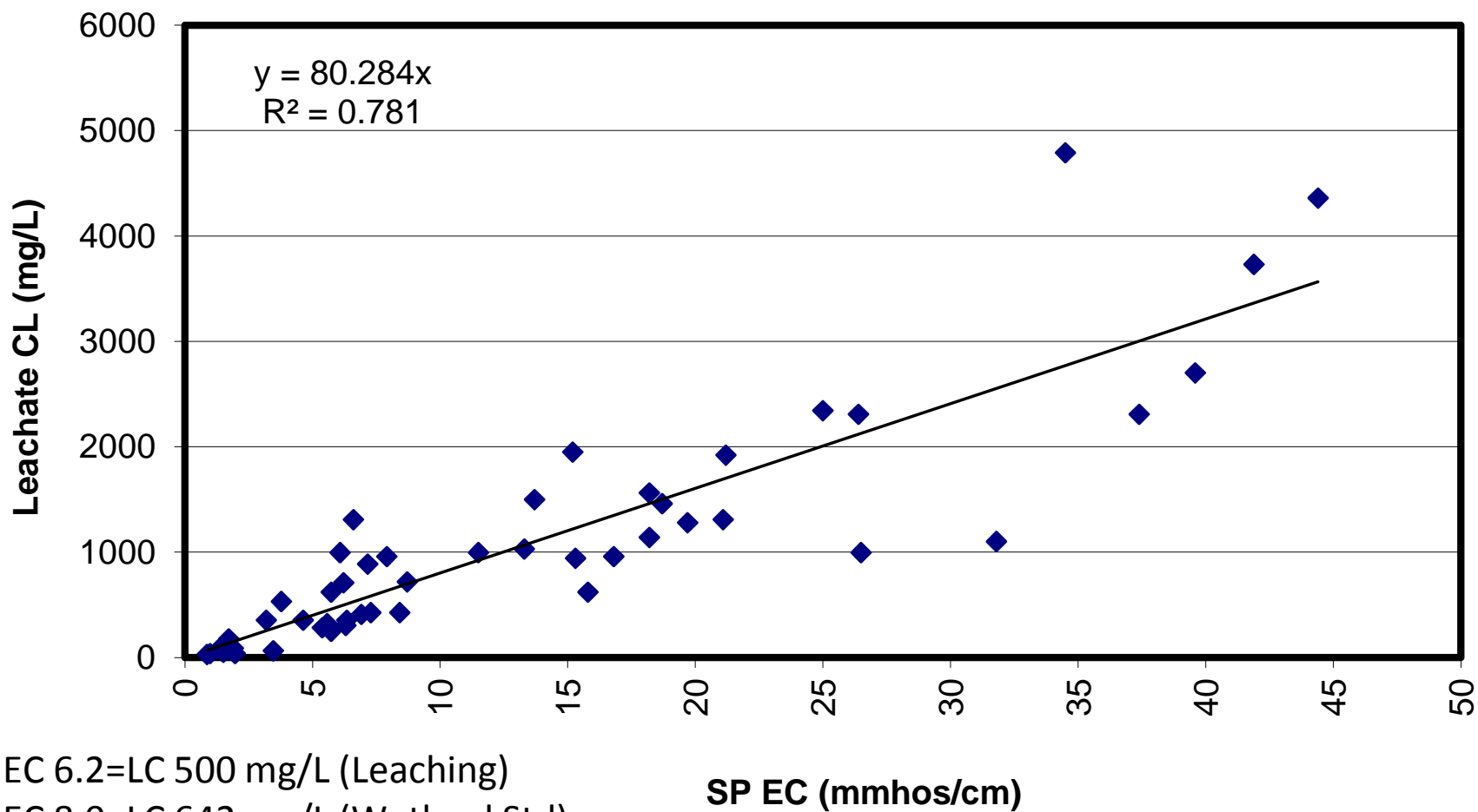
PREPARED BY:
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Port Allen, Louisiana 70767

PREPARED FOR:
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17405 Perkins Road
Baton Rouge, Louisiana 70810

FIELD RESULTS OF 29B LEACHATE CHLORIDE TEST
State of Louisiana and VPSB v LL&E, et al; Docket No. 82162, Div "D"; 15th JDC
East White Lake Field, Vermilion Parish, LA

FILENAME	REV #
JOB NO.	DATE JAN 2016
DIRECTORY	FIGURE NO.
	2-23

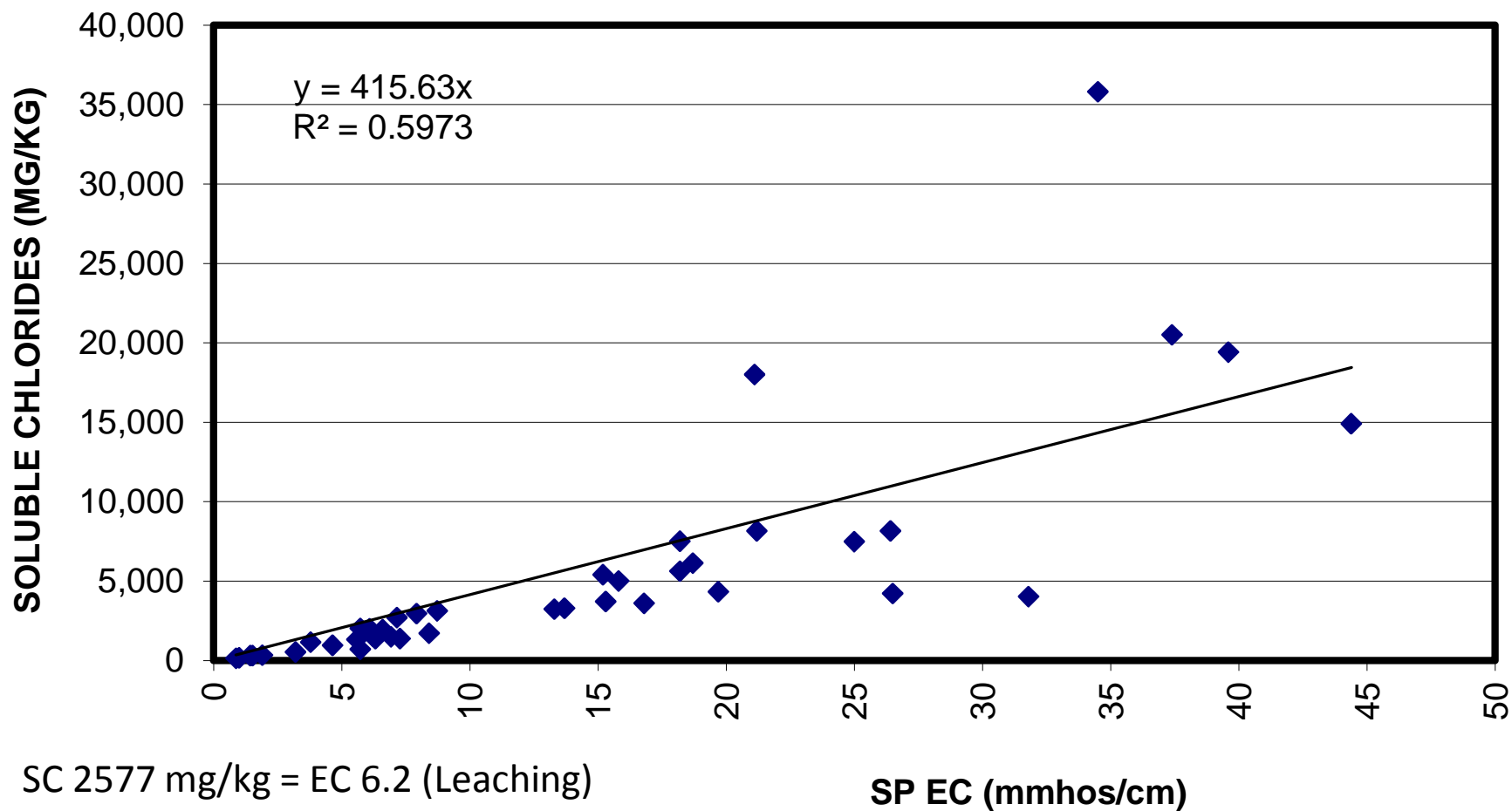
FIGURE 2-24
Soil EC v 29B Leachate Chlorides



EC 6.2=LC 500 mg/L (Leaching)
EC 8.0=LC 642 mg/L (Wetland Std)

SP EC (mmhos/cm)

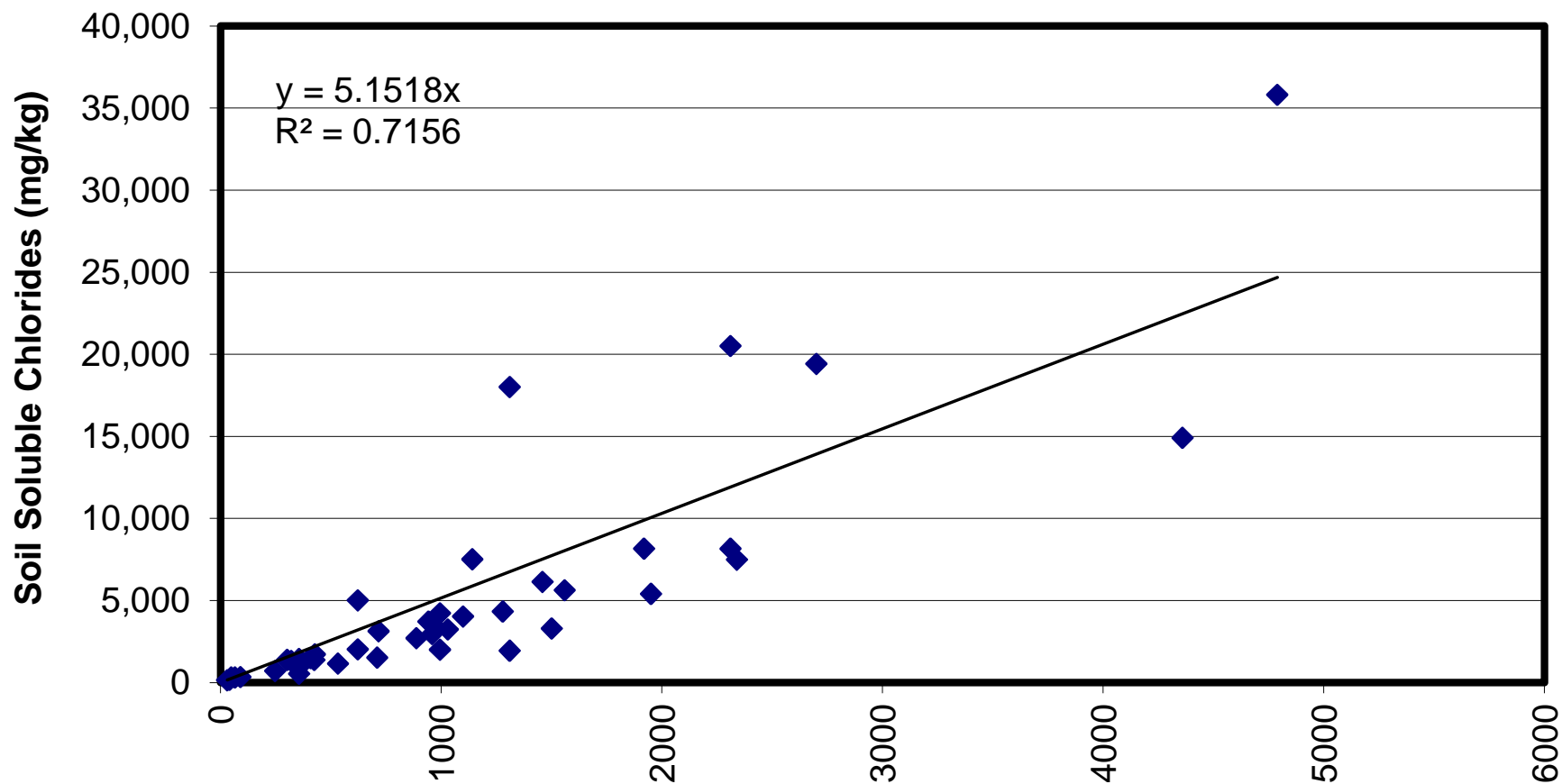
FIGURE 2-25
Soil Soluble Chlorides v Soil EC



SC 2577 mg/kg = EC 6.2 (Leaching)
SC 3325 mg/kg = EC 8 (Wetland Std)

SP EC (mmhos/cm)

FIGURE 2-26
Soil Soluble Chlorides v 29B Leachate Chlorides



SC 2576 mg/kg = LC 500 mg/L (Leaching)
SC 3325 mg/kg = LC 645 mg/L (Wetland Std)

29B Leachate Chlorides (mg/L)