

LM LAUGENOUR AND MEIKLE
 CIVIL ENGINEERING - LAND SURVEYING - PLANNING
 2000 MARKET STREET, SUITE 200, SAN FRANCISCO, CA 94102
 TEL: 415.774.1100 FAX: 415.774.1101



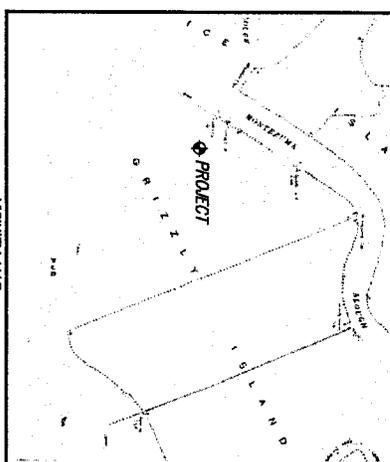
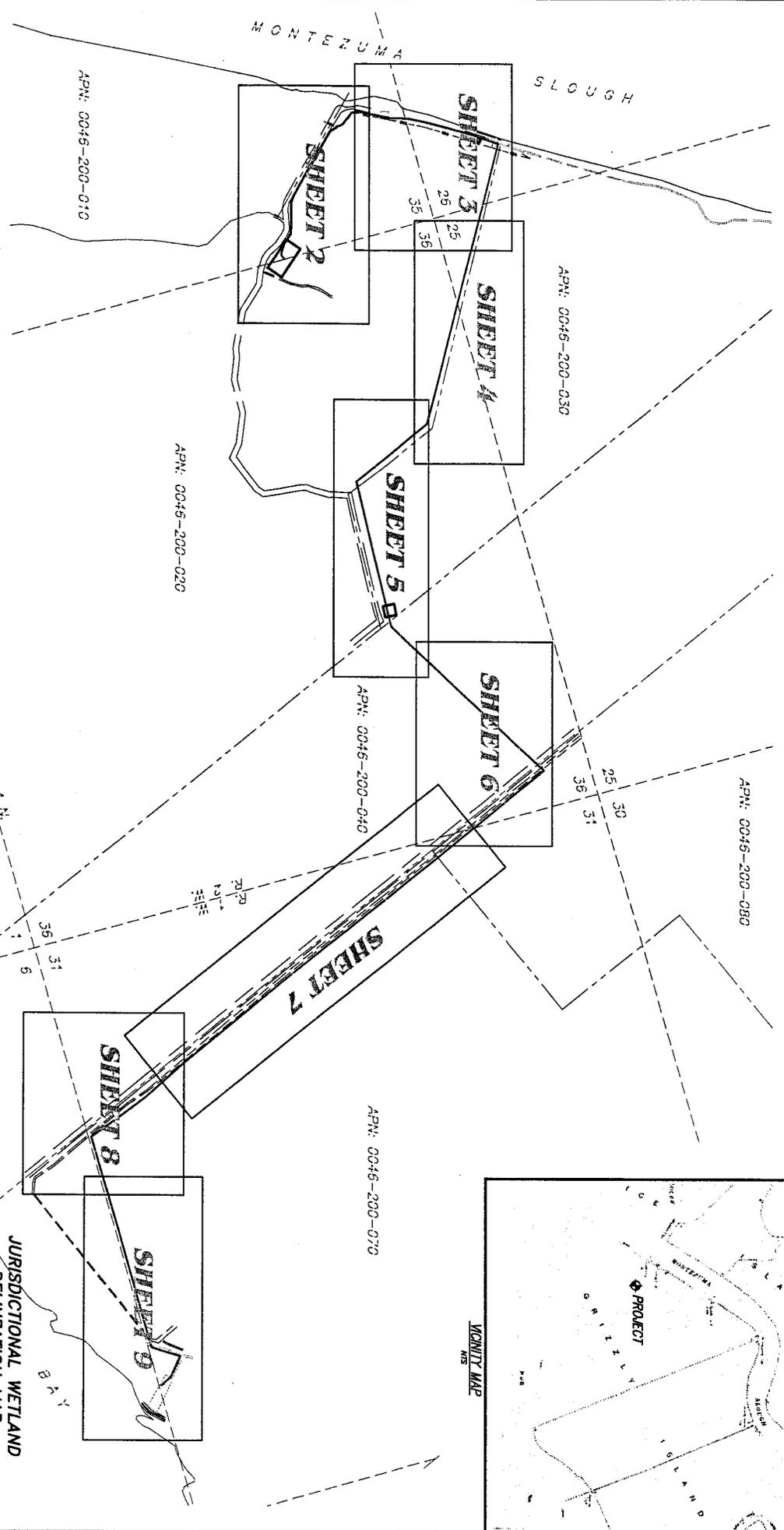
U.S. Army Corps
 of Engineers
 San Francisco District
 Regulatory Division

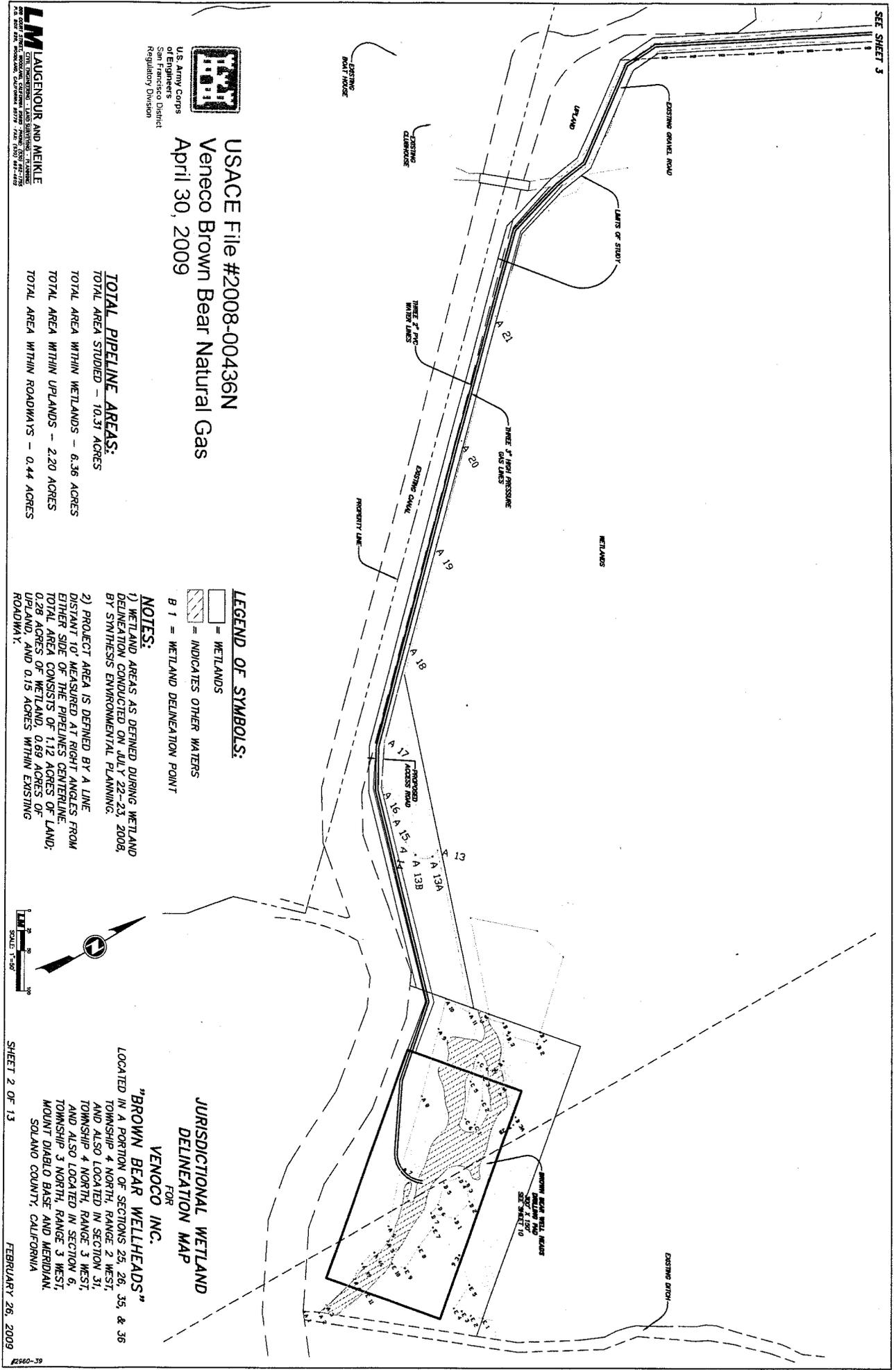
USACE File #2008-00436N
 Veneco Brown Bear Natural Gas
 April 30, 2009



SHEET 1 OF 13
 FEBRUARY 26, 2009

"BROWN BEAR WELLHEADS"
 FOR
VENOCO INC.
**JURISDICTIONAL WETLAND
 DELINEATION MAP**
 LOCATED IN A PORTION OF SECTIONS 25, 26, 35, & 36
 TOWNSHIP 4 NORTH, RANGE 2 WEST,
 AND ALSO LOCATED IN SECTION 31,
 TOWNSHIP 4 NORTH, RANGE 3 WEST,
 AND ALSO LOCATED IN SECTION 6,
 TOWNSHIP 3 NORTH, RANGE 3 WEST,
 MOUNT DIABLO BASE AND MERIDIAN,
 SOLANO COUNTY, CALIFORNIA





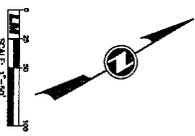
USACE File #2008-00436N
 Veneco Brown Bear Natural Gas
 April 30, 2009

LM LAUGENOUR AND MEIKLE
 CIVIL ENGINEERING - LAND SURVEYING - PLANNING
 10000 W. 10th Ave., Suite 200, Golden, CO 80401
 TEL: 303.440.1100 FAX: 303.440.1101

TOTAL PIPELINE AREAS:
 TOTAL AREA STUDIED - 10.37 ACRES
 TOTAL AREA WITHIN WETLANDS - 6.36 ACRES
 TOTAL AREA WITHIN UPLANDS - 2.20 ACRES
 TOTAL AREA WITHIN ROADWAYS - 0.44 ACRES

LEGEND OF SYMBOLS:
 [Symbol] = WETLANDS
 [Symbol] = INDICATES OTHER WATERS
 B 1 = WETLAND DELINEATION POINT

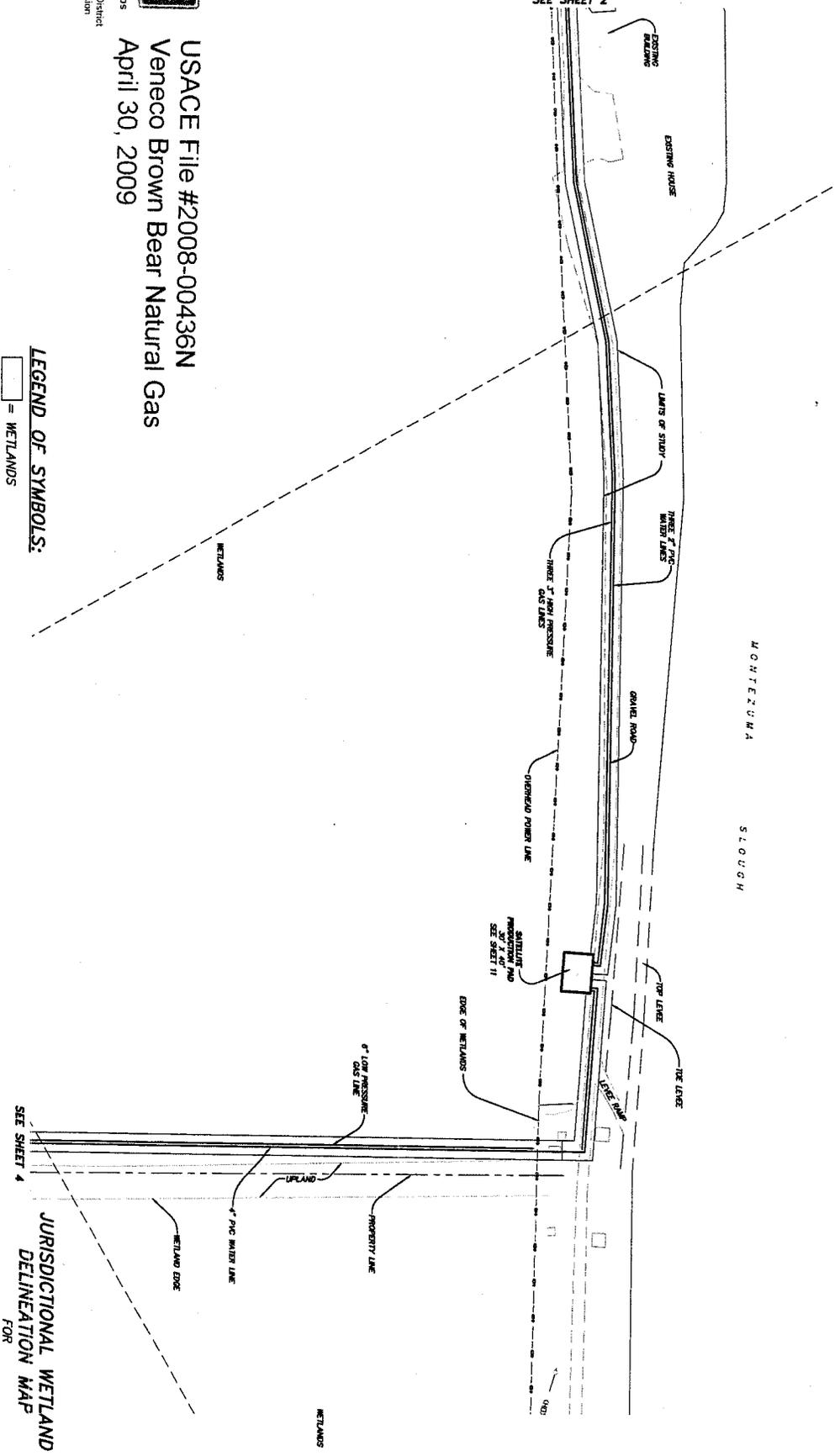
NOTES:
 1) WETLAND AREAS AS DEFINED DURING WETLAND DELINEATION CONDUCTED ON JULY 22-23, 2008, BY SYNTHESIS ENVIRONMENTAL PLANNING.
 2) PROJECT AREA IS DEFINED BY A LINE DISTANT 10' MEASURED AT RIGHT ANGLES FROM EITHER SIDE OF THE PIPELINE CENTERLINE. TOTAL AREA CONSISTS OF 1.12 ACRES OF LAND, 0.28 ACRES OF WETLAND, 0.69 ACRES OF UPLAND, AND 0.15 ACRES WITHIN EXISTING ROADWAY.



JURISDICTIONAL WETLAND DELINEATION MAP
 FOR
VENOCO INC.
"BROWN BEAR WELLSHEADS"
 LOCATED IN A PORTION OF SECTIONS 25, 26, 35, & 36 TOWNSHIP 4 NORTH, RANGE 2 WEST, AND ALSO LOCATED IN SECTION 31, TOWNSHIP 4 NORTH, RANGE 3 WEST, AND ALSO LOCATED IN SECTION 6, TOWNSHIP 3 NORTH, RANGE 3 WEST, MOUNT DIAULO BASE AND MERIDIAN, SOLANO COUNTY, CALIFORNIA

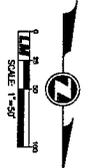


USACE File #2008-00436N
 Veneco Brown Bear Natural Gas
 April 30, 2009



LEGEND OF SYMBOLS:
 [Symbol] = WETLANDS

- NOTES:**
- 1) WETLAND AREAS AS DEFINED DURING WETLAND DELINEATION CONDUCTED ON JULY 22-23, 2008, BY SYNTHESIS ENVIRONMENTAL PLANNING.
 - 2) PROJECT AREA IS DEFINED BY A LINE DISTANT 10' MEASURED AT RIGHT ANGLES FROM EITHER SIDE OF THE PIPELINE CENTERLINE. TOTAL AREA CONSISTS OF 0.73 ACRES OF LAND, 0.29 ACRES OF WETLAND, 0.12 ACRES OF UPLAND, AND 0.32 ACRES WITHIN EXISTING ROADWAY.

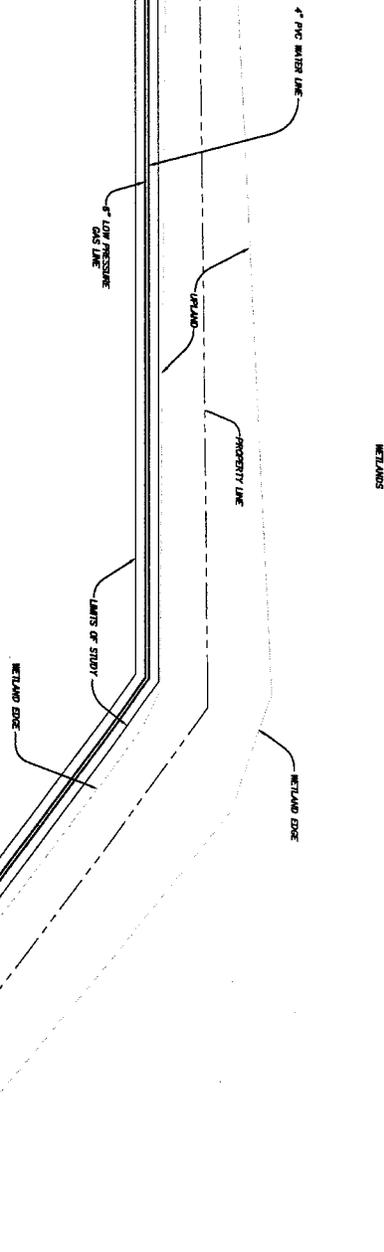


"BROWN BEAR WELLHEADS"
 FOR
VENOCO INC.
 JURISDICTIONAL WETLAND
 DELINEATION MAP

LOCATED IN A PORTION OF SECTIONS 25, 26, 35, & 36
 TOWNSHIP 4 NORTH, RANGE 2 WEST,
 AND ALSO LOCATED IN SECTION 31,
 TOWNSHIP 4 NORTH, RANGE 3 WEST,
 AND ALSO LOCATED IN SECTION 6,
 TOWNSHIP 3 NORTH, RANGE 3 WEST,
 MOUNT Diablo BASE AND MERIDIAN,
 SOLANO COUNTY, CALIFORNIA

SHEET 3 OF 13
 FEBRUARY 26, 2009

SEE SHEET 3



USACE File #2008-00436N
 Veneco Brown Bear Natural Gas
 April 30, 2009

LEGEND OF SYMBOLS:
 [Symbol] = WETLANDS

- NOTES:**
- 1) WETLAND AREAS AS DEFINED DURING WETLAND DELINEATION CONDUCTED ON JULY 22-23, 2008, BY SYNTHESIS ENVIRONMENTAL PLANNING.
 - 2) PROJECT AREA IS DEFINED BY A LINE DISTANT 10' MEASURED AT RIGHT ANGLES FROM EITHER SIDE OF THE PIPELINES CENTERLINE. TOTAL AREA CONSISTS OF 1.19 ACRES OF LAND, ALL WITHIN WETLANDS.



JURISDICTIONAL WETLAND DELINEATION MAP
 FOR
VENOCO INC.
"BROWN BEAR WELLHEADS"
 LOCATED IN A PORTION OF SECTIONS 25, 26, 35, & 36
 TOWNSHIP 4 NORTH, RANGE 2 WEST,
 AND ALSO LOCATED IN SECTION 31,
 TOWNSHIP 4 NORTH, RANGE 3 WEST,
 AND ALSO LOCATED IN SECTION 6,
 TOWNSHIP 3 NORTH, RANGE 3 WEST,
 MOUNT DIABLO BASE AND MENDIAN,
 SOLANO COUNTY, CALIFORNIA

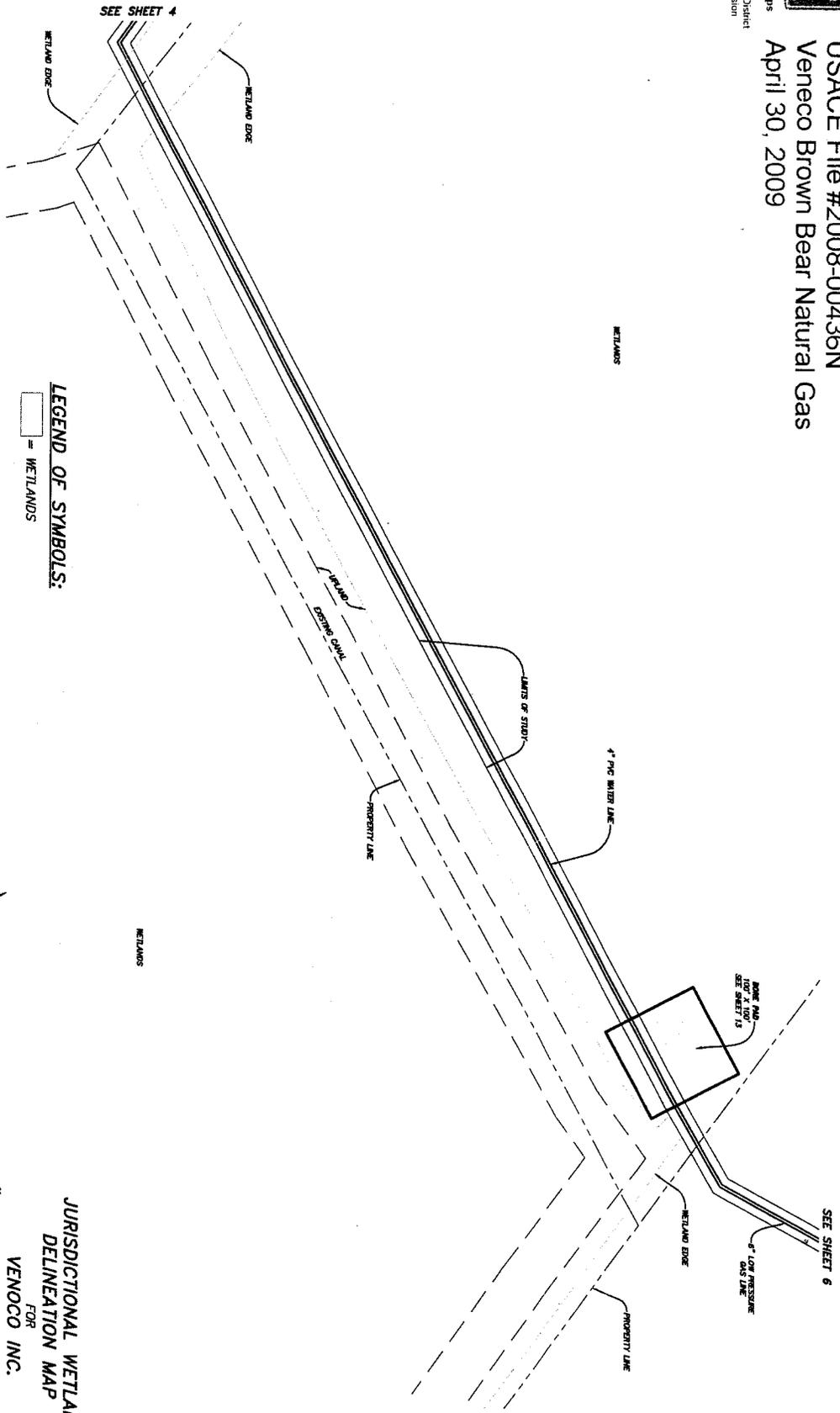
SHEET 4 OF 13
 FEBRUARY 26, 2009

LM LAUGENOUR AND MENKE
 CIVIL ENGINEERS AND SURVEYORS
 2010 10TH STREET, SUITE 100, SAN FRANCISCO, CA 94103
 TEL: 415.774.8888 FAX: 415.774.8889



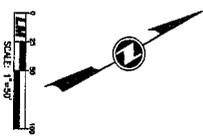
U.S. Army Corps
of Engineers
San Francisco District
Regulatory Division

USACE File #2008-00436N
Veneco Brown Bear Natural Gas
April 30, 2009



LEGEND OF SYMBOLS:
 = WETLANDS

- NOTES:**
- 1) WETLAND AREAS AS DEFINED DURING WETLAND DELINEATION CONDUCTED ON JULY 22-23, 2008, BY SYNTHESIS ENVIRONMENTAL PLANNING.
 - 2) PROJECT AREA IS DEFINED BY A LINE DISTANT 10' MEASURED AT RIGHT ANGLES FROM EITHER SIDE OF THE PIPELINES CENTERLINE. TOTAL AREA CONSISTS OF 0.76 ACRES OF LAND, 0.64 ACRES OF WETLAND AND 1,583 SQ. FT. OF UPLAND.



**JURISDICTIONAL WETLAND
DELINEATION MAP**

FOR
VENOCO INC.

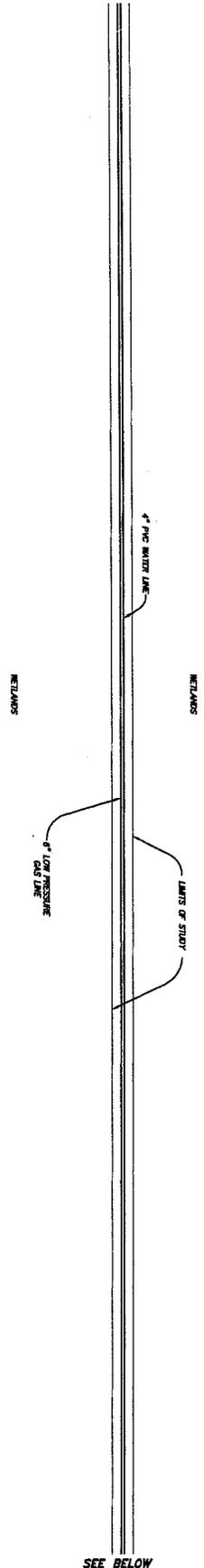
"BROWN BEAR WELHEADS"
 LOCATED IN A PORTION OF SECTIONS 25, 26, 35, & 36
 TOWNSHIP 4 NORTH, RANGE 2 WEST,
 AND ALSO LOCATED IN SECTION 31,
 TOWNSHIP 4 NORTH, RANGE 3 WEST,
 AND ALSO LOCATED IN SECTION 6,
 TOWNSHIP 3 NORTH, RANGE 3 WEST,
 MOUNT DIAZLO BASE AND MERIDIAN,
 SOLANO COUNTY, CALIFORNIA

SHEET 5 OF 13

FEBRUARY 26, 2009

LM LAUGENOUR AND MEIKLE
 1000 MARKET STREET, SUITE 100, OAKLAND, CALIFORNIA 94612
 TEL: 415.763.7000 FAX: 415.763.7001
 WWW.LMENGINEERS.COM

SEE SHEET 5



SEE BELOW



U.S. Army Corps
of Engineers
San Francisco District
Regulatory Division

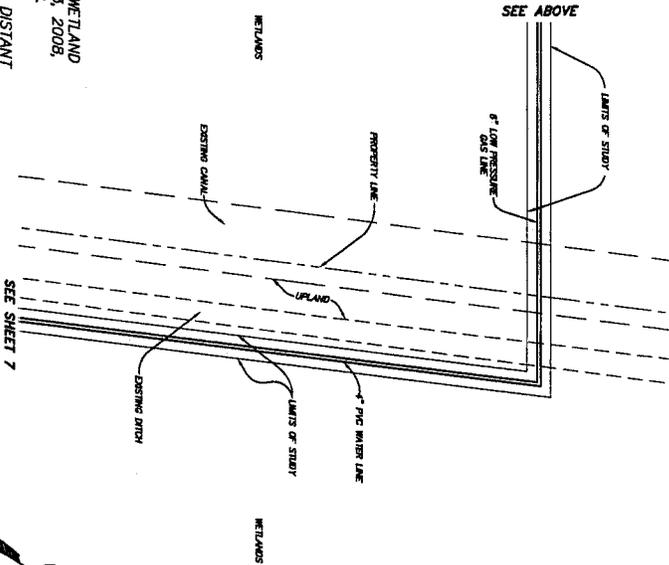
USACE File #2008-00436N Veneco Brown Bear Natural Gas April 30, 2009

LEGEND OF SYMBOLS:

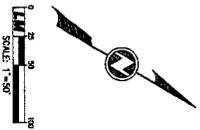
= WETLANDS

NOTES:

- 1) WETLAND AREAS AS DEFINED DURING WETLAND DELINEATION CONDUCTED ON JULY 22-23, 2008, BY SYNTHESIS ENVIRONMENTAL PLANNING.
- 2) PROJECT AREA IS DEFINED BY A LINE DISTANT 10' MEASURED AT RIGHT ANGLES FROM EITHER SIDE OF THE PIPELINES CENTERLINE. TOTAL AREA CONSISTS OF 1.01 ACRES OF LAND, 0.98 ACRES OF WETLAND AND 0.03 ACRES OF UPLAND.



SEE SHEET 7



JURISDICTIONAL WETLAND DELINEATION MAP

FOR
VENOCO INC.

"BROWN BEAR WELLHEADS"

LOCATED IN A PORTION OF SECTIONS 25, 26, 35, & 36
TOWNSHIP 4 NORTH, RANGE 2 WEST,
AND ALSO LOCATED IN SECTION 31,
TOWNSHIP 4 NORTH, RANGE 3 WEST,
AND ALSO LOCATED IN SECTION 6,
TOWNSHIP 3 NORTH, RANGE 3 WEST
MOUNT Diablo Base AND MERRIDIAN
SOLANO COUNTY, CALIFORNIA

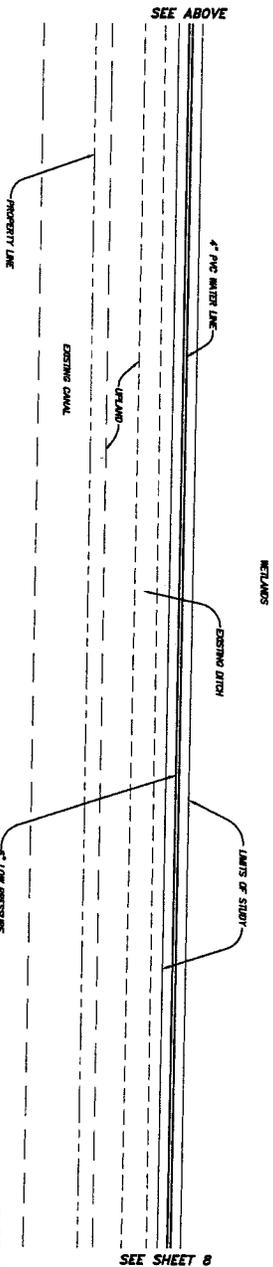
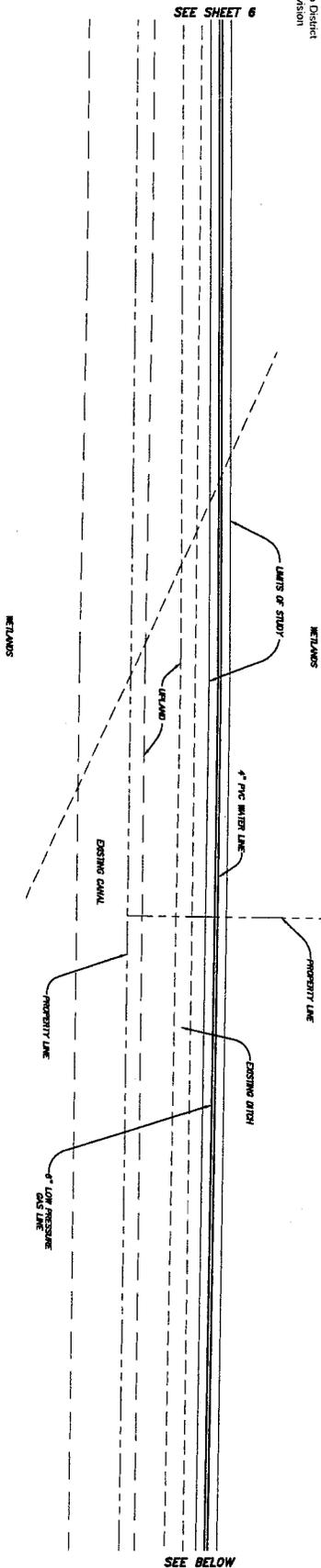
SHEET 6 OF 13

FEBRUARY 26, 2009



U.S. Army Corps
of Engineers
District
Regulatory Division

USACE File #2008-00436N
Veneco Brown Bear Natural Gas
April 30, 2009



LEGEND OF SYMBOLS:
[Symbol] = WETLANDS

- NOTES:**
- 1) WETLAND AREAS AS DEFINED DURING WETLAND DELINEATION CONDUCTED ON JULY 22-23, 2008, BY SYNTHESIS ENVIRONMENTAL PLANNING.
 - 2) PROJECT AREA IS DEFINED BY A LINE DISTANT 10' MEASURED AT RIGHT ANGLES FROM EITHER SIDE OF THE PIPELINE CENTERLINE. TOTAL AREA CONSISTS OF 1.11 ACRES OF LAND, ALL WITHIN WETLANDS.



**JURISDICTIONAL WETLAND
DELINEATION MAP**

FOR
VENECO INC.

"BROWN BEAR WELLSHEADS"
LOCATED IN A PORTION OF SECTIONS 25, 26, 35, & 36
TOWNSHIP 4 NORTH, RANGE 2 WEST,
AND ALSO LOCATED IN SECTION 31,
TOWNSHIP 4 NORTH, RANGE 3 WEST,
AND ALSO LOCATED IN SECTION 6,
TOWNSHIP 3 NORTH, RANGE 3 WEST,
MOUNT DIABLO BASE AND MERIDIAN,
SOLANO COUNTY, CALIFORNIA

SHEET 7 OF 13

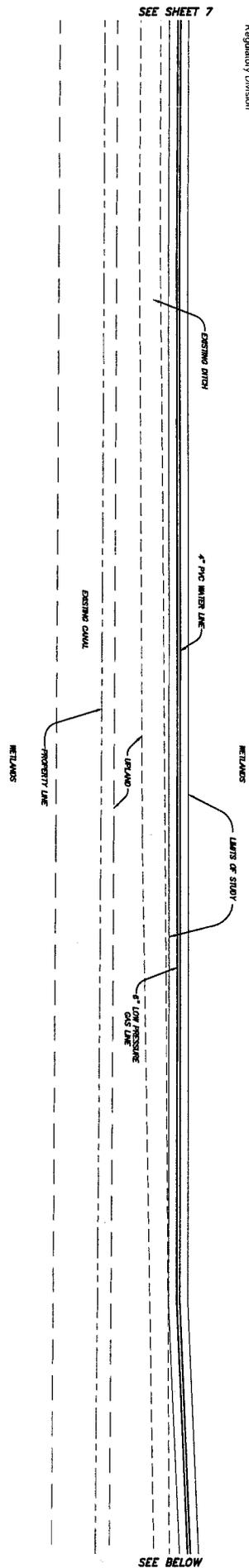
FEBRUARY 26, 2009

LM LAUGENOUR AND MEIKLE
REGISTERED PROFESSIONAL LAND SURVEYORS - FURNISHING
SURVEYING AND MAPPING SERVICES
P.O. BOX 228 WOODLAND, CALIFORNIA 95776 TEL: (916) 467-4422

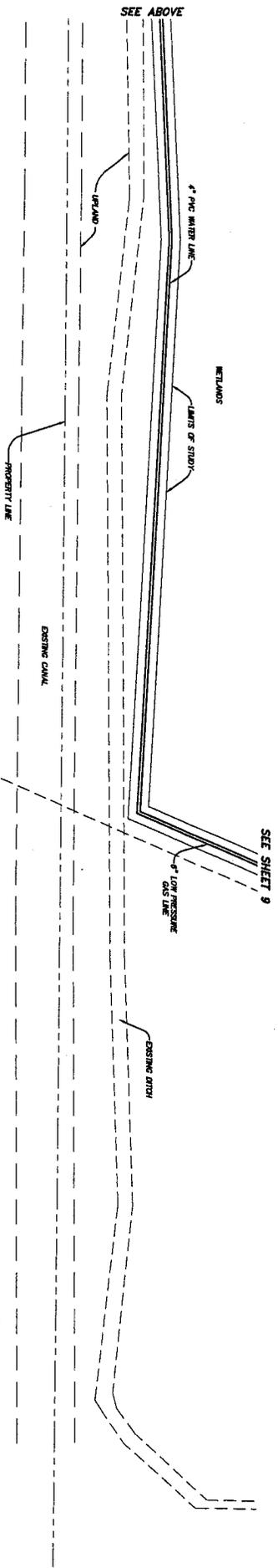


U.S. Army Corps
of Engineers
San Francisco District
Regulatory Division

USACE File #2008-00436N
Veneco Brown Bear Natural Gas
April 30, 2009



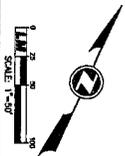
SEE BELOW



LEGEND OF SYMBOLS:

☐ = WETLANDS

- NOTES:**
- 1) WETLAND AREAS AS DEFINED DURING WETLAND DELINEATION CONDUCTED ON JULY 22-23, 2008, BY SYNTHESIS ENVIRONMENTAL PLANNING.
 - 2) PROJECT AREA IS DEFINED BY A LINE DISTANT 10' MEASURED AT RIGHT ANGLES FROM EITHER SIDE OF THE PIPELINES CENTERLINE. TOTAL AREA CONSISTS OF 111 ACRES OF LAND, ALL WITHING WETLANDS.



**JURISDICTIONAL WETLAND
DELINEATION MAP**

FOR
VENOCO INC.

"BROWN BEAR WELLHEADS"

LOCATED IN A PORTION OF SECTIONS 25, 26, 35, & 36
TOWNSHIP 4 NORTH, RANGE 2 WEST,
AND ALSO LOCATED IN SECTION 31,
TOWNSHIP 4 NORTH, RANGE 3 WEST,
AND ALSO LOCATED IN SECTION 6,
TOWNSHIP 3 NORTH, RANGE 3 WEST,
MOUNT DIABLO BASE AND MERIDIAN,
SOLANO COUNTY, CALIFORNIA

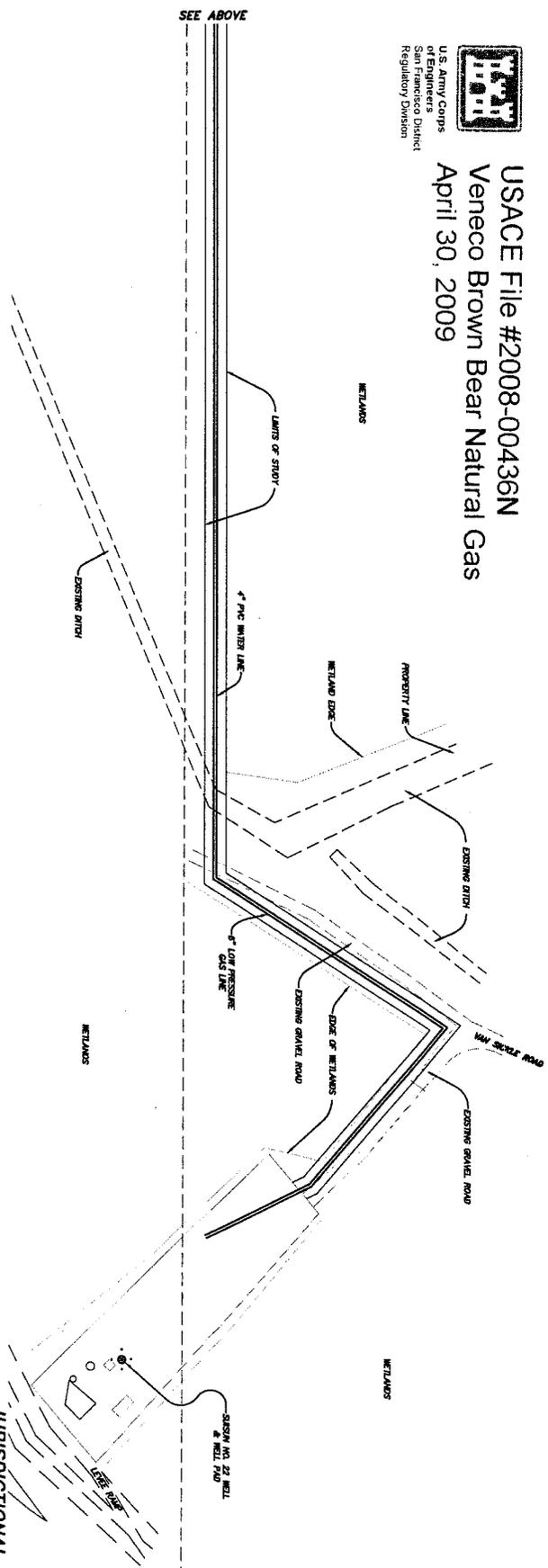
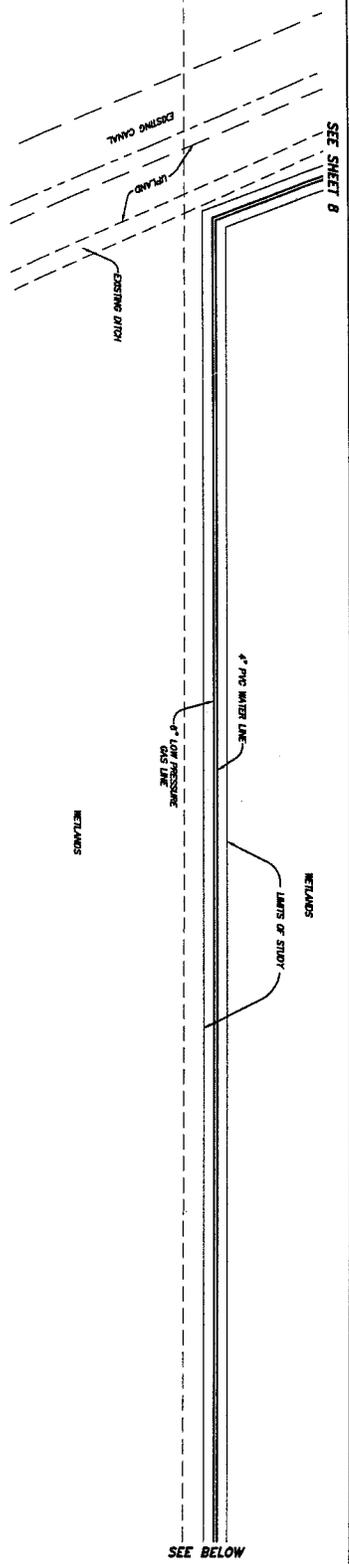
SHEET 8 OF 13

FEBRUARY 26, 2009



U.S. Army Corps
of Engineers
San Francisco District
Regulatory Division

USACE File #2008-00436N Veneco Brown Bear Natural Gas April 30, 2009



LEGEND OF SYMBOLS:
[Symbol] = WETLANDS

- NOTES:**
- 1) WETLAND AREAS AS DEFINED DURING WETLAND DELINEATION CONDUCTED ON JULY 22-23, 2008, BY SYNTHESIS ENVIRONMENTAL PLANNING.
 - 2) PROJECT AREA IS DEFINED BY A LINE DISTANT 10' MEASURED AT RIGHT ANGLES FROM EITHER SIDE OF THE PIPELINES CENTERLINE. TOTAL AREA CONSISTS OF 1.05 ACRES OF UPLAND, 0.80 ACRES OF WETLAND, 0.22 ACRES OF UPLAND, AND 0.03 ACRES WITHIN EXISTING ROADWAY.



"BROWN BEAR WELHEADS"
VENECO INC.
FOR
JURISDICTIONAL WETLAND
DELINEATION MAP

LOCATED IN A PORTION OF SECTIONS 25, 26, 35, & 36
TOWNSHIP 4 NORTH, RANGE 2 WEST,
AND ALSO LOCATED IN SECTION 31,
TOWNSHIP 4 NORTH, RANGE 3 WEST,
AND ALSO LOCATED IN SECTION 6,
TOWNSHIP 3 NORTH, RANGE 3 WEST,
MOUNT DIABLO BASE AND MERIDIAN,
SOLANO COUNTY, CALIFORNIA

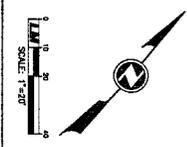
SHEET 9 OF 13
FEBRUARY 26, 2009

LM LAUGENDOUR AND MEIKLE
REGISTERED PROFESSIONAL LAND SURVEYORS
1000 RIVER STREET, SUITE 200
SOLANO COUNTY, CALIFORNIA 94568
TEL: (707) 428-4444 FAX: (707) 428-4444

USACE File #2008-00436N

Veneco Brown Bear Natural Gas

April 30, 2009

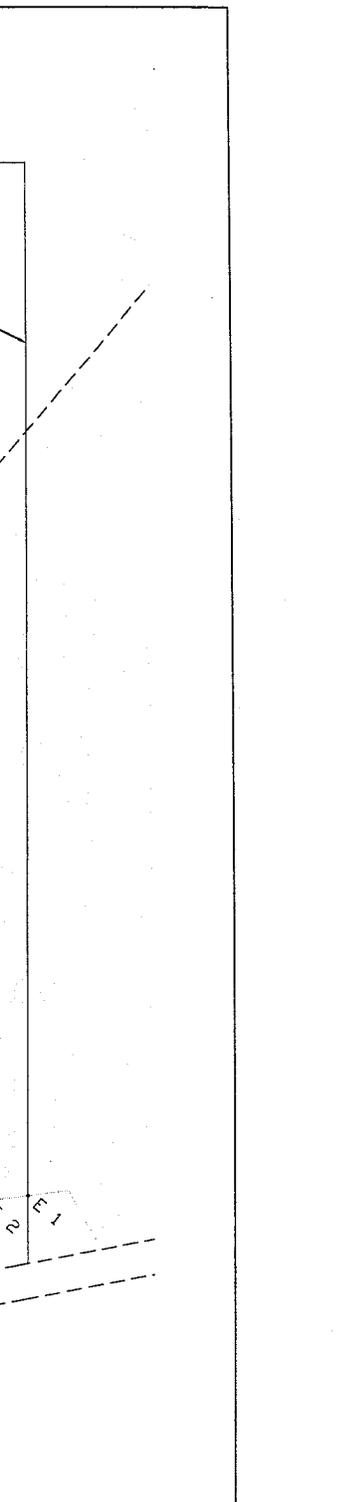
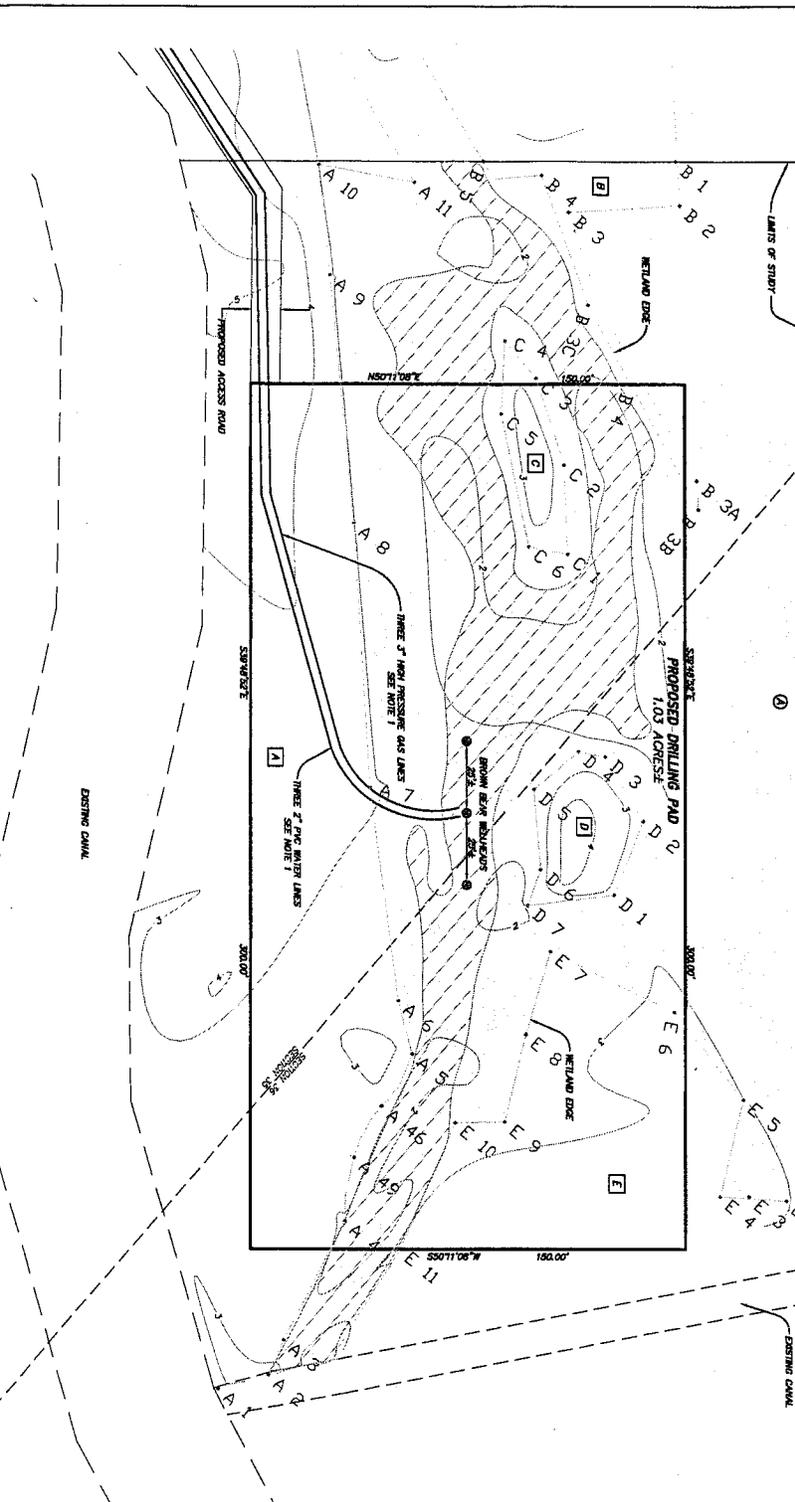


LM LAUGELOUR AND MERKLE

 200 SOUTH BAY STREET, SUITE 200, SAN FRANCISCO, CALIFORNIA 94111

 TEL: (415) 774-2200 FAX: (415) 774-2202

 WWW.LM-LAUGELOUR.COM



LEGEND OF SYMBOLS:

 = INDICATES WETLANDS

 = INDICATES OTHER WATERS

 A = WETLAND AREA "A" 1.15 ACRES

 B = WETLAND AREA "B" 0.60 ACRES

 C = WETLAND AREA "C" 0.03 ACRES

 D = WETLAND AREA "D" 0.02 ACRES

 E = WETLAND AREA "E" 0.26 ACRES

 A 2 = WETLAND DELINEATION POINT

NOTES:

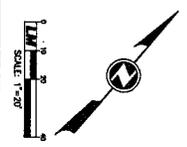
 1) WETLAND AREAS AS DETERMINED DURING WETLAND DELINEATION CONDUCTED ON JULY 22-23, 2008, BY SYNTHESIS ENVIRONMENTAL PLANNING.

 2) PROJECT AREA IS DENIED BY THE CANAL ON THE SOUTH, THE TOP OF DITCH ON THE EAST AND DISTANT SO NORTH AND WEST FROM THE PROPOSED PAD. AREA ENCOMPASSED BY 2.04 ACRES OF CANAL, 1.20 ACRES OF WETLAND AND 0.94 ACRES OF UPLAND.

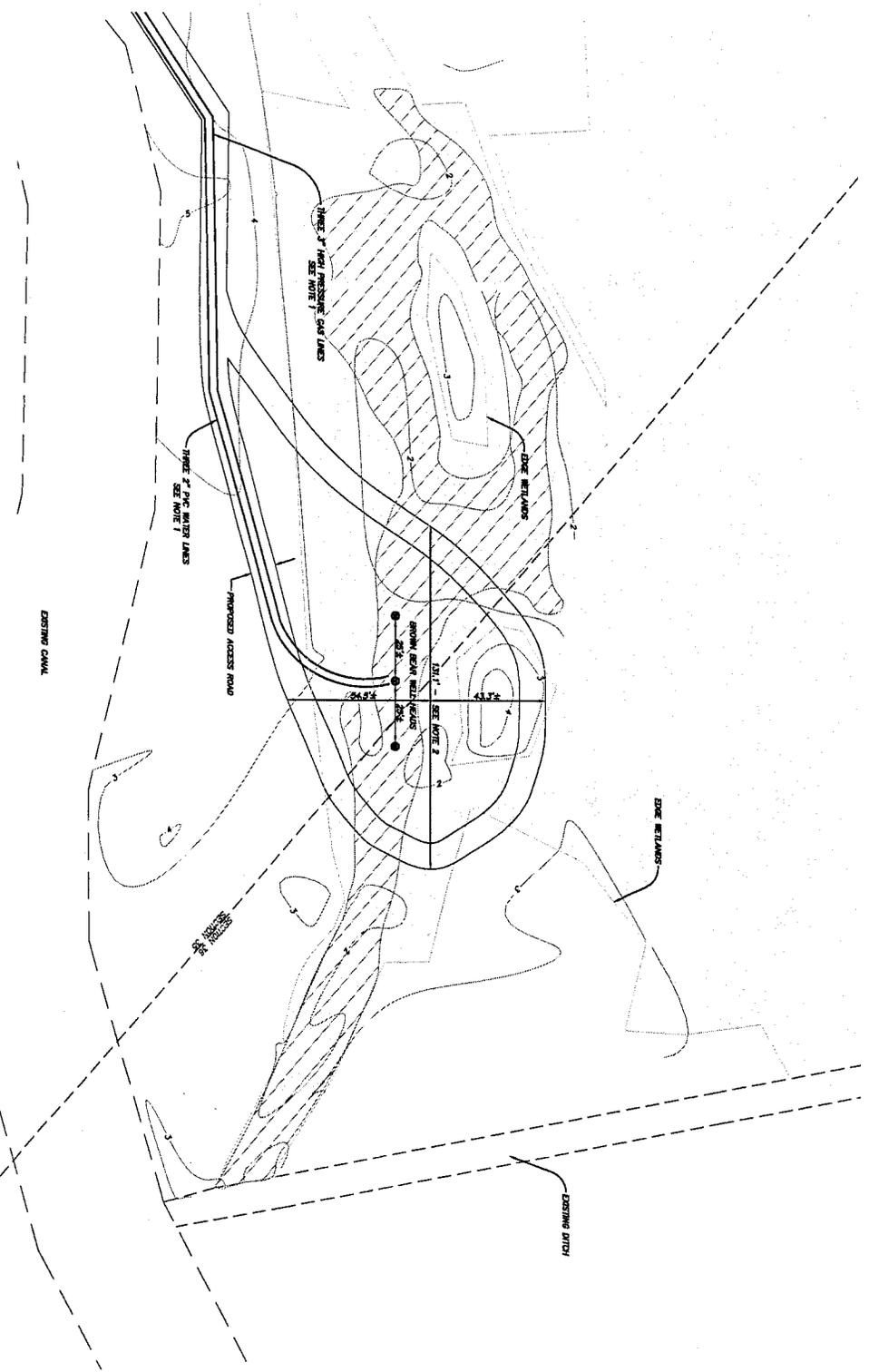
DRILLING PAD JURISDICTIONAL WETLAND DELINEATION MAP FOR VENOCO INC. "BROWN BEAR WELLHEADS" LOCATED IN A PORTION OF SECTION 35 & 36 TOWNSHIP 4 NORTH, RANGE 2 WEST, MOUNT DIABLO BASE AND MERIDIAN, SOLANO COUNTY, CALIFORNIA

USACE File #2008-00436N
Veneco Brown Bear Natural Gas
April 30, 2009

NOTE: WILL BE A SEPARATE GAS AND WATER LINE BETWEEN THE SATELLITE PRODUCTION FACILITY AND EACH INDIVIDUAL WELL HEAD.



LEGEND OF SYMBOLS:
 = INDICATES WETLANDS



LEGEND OF SYMBOLS:

	= INDICATES WETLANDS
①	= WETLAND AREA "A" 1.15 ACRES
A	= UPLAND AREA "A" 0.60 ACRES
B	= UPLAND AREA "B" 0.03 ACRES
C	= UPLAND AREA "C" 0.02 ACRES
D	= UPLAND AREA "D" 0.03 ACRES
E	= UPLAND AREA "E" 0.26 ACRES
A 2	= WETLAND DELINEATION POINT

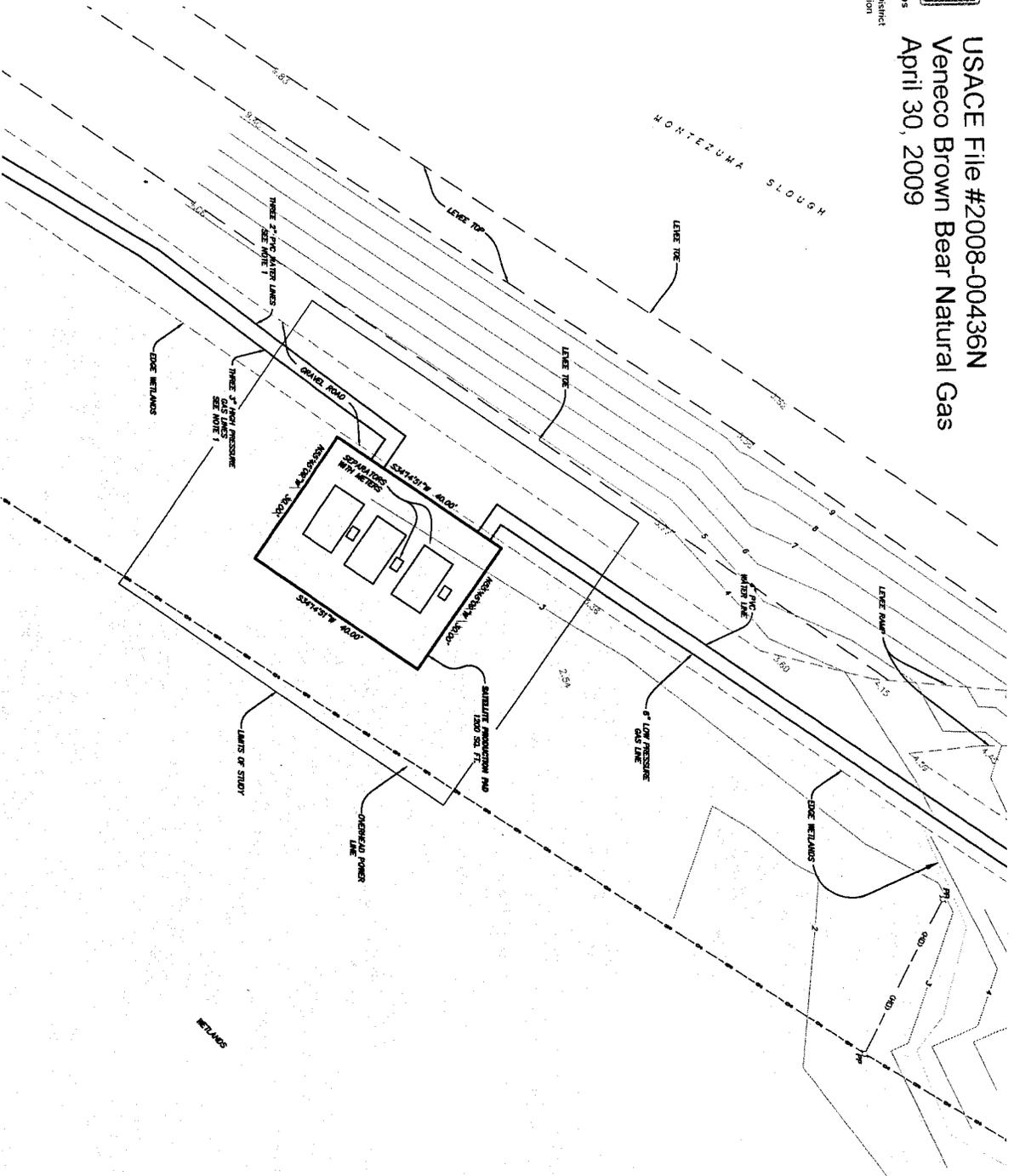
NOTE:
 1) THERE WILL BE A SEPARATE GAS AND WATER LINE BETWEEN THE SATELLITE PRODUCTION FACILITY AND EACH INDIVIDUAL WELL HEAD.
 2) DIMENSIONS SHOWN ARE APPROXIMATE. THE AREA INSIDE THE ACCESS ROAD IS APPROXIMATELY 8,963 SQUARE FEET.
 3) TOTAL AREA PERMANENTLY AFFECTED BY PAD 0.32 ACRES, WETLAND AREA PERMANENTLY AFFECTED BY PAD 0.26 ACRES, AND UPLAND AREA PERMANENTLY AFFECTED BY PAD 0.11 ACRES.

BROWN BEAR WELL HEAD EXHIBIT
 FOR
VENOCO INC.
"BROWN BEAR WELLHEADS"
 LOCATED IN A PORTION OF SECTION 35 & 36
 TOWNSHIP 4 NORTH, RANGE 2 WEST,
 MOUNT Diablo BASE AND MERIDIAN,
 SOLANO COUNTY, CALIFORNIA



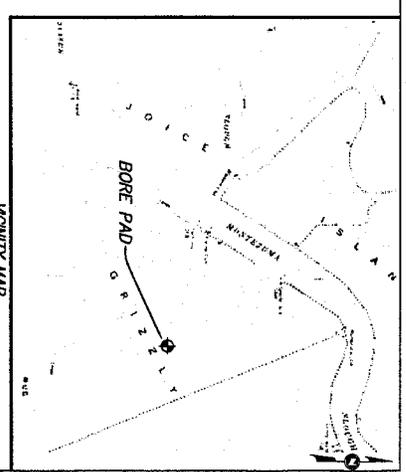
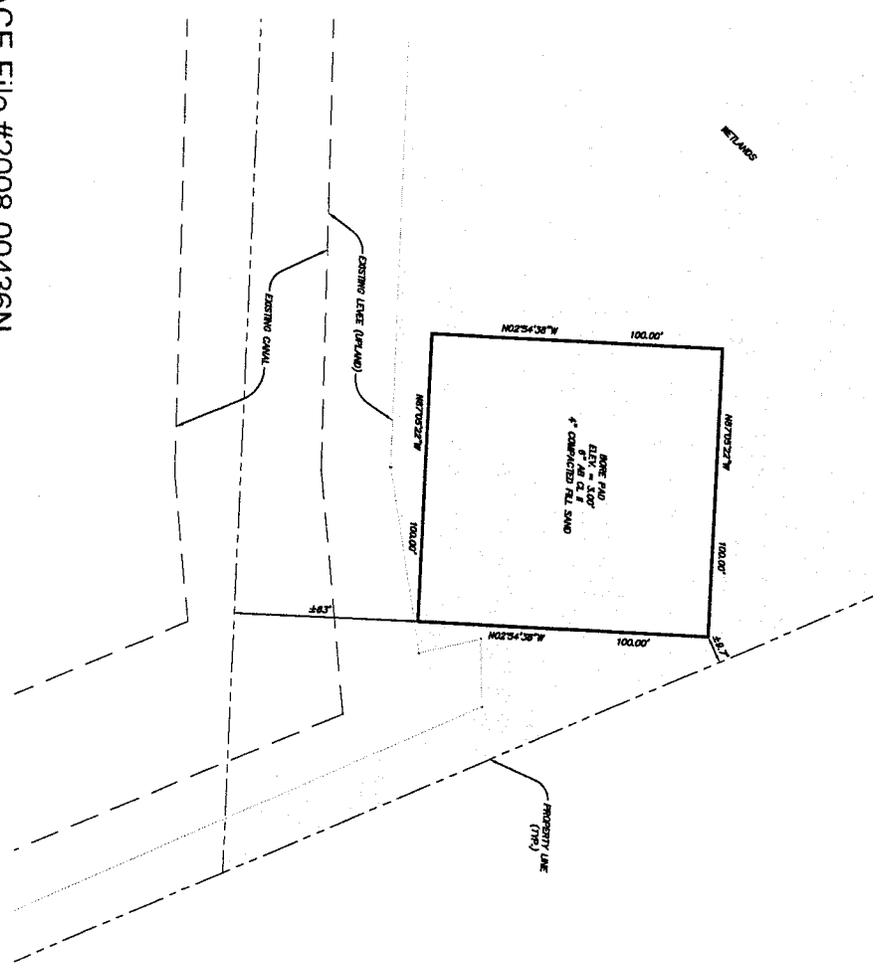
U.S. Army Corps
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USACE File #2008-00436N
Veneco Brown Bear Natural Gas
April 30, 2009





USACE File #2008-00436N
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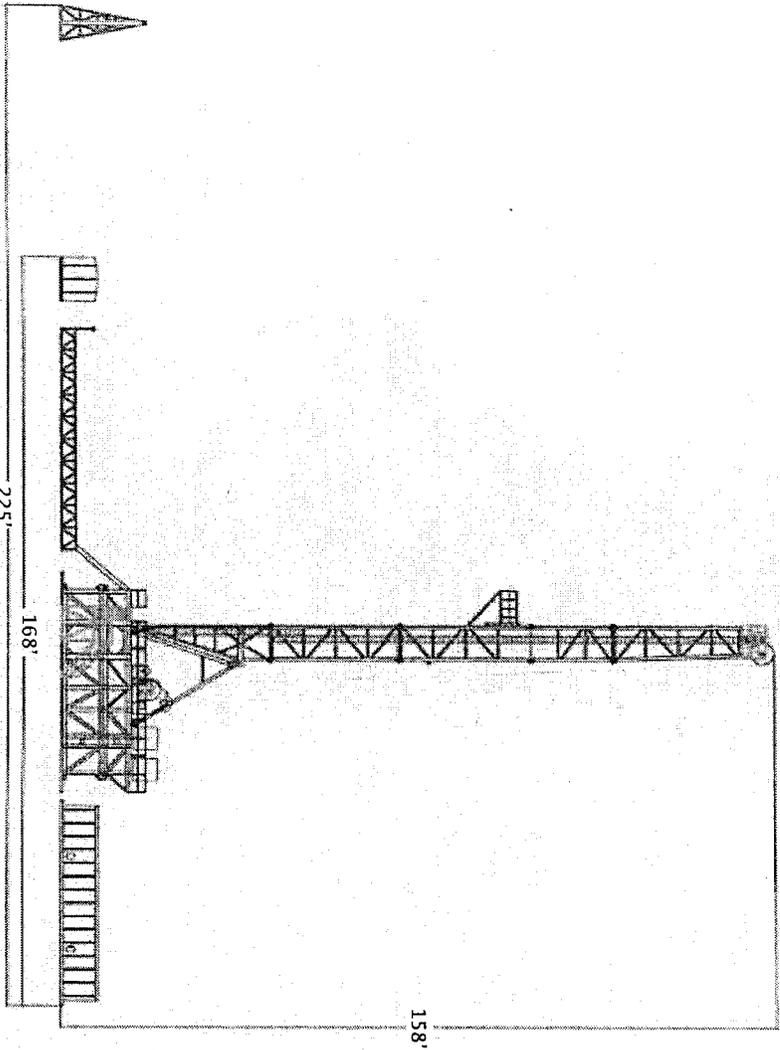


LEGEND OF SYMBOLS:
 = INDICATES WETLANDS

- NOTES:**
- 1) WETLAND AREAS AS DEFINED DURING WETLAND DELINEATION CONDUCTED ON JULY 22-23, 2008, BY SYNTHESIS ENVIRONMENTAL PLANNING.
 - 2) PROJECT AREA IS DEFINED BY A LINE DISTANT 50' IN ALL DIRECTIONS FROM THE PROPOSED PAD. TOTAL AREA CONSISTS OF 4,875 SQ. FT. OF LAND, 27,54 SQ. FT. OF WETLAND AND 1,941 SQ. FT. OF UPLAND.



**BORE PAD
 JURISDICTIONAL WETLAND
 DELINEATION MAP**
 FOR
VENOCO INC.
"BROWN BEAR WELHEADS"
 LOCATED IN A PORTION OF SECTION 26
 TOWNSHIP 4 NORTH, RANGE 2 WEST,
 MOUNT DIABLO BASE AND MERIDIAN,
 SOLANO COUNTY, CALIFORNIA



Drill Rig Elevation

Paul Graham Drilling

Rig No. 5

Equipment Elevation View

Looking from Roadside



U.S. Army Corps
of Engineers
San Francisco District
Regulatory Division

USACE File #2008-00436N
Veneco Brown Bear Natural Gas
April 30, 2009

Scale: 1" = 20'
Created: October 21, 2004
File: Rig_5_Elevation
Drawn By: KPG
Sheet: Ansi "C"