

AP-111

**SWMU No. 10
Sludge Pits**

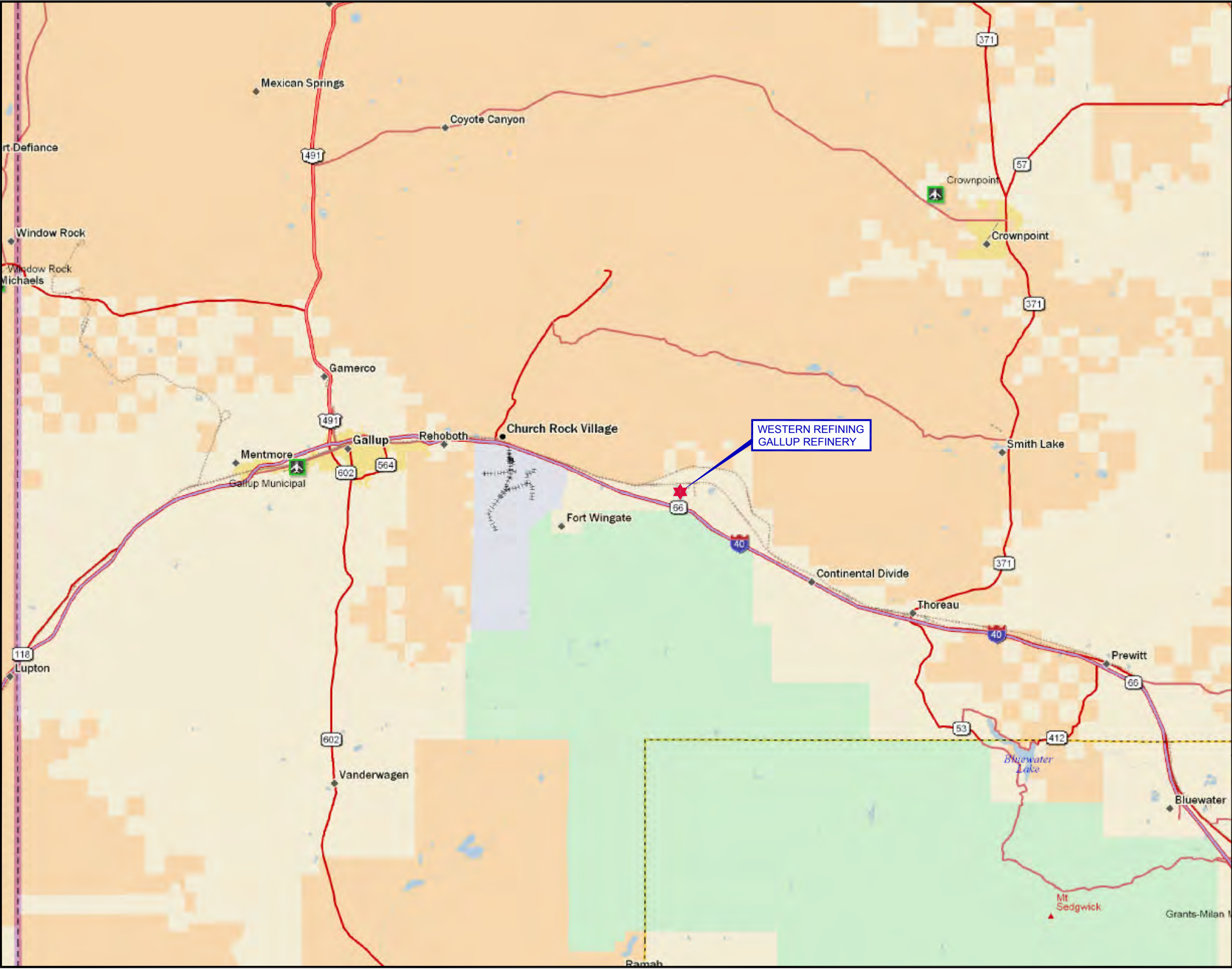
**Investigation
Report (4)**

March 2016

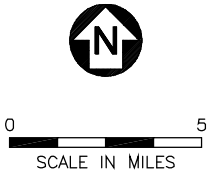
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Map Source: DeLorme Street Atlas USA 2007 Plus.



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FIGURE 1
SITE LOCATION MAP
GALLUP REFINERY

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Aerial Map Source: Google Map, 02/19/2014.



0 100
SCALE IN FEET

LEGEND

 SWMU No. 10 LOCATION



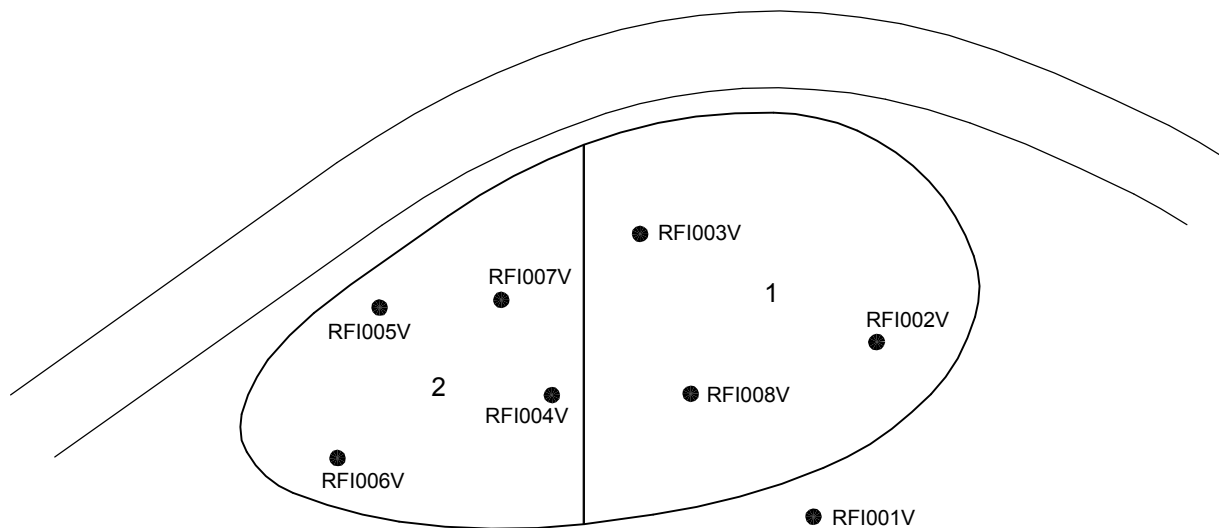
GALLUP SITE LOCATION

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GALLUP REFINERY

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FIGURE 2
SWMU No. 10 LOCATION MAP

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0 50
SCALE IN FEET

LEGEND

RFI002V ● 1990 RFI SOIL BORING LOCATION
AND IDENTIFICATION NUMBER

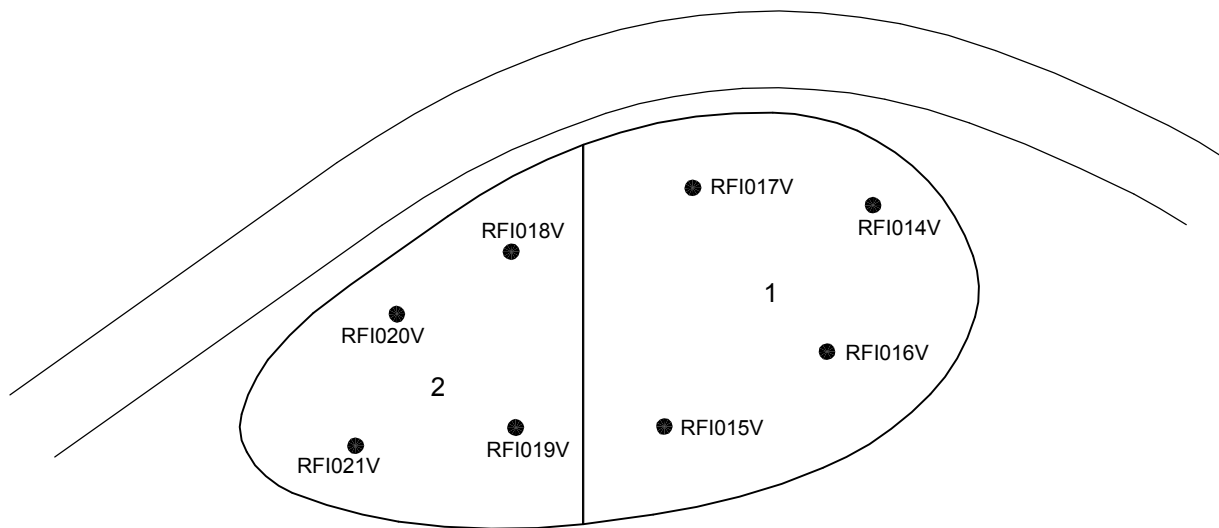


PROJ. NO.:Western Refining DATE:09/07/14 FILE:WestRef-dA02

FIGURE 3
SWMU No. 10
1990 RFI SAMPLE LOCATIONS
GALLUP REFINERY



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0 50
SCALE IN FEET

LEGEND

RFI014V ● 1994 RFI SOIL BORING LOCATION
AND IDENTIFICATION NUMBER

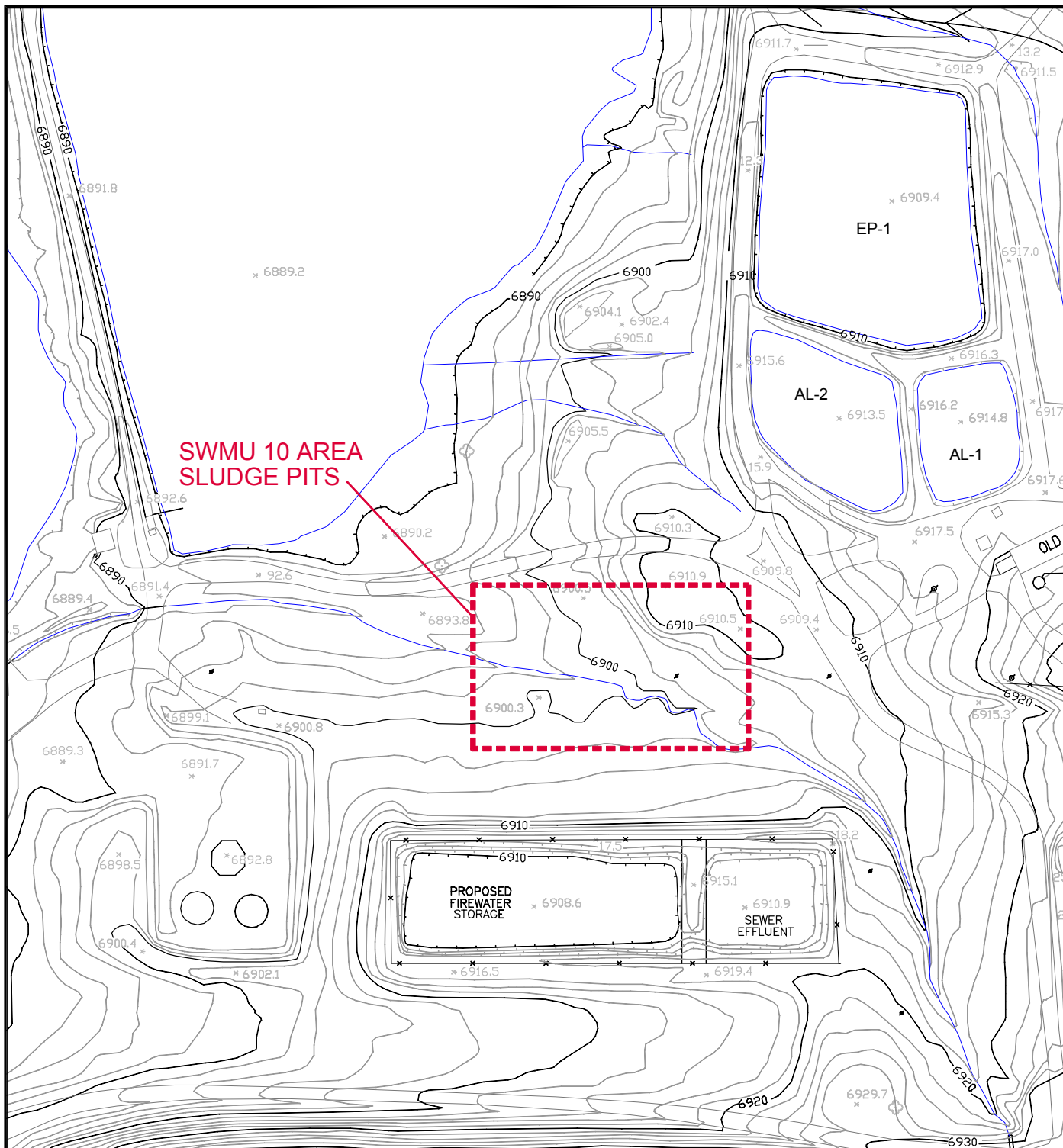


PROJ. NO.:Western Refining DATE:09/07/14 FILE:WestRef-dA03

FIGURE 4
SWMU No. 10
1994 RFI SAMPLE LOCATIONS
GALLUP REFINERY



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Map Source: Compiled by Photogrammetric Methods from
Photography Acquired on March 1, 1998.



0 150
SCALE IN FEET



QUADRANGLE LOCATION



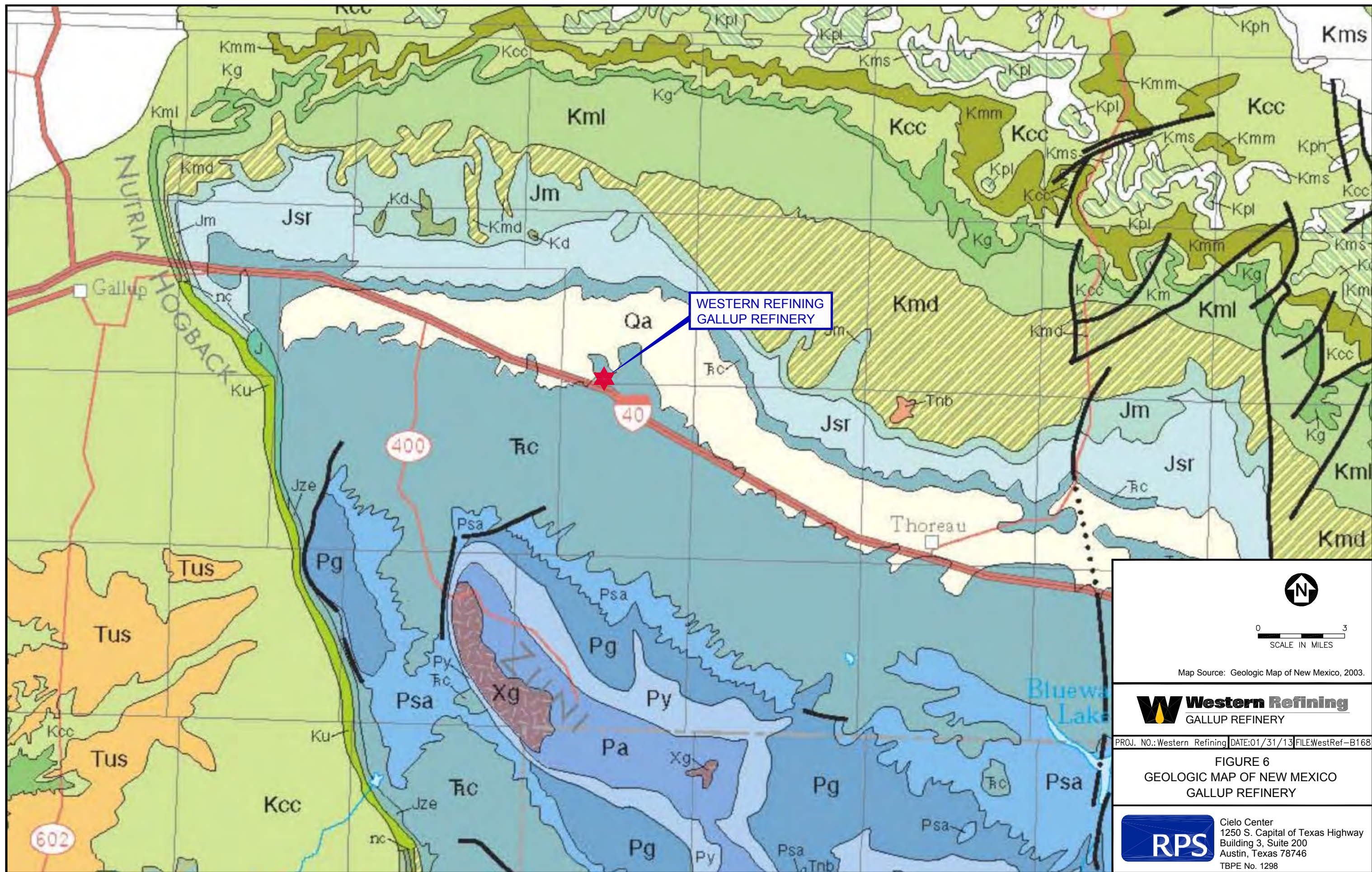
GALLUP REFINERY

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FIGURE 5 TOPOGRAPHIC MAP GALLUP REFINERY

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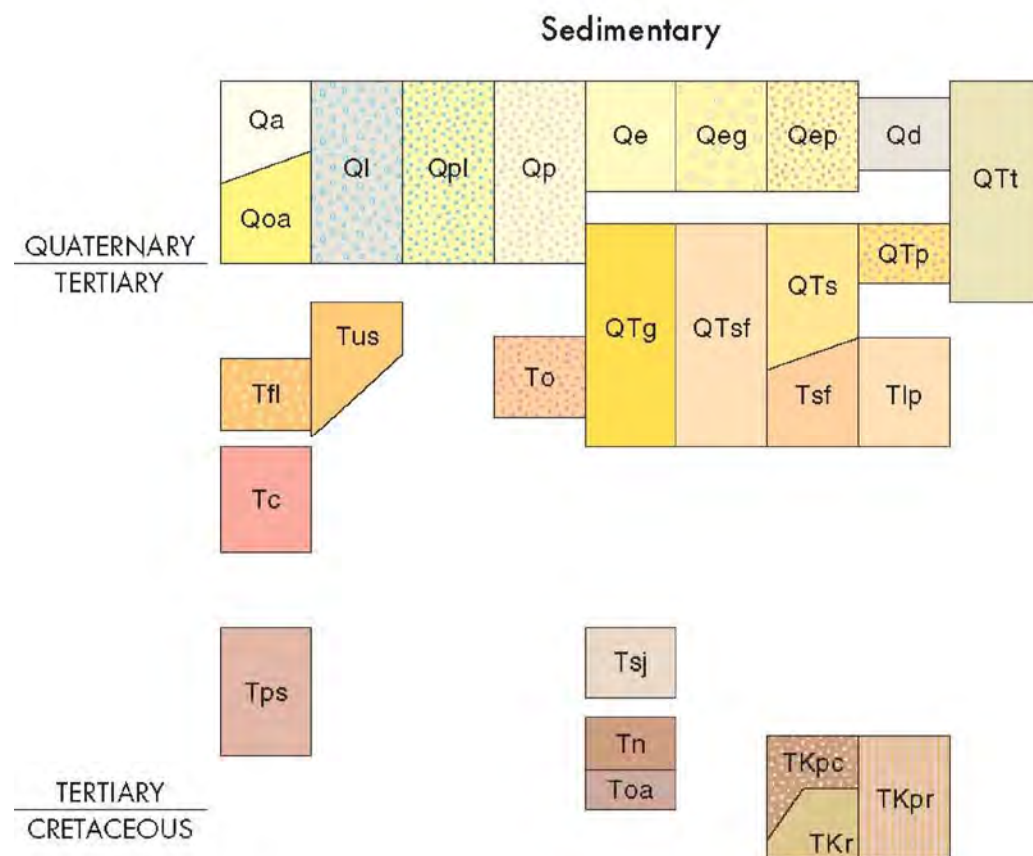


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FIGURE 6
GEOLOGIC MAP OF NEW MEXICO
GALLUP REFINERY

RPS
Cielo Center
1250 S. Capital of Texas Highway
Building 3, Suite 200
Austin, Texas 78746
TBPE No. 1298



DESCRIPTION OF MAP UNITS

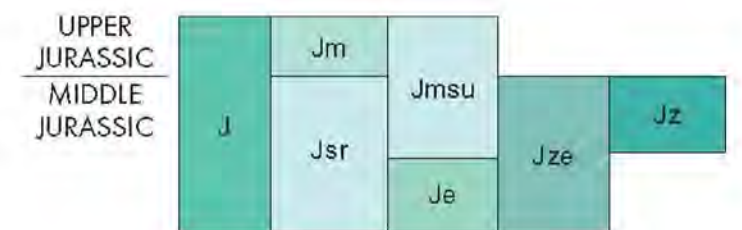
QUATERNARY

- Qa** Alluvium (Holocene to upper Pleistocene)
- Ql** Landslide deposits and colluvium (Holocene to Pleistocene)—Landslide deposits on western flanks of Socorro Mountains not shown for clarity
- Qpl** Lacustrine and playa deposits (Holocene)—Includes associated alluvial and eolian deposits of major lake basins
- Qp** Piedmont alluvial deposits (Holocene to lower Pleistocene)—Includes deposits of higher gradient tributaries bordering major stream valleys, alluvial veneers of the piedmont slope, and alluvial fans. May locally include uppermost Pliocene deposits

TRIASSIC

Chinle Formation of previous workers (e.g., Stewart et al., 1972) is used here as Chinle Group, following Lucas (1993)

- T** Triassic rocks, undivided—Continental red beds
- Trp** Rock Point Formation of Chinle Group (Upper Triassic)—May locally include Wingate Sandstone (Triassic)
- Tc** Chinle Group (Upper Triassic)—Map unit includes Moenkopi Formation (Middle Triassic) at base in many areas; in eastern part of state the following five formations are mapped:
 - Tr** Redonda Formation (Upper Triassic)
 - Tb** Bull Canyon Formation (Norian)
 - Tt** Trujillo Formation (Norian)
 - Tg** Garita Creek Formation (Carnian)
 - Trs** Santa Rosa Formation (Carnian)—Includes Moenkopi Formation (Middle Triassic) at base in most areas
- Tcu** Upper Chinle Group, Garita Creek through Redonda Formations, undivided
- Tm** Moenkopi Formation (Middle Triassic)



JURASSIC

To compare this map nomenclature to the USGS nomenclature, see the diagram included on this sheet (at right)

- J** Upper and Middle Jurassic rocks, undivided. In southwest includes the basalt-bearing Broken Jug Formation
- Jm** Morrison Formation—Upper Jurassic nonmarine rocks
- Jmsu** Morrison Formation and upper San Rafael Group (lowermost Cretaceous?—upper Jurassic)
- Jz** Zuni Sandstone (Callovian)—Consists of undivided equivalents of the Summerville Formation and Bluff Sandstone; restricted to Zuni Basin area
- Jze** Zuni and Entrada Sandstones, undivided
- Je** Entrada Sandstone (Middle Jurassic)
- Jsr** San Rafael Group (Middle Jurassic)—Consists of Entrada Sandstone, Todilto and Summerville Formations, Bluff Sandstone, and locally Zuni Sandstone (or only Acoma Tongue of Zuni)

Map Source: Geologic Map of New Mexico, 2003.

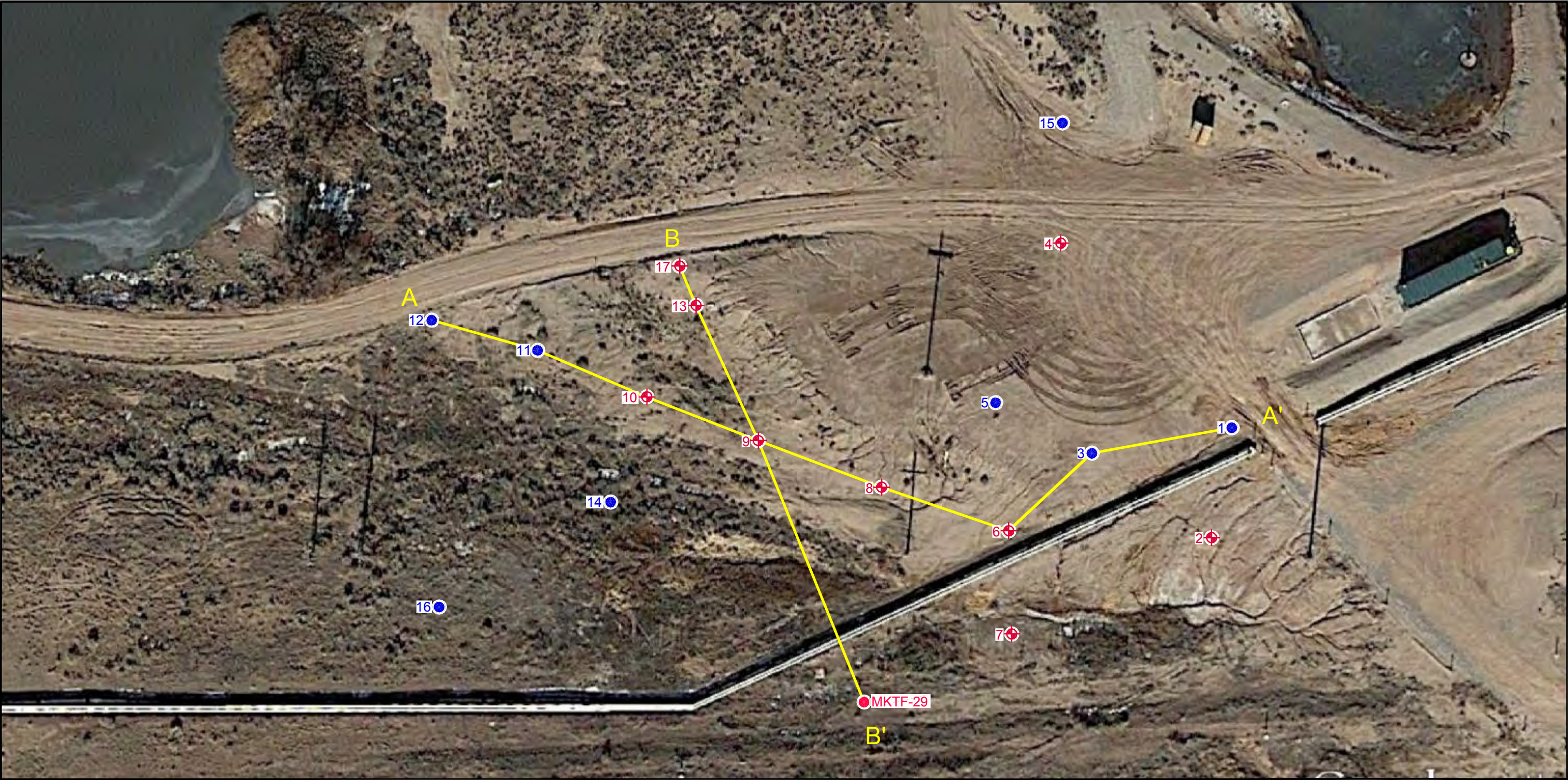


PROJ. NO.: Western Refining DATE: 01/31/13 FILE: WestRef-B168

FIGURE 6
GEOLOGIC MAP OF NEW MEXICO
GALLUP REFINERY



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Aerial Map Source: Google Map, 01/05/2014.



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FIGURE 7
CROSS SECTION LOCATION MAP
SWMU No. 10

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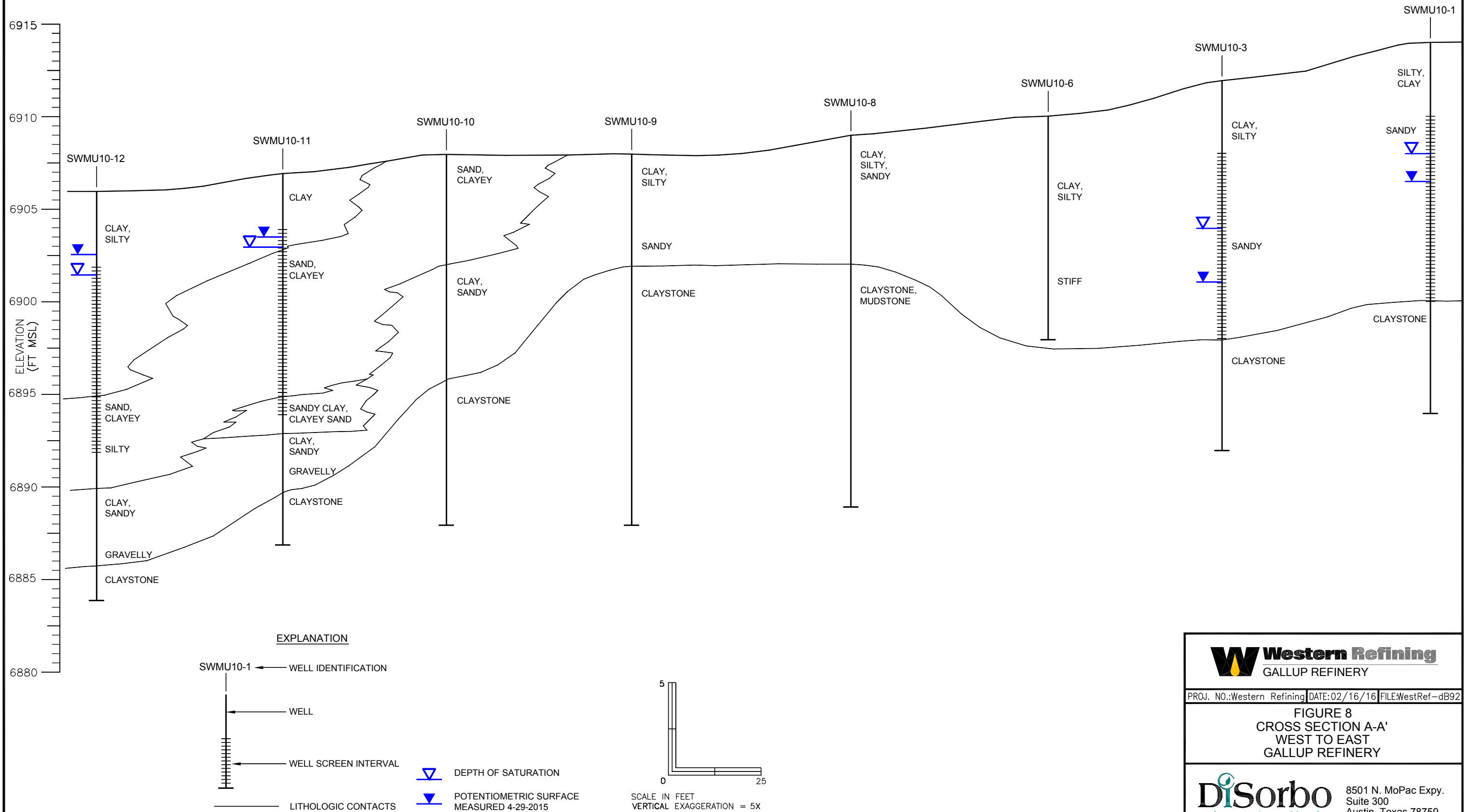
LEGEND

- 2 SOIL BORING LOCATION AND IDENTIFICATION NUMBER
- 1 SOIL BORING / TEMPORARY WELL LOCATION AND IDENTIFICATION NUMBER
- MKTF-29 MONITORING WELL LOCATION (PERMANENT WELL) AND IDENTIFICATION NUMBER
- A—A' LINE OF CROSS-SECTION



WEST
A

EAST
A'



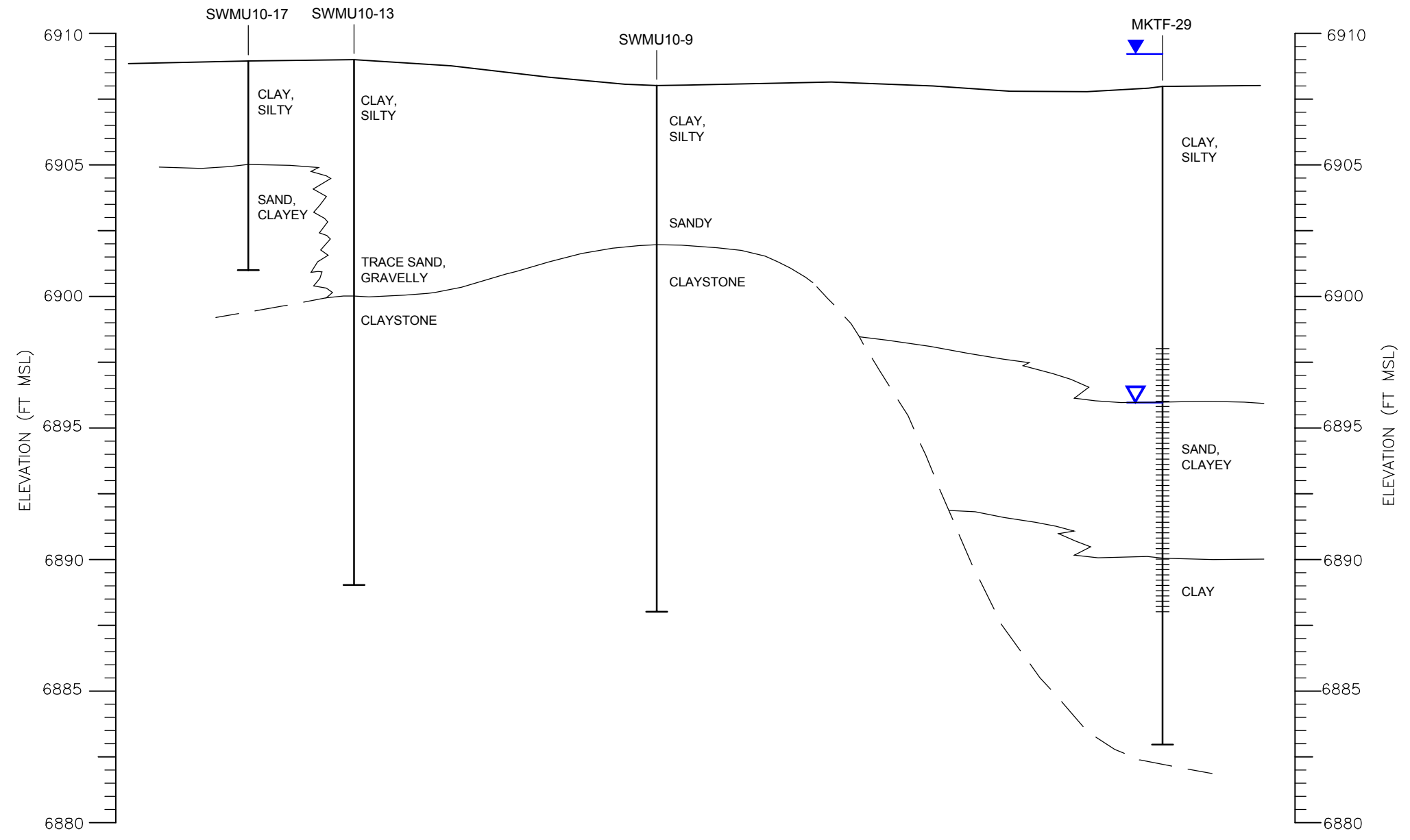
PROJ. NO.:Western Refining DATE:02/16/16 FILE:WestRef-dB92

FIGURE 8
CROSS SECTION A-A'
WEST TO EAST
GALLUP REFINERY

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NORTH
B

SOUTH
B'



EXPLANATION

MKTF-29 ← WELL IDENTIFICATION
← WELL
← WELL SCREEN INTERVAL
← LITHOLOGIC CONTACTS

△ DEPTH OF SATURATION
△ POTENTIOMETRIC SURFACE MEASURED 6-10-2015

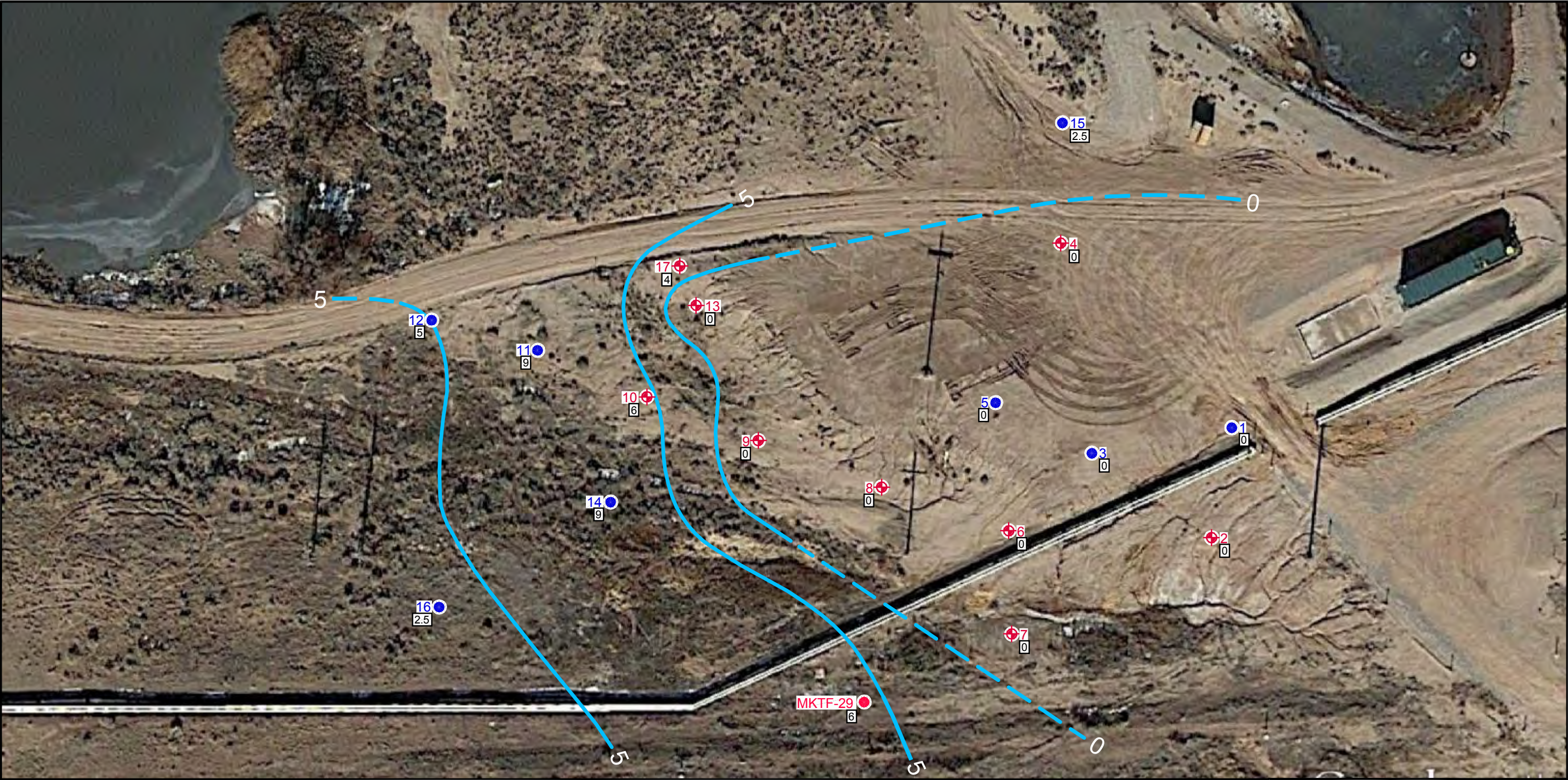
SCALE IN FEET
VERTICAL EXAGGERATION = 5X

Western Refining
GALLUP REFINERY

PROJ. NO.: Western Refining DATE: 02/16/16 FILE: WestRef-dB92

FIGURE 9
CROSS SECTION B-B'
NORTH TO SOUTH
GALLUP REFINERY

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0 40
SCALE IN FEET

LEGEND

- 2 SOIL BORING LOCATION AND IDENTIFICATION NUMBER
- 1 SOIL BORING / TEMPORARY WELL LOCATION AND IDENTIFICATION NUMBER
- MKTf-29 MONITORING WELL LOCATION (PERMANENT WELL) AND IDENTIFICATION NUMBER
- 5 CONTOUR LINE OF SAND THICKNESS (FT)
- 2.5 SAND THICKNESS (FT)



GALLUP SITE LOCATION

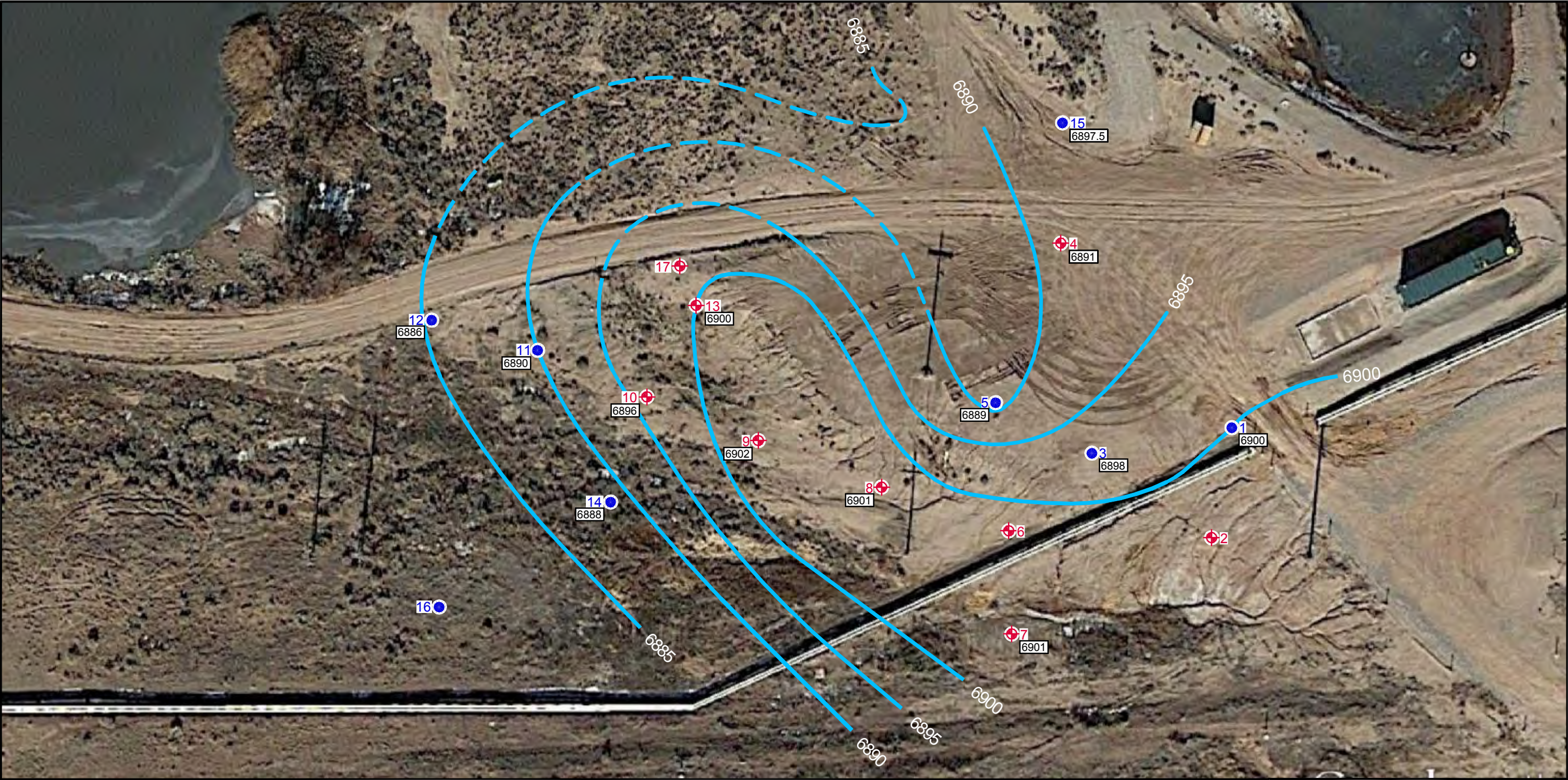


PROJ. NO.: Western Refining DATE: 02/18/16 FILE: WestRef-dB94

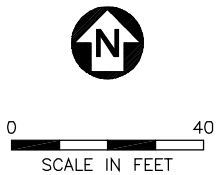
FIGURE 10
SAND ISOPACH MAP
SWMU No. 10



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Aerial Map Source: Google Map, 01/05/2014.



- LEGEND**
- 2 SOIL BORING LOCATION AND IDENTIFICATION NUMBER
 - 1 SOIL BORING / TEMPORARY WELL LOCATION AND IDENTIFICATION NUMBER
 - 6900 CONTOUR LINE ESTIMATED ELEVATION ON TOP OF BEDROCK (ABOVE MSL)
 - 6901 ESTIMATED ELEVATION ON TOP OF BEDROCK (ABOVE MSL)



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FIGURE 11
ESTIMATED ELEVATION
ON TOP OF BEDROCK
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Aerial Map Source: Google Map, 01/05/2014.

LEGEND

- 2 SOIL BORING LOCATION AND IDENTIFICATION NUMBER
- 1 SOIL BORING / TEMPORARY WELL LOCATION AND IDENTIFICATION NUMBER
- MKTF-29 MONITORING WELL LOCATION AND IDENTIFICATION NUMBER
- 6900 CONTOUR OF GROUNDWATER ELEVATION (FT MSL)
- 6905.34 GROUNDWATER ELEVATION (FEET MSL)
- * MEASURED NOVEMBER 2014
- GROUNDWATER FLOW DIRECTION



GALLUP SITE LOCATION

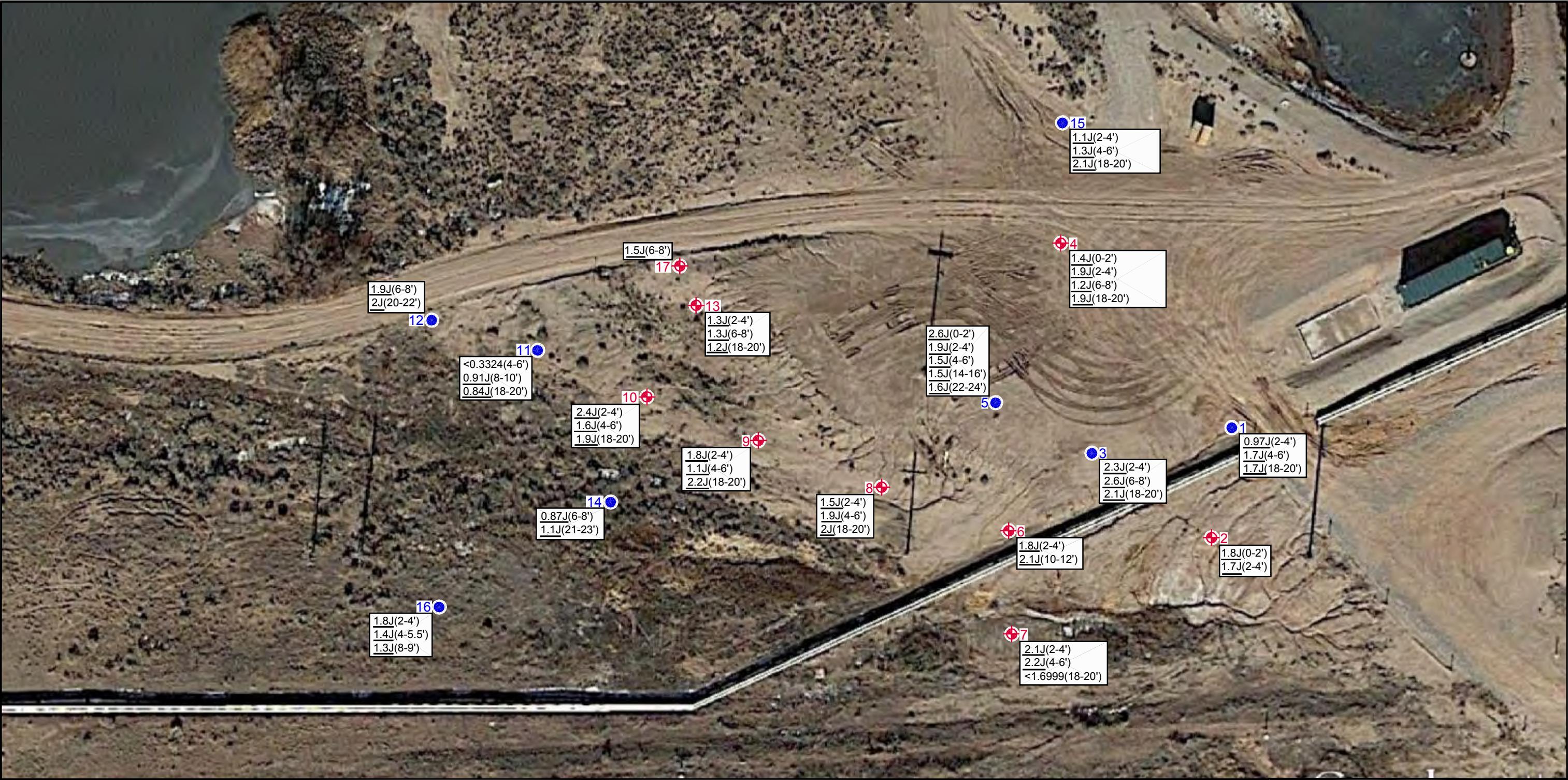


PROJ. NO.: Western Refining | DATE: 02/18/16 | FILE: WestRef-dB96

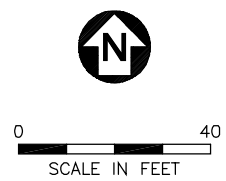
FIGURE 12
POTENTIOMETRIC SURFACE MAP
MARCH 2015
SWMU No. 10



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Aerial Map Source: Google Map, 01/05/2014.



- LEGEND**
- 2 SOIL BORING LOCATION AND IDENTIFICATION NUMBER
- 1 SOIL BORING / TEMPORARY WELL LOCATION AND IDENTIFICATION NUMBER
- 2.4J(0-2') ARSENIC CONCENTRATION, mg/kg (SAMPLE DEPTH-FT)
- 0.299 UNDERLINED CONCENTRATION VALUE EXCEEDS SCREENING LEVEL

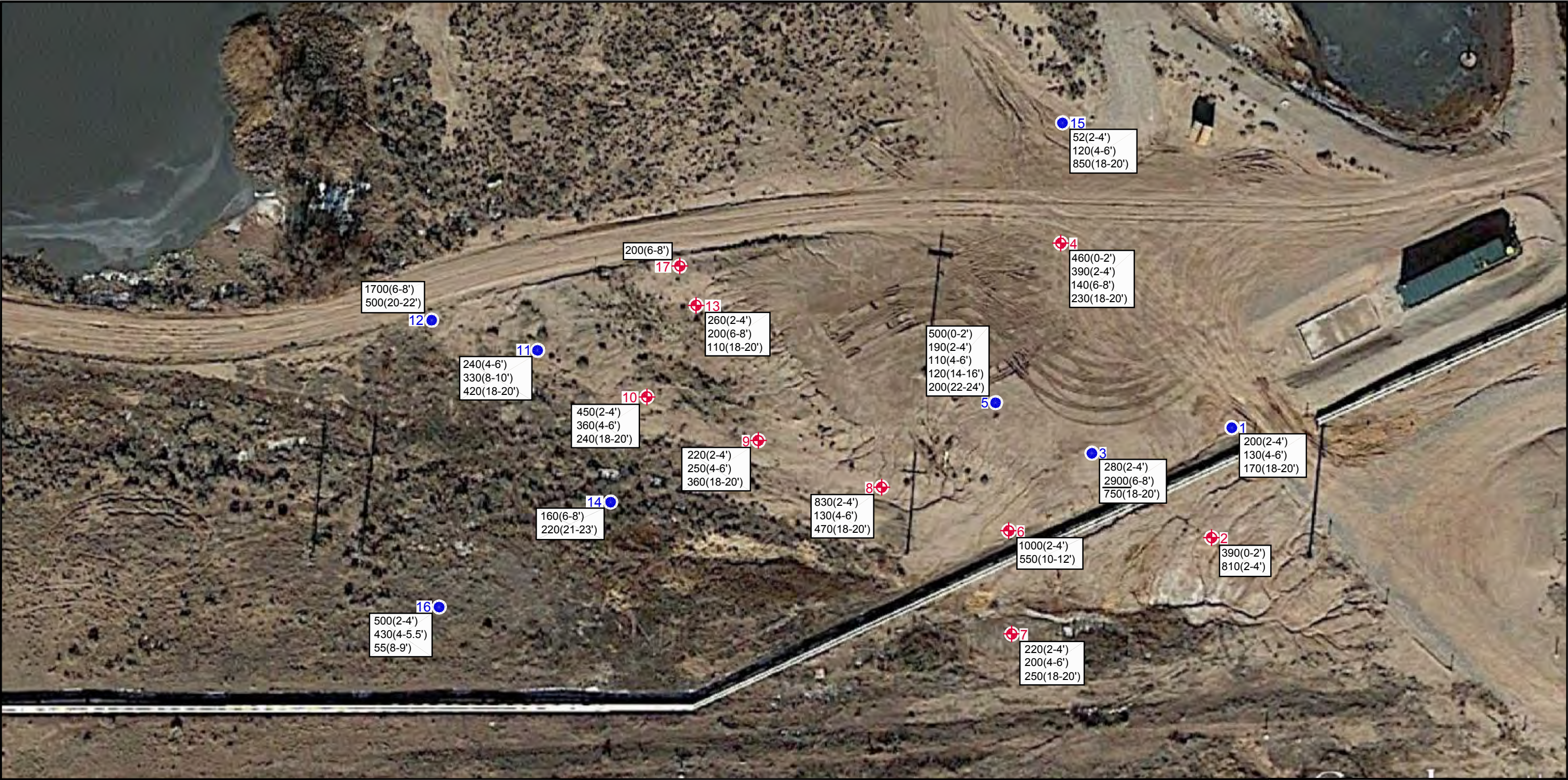


PROJ. NO.: Western Refining | DATE: 02/13/16 | FILE: WestRef-dB75

FIGURE 13
ARSENIC
SOILS CONCENTRATION MAP
SWMU No. 10

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Aerial Map Source: Google Map, 01/05/2014.

LEGEND

- 2  SOIL BORING LOCATION AND IDENTIFICATION NUMBER
- 1  SOIL BORING / TEMPORARY WELL LOCATION AND IDENTIFICATION NUMBER
- 500(0-2') BARIUM CONCENTRATION, mg/kg (SAMPLE DEPTH-FT)
- 2700 UNDERLINED CONCENTRATION VALUE EXCEEDS SCREENING LEVEL



GALLUP SITE LOCATION

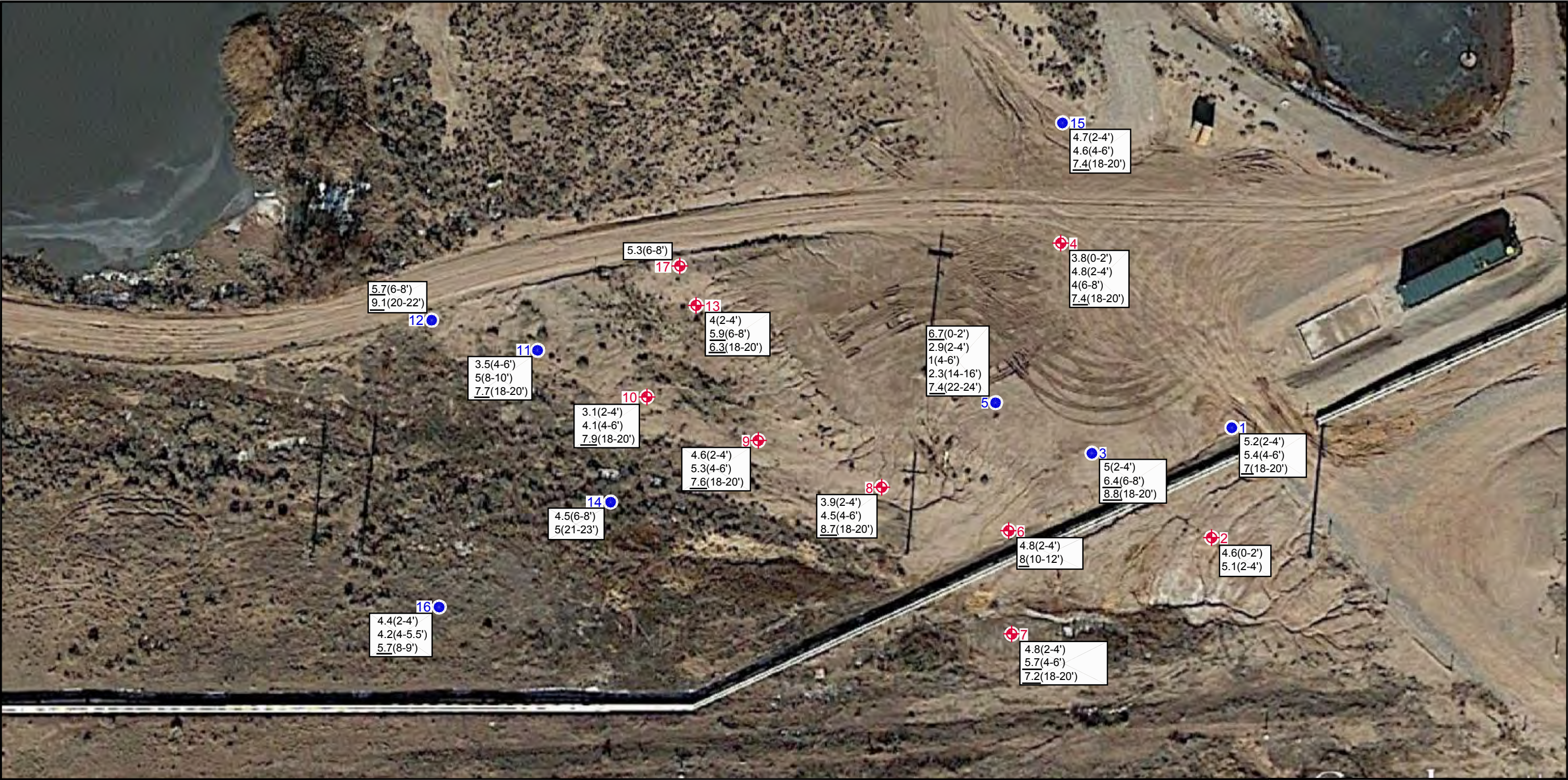


PROJ. NO.: Western Refining | DATE: 02/13/16 | FILE: WestRef-dB76

FIGURE 14
BARIUM
SOILS CONCENTRATION MAP
SWMU No. 10



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Aerial Map Source: Google Map, 01/05/2014.

LEGEND

- 2 SOIL BORING LOCATION AND IDENTIFICATION NUMBER
- 1 SOIL BORING / TEMPORARY WELL LOCATION AND IDENTIFICATION NUMBER
- 3.8(0-2') COBALT CONCENTRATION, mg/kg (SAMPLE DEPTH-FT)
- 5.4 UNDERLINED CONCENTRATION VALUE EXCEEDS SCREENING LEVEL



GALLUP SITE LOCATION

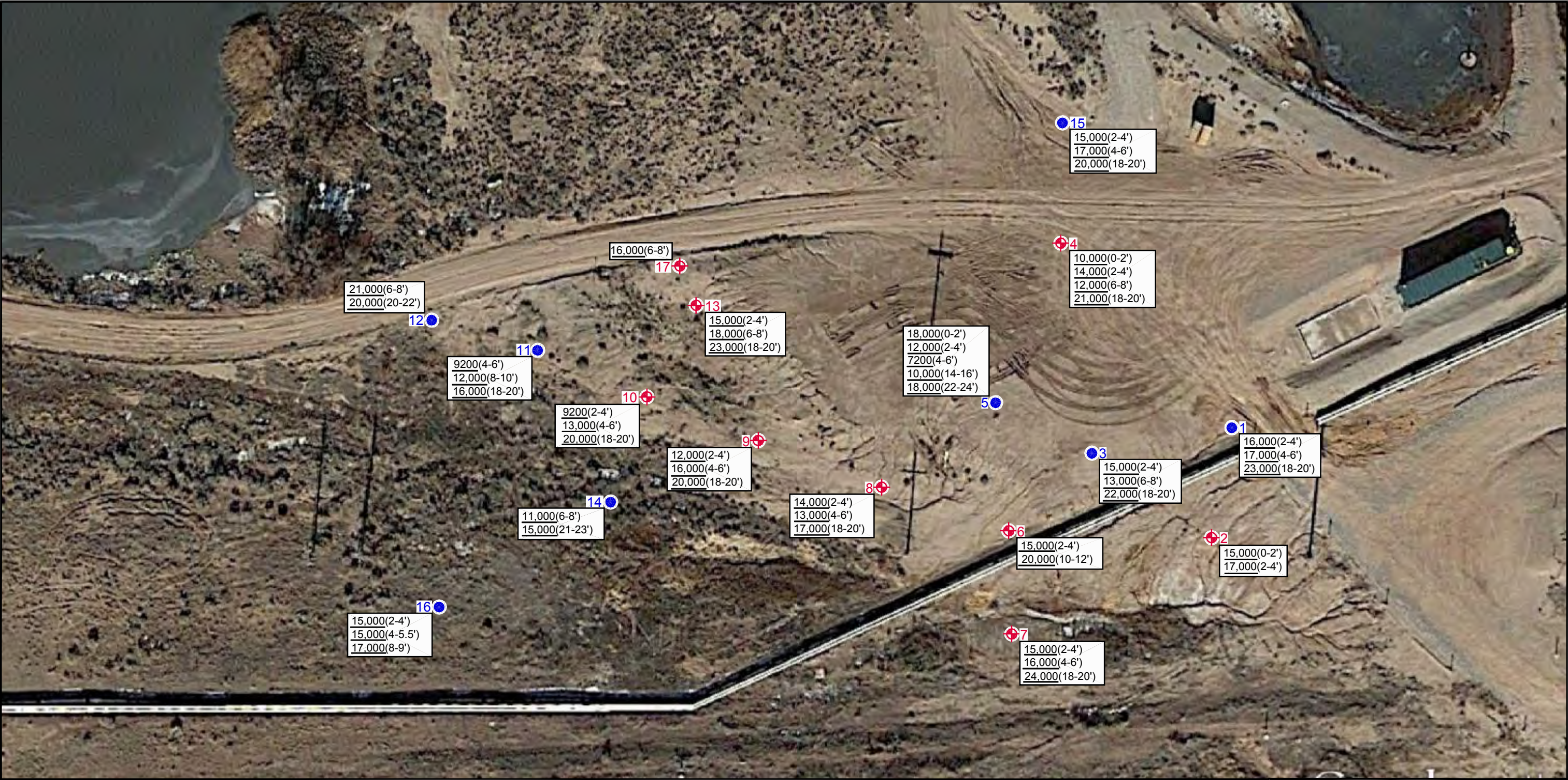


PROJ. NO.: Western Refining | DATE: 02/13/16 | FILE: WestRef-dB77

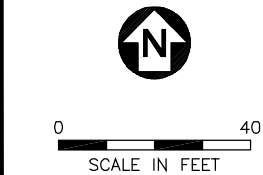
FIGURE 15
COBALT
SOILS CONCENTRATION MAP
SWMU No. 10



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Aerial Map Source: Google Map, 01/05/2014.



- LEGEND**
- 2 SOIL BORING LOCATION AND IDENTIFICATION NUMBER
 - 1 SOIL BORING / TEMPORARY WELL LOCATION AND IDENTIFICATION NUMBER
 - 10,000(0-2') IRON CONCENTRATION, mg/kg (SAMPLE DEPTH-FT)
 - 7000 UNDERLINED CONCENTRATION VALUE EXCEEDS SCREENING LEVEL



GALLUP SITE LOCATION

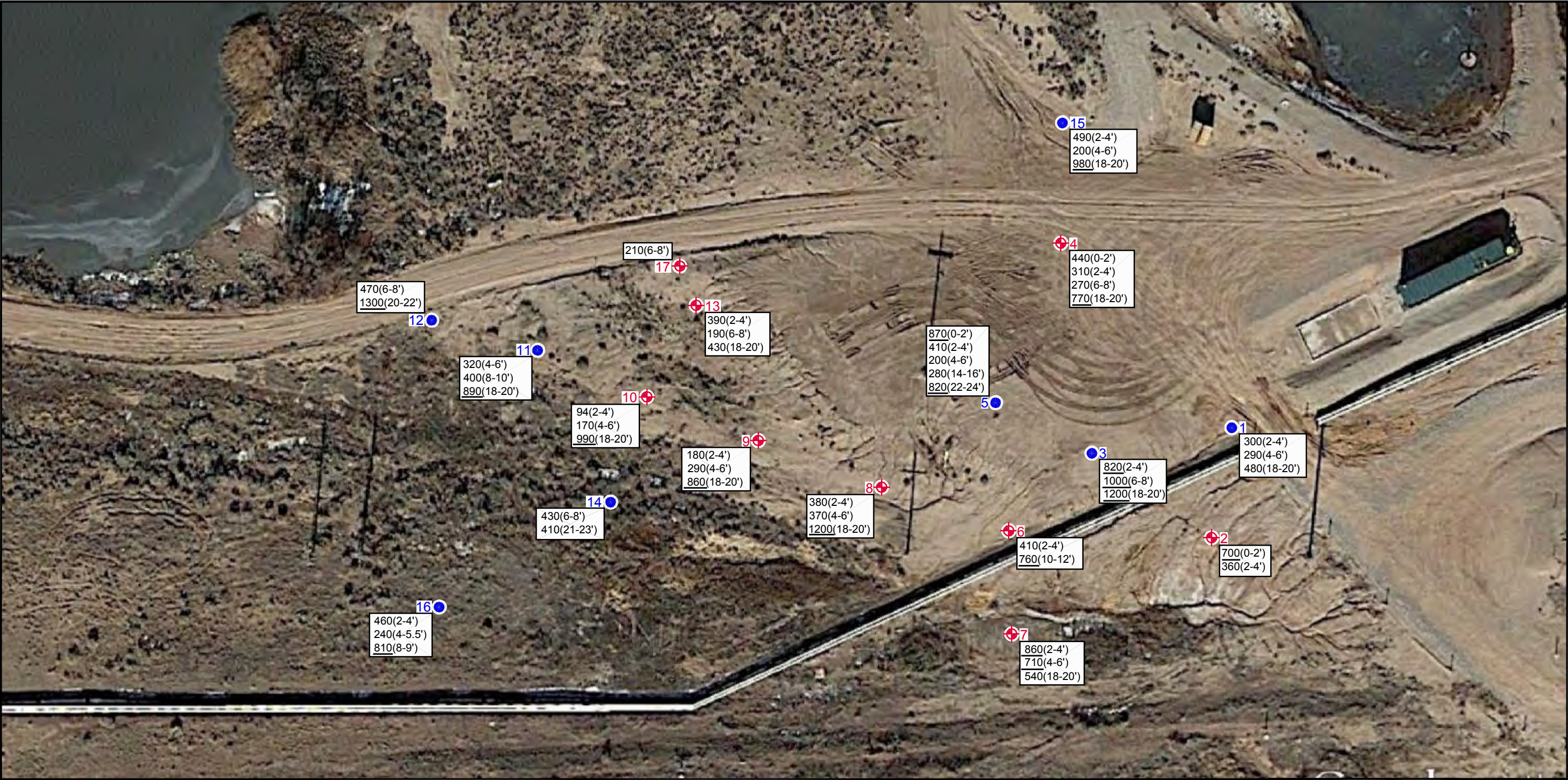


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FIGURE 16
IRON
SOILS CONCENTRATION MAP
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Aerial Map Source: Google Map, 01/05/2014.

SCALE IN FEET

LEGEND

2 SOIL BORING LOCATION AND IDENTIFICATION NUMBER

1 SOIL BORING / TEMPORARY WELL LOCATION AND IDENTIFICATION NUMBER

440(0-2') MANGANESE CONCENTRATION, mg/kg (SAMPLE DEPTH-FT)

560 UNDERLINED CONCENTRATION VALUE EXCEEDS SCREENING LEVEL

NEW MEXICO
GALLUP SITE LOCATION

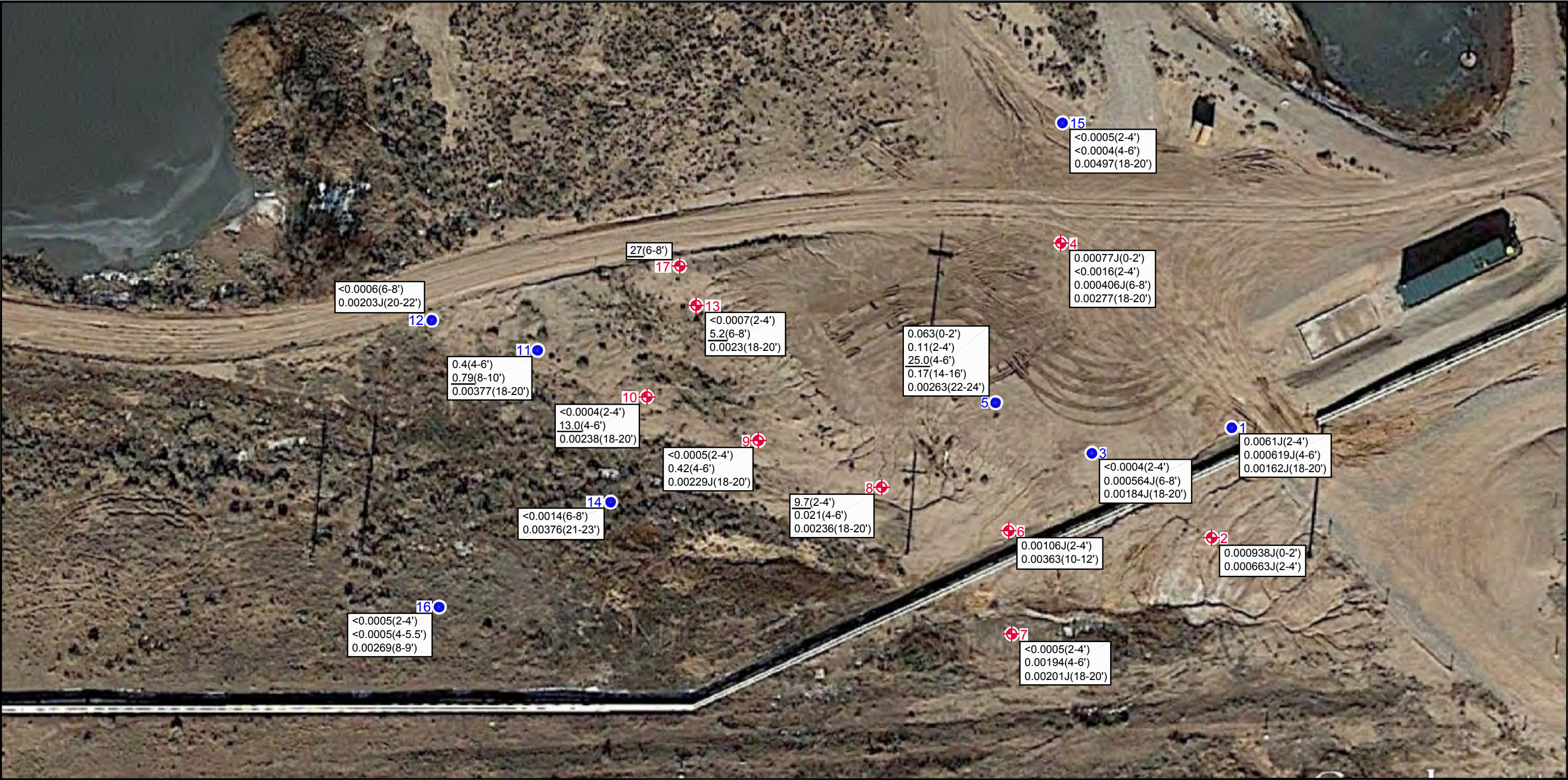
GALLUP REFINERY

PROJ. NO.: Western Refining | DATE: 02/13/16 | FILE: WestRef-dB79

FIGURE 17
MANGANESE
SOILS CONCENTRATION MAP
SWMU No. 10

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Aerial Map Source: Google Map, 01/05/2014.

0 40
SCALE IN FEET

LEGEND

2 SOIL BORING LOCATION AND IDENTIFICATION NUMBER

1 SOIL BORING / TEMPORARY WELL LOCATION AND IDENTIFICATION NUMBER

0.063(0-2') 1,2,4- TRIMETHYLBENZENE CONCENTRATION, mg/kg (SAMPLE DEPTH-FT)

0.42 UNDERLINED CONCENTRATION VALUE EXCEEDS SCREENING LEVEL

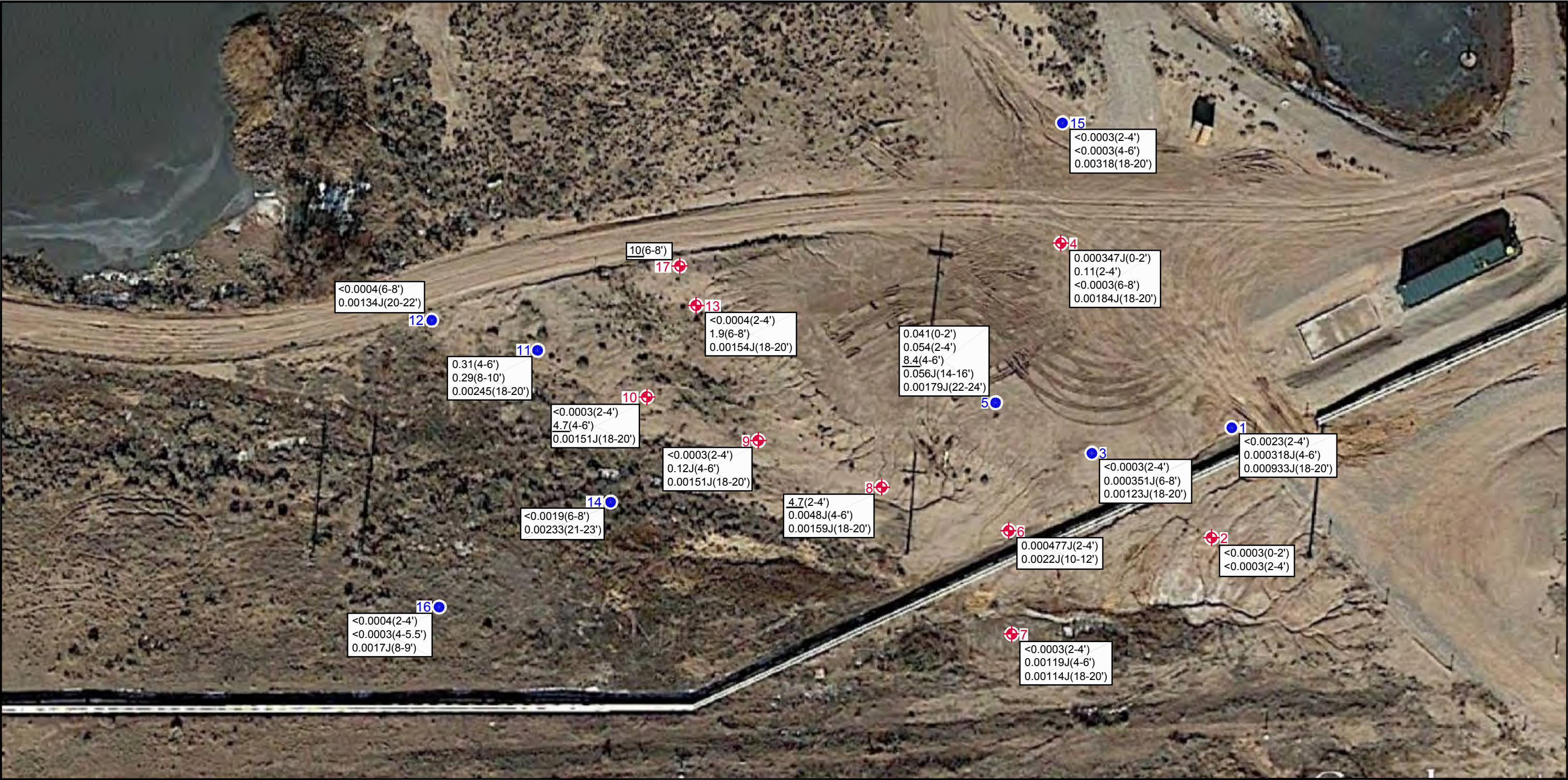
NEW MEXICO
GALLUP SITE LOCATION

GALLUP REFINERY

PROJ. NO.: Western Refining | DATE: 12/19/15 | FILE: WestRef-dB66

FIGURE 18
1,2,4- TRIMETHYLBENZENE
SOILS CONCENTRATION MAP
SWMU No. 10

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Aerial Map Source: Google Map, 01/05/2014.

LEGEND

- 2  SOIL BORING LOCATION AND IDENTIFICATION NUMBER
- 1  SOIL BORING / TEMPORARY WELL LOCATION AND IDENTIFICATION NUMBER
- 0.041(0-2') 1,3,5- TRIMETHYLBENZENE CONCENTRATION, mg/kg (SAMPLE DEPTH-FT)
- 3.4 UNDERLINED CONCENTRATION VALUE EXCEEDS SCREENING LEVEL



GALLUP SITE LOCATION

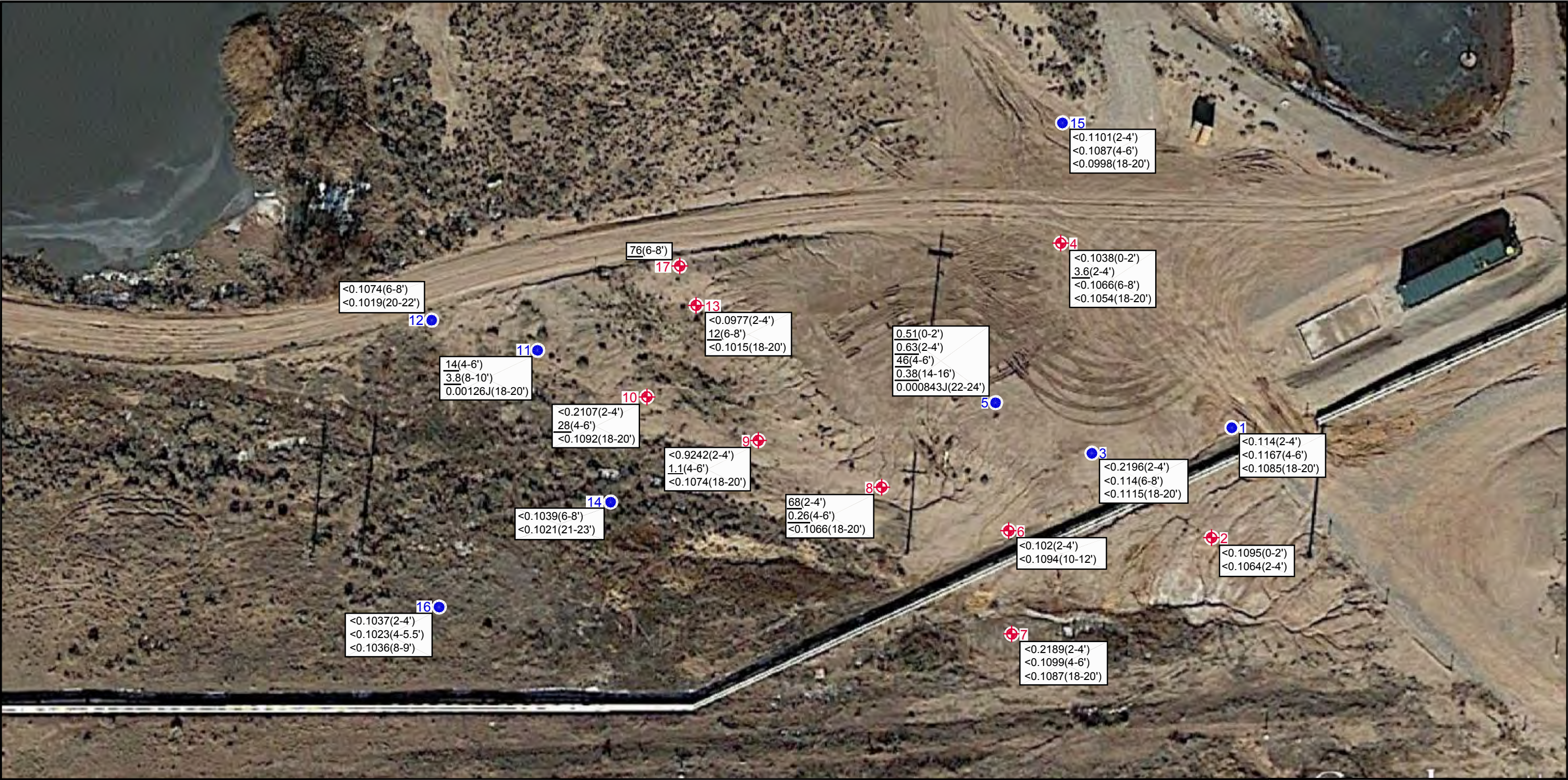


PROJ. NO.: Western Refining | DATE: 02/18/16 | FILE: WestRef-dB97

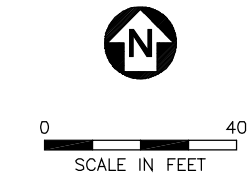
FIGURE 19
1,3,5- TRIMETHYLBENZENE
SOILS CONCENTRATION MAP
SWMU No. 10



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Aerial Map Source: Google Map, 01/05/2014.



- LEGEND**
- 2 SOIL BORING LOCATION AND IDENTIFICATION NUMBER
 - 1 SOIL BORING / TEMPORARY WELL LOCATION AND IDENTIFICATION NUMBER
 - 0.51(0-2') 1-METHYLNAPHTHALENE CONCENTRATION, mg/kg (SAMPLE DEPTH-FT)
 - 0.116 UNDERLINED CONCENTRATION VALUE EXCEEDS SCREENING LEVEL



GALLUP SITE LOCATION

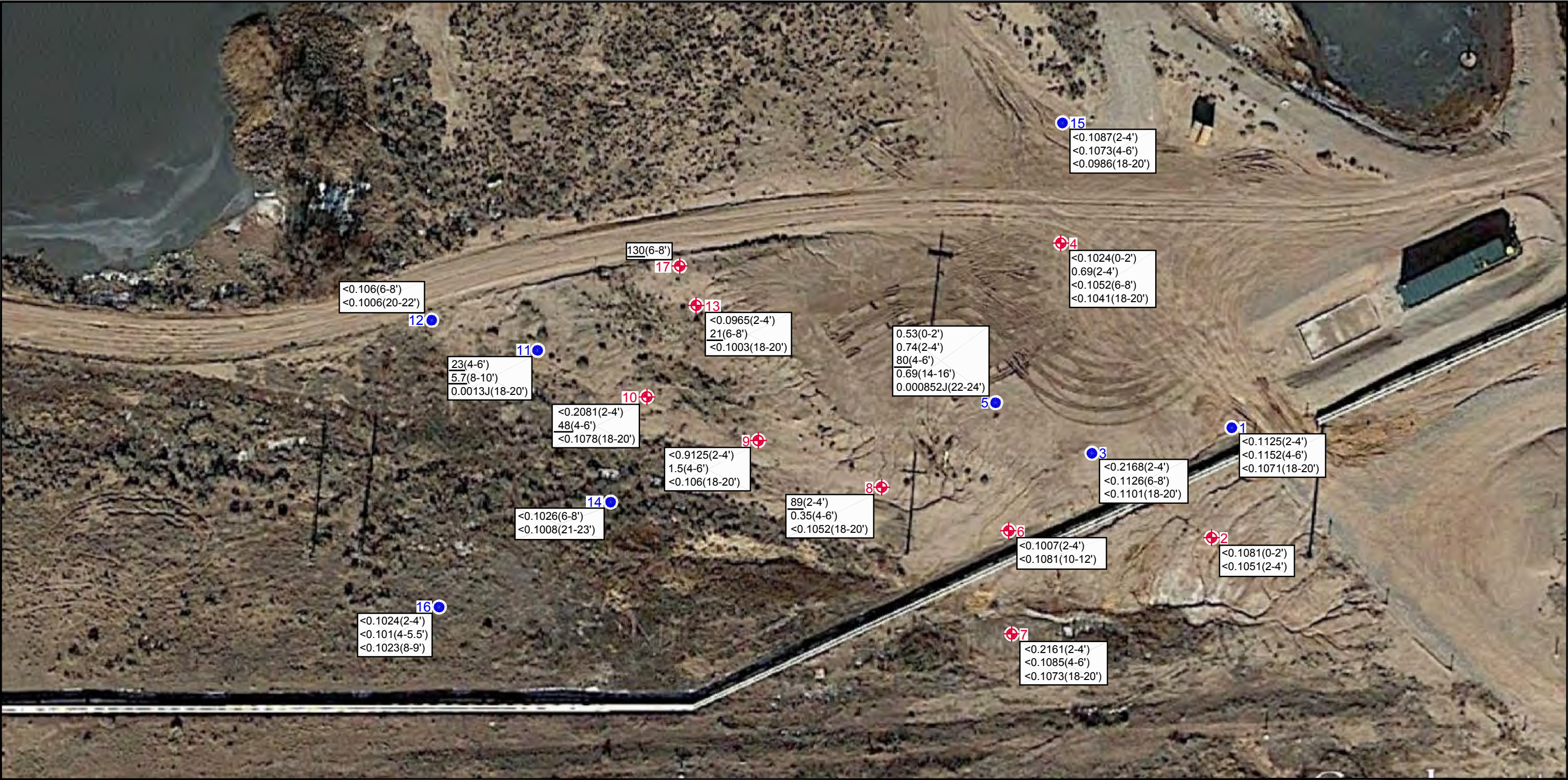


PROJ. NO.: Western Refining | DATE: 12/19/15 | FILE: WestRef-dB70

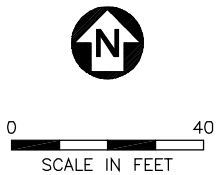
FIGURE 20
1-METHYLNAPHTHALENE
SOILS CONCENTRATION MAP
SWMU No. 10



8501 N. MoPac Expy.
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Austin, Texas 78759



Aerial Map Source: Google Map, 01/05/2014.



- LEGEND**
- 2 SOIL BORING LOCATION AND IDENTIFICATION NUMBER
 - 1 SOIL BORING / TEMPORARY WELL LOCATION AND IDENTIFICATION NUMBER
 - 0.53(0-2') 2-METHYLNAPHTHALENE CONCENTRATION, mg/kg (SAMPLE DEPTH-FT)
 - 3.8 UNDERLINED CONCENTRATION VALUE EXCEEDS SCREENING LEVEL



GALLUP SITE LOCATION

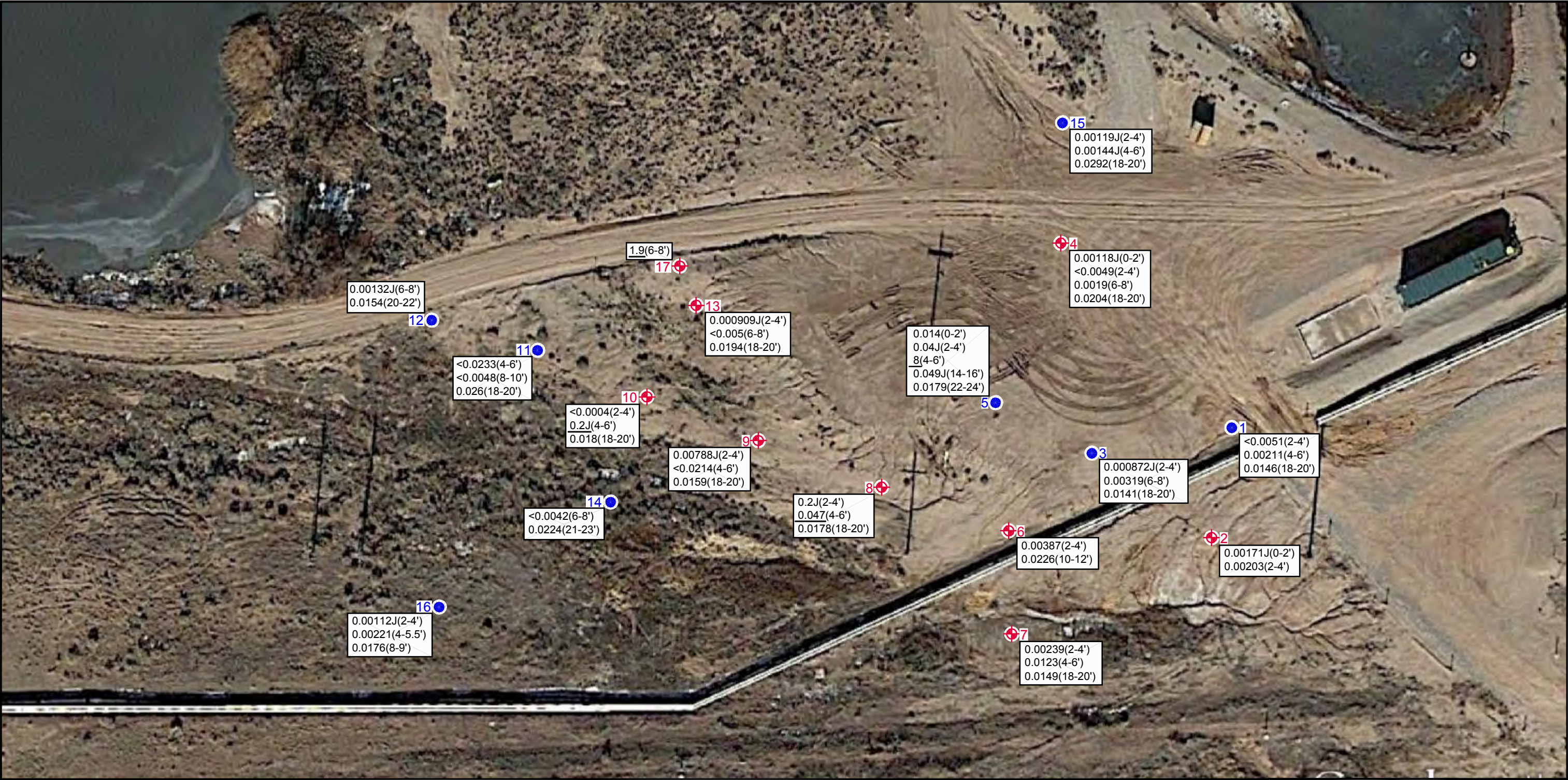


PROJ. NO.: Western Refining | DATE: 12/27/15 | FILE: WestRef--dB71

FIGURE 21
2-METHYLNAPHTHALENE
SOILS CONCENTRATION MAP
SWMU No. 10



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Aerial Map Source: Google Map, 01/05/2014.

SCALE IN FEET

LEGEND

2 SOIL BORING LOCATION AND IDENTIFICATION NUMBER

1 SOIL BORING / TEMPORARY WELL LOCATION AND IDENTIFICATION NUMBER

0.014(0-2') BENZENE CONCENTRATION, mg/kg (SAMPLE DEPTH-FT)

0.038 UNDERLINED CONCENTRATION VALUE EXCEEDS SCREENING LEVEL

NEW MEXICO
GALLUP SITE LOCATION

GALLUP REFINERY

PROJ. NO.: Western Refining | DATE: 12/19/15 | FILE: WestRef-dB67

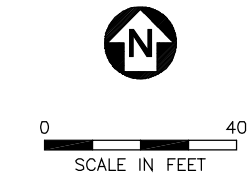
FIGURE 22
BENZENE
SOILS CONCENTRATION MAP
SWMU No. 10

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Aerial Map Source: Google Map, 01/05/2014.



- LEGEND**
- 2 (red dot with cross) SOIL BORING LOCATION AND IDENTIFICATION NUMBER
 - 1 (blue dot) SOIL BORING / TEMPORARY WELL LOCATION AND IDENTIFICATION NUMBER
 - 1.4(2-4') ETHYLBENZENE CONCENTRATION, mg/kg (SAMPLE DEPTH-FT)
 - 0.262 UNDERLINED CONCENTRATION VALUE EXCEEDS SCREENING LEVEL

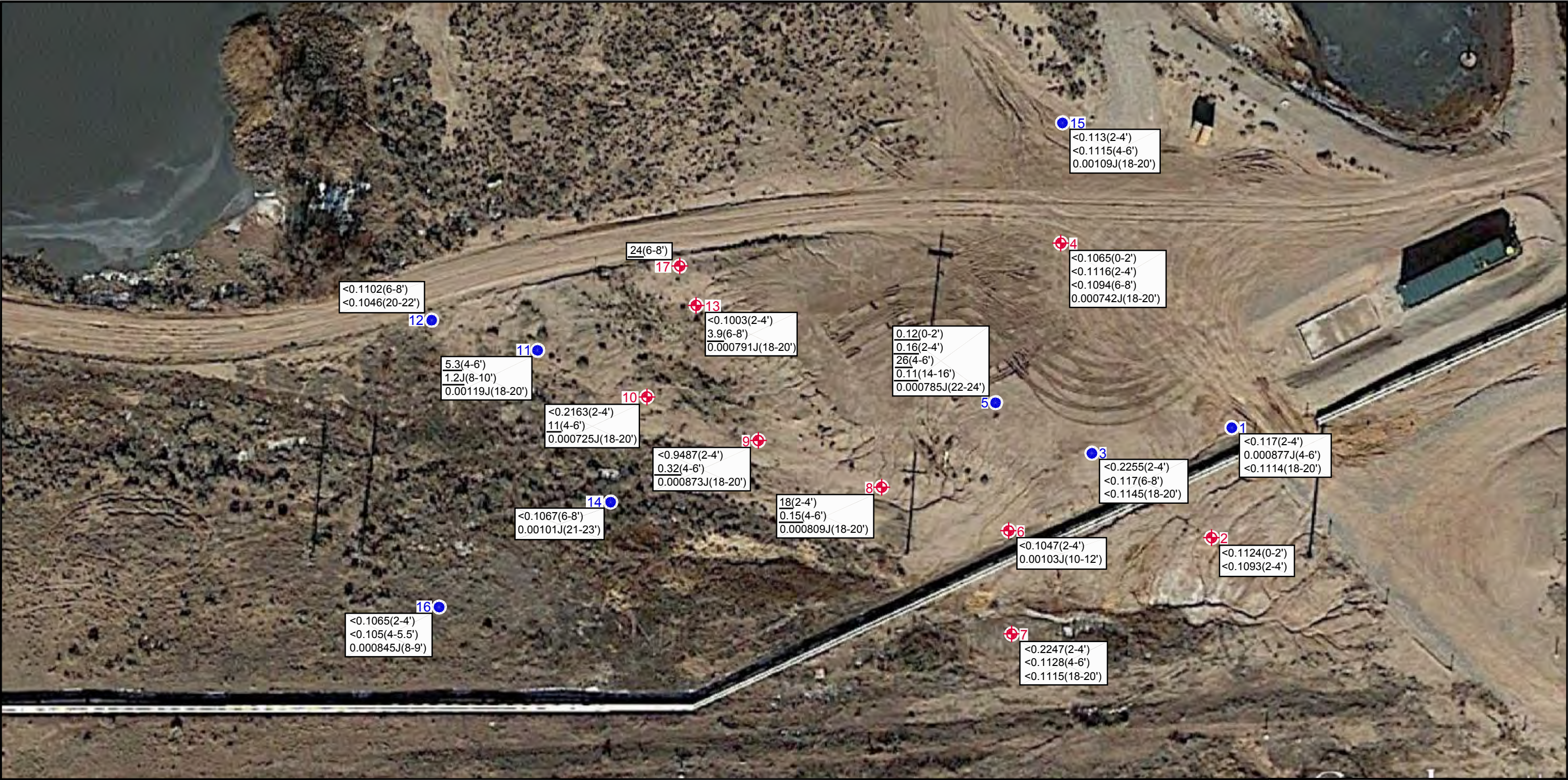


PROJ. NO.: Western Refining | DATE: 12/19/15 | FILE: WestRef-dB68

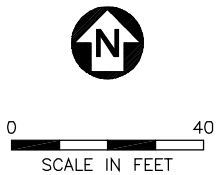
FIGURE 23
ETHYLBENZENE
SOILS CONCENTRATION MAP
SWMU No. 10



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Aerial Map Source: Google Map, 01/05/2014.



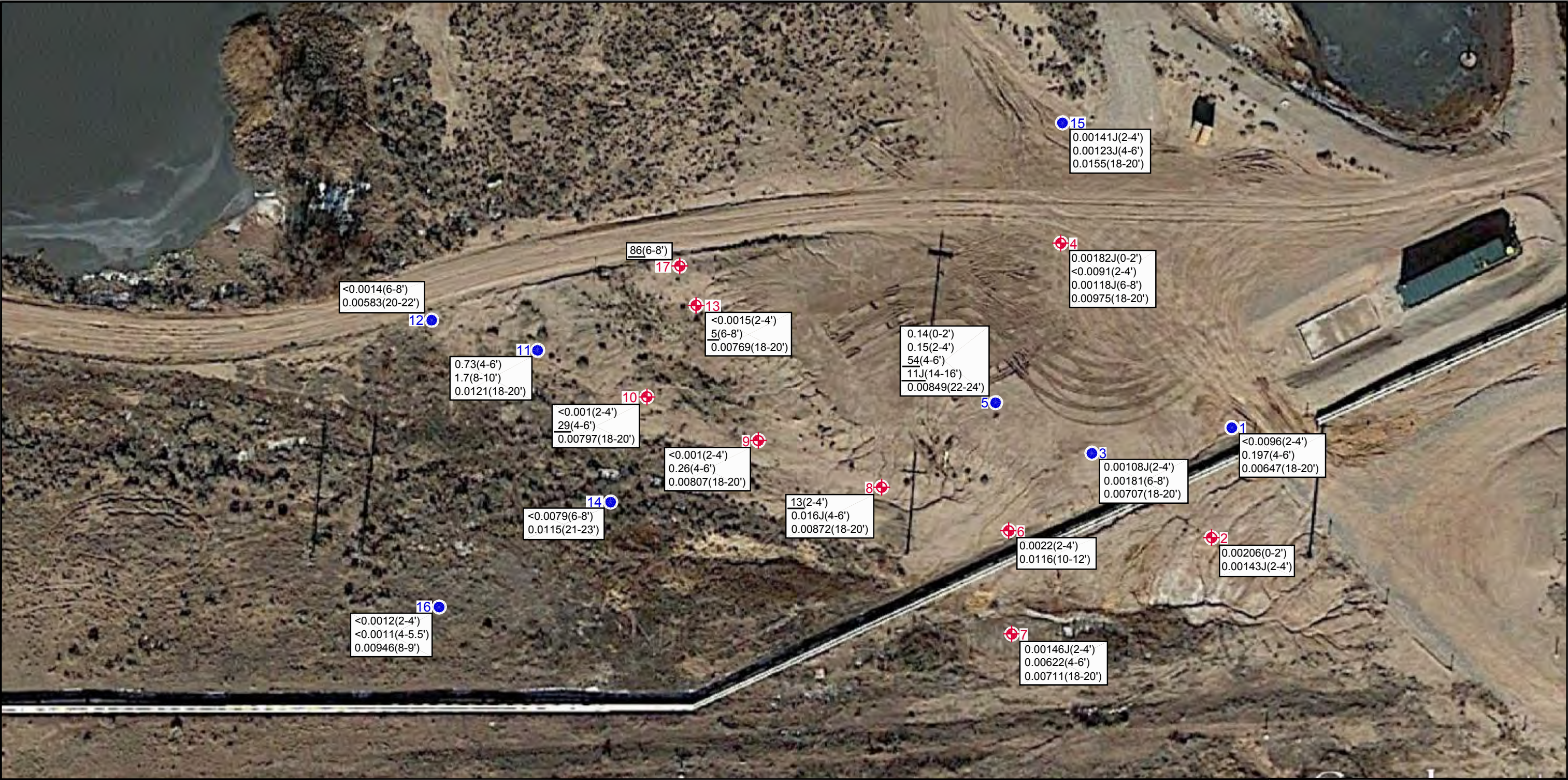
- LEGEND**
- 2 SOIL BORING LOCATION AND IDENTIFICATION NUMBER
 - 1 SOIL BORING / TEMPORARY WELL LOCATION AND IDENTIFICATION NUMBER
 - 0.12(0-2') NAPHTHALENE CONCENTRATION, mg/kg (SAMPLE DEPTH-FT)
 - 0.0823 UNDERLINED CONCENTRATION VALUE EXCEEDS SCREENING LEVEL



PROJ. NO.: Western Refining | DATE: 12/19/15 | FILE: WestRef-dB69

FIGURE 24
NAPHTHALENE
SOILS CONCENTRATION MAP
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Aerial Map Source: Google Map, 01/05/2014.



SCALE IN FEET

LEGEND

2  SOIL BORING LOCATION AND IDENTIFICATION NUMBER

1  SOIL BORING / TEMPORARY WELL LOCATION AND IDENTIFICATION NUMBER

0.14(0-2')

2.98

XYLENES CONCENTRATION, mg/kg (SAMPLE DEPTH-FT)

UNDERLINED CONCENTRATION VALUE EXCEEDS SCREENING LEVEL



NEW MEXICO

GALLUP SITE LOCATION



GALLUP REFINERY

PROJ. NO.: Western Refining | DATE: 12/27/15 | FILE: WestRef-dB72

FIGURE 25

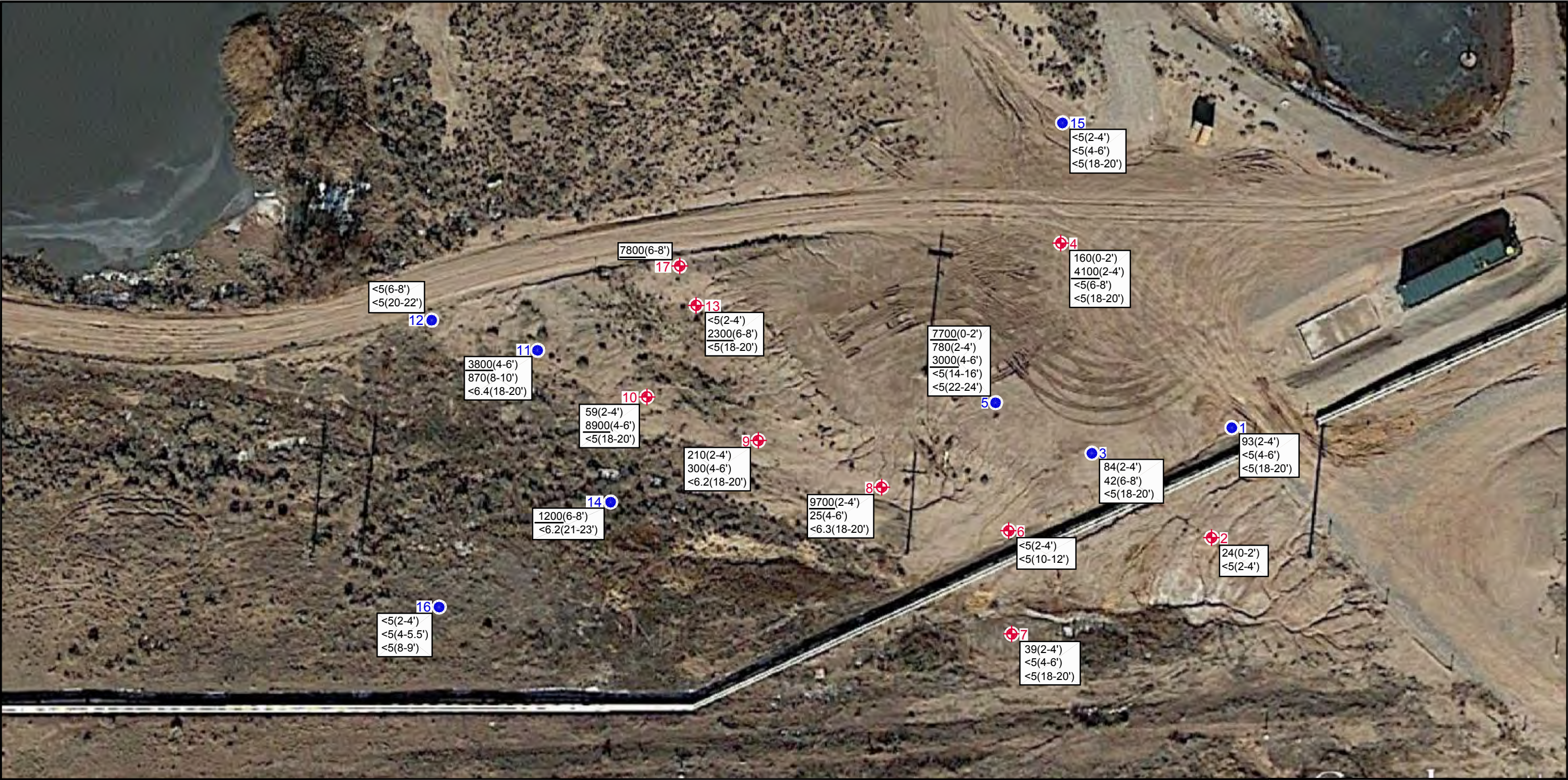
XYLENES

SOILS CONCENTRATION MAP

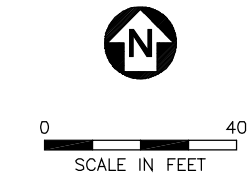
SWMU No. 10



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Aerial Map Source: Google Map, 01/05/2014.



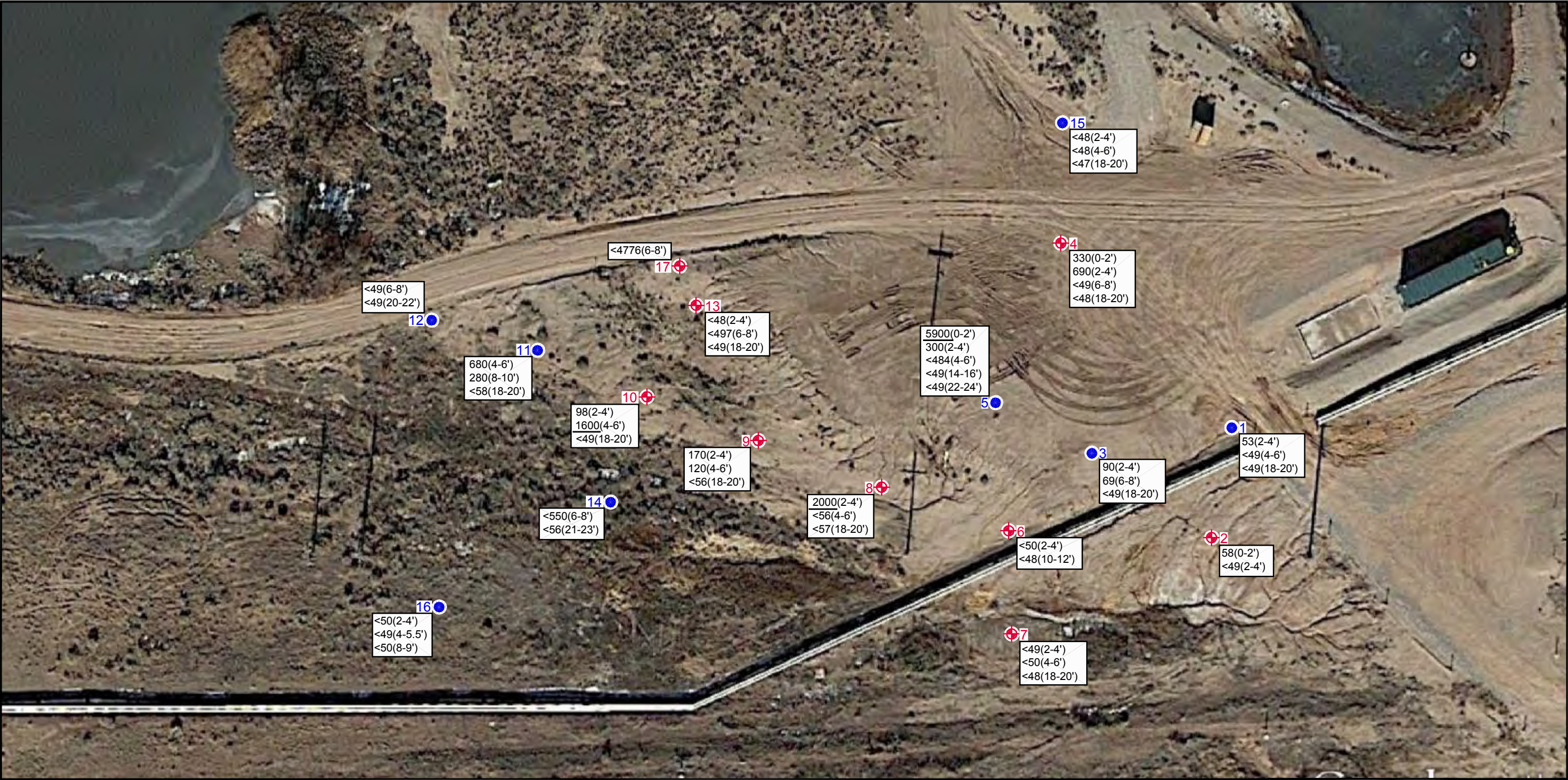
- LEGEND**
- SOIL BORING LOCATION AND IDENTIFICATION NUMBER
 - SOIL BORING / TEMPORARY WELL LOCATION AND IDENTIFICATION NUMBER
 - DIESEL RANGE ORGANICS CONCENTRATION, mg/kg (SAMPLE DEPTH-FT)
 - UNDERLINED CONCENTRATION VALUE EXCEEDS SCREENING LEVEL



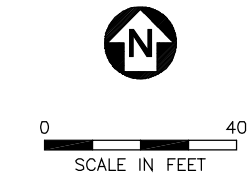
PROJ. NO.: Western Refining | DATE: 12/27/15 | FILE: WestRef-dB73

FIGURE 26
DIESEL RANGE ORGANICS
SOILS CONCENTRATION MAP
SWMU No. 10

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Aerial Map Source: Google Map, 01/05/2014.



- LEGEND**
- SOIL BORING LOCATION AND IDENTIFICATION NUMBER
 - SOIL BORING / TEMPORARY WELL LOCATION AND IDENTIFICATION NUMBER
 - 330(0-2') MOTOR OIL RANGE ORGANICS CONCENTRATION, mg/kg (SAMPLE DEPTH-FT)
 - 1,000 UNDERLINED CONCENTRATION VALUE EXCEEDS SCREENING LEVEL



GALLUP SITE LOCATION



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FIGURE 27
MOTOR OIL RANGE ORGANICS
SOILS CONCENTRATION MAP
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FIGURE 28
ARSENIC
GROUNDWATER CONCENTRATION MAP
SWMU No. 10

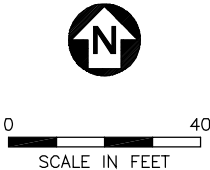
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LEGEND

- 2 SOIL BORING LOCATION AND IDENTIFICATION NUMBER
- 1 SOIL BORING / TEMPORARY WELL LOCATION AND IDENTIFICATION NUMBER
- 0.016 ARSENIC CONCENTRATION, mg/l
- 0.01 UNDERLINED CONCENTRATION VALUE EXCEEDS SCREENING LEVEL
- * NOT SUFFICIENT WATER VOLUME FOR ANALYSIS

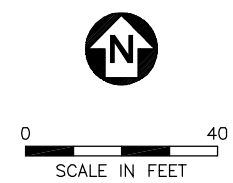


GALLUP SITE LOCATION





Aerial Map Source: Google Map, 01/05/2014.



- LEGEND**
- 2 SOIL BORING LOCATION AND IDENTIFICATION NUMBER
 - 1 SOIL BORING / TEMPORARY WELL LOCATION AND IDENTIFICATION NUMBER
 - | |
|-------|
| 2.6 |
| 0.012 |

 DISSOLVED IRON CONCENTRATION, mg/l
DISSOLVED NICKEL CONCENTRATION, mg/l
 - 1.0 IRON - UNDERLINED CONCENTRATION
VALUE EXCEEDS SCREENING LEVEL
 - 0.372 NICKEL - UNDERLINED CONCENTRATION
VALUE EXCEEDS SCREENING LEVEL



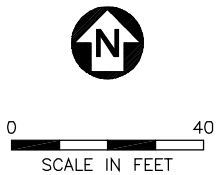
PROJ. NO.: Western Refining | DATE: 02/16/16 | FILE: WestRef-dB89

FIGURE 29
IRON & NICKEL
GROUNDWATER CONCENTRATION MAP
SWMU No. 10

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Aerial Map Source: Google Map, 01/05/2014.



LEGEND

- 2 SOIL BORING LOCATION AND IDENTIFICATION NUMBER
- 1 SOIL BORING / TEMPORARY WELL LOCATION AND IDENTIFICATION NUMBER
- 0.91 MANGANESE (DISSLOVED) CONCENTRATION, mg/l
- 0.2 UNDERLINED CONCENTRATION VALUE EXCEEDS SCREENING LEVEL
- * NOT SUFFICIENT WATER VOLUME FOR ANALYSIS



GALLUP SITE LOCATION



PROJ. NO.: Western Refining | DATE: 02/12/16 | FILE: WestRef-dB81

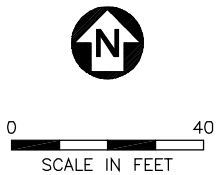
FIGURE 30
MANGANESE (DISSOLVED)
GROUNDWATER CONCENTRATION MAP
SWMU No. 10



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Aerial Map Source: Google Map, 01/05/2014.



LEGEND

- 2 SOIL BORING LOCATION AND IDENTIFICATION NUMBER
- 1 SOIL BORING / TEMPORARY WELL LOCATION AND IDENTIFICATION NUMBER
- | |
|-----|
| 330 |
| 370 |

 CHLORIDE CONCENTRATION, mg/l
SULFATE CONCENTRATION, mg/l
- 250 CHLORIDE - UNDERLINED CONCENTRATION VALUE EXCEEDS SCREENING LEVEL
- 600 SULFATE - UNDERLINED CONCENTRATION VALUE EXCEEDS SCREENING LEVEL



GALLUP SITE LOCATION



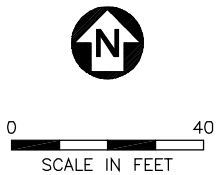
PROJ. NO.: Western Refining | DATE: 02/16/16 | FILE: WestRef-dB90

FIGURE 31
CHLORIDE & SULFATE
GROUNDWATER CONCENTRATION MAP
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- LEGEND**
- 2 SOIL BORING LOCATION AND IDENTIFICATION NUMBER
 - 1 SOIL BORING / TEMPORARY WELL LOCATION AND IDENTIFICATION NUMBER
 - 0.44 1,2,4-TRIMETHYLBENZENE CONCENTRATION, $\mu\text{g/l}$
 - 15.0 UNDERLINED CONCENTRATION VALUE EXCEEDS SCREENING LEVEL



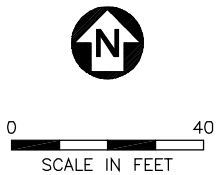
PROJ. NO.: Western Refining | DATE: 02/12/16 | FILE: WestRef-dB82

FIGURE 32
1,2,4-TRIMETHYLBENZENE
GROUNDWATER CONCENTRATION MAP
SWMU No. 10

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Aerial Map Source: Google Map, 01/05/2014.



- LEGEND**
- 2 SOIL BORING LOCATION AND IDENTIFICATION NUMBER
 - 1 SOIL BORING / TEMPORARY WELL LOCATION AND IDENTIFICATION NUMBER
 - 3.9 1,3,5-TRIMETHYLBENZENE CONCENTRATION, $\mu\text{g/l}$
 - 12 UNDERLINED CONCENTRATION VALUE EXCEEDS SCREENING LEVEL



GALLUP SITE LOCATION



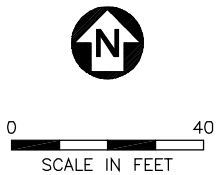
PROJ. NO.: Western Refining | DATE: 02/12/16 | FILE: WestRef-dB83

FIGURE 33
1,3,5-TRIMETHYLBENZENE
GROUNDWATER CONCENTRATION MAP
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Aerial Map Source: Google Map, 01/05/2014.



- LEGEND**
- 2 SOIL BORING LOCATION AND IDENTIFICATION NUMBER
 - 1 SOIL BORING / TEMPORARY WELL LOCATION AND IDENTIFICATION NUMBER
 - 3.1 1-METHYLNAPHTHALENE CONCENTRATION, $\mu\text{g/l}$
 - 11 UNDERLINED CONCENTRATION VALUE EXCEEDS SCREENING LEVEL



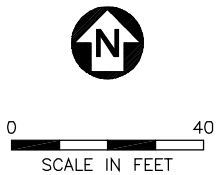
PROJ. NO.: Western Refining | DATE: 02/12/16 | FILE: WestRef-dB84

FIGURE 34
1-METHYLNAPHTHALENE
GROUNDWATER CONCENTRATION MAP
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Aerial Map Source: Google Map, 01/05/2014.



- LEGEND**
- 2 SOIL BORING LOCATION AND IDENTIFICATION NUMBER
 - 1 SOIL BORING / TEMPORARY WELL LOCATION AND IDENTIFICATION NUMBER
 - 3.8 2-METHYLNAPHTHALENE CONCENTRATION, $\mu\text{g/l}$
 - 36 UNDERLINED CONCENTRATION VALUE EXCEEDS SCREENING LEVEL



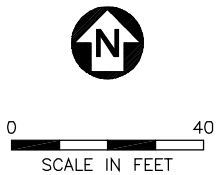
PROJ. NO.: Western Refining | DATE: 02/12/16 | FILE: WestRef-dB85

FIGURE 35
2-METHYLNAPHTHALENE
GROUNDWATER CONCENTRATION MAP
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- LEGEND**
- 2  SOIL BORING LOCATION AND IDENTIFICATION NUMBER
 - 1  SOIL BORING / TEMPORARY WELL LOCATION AND IDENTIFICATION NUMBER
 - 2.5 BENZENE CONCENTRATION, $\mu\text{g/l}$
 - 5.0 UNDERLINED CONCENTRATION VALUE EXCEEDS SCREENING LEVEL



GALLUP SITE LOCATION



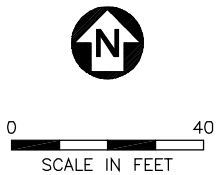
PROJ. NO.: Western Refining | DATE: 02/12/16 | FILE: WestRef-dB86

FIGURE 36
BENZENE
GROUNDWATER CONCENTRATION MAP
SWMU No. 10

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Aerial Map Source: Google Map, 01/05/2014.



- LEGEND**
- 2 SOIL BORING LOCATION AND IDENTIFICATION NUMBER
 - 1 SOIL BORING / TEMPORARY WELL LOCATION AND IDENTIFICATION NUMBER
 - 16 MTBE CONCENTRATION, $\mu\text{g/l}$
 - 143 UNDERLINED CONCENTRATION VALUE EXCEEDS SCREENING LEVEL



GALLUP SITE LOCATION



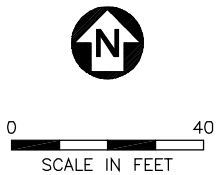
PROJ. NO.: Western Refining DATE: 02/12/16 FILE: WestRef-dB87

FIGURE 37
MTBE
GROUNDWATER CONCENTRATION MAP
SWMU No. 10

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Aerial Map Source: Google Map, 01/05/2014.



- LEGEND**
- 2 SOIL BORING LOCATION AND IDENTIFICATION NUMBER
 - 1 SOIL BORING / TEMPORARY WELL LOCATION AND IDENTIFICATION NUMBER
 - 45 NAPHTHALENE CONCENTRATION, $\mu\text{g/l}$
 - 1.65 UNDERLINED CONCENTRATION VALUE EXCEEDS SCREENING LEVEL



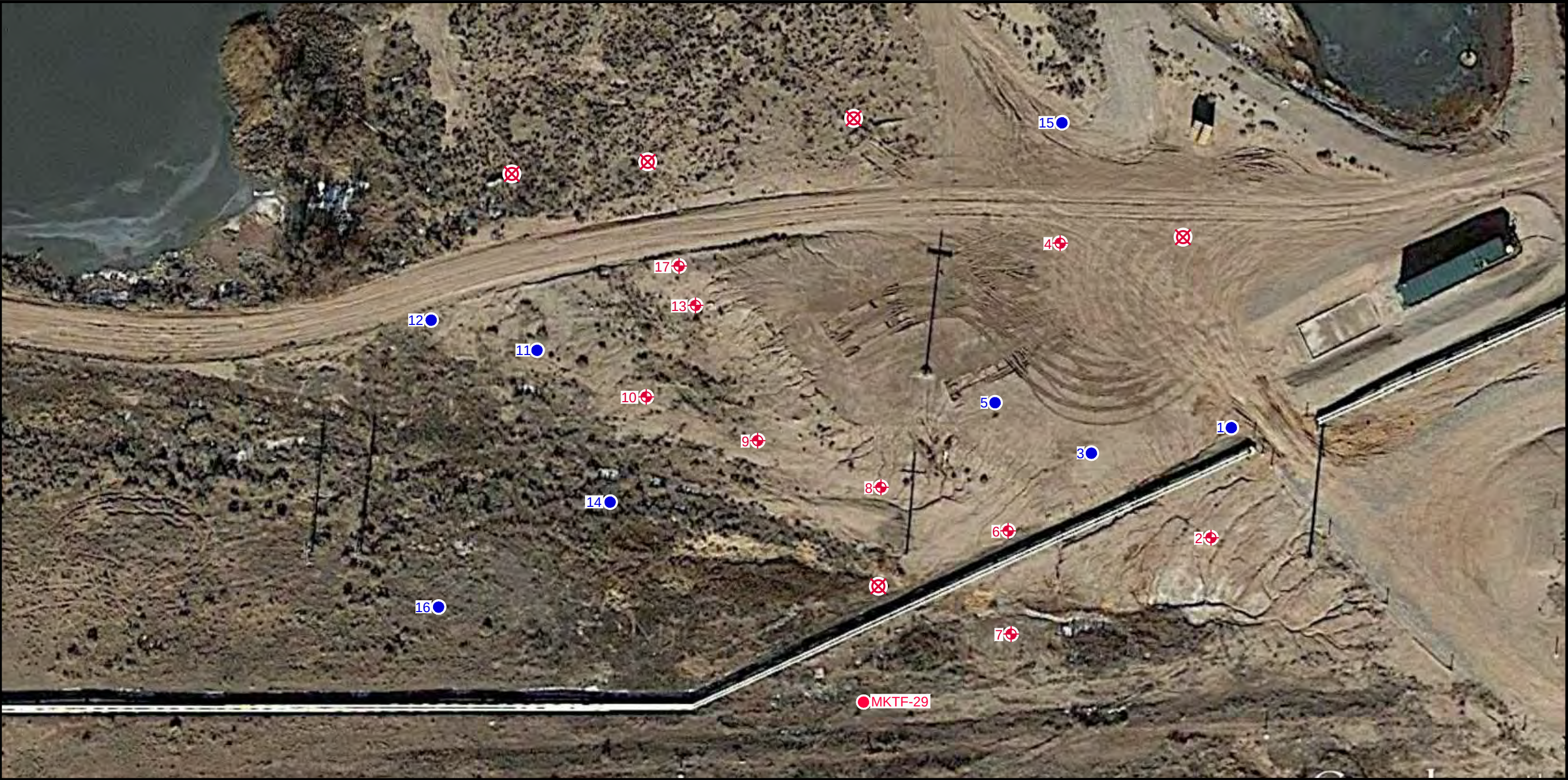
GALLUP SITE LOCATION



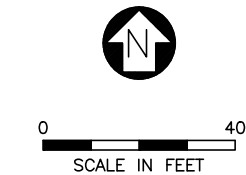
PROJ. NO.: Western Refining DATE: 02/12/16 FILE: WestRef-dB88

FIGURE 38
NAPHTHALENE
GROUNDWATER CONCENTRATION MAP
SWMU No. 10

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Aerial Map Source: Google Map, 01/05/2014.



- LEGEND**
-  PROPOSED ADDITIONAL SOIL BORING LOCATION AND IDENTIFICATION NUMBER
 -  SOIL BORING LOCATION AND IDENTIFICATION NUMBER
 -  SOIL BORING / TEMPORARY WELL LOCATION AND IDENTIFICATION NUMBER
 -  MONITORING WELL LOCATION (PERMANENT WELL) AND IDENTIFICATION NUMBER
- MKTf-29** 



PROJ. NO.: Western Refining | DATE: 02/23/16 | FILE: WestRef-dB98

FIGURE 39
PROPOSED SOIL BORING MAP
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