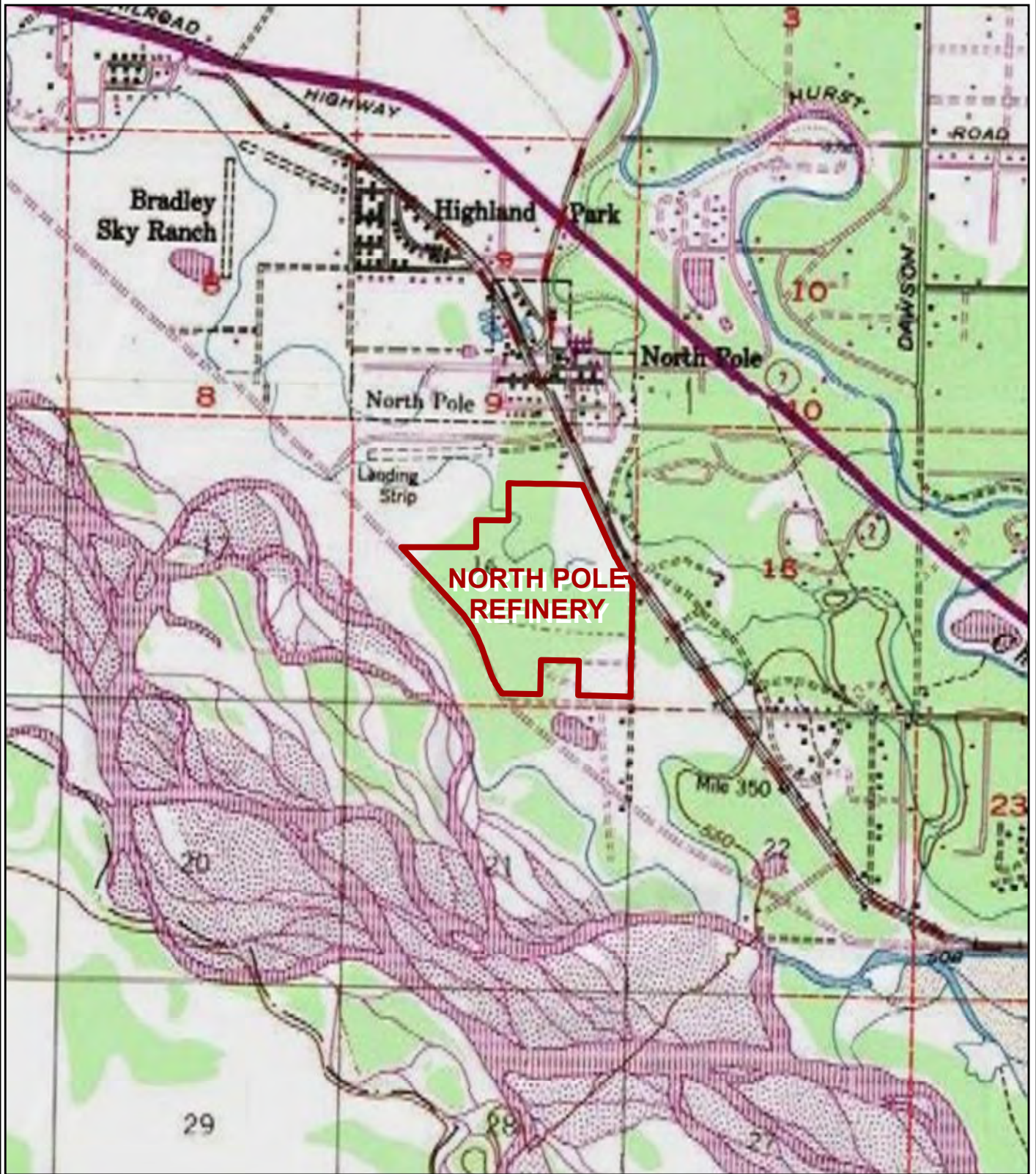
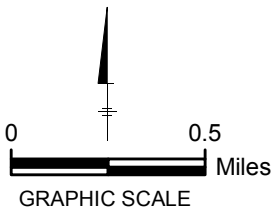




LEGEND:

 FHRA PROPERTY
BOUNDARY



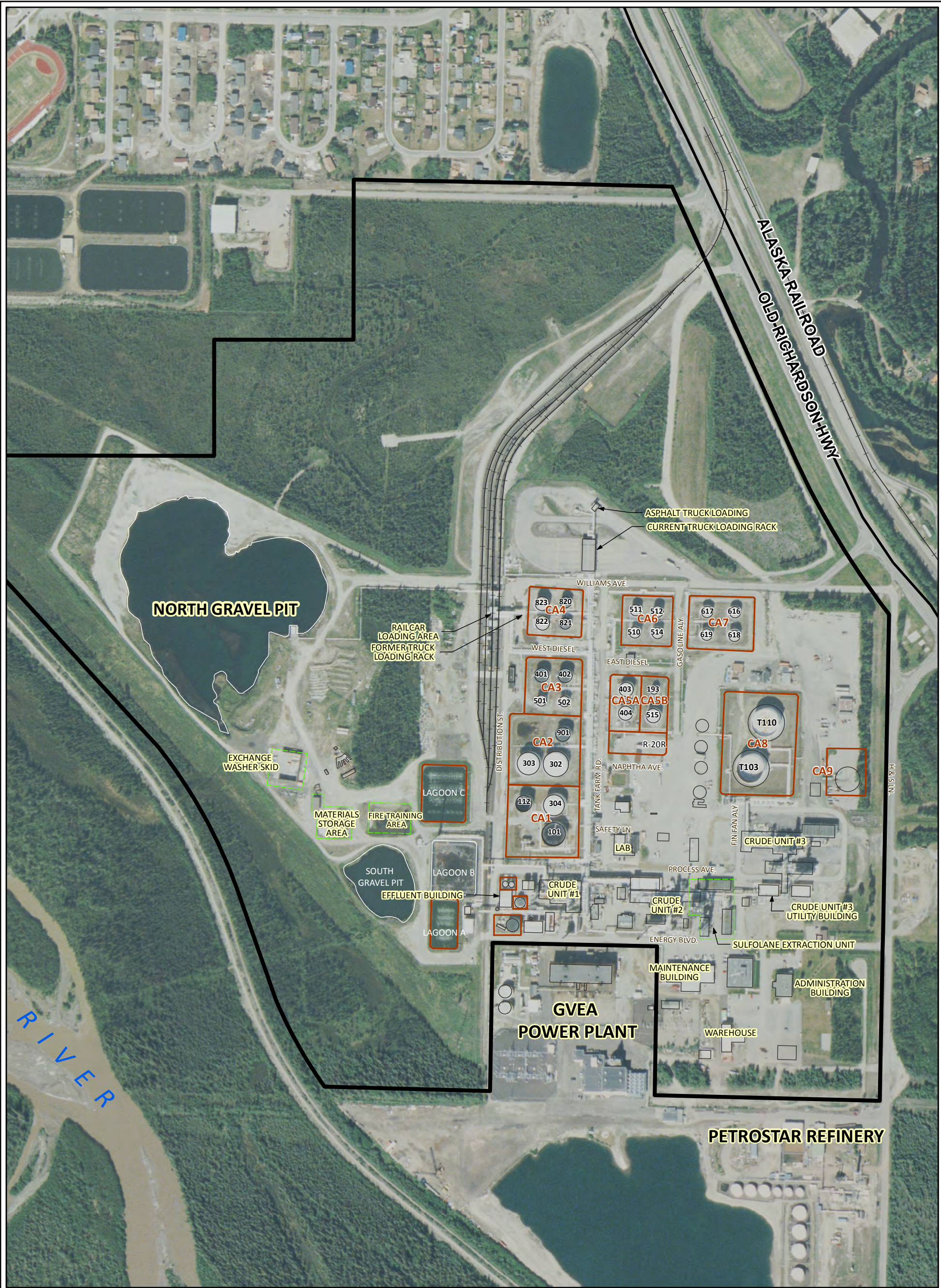
FLINT HILLS RESOURCES ALASKA, LLC
NORTH POLE REFINERY, NORTH POLE, ALASKA

SITE CHARACTERIZATION REPORT - 2012 ADDENDUM

SITE LOCATION



FIGURE
1



Legend

- Bermed Containment Areas (CA)
- Approximate Area
- FHRA Property Boundary

Notes:
Image Date June 9, 2007

0400800

SCALE IN FEET

FLINT HILLS RESOURCES ALASKA, LLC
NORTH POLE REFINERY, NORTH POLE, ALASKA

SITE CHARACTERIZATION REPORT – 2012 ADDENDUM

CURRENT SITE FEATURES

FIGURE

2

-  Monitoring Well
-  Recovery Well
-  Observation Well
-  Vertical Profile Transect Well
-  FHRA Property Boundary



SITE PLAN - ONSITE



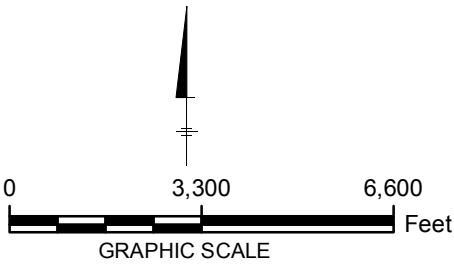
3



Legend:

- | | |
|--------------------------------|------------------------|
| Monitoring Well | FHRA Property Boundary |
| Recovery Well | RAIL LINE |
| Observation Well | Highway |
| Vertical Profile Transect Well | Major Road |
| | Local Road |

Notes:
Image Date June 9, 2007

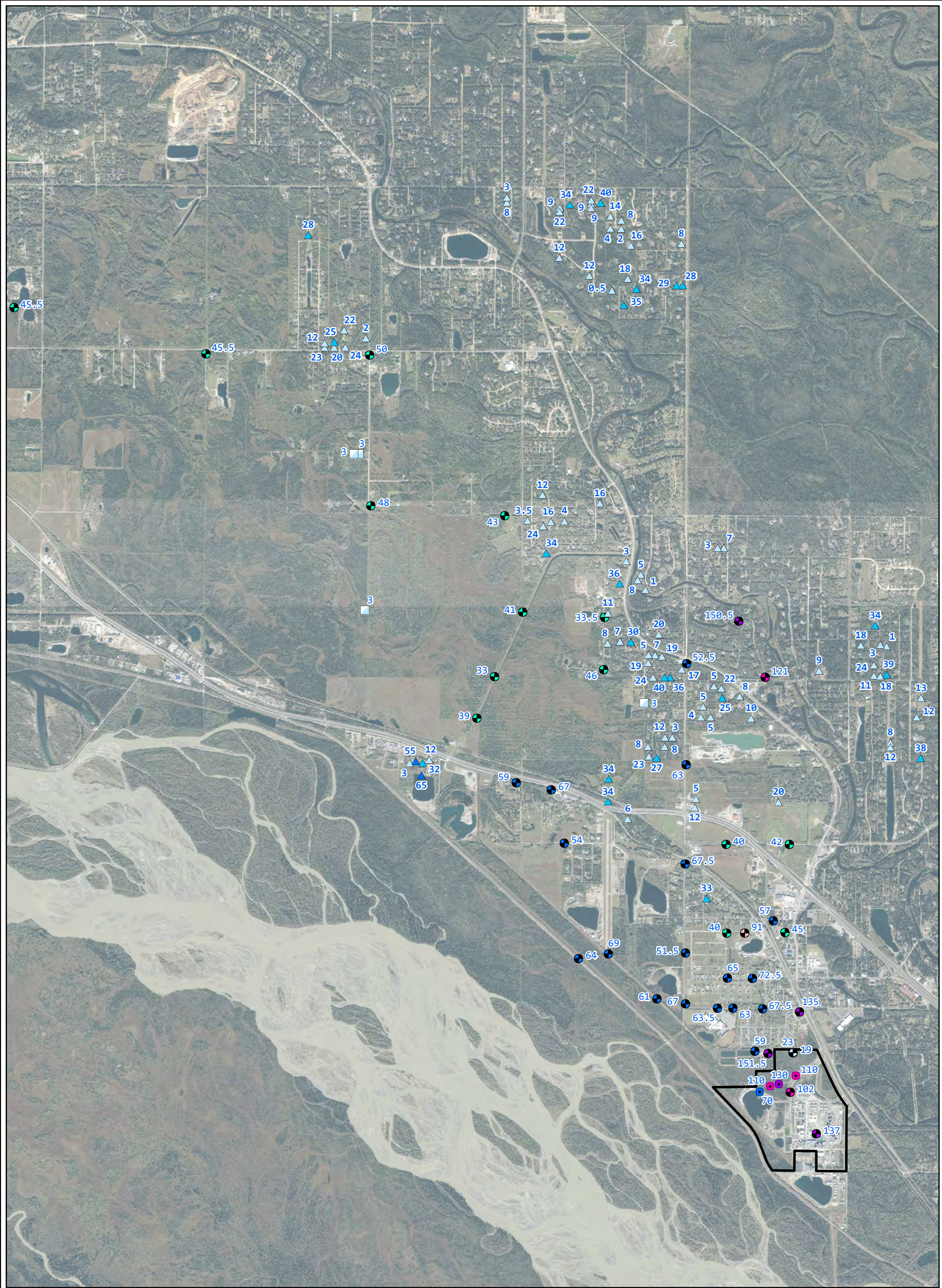


FLINT HILLS RESOURCES ALASKA, LLC
NORTH POLE REFINERY, NORTH POLE, ALASKA
SITE CHARACTERIZATION REPORT – 2012 ADDENDUM

SITE PLAN - OFFSITE



FIGURE
4



Legend

Depth to Permafrost

- <24.9'
- 25-49.9'
- 50-74.9'
- 75-99.9'
- 100-124.9'
- ≥125'

- Monitoring Well
- Vertical Profile Transect Well
- Private Well
- Shallow Permafrost Observed-
- Monitoring Well Not Constructed
- FHRA Property Boundary

SCALE IN FEET

FLINT HILLS RESOURCES ALASKA, LLC
NORTH POLE REFINERY, NORTH POLE, ALASKA

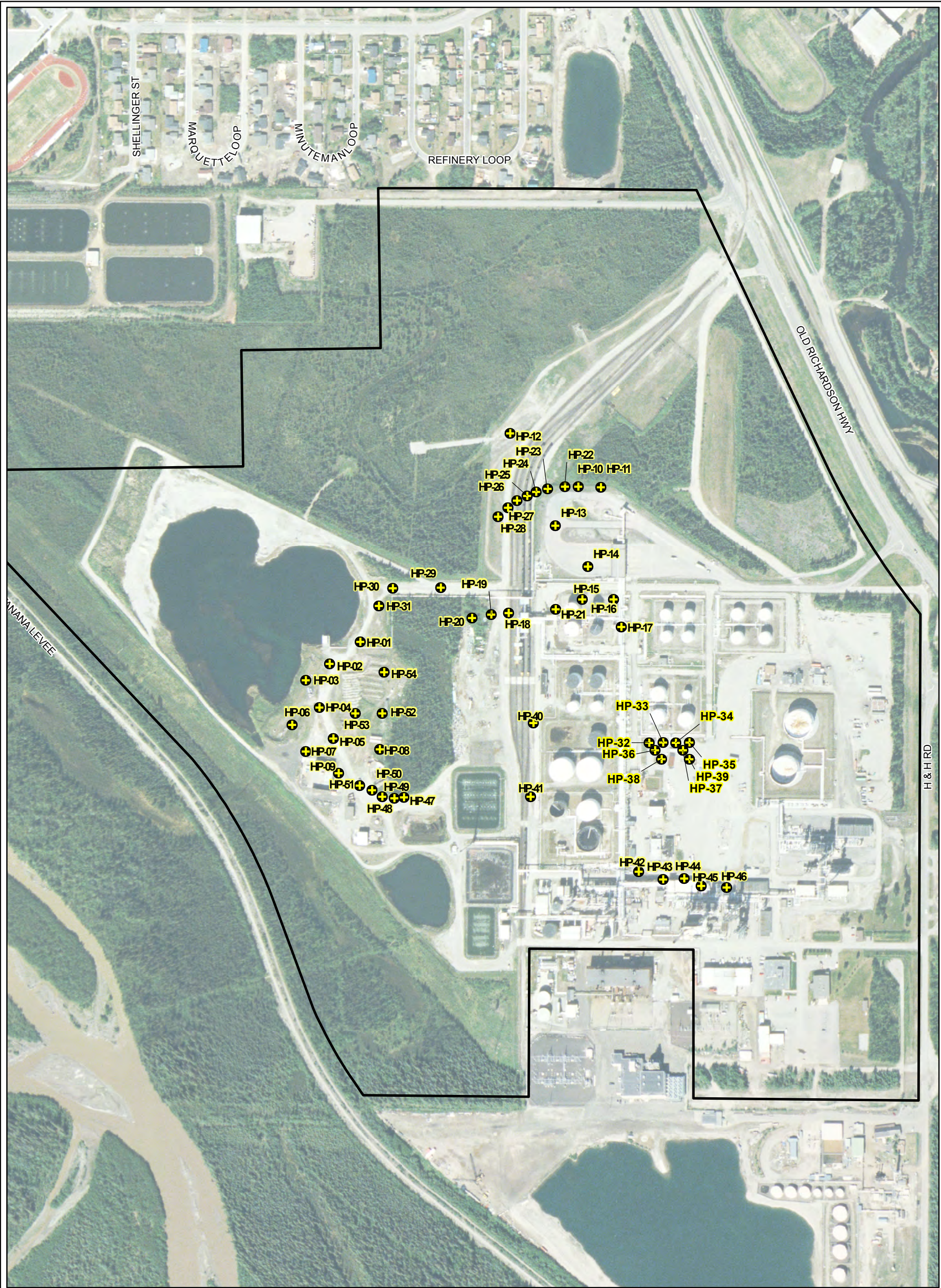
SITE CHARACTERIZATION REPORT – 2012 ADDENDUM

DEPTH TO PERMAFROST

FIGURE

5

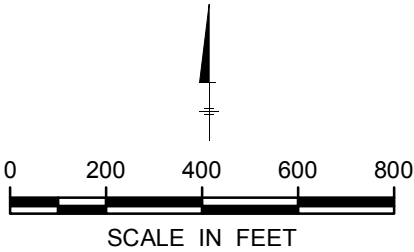




- Legend
- Hydropunch Location
 - FHRA Property Boundary

Notes:

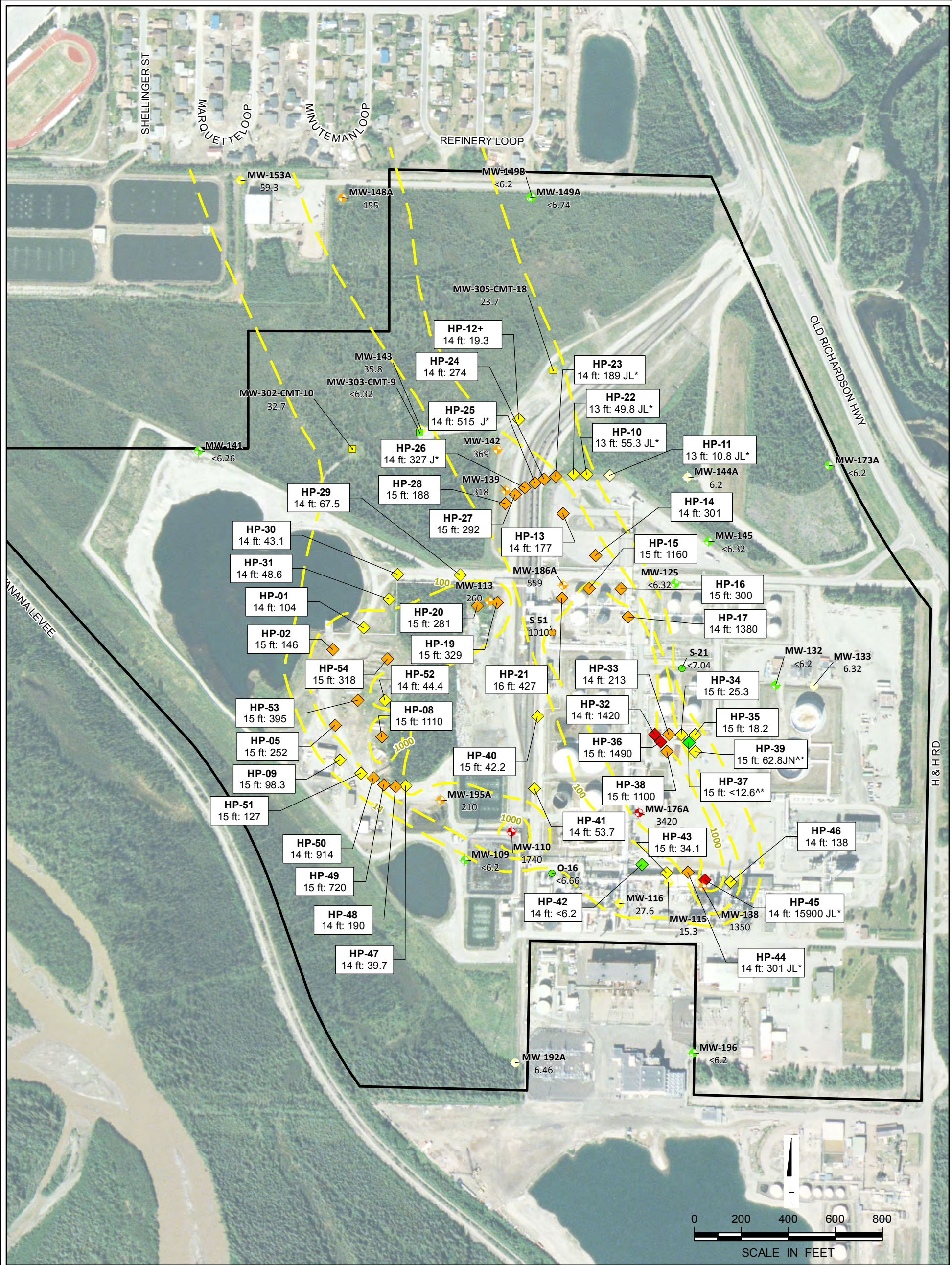
Borings HP-1 through HP-31 will be advanced to refusal.
Borings HP-32 through HP-46 will be advanced to refusal
or 25 feet bgs, whichever is encountered first.



FLINT HILLS RESOURCES, ALASKA, LLC
NORTH POLE REFINERY, NORTH POLE, ALASKA
SITE CHARACTERIZATION REPORT – 2012 ADDENDUM

HYDROPUNCH LOCATIONS





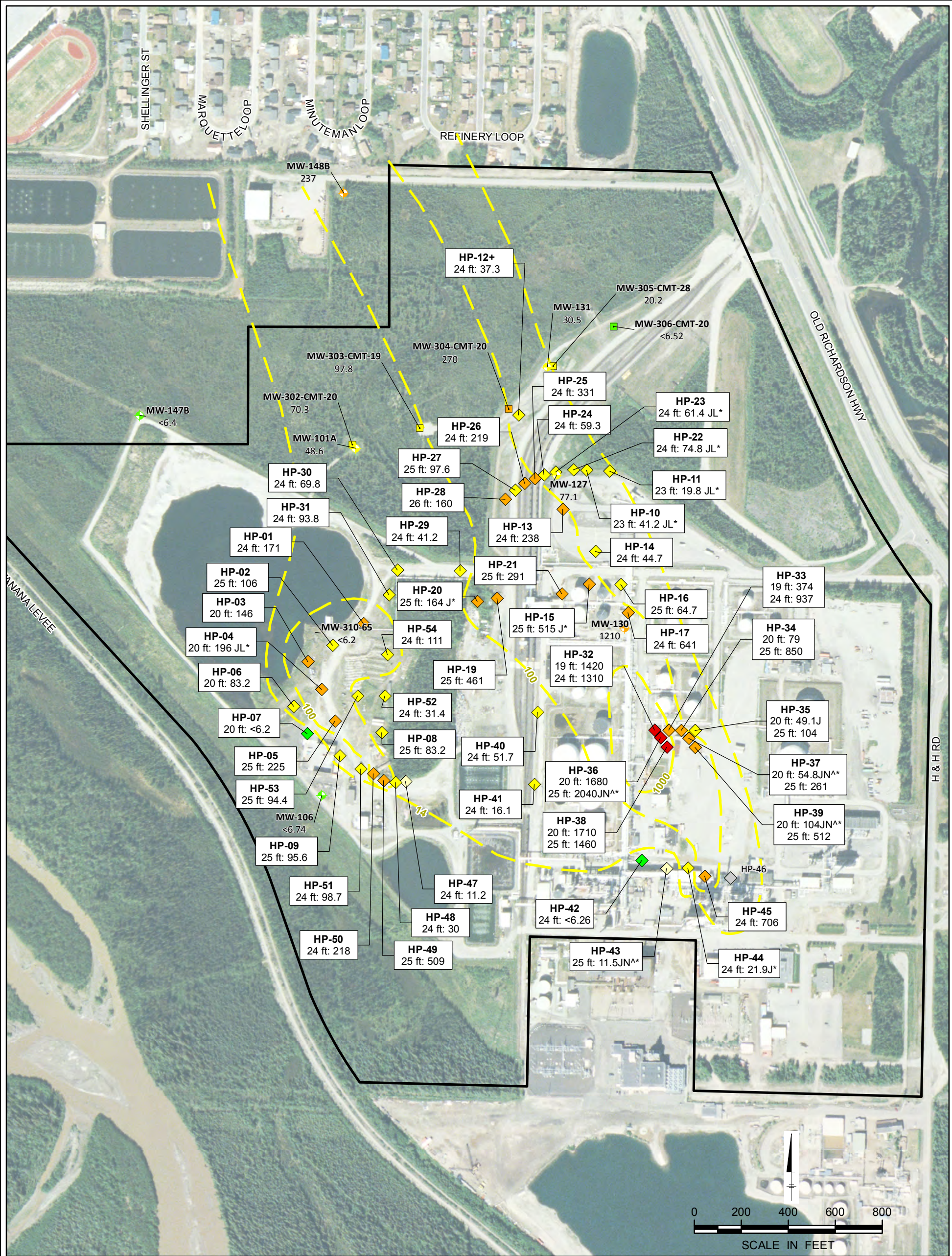
Legend

- Sample Location Types Sulfolane Result Color-Coding:
- Monitoring Well
 - Observation Well
 - Hydropunch
 - Non-Detect
 - 1.4 - 14 µg/L
 - 14 - 140 µg/L
 - 140 - 1,400 µg/L
 - >1,400 µg/L
 - Matrix Interference
 - FHRA Property Boundary
 - Approximate Sulfolane Isopleth in µg/L

Notes:
µg/L Micrograms per liter
< Not detected; limit of detection (LOD) listed
J Estimated concentration
R Result rejected due to hydrocarbon interference
JH Estimated result, biased high
JL Estimated result, biased low
N Analysis indicates there is presumptive evidence to make a tentative identification of this compound
* Data flag applied based on S&W's Level II data assurance review
** Data flag applied based on ESI's Level IV data assurance review
+ Location within treatment zone of Air-Sparge pilot system

FLINT HILLS RESOURCES, ALASKA, LLC
NORTH POLE REFINERY, NORTH POLE, ALASKA
SITE CHARACTERIZATION REPORT – 2012 ADDENDUM
HYDROPUNCH SULFOLANE RESULTS
12 - 18 FEET BGS





Legend

Sample Location Types	Sulfolane Result Color-Coding:
Monitoring Well	Non-Detect
Observation Well	1.4 - 14 µg/L
Hydropunch	14 - 140 µg/L
	140 - 1,400 µg/L
	>1,400 µg/L
	Matrix Interference
	FHRA Property Boundary
	Approximate Sulfolane Isopleth in µg/L

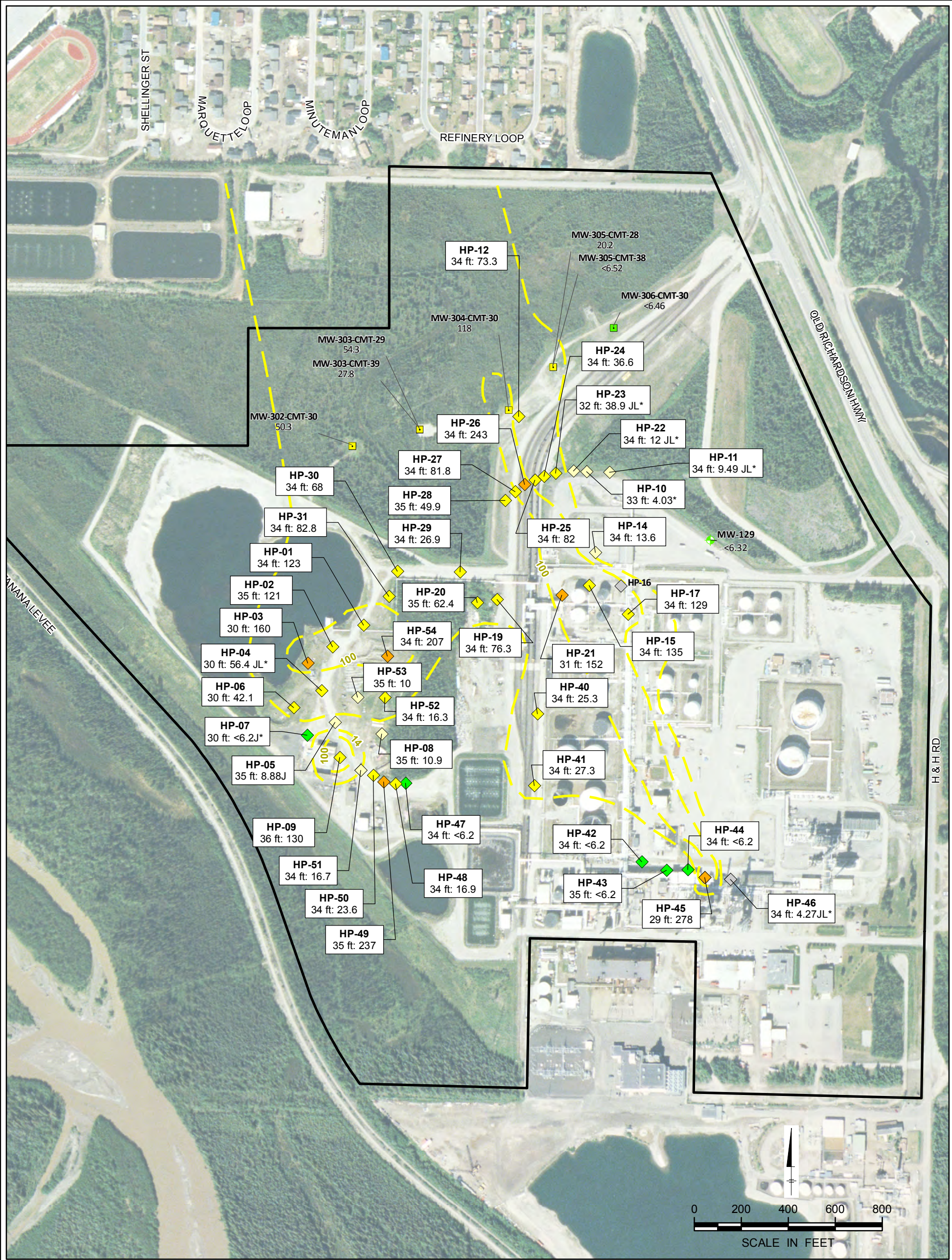
Notes:

µg/L Micrograms per liter
< Not detected; limit of detection (LOD) listed
J Estimated concentration
R Result rejected due to hydrocarbon interference
JH Estimated result, biased high
JL Estimated result, biased low
N Analysis indicates there is presumptive evidence to make a tentative identification of this compound
* Data flag applied based on S&W's Level II data assurance review
** Data flag applied based on ESI's Level IV data assurance review
+ Location within treatment zone of Air-Sparge pilot system

FLINT HILLS RESOURCES, ALASKA, LLC
NORTH POLE REFINERY, NORTH POLE, ALASKA
SITE CHARACTERIZATION REPORT – 2012 ADDENDUM

**HYDROPUNCH SULFOLANE RESULTS
19 - 28 FEET BGS**

FIGURE
9



Legend

Sample Location Types

- Monitoring Well
- Observation Well
- Hydropunch

Sulfolane Result Color-Coding:

- Non-Detect
- 1.4 - 14 µg/L
- 14 - 140 µg/L
- 140 - 1,400 µg/L
- >1,400 µg/L
- Matrix Interference
- FHRA Property Boundary

Approximate Sulfolane Isopleth in µg/L

Notes:

µg/L Micrograms per liter

< Not detected; limit of detection (LOD) listed

J Estimated concentration

R Result rejected due to hydrocarbon interference

JH Estimated result, biased high

JL Estimated result, biased low

N Analysis indicates there is presumptive evidence to make a tentative identification of this compound

* Data flag applied based on S&W's Level II data assurance review

^* Data flag applied based on ESI's Level IV data assurance review

FLINT HILLS RESOURCES, ALASKA, LLC
NORTH POLE REFINERY, NORTH POLE, ALASKA
SITE CHARACTERIZATION REPORT - 2012 ADDENDUM

**HYDROPUNCH SULFOLANE RESULTS
29 - 38 FEET BGS**

FIGURE
10

ARCADIS