

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural
Resources Department

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised August 24, 2018
Submit to appropriate OCD District office

| | |
|----------------|---------------|
| Incident ID | NRM2016448841 |
| District RP | |
| Facility ID | |
| Application ID | |

Release Notification

Responsible Party

| | | |
|--|-----------------------------------|----------------------|
| Responsible Party: SIMCOE LLC | OGRID: 329736 | Initial Spill Report |
| Contact Name: Steve Moskal (Contract for Simcoe) | Contact Telephone: (505) 330-9179 | |
| Contact email: steven.moskal@bpx.com | Incident # (assigned by OCD) | |
| Contact mailing address: 1199 Main St., Suite 101, Durango CO, 81301 | | |

Location of Release Source

Latitude: 36.850419° Longitude: -107.630780°
(NAD 83 in decimal degrees to 5 decimal places)

| | |
|--|---------------------------------|
| Site Name: Northeast Blanco Unit Pump Mesa SWD 001 | Site Type: Water Injection Well |
| Date Release Discovered: May 20, 2020 | API#: 30-045-27340 |

| Unit Letter | Section | Township | Range | County |
|-------------|---------|----------|-------|----------|
| N | 36 | T31N | R08W | San Juan |

Surface Owner: State Federal Tribal Private (Name: _____)

Nature and Volume of Release

Material(s) Released (Select all that apply and attach calculations or specific justification for the volumes provided below)

| | | |
|--|--|---|
| <input type="checkbox"/> Crude Oil | Volume Released (bbls) | Volume Recovered (bbls) |
| <input checked="" type="checkbox"/> Produced Water | Volume Released (bbls): 31 | Volume Recovered (bbls): 30 |
| | Is the concentration of dissolved chloride in the produced water >10,000 mg/l? | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| <input type="checkbox"/> Condensate | Volume Released (bbls): | Volume Recovered (bbls): |
| <input type="checkbox"/> Natural Gas | Volume Released (Mcf) | Volume Recovered (Mcf) |
| <input checked="" type="checkbox"/> Other (describe) | Volume/Weight Released (provide units) 40 gallons – slop oil | Volume/Weight Recovered (provide units) 0 gallons |

Cause of Release:

Release of produced water from a slop oil tank that over-ran during a truck offloading event. The isolation valves were not in the correct operating positions from the prior week when the tank was emptied.

| | |
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| | |
|---|--|
| Was this a major release as defined by 19.15.29.7(A) NMAC? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | If YES, for what reason(s) does the responsible party consider this a major release? Greater than 25 bbls and water and oil was released into containment. |
| If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? Steve Moskal to Cory Smith (cell phone) on May 20, 2020; 3:45 PM | |

Initial Response

The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury

| |
|--|
| <input checked="" type="checkbox"/> The source of the release has been stopped. <input checked="" type="checkbox"/> The impacted area has been secured to protect human health and the environment. <input checked="" type="checkbox"/> Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices. <input checked="" type="checkbox"/> All free liquids and recoverable materials have been removed and managed appropriately. |
| If all the actions described above have <u>not</u> been undertaken, explain why: |
| Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation. |
| I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. |
| Printed Name: <u>Steve Moskal</u> Title: <u>Contract Environmental Coordinator</u> |
| Signature:  Date: <u>June 4, 2020</u> |
| email: <u>steven.moskal@bpx.com</u> Telephone: <u>(505) 330-9179</u> |
| <u>OCD Only</u> Received by: <u>Ramona Marcus</u> Date: <u>6/12/2020</u> |

| | |
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Site Assessment/Characterization

This information must be provided to the appropriate district office no later than 90 days after the release discovery date.

| | |
|---|---|
| What is the shallowest depth to groundwater beneath the area affected by the release? | >100 (ft bgs) |
| Did this release impact groundwater or surface water? | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse? | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)? | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church? | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes? | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Are the lateral extents of the release within 1000 feet of any other fresh water well or spring? | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field? | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Are the lateral extents of the release within 300 feet of a wetland? | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Are the lateral extents of the release overlying a subsurface mine? | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Are the lateral extents of the release overlying an unstable area such as karst geology? | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Are the lateral extents of the release within a 100-year floodplain? | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Did the release impact areas not on an exploration, development, production, or storage site? | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |

Attach a comprehensive report (electronic submittals in .pdf format are preferred) demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined. Refer to 19.15.29.11 NMAC for specifics.

Characterization Report Checklist: *Each of the following items must be included in the report.*

- Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
- Field data
- Data table of soil contaminant concentration data
- Depth to water determination
- Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release
- Boring or excavation logs
- Photographs including date and GIS information
- Topographic/Aerial maps
- Laboratory data including chain of custody

If the site characterization report does not include completed efforts at remediation of the release, the report must include a proposed remediation plan. That plan must include the estimated volume of material to be remediated, the proposed remediation technique, proposed sampling plan and methods, anticipated timelines for beginning and completing the remediation. The closure criteria for a release are contained in Table 1 of 19.15.29.12 NMAC, however, use of the table is modified by site- and release-specific parameters.

| | |
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Printed Name: Steve Moskal Title: Contract Environmental Coordinator

Signature:  Date: June 4, 2020

email: steven.moskal@bpx.com Telephone: (505) 330-9179

OCD Only

Received by: Ramona Marcus Date: 6/12/2020

| | |
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Remediation Plan

Remediation Plan Checklist: *Each of the following items must be included in the plan.*

- Detailed description of proposed remediation technique
- Scaled sitemap with GPS coordinates showing delineation points
- Estimated volume of material to be remediated
- Closure criteria is to Table 1 specifications subject to 19.15.29.12(C)(4) NMAC
- Proposed schedule for remediation (note if remediation plan timeline is more than 90 days OCD approval is required)

Deferral Requests Only: *Each of the following items must be confirmed as part of any request for deferral of remediation.*

- Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.
- Extents of contamination must be fully delineated.
- Contamination does not cause an imminent risk to human health, the environment, or groundwater.

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Printed Name: Steve Moskal Title: Contract Environmental Coordinator

Signature: _____ Date: _____

email: steven.moskal@bpx.com Telephone: (505) 330-9179

OCD Only

Received by: Ramona Marcus Date: 6/12/2020

- Approved
 Approved with Attached Conditions of Approval
 Denied
 Deferral Approved

Signature: _____ Date: _____

| | |
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Closure

The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (electronic submittals in .pdf format are preferred) including a scaled site map, sampling diagrams, relevant field notes, photographs of any excavation prior to backfilling, laboratory data including chain of custody documents of final sampling, and a narrative of the remedial activities. Refer to 19.15.29.12 NMAC.

Closure Report Attachment Checklist: *Each of the following items must be included in the closure report.*

- A scaled site and sampling diagram as described in 19.15.29.11 NMAC
- Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)
- Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)
- Description of remediation activities

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

Printed Name: Steve Moskal Title: Contract Environmental Coordinator

Signature: _____ Date: _____

email: steven.moskal@bpx.com Telephone: (505) 330-9179

OCD Only

Received by: Ramona Marcus Date: 6/12/2020

Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.

Closure Approved by: _____ Date: _____

Printed Name: _____ Title: _____

NORTHEAST BLANCO UNIT PUMP MESA SWD #001

API #30-045-27340
N-36-31N-08W
GPS: 36.850419°, -107.630780°

Legend

-  Release Extents
-  Release Point



100 ft

| | | |
|---------------|---|--|
| CLIENT: _____ | BLAGG ENGINEERING, INC. P.O. BOX 87, BLOOMFIELD, NM 87413 (505) 632-1199 | API #: _____ TANK ID (if applicable): _____ |
|---------------|---|--|

FIELD REPORT:

(circle one): BGT CONFIRMATION / **RELEASE INVESTIGATION** / OTHER: _____

PAGE #: 1 of 1

SITE INFORMATION:

SITE NAME: NEBU PUMP MESA SWD

DATE STARTED: 5/22/2020

QUAD/UNIT: SEC. 36 TWP. 31N RING. 8W PM. NM CNTY. SJ ST. NM

DATE FINISHED: 5/22/2020

1/4-1/4/FOOTAGE: 990 FSL x 1600 FWL LEASE TYPE: FEDERAL / STATE / FEE / INDIAN

ENVIRONMENTAL SPECIALIST(S): JCB

LEASE #: _____ PROD. FORMATION: - CONTRACTOR: -

REFERENCE POINT:

WELL HEAD (W.H.) GPS COORD.: 36.850222 x 107.630321 GL ELEV.: 6,432'

| | | |
|--------------------------------|---|---------------------------------|
| 1) <u>RELEASE SOURCE POINT</u> | GPS COORD.: <u>36.850427 x 107.630779</u> | DISTANCE/BEARING FROM WH: _____ |
| 2) _____ | GPS COORD.: _____ | DISTANCE/BEARING FROM WH: _____ |
| 3) _____ | GPS COORD.: _____ | DISTANCE/BEARING FROM WH: _____ |
| 4) _____ | GPS COORD.: _____ | DISTANCE/BEARING FROM WH: _____ |

SAMPLING DATA:

CHAIN OF CUSTODY RECORD(S) # OR LAB USED: ENVIROTECH

OVM READING (ppm)

| | | | | |
|---------------------------------------|-------------------------------|--------------------------|----------------------------------|---------------------------|
| 1) SAMPLE ID: <u>AREA 1 (S-POINT)</u> | SAMPLE DATE: <u>5/22/2020</u> | SAMPLE TIME: <u>1005</u> | LAB ANALYSIS: <u>TPH/BTEX/CL</u> | OVM READING: <u>4,271</u> |
| 2) SAMPLE ID: <u>AREA 2 (S-POINT)</u> | SAMPLE DATE: <u>"</u> | SAMPLE TIME: <u>1008</u> | LAB ANALYSIS: <u>"</u> | OVM READING: <u>3,960</u> |
| 3) SAMPLE ID: <u>AREA 3 (S-POINT)</u> | SAMPLE DATE: <u>"</u> | SAMPLE TIME: <u>1011</u> | LAB ANALYSIS: <u>"</u> | OVM READING: <u>2,920</u> |
| 4) SAMPLE ID: <u>AREA 4 (S-POINT)</u> | SAMPLE DATE: <u>"</u> | SAMPLE TIME: <u>1014</u> | LAB ANALYSIS: <u>"</u> | OVM READING: <u>966</u> |

SOIL DESCRIPTION:

SOIL TYPE: SAND / SILTY SAND / SILT / SILTY CLAY / CLAY / GRAVEL / OTHER: GRAVEL ON SURFACE ONLY

SOIL COLOR: TAN
 PLASTICITY (CLAYS): NON PLASTIC / SLIGHTLY PLASTIC / COHESIVE / MEDIUM PLASTIC / HIGHLY PLASTIC
 COHESION (ALL OTHERS): NON COHESIVE / SLIGHTLY COHESIVE / COHESIVE / HIGHLY COHESIVE
 DENSITY (COHESIVE CLAYS & SILTS): SOFT / FIRM / STIFF / VERY STIFF / HARD
 CONSISTENCY (NON COHESIVE SOILS): LOOSE / FIRM / DENSE / VERY DENSE
 HC ODOR DETECTED: YES / NO EXPLANATION - MODERATE / STRONG
 MOISTURE: DRY / SLIGHTLY MOIST / MOIST / WET / SATURATED / SUPER SATURATED
 ANY AREAS DISPLAYING WETNESS: YES / NO EXPLANATION - _____
 SAMPLE TYPE: GRAB / COMPOSITE - # OF PTS. 5
 DISCOLORATION/STAINING OBSERVED: YES / NO EXPLANATION - oily surface

SITE OBSERVATIONS:

LOST INTEGRITY OF EQUIPMENT: YES / NO EXPLANATION - OVERFLOW

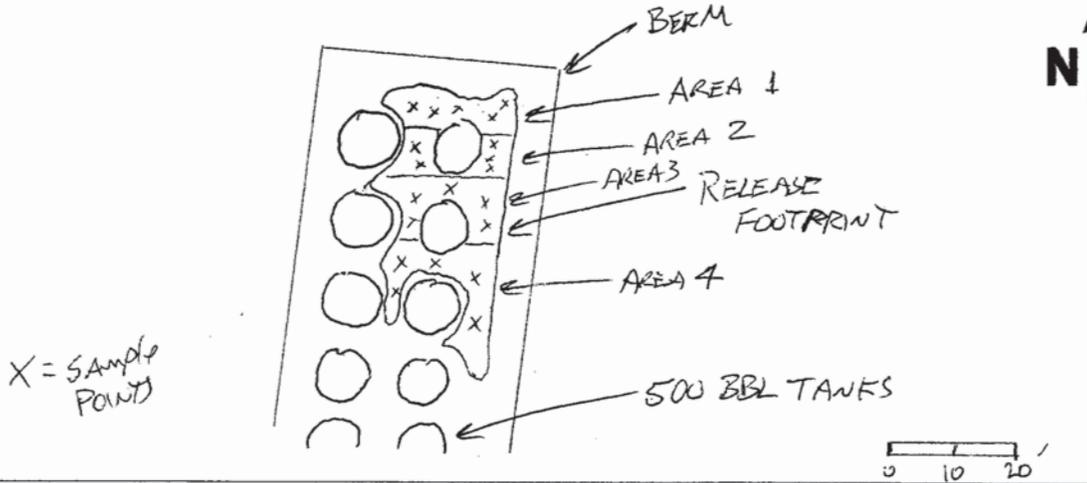
APPARENT EVIDENCE OF A RELEASE OBSERVED AND/OR OCCURRED: YES / NO EXPLANATION: _____
 EQUIPMENT SET OVER RECLAIMED AREA: YES / NO EXPLANATION - _____
 OTHER: _____

SOIL IMPACT DIMENSION ESTIMATION: 40 ft. X 30 ft. X ? ft. EXCAVATION ESTIMATION (Cubic Yards): 1200 ft^3

DEPTH TO GROUNDWATER: >100 NEAREST WATER SOURCE: >1000 NEAREST SURFACE WATER: >1000 NMOCOD TPH CLOSURE STD: 2500 ppm

SITE SKETCH

BGT Located: off / on site PLOT PLAN circle: attached



OVM CALIB. READ = 100.2 ppm
 OVM CALIB. GAS = 100.0 ppm
 TIME 1020 am/pm DATE 5/22/2020

MISCELL. NOTES

WO: _____
 PO #: _____
 PK: _____
 PJ #: _____
 Permit date(s): _____
 OCD Appr. date(s): _____
 Tank ID: _____ OVM = Organic Vapor Meter ppm = parts per million
 BGT Sidewalls Visible: Y / N
 BGT Sidewalls Visible: Y / N
 BGT Sidewalls Visible: Y / N
 Magnetic declination: 10° E

NOTES: BGT = BELOW-GRADE TANK; E.D. = EXCAVATION DEPRESSION; B.G. = BELOW GRADE; B = BELOW; T.H. = TEST HOLE; - = APPROX.; W.H. = WELL HEAD; T.B. = TANK BOTTOM; PBGTL = PREVIOUS BELOW-GRADE TANK LOCATION; SPD = SAMPLE POINT DESIGNATION; R.W. = RETAINING WALL; NA - NOT APPLICABLE OR NOT AVAILABLE; SW - SINGLE WALL; DW - DOUBLE WALL; SB - SINGLE BOTTOM; DB - DOUBLE BOTTOM.

NOTES: _____ ONSITE: 5/22/2020

Legend

- Release Extents
- Release Point

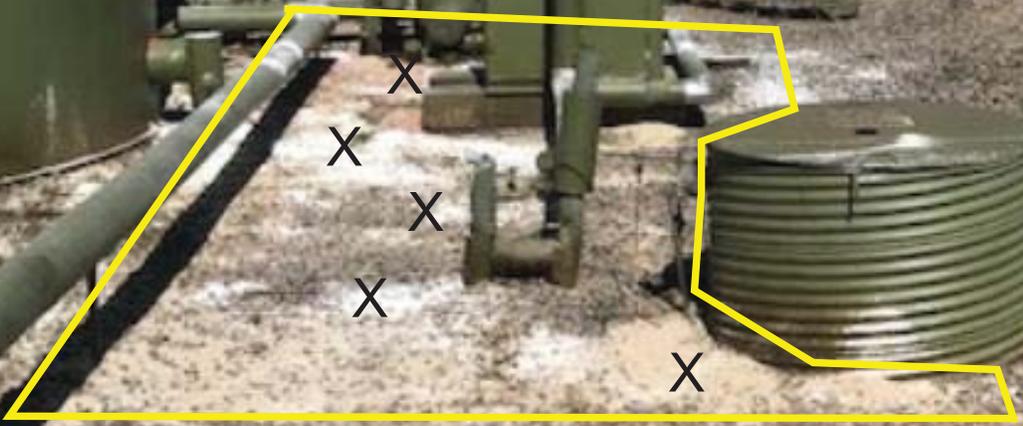
NORTHEAST BLANCO UNIT PUMP MESA SWD #001

API #30-045-27340
 N-36-31N-08W
 GPS: 36.850419°, -107.630780°



100 ft

Area 1
May 22, 2020



Area 2
May 22, 2020





Area 2
May 22, 2020

X

X

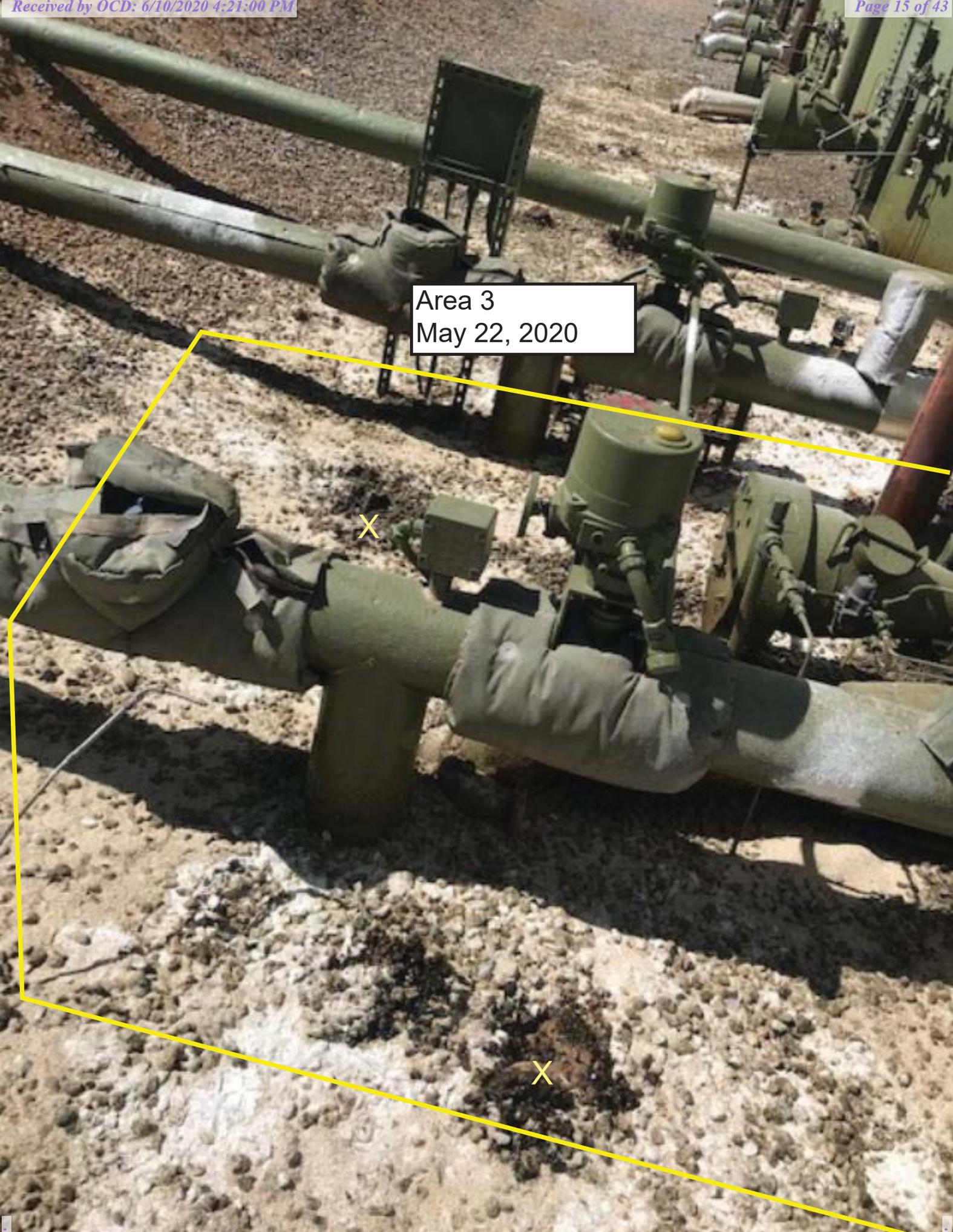
Area 2
May 22, 2020



Area 3
May 22, 2020



Area 3
May 22, 2020



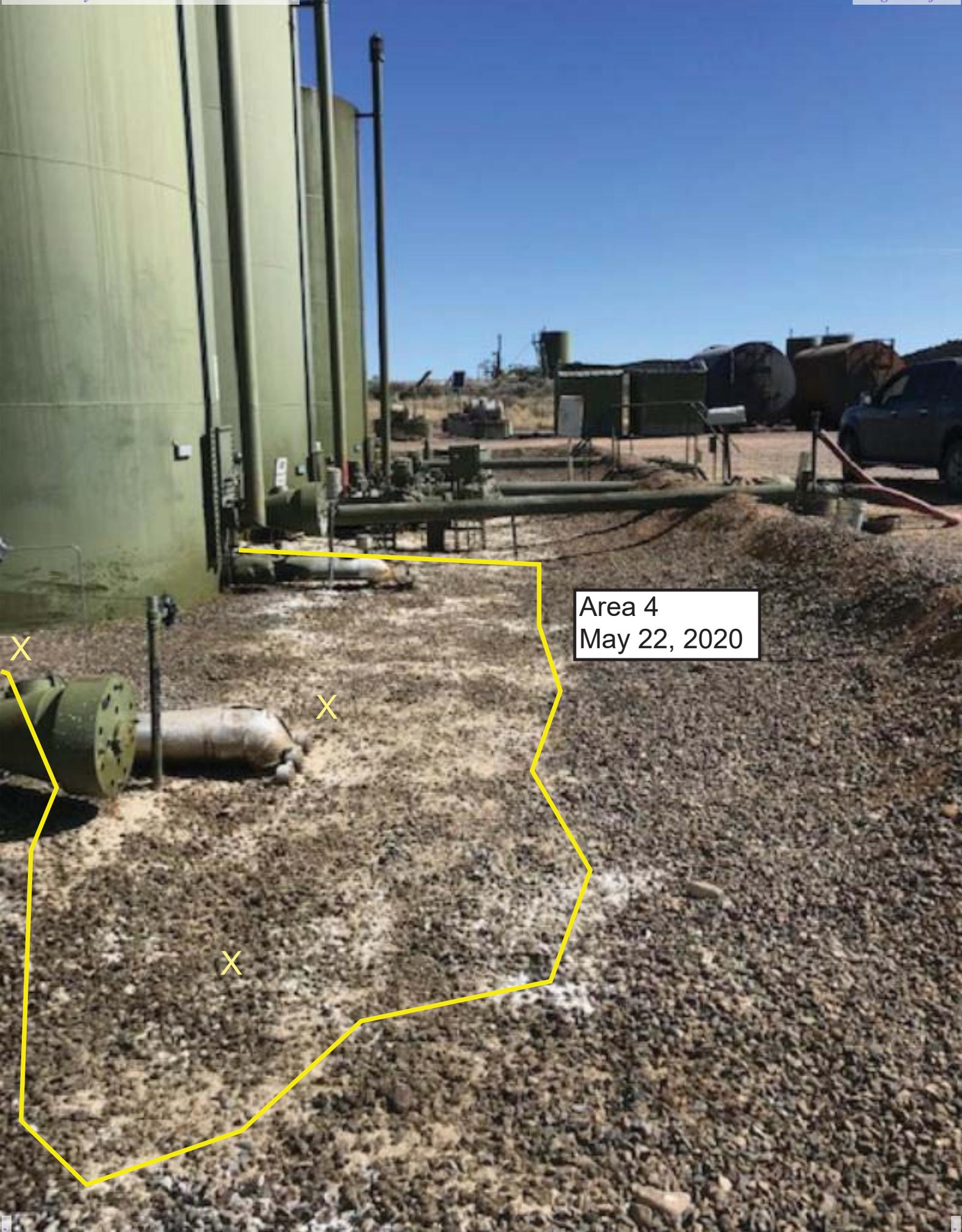


Area 3
May 22, 2020

Area 2
May 22, 2020

Area 4
May 22, 2020





Area 4
May 22, 2020



Analytical Report

Report Summary

Client: BP America Production Co.

Samples Received: 5/22/2020

Job Number: 03143-0424

Work Order: P005074

Project Name/Location: NEBU Pump Mesa SWD

Report Reviewed By:

A handwritten signature in black ink that reads 'Walter Hinchman'.

Date: 5/27/20

Walter Hinchman, Laboratory Director



Envirotech Inc. certifies the test results meet all requirements of TNi unless footnoted otherwise.
 Statement of Data Authenticity: Envirotech, Inc, attests the data reported has not been altered in any way.
 Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech, Inc.
 Envirotech, Inc, holds the Utah TNi certification NM009792018-1 for the data reported.
 Envirotech, Inc, holds the Texas TNi certification T104704557-19-2 for the data reported.



BP America Production Co.
PO Box 22024
Tulsa OK, 74121-2024

Project Name: NEBU Pump Mesa SWD
Project Number: 03143-0424
Project Manager: Steve Moskal

Reported:
05/27/20 12:07

Analytical Report for Samples

| Client Sample ID | Lab Sample ID | Matrix | Sampled | Received | Container |
|------------------|---------------|--------|----------|----------|------------------|
| AREA 1 | P005074-01A | Soil | 05/22/20 | 05/22/20 | Glass Jar, 4 oz. |
| AREA 2 | P005074-02A | Soil | 05/22/20 | 05/22/20 | Glass Jar, 4 oz. |
| AREA 3 | P005074-03A | Soil | 05/22/20 | 05/22/20 | Glass Jar, 4 oz. |
| AREA 4 | P005074-04A | Soil | 05/22/20 | 05/22/20 | Glass Jar, 4 oz. |

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| | | |
|---|---|------------------------------------|
| BP America Production Co. PO Box 22024 Tulsa OK, 74121-2024 | Project Name: NEBU Pump Mesa SWD Project Number: 03143-0424 Project Manager: Steve Moskal | Reported: 05/27/20 12:07 |
|---|---|------------------------------------|

AREA 1
P005074-01 (Solid)

| Analyte | Result | Reporting | | Dilution | Batch | Prepared | Analyzed | Method | Notes | |
|--|--------|-----------|-------|----------|---------|----------|----------|--------------------|-------|--|
| | | Limit | Units | | | | | | | |
| Volatile Organics by EPA 8021 | | | | | | | | | | |
| Benzene | 0.497 | 0.250 | mg/kg | 10 | 2022001 | 05/26/20 | 05/26/20 | EPA 8021B | | |
| Toluene | 31.2 | 0.250 | mg/kg | 10 | 2022001 | 05/26/20 | 05/26/20 | EPA 8021B | | |
| Ethylbenzene | 13.2 | 0.250 | mg/kg | 10 | 2022001 | 05/26/20 | 05/26/20 | EPA 8021B | | |
| p,m-Xylene | 159 | 0.500 | mg/kg | 10 | 2022001 | 05/26/20 | 05/26/20 | EPA 8021B | | |
| o-Xylene | 37.5 | 0.250 | mg/kg | 10 | 2022001 | 05/26/20 | 05/26/20 | EPA 8021B | | |
| Total Xylenes | 197 | 0.250 | mg/kg | 10 | 2022001 | 05/26/20 | 05/26/20 | EPA 8021B | | |
| <i>Surrogate: 4-Bromochlorobenzene-PID</i> | | 108 % | | 50-150 | 2022001 | 05/26/20 | 05/26/20 | EPA 8021B | | |
| Nonhalogenated Organics by 8015 - DRO/ORO | | | | | | | | | | |
| Diesel Range Organics (C10-C28) | 13500 | 1250 | mg/kg | 50 | 2022003 | 05/26/20 | 05/26/20 | EPA 8015D | | |
| Oil Range Organics (C28-C40) | 9920 | 2500 | mg/kg | 50 | 2022003 | 05/26/20 | 05/26/20 | EPA 8015D | | |
| <i>Surrogate: n-Nonane</i> | | 1100 % | | 50-200 | 2022003 | 05/26/20 | 05/26/20 | EPA 8015D | S5 | |
| Nonhalogenated Organics by 8015 - GRO | | | | | | | | | | |
| Gasoline Range Organics (C6-C10) | 1290 | 200 | mg/kg | 10 | 2022001 | 05/26/20 | 05/26/20 | EPA 8015D | | |
| <i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i> | | 93.4 % | | 50-150 | 2022001 | 05/26/20 | 05/26/20 | EPA 8015D | | |
| Anions by 300.0/9056A | | | | | | | | | | |
| Chloride | ND | 20.0 | mg/kg | 1 | 2022002 | 05/26/20 | 05/26/20 | EPA 300.0/9056A | | |

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| | | |
|---|---|------------------------------------|
| BP America Production Co. PO Box 22024 Tulsa OK, 74121-2024 | Project Name: NEBU Pump Mesa SWD Project Number: 03143-0424 Project Manager: Steve Moskal | Reported: 05/27/20 12:07 |
|---|---|------------------------------------|

AREA 2
P005074-02 (Solid)

| Analyte | Result | Reporting | | | Batch | Prepared | Analyzed | Method | Notes |
|--|--------|-----------|-------|----------|---------|----------|----------|--------------------|-------|
| | | Limit | Units | Dilution | | | | | |
| Volatile Organics by EPA 8021 | | | | | | | | | |
| Benzene | ND | 0.250 | mg/kg | 10 | 2022001 | 05/26/20 | 05/26/20 | EPA 8021B | |
| Toluene | 10.7 | 0.250 | mg/kg | 10 | 2022001 | 05/26/20 | 05/26/20 | EPA 8021B | |
| Ethylbenzene | 5.64 | 0.250 | mg/kg | 10 | 2022001 | 05/26/20 | 05/26/20 | EPA 8021B | |
| p,m-Xylene | 71.4 | 0.500 | mg/kg | 10 | 2022001 | 05/26/20 | 05/26/20 | EPA 8021B | |
| o-Xylene | 17.9 | 0.250 | mg/kg | 10 | 2022001 | 05/26/20 | 05/26/20 | EPA 8021B | |
| Total Xylenes | 89.2 | 0.250 | mg/kg | 10 | 2022001 | 05/26/20 | 05/26/20 | EPA 8021B | |
| <i>Surrogate: 4-Bromochlorobenzene-PID</i> | | 107 % | | 50-150 | 2022001 | 05/26/20 | 05/26/20 | EPA 8021B | |
| Nonhalogenated Organics by 8015 - DRO/ORO | | | | | | | | | |
| Diesel Range Organics (C10-C28) | 6760 | 500 | mg/kg | 20 | 2022003 | 05/26/20 | 05/26/20 | EPA 8015D | |
| Oil Range Organics (C28-C40) | 4970 | 1000 | mg/kg | 20 | 2022003 | 05/26/20 | 05/26/20 | EPA 8015D | |
| <i>Surrogate: n-Nonane</i> | | 526 % | | 50-200 | 2022003 | 05/26/20 | 05/26/20 | EPA 8015D | S5 |
| Nonhalogenated Organics by 8015 - GRO | | | | | | | | | |
| Gasoline Range Organics (C6-C10) | 629 | 200 | mg/kg | 10 | 2022001 | 05/26/20 | 05/26/20 | EPA 8015D | |
| <i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i> | | 90.9 % | | 50-150 | 2022001 | 05/26/20 | 05/26/20 | EPA 8015D | |
| Anions by 300.0/9056A | | | | | | | | | |
| Chloride | ND | 20.0 | mg/kg | 1 | 2022002 | 05/26/20 | 05/26/20 | EPA 300.0/9056A | |

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| | | |
|---|---|------------------------------------|
| BP America Production Co. PO Box 22024 Tulsa OK, 74121-2024 | Project Name: NEBU Pump Mesa SWD Project Number: 03143-0424 Project Manager: Steve Moskal | Reported: 05/27/20 12:07 |
|---|---|------------------------------------|

AREA 3
P005074-03 (Solid)

| Analyte | Result | Reporting | | | Batch | Prepared | Analyzed | Method | Notes |
|--|---------------|---------------|-------|---------------|----------------|-----------------|-----------------|--------------------|-------|
| | | Limit | Units | Dilution | | | | | |
| Volatile Organics by EPA 8021 | | | | | | | | | |
| Benzene | ND | 0.0250 | mg/kg | 1 | 2022001 | 05/26/20 | 05/26/20 | EPA 8021B | |
| Toluene | 0.0288 | 0.0250 | mg/kg | 1 | 2022001 | 05/26/20 | 05/26/20 | EPA 8021B | |
| Ethylbenzene | 0.0550 | 0.0250 | mg/kg | 1 | 2022001 | 05/26/20 | 05/26/20 | EPA 8021B | |
| p,m-Xylene | 1.24 | 0.0500 | mg/kg | 1 | 2022001 | 05/26/20 | 05/26/20 | EPA 8021B | |
| o-Xylene | 0.508 | 0.0250 | mg/kg | 1 | 2022001 | 05/26/20 | 05/26/20 | EPA 8021B | |
| Total Xylenes | 1.74 | 0.0250 | mg/kg | 1 | 2022001 | 05/26/20 | 05/26/20 | EPA 8021B | |
| <i>Surrogate: 4-Bromochlorobenzene-PID</i> | | <i>107 %</i> | | <i>50-150</i> | <i>2022001</i> | <i>05/26/20</i> | <i>05/26/20</i> | <i>EPA 8021B</i> | |
| Nonhalogenated Organics by 8015 - DRO/ORO | | | | | | | | | |
| Diesel Range Organics (C10-C28) | 799 | 25.0 | mg/kg | 1 | 2022003 | 05/26/20 | 05/26/20 | EPA 8015D | |
| Oil Range Organics (C28-C40) | 638 | 50.0 | mg/kg | 1 | 2022003 | 05/26/20 | 05/26/20 | EPA 8015D | |
| <i>Surrogate: n-Nonane</i> | | <i>106 %</i> | | <i>50-200</i> | <i>2022003</i> | <i>05/26/20</i> | <i>05/26/20</i> | <i>EPA 8015D</i> | |
| Nonhalogenated Organics by 8015 - GRO | | | | | | | | | |
| Gasoline Range Organics (C6-C10) | 31.6 | 20.0 | mg/kg | 1 | 2022001 | 05/26/20 | 05/26/20 | EPA 8015D | |
| <i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i> | | <i>90.9 %</i> | | <i>50-150</i> | <i>2022001</i> | <i>05/26/20</i> | <i>05/26/20</i> | <i>EPA 8015D</i> | |
| Anions by 300.0/9056A | | | | | | | | | |
| Chloride | 35.0 | 20.0 | mg/kg | 1 | 2022002 | 05/26/20 | 05/26/20 | EPA 300.0/9056A | |

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| | | |
|---|---|-----------------------------|
| BP America Production Co. PO Box 22024 Tulsa OK, 74121-2024 | Project Name: NEBU Pump Mesa SWD Project Number: 03143-0424 Project Manager: Steve Moskal | Reported: 05/27/20 12:07 |
|---|---|-----------------------------|

AREA 4
P005074-04 (Solid)

| Analyte | Result | Reporting | | | Batch | Prepared | Analyzed | Method | Notes |
|--|---------------|---------------|-------|---------------|----------------|-----------------|-----------------|--------------------|-------|
| | | Limit | Units | Dilution | | | | | |
| Volatile Organics by EPA 8021 | | | | | | | | | |
| Benzene | ND | 0.0250 | mg/kg | 1 | 2022001 | 05/26/20 | 05/26/20 | EPA 8021B | |
| Toluene | 0.0499 | 0.0250 | mg/kg | 1 | 2022001 | 05/26/20 | 05/26/20 | EPA 8021B | |
| Ethylbenzene | ND | 0.0250 | mg/kg | 1 | 2022001 | 05/26/20 | 05/26/20 | EPA 8021B | |
| p,m-Xylene | 4.65 | 0.0500 | mg/kg | 1 | 2022001 | 05/26/20 | 05/26/20 | EPA 8021B | |
| o-Xylene | 1.41 | 0.0250 | mg/kg | 1 | 2022001 | 05/26/20 | 05/26/20 | EPA 8021B | |
| Total Xylenes | 6.06 | 0.0250 | mg/kg | 1 | 2022001 | 05/26/20 | 05/26/20 | EPA 8021B | |
| <i>Surrogate: 4-Bromochlorobenzene-PID</i> | | <i>110 %</i> | | <i>50-150</i> | <i>2022001</i> | <i>05/26/20</i> | <i>05/26/20</i> | <i>EPA 8021B</i> | |
| Nonhalogenated Organics by 8015 - DRO/ORO | | | | | | | | | |
| Diesel Range Organics (C10-C28) | 1020 | 25.0 | mg/kg | 1 | 2022003 | 05/26/20 | 05/26/20 | EPA 8015D | |
| Oil Range Organics (C28-C40) | 811 | 50.0 | mg/kg | 1 | 2022003 | 05/26/20 | 05/26/20 | EPA 8015D | |
| <i>Surrogate: n-Nonane</i> | | <i>116 %</i> | | <i>50-200</i> | <i>2022003</i> | <i>05/26/20</i> | <i>05/26/20</i> | <i>EPA 8015D</i> | |
| Nonhalogenated Organics by 8015 - GRO | | | | | | | | | |
| Gasoline Range Organics (C6-C10) | 71.4 | 20.0 | mg/kg | 1 | 2022001 | 05/26/20 | 05/26/20 | EPA 8015D | |
| <i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i> | | <i>93.6 %</i> | | <i>50-150</i> | <i>2022001</i> | <i>05/26/20</i> | <i>05/26/20</i> | <i>EPA 8015D</i> | |
| Anions by 300.0/9056A | | | | | | | | | |
| Chloride | 163 | 20.0 | mg/kg | 1 | 2022002 | 05/26/20 | 05/26/20 | EPA 300.0/9056A | |

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| | | | |
|---------------------------|------------------|--------------------|------------------------------------|
| BP America Production Co. | Project Name: | NEBU Pump Mesa SWD | Reported: 05/27/20 12:07 |
| PO Box 22024 | Project Number: | 03143-0424 | |
| Tulsa OK, 74121-2024 | Project Manager: | Steve Moskal | |

Volatile Organics by EPA 8021 - Quality Control

Envirotech Analytical Laboratory

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---------|--------|-----------------|-------|-------------|---------------|------|-------------|-----|-----------|-------|
|---------|--------|-----------------|-------|-------------|---------------|------|-------------|-----|-----------|-------|

Batch 2022001 - Purge and Trap EPA 5030A

Blank (2022001-BLK1)

Prepared: 05/26/20 0 Analyzed: 05/26/20 1

| | | | | | | | | | | |
|--|------|--------|-------|------|--|-----|--------|--|--|--|
| Benzene | ND | 0.0250 | mg/kg | | | | | | | |
| Toluene | ND | 0.0250 | " | | | | | | | |
| Ethylbenzene | ND | 0.0250 | " | | | | | | | |
| p,m-Xylene | ND | 0.0500 | " | | | | | | | |
| o-Xylene | ND | 0.0250 | " | | | | | | | |
| Total Xylenes | ND | 0.0250 | " | | | | | | | |
| <i>Surrogate: 4-Bromochlorobenzene-PID</i> | 8.33 | | " | 8.00 | | 104 | 50-150 | | | |

LCS (2022001-BS1)

Prepared: 05/26/20 0 Analyzed: 05/26/20 1

| | | | | | | | | | | |
|--|------|--------|-------|------|--|-----|--------|--|--|--|
| Benzene | 5.09 | 0.0250 | mg/kg | 5.00 | | 102 | 70-130 | | | |
| Toluene | 5.09 | 0.0250 | " | 5.00 | | 102 | 70-130 | | | |
| Ethylbenzene | 5.07 | 0.0250 | " | 5.00 | | 101 | 70-130 | | | |
| p,m-Xylene | 10.1 | 0.0500 | " | 10.0 | | 101 | 70-130 | | | |
| o-Xylene | 5.08 | 0.0250 | " | 5.00 | | 102 | 70-130 | | | |
| Total Xylenes | 15.2 | 0.0250 | " | 15.0 | | 101 | 0-200 | | | |
| <i>Surrogate: 4-Bromochlorobenzene-PID</i> | 8.50 | | " | 8.00 | | 106 | 50-150 | | | |

Matrix Spike (2022001-MS1)

Source: P005075-04

Prepared: 05/26/20 0 Analyzed: 05/26/20 1

| | | | | | | | | | | |
|--|------|--------|-------|------|----|-----|----------|--|--|--|
| Benzene | 5.09 | 0.0250 | mg/kg | 5.00 | ND | 102 | 54.3-133 | | | |
| Toluene | 5.08 | 0.0250 | " | 5.00 | ND | 102 | 61.4-130 | | | |
| Ethylbenzene | 5.05 | 0.0250 | " | 5.00 | ND | 101 | 61.4-133 | | | |
| p,m-Xylene | 10.1 | 0.0500 | " | 10.0 | ND | 101 | 63.3-131 | | | |
| o-Xylene | 5.06 | 0.0250 | " | 5.00 | ND | 101 | 63.3-131 | | | |
| Total Xylenes | 15.1 | 0.0250 | " | 15.0 | ND | 101 | 0-200 | | | |
| <i>Surrogate: 4-Bromochlorobenzene-PID</i> | 8.49 | | " | 8.00 | | 106 | 50-150 | | | |

Matrix Spike Dup (2022001-MSD1)

Source: P005075-04

Prepared: 05/26/20 0 Analyzed: 05/26/20 1

| | | | | | | | | | | |
|--|------|--------|-------|------|----|------|----------|------|-----|--|
| Benzene | 4.92 | 0.0250 | mg/kg | 5.00 | ND | 98.4 | 54.3-133 | 3.40 | 20 | |
| Toluene | 4.89 | 0.0250 | " | 5.00 | ND | 97.8 | 61.4-130 | 3.76 | 20 | |
| Ethylbenzene | 4.87 | 0.0250 | " | 5.00 | ND | 97.4 | 61.4-133 | 3.66 | 20 | |
| p,m-Xylene | 9.73 | 0.0500 | " | 10.0 | ND | 97.3 | 63.3-131 | 3.61 | 20 | |
| o-Xylene | 4.87 | 0.0250 | " | 5.00 | ND | 97.5 | 63.3-131 | 3.76 | 20 | |
| Total Xylenes | 14.6 | 0.0250 | " | 15.0 | ND | 97.3 | 0-200 | 3.66 | 200 | |
| <i>Surrogate: 4-Bromochlorobenzene-PID</i> | 8.31 | | " | 8.00 | | 104 | 50-150 | | | |

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| | | |
|---|---|-----------------------------|
| BP America Production Co. PO Box 22024 Tulsa OK, 74121-2024 | Project Name: NEBU Pump Mesa SWD Project Number: 03143-0424 Project Manager: Steve Moskal | Reported: 05/27/20 12:07 |
|---|---|-----------------------------|

Nonhalogenated Organics by 8015 - DRO/ORO - Quality Control

Envirotech Analytical Laboratory

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---------|--------|-----------------|-------|-------------|---------------|------|-------------|-----|-----------|-------|
|---------|--------|-----------------|-------|-------------|---------------|------|-------------|-----|-----------|-------|

Batch 2022003 - DRO Extraction EPA 3570

Blank (2022003-BLK1)

Prepared: 05/26/20 0 Analyzed: 05/26/20 1

| | | | | | | | | | | |
|---------------------------------|------|------|-------|------|--|-----|--------|--|--|--|
| Diesel Range Organics (C10-C28) | ND | 25.0 | mg/kg | | | | | | | |
| Oil Range Organics (C28-C40) | ND | 50.0 | " | | | | | | | |
| Surrogate: n-Nonane | 51.0 | | " | 50.0 | | 102 | 50-200 | | | |

LCS (2022003-BS1)

Prepared: 05/26/20 0 Analyzed: 05/26/20 1

| | | | | | | | | | | |
|---------------------------------|------|------|-------|------|--|------|--------|--|--|--|
| Diesel Range Organics (C10-C28) | 417 | 25.0 | mg/kg | 500 | | 83.4 | 38-132 | | | |
| Surrogate: n-Nonane | 46.4 | | " | 50.0 | | 92.8 | 50-200 | | | |

Matrix Spike (2022003-MS1)

Source: P005074-01

Prepared: 05/26/20 0 Analyzed: 05/26/20 1

| | | | | | | | | | | |
|---------------------------------|-------|------|-------|------|-------|-----|--------|--|--|----|
| Diesel Range Organics (C10-C28) | 14400 | 2500 | mg/kg | 500 | 13500 | 172 | 38-132 | | | M4 |
| Surrogate: n-Nonane | 0.00 | | " | 50.0 | | | 50-200 | | | S6 |

Matrix Spike Dup (2022003-MSD1)

Source: P005074-01

Prepared: 05/26/20 0 Analyzed: 05/26/20 1

| | | | | | | | | | | |
|---------------------------------|-------|------|-------|------|-------|-----|--------|------|----|----|
| Diesel Range Organics (C10-C28) | 14800 | 2500 | mg/kg | 500 | 13500 | 249 | 38-132 | 2.64 | 20 | M4 |
| Surrogate: n-Nonane | 0.00 | | " | 50.0 | | | 50-200 | | | S6 |

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| | | |
|---|---|-----------------------------|
| BP America Production Co. PO Box 22024 Tulsa OK, 74121-2024 | Project Name: NEBU Pump Mesa SWD Project Number: 03143-0424 Project Manager: Steve Moskal | Reported: 05/27/20 12:07 |
|---|---|-----------------------------|

Nonhalogenated Organics by 8015 - GRO - Quality Control

Envirotech Analytical Laboratory

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---------|--------|-----------------|-------|-------------|---------------|------|-------------|-----|-----------|-------|
|---------|--------|-----------------|-------|-------------|---------------|------|-------------|-----|-----------|-------|

Batch 2022001 - Purge and Trap EPA 5030A

Blank (2022001-BLK1)

Prepared: 05/26/20 0 Analyzed: 05/26/20 1

| | | | | | | | | | | |
|---|------|------|-------|------|--|------|--------|--|--|--|
| Gasoline Range Organics (C6-C10) | ND | 20.0 | mg/kg | | | | | | | |
| Surrogate: 1-Chloro-4-fluorobenzene-FID | 7.30 | | " | 8.00 | | 91.3 | 50-150 | | | |

LCS (2022001-BS2)

Prepared: 05/26/20 0 Analyzed: 05/26/20 1

| | | | | | | | | | | |
|---|------|------|-------|------|--|------|--------|--|--|--|
| Gasoline Range Organics (C6-C10) | 46.0 | 20.0 | mg/kg | 50.0 | | 92.0 | 70-130 | | | |
| Surrogate: 1-Chloro-4-fluorobenzene-FID | 7.52 | | " | 8.00 | | 94.0 | 50-150 | | | |

Matrix Spike (2022001-MS2)

Source: P005075-04

Prepared: 05/26/20 0 Analyzed: 05/26/20 1

| | | | | | | | | | | |
|---|------|------|-------|------|----|------|--------|--|--|--|
| Gasoline Range Organics (C6-C10) | 48.7 | 20.0 | mg/kg | 50.0 | ND | 97.4 | 70-130 | | | |
| Surrogate: 1-Chloro-4-fluorobenzene-FID | 7.38 | | " | 8.00 | | 92.2 | 50-150 | | | |

Matrix Spike Dup (2022001-MSD2)

Source: P005075-04

Prepared: 05/26/20 0 Analyzed: 05/26/20 1

| | | | | | | | | | | |
|---|------|------|-------|------|----|------|--------|------|----|--|
| Gasoline Range Organics (C6-C10) | 45.4 | 20.0 | mg/kg | 50.0 | ND | 90.9 | 70-130 | 6.92 | 20 | |
| Surrogate: 1-Chloro-4-fluorobenzene-FID | 7.32 | | " | 8.00 | | 91.5 | 50-150 | | | |

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| | | |
|---|---|------------------------------------|
| BP America Production Co. PO Box 22024 Tulsa OK, 74121-2024 | Project Name: NEBU Pump Mesa SWD Project Number: 03143-0424 Project Manager: Steve Moskal | Reported: 05/27/20 12:07 |
|---|---|------------------------------------|

Anions by 300.0/9056A - Quality Control

Envirotech Analytical Laboratory

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---------|--------|-----------------|-------|-------------|---------------|------|-------------|-----|-----------|-------|
|---------|--------|-----------------|-------|-------------|---------------|------|-------------|-----|-----------|-------|

Batch 2022002 - Anion Extraction EPA 300.0/9056A

Blank (2022002-BLK1)

Prepared: 05/26/20 0 Analyzed: 05/26/20 1

| | | | | | | | | | | |
|----------|----|------|-------|--|--|--|--|--|--|--|
| Chloride | ND | 20.0 | mg/kg | | | | | | | |
|----------|----|------|-------|--|--|--|--|--|--|--|

LCS (2022002-BS1)

Prepared: 05/26/20 0 Analyzed: 05/26/20 1

| | | | | | | | | | | |
|----------|-----|------|-------|-----|--|-----|--------|--|--|--|
| Chloride | 254 | 20.0 | mg/kg | 250 | | 102 | 90-110 | | | |
|----------|-----|------|-------|-----|--|-----|--------|--|--|--|

Matrix Spike (2022002-MS1)

Source: P005076-01

Prepared: 05/26/20 0 Analyzed: 05/26/20 1

| | | | | | | | | | | |
|----------|-----|------|-------|-----|----|-----|--------|--|--|--|
| Chloride | 261 | 20.0 | mg/kg | 250 | ND | 105 | 80-120 | | | |
|----------|-----|------|-------|-----|----|-----|--------|--|--|--|

Matrix Spike Dup (2022002-MSD1)

Source: P005076-01

Prepared: 05/26/20 0 Analyzed: 05/26/20 1

| | | | | | | | | | | |
|----------|-----|------|-------|-----|----|-----|--------|-------|----|--|
| Chloride | 260 | 20.0 | mg/kg | 250 | ND | 104 | 80-120 | 0.537 | 20 | |
|----------|-----|------|-------|-----|----|-----|--------|-------|----|--|

QC Summary Report

Comment:

Calculations are based off of the raw (non-rounded) data. However, for reporting purposes all QC data is rounded to three significant figures. Therefore, hand calculated values may differ slightly.

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| | | | |
|---------------------------|------------------|--------------------|------------------|
| BP America Production Co. | Project Name: | NEBU Pump Mesa SWD | |
| PO Box 22024 | Project Number: | 03143-0424 | Reported: |
| Tulsa OK, 74121-2024 | Project Manager: | Steve Moskal | 05/27/20 12:07 |

Notes and Definitions

- S6 Surrogate was diluted out due to high concentrations of target and/or non-target analytes and does not provide useful information. The associated LCS spike recovery was acceptable.
- S5 Surrogate spike recovery exceeded acceptance limits due to interfering target and/or non-target analytes.
- M4 Matrix spike recovery value is suspect since the analyte concentration in the sample is disproportionate to the spike level. The associated LCS spike recovery was acceptable.
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- RPD Relative Percent Difference
- ** Methods marked with ** are non-accredited methods.

Soil data is reported on an "as received" weight basis, unless reported otherwise.

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Chain of Custody

Project Information

| Client: BPX Project: NEBU Rump Mesa SUD Project Manager: Steve Maskal Address: City, State, Zip Phone: Email: JEFFCBLA66@AOL.COM Report due by: 5/29/2020 | | Bill To Attention: BPX - Steve Maskal Address: City, State, Zip Phone: Email: Steven.Maskal@BPX.COM | | Lab Use Only Lab WO# P005074 Job Number 03143-0424 Analysis and Method | | TAT 1D 3D | | EPA Program RCRA CWA SDWA State NM CO UT AZ TX OK | | | | |
|---|--------------|---|---------------|--|------------|---------------------|-----------------|---|-------------|---|----------------|---------|
| Time Sampled | Date Sampled | Matrix | No Containers | Sample ID | Lab Number | DRO/ORO by 8015 | GRO/DRO by 8015 | BTEX by 8021 | VOC by 8260 | Metals 6010 | Chloride 300.0 | Remarks |
| 1005 | 5/22/20 | SOIL | 1 | AREA 1 | 1 | X | X | X | | | X | |
| 1008 | | | 1 | AREA 2 | 2 | | | | | | | |
| 1011 | | | 1 | AREA 3 | 3 | | | | | | | |
| 1014 | | | 1 | AREA 4 | 4 | | | | | | | |
| Additional Instructions: Bill BPX 142020 SPIUS P.O. I, (field sampler), attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabelling the sample location, date or time of collection is considered fraud and may be grounds for legal action. Sampled by: <i>JHL Gray</i> | | | | | | | | | | | | |
| Relinquished by: (Signature) <i>JHL Gray</i> | | Date: 5/20/2020 | | Time: 11:58 | | Date: 5/20/2020 | | Time: 11:58 | | Received on ice: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N T1 T2 T3 AVG Temp °C: 4°C | | |
| Relinquished by: (Signature) | | Date | | Time | | Date | | Time | | Lab Use Only | | |
| Relinquished by: (Signature) | | Date | | Time | | Date | | Time | | Container Type: g - glass, p - poly/plastic, ag - amber glass, v - VOA Note: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at the client expense. The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for on the report. | | |



5795 US Highway 64, Farmington, NM 87401
 24 Hour Emergency Response Phone (800) 363-1879

PH (505) 632-1881 Fx (505) 632-1865
 envirotech-inc.com
 labadmin@envirotech.com

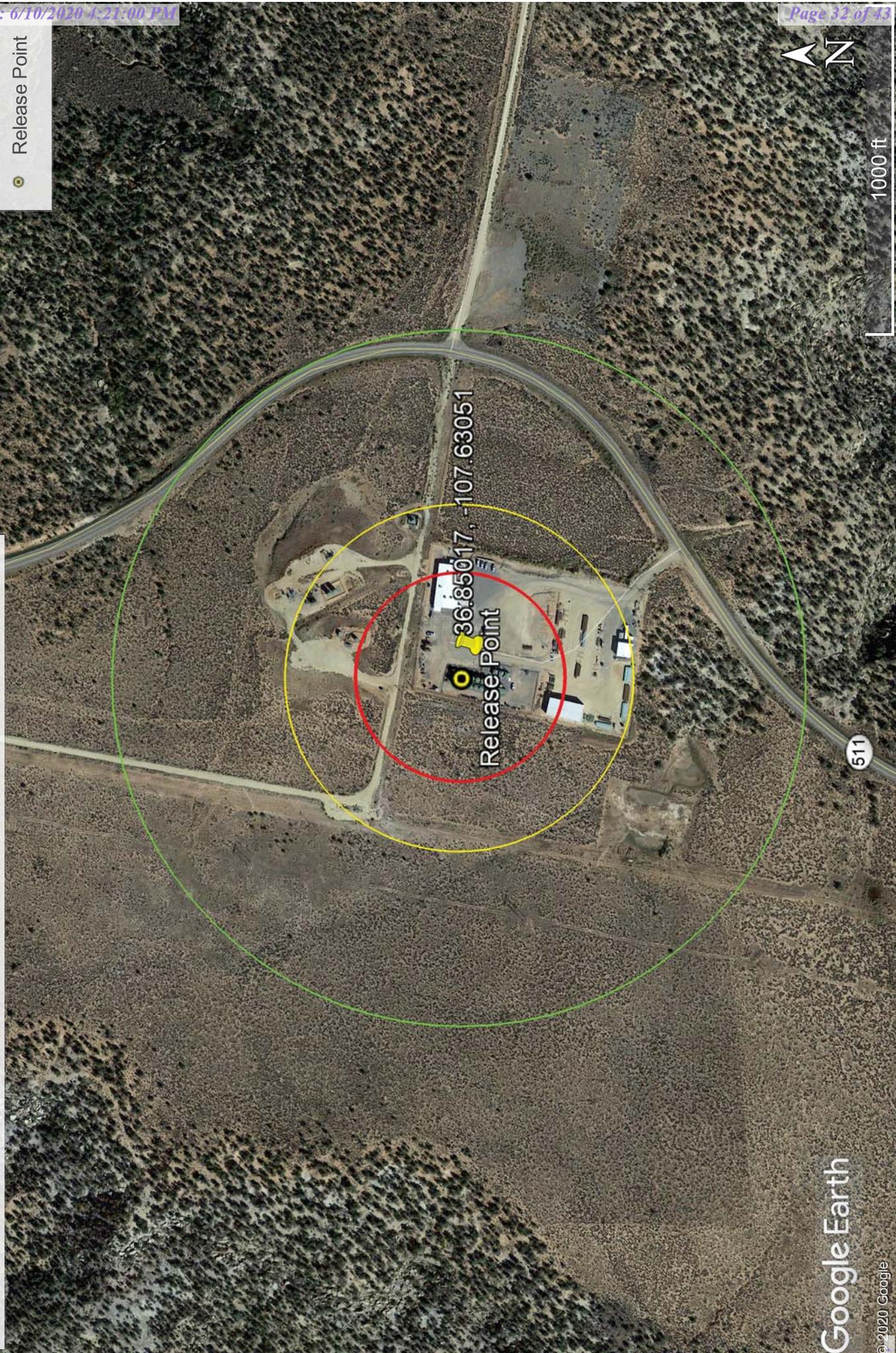
envirotech
 Analytical Laboratory

NORTHEAST BLANCO UNIT PUMP MESA SWD #001

API #30-045-27340
N-36-31N-08W
GPS: 36.850419°, -107.630780°

Legend

- 1,000 ft
- 500 ft
- 300 ft
- Release Point



1000 ft



Measurement



Miles

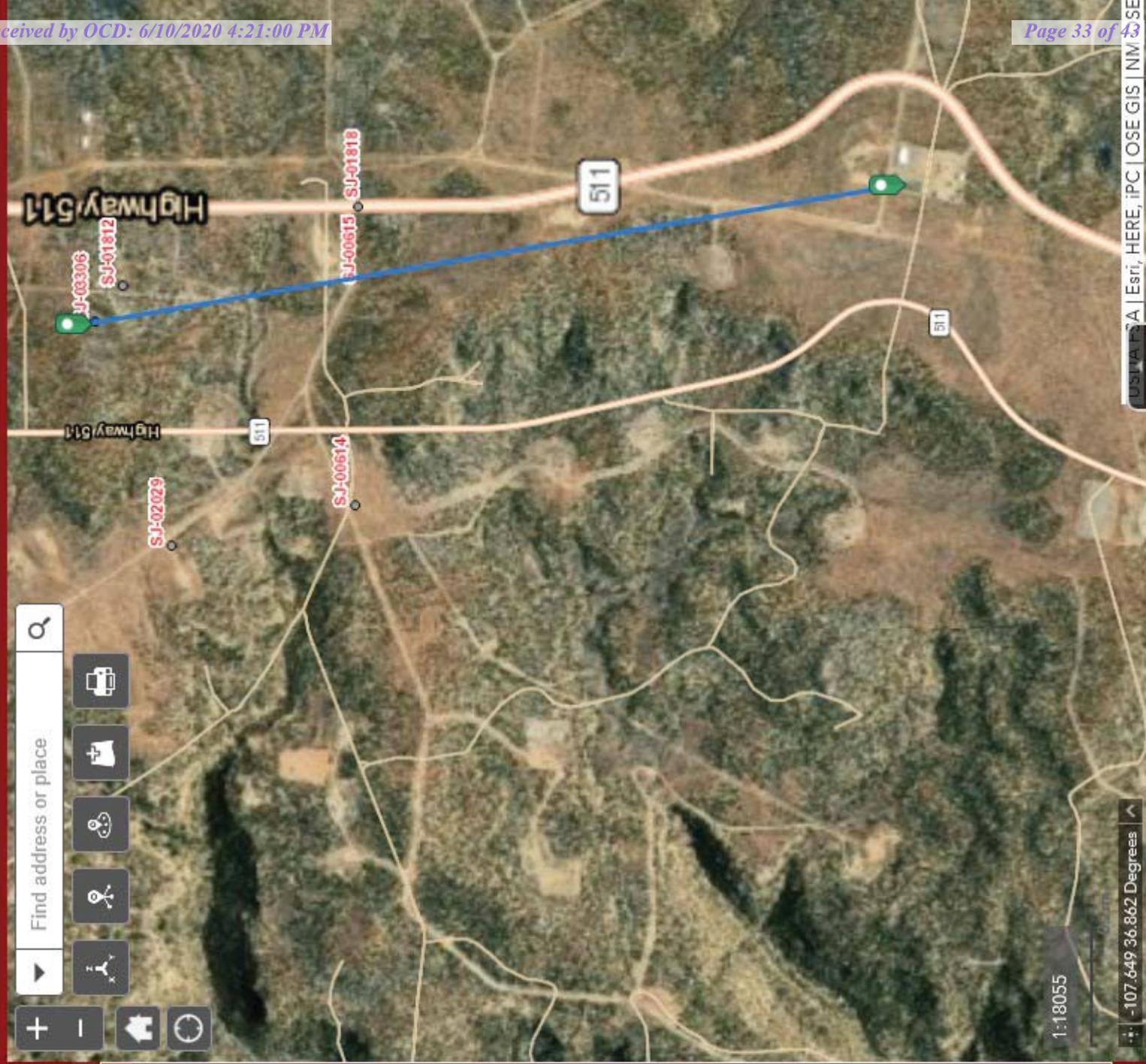
Measurement Result

1.36 Miles

Clear

Press CTRL to enable snapping

Map navigation controls including zoom in (+), zoom out (-), home, and refresh buttons. A search bar labeled "Find address or place" with a magnifying glass icon. Below the search bar are icons for print, share, location, and other map functions.



Scale: 1:18055
Coordinates: -107.649 36.862 Degrees



New Mexico Office of the State Engineer Point of Diversion Summary

| | | | | | |
|-----------------|-------------------|------------------------------------|-------------------------------|----------|-----------------------|
| | | (quarters are 1=NW 2=NE 3=SW 4=SE) | | | (NAD83 UTM in meters) |
| Well Tag | POD Number | (quarters are smallest to largest) | Q64 Q16 Q4 Sec Tws Rng | X | Y |
| SJ 03306 | | | 4 4 1 25 31N 08W | 265739 | 4083645* |

| | | |
|-------------------------------------|---|--------------------------------|
| Driller License: 1357 | Driller Company: BAILEY DRILLING COMPANY | |
| Driller Name: MARK BAILEY | | |
| Drill Start Date: 11/03/2003 | Drill Finish Date: 11/17/2003 | Plug Date: |
| Log File Date: 11/26/2003 | PCW Rev Date: | Source: Shallow |
| Pump Type: | Pipe Discharge Size: | Estimated Yield: 10 GPM |
| Casing Size: 5.00 | Depth Well: 600 feet | Depth Water: 500 feet |

| Water Bearing Stratifications: | Top | Bottom | Description |
|--------------------------------|-----|--------|-------------------------------|
| | 500 | 600 | Sandstone/Gravel/Conglomerate |

| Casing Perforations: | Top | Bottom |
|----------------------|-----|--------|
| | 480 | 600 |

*UTM location was derived from PLSS - see Help

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6/4/20 10:41 AM

POINT OF DIVERSION SUMMARY

Hydrogeological Report for the NEBU 447

Geology:

The stratigraphic sequence of Paleocene and Eocene rocks in the eastern part of the San Juan basin is the Nacimiento and Animas formation overlain by the San Jose Formation. The San Jose Formation of Eocene age was defined by Simpson (1948a, b). It occurs in New Mexico and Colorado and its outcrop forms the land surface over much of the central basin area. It overlies the Nacimiento Formation in the area generally south of the State line (Fassett, 1974. P229). The Basal contact of the San Jose varies with location in the basin. This contact is a disconformity along the basin margins, and it is an angular unconformity along the Nacimiento uplift; the contact is conformable in the central basin. The Nacimiento is a sequence of varicolored beds of sandstone and mudrock that attains a thickness of as much as 120 m thick (Baltz, 1967).

The Animas Formation occupies a stratigraphic position similar to that of the OJO Alamo and Nacimiento Formations. The Animas strata comprise a general fining upward sequence of volcanoclastic conglomerates and sandstones, with arkosic conglomerates and sandstones near the top. The upper member of the Animas has been shown to interfinger with the Nacimiento in its eastern (Dane, 1946) and western (Barnes et al., 1954) outcrop belts. Subsurface correlation of these formations has not been carried out in any detail because of the difficulty of recognizing their contact on Electric logs (Fassett and Hinds, 1971:33).

The nature of the contact between the lower Eocene San Jose Formation and the Nacimiento formation north of latitude 36 degrees 45'N has been described as conformable (Barnes et al., 1954, Stone et al., 1983 25-26), Whereas at latitude 36 it has been shown to be unconformable (Baltz, 1967; Lucas et al., 1981) Contact relationships between the San Jose and Animas Formations in the northernmost San Juan Basin have been shown to be intertonguing (Smith, 1988). The San Jose formation was deposited in various fluvial type environments. In general the unit consists of an interbedded sequence of sandstone siltstone and variegated shale, the sandstones are buff to yellow and rusty-colored crossbedded very fine to coarse grained arkose, which are locally conglomeratic and contain abundant silicified wood. The thickness of the San Jose Nacimiento and Animas Formations is ranges from zero to more than 3,500 feet in the east central part of the structural basin. The bottom of the Nacimiento and Animas Formations decreases from a maximum altitude of more than 8 000 feet above sea level along the northeastern basin rim to less than 4,000 feet above sea level in the east central part of the basin.

Hydraulic Properties:

The San Jose, Nacimiento, and Animas Formations are a source of water for public-supply, commercial, private-domestic, and livestock use in areas where drilling depths and pumping levels are economically feasible and where water quality is suitable. Water in the San Jose Nacimiento and Animas Formations occurs under both water table and

artesian conditions. Recharge to the aquifer is from infiltration of precipitation and stream flow on outcrops and from vertical upward leakage of water from underlying units. Transmissivity data for the San Jose Nacimiento and Animas Formations are minimal-Values of 40 and 120 feet squared per day were determined from two aquifer tests (Stone and others 1983 table 5). The reported or measured discharge from 79 water wells completed in the San Jose, Nacimiento, and Animas Formations ranges from 1 to 61 gallons per minute and the median is 6 gallons per minute. The specific capacity of 12 of these wells ranges from 0.03 to 2.30 gallons per minute per foot of drawdown and the median is 0.23 gallon per minute per foot of drawdown. Water quality data described in this section are from the NWIS data base and were collected during 1938. 84 Well records were checked to assure to the extent possible that a particular sample represents water only from the San Jose Nacimiento and Animas Formations and not a mixture of water from other aquifers. Locally however these formations may have substantial differences in the concentration of some water quality constituents due in part to differences in rock characteristics as described in the Geology section.

Reference:

USGS Hydrologic investigations atlas HA-720-A plate 1,2
Lucas, Spencer G and Smith, Larry N. 1991, Stratigraphy, Sedimentology and Paleontology of the Lower Eocene San Jose Formation in the central portion of the San Juan basin, Northwestern New Mexico, New Mexico Bureau of Mines & Mineral Resources Bulletin 126. 6-7p.

Sitting Requirements for NEBU 447

The NEBU 447 is not located in an unstable area per topographic map attached.

There is no continuously flowing watercourse near the proposed location.

The proposed well location is neither near any private and/or public buildings nor any private and/or public water sources.

The proposed well location is not located within any incorporated municipal boundaries or municipal fresh water well field.

There are no wetlands located near the proposed well location as per the wetlands map attached.

Per the NM Bureau of Geology and Mineral Resources map attached there are no locations of any mines, mills or quarries near the proposed well location.

The FEMA floodplain map attached indicates the proposed well location is defined as outside of the 500 Year Flood Plain.

There will be no excavated material placed within 300 feet of a flowing watercourse or within 200 feet of any other defined water course.

**New Mexico Office of the State Engineer
POD Reports and Downloads**

Township: 31N | Range: 08W | Sections: 36,25,35,26 |

NAD27 X: | Y: | Zone: Search Radius:

County: Basin: Number: Suffix:

Owner Name: (First) _____ (Last) _____ Non-Domestic Domestic
 All

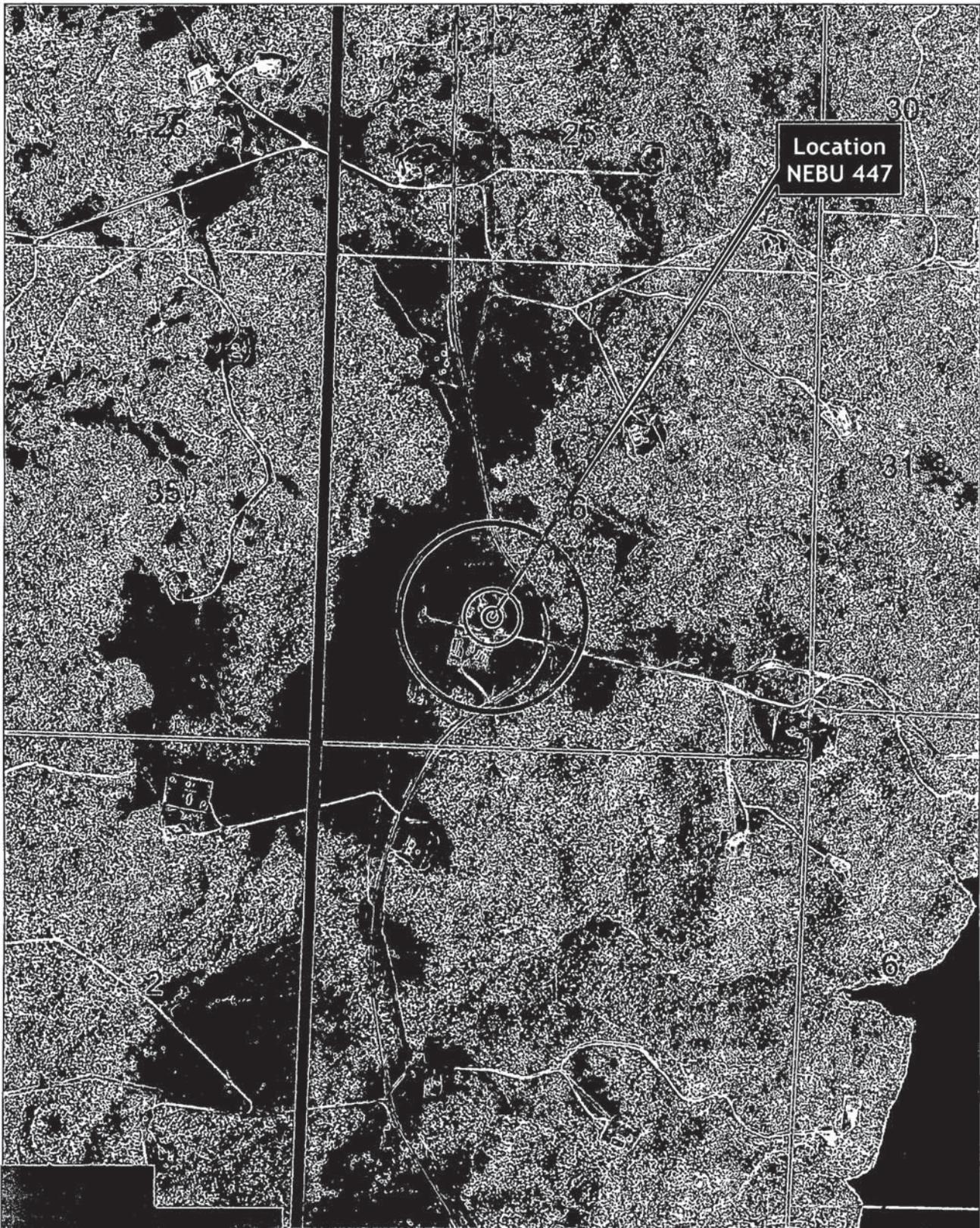
POD-/Surface-Data-Report Avg Depth-to-Water-Report

Water-Column-Report

AVERAGE DEPTH OF WATER REPORT 09/10/2008

| Bsn | Tws | Rng | Sec | Zone | X | Y | Wells | (Depth Water in Feet) | | |
|-----|-----|-----|-----|------|---|---|-------|-----------------------|-----|-----|
| | | | | | | | | Min | Max | Avg |
| SJ | 31N | 08W | 25 | | | | 2 | 500 | 500 | 500 |

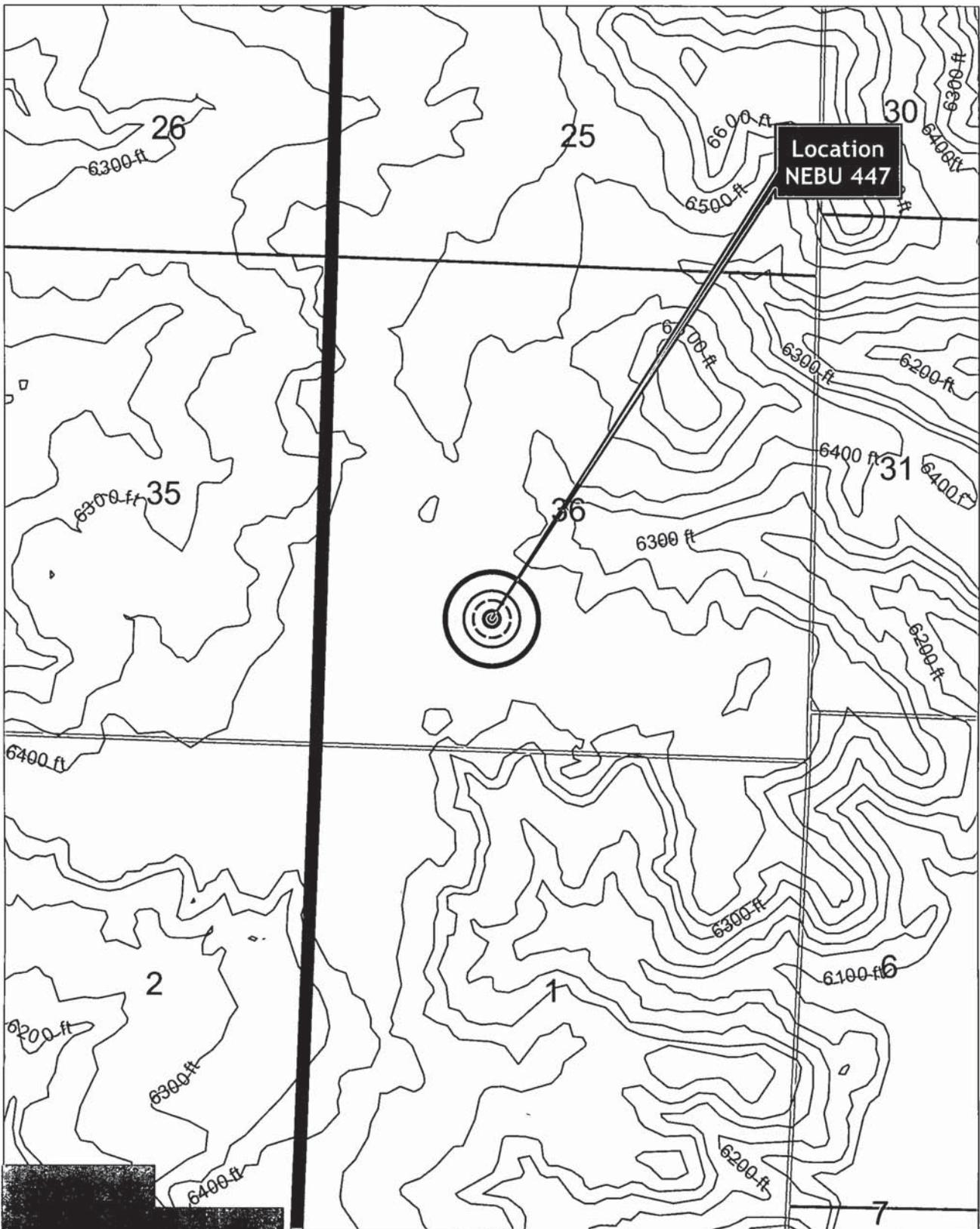
Record Count: 2



○ 300 ft
○ 1000 ft
1 inch equals 1,500 feet

Northeast Blanco Unit
Aerial Map





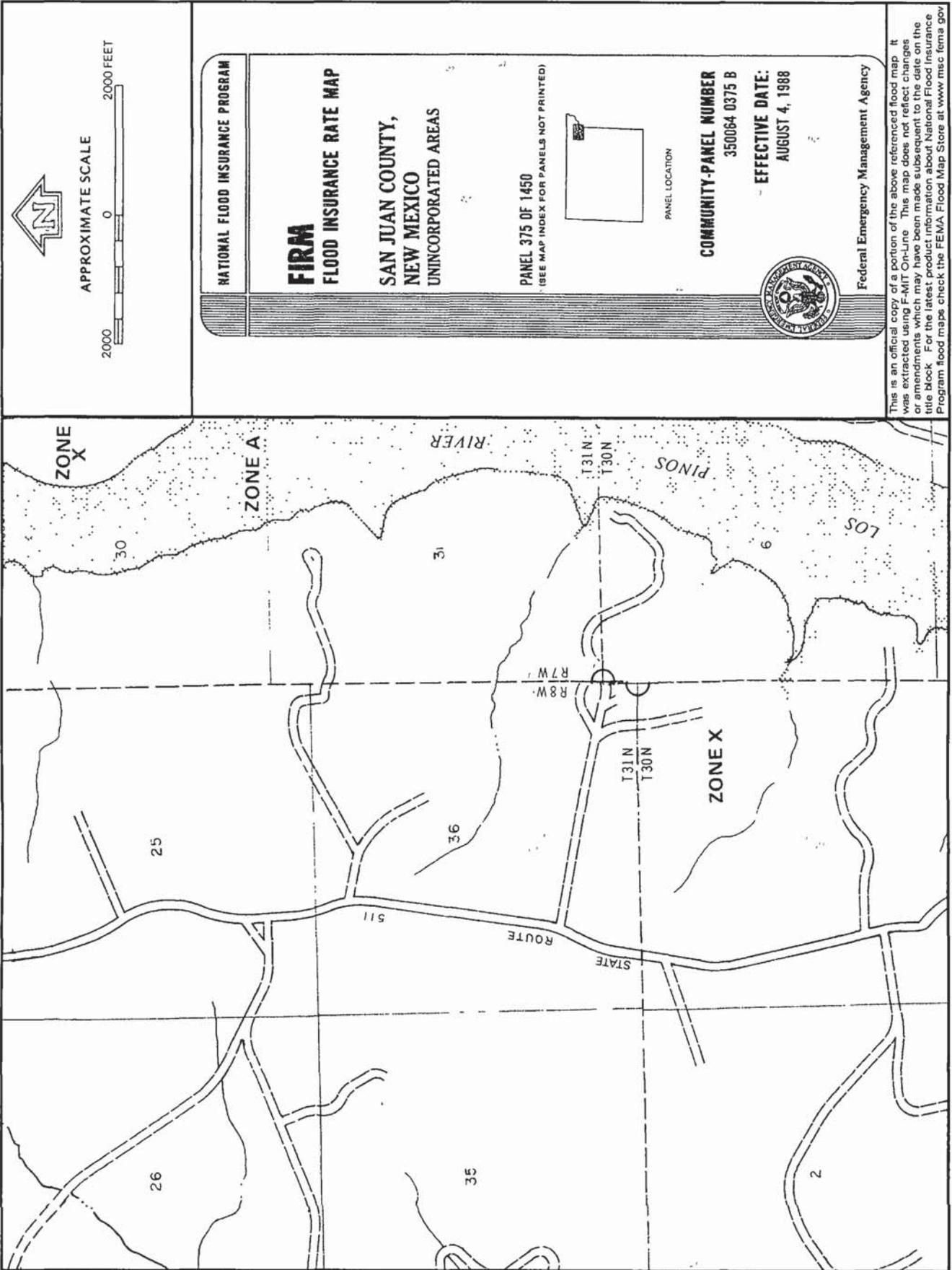
1 inch equals 1,500 feet

- 200 ft
- 300 ft
- 500 ft

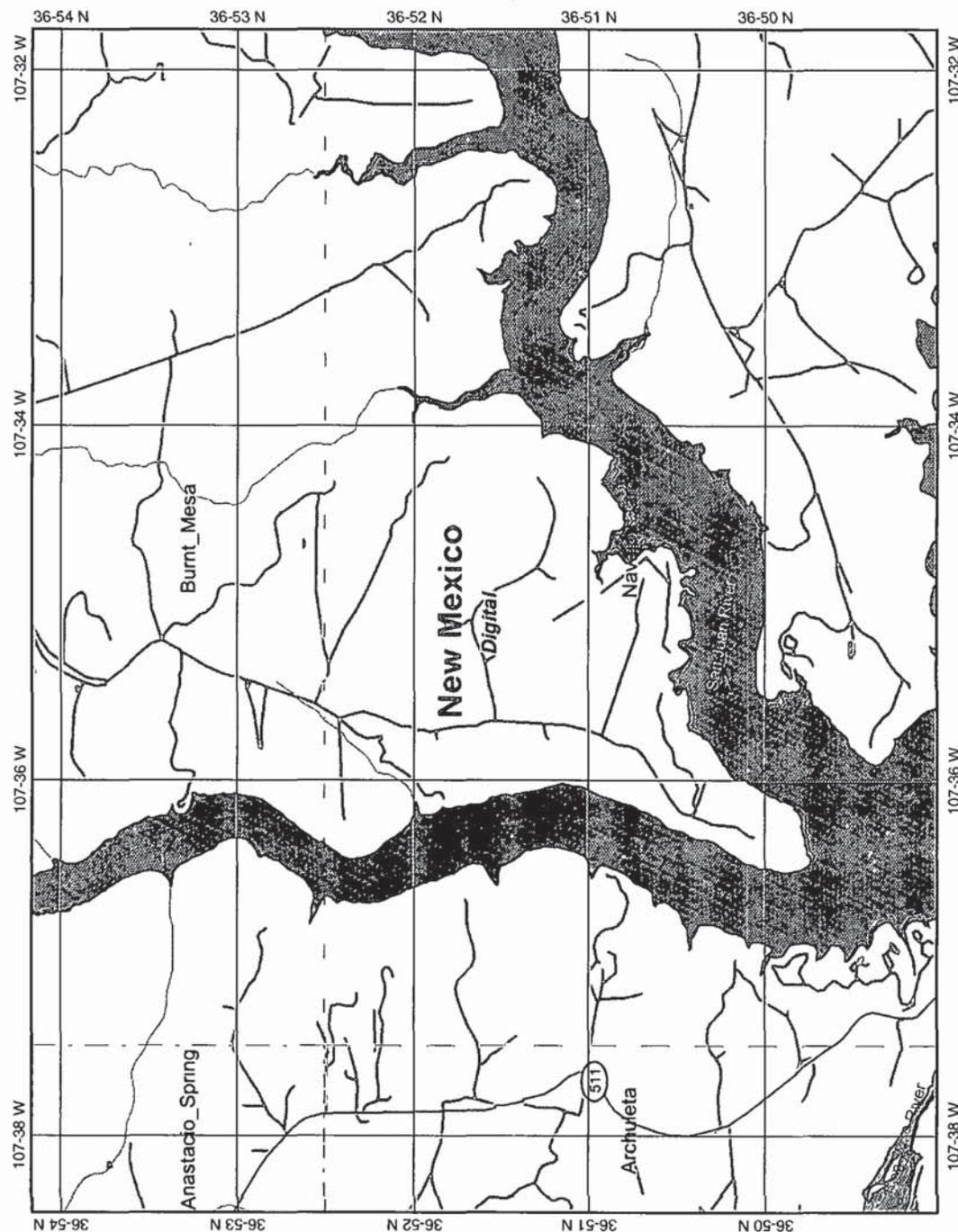
Northeast Blanco Unit

Topo Map





NEBU 447 Wetlands Map



Map center: 36° 51' 36" N, 107° 35' 6" W



Legend

- Interstate
- Major Road
- Other Road
- Interstate
- State Highway
- US Highway
- Roads
- Cities
- USGS Quad Index 24K
- Lower 48 Wetland Polygons
- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine
- Lower 48 Available Wetland Data
- Non-Digital
- Digital
- No Data
- Scan
- NHD Streams
- Counties 100K
- States 100K
- South America
- North America



Scale: 1:66,584

This map is a user generated static output from an internet mapping site and is for general reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable. THIS MAP IS NOT TO BE USED FOR NAVIGATION.

NEBU 447 Mines, Mills and Quarries Web Map

Mines, Mills & Quarries Commodity Groups

- △ Aggregate & Stone Mines
- ◆ Coal Mines
- ★ Industrial Minerals Mines
- ▼ Industrial Minerals Mills
- ☒ Metal Mines and Mill Concentrate
- Potash Mines & Refineries
- ⌋ Smelters & Refinery Ops.
- ✦ Uranium Mines
- ⊕ Uranium Mills

Population

- ⊙ Cities (2000 Census)



SCALE 1 : 578,656

