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By JKeyes at 2:20 pm, Feb 10, 2016

: YVfi Ufm2016

**C-144 Permit Package for
Nectarine BSQ State Com 2H
Section 24 T21S R33E, Lea Co, NM**



View east showing staked locations of Nectarine 2H, which will be drilled in 2016 and in the foreground, Persimmon BSS State Com 1H, which will be drilled at a later date.

**Prepared for
Yates Petroleum Corporation
Artesia, NM**

**Prepared by
R.T. Hicks Consultants, Ltd.
Albuquerque, New Mexico**

R. T. HICKS CONSULTANTS, LTD.

901 Rio Grande Blvd NW ▲ Suite F-142 ▲ Albuquerque, NM 87104 ▲ 505.266.5004 ▲ Fax: 505.266-0745

February 4, 2016

Dr. Tomas Oberding
Kellie Jones
NMOCD District 1
1625 French Drive
Hobbs, NM 88240
Via E-Mail

RE: Yates Petroleum, Nectarine BSQ State Com 2H, Temporary Pit

Dr. Oberding and Ms. Jones:

On behalf of Yates Petroleum Corporation, R.T. Hicks Consultants, Ltd. is pleased to submit the C-144 application package for the above-referenced well. Please note the following:

1. The distance between the bottom of the pit and groundwater is more than 100 feet.
2. The Design/Construction, O&M and Closure Plans are *almost* verbatim after the recently-approved. Note, however that the geometry and purpose of this pit is markedly different from a typical reserve pit. There are three cells of this single pit:
 - a. The cell nearest to the drill rig captures cuttings from the closed loop system
 - b. One fluid cell holds brine drilling fluids discharged from the steel tanks after completion of the intermediate casing (salt section)
 - c. The other fluid cell holds fresh water discharged from the steel drilling pits after completion of the surface casing and any residual cut brine in the pit after setting the production casing and workover (hydraulic stimulation) of the well
3. The Closure Plan is *almost* verbatim after recently approved reserve pits.
4. We anticipate "in place" burial of stabilized solids in the cuttings cell of the pit and, if necessary, the brine fluids cell.
5. This letter and application is copied to Mr. Ed Martin of the SLO to notify the surface landowner of the operator's intent to use on-site burial.
6. I certify that Hicks Consultants performed a visual inspection of the site.

The fluids cells shown in Plates 1 and 2 will accept residual drilling fluids from nearby wells for recycling in the drilling process or for other uses as approved by the Division. Any residual fluids in the temporary pit will be disposed if they cannot be recycled.

The attached variances, which have been approved previously, are meant to apply to all YPC pit permits. If you have any questions or concerns regarding this application or the "blanket variance", please contact me. As always, we appreciate your work ethic and attention to detail.

Sincerely,
R.T. Hicks Consultants



Randall Hicks
Principal

Copy: Yates Petroleum Corporation
Mr. Ed Martin, NM State Land Office

Statement Explaining Why the Applicant Seeks a Variance

The prescriptive mandates of the Rule that are the subject of this variance request are the following subsections of 19.15.17.13.D [emphasis added]:

19.15.17.13 CLOSURE AND SITE RECLAMATION REQUIREMENTS:

D. Closure where wastes are destined for burial in place or into nearby division approved pits or trenches. This subsection applies to waste from temporary pits and closed-loop systems, when such waste may be disposed of in place in the existing temporary pit or disposed of at a nearby temporary pit or burial trench that is not a permitted commercial facility regulated under 19.15.36 NMAC. A nearby temporary pit or burial trench that receives waste from another temporary pit must be onsite within the same lease.

It is our understanding that the intent of this mandate of the Pit Rule is to limit the transfer of waste long distances or to limit the transfer between different surface owners. In general, such limits are good for all.

The attached maps show the location of wells that are the subject of this variance. While not on the same lease, the distance between the locations is small, the surface owner of all location is the SLO and we believe the spirit of the Rule is met. The pit size for all locations is small and the ability to move fluids and/or solids between pits allows flexibility that can minimize the excavation footprint.

Demonstration That the Variance Will Provide Equal or Better Protection of Fresh Water, Public Health and the Environment

We strongly believe approval of this variance will provide better protection of the environment than the alternatives

1. Hauling any excess cuttings and fluids many miles to R-360 or Sundance
2. Permitting and excavating pits that are larger than necessary to hold fluids and/or solids

We believe it is obvious that using an existing pit that can hold the solids creates a smaller environmental footprint than constructing a new pit for burial on the same lease. The movement of drilling fluids from site to site for recycling does not require a variance, and such actions are not the subject of this request.

Limiting the transport of cuttings reduces the dust, exhaust and road wear – all of which reduce the environmental footprint of the proposed alternative versus transport to a commercial facility.

Statement Explaining Why the Applicant Seeks a Variance

The prescriptive mandates of the Rule that are the subject of this variance request are the following subsections of 19.15.17.13.E:

E. Closure notice.

(1) The operator shall notify the surface owner by certified mail, return receipt requested that the operator plans closure operations at least 72 hours, but not more than one week, prior to any closure operation. Notice shall include well name, API number and location. Evidence of mailing of the notice to the address of the surface owner shown in the county tax records is sufficient to demonstrate compliance with this requirement.

Hicks Consultants includes the SLO or BLM by carbon copy of the closure notice emails sent to NMOCD. This eliminates a delay in receipt of the notice by SLO or BLM and facilitates real-time dialogue between the surface owner, NMOCD, Hicks Consultants, and the operator should any questions arise about the closure. On November 24, 2014, Ed Martin of SLO confirmed that email is an acceptable method of copy for the notices of closure. BLM routinely accepts such email notifications.

Demonstration that the Variance Will Provide Equal or Better Protection of Fresh Water, Public Health and the Environment

Approval of an email copy of the closure notice for a temporary pit to substitute for one sent via U.S. Mail would offer a reduction of paper received and stored at the State Land Office and well as energy expended (carbon-emitted) to produce and ship the document. Lowering the carbon footprint provides better protection of the environment than compliance with the prescriptive mandate of the Rule.

Statement Explaining Why the Applicant Seeks a Variance

The prescriptive mandates of the Rule that are the subject of this variance request are the following subsections of 19.15.17.16 [emphasis added]:

19.15.17.13 CLOSURE AND SITE RECLAMATION REQUIREMENTS:

D.(5) The operator shall collect, at a minimum, a five point composite of the contents of the temporary pit or drying pad/tank associated with a closed-loop system to demonstrate that, after the waste is solidified or stabilized with soil or other non-waste material at a ratio of no more than 3:1 soil or other non-waste material to waste, the concentration of any contaminant in the stabilized waste is not higher than the parameters listed in Table II of 19.15.17.13 NMAC.

The referenced Table II, which is reproduced in part below, notes the Method with asterisk signifying: “*Or other test methods approved by the division”.

Table II Closure Criteria for Burial Trenches and Waste Left in Place in Temporary Pits			
Depth below bottom of pit to groundwater less than 10,000 mg/l TDS	Constituent	Method*	Limit**
25-50 feet	Chloride	EPA Method 300.0	20,000 mg/kg
	TPH	EPA SW-846 Method 418.1	100 mg/kg

After sampling solids of more than 50 drilling pits in the Permian Basin, we have observed and reported to OCD on numerous occasions significant problems with non-petroleum drilling additives (e.g. starch) interfering with the laboratory method 418.1. It is not surprising that in many instances we found no correlation between the laboratory results using 418.1 and the results using Method 8015.

We request a variance to substitute Method 8015 (GRO + DRO + MRO) for Method 418.1.

Demonstration That the Variance Will Provide Equal or Better Protection of Fresh Water, Public Health and the Environment

The purpose of TPH analyses in the Pit Rule is to measure total petroleum hydrocarbons not all non-polar compounds, such as starch or cellulose that can interfere with Method 418.1. While Method 418.1 may provide some useful data for transportation of crude oil or condensate spills to disposal, the addition of non-polar organic materials in drilling fluids, especially for horizontal wells, renders Method 418.1 highly problematic to determine compliance with the Rule. Using Method 8015 for TPH (GRO+DRO+MRO) provides a better measurement of what we believe the Commission intended operators to measure.

C-144 and Site Specific Information for Temporary Pit

R.T. Hicks Consultants, Ltd.

901 Rio Grande Blvd. NW, Suite F-142
Albuquerque, NM 87104

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-144
Revised June 6, 2013

For temporary pits, below-grade tanks, and multi-well fluid management pits, submit to the appropriate NMOC District Office.
For permanent pits submit to the Santa Fe Environmental Bureau office and provide a copy to the appropriate NMOC District Office.

Pit, Below-Grade Tank, or
Proposed Alternative Method Permit or Closure Plan Application

Type of action: ☐ Below grade tank registration
☒ Permit of a pit or proposed alternative method
☐ Closure of a pit, below-grade tank, or proposed alternative method
☐ Modification to an existing permit/or registration
☐ Closure plan only submitted for an existing permitted or non-permitted pit, below-grade tank, or proposed alternative method

Instructions: Please submit one application (Form C-144) per individual pit, below-grade tank or alternative request

Please be advised that approval of this request does not relieve the operator of liability should operations result in pollution of surface water, ground water or the environment. Nor does approval relieve the operator of its responsibility to comply with any other applicable governmental authority's rules, regulations or ordinances.

1.
Operator: Yates Petroleum Corporation OGRID #: 25575
Address: 105 S. 4th Street, Artesia, NM 88210
Facility or well name: Nectarine BSQ State Com 2H
API Number: 30-025-42460 OCD Permit Number: _____
U/L or Qtr/Qtr P Section 24 Township 21S Range 33E County: Lea
Center of Proposed Design: Latitude 32 267 49.46 Longitude -103 31 56.00 NAD: ☐ 1927 ☒ 1983 Staked Location
Surface Owner: ☐ Federal ☒ State ☐ Private ☐ Tribal Trust or Indian Allotment

2.
☒ **Pit:** Subsection F, G or J of 19.15.17.11 NMAC
Temporary: ☒ Drilling ☐ Workover
☐ Permanent ☐ Emergency ☐ Cavitation ☐ P&A ☐ Multi-Well Fluid Management Low Chloride Drilling Fluid ☐ yes ☒ no
☒ Lined ☐ Unlined Liner type: Thickness 20 mil ☒ LLDPE ☐ HDPE ☐ PVC ☐ Other _____
☒ String-Reinforced
Liner Seams: ☒ Welded ☐ Factory ☐ Other _____ Volume 14,308 bbl (drilling cell), 5986+3543 = 9529 bbls fluids cells
Dimensions: L 165 x W 150 x D 9.5 ft average Temporary Pit

3.
☐ **Below-grade tank:** Subsection I of 19.15.17.11 NMAC
Volume: _____ bbl Type of fluid: _____
Tank Construction material: _____
☐ Secondary containment with leak detection ☐ Visible sidewalls, liner, 6-inch lift and automatic overflow shut-off
☐ Visible sidewalls and liner ☐ Visible sidewalls only ☐ Other _____
Liner type: Thickness _____ mil ☐ HDPE ☐ PVC ☐ Other _____

4.
☐ **Alternative Method:**
Submittal of an exception request is required. Exceptions must be submitted to the Santa Fe Environmental Bureau office for consideration of approval.

5.
Fencing: Subsection D of 19.15.17.11 NMAC (*Applies to permanent pits, temporary pits, and below-grade tanks*)
☐ Chain link, six feet in height, two strands of barbed wire at top (*Required if located within 1000 feet of a permanent residence, school, hospital, institution or church*)
☒ Four foot height, four strands of barbed wire evenly spaced between one and four feet
☐ Alternate. Please specify _____

6.

Netting: Subsection E of 19.15.17.11 NMAC (*Applies to permanent pits and permanent open top tanks*)

- ☐ Screen ☐ Netting ☐ Other _____
- ☐ Monthly inspections (If netting or screening is not physically feasible)

7.

Signs: Subsection C of 19.15.17.11 NMAC

- ☐ 12"x 24", 2" lettering, providing Operator's name, site location, and emergency telephone numbers
- ☒ Signed in compliance with 19.15.16.8 NMAC

8.

Variances and Exceptions:

Justifications and/or demonstrations of equivalency are required. Please refer to 19.15.17 NMAC for guidance.

Please check a box if one or more of the following is requested, if not leave blank:

- ☒ Variance(s): Requests must be submitted to the appropriate division district for consideration of approval.
- ☐ Exception(s): Requests must be submitted to the Santa Fe Environmental Bureau office for consideration of approval.

9.

Siting Criteria (regarding permitting): 19.15.17.10 NMAC

Instructions: The applicant must demonstrate compliance for each siting criteria below in the application. Recommendations of acceptable source material are provided below. Siting criteria does not apply to drying pads or above-grade tanks.

General siting

Ground water is less than 25 feet below the bottom of a low chloride temporary pit or below-grade tank.

- ☐ NM Office of the State Engineer - iWATERS database search; ☐ USGS; ☐ Data obtained from nearby wells

☐ Yes ☐ No
☒ NA

Ground water is less than 50 feet below the bottom of a Temporary pit, permanent pit, or Multi-Well Fluid Management pit.

NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells **See Figures 1 & 2**

☐ Yes ☒ No
☐ NA

Within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance adopted pursuant to NMSA 1978, Section 3-27-3, as amended. **(Does not apply to below grade tanks) See Figure 5**

- Written confirmation or verification from the municipality; Written approval obtained from the municipality

☐ Yes ☒ No

Within the area overlying a subsurface mine. **(Does not apply to below grade tanks) See Figure 7**

- Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division

☐ Yes ☒ No

Within an unstable area. **(Does not apply to below grade tanks) See Figure 8**

- Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map

☐ Yes ☒ No

Within a 100-year floodplain. **(Does not apply to below grade tanks) See Figure 9**

- FEMA map

☐ Yes ☒ No

Below Grade Tanks

Within 100 feet of a continuously flowing watercourse, significant watercourse, lake bed, sinkhole, wetland or playa lake (measured from the ordinary high-water mark).

- Topographic map; Visual inspection (certification) of the proposed site

☐ Yes ☐ No

Within 200 horizontal feet of a spring or a fresh water well used for public or livestock consumption;

- NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site

☐ Yes ☐ No

Temporary Pit using Low Chloride Drilling Fluid (maximum chloride content 15,000 mg/liter)

Within 100 feet of a continuously flowing watercourse, or any other significant watercourse or within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark). (Applies to low chloride temporary pits.)

- Topographic map; Visual inspection (certification) of the proposed site

☐ Yes ☐ No

Within 300 feet from a occupied permanent residence, school, hospital, institution, or church in existence at the time of initial application.

- Visual inspection (certification) of the proposed site; Aerial photo; Satellite image

☐ Yes ☐ No

Within 200 horizontal feet of a spring or a private, domestic fresh water well used by less than five households for domestic or stock watering purposes, or 300feet of any other fresh water well or spring, in existence at the time of the initial application.

NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site

☐ Yes ☐ No

Within 100 feet of a wetland.

- US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site

☐ Yes ☐ No

Temporary Pit Non-low chloride drilling fluid

Within 300 feet of a continuously flowing watercourse, or any other significant watercourse, or within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark). **See Figure 3**

- Topographic map; Visual inspection (certification) of the proposed site

☐ Yes ☒ No

Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application.

- Visual inspection (certification) of the proposed site; Aerial photo; Satellite image. **See Figure 4**

☐ Yes ☒ No

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, or 1000 feet of any other fresh water well or spring, in the existence at the time of the initial application;

- NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site

See Figures 1 & 2

☐ Yes ☒ No

Within 300 feet of a wetland. **See Figure 6**

- US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site

☐ Yes ☒ No

Permanent Pit or Multi-Well Fluid Management Pit

Within 300 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse, or lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark).

- Topographic map; Visual inspection (certification) of the proposed site

☐ Yes ☐ No

Within 1000 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application.

- Visual inspection (certification) of the proposed site; Aerial photo; Satellite image

☐ Yes ☐ No

Within 500 horizontal feet of a spring or a fresh water well used for domestic or stock watering purposes, in existence at the time of initial application.

- NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site

☐ Yes ☐ No

Within 500 feet of a wetland.

- US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site

☐ Yes ☐ No

10.

Temporary Pits, Emergency Pits, and Below-grade Tanks Permit Application Attachment Checklist: Subsection B of 19.15.17.9 NMAC

Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached.

- ☐ Hydrogeologic Report (Below-grade Tanks) - based upon the requirements of Paragraph (4) of Subsection B of 19.15.17.9 NMAC
- ☒ Hydrogeologic Data (Temporary and Emergency Pits) - based upon the requirements of Paragraph (2) of Subsection B of 19.15.17.9 NMAC
- ☒ Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC
- ☒ Design Plan - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☒ Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC
- ☒ Closure Plan (Please complete Boxes 14 through 18, if applicable) - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC

☐ Previously Approved Design (attach copy of design) API Number: _____ or Permit Number: _____

11.

Multi-Well Fluid Management Pit Checklist: Subsection B of 19.15.17.9 NMAC

Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached.

- ☐ Design Plan - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC
- ☐ A List of wells with approved application for permit to drill associated with the pit.
- ☐ Closure Plan (Please complete Boxes 14 through 18, if applicable) - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC
- ☐ Hydrogeologic Data - based upon the requirements of Paragraph (4) of Subsection B of 19.15.17.9 NMAC
- ☐ Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC

☐ Previously Approved Design (attach copy of design) API Number: _____ or Permit Number: _____

12.
Permanent Pits Permit Application Checklist: Subsection B of 19.15.17.9 NMAC

Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached.

- ☐ Hydrogeologic Report - based upon the requirements of Paragraph (1) of Subsection B of 19.15.17.9 NMAC
- ☐ Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC
- ☐ Climatological Factors Assessment
- ☐ Certified Engineering Design Plans - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ Dike Protection and Structural Integrity Design - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ Leak Detection Design - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ Liner Specifications and Compatibility Assessment - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ Quality Control/Quality Assurance Construction and Installation Plan
- ☐ Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC
- ☐ Freeboard and Overtopping Prevention Plan - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ Nuisance or Hazardous Odors, including H₂S, Prevention Plan
- ☐ Emergency Response Plan
- ☐ Oil Field Waste Stream Characterization
- ☐ Monitoring and Inspection Plan
- ☐ Erosion Control Plan
- ☐ Closure Plan - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC

13.
Proposed Closure: 19.15.17.13 NMAC

Instructions: Please complete the applicable boxes, Boxes 14 through 18, in regards to the proposed closure plan.

- Type: ☒ Drilling ☐ Workover ☐ Emergency ☐ Cavitation ☐ P&A ☐ Permanent Pit ☐ Below-grade Tank ☐ Multi-well Fluid Management Pit
☐ Alternative
- Proposed Closure Method: ☐ Waste Excavation and Removal
☐ Waste Removal (Closed-loop systems only)
☒ On-site Closure Method (Only for temporary pits and closed-loop systems)
☒ In-place Burial ☐ On-site Trench Burial
☐ Alternative Closure Method

14.
Waste Excavation and Removal Closure Plan Checklist: (19.15.17.13 NMAC) **Instructions:** Each of the following items must be attached to the closure plan. Please indicate, by a check mark in the box, that the documents are attached.

- ☐ Protocols and Procedures - based upon the appropriate requirements of 19.15.17.13 NMAC
- ☐ Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of Subsection C of 19.15.17.13 NMAC
- ☐ Disposal Facility Name and Permit Number (for liquids, drilling fluids and drill cuttings)
- ☐ Soil Backfill and Cover Design Specifications - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC
- ☐ Re-vegetation Plan - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC
- ☐ Site Reclamation Plan - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC

15.
Siting Criteria (regarding on-site closure methods only): 19.15.17.10 NMAC

Instructions: Each siting criteria requires a demonstration of compliance in the closure plan. Recommendations of acceptable source material are provided below. Requests regarding changes to certain siting criteria require justifications and/or demonstrations of equivalency. Please refer to 19.15.17.10 NMAC for guidance.

- | | |
|---|--|
| Ground water is less than 25 feet below the bottom of the buried waste.
- NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<input type="checkbox"/> NA |
| Ground water is between 25-50 feet below the bottom of the buried waste
- NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<input type="checkbox"/> NA |
| Ground water is more than 100 feet below the bottom of the buried waste.
- NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/> NA |
| Within 100 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse, lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark).
- Topographic map; Visual inspection (certification) of the proposed site | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application.
- Visual inspection (certification) of the proposed site; Aerial photo; Satellite image | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Within 300 horizontal feet of a private, domestic fresh water well or spring used for domestic or stock watering purposes, in existence at the time of initial application.
- NM Office of the State Engineer - iWATERS database; Visual inspection (certification) of the proposed site | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Written confirmation or verification from the municipality; Written approval obtained from the municipality | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Within 300 feet of a wetland.
US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance | |

adopted pursuant to NMSA 1978, Section 3-27-3, as amended.

- Written confirmation or verification from the municipality; Written approval obtained from the municipality

☐ Yes ☒ No

Within the area overlying a subsurface mine.

- Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division

☐ Yes ☒ No

Within an unstable area.

- Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map

☐ Yes ☒ No

Within a 100-year floodplain.

- FEMA map

☐ Yes ☒ No

16.

On-Site Closure Plan Checklist: (19.15.17.13 NMAC) *Instructions: Each of the following items must be attached to the closure plan. Please indicate, by a check mark in the box, that the documents are attached.*

- ☒ Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC
☒ Proof of Surface Owner Notice - based upon the appropriate requirements of Subsection E of 19.15.17.13 NMAC
☐ Construction/Design Plan of Burial Trench (if applicable) based upon the appropriate requirements of Subsection K of 19.15.17.11 NMAC
☒ Construction/Design Plan of Temporary Pit (for in-place burial of a drying pad) - based upon the appropriate requirements of 19.15.17.11 NMAC
☒ Protocols and Procedures - based upon the appropriate requirements of 19.15.17.13 NMAC
☐ Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of 19.15.17.13 NMAC
☒ Waste Material Sampling Plan - based upon the appropriate requirements of 19.15.17.13 NMAC
☐ Disposal Facility Name and Permit Number (for liquids, drilling fluids and drill cuttings or in case on-site closure standards cannot be achieved)
☒ Soil Cover Design - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC
☒ Re-vegetation Plan - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC
☒ Site Reclamation Plan - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC

17.

Operator Application Certification:

I hereby certify that the information submitted with this application is true, accurate and complete to the best of my knowledge and belief.

Name (Print): Travis Hahn Title: Land Regulatory Agent

Signature:  Date: January 29, 2016

e-mail address: thahn@yatespetroleum.com Telephone: 575 748 4120

18.

OCD Approval: ☐ Permit Application (including closure plan) ☐ Closure Plan (only) ☐ OCD Conditions (see attachment)

OCD Representative Signature: _____ **Approval Date:** _____

Title: _____ **OCD Permit Number:** _____

19.

Closure Report (required within 60 days of closure completion): 19.15.17.13 NMAC

Instructions: Operators are required to obtain an approved closure plan prior to implementing any closure activities and submitting the closure report. The closure report is required to be submitted to the division within 60 days of the completion of the closure activities. Please do not complete this section of the form until an approved closure plan has been obtained and the closure activities have been completed.

☐ **Closure Completion Date:** _____

20.

Closure Method:

- ☐ Waste Excavation and Removal ☐ On-Site Closure Method ☐ Alternative Closure Method ☐ Waste Removal (Closed-loop systems only)
☐ If different from approved plan, please explain.

21.

Closure Report Attachment Checklist: *Instructions: Each of the following items must be attached to the closure report. Please indicate, by a check mark in the box, that the documents are attached.*

- ☐ Proof of Closure Notice (surface owner and division)
☐ Proof of Deed Notice (required for on-site closure for private land only)
☐ Plot Plan (for on-site closures and temporary pits)
☐ Confirmation Sampling Analytical Results (if applicable)
☐ Waste Material Sampling Analytical Results (required for on-site closure)
☐ Disposal Facility Name and Permit Number
☐ Soil Backfilling and Cover Installation
☐ Re-vegetation Application Rates and Seeding Technique
☐ Site Reclamation (Photo Documentation)

On-site Closure Location: Latitude _____ Longitude _____ NAD: ☐ 1927 ☐ 1983

Operator Closure Certification:

I hereby certify that the information and attachments submitted with this closure report is true, accurate and complete to the best of my knowledge and belief. I also certify that the closure complies with all applicable closure requirements and conditions specified in the approved closure plan.

Name (Print): _____ Title: _____

Signature: _____ Date: _____

e-mail address: _____ Telephone: _____

Geologic Setting of the Regional Fresh-Water Bearing Formations

The proposed temporary pit site is located on the southern edge of the Grama Ridge Area. It is a topographically elevated erosional remnant of the High Plains that separates the San Simon Swale to the south from the Laguna Valley to the north; all of which are part of the eastern edge of the Pecos Valley Physiographic Province (see adjacent map insert).



The surface elevation for most of the Grama Ridge Area ranges from 3,700 to 3,800 feet above sea level (ASL), with the highest elevation at Hat Mesa (3,900 feet ASL)

located approximately six miles to the west of the proposed temporary pit site. The San Simon Sink is in the southeast end of the San Simon Swale. It is located twelve miles to the south-southeast of the site and represents the lowest surface elevation in the region at 3,273 feet ASL. To the north of the Grama Ridge Area the topography slopes gently into the Laguna Valley, toward three large playa lakes, the lowest of which is Laguna Plata at 3,440 feet ASL. Regionally, surface drainage is to the south toward the San Simon Swale.

Groundwater in the Grama Ridge Area is found only in Mesozoic and Cenozoic Era rocks that were deposited approximately 235 million years ago. The oldest of these are the Mesozoic Era, Triassic Period, Dockum Group, Chinle and Santa Rosa Formations. They consist of conglomerates, cross-bedded sandstones, claystones, and siltstones that were deposited in a continental fluvial environment over the evaporites of the late Permian Ochoan Series, which had filled the Delaware Basin by that time.

Any later Jurassic or Cretaceous age rocks that were deposited above the Triassic have subsequently been removed by erosion leaving an irregular surface on the Triassic Chinle Formation. The Tertiary age Ogallala Formation and Quaternary age eolian and piedmont deposits represent the Cenozoic Era rocks deposited in the area. The Ogallala Formation consists of terrestrial sediments (sand with some clay, silt and gravel) that were deposited on the Triassic age surface. Generally, the Ogallala is capped by a caliche layer, observed in many outcrops along Grama Ridge, being resistant to the erosion that shaped the San Simon Swale.

The Ogallala aquifer is the primary groundwater source where it is present on the Eunice Plains approximately 12 to 25 miles to the east and on the High Plains to the north. Across most of the Laguna Valley, Grama Ridge Area, and San Simon Swale; the Triassic Chinle or Santa Rosa aquifers provide the only regionally extensive source of fresh groundwater. Within five miles of the proposed temporary pit site several water wells are present that produce water from the Cenozoic (Ogallala, Alluvium, or Bolson aquifers). These wells are generally located to the north and east of the site and are believed to be associated with shallow, isolated areas where the

geometry of the underlying Triassic beds have created a local containment for precipitation in the immediate area.

Distance to Groundwater

Figure 1, Figure 2a, Figure 2b, and the discussion presented below demonstrates that groundwater (fresh water as defined by NMOCD Rules) at the location is greater than 100 feet beneath the temporary pit.

Figure 1 is an area geologic base map that depicts regional topography (metric contour units) and includes the water wells located nearest to the temporary pit site for which information is available, regardless of how comprehensive or useful. It also shows:

1. The location of the temporary pit site as a purple hexagon.
2. Water wells from the USGS database as color-coded triangles that indicated the producing aquifer (see Legend).
3. Water wells from the New Mexico Office of the State Engineer (OSE) database as a small blue triangle inside a colored circle that indicates the well depth (see Legend). Please note, OSE wells are often miss-located in the WATERS database as older wells are plotted in the center of the quarter, quarter, quarter, of the Section Township and Range. Topographic maps and/or aerial photographs verified all of the OSE well locations included on this map.
4. Water wells, which are not documented in the public databases but were identified by field inspection or other published reports are shown as a dot inside a color-coded (depth) square.
5. Depth to water and gauging dates from the most recent and reliable measurement for each well is provided adjacent to the well symbol. It should be noted that in most cases the depth to water provided by the OSE database are from drillers log notes estimated at the time of completion, rather than static (non-pumping) field measurements.

Figure 2a is a regional topographic base map (metric contour units) that depicts the potentiometric surface contours of the shallow-most aquifer surrounding the site. The potentiometric contours are labeled in feet ASL. The water wells plotted include only the USGS database and published report water wells from Figure 1 for which a reliable depth to water measurement has been recorded. While the OSE data can provide some useful data in some areas, the depth to water (and location) are reported by drillers and represent their best guess of depth to water or a measured depth in a non-static (muddy hole) condition. The USGS and Misc data on Figure 2a represents data collected by professionals. Figure 2a also shows:

1. The location of the temporary pit site as a purple hexagon.
2. Groundwater elevations and gauging dates from the most recent available static water level measurement for each well, regardless of which formation (or formations) are being produced.

Figure 2b contains the same well data as Figure 2a but instead of a topographic map, the potentiometric map from Ground-Water Report 6 (GWR-6) *Geology and Ground-Water Conditions in Southern Lea County, New Mexico* by Alexander Nicholson and Alfred Clebsch (1961) was used as a base map.

What is not shown in Figures 2a or 2b is a final depth to water measurement at the Calabash

Siting Criteria (19.15.17.10 NMAC)

Yates Petroleum Corporation: Nectarine BSQ State Com 2H

location. On January 23, 2016, a spudder rig advanced a boring from 65 feet to 80 feet and retrieved dust-dry cuttings from the auger at 70, 75 and 80 feet below grade. Prior to drilling the Calabash BWC State 1H an auger rig should penetrate groundwater and we will report the depth to water to OCD at that time. This will probably occur prior to drilling this Nectarine well.

Site Geology

The Yates Petroleum Corporation temporary pit is located on outcrop of Tertiary Age Ogallala Formation as described above (To on Figure 1). Beneath the Ogallala is the Triassic Dockum Group sediments.(Chinle Formation).

Water Table Elevation

We used data from many water wells identified in the area surrounding the temporary pit site to construct Figure 2a, but show only the nearest seven wells. In addition to data from the USGS, we used published and field verified well information, which is generally considered reliable. Figure 2a does not use data from wells listed on the OSE Waters database. As stated earlier, the groundwater elevations provided for these OSE wells are likely based on driller log notes rather than measurements made under static conditions.

Initially, an attempt was made to identify each well using USGS topographic maps. The surface elevation of each well identified on the topographic map was compared to the published surface elevation, if available. Wells that could not be verified using maps were searched for using current and historic satellite photographs in an effort to identify windmills, tanks, or roads associated with the present or former water well. The following comments should be noted from Figure 1 and 2a:

- Wells USGS-853 and CP 00498 are believed to be the same well, based on satellite image and field verification.
- There are at least six closely spaced wells at the location identified as USGS-793 and CP-01041. Several of the wells are believed to have been recently installed; they are currently being used for oil well drilling supply, based on field verification.
- West of the proposed pit are seven deep (some >1000 feet TD) supply wells in the OSE database and well USGS-798. Note that the reported depth to water in the OSE wells is 500-800 feet (driller's estimates) and the 1996 measured depth to water by USGS professionals is 178.85 feet. The USGS report that the aquifer is the Chinle Formation. Obviously, these data support a conclusion that the aquifer is encountered by drillers at depths exceeding 500 feet and the water is under pressure, rising more than 300 feet in the well.
- Misc 71 is a windmill that was not accessible to measure the depth to water. Based upon repeated measurement of Ogallala/Alluvium wells nearby, we do not believe the depth to water today is materially different from the 59 feet measured in 1971.

Hydrogeology

Two aquifers are present in the general area of the proposed pit: a shallow aquifer that exists around of the proposed pit and the regionally-extensive Chinle (red bed) aquifer that provides water to wells west of the Nectarine location.

Siting Criteria (19.15.17.10 NMAC)
Yates Petroleum Corporation: Nectarine BSQ State Com 2H

The nearest water well, assumed to be an Ogallala or alluvium/Bolsom producer, is Misc-71, located approximately 1½ mile to the south-southeast. The groundwater elevation from this well and other shallow wells was used to produce the potentiometric map shown in Figure 2a in order to present the most conservative possible case. Wells to the west that measure water in the Chinle Formation are also used to create the surface presented in Figure 2a.

Potentiometric contours shown Figure 2b (GWR-6) provide a different interpretation of groundwater conditions. This map identifies that the elevation of the water table is higher than the



elevation of the top of the Chinle (red bed) Formation east and north of the hatched line shown in the inset figure below “GRAMA”. South and west of that line groundwater occurs in the Chinle Formation as the Ogallala and Bolson are generally dry (but not Misc-71).

Based on the potentiometric surface contours shown in Figure 2A, we conclude that the groundwater elevation at the temporary pit site is approximately 3,610 feet ASL. With a surface elevation of about 3,784 feet ASL and a maximum pit depth of 10 feet, the depth to groundwater below the pit floor should be $(3784-10-3610=)$ 164 feet.

Distance to Surface Water

Figure 3 and the site visit demonstrates that the location is not within 300 feet of a continuously flowing watercourse, or any other significant watercourse, or within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark).

- No continuously flowing watercourses exist within 300 feet of the location.
- The nearest surface drainage feature (un-named intermittent stream identified on the USGS quadrangle map) is located about 1500 feet to the northeast.

Distance to Permanent Residence or Structures

Figure 4 and the site visit demonstrates that the location is not within 300 feet from a permanent residence, school, hospital, institution, church, or other structure in existence at the time of initial application.

- The nearest structures are oil well facilities

Distance to Non-Public Water Supply

Figures 1 and 3 demonstrate that the location is not within 500 horizontal feet of a private, domestic fresh water well or spring that less than five households use for domestic or stock watering purposes, or within 1000 horizontal feet of any other fresh water well or spring, in existence at the time of initial application.

- Figure 1 shows the locations of all area water wells; the nearest fresh water well is Misc-71, a stock well located 1.5 miles to the south-southeast.
- There are no known domestic water wells located within the mapping area.
- Figure 3 shows that no springs are identified within the mapping area.

Distance to Municipal Boundaries and Fresh Water Fields

Figure 5 demonstrates that the location is not within incorporated municipal boundaries or defined municipal fresh water well fields covered under a municipal ordinance adopted pursuant to NMSA 1978, Section 3-27-3, as amended.

- The closest municipality is Eunice, NM approximately 25 miles to the east.
- The closest public well field is located approximately 30 miles to the north.

Distance to Wetlands

Figure 6 demonstrates the location is not within 300 feet of wetlands.

- The nearest designated wetlands is a “Freshwater Pond” located about 1 mile east-southeast.
- Our site inspection showed no water in this pond during the inspection.

Distance to Subsurface Mines

Figure 7 and our general reconnaissance of the area demonstrate that the nearest mines are caliche pits.

- The nearest caliche pit is located approximately 2 miles to the southwest.

Stability of Pit Area and Distance to High or Critical Karst Areas

Figure 8 shows the location of the proposed temporary pit with respect to BLM Karst areas using the 2014 map and Figure 1 shows the regional geology.

- The proposed temporary pit is located within a “low” potential karst area.
- The nearest “high” or “critical” potential karst area is located approximately 15 miles west of the site.
- We saw no evidence of solution voids were observed near the site during the field inspection.
- No evidence of unstable ground near the site was observed during the site inspection. A professional geologist (Randall Hicks) conducted the field survey and concluded that the ground is stable.

Distance to 100-Year Floodplain

Figure 9 demonstrates that the location is within an area that has not yet been mapped by the Federal Emergency Management Agency with respect to the Flood Insurance Rate 100-Year Floodplain.

- Areas that are not mapped are designated as “Undetermined Flood Hazard” and are generally considered minimal flood risk.
- Our field inspection and examination of the topography permit a conclusion that the location is not within any floodplain.

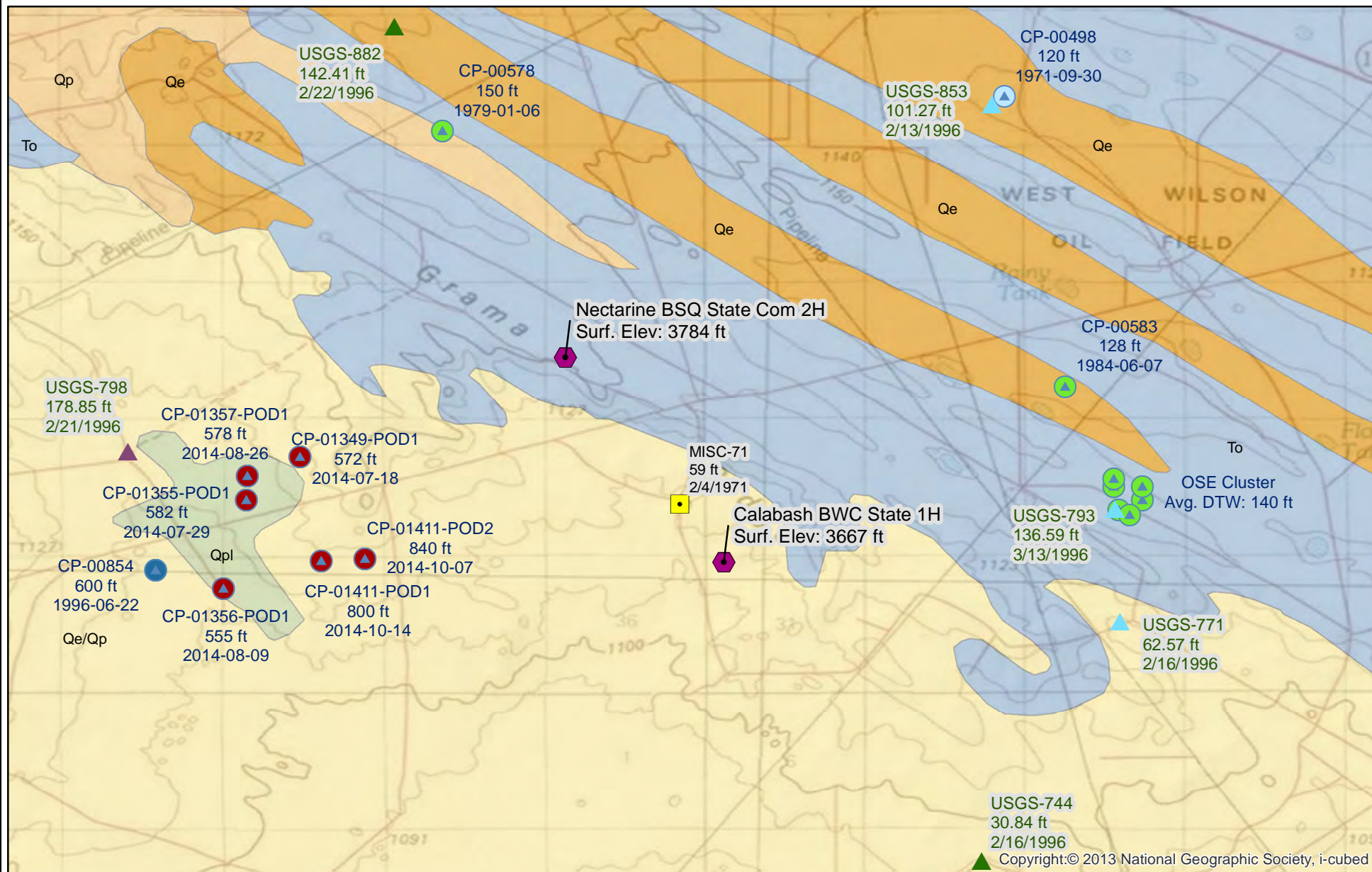
Temporary Pit Design

Please refer to Plates 1 and 2 for the design of the temporary pit and the Design and Construction Plan at the end of this application.

Site Specific Information Figures

R.T. Hicks Consultants, Ltd.

901 Rio Grande Blvd. NW, Suite F-142
Albuquerque, NM 87104



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Miles













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Depth To Water and Geology

Yates Petroleum Corporation: Calabash BWC State 1H &
Nectarine BSQ State Com 2H

Figure 1

January 2016

Legend	
USGS Gauging Station (DTW, Date)	NM Geology
Aquifer Code, Well Status	Map Unit, Description
 Alluvium/Bolsom	 Qe, Quaternary-Eolian Deposits
 Ogallala	 Qe/Qp, Quaternary-Eolian Piedmont Deposits
 Chinle	 Qp, Quaternary-Piedmont Alluvial Deposits
OSE Water Wells (DTW, Date)	 Qpl, Quaternary-Lacustrine and Playa Deposits
Well Depth (ft)	 To, Tertiary-Ogallala Formation
 <= 150	
 151 - 350	
 501 - 1000	
Misc Water Wells (DTW, Date)	
Well Depth (ft)	
 No Data	

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LEGEND - Depth To Water and Geology
Yates Petroleum Corporation: Calabash BWC State 1H &
Nectarine BSQ State Com 2H

Figure 1
LEGEND
January 2016

Legend

Potentiometric Surface (ft msl)

— Isocontour

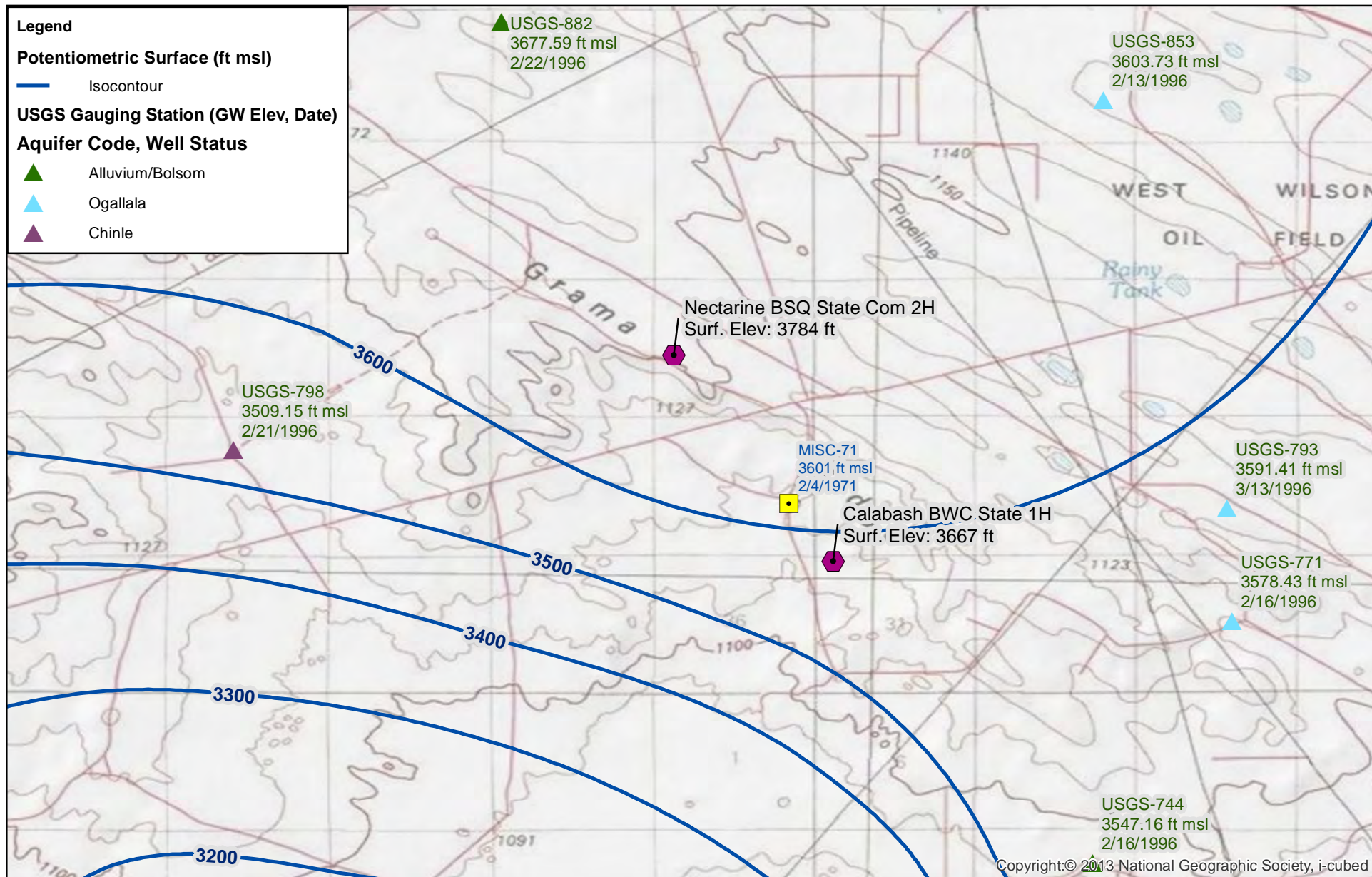
USGS Gauging Station (GW Elev, Date)

Aquifer Code, Well Status

▲ Alluvium/Bolsom

▲ Ogallala

▲ Chinle

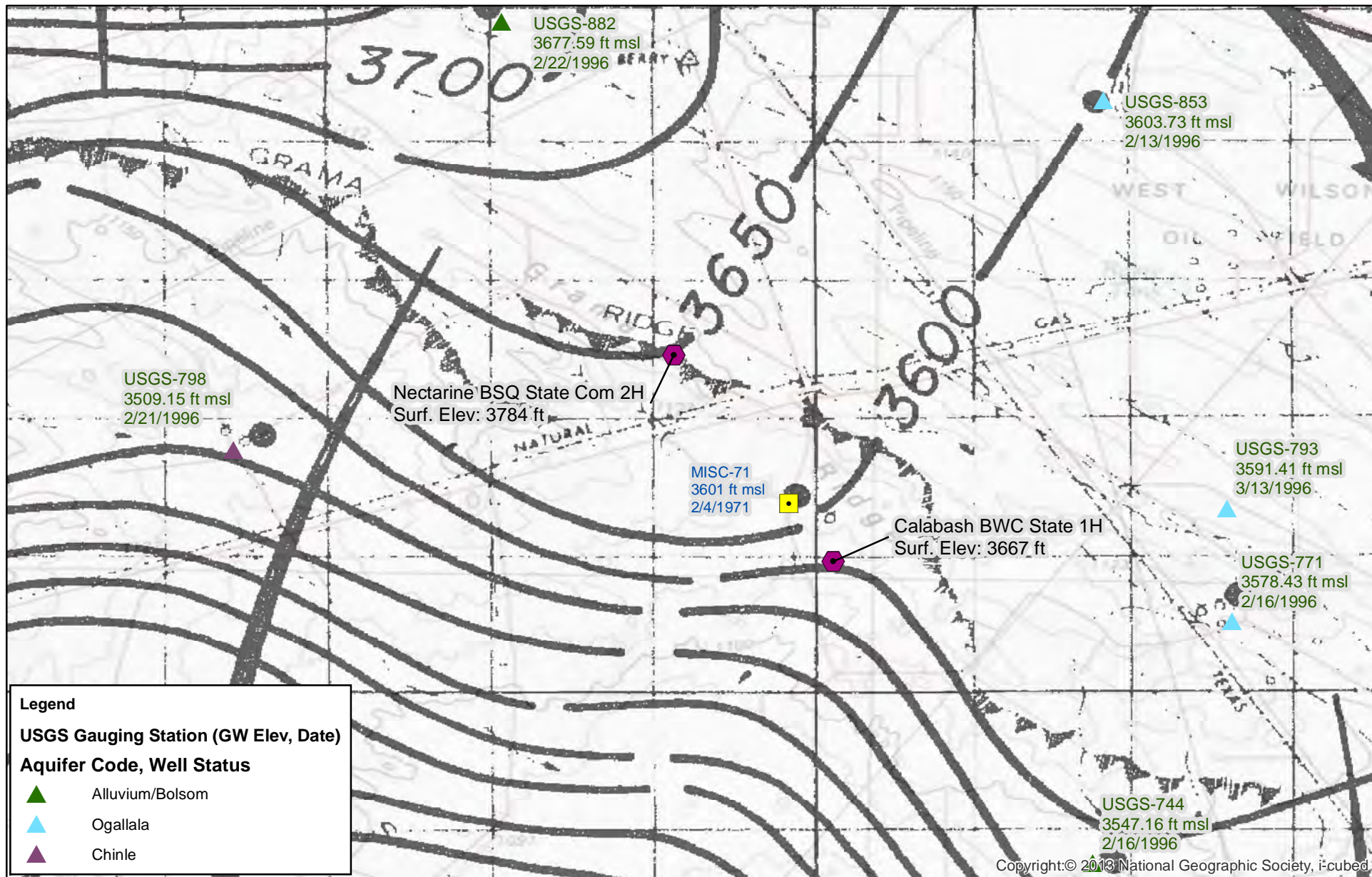


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Potentiometric Surface and Groundwater Elevation
at Nearby Water Wells
Yates Petroleum Corporation: Calabash BWC State 1H &
Nectarine BSQ State Com 2H

Figure 2a
January 2016



Basemap: USGS OFR-95

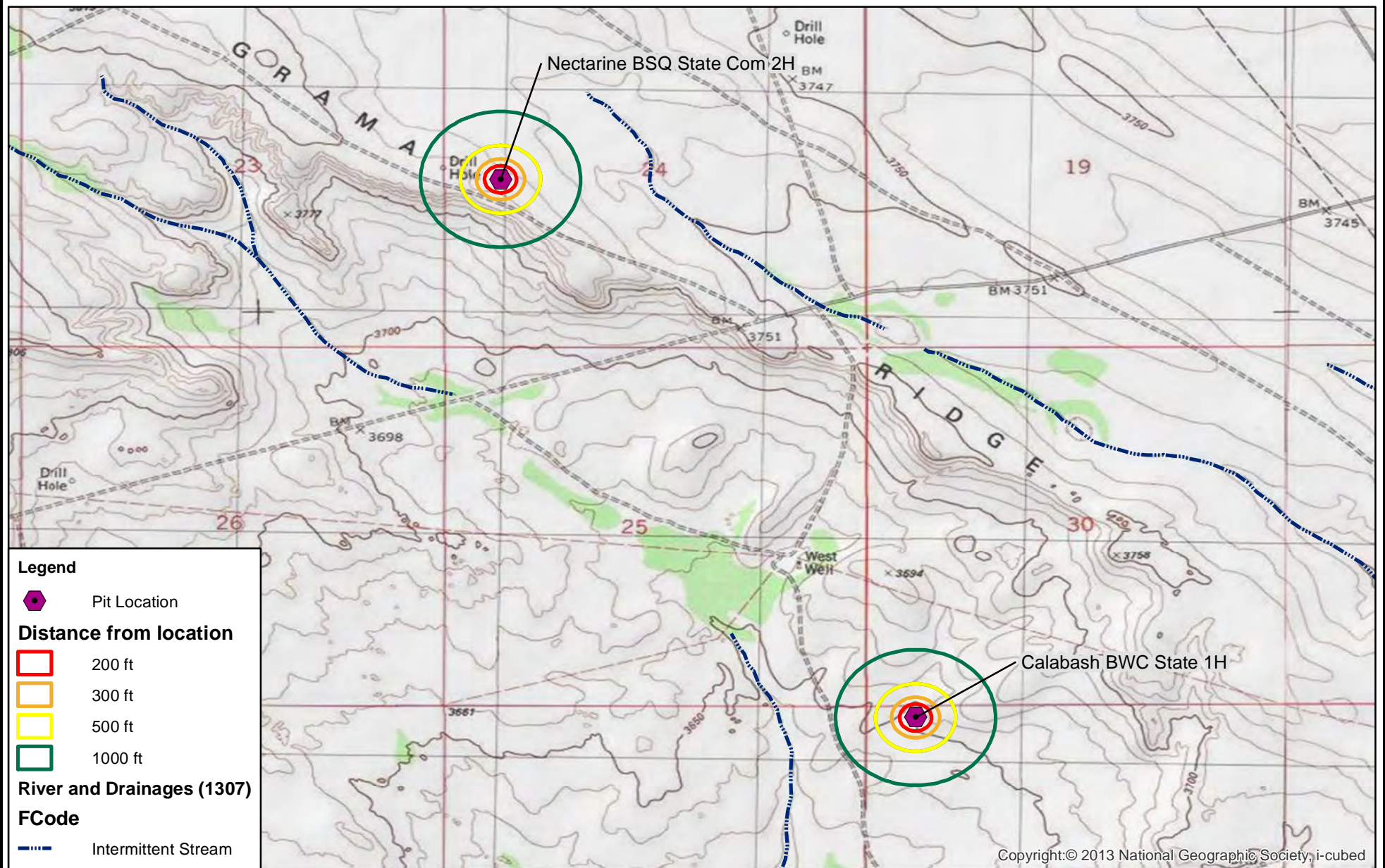


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Potentiometric Surface and Groundwater Elevation
at Nearby Water Wells
Yates Petroleum Corporation: Calabash BWC State 1H &
Nectarine BSQ State Com 2H

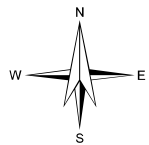
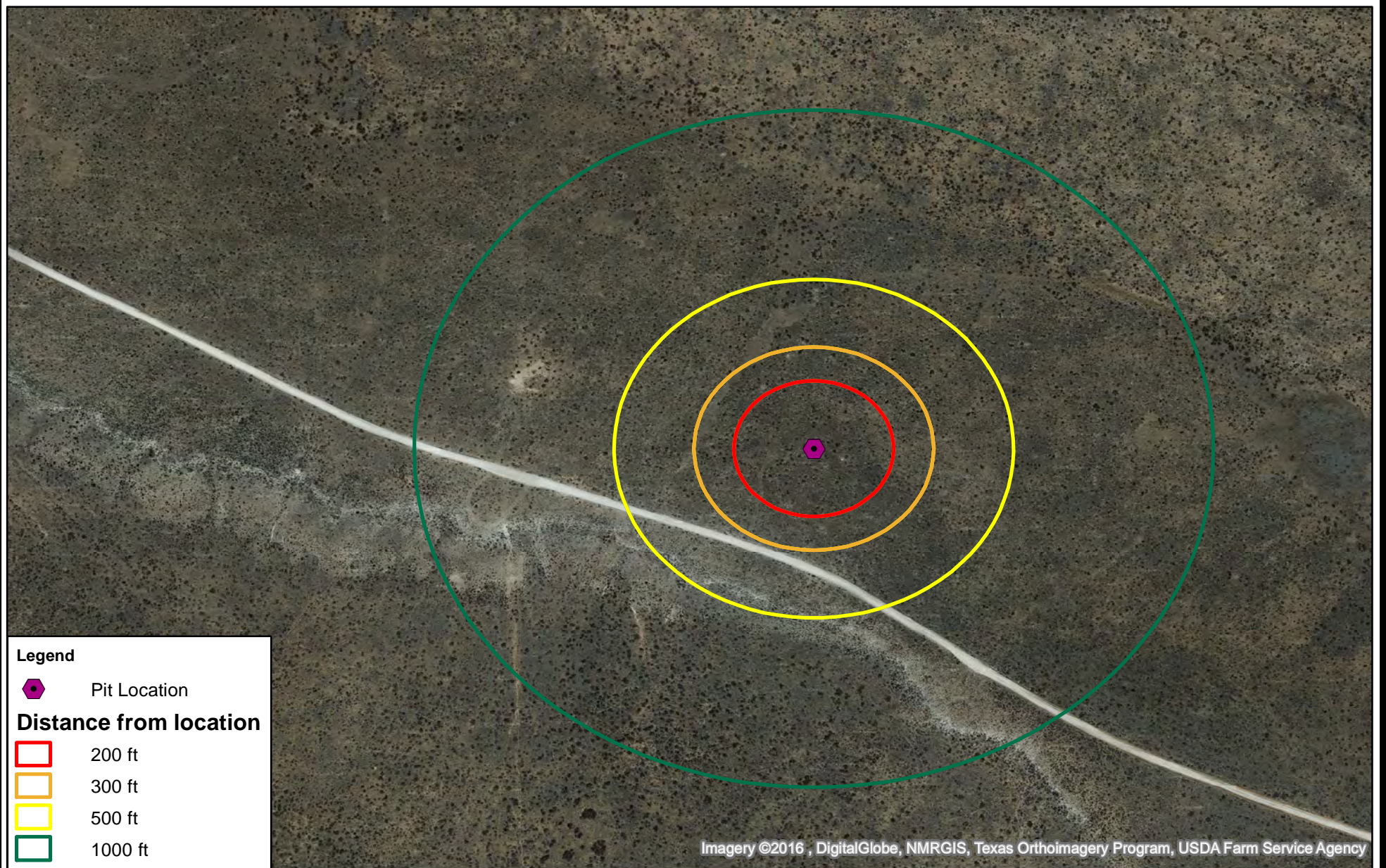
Figure 2b
January 2016



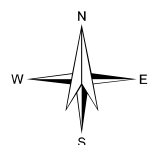
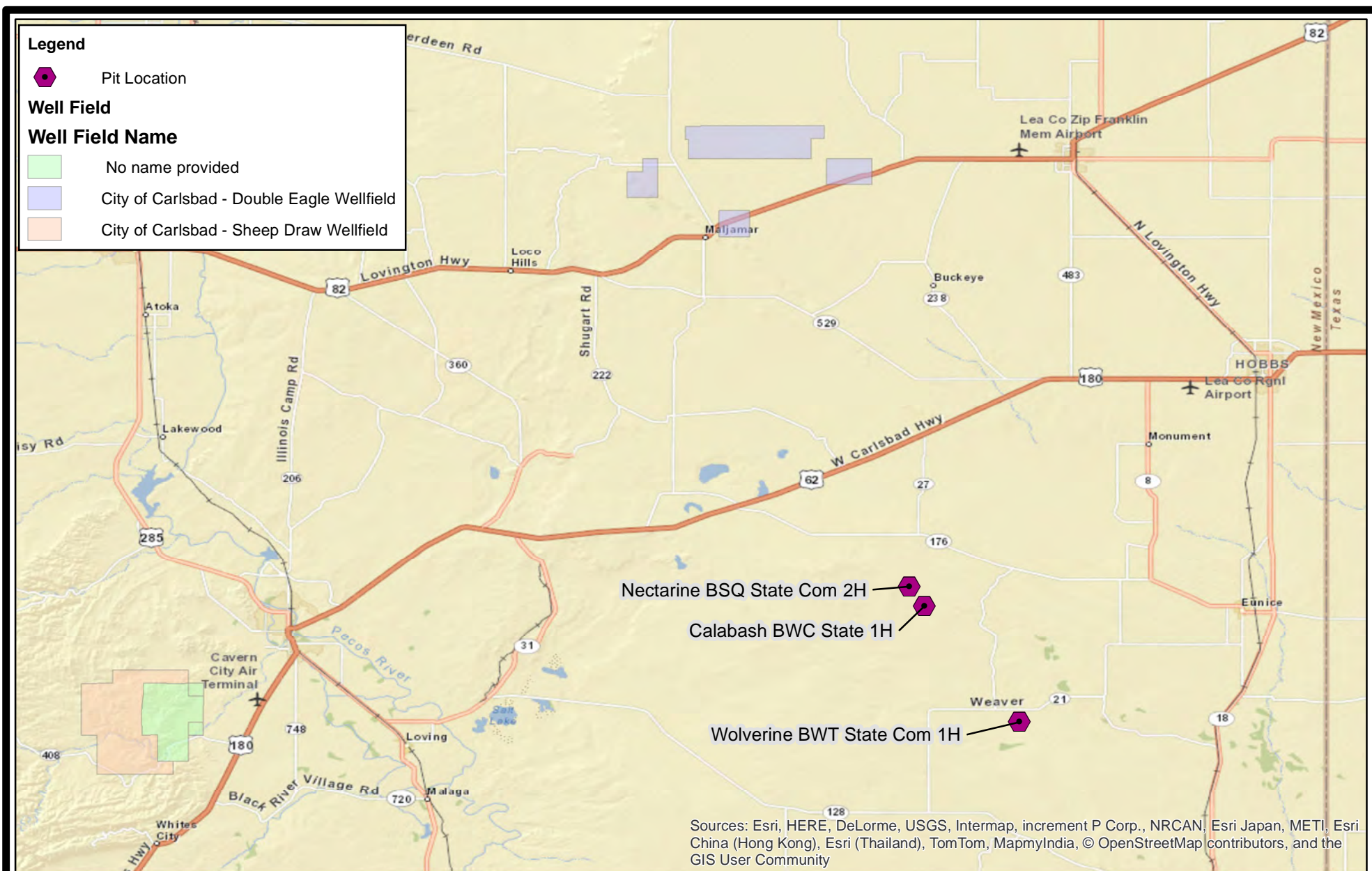
R.T. Hicks Consultants, Ltd
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Surface Water and Topography
 Yates Petroleum Corporation: Calabash BWC State 1H &
 Nectarine BSQ State Com 2H

Figure 3
 January 2016



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	Yates Petroleum Corporation Nectarine BSQ State Com 2H	January 2016



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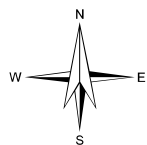
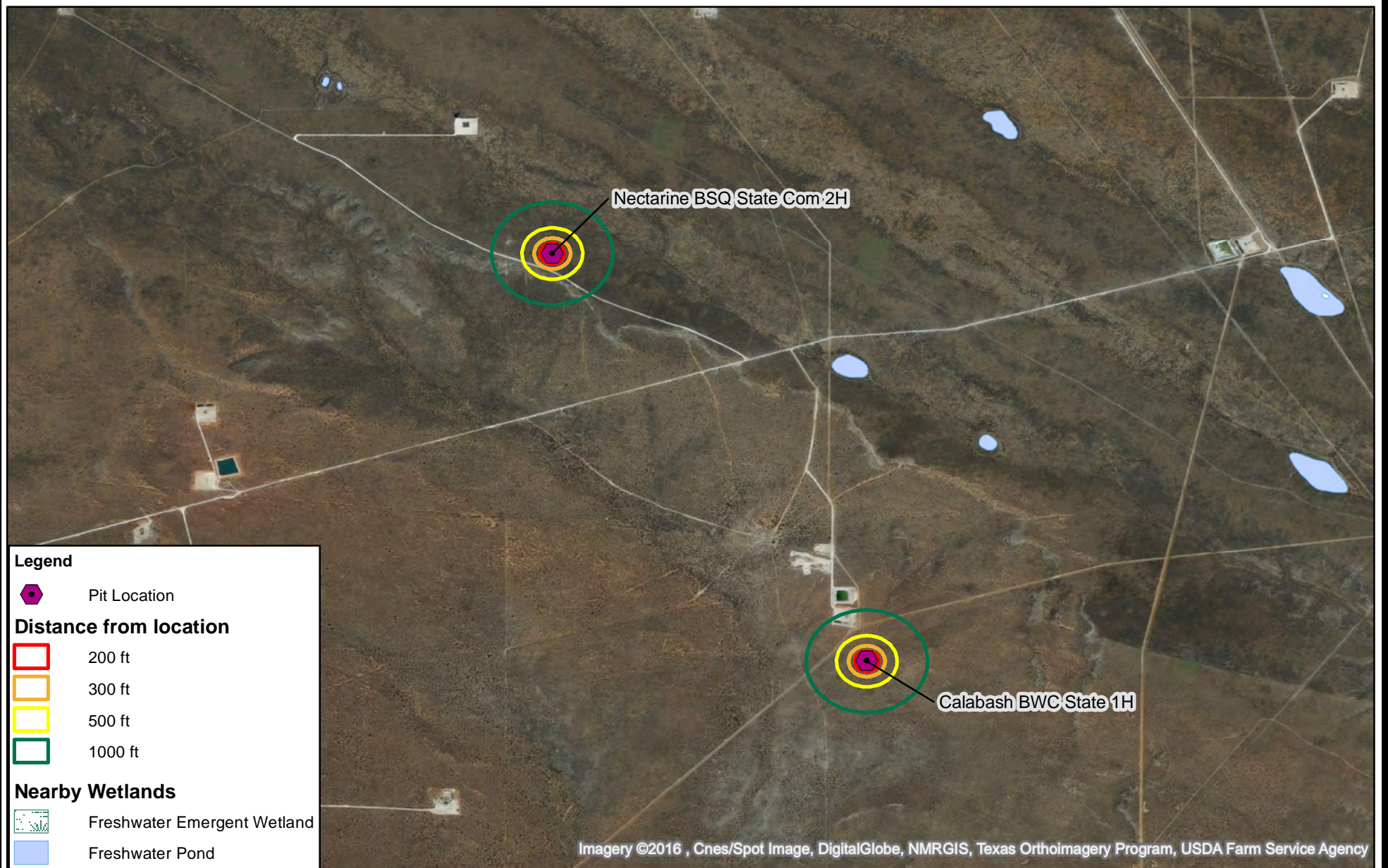
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Nearby Municipalities and Well Fields

Yates Petroleum Corporation
Calabash, Nectarine & Wolverine

Figure 5

January 2016



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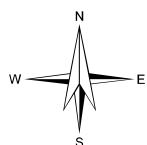
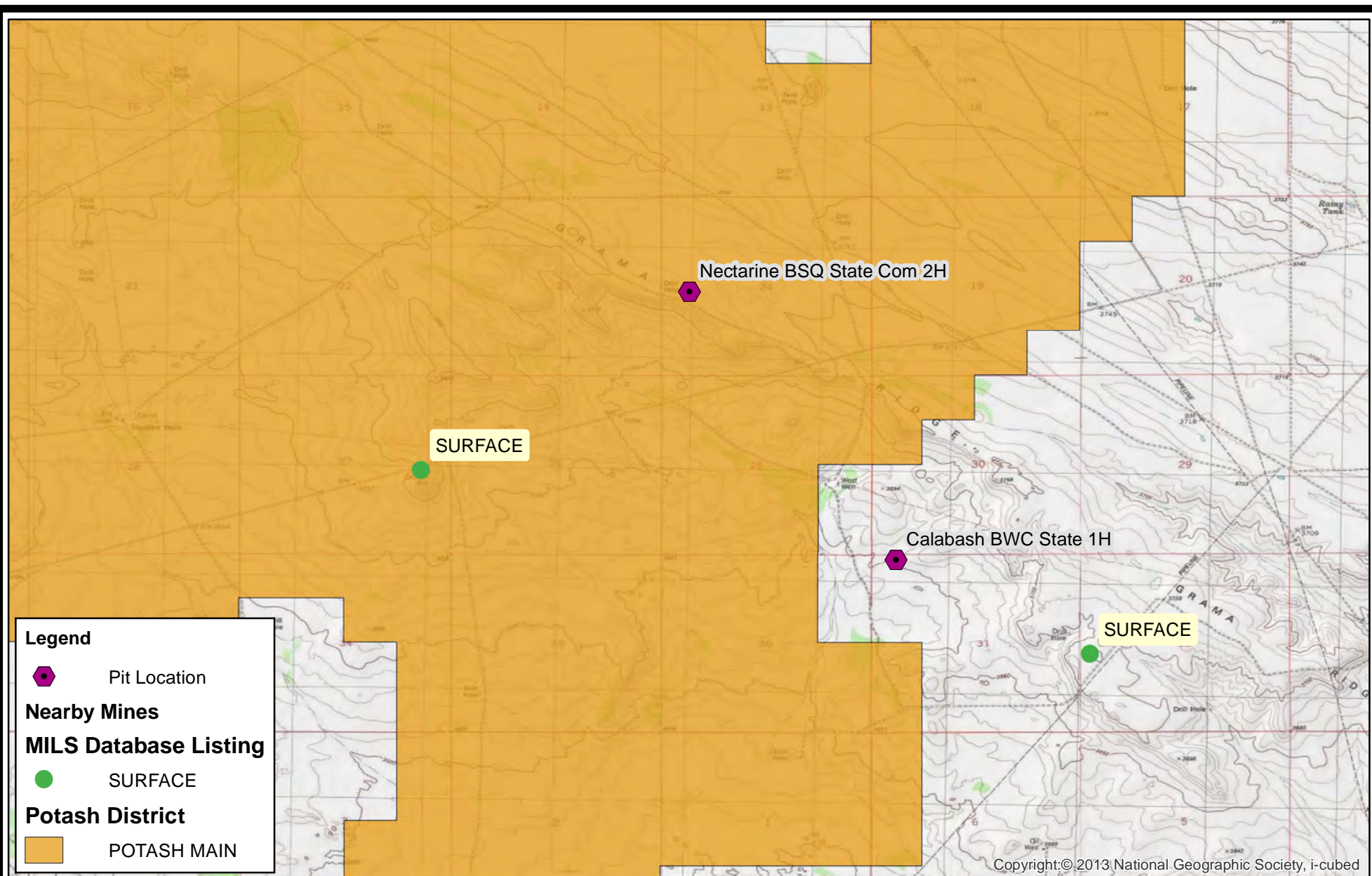
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Ph: 505.266.5004

Nearby Wetlands

Yates Petroleum Corporation: Calabash BWC State 1H &
Nectarine BSQ State Com 2H

Figure 6

January 2016



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Feet

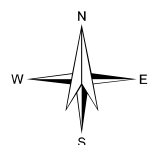
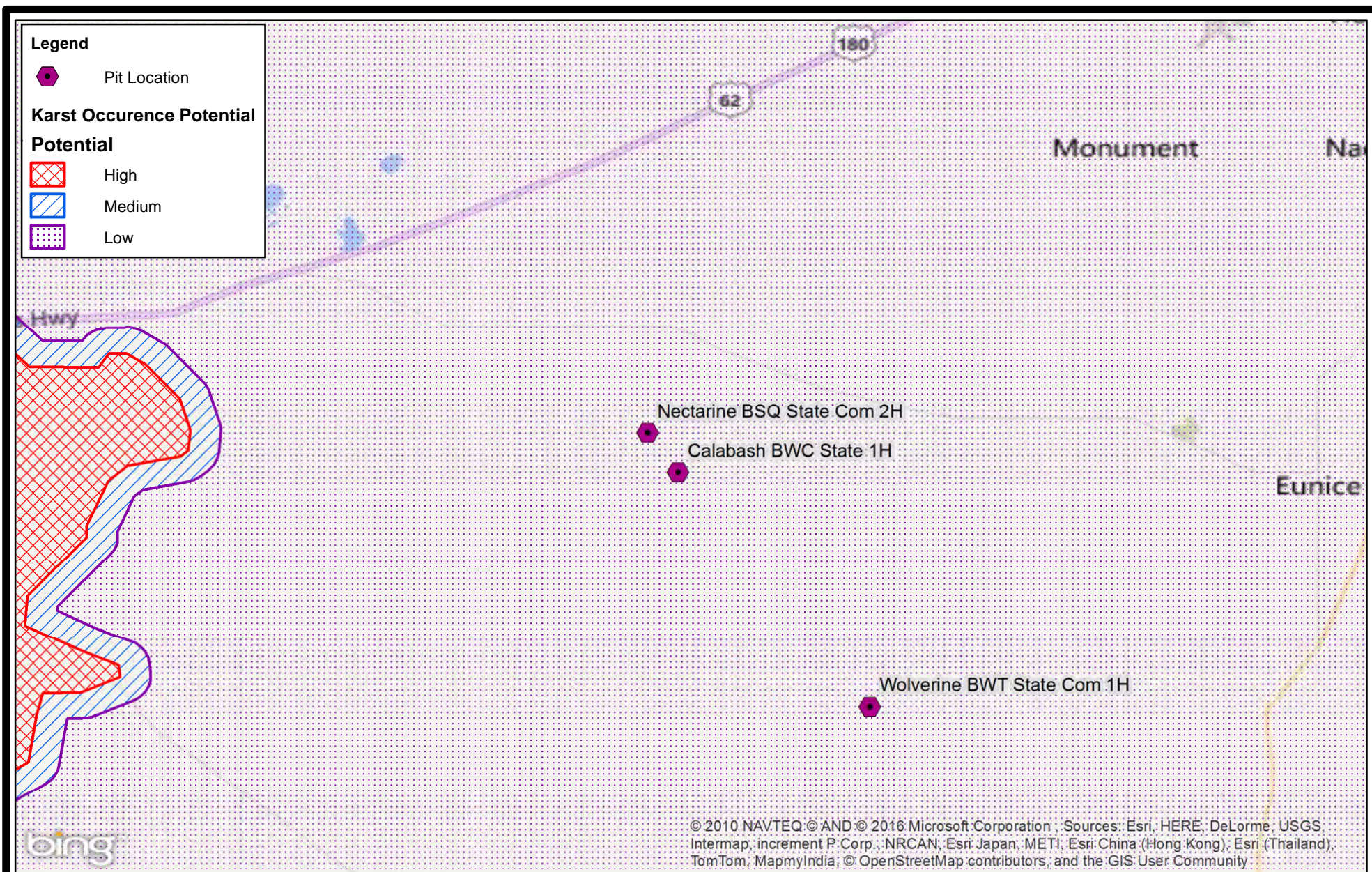
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Nearby Mines and Minerals

Yates Petroleum Corporation: Calabash BWC State 1H &
Nectarine BSQ State Com 2H

Figure 7

January 2016



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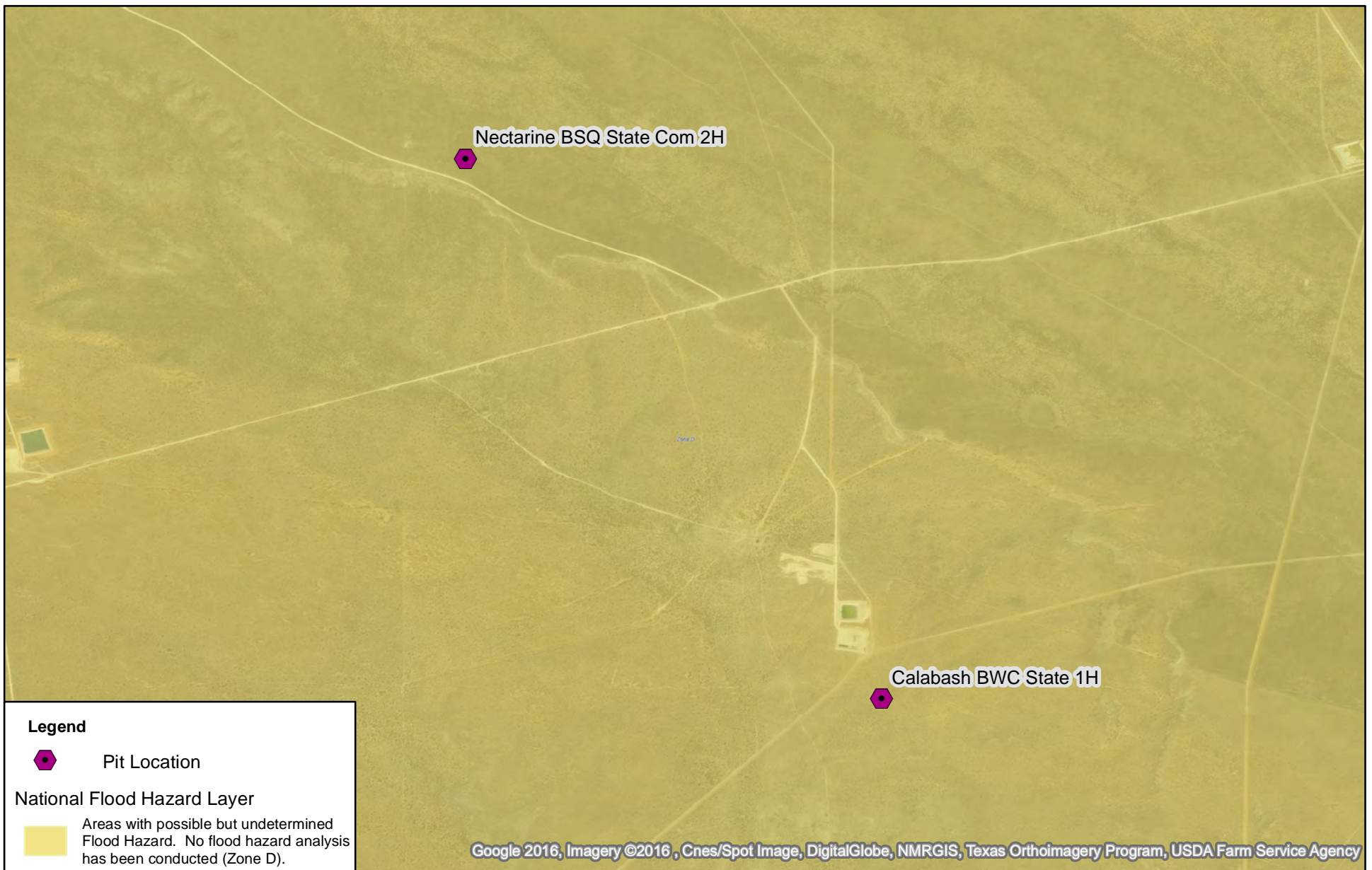
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Karst Potential

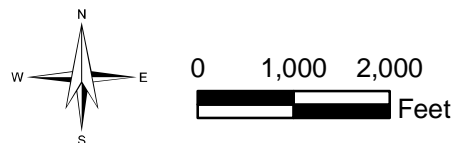
Yates Petroleum Corporation
Calabash, Nectarine & Wolverine

Figure 8

January 2016



FEMA Source: <https://hazards.fema.gov/gis/nfhl/services/public/NFHLWMS/MapServer/WMSServer>



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FEMA Flood Map

Yates Petroleum Corporation: Calabash BWC State 1H &
Nectarine BSQ State Com 2H

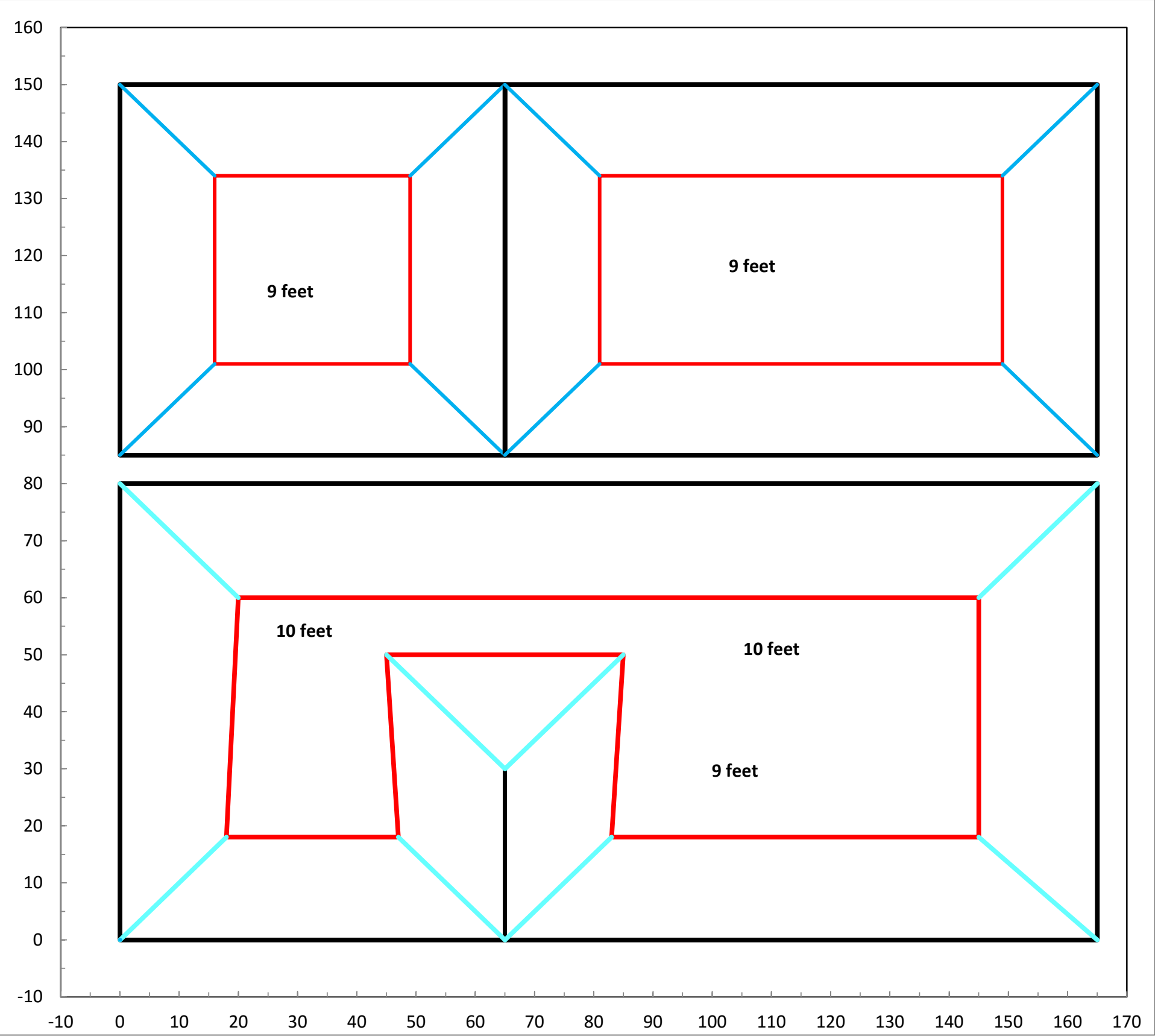
Figure 9

January 2016

Site Specific Information Plates

R.T. Hicks Consultants, Ltd.

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Drilling Cell Dimensions in Feet

Total Width (left right)	165.0		
Total Length (up down)	80.0		
Depth Discharge Side	9.0		
Depth Far Side (Discharge)	10.0		
Depth Far Side (Suction)	10.0		
Depth Suction Side	9.0		
Length of Divider	30.0		
Divider Width	0.0		
Width of discharge floor	62.0		
Width of suction floor	29.0		
Pit Slopes (Rise to Run)	1.00	to	2.00

Fresh/ Cut Brine Cell Dimensions in Feet

Total Width (left right)	100.0		
Total Length (up down)	65.0		
Depth	8		
Pit Slopes (Rise to Run)	1.00	to	2.00
Distance from Drilling Cell	5.0		

Brine Cell Dimensions in Feet

Total Width (left right)	65.0		
Total Length (up down)	65.0		
Depth	8		
Pit Slopes (Rise to Run)	1.00	to	2.00
Distance from Drilling Cell	5.0		

Temporary Pit Dimensions

Total Width (left right)	165.0		
Total Length (up down)	150.0		
Depth Far Side	10.0		
Depth Rig Side	9.0		

Drilling Cell

Total Capacity	14,308.27	bbls
Solids Capacity 4' Freeboard	36,353.83	cu ft
Total Solids	26,708.09	cu ft

Fresh/Cut Brine Cell Capacity

With 2 feet freeboard	5986	bbls
Brine Cell Capacity	3898	bbls
With 2 feet freeboard	3543	bbls
	2215	bbls

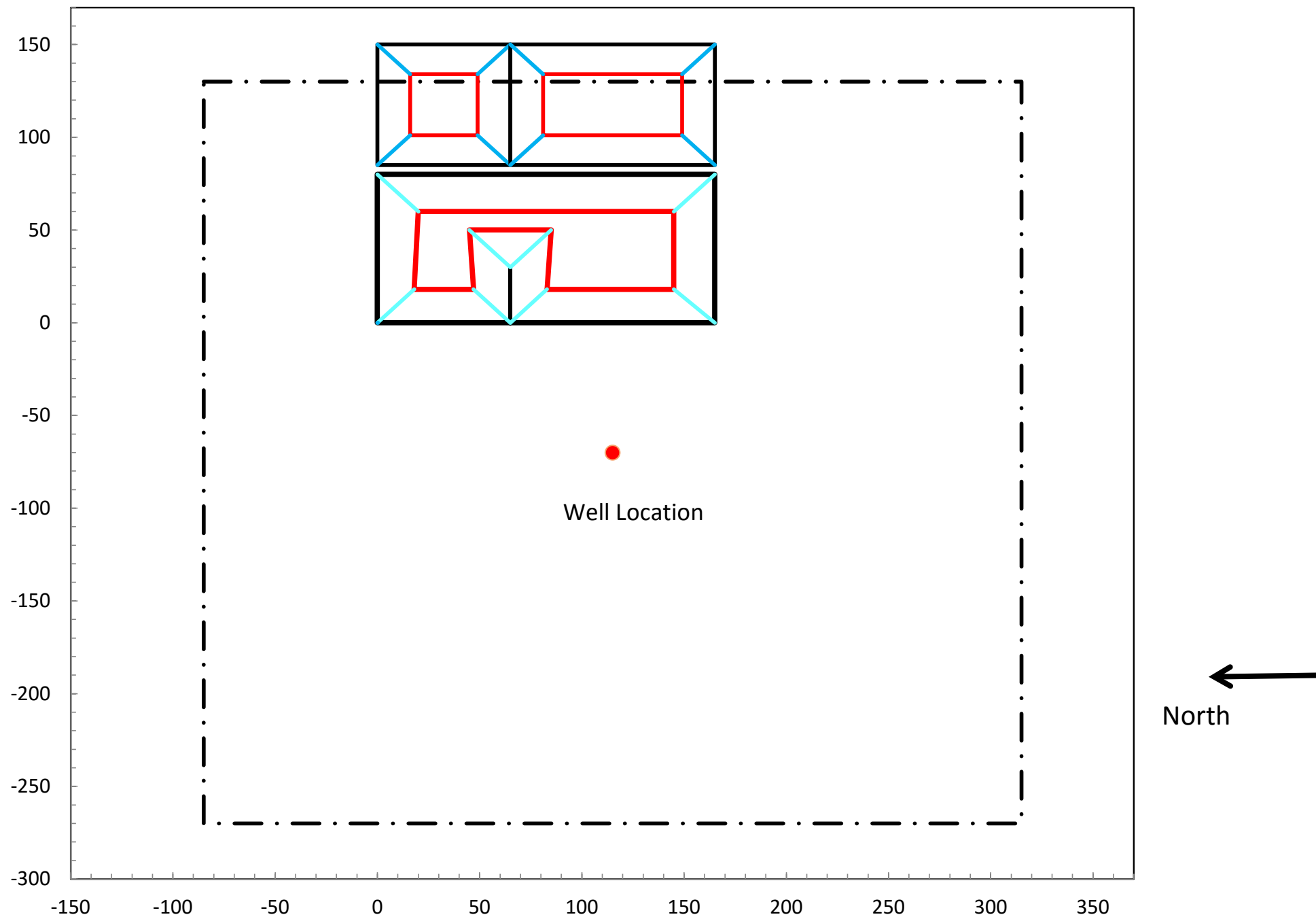
RT Hicks Consultants
Albuquerque, NM

Pit Diagram

Plate 1

YPC - Nectarine SQ State Com 2H

January 2016



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 Albuquerque, N. M. 87104

Drawing of Temporary Pit and Well in Relation to Pad Boundary

Plate 2

YPC - Nectarine SQ State Com 2H

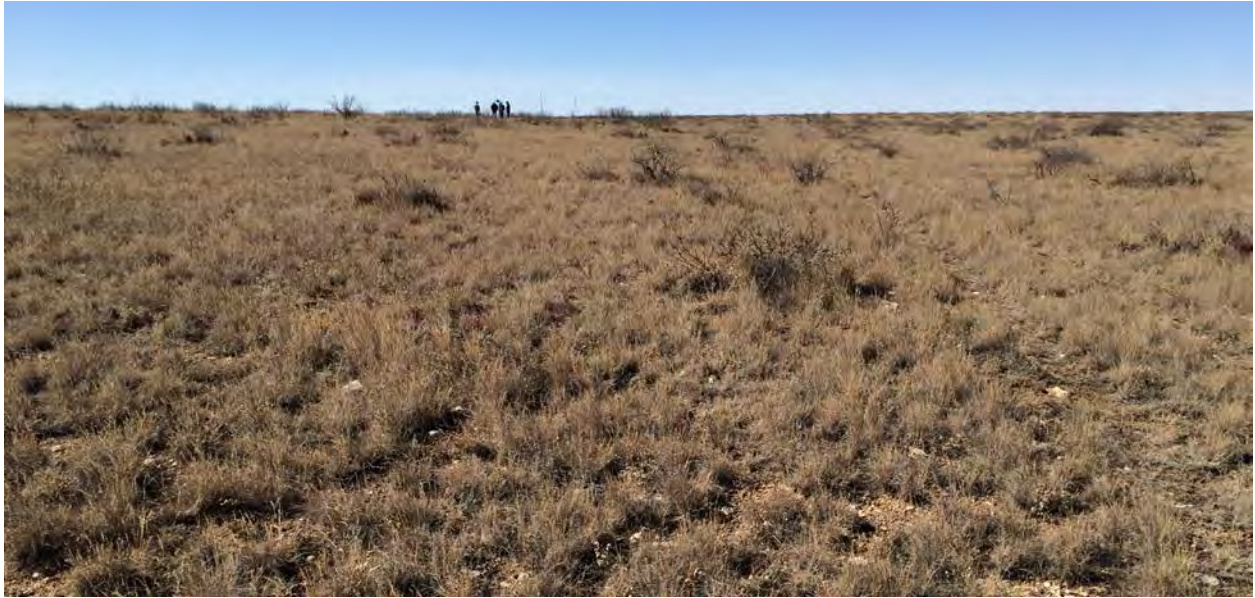
January 2016

Appendix A

Site Inspection Photographs & Survey Information

R.T. Hicks Consultants, Ltd.

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View southwest from northeast corner of pad



View south from about 650 feet north of staked location showing no evidence of watercourse in small swale.



View northwest from about 400 feet south of staked location showing south facing slope of Grama Ridge

DISTRICT I
1625 N. French Dr., Hobbs, NM 88240
Phone (575) 393-6161 Fax: (575) 393-0720

DISTRICT II
811 S. First St., Artesia, NM 88210
Phone (575) 748-1283 Fax: (575) 748-9720

DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone (505) 334-6178 Fax: (505) 334-6170

DISTRICT IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone (505) 476-3480 Fax: (505) 476-3482

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-102
Revised August 1, 2011

Submit one copy to appropriate
District Office

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, New Mexico 87505

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number	Pool Code	Pool Name
Property Code	Property Name	Well Number
	NECTARINE BSQ STATE COM	2H
OGRID No.	Operator Name	Elevation
025575	YATES PETROLEUM CORPORATION	3784

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
P	24	21 S	33 E		2440	SOUTH	760	WEST	LEA

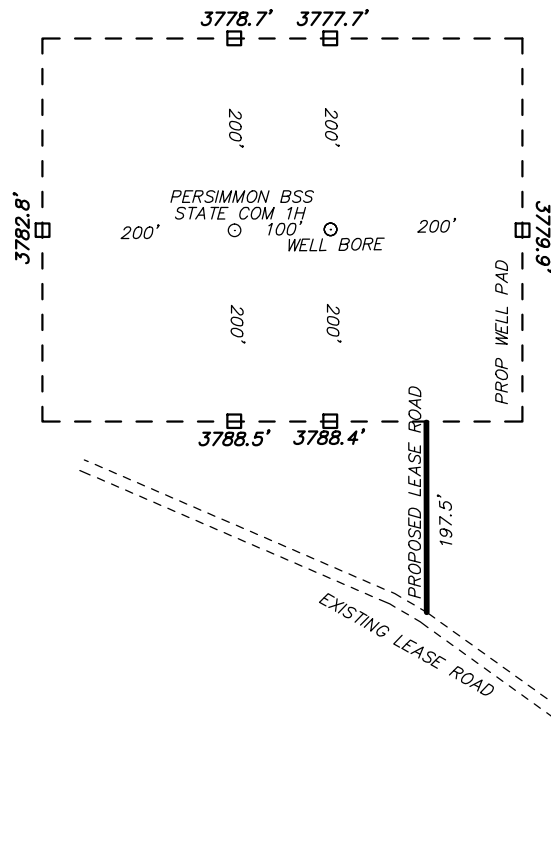
Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
D	13	21 S	33 E		330	NORTH	760	WEST	LEA
Dedicated Acres	Joint or Infill	Consolidation Code	Order No.						

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

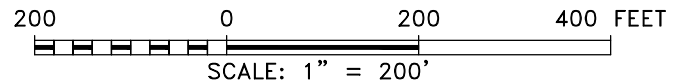
<p>PROPOSED BOTTOM HOLE LOCATION Lat - N 32°29'06.56" Long - W 103°31'56.07" NMSPCE- N 541158.2 E 788353.6 (NAD-83)</p>		<p>OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unLEASEd mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.</p> <p>Signature _____ Date _____</p> <p>Printed Name _____</p> <p>Email Address _____</p>
<p>SURFACE LOCATION Lat - N 32°27'49.46" Long - W 103°31'56.00" NMSPCE- N 533371.3 E 788417.4 (NAD-83)</p>		<p>SURVEYOR CERTIFICATION I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.</p> <p>SEPTEMBER 22 2013</p> <p>Date Surveyed _____</p> <p>Signature & Seal of Professional Surveyor _____</p> <p>Certificate No. Gary L. Jones 7977</p> <p>BASIN SURVEYS</p> <p>0' 1000' 2000' 3000' 4000'</p> <p>SCALE: 1" = 2000'</p> <p>WO Num.: 28738</p>

SECTION 24, TOWNSHIP 21 SOUTH, RANGE 33 EAST. N.M.P.M.,
LEA COUNTY, NEW MEXICO.



YATES PETROLEUM CORPORATION
NECTARINE BSQ STATE COM #2H
 ELEV. - 3784'
 Lat - N 32°27'49.46"
 Long - W 103°31'56.00"
 NMSPCE- N 533371.3
 E 788417.4
 (NAD-83)

EUNICE, NM IS ±21 MILES TO THE EAST OF LOCATION.




Directions to Location:

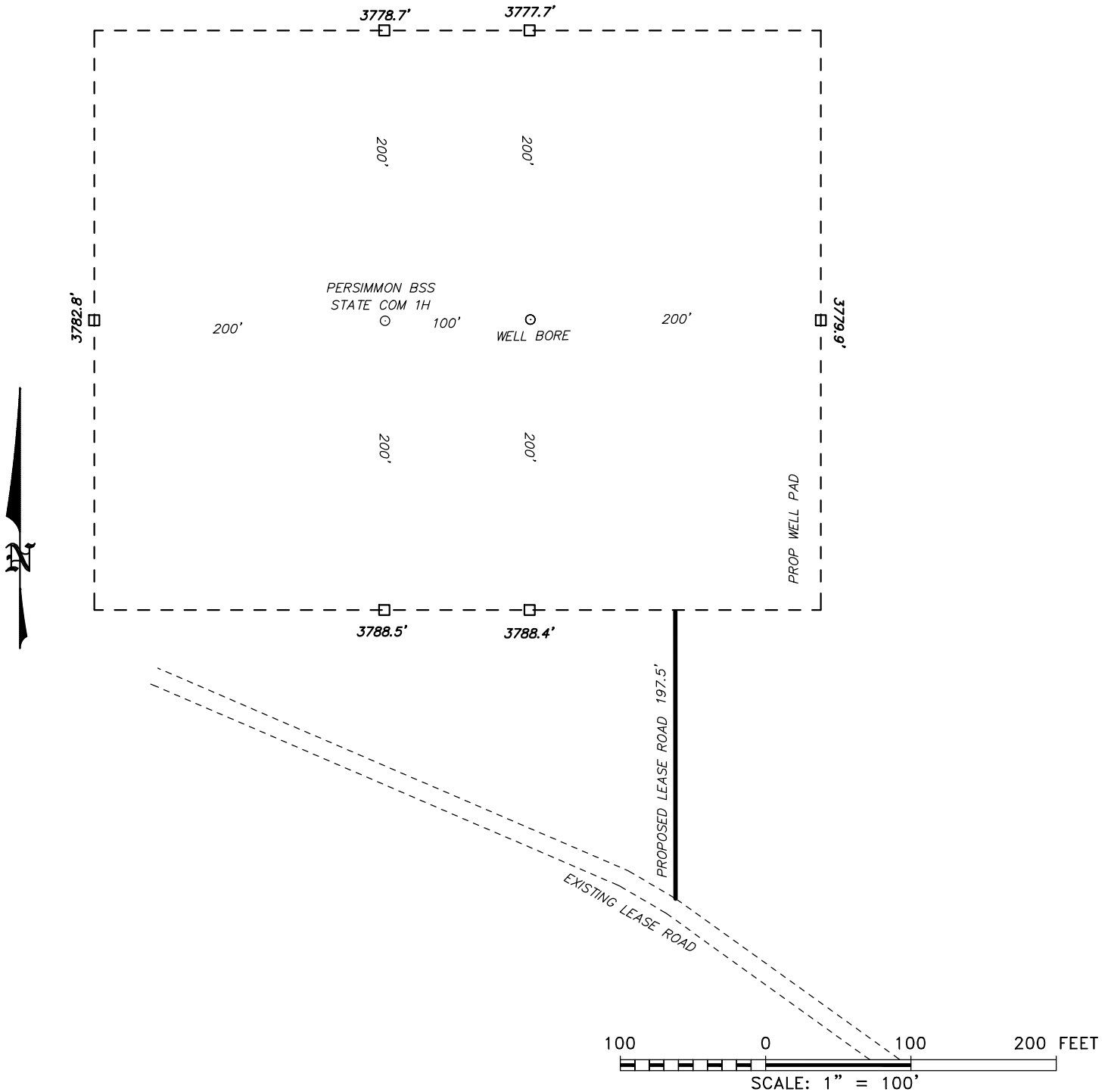
FROM CO RD 176 TURN SOUTH ON LEASE ROAD
 FOR 3.7 MILES, TURN RIGHT AT INTERSECTION FOR
 1.7 MILES, TURN RIGHT ONTO LEASE ROAD FOR 0.67
 MILES AND PROPOSED LEASE ROAD WILL BE ON
 RIGHT.



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 Hobbs, New Mexico 88241 basinsurveys.com

 YATES PETROLEUM CORPORATION
REF: NECTARINE BSQ STATE COM #2H / WELL PAD TOPO
THE NECTARINE BSQ STATE COM #2H LOCATED 2440' FROM THE SOUTH LINE AND 760' FROM THE WEST LINE OF SECTION 24, TOWNSHIP 21 SOUTH, RANGE 33 EAST. N.M.P.M., LEA COUNTY, NEW MEXICO.

SECTION 24, TOWNSHIP 21 SOUTH, RANGE 33 EAST. N.M.P.M.,
LEA COUNTY, NEW MEXICO.



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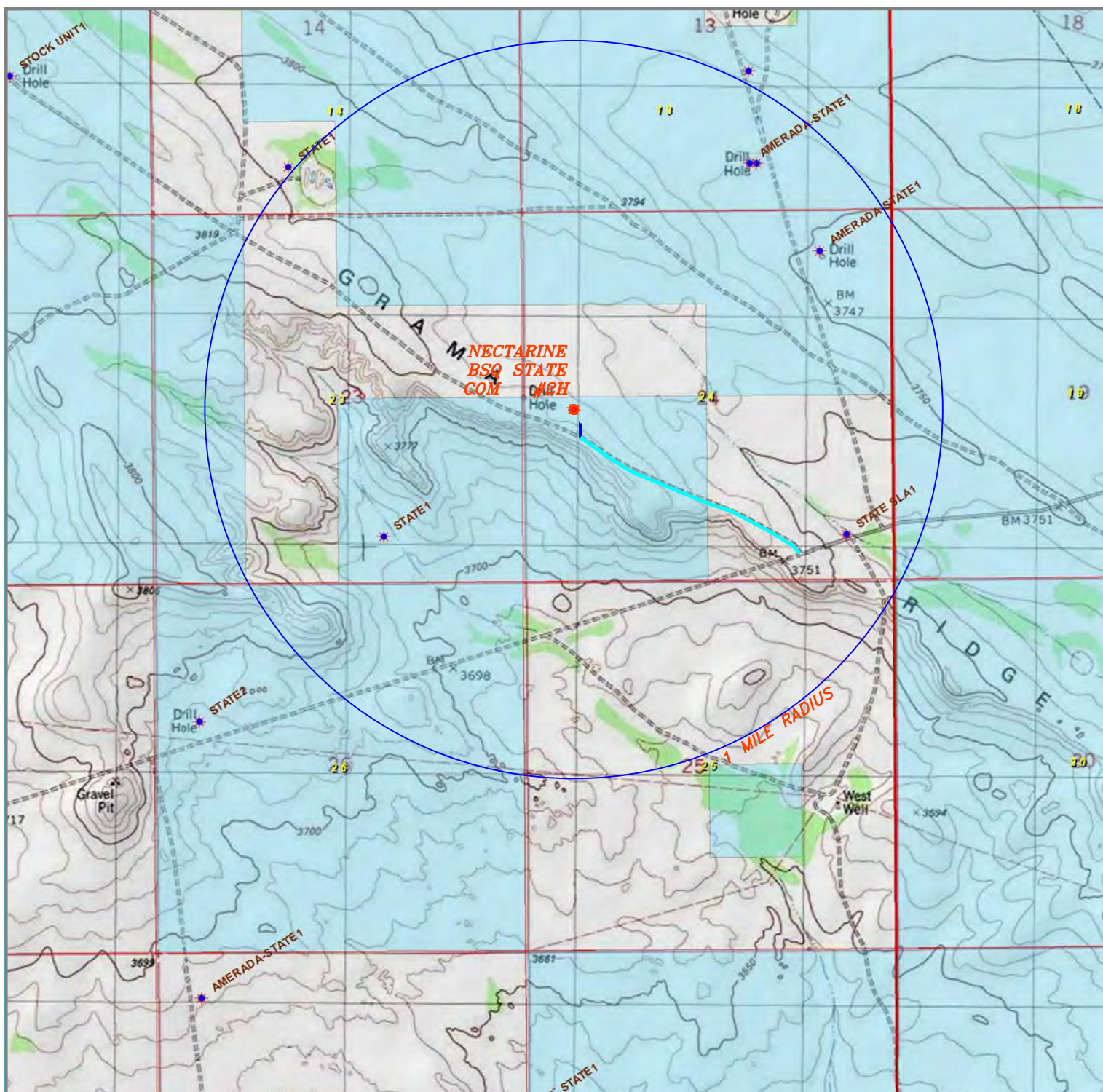
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N.M.P.M., LEA COUNTY, NEW MEXICO.



NECTARINE BSQ STATE COM #2H

Located 2440' FSL and 760' FWL

Section 24 Township 21 South, Range 33 East,
N.M.P.M., Lea County, New Mexico.



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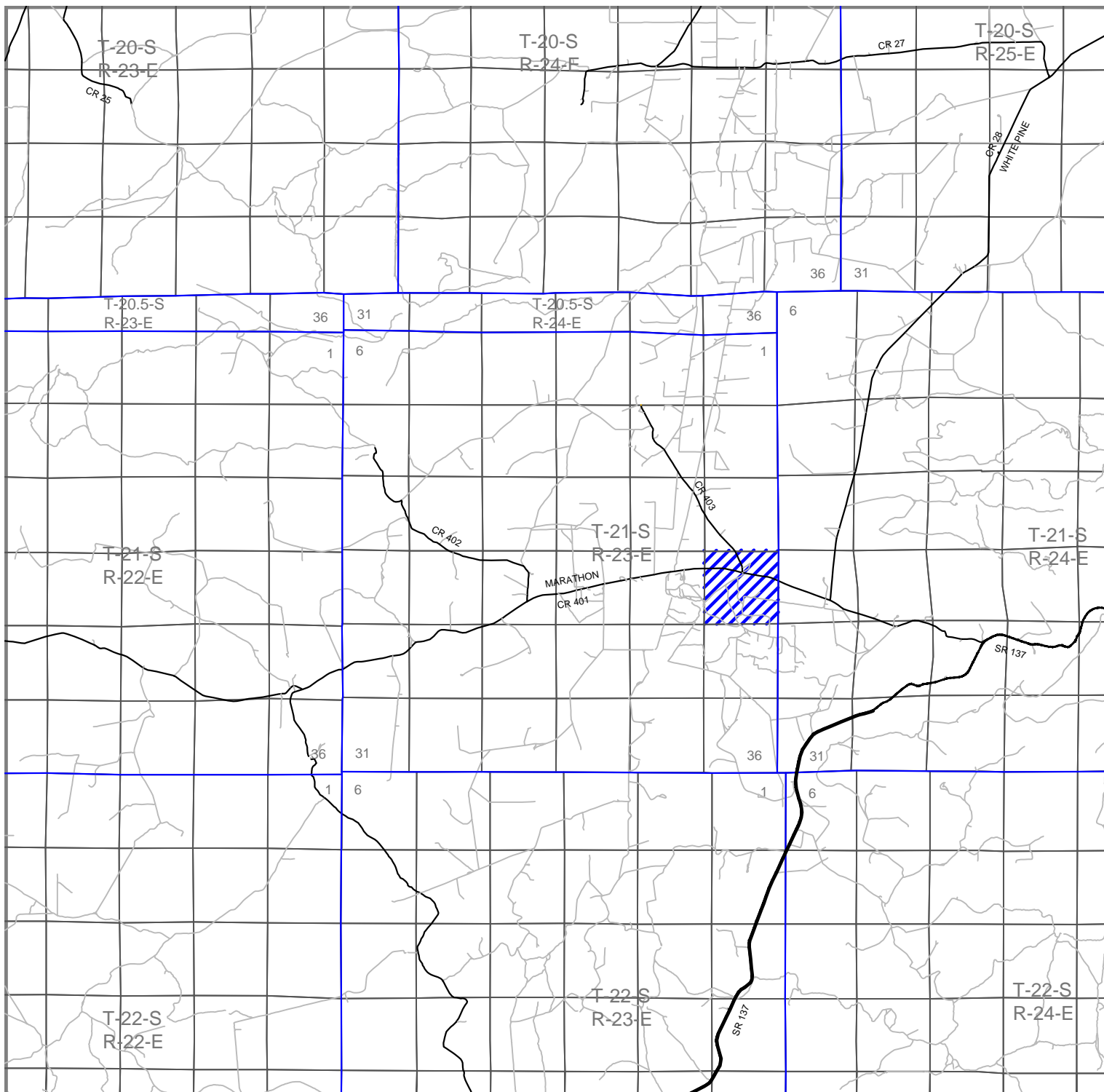
0' 1000' 2000' 3000' 4000'
SCALE: 1" = 2000'

W.O. Number: KAN 28738

Survey Date: 09-22-2013

YELLOW TINT - USA LAND
BLUE TINT - STATE LAND
NATURAL COLOR - FEE LAND





NECTARINE BSQ STATE COM #2H

Located 2440' FSL and 760' FWL
 Section 24 Township 21 South, Range 33 East,
 N.M.P.M., Lea County, New Mexico.



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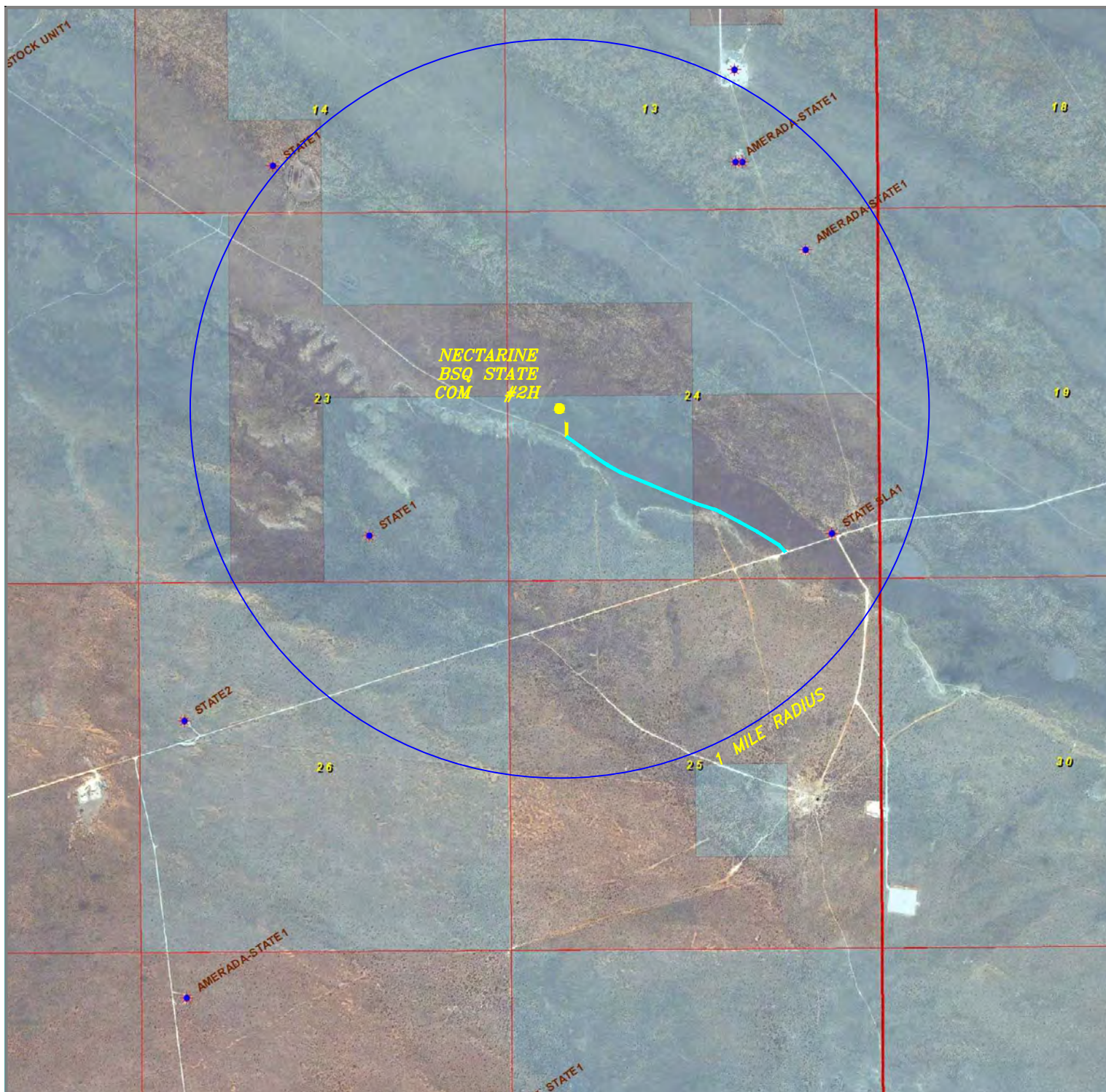
SCALE: 1" = 2 MILES

W.O. Number: KAN 28738

Survey Date: 09-22-2013

YELLOW TINT - USA LAND
 BLUE TINT - STATE LAND
 NATURAL COLOR - FEE LAND



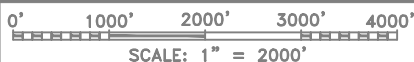


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Generic Plans for Temporary Pits

R.T. Hicks Consultants, Ltd.

901 Rio Grande Blvd. NW, Suite F-142
Albuquerque, NM 87104

Temporary Pit Design/Construction Plan

Plates 1 and 2 show the design of the temporary pit proposed for this project. Field conditions and the drilling rig layout will determine the final configuration of the pit, which will consist of cell for the burial of water-based drilling solids derived from a closed-loop system. If identified in the transmittal letter, Plates 1 and 2 show a second burial cell to accept intervals of the well drilled with oil based mud (OBM). Two fluids cells, one for brine and one for fresh water and cut brine store used drilling fluids for re-use (for drilling at nearby wells or for other uses approved by the OCD).

Although unlikely due to the nature of the operation, the operator may install a system that can drain water entrained in the drilling waste of the drilling pit. The drainage system may be installed in the entire cell. As described in, the closure plan this system of fabric-wrapped perforated pipe and drainage mats lie on the bottom of the pit over the liner. The system will drain to the lowest corner of pit where a standpipe rises from the depression to the top of the berm. The drainage system can remove water to an above-ground tank, a fluids cell of the pit or directly to a truck for re-use or disposal.

The temporary storage of fluids, fluid reuse or fluid disposal will be conducted in a manner approved by division rules that prevents the contamination of fresh water and protects public health and the environment.

Construction/Design Plan of Temporary Pit

Stockpile Topsoil by Earthwork Contractor

Prior to constructing the pit the qualified contractor will strip and stockpile any topsoil for use as the final cover or fill at the time of closure.

Signage Provided by Operator

The operator will post an upright sign in a conspicuous place in compliance with 19.15.16.8 NMAC as the pit and the well are operated by the same operator. Section 19.15.16.8 states in part:

19.15.16.8 SIGN ON WELLS:

B. For drilling wells, the operator shall post the sign on the derrick or not more than 20 feet from the well.

C. The sign shall be of durable construction and the lettering shall be legible and large enough to be read under normal conditions at a distance of 50 feet.

F. Each sign shall show the:

- (1) well number;
- (2) property name;
- (3) operator's name;
- (4) location by footage, quarter-quarter section, township and range (or unit letter can be substituted for the quarter-quarter section);
- and
- (5) API number.

The sign will also provide emergency telephone numbers.

Fencing Provided by Liner Contractor

During drilling or workover operations, the operator will not fence the edge of the pit adjacent to the drilling or workover rig.

As the pit is not located within 1000 feet of a permanent residence, school, hospital, institution or church, the operator will fence the pit to exclude livestock with four-wire strands evenly spaced in the interval between one foot and four feet above ground level.

Earthwork

The temporary pit will have a properly constructed foundation and interior slopes consisting of a firm, unyielding base that is smooth and free of rocks, debris, sharp edges or irregularities to prevent the liner's rupture or tear. Rolling the surface to prepare the foundation for placement of the liner is recommended.

The slopes of the pit will be no steeper than two horizontal feet to one vertical foot (2H:1V) unless in the transmittal letter the operator requested an alternative to the slope requirement with a demonstration that the pit can be operated in a safe manner to prevent contamination of fresh water and protect public health and the environment.

A berm or ditch will surround the temporary pit to prevent run-on of surface water.

If the transmittal letter or contractor instructions identifies concerns relating to the presence of karst and associated instability, during construction of the pit the contractor will compact the earth material that forms the foundation for the pit liner. An expected proctor density of greater than 90% will be achieved by

1. adding water to the earth material as appropriate,
2. compacting the earth by walking a crawler-type tractor down the sides and bottom of the pit
3. repeating this process with a second 6-inch lift of earth material if necessary

Liner Installation

The geomembrane liner will consist of 20-mil string reinforced LLDPE (or thicker).

The operator will direct the liner installation contractor to:

1. minimize liner seams and orient them up and down, not across a slope
2. use factory welded seams where possible
3. overlap liners four to six inches and orient seams parallel to the line of maximum slope, i.e., oriented along, not across, the slope, prior to any field seaming
4. minimize the number of welded field seams in comers and irregularly shaped areas
5. utilize only qualified personnel to weld field seams
6. avoid excessive stress-strain on the liner
7. place geotextile under the liner where needed to reduce localized stress-strain or protuberances that may otherwise compromise the liner's integrity
8. anchor the edges of all liners in the bottom of a compacted earth-filled trench that is at least 18 inches deep

C-144 Supplemental Documentation for Temporary Pit

9. place additional material (liner, felt, etc.) to ensure that the liner is protected from any fluid force or mechanical damage at any point of discharge into or suction from the lined temporary pit.

A berm or ditch will surround the temporary pit to prevent run-on of surface water. During drilling operations, the operator may elect to remove run-on protection on the pit edge adjacent to the drilling or workover rig provided that the pit is being used to collect liquids escaping from the drilling or workover rig and this additional fluid will not cause a breach of the temporary pit.

The temporary pit will not be used to vent or flare gas and the volume of the temporary drilling pit, including freeboard, will not exceed 10 acre-feet.

Temporary Pit Operating and Maintenance Plan

The operator will maintain and operate the pit in accordance with the following plan to contain liquids and solids and maintain the integrity of the liner to prevent contamination of fresh water and protect public health and the environment.

If feasible, the operator will recycle, reuse or reclaim all drilling fluids in the temporary pit in a manner approved by division rules that prevents the contamination of fresh water and protects public health and the environment. Re-use of drilling fluids and workover fluids (stimulation flow-back) for drilling and stimulation of subsequent wells is anticipated. If re-use is not possible, fluids will be sent to disposal at a division-approved facility.

The operator will not discharge into or store any hazardous waste in the pit.

If the pit develops a leak or if any penetration of the pit liner occurs above the liquid's surface, then the operator will repair the damage or initiate replacement of the liner within 48 hours of discovery or will seek a variance from the division district office within this time period.

If the pit develops a leak or if any penetration of the pit liner occurs below the liquid's surface, then the operator will remove all liquid above the damage or leak line within 48 hours of discovery. The operator will also notify the district division office (19.15.29 NMAC) within this same 48 hours of the discovery and repair the damage or replace the pit liner.

The operator will ensure that the drilling contractor installs and uses a header, diverter or other hardware that prevents damage to the liner by erosion, fluid jets or impact from installation and removal of hoses or pipes during injection or withdrawal of liquids.

During construction, the operator or qualified contractor will install diversion ditches and berms around the pit as necessary to prevent the collection of surface water run-on. As outlined in the Construction and Design Plan, during drilling operations, the edge of the temporary pit adjacent to the drilling or workover rig may not have run-on protection if the operator is using the temporary pit to collect liquids escaping from the drilling or workover rig and run-on will not result in a breach of the temporary pit.

The operator will maintain on site an oil absorbent boom to contain and remove oil from the pit's surface.

The operator will only discharge fluids or mineral solids (including cement) generated or used during the drilling, completion, or workover processes into the pit.

The operator will maintain the temporary pit free of miscellaneous solid waste or debris. Immediately after cessation of drilling or a workover operation, the operator will remove any visible or measurable layer of oil from the surface of the pit.

The operator will maintain at least two feet of freeboard for the temporary pit, except under extenuating circumstances, which will be noted on the pit inspection log as described below.

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The operator will inspect the temporary pit containing drilling fluids daily while the drilling rig or workover rig is on site. After the rigs have left the site, the operator will inspect the pit weekly as long as liquids are present in the pit. The operator will maintain a log of the inspections. The operator will make the log available to the division district office upon request.

The operator will remove all free drilling fluids from the surface of the temporary pit within 60 days from the date that the last drilling or workover rig associated with the pit permit is released. The operator will note the date of this release upon Form C-105 or C-103 upon well or workover completion. The operator may request an extension up to two months from the division district office as long as this additional time does not exceed the temporary pit life span (Subsection R of 19.15.17.7 NMAC).

Temporary Pit In-Place Closure Plan

The wastes in the temporary pit are destined for in place burial at the permitted location. However, a transmittal letter may notify OCD that drilling waste from a nearby site on the same lease may be placed in the temporary pit (e.g. placed in the drilling or fluids cells of the temporary pit). A notice will include the name of the nearby well, the date that the drilling or workover rig moved from the temporary pit, an affirmation that the temporary pit will be closed in conformance with the mandates of the Rule, including the mandated lifetime of the pit.

The operator will not begin closure operations without approval of the closure plan submitted with the permit application.

Siting Criteria Compliance Demonstration

Compliance with siting criteria is described in the site-specific information appended to the C-144.

Proof of Surface Owner Notice

The application package was transmitted to the BLM or State Land Office via email, which serves as notification that the operator intends on-site burial of solids. For private surface owners, this application package was delivered by email, US Mail or by hand delivery.

Construction/Design Plan of Temporary Pit

The design and construction protocols for the temporary pit are provided in the design and construction plan and in Plates 1-2. The optional drainage system described in the design and construction plan is not shown on the Plates but can be important element of the closure plan.

General Protocols and Procedures

- All free liquids from the pit will be recycled or disposed in a manner consistent with OCD Rules.
- Residual free drilling or workover liquids will be removed from the pit within 60 days of release of the last drilling or workover rig associated with the relevant pit permit..
- The residual drilling mud and cuttings will be stabilized to a capacity sufficient to support the 4-foot thick soil cover.
- The residual pit solids will not be mixed at a ratio greater than 1 part pit solids to 3 parts dry earth material (e.g. subsoil).
- The pit will not be closed until the stabilized pit contents pass the paint filter liquids test.

Waste Material Sampling Plan

Prior to closure, an five-point (minimum) composite sample of the residual solids in the drilling cell of the temporary pit and a five-point composite sample of any solids in the fluids cell of the temporary pit will be tested in a laboratory to demonstrate that the stabilized material will not exceed the contaminant concentrations listed in Table II of 19.15.17.13 NMAC after being mixed in a ratio of 3:1 with the earth material to be used for stabilization of the residual cuttings and mud. A volumetric average of the laboratory result from the drilling cell solids and any fluid cells solids will be used to determine compliance with the standards of Table II.

In-place burial is the selected on-site disposal alternative.

C-144 Supplemental Documentation for Temporary Pit

If a concentration of a contaminant within the material mixed at a ratio not exceeding 3:1 is higher than the concentration given in Table II, closure will proceed in accordance with Subsection C of 19.15.17.13 NMAC.

In the event that on-site closure standards cannot be achieved, the operator will remove the solid pit contents and transfer to the following division-approved facility, specifically:

R360 or Sundance Services

Protocols and Procedures for Earthwork

Stabilization of the residual cuttings and mud is accomplished by mixing dry earth material within the temporary pit footprint. After stabilization the operator or qualified contractor will:

1. Place a geomembrane cover over the sloping surface of the stabilized waste material. It will be placed in a manner so as to prevent infiltration of water and so that infiltrated water does not collect on the geomembrane cover after the upper soil cover has been placed.
2. Use a geomembrane cover made of 20-mil string reinforced LLDPE liner
3. Over the sloping, stabilized material and liner, place the **Soil Cover** of:
 - a. at least 3-feet of compacted, uncontaminated, non-waste containing earthen fill with chloride concentrations less than 600 mg/kg as analyzed by EPA Method 300.0.
 - b. either the background thickness of topsoil or one foot of suitable material to establish vegetation at the site, whichever is greater, over the 3-foot earth material.
4. Contour the cover to
 - a. blend with the surrounding topography
 - b. prevent erosion of the cover and
 - c. prevent ponding over the cover.

Closure Notice

The operator will notify the surface owner by certified mail, return receipt requested, that the operator plans closure operations at least 72 hours, but not more than one week, prior to any closure operation. The notice will include the well name, API number, and location. Notification of the State Land Office or BLM as surface owner's representatives will be accomplished via email if a variance is granted by OCD.

After approval for in-place burial, the operator shall notify the district office verbally and in writing at least 72 hours but not more than one week before any closure operation. Notice will include the operator's name and the location of the temporary pit. The location will include unit letter, section number, township and range. If the location is associated with a well, then the well's name, number and API number will be included.

Should onsite burial be on private land, the operator will file a deed notice including exact location of the burial with the county clerk of the county where the onsite burial is located.

Closure Report

Within 60 days of closure completion, the operator will submit a

- i. closure report on form C-144, with necessary attachments

C-144 Supplemental Documentation for Temporary Pit

- ii. a certification that all information in the report and attachments is correct, that the operator has complied with all applicable closure requirements and conditions specified in the approved closure plan
- iii. a plat of the pit location on form C-105
if burial includes solids derived from a nearby well on the same lease, the report will list the name, API # and location of the well(s) from which the solids originated

Unless the permit transmittal letter requests an alternative marker to comply with surface landowner specifications, the operator will place at the center of an onsite burial a steel marker that

- is not less than four inches in diameter
- is placed at the bottom of a three-foot deep hole (minimum) that is filled with cement to secure the marker
- is at least four feet above mean ground level
- permanently displays the operator name, lease name, well number, unit letter, section, township and range in welded or stamped legible letters/numbers

Timing of Closure

The operator will close the temporary pit within 6 months from the date the drilling rig was released from the first well using the pit. This date will be noted on form C-105 or C-103 filed with the division upon the well's completion (or re-completion in the case of a workover).

Reclamation and Re-vegetation Plan

In addition to the area of the in-place burial, the operator will reclaim the surface impacted by the temporary pit, including access roads associated with the pit, to a safe and stable condition that blends with the surrounding undisturbed area including:

Areas not reclaimed as described herein due to their use in production or drilling operations will be stabilized and maintained to minimize dust and erosion. This includes the area of the temporary pit if a transmittal letter to OCD proposes an alternative to the re-vegetation or recontouring requirement with

- a demonstration that the proposed alternative provides equal or better prevention of erosion, and protection of fresh water, public health and the environment
- written documentation that the alternative is agreed upon by the surface owner.

As stated above, the soil cover for burial in-place

- A. consists of a minimum of three feet of non-waste containing, uncontaminated, earthen material with chloride concentrations less than 600 mg/kg (or background concentration) as analyzed by EPA Method 300.0 placed over the liner and stabilized solids
- B. is capped by the background thickness of topsoil or 1-foot of suitable material to establish vegetation, whichever is greater
- C. blends into surrounding topography
- D. is graded to prevent ponding and to minimize erosion

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For all areas disturbed by the closure process that will not be used for production operations or future drilling, the operator will:

- I. Replace topsoils and subsoils to their original relative positions
- II. Grade so as to achieve erosion control, long-term stability and preservation of surface water flow patterns
- III. Reseed in the first favorable growing season following closure

Re-vegetation and reclamation plans imposed by the surface owner will be outlined in communications with the OCD.

The operator will notify the division when the surface grading work element of reclamation is complete.

The operator will notify the division when the site meets the surface owner's requirements or exhibits a uniform vegetative cover that reflects a life-form ratio of plus or minus fifty percent (50%) of pre-disturbance levels and a total percent plant cover of at least seventy percent (70%) of pre-disturbance levels, excluding noxious weeds.