

District I  
1625 N French Dr., Hobbs, NM 88240  
District II  
1301 W Grand Avenue, 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  
June 16, 2008

For temporary pits, closed-loop systems, and below-grade tanks, submit to the appropriate NMOCD District Office.  
For permanent pits and exceptions submit to the Santa Fe Environmental Bureau office and provide a copy to the appropriate NMOCD District Office.

36058 Pit, Closed-Loop System, Below-Grade Tank, or  
Proposed Alternative Method Permit or Closure Plan Application

Type of action: ☒ Permit of a pit, closed-loop system, below-grade tank, or proposed alternative method  
☐ Closure of a pit, closed-loop system, below-grade tank, or proposed alternative method

Instructions: Please submit one application (Form C-144) per individual pit, closed-loop system, 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.

Operator: SG Interests I, Ltd. OGRID #: 20572

Address: PO Box 2677, Durango, Colorado 81302

Facility or well name: West Bisti 26-13-17 #1

API Number: 30-045-29160

OCD Permit Number: None

U/L or Qtr/Qtr A Section 17 Township 26N Range 13W County: San Juan

Center of Proposed Design: Latitude 36.493486\*N Longitude -108.237083\*W NAD: ☒ 1927 ☐ 1983

Surface Owner: ☐ Federal ☐ State ☐ Private ☒ Tribal Trust or Indian Allotment

☒ Pit: Subsection F or G of 19.15.17.11 NMAC

Temporary: ☐ Drilling ☒ Workover

☐ Permanent ☐ Emergency ☐ Cavitation

☒ Lined ☐ Unlined

Liner type: Thickness 20 mil ☒ LLDPE ☐ HDPE ☐ PVC

☐ Other \_\_\_\_\_ ☐ String-Reinforced

Seams: ☐ Welded ☒ Factory ☐ Other \_\_\_\_\_

Volume: 1000 bbl Dimensions: L 10' x W 10' x D 10'

☐ Closed-loop System: Subsection H of 19.15.17.11 NMAC

☐ Drying Pad ☐ Tanks ☐ Haul-off Bins ☐ Other \_\_\_\_\_

☐ Lined ☐ Unlined

Liner type: Thickness \_\_\_\_\_ mil ☐ LLDPE ☐ HDPE ☐ PVC

☐ Other \_\_\_\_\_

Seams: ☐ Welded ☐ Factory ☐ Other \_\_\_\_\_

Volume: \_\_\_\_\_ bbl \_\_\_\_\_ yd<sup>3</sup>

Dimensions: Length \_\_\_\_\_ x Width \_\_\_\_\_

☐ 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 \_\_\_\_\_

Fencing: Subsection D of 19.15.17.11 NMAC

☐ Chain link, six feet in height, two strands of barbed wire at top

☒ Four foot height, four strands of barbed wire evenly spaced between one and four feet

Netting: Subsection E of 19.15.17.11 NMAC

☐ Screen ☐ Netting ☐ Other \_\_\_\_\_

☐ Monthly inspections

Signs: Subsection C of 19.15.17.11 NMAC

☐ 12'x24', 2' lettering, providing Operator's name, site location, and emergency telephone numbers

☒ Signed in compliance with 19.15.3.103 NMAC



☐ **Alternative Method:**

Submittal of an exception request is required. Exceptions must be submitted to the Santa Fe Environmental Bureau office for consideration of approval.

**Administrative Approvals 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:*

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

☐ Exception(s): Requests must be submitted to the Santa Fe Environmental Bureau office for consideration of approval.

**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. Requests regarding changes to certain siting criteria may require administrative approval from the appropriate district office or may be considered an exception which must be submitted to the Santa Fe Environmental Bureau office for consideration of approval. Applicant must attach justification for request. Please refer to 19.15.17.10 NMAC for guidance. Siting criteria does not apply to drying pads or above-grade tanks associated with a closed-loop system.

Ground water is less than 50 feet below the bottom of the temporary pit, permanent pit, or below-grade tank.

☐ Yes ☒ No

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

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

☐ Yes ☒ No

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

Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. (Applies to temporary, emergency, or cavitation pits and below-grade tanks)

☐ Yes ☒ No

☐ NA

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

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

☐ Yes ☐ No

☒ NA

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

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.

☐ Yes ☒ No

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

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.

☐ Yes ☒ No

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

Within 500 feet of a wetland.

☐ Yes ☒ No

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

Within the area overlying a subsurface mine.

☐ Yes ☒ No

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

Within an unstable area.

☐ Yes ☒ No

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

Within a 100-year floodplain.

☐ Yes ☒ No

- FEMA map

**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 - 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: \_\_\_\_\_

**Closed-loop Systems 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.

- ☐ Geologic and Hydrogeologic Data (required for on-site closure) - based upon the requirements of Paragraph (3) of Subsection B of 19.15.17.9
- ☐ Siting Criteria Compliance Demonstrations (required for on-site closure) - 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 - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC

NMAC

☐ Previously Approved Design (attach copy of design) API Number: \_\_\_\_\_

**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 H<sub>2</sub>S, 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

**Proposed Closure:** 19.15.17.13 NMAC

Type: ☐ Drilling ☒ Workover ☐ Emergency ☐ Cavitation ☐ Permanent Pit ☐ Below-grade Tank ☐ Closed-loop System ☐ Alternative

Proposed Closure Method: ☐ Waste Excavation and Removal

☒ On-site Closure Method (only for temporary pits and closed-loop systems)

☐ In-place Burial ☐ On-site Trench Burial

☐ Alternative Closure Method (Exceptions must be submitted to the Santa Fe Environmental Bureau for consideration)

**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 may require administrative approval from the appropriate district office or may be considered an exception which must be submitted to the Santa Fe Environmental Bureau office for consideration of approval. Justifications and/or demonstrations of equivalency are required. Please refer to 19.15.17.10 NMAC for guidance.

Ground water is less than 50 feet below the bottom of the buried waste.

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

☐ Yes ☒ No  
☐ NA

Ground water is between 50 and 100 feet below the bottom of the buried waste

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

☐ Yes ☒ No  
☐ 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

☒ Yes ☐ No  
☐ NA

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

- 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

☐ Yes ☒ No

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.

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

☐ Yes ☒ 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 500 feet of a wetland.

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

☐ 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

**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 F 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 I of 19.15.17.13 NMAC
- ☐ Site Reclamation Plan - based upon the appropriate requirements of Subsection G of 19.15.17.13 NMAC

**Waste Removal Closure For Closed-loop Systems That Utilize Haul-off Bins Only:** (19.15.17.13.D NMAC) **Instructions:** Please identify the facility or facilities for the disposal of liquids, drilling fluids and drill cuttings.

Disposal Facility Name: \_\_\_\_\_

Disposal Facility Permit Number: \_\_\_\_\_

**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 F of 19.15.17.13 NMAC
- ☐ Construction and Design of Burial Trench (if applicable) 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 Subsection F of 19.15.17.13 NMAC
- ☐ Waste Material Sampling Plan - based upon the appropriate requirements of Subsection F 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 I of 19.15.17.13 NMAC
- ☒ Site Reclamation Plan - based upon the appropriate requirements of Subsection G of 19.15.17.13 NMAC

**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): William Schwab III Title: Registered Agent for SG Interests I, Ltd

Signature: [Signature] Date: 09/17/2008

e-mail address: tripp@nikaenergy.com Telephone: 970-259-2701

**OCD Approval:** ☒ Permit Application (including closure plan) ☐ Closure Plan (only)

OCD Representative Signature: [Signature] Approval Date: 7-7-09

Title: Enviro/spec OCD Permit Number: \_\_\_\_\_

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

☐ Closure Completion Date: \_\_\_\_\_

**Closure Method:**

- ☐ Waste Excavation and Removal ☐ On-Site Closure Method ☐ Alternative Closure Method  
☐ If different from approved plan, please explain.

**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  
☐ Proof of Deed Notice (if applicable)  
☐ Plot Plan  
☐ Confirmation Sampling Analytical Results  
☐ Waste Material Sampling Analytical Results  
☐ 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: \_\_\_\_\_

## ADMINISTRATIVE APPROVAL REQUEST

### **RE: West Bisti 26-13-17 #1 Temporary P&A Pit Design**

SGL is requesting administrative approval for the current pit design as applied for and approved by BLM and NMOCD under the current Federal APD. This design is for a P&A cement flush pit used during the Plug & Abandonment of a well.

The design submitted is the same design used to P&A all previous wells in this area without incident negatively affecting the Environment, the Health and Welfare of the surrounding residents, and the employees and contractors of SGL.

The request is for a variance concerning the rise to run slope of the pit walls. The current pit was designed with a 2' rise to 1' run in order to reduce the footprint of the drilling pad as requested by the BLM. All other new temporary drilling pit design criteria will be followed.

A 10'W x 10'H x 10'L pit with 1'H:2'V walls has an approximate 256 Bbl capacity full. Subtracting a 2' freeboard there is an approximate 205 Bbl capacity. This is considerably more capacity needed for the P&A cementing procedure.

To address the issue of egress from the pit in case of an accidental ingress, a rope ladder will be installed. The rope ladder will be anchored at the surface outside the pit liner anchor ditch and will extend to the bottom of the pit. This will allow any personnel to escape from the pit. Please note: In the several years we have worked in the industry (30+ years) we have never seen or heard of any accidents or fatalities concerning drowning or near drowning in these types of pits.



Search TerraServer

The National Map 27 km S of Farmington, New Mexico, United States 5/9/1998

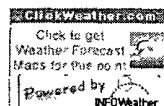
Street

City

State

Longitude Latitude  
-108.23693 36.49318

(GO)



Download | E-mail | Info | Print | Order Photo

Aerial Photo

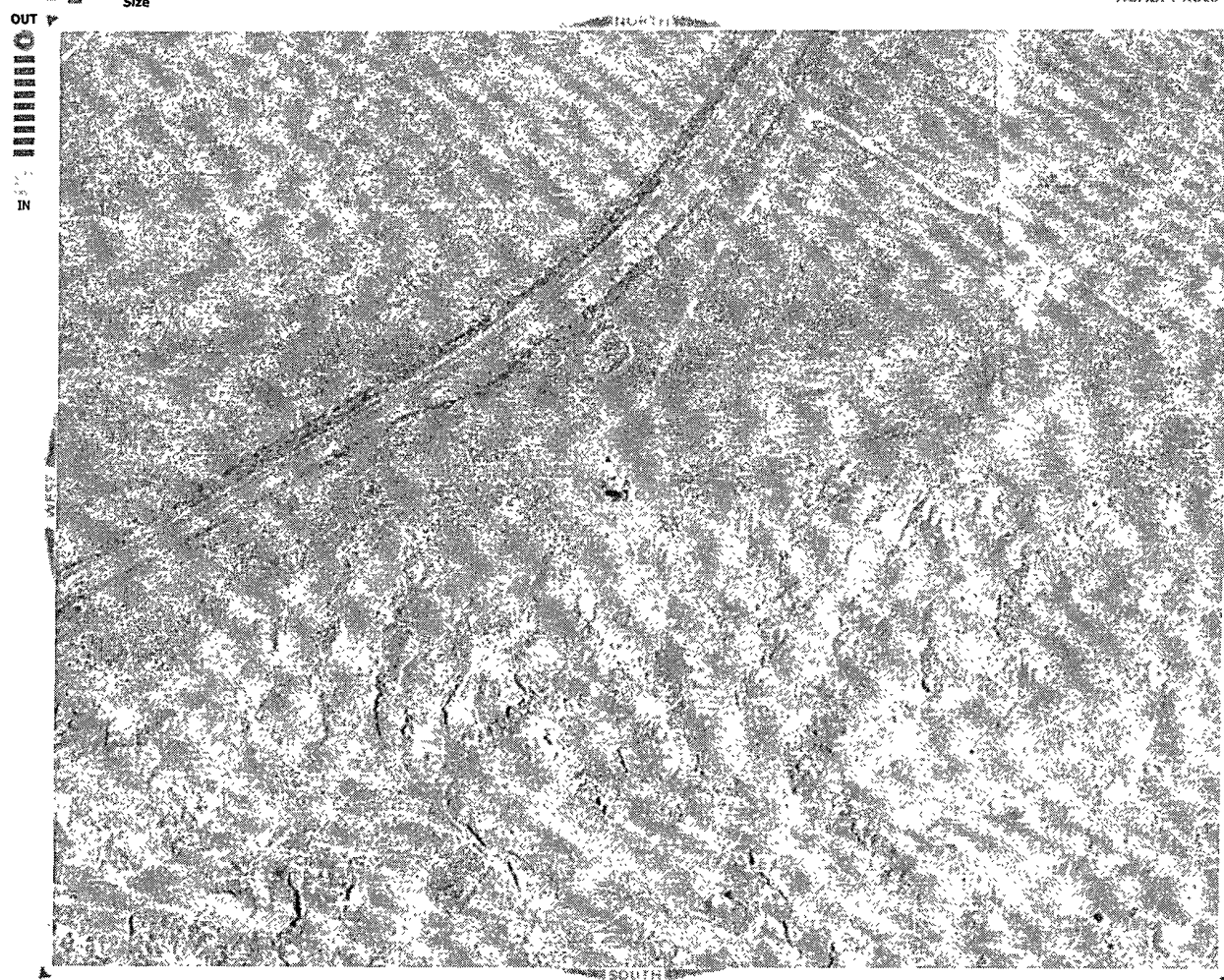


Image courtesy of the U.S. Geological Survey

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Source-86528 Running Time 265.63 ms

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THE WEST BIST 26-13-17#1 IS NOT WITHIN 200' OF ANY SINKHOLE  
PLAYA LAKE OR 300' OF A CONTINUOUSLY FLOWING WATERCOURSE

THIS WELL IS NOT WITHIN 300' OF ANY STRUCTURE, OR 1000'  
OF ANY STRUCTURE.

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

Township: 26N Range: 13W Sections: 17

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

Clear Form

iWATERS Menu

Help

**AVERAGE DEPTH OF WATER REPORT 09/29/2008**

| Bsn | Tws | Rng | Sec | Zone | X | Y | Wells | (Depth Water in Feet) |     |     |
|-----|-----|-----|-----|------|---|---|-------|-----------------------|-----|-----|
|     |     |     |     |      |   |   |       | Min                   | Max | Avg |

No Records found, try again

Wetlands Certification

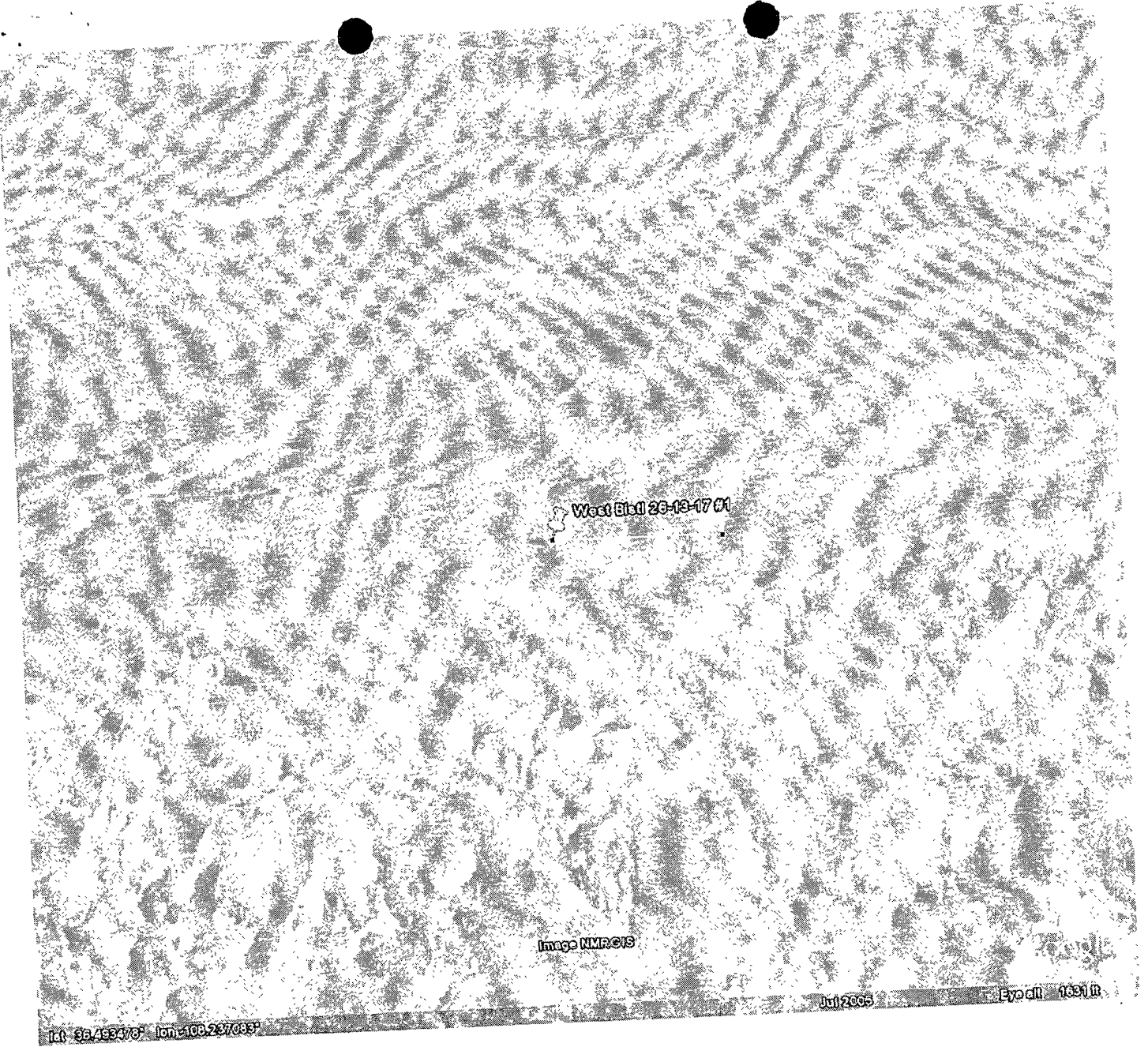
RE: West Bisti 26-13-17 #1

I William Schwab III certify that I have visually inspected the above well and that there are no wetlands within a 500 foot radius.\

There is no data available from the US Fish and Wildlife identification map (attached) as to the existence of a wetland.

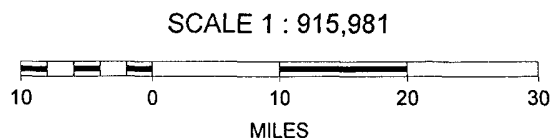
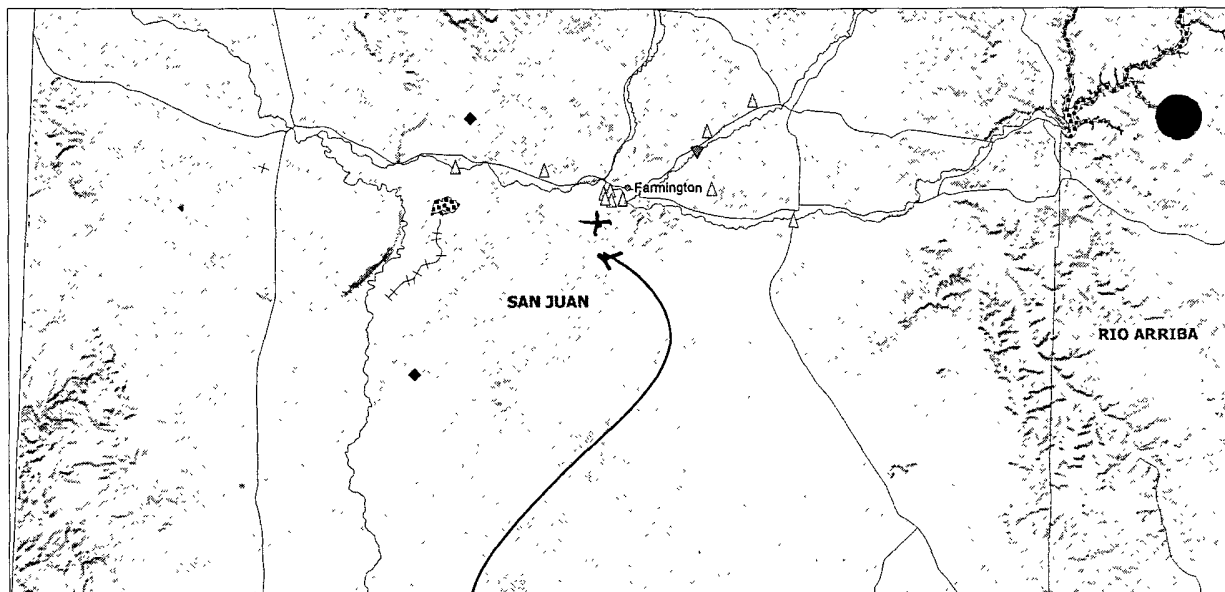
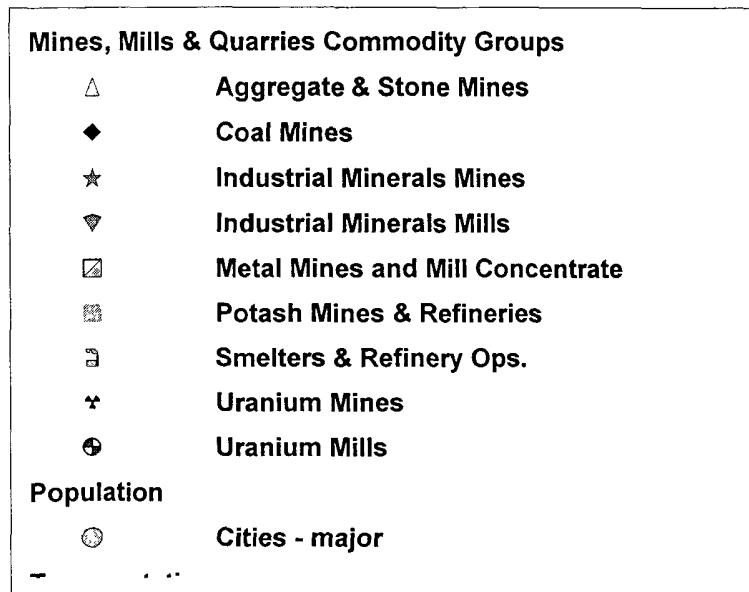
Signature: W. Schwab III

Date: 10/6/2008.



There ARE NO WETLANDS WITHIN 500' OF THE  
West Blvd 26-13-17 #1

# MMQonline Public Version

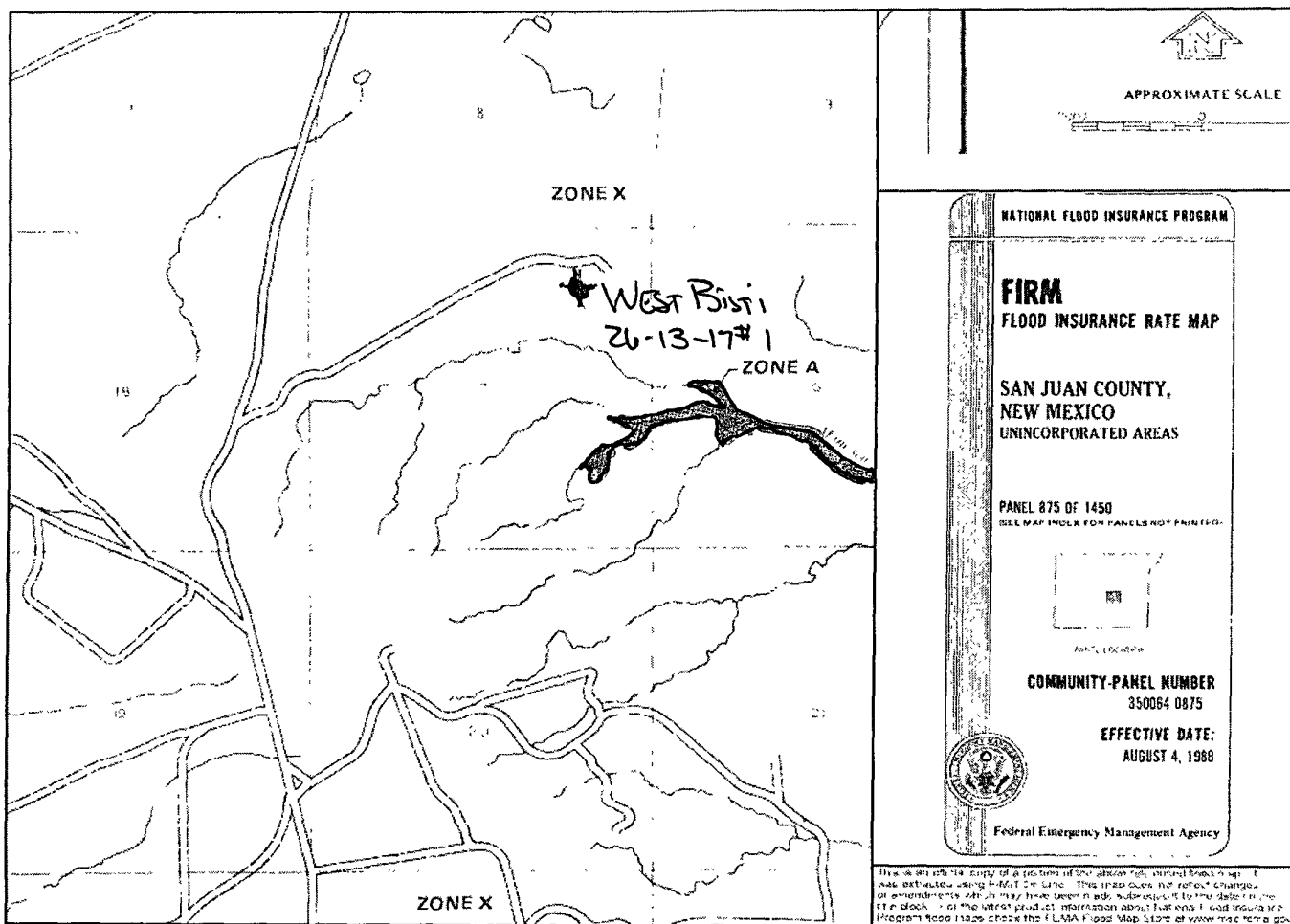


THERE ARE NO UNDERGROUND MINES  
LOCATED IN THE AREA OF THE WEST BISHOP 26-13-17#1

## Unstable Area

**RE: West Bisti 26-13-17 #1**

The well pad is not located near any surface mines or over any subsurface mines. The Soil consists of a clay sand mixture. The location is an existing well pad. The temporary workover pit will be located in the cut of the cut side of the location.



Fema # 3500640875B

## Hydrogeology Report for the SG Interests I, LTD, Bisti West 26-13-17 #1

The Bisti West 26-13-17 #1 (30-045-29160 ), located in NENE Sec 17, T26N, R13W San Juan County, is in the upper southwestern reaches of the San Juan River drainage basin. The surface is covered by Quaternary alluvium consisting of unconsolidated sand, gravel, silt, clay, and terrace gravel and boulder deposits. The alluvium itself is not a source for ground water. The consolidated rock outcrops along the drainage are the Tertiary Age Paleocene Nacimiento Formation which underlies the alluvium. The Nacimineto Formation is a stratified fluvial sand and shale sequence less than 200 feet thick.

The aquifer in this area of the San Juan Basin primarily consists of the Ojo Alamo Sandstone. The top of the Ojo Alamo at this drill site is estimated to be approximately 220 feet below the surface. The Ojo Alamo is a permeable conglomerate and medium to very coarse sandstone interlayered with relatively impermeable shale. This aquifer contains fresh to moderately saline water. Dissolved-solids concentrations generally increase along the groundwater flow path from less than 1,000 milligrams per liter near recharge areas to about 4,000 as the formation is deeper into the basin.

The Bisti West 26-13-17 #1 is located in the NENE quarter-quarter of section Sec 17, T26N, R13W. No groundwater wells were identified using the iWaters Database from the Office of the State Engineers within a 3 mile radius of this well. The following table shows the formation tops for this well.

| Formation Name  | Top MD | Top SS | Top TVD | Position | Pick Basis |
|-----------------|--------|--------|---------|----------|------------|
| Nacimiento      | 0      | 6,350  |         |          |            |
| Ojo Alamo       | 220    | 6,131  |         | TOP      |            |
| Kirtland        | 346    | 6,005  |         | TOP      |            |
| Fruitland       | 924    | 5,427  |         | TOP      | Log        |
| Pictured Cliffs | 1,492  | 4,859  |         | TOP      | Log        |
| Total Depth     | 1,740  |        |         |          | Driller    |

### Reference:

#### GROUND WATER ATLAS of the UNITED STATES

Arizona, Colorado, New Mexico, Utah, HA 729-C, USGS, S.G. Robson and E.R. Banta, 1995

iWaters (Waters Database), New Mexico Office of the State Engineer, 2007

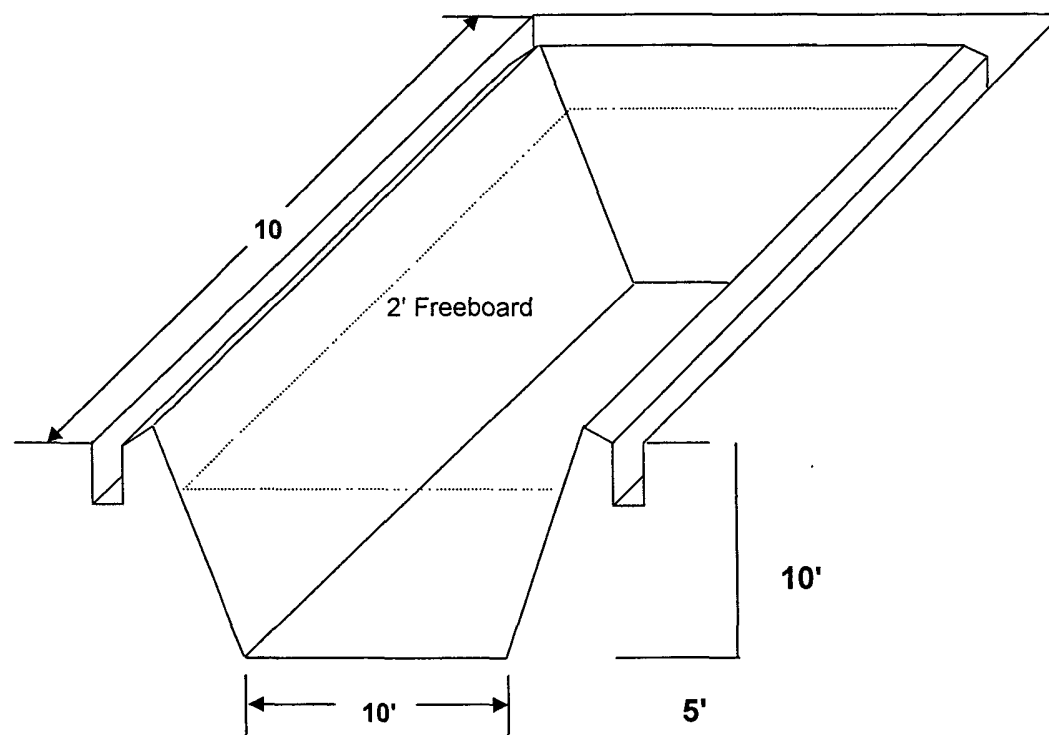
## SG Interests I, Ltd.

### Temporary Pit Design & Construction Plan

#### **Re: West Bisti 26-13-17 #1**

- 1 - SG Interests will design and construct a temporary pit to contain liquids, solids, prevent contamination of fresh water, and protect public health and environment.
- 2 - Prior to constructing the pit, topsoil will be stockpiled per APD for later use in reclamation.
- 3 - SGI will have sign on location in compliance with 19.15.3.103 NMAC.
- 4 - SGI shall construct all new fences utilizing 48" hog wire on bottom with a single strand of barbed wire on top. T-posts will be installed a minimum of every 12 feet and corners will be braced. Temporary pits will be fenced at all times except during drilling or workover operations when the rig side of the fence will be temporarily removed for operational purposes.
- 5 - SGI shall construct the temporary pit so the foundation and interior slopes are compact, free of rocks, debris, sharp edges and irregularities to prevent liner failure.
- 6 - SGI shall construct the pit so the slopes are no steeper than two horizontal feet to one vertical foot. Any other design will be submitted for administrative approval. *The West Bisti 26-13-17 #1 has submitted for administrative approval a slope of one horizontal foot to two vertical feet.*
- 7 - All temporary pits will be lined with a 20 mil string reinforced, LLDPE liner, complying with EPA SW-846 method 9090A requirements.
- 8 - Geotextile will be installed beneath the liner if integrity will be compromised from sharp edges or irregularities.
- 9 - Liner will be anchored in the bottom of a compacted earth filled trench at least eighteen inches deep.
- 10 - Liner seams will be minimized and oriented up and down, not cross slope. Factory seams will be used wherever possible. Field seams will be overlapped four to six inches and welded by qualified personnel. Seams will be minimized in corners and irregularly shaped areas.
- 11 - The liner shall be protected from any fluid force through the use of mud pit slides or a manifold system.
- 12 - Diversion ditches and berms will be used to prevent natural runoff from entering pit.
- 13 - Pit volume will not exceed 10 acre feet, including freeboard.
- 14 - Temporary blow pits will be constructed to allow fluid discharged to unlined pit, as allowed by Rule 19.15.17.11.F.11, to gravity flow into lined pit.
- 15 - Freestanding liquids will not be allowed in unlined portion of a temporary blow pit.

Temporary Pit Design - West Bisti 26-13-17 #1.xls



Pit to be lined with 20 mil LLDPE Material

Liner will be anchored in anchor ditch

## SG Interests I, Ltd.

### Temporary Pit - Maintenance & Operating Plan

**Re: West Bisti 26-13-17 #1**

- 1 - SG Interests will design and construct a temporary pit to contain liquids, solids, prevent contamination of fresh water, and protect public health and environment.
- 2 - SGI will dispose of fluids at Basin Disposal Inc., Permit # NM-01-005.
- 3 - SGI will not dispose of or store any hazardous waste in any temporary pit.
- 4 - If the pit liner's integrity is compromised, or if any penetration of the liner occurs above the liquid surface, the NMOCD Aztec Division office will be notified by phone or e-mail within forty eight hours.
- 5 - If a leak develops below the liquid level SGI shall remove all liquids above the damaged liner within forty eight hours and repair the damage to the liner. For leaks less than 25 Bbls SGI shall notify the NMOCD Aztec office within forty eight hours of the discovery. For leaks greater than 25 Bbls SGI shall notify the NMOCD Aztec office within twenty four hours of the discovery. In addition verbal notification shall be given to the divisions Environmental Bureau Chief.
- 6 - The liner shall be protected from any fluid force through the use of mud pit slides or a manifold system.
- 7 - Diversion ditches and berms will be used to prevent natural runoff from entering pit.
- 8 - SGI shall immediately remove any visible layer of oil from the surface of the temporary pit. An oil absorbent boom will be used to contain and remove oil from the pits surface. An oil absorbent boom will be kept on-site until closure of pit.
- 9 - Only fluids generated during the plugging process will be discharged into a temporary pit.
- 10 - The pit will be kept free of miscellaneous solid waste and or debris.
- 11 - During drilling or completion operations, SGI will inspect the temporary pit at least once daily to insure compliance with this plan. Inspections will be logged in the SGI daily workover reports. These reports will be filed with the NMOCD Aztec Division office upon closure of the pit.
- 12 - After drilling or completion operations, SGI will inspect the temporary pit at least once weekly so long as liquids are present in the pit. Inspections will be logged as a continuation of the SGI daily drilling report and will be filed with the NMOCD Aztec Division office upon closure of the pit.
- 13 - The temporary pit shall always maintain a minimum of two feet of freeboard.
- 14 - Freestanding liquids will be removed from a temporary pit within 30 days from the date the drilling rig is released and removed as needed thereafter until the pit is closed.
- 15 - SGI will remove all freestanding liquids from a cavitation pit within 48 hours after completing a cavitation. SGI may request additional time to remove liquids from the NMOCD Aztec Division office if SGI is not able to remove liquids in 48 hours.

## SG Interests I, Ltd.

### Temporary Pit - Closure Plan

#### **Re: West Bisti 26-13-17 #1**

All closure activities will include proper documentation and be available for review upon request and will be submitted to the NMOCD Aztec Division office within 60 days of pit closure. Closure report will be filed on form C-144 and incorporate the following:

Details on capping and covering (where applicable)

Plot Plan (Pit Diagram)

Inspection Reports

Sampling Results

C-105

Copy of Deed Notice filed with County Clerk

- 1 – All freestanding liquids will be removed at the start of the pit closure process from the pit and disposed of in a division approved facility or recycle, re-use or reclaim the liquids in a manner that the appropriate division district office approves. SGI plans to dispose of drilling fluids at Basin Disposal Inc., Permit # NM-01-005, unless otherwise noted.
- 2 - The method of closure for all temporary pits will be on-site burial as long as all the criteria listed in sub-section B of 19.15.17.13 NMAC are met.
- 3 - The surface owner shall be notified of SGI closure plan using a means that provides proof of notice i.e., certified mail, return receipt requested or electronic mail with read receipt.
- 4 - Temporary pits will be closed, re-contoured, and re-seeded 6 months after drilling rig is released.
- 5 - "Notice of Closure" will be given to the NMOCD Aztec Division office within 72 hours of closure via electronic mail or verbally. The "Notification of Closure" will include:
  - i. Operators Name
  - ii. Location by Unit Letter, Section, Township, and Range
  - iii. Well Name and API number.
- 6 - A five point composite sample will be taken of the pit using sampling tools and tested per 19.15.17.13.B.1.b. NMAC. Maximum limits for on-site burial are listed below:

| Components | Test Method               | Limit (mg/kg) |
|------------|---------------------------|---------------|
| Benzene    | EPA SW-846 8021B or 8260B | 0.2           |
| BTEX       | EPA SW 846 8021B or 8260B | 50            |
| TPH        | EPA SW 846 418.1          | 2500          |
| GRO/DRO    | EPA SW 846 8015M          | 500           |
| Chlorides  | EPA 300.1                 | 1000          |

In the event the criteria are not met all contents and remediation will be handled per 19.15.17.13.B.1 NMAC. If ground water is 50'-100' below the bottom of the buried waste all limits are the same except the chloride limit is reduced to 500 mg/kg.

The sampling can be taken prior to mixing but if the contents exceed the parameters then contents must be sampled after mixing and meet the criteria before closure.

- 7 - Pit contents shall be mixed with non waste containing earth material in order to achieve the solidification process. The solidification process will be accomplished using a combination of natural drying and mechanical mixing. Pit contents will be mixed with non waste, earth material to a consistency that is deemed safe and stable. The mixing ratio shall not exceed 3 parts clean soil to 1 part pit contents.
- 8 - Liner of temporary pit will be removed above "mud level" after stabilization. Liner will be cut and all excessive liner will be removed and taken to a licensed disposal facility.
- 9 - Upon completion of solidification and satisfactory test results the pit area will be backfilled and compacted with non-waste earth material. A minimum of four feet of cover with the top foot (or background thickness of topsoil whichever is greater) suitable to establish vegetation at the site.
- 10 - The pit cover will be re-contoured and re-vegetated complying with subsections G,H,&I of 19.15.17.13 NMAC.
- 11 - Notification will be sent to NMOCD Aztec Division office when reseeding is completed.
- 12 - SGI will seed the disturbed areas the first growing season after the operator closes the pit. Seeding will be accomplished by drilling on the contour whenever practical or by other division approved methods. APD stipulated seed mixes will be used on NAPI lands. Vegetative cover will equal 70% of the native perennial vegetative cover (unimpacted) consisting of at least three native plant species, including at least one grass, but not including noxious weeds. Seed cover will be maintained thru two consecutive growing seasons. Repeat seeding or planting will be continued until successive vegetative growth occurs.
- 13 - The surface owner is the Navajo Agricultural Products Industry. NAPI will not allow any protruding markers on a reclaimed location so none will be installed.

## Tripp Schwab

**From:** Tripp Schwab [tripp@nikaenergy.com]  
**Sent:** Wednesday, October 01, 2008 7:52 AM  
**To:** rhanna@navajopride.com  
**Cc:** Marcia Stewart  
**Subject:** landowner notification

RE: West Bisti 26-13-17 #1  
API # 30-045-29160

Robert,  
This is an e-mail notification per the requirements of the new OCD pit rule 17 requiring notification to the surface owner that we are planning to open a temporary P&A workover pit on the subject location. After P&A operations cease, SGI plans to close the temporary pit per the approved APD, the new NMOC rules, and any NAPI / BIA regulations that apply.

As per our phone conversation today I will meet with you Wednesday, October 1, 2008 to discuss NAPI will require for the closing and reclamation of the pit and location.

You will also receive a certified letter stating the above.

Thank you for your time.

Tripp Schwab  
Nika Energy Operating  
Agent for SG Interests I, Ltd.  
970-259-2701 off  
970-385-1598 fax

10/1/2008

# Nika Energy Operating

Robert Hanna  
Navajo Agricultural Products Industry  
PO Drawer 1318  
Farmington, NM 87499

RE: West Bisti 26-13-17 #1, API # 30-045-29160

Robert,

This is a follow up certified letter as per the requirements of the new OCD pit rule 17 requiring notification to the surface owner that we are planning to open a temporary P&A workover pit on the subject location. After P&A operations cease, SGI plans to close the temporary pit per the approved APD, the new NMOCD rules, and any NAPI BIA regulations that apply.

As per our phone conversation today I will meet with you Wednesday, October 1, 2008 to discuss NAPI will require for the closing and reclamation of the pit and location.

Please let me know if you have any questions or if this notification needs to be directed to someone else.

Thank you for your time.

Tripp Schwab  
President  
Nika Energy Operating,  
Agent for SG Interests.

| SENDER: COMPLETE THIS SECTION                                                                                                                                                                                                                                                                                              |  | COMPLETE THIS SECTION ON DELIVERY                                                                                                                                                                                                                                                                         |  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| <ul style="list-style-type: none"> <li>Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.</li> <li>Print your name and address on the reverse so that we can return the card to you.</li> <li>Attach this card to the back of the mailpiece, or on the front if space permits.</li> </ul> |  | <p>A. Signature<br/> <input checked="" type="checkbox"/> Agent<br/> <input type="checkbox"/> Addressee</p>                                                                                                                                                                                                |  |
| <p>1. Article Addressed to:</p> <p>Attn: Mr. Robert Hanna<br/>NAPI<br/>PO Drawer 1318<br/>Farmington, NM 87499</p>                                                                                                                                                                                                         |  | <p>B. Received by (Printed Name)<br/>           Kevin Johnson</p> <p>C. Date of Delivery<br/>           10/1/08</p>                                                                                                                                                                                       |  |
| <p>2. Article Number<br/>           (Transfer from service label)</p>                                                                                                                                                                                                                                                      |  | <p>3. Service Type<br/> <input checked="" type="checkbox"/> Certified Mail    <input type="checkbox"/> Express Mail<br/> <input type="checkbox"/> Registered    <input type="checkbox"/> Return Receipt for Merchandise<br/> <input type="checkbox"/> Insured Mail    <input type="checkbox"/> C.O.D.</p> |  |
| <p>4. Restricted Delivery? (Extra Fee)</p>                                                                                                                                                                                                                                                                                 |  | <p><input type="checkbox"/> Yes</p>                                                                                                                                                                                                                                                                       |  |

P.O. Box 2677 • Duran

7006 2150 0001 7642 6117

PS Form 3811, February 2004

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Attn: Mr. Robert Hanna  
 NAPI  
 PO Drawer 1318  
 Farmington, NM 87499

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PS Form 3811, February 2004