District I
1625 N French Dr , Hobbs, NM 88240
District II
1301 W Grand Avenue, Artesia, NM 88210
District III
1000 Pt. Press Read Artes NM 87410 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

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.

0569
de

# Pit, Closed-Loop System, Below-Grade Tank, or

Proposed Alternative Method Permit or Closure Plan Appli	cation
Type of action:    Permit of a pit, closed-loop system, below-grade tank, or proposed alt     Closure of a pit, closed-loop system, below-grade tank, or proposed a     Modification to an existing permit     Closure plan only submitted for an existing permitted or non-permitted below-grade tank, or proposed alternative method	Iternative method
Instructions: Please submit one application (Form C-144) per individual pit, closed-loop system, below-grad	le 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 sunvironment. Nor does approval relieve the operator of its responsibility to comply with any other applicable governmental authorized to the complex of the co	
1. Operator: SG Interests I, Ltd. OGRID #: 20572	
Address: PO Box 2677, Durango, Colorado 81301	
Facility or well name: Federal 21-6-28 #1	
API Number: 30-043-21111 OCD Permit Number:	
U/L or Qtr/Qtr A NENE Section 28 Township 21N Range 06W County: S	andoval, NM
Center of Proposed Design: Latitude 36.02514° N Longitude -107.47064° W	
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 □ P&A □ Lined □ Unlined Liner type: Thickness 20 mil □ LLDPE □ HDPE □ PVC □ Other □ String-Reinforced Liner Seams: □ Welded □ Factory □ Other □ Volume: 1675 □ Bbls Dimensions: I  3. □ Closed-loop System: Subsection H of 19.15.17.11 NMAC  Type of Operation: □ P&A □ Drilling a new well □ Workover or Drilling (Applies to activities which require prior intent) □ Drying Pad □ Above Ground Steel Tanks □ Haul-off Bins □ Other □ Lined □ Unlined Liner type: Thickness □ mil □ LLDPE □ HDPE □ PVC □ Other □ Liner Seams: □ Welded □ Factory □ Other □ Li	or approval of a permit or notice of
Below-grade tank: Subsection I of 19.15.17.11 NMAC  Volume:	f
5.  Alternative Method:  Submitted of an exception request is required. Exceptions must be submitted to the Santa Fe Environmental Bureau off	fice for consideration of approval

Page 1 of 5

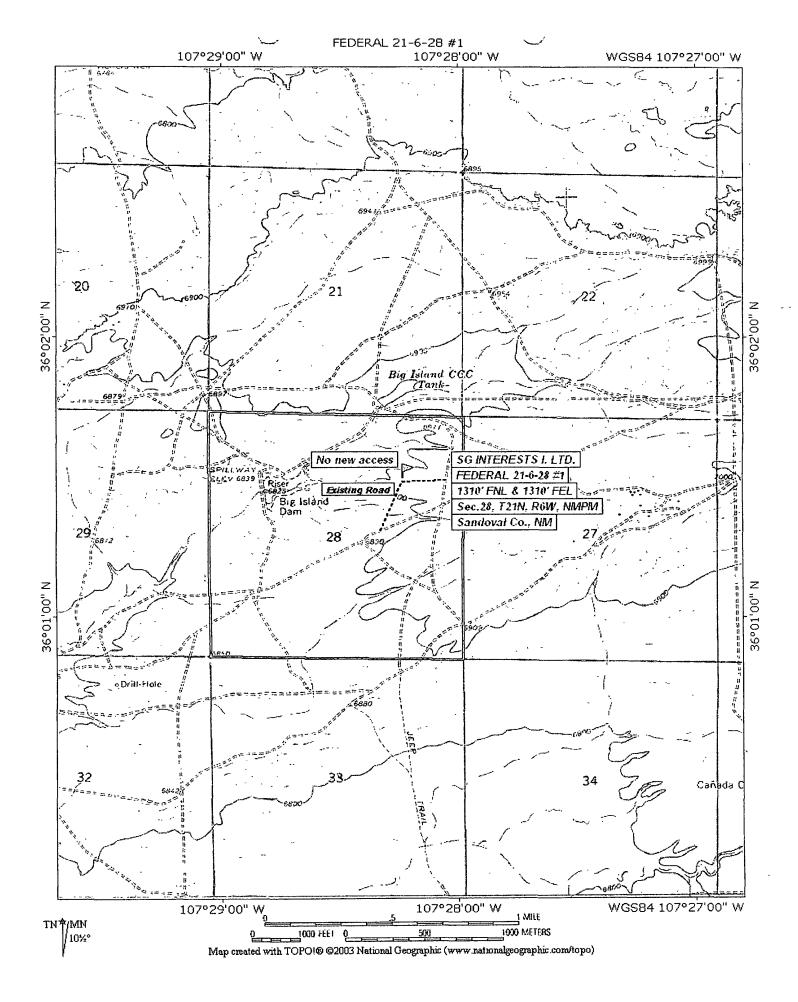
6.				
Fencing: Subsection D of 19.15.17.11 NMAC (Applies to permanent pits, temporary pits, and below-grade tanks)				
Chain link, six feet in height, two strands of barbed wire at top (Required if located within 1000 feet of a permanent residence, school, hospital, institution or church)				
Four foot height, four strands of barbed wire evenly spaced between one and four feet				
Alternate. Please specify The pit will be fenced with 4' Hog wire fence with 2 strands barbed wire on top				
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)				
8. 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 19.15.3.103 NMAC				
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.  - NM Office of the State Engineer - IWATERS database search; USGS; Data obtained from nearby wells	☐ Yes ⊠ No			
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 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)  - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	☐ Yes ⊠ No ☐ NA			
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	☐ 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 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.  - 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				
<ul> <li>Within an unstable area.</li> <li>Engineering measures incorporated into the design; NM Bureau of Geology &amp; Mineral Resources; USGS; NM Geological Society; Topographic map</li> </ul>	☐ Yes ⊠ No			
Within a 100-year floodplain FEMA map				

11.
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
<ul> <li>✓ Design Plan - based upon the appropriate requirements of 19.15.17.11 NMAC</li> <li>✓ Operating and Maintenance Plan - based upon the appropriate requirements of 19 15.17 12 NMAC</li> </ul>
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:
12.
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 (only for on-site closure) - based upon the requirements of Paragraph (3) of Subsection B of 19.15 17 9  Siting Criteria Compliance Demonstrations (only 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 (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:
Previously Approved Operating and Maintenance Plan API Number:(Applies only to closed-loop system that use
above ground steel tanks or haul-off bins and propose to implement waste removal for closure)
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
<ul> <li>Nuisance or Hazardous Odors, including H₂S, Prevention Plan</li> <li>Emergency Response Plan</li> </ul>
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
14.
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 Closed-loop System Alternative
Proposed Closure Method: Waste Excavation and Removal
<ul> <li>☐ Waste Removal (Closed-loop systems only)</li> <li>☑ On-site Closure Method (Only for temporary pits and closed-loop systems)</li> </ul>
☐ In-place Burial ☐ On-site Trench Burial
Alternative Closure Method (Exceptions must be submitted to the Santa Fe Environmental Bureau for consideration)
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

Four C-144 Oil Conservation Division Days 3 of 5

Waste Removal Closure For Closed-loop Systems That Utilize Above Ground Instructions: Please indentify the facility or facilities for the disposal of liquids,					
facilities are required.  Disposal Facility Name:	Dianagal Facility Downit Number				
Disposal Facility Name: Disposal Facility Permit Number Disposal Facility Name: Disposal Facility Permit Number					
Will any of the proposed closed-loop system operations and associated activities of Yes (If yes, please provide the information below) No					
Required for impacted areas which will not be used for future service and operations  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 G of 19.15.17.13 NMAC  Site Reclamation Plan - based upon the appropriate requirements of Subsection G of 19.15.17.13 NMAC					
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 Santá 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; Dat	a 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; Dat	a 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; Dat	a obtained from nearby wells	⊠ Yes □ No □ NA			
Within 300 feet of a continuously flowing watercourse, or 200 feet of any other sig lake (measured from the ordinary high-water mark).  - Topographic map; Visual inspection (certification) of the proposed site	nificant watercourse or lakebed, sınkhole, or playa	☐ Yes ⊠ No			
Within 300 feet from a permanent residence, school, hospital, institution, or church - Visual inspection (certification) of the proposed site; Aerial photo; Satellite		☐ Yes ☒ No			
Within 500 horizontal feet of a private, domestic fresh water well or spring that les watering purposes, or within 1000 horizontal feet of any other fresh water well or some NM Office of the State Engineer - iWATERS database; Visual inspection	pring, in existence at the time of initial application.	☐ Yes ☑ No			
Within incorporated municipal boundaries or within a defined municipal fresh water adopted pursuant to NMSA 1978, Section 3-27-3, as amended.  - Written confirmation or verification from the municipality; Written approx		☐ Yes ☑ No			
Within 500 feet of a wetland.  - US Fish and Wildlife Wetland Identification map; Topographic map; Visu	al 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	g and Mineral Division	☐ Yes ⊠ No			
Within an unstable area.  - Engineering measures incorporated into the design, NM Bureau of Geolog Society, Topographic map	y & Mineral Resources; USGS; NM Geological	☐ Yes ☑ No			
Within a 100-year floodplain FEMA map		☐ Yes ⊠ No			
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/Design Plan of Burial Trench (if applicable) based upon the appropriate requirements 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 19.15.17.13 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  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: Agent for SG Interests				
Signature: No. 100 No.	Date: February 3, 2012				
e-mail address: tripp@nikaenergy.com	Telephone <u>970-759-2701</u>				
(KC)	(only) OCD Conditions (see attachment)  Approval Date: 2/15/2012  OCD Permit Number:				
Closure Report (required within 60 days of closure completion): Subsection K of 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:					
Closure Method:  Waste Excavation and Removal On-Site Closure Method Alternative If different from approved plan, please explain.	e Closure Method   Waste Removal (Closed-loop systems only)				
	Disposal Facility Permit Number				
Closure Report Attachment Checklist: Instructions: Each of the following items 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)  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					
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):					
Signature:	Date:				
e-mail address:	Telephone.				



# District I 1625 N. French Dr, Hobbs, NM 88240 District II 1301 W. Grand Avenure, Artesia, NM 88210 District III 1000 Rio Brazos Rd, Aztec, NM 87410 District IV 1220 S. St. Francis Dr., Santa Fe, NM 87505

#### State of New Mexico

## Energy, Minerals & Natural Resources Department OIL CONSERVATION DIVISION

1220 South St. Francis Dr. Santa Fe, NM 87505

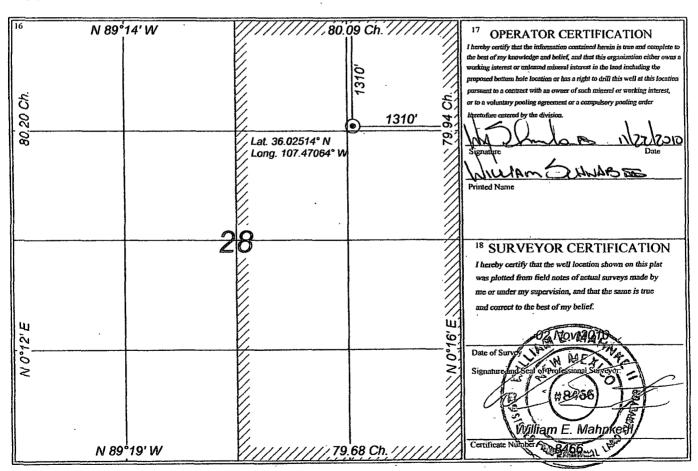
Form C-102
Revised October 12, 2005
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

☐ AMENDED REPORT

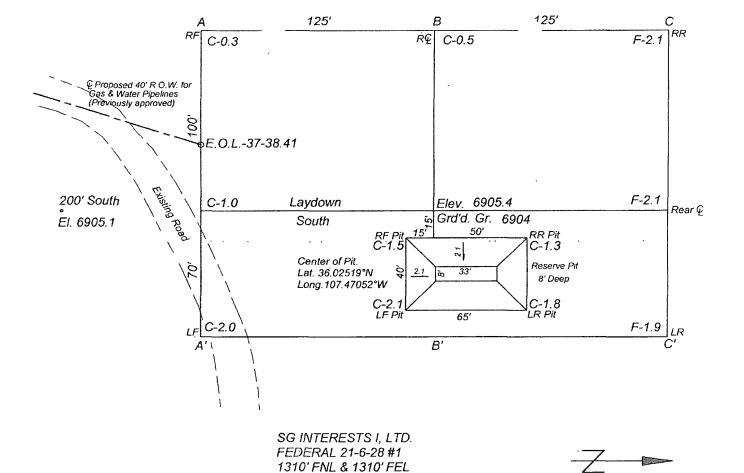
#### WELL LOCATION AND ACREAGE DEDICATION PLAT

	Pi Number <b>43-210</b>	12		<sup>2</sup> Pool Code 71629		³ Pool Name Basin Fruitland Coal				
<sup>4</sup> Property Co. 35512	ie			FEDERAL 21-6-28				` '		
<sup>7</sup> OGRID N 20572	).			<sup>8</sup> Operator Name SG INTERESTS I, LTD.				<sup>9</sup> Elevation <b>6905</b>		
					10 Surface L	ocation				
UL or Lot No.	Section	Township	Range	Lot Idn.	Feet from the	North/South Line	Feet from the	East/West Line	County	
Α	28	21 N	6 W		1310	North	1310	East	Sandoval	
			11 Bo	ottom Ho	le 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	
<sup>12</sup> Dedicated Acres 320 (E/2)	13 Joint o	or Infill 14	Consolidation	Code 15 C	l Order No.	<u> </u>	I	. <b>L</b>	<u> </u>	

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.



Bearings shown are from BLM Plat

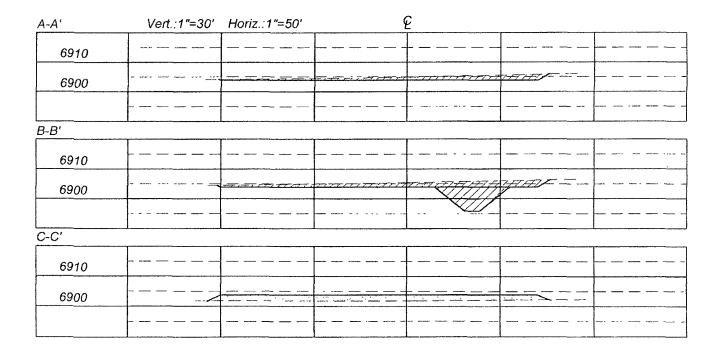


Sec.28, T21N, R6W, NMPM

Sandoval Co., NM

• 200' East El. 6908.0

Scale: 1"=50'





#### ENERGY SURVEYORS, INC.

P.O. Box 991 Farmington, NM 87499

e-mail: surveyor\_nm@yahoo.com Phone: 505-360-8142

#### Access Description for Federal 21-6-28 #1

From Counselor Trading Post on U.S. Hwy. 550, travel south on U.S. 550 ±0.1 miles, turn right on dirt road with sign "Star Lake Compressor-26 miles". This is the 0 miles point for this description. Follow dirt road (Rd. #46),

9.0 miles- Turn left on to a main road ±300 past a pipeline corridor,

- 13.0 miles- Turn left at water wells,
- 14.0 miles- At top of hill, take right fork,
- 15.4 miles- Turn left, continue easterly through Fed.21-6-29 #4 well pad, uphill through Fed.21-6-28 #3 well pad,
- 17.0 miles- Arrive at location.

#### **Tripp Schwab**

From: Tripp Schwab [tripp@nikaenergy.com]

Sent: Friday, February 03, 2012 3:20 PM

To: Mark Kelly (mark\_kelly@nm.blm.gov)

Subject: Landowner Notification

Re: Federal 21-6-28 #1, API 30-043-21111

Mark,

The requirements of the OCD pit rule 17 requires notification to the surface owner that we are planning to open a temporary drilling pit on the subject location. After drilling operations cease, the pit will then be closed. SGI plans to close the temporary pit per approved Federal APD and NMOCD rules.

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

Thank you for your time.

Tripp Schwab Nika Energy - Agent for SG Interests 970-259-2701 office 970-385-1598 fax

#### **Tripp Schwab**

From: Sent: Mail Delivery System [MAILER-DAEMON@mail brainstorminternet net]

Friday, February 03, 2012 3:21 PM

To:

tripp@nikaenergy.com

Subject:

Successful Mail Delivery Report

Attachments:

details.txt; Message Headers.txt





details.txt (510 B)

Message Headers.txt (1 KB)

This is the mail system at host mail.brainstorminternet.net.

Your message was successfully delivered to the destination(s) listed below. If the message was delivered to mailbox you will receive no further notifications. Otherwise you may still receive notifications of mail delivery errors from other systems.

The mail system

<mark\_kelly@nm.blm.gov>: delivery via relay[68.168.100.64]:25: 250 Ok: queued
as 67C2128EC003

Information from ESET NOD32 Antivirus, version of virus signature database 6856

The message was checked by ESET NOD32 Antivirus.

http://www.eset.com

Mark Kelly Bureau Of Land Management, DOI Farmington Field Office 1235 La Plata Highway, Suite A Farmington, NM 87401

February 3, 2012

RE: Federal 21-6-28 #1, API # 30-043-21111

#### Mark.

This is a follow up certified letter, to the e-mail, as per the requirements of the new OCD pit rule 17 requiring notification to the surface owner that we are planning to close a temporary drilling pit on the subject location. After drilling operations cease, SGI plans to close the temporary pit per the approved APD and the new NMOCD rules.

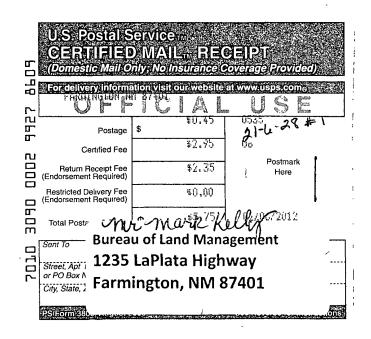
Please let me know if you have any questions or if this notification needs to be directed to someone else.

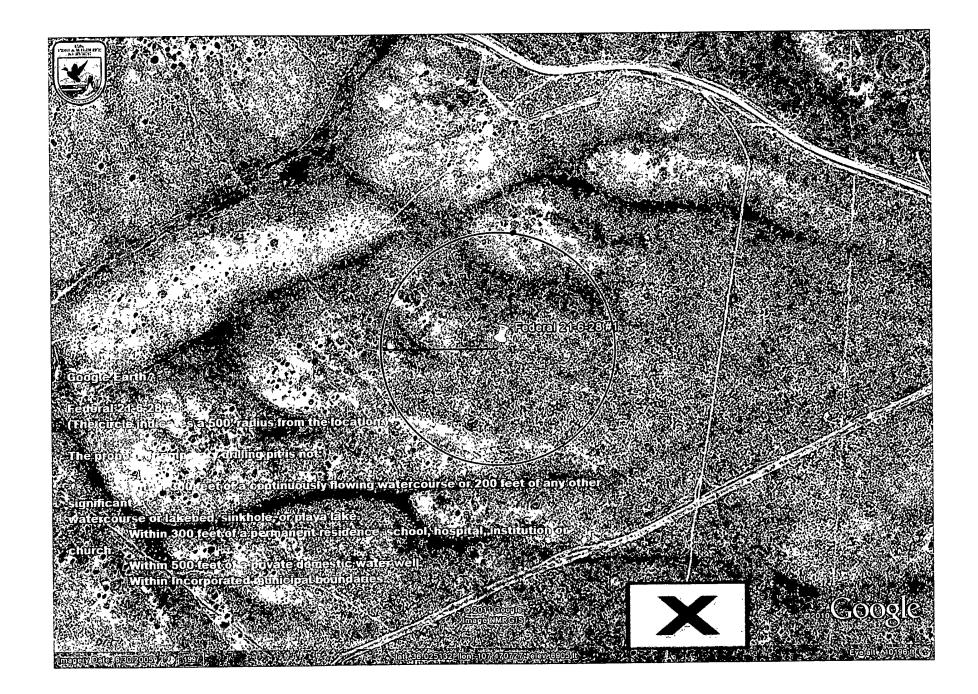
Thank you for your time.

Tripp Schwab President

Nika Energy Operating, LLC

Agent for SG Interests.





#### Hydrogeology Report for the SG Interests Federal 21-6-28 #1

The Federal 21-6-28 #1 located in Sandoval County, is in the upper southeastern reaches of the San Juan River drainage basin and in the San Juan Underground Water Basin as defined by the New Mexico Office of the State Engineer. 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 345 feet below the surface. The Ojo Alamo is a permeable conglomerate and medium to very coarse sandstone inter-layered 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 proposed well, Federal 21-6-28 #1, is located in the NENE quarter-quarter of section 28 T21N- R6W. Ground level elevation at this site is at 6905'. The approximate elevation of the water bearing formation is 6560'. No groundwater wells were identified within a mile radius of this location using the iWaters Database from the Office of the State Engineers. The closest known water well (POD #SJ 01704) is located over 5 miles to the east southeast. This well found water at 229 ft with a TD of 506 ft. The well is being pumped by a windmill.

#### Water Well Locations in Subject Area

Location (T, R, Section)	POD Number	Well Depth	Depth to Water	Water Column
21N 07W Sec 07	SJ 01824	100'	n/a	n/a
21N 07W Sec 07	SJ 03562	680'	240'	440'
20N 07W Sec 17	RG 38729	252'	110'	142'
20N 07W Sec 16	SJ 01415	512'	40'	472'
20N 07W Sec 22	SJ01416	15'	5'	10'
20N 07W Sec 22	SJ 01417	620'	10'	610'
20N 07W Sec 22	SJ 01418	20'	5'	15'
20N 07W Sec 34	SJ 01419	350'	30'	320'
20N 07W Sec 08	SJ 01705	125'	88'	37'
20N 07W Sec 34	SJ 02615	360'	200'	160'
20N 06W Sec 32	SJ 00119	5007'	180'	4827'
20N 06W Sec 32	SJ 00119 Explore-1	5656'	255'	5401'
20N 06W Sec 11	SJ 01704	506'	229'	277'
20N 05W Sec 22	RG 91231 POD-1	143'	78'	65'
21N 05W Sec 32	RG 29678	2238'	769'	1469'

#### Reference:

GROUND WATER ATLAS of the UNITED STATES Arizona, Colorado, New Mexico, Utah, HA 730-C, USGS, S.G. Robson and E.R. Banta, 1995

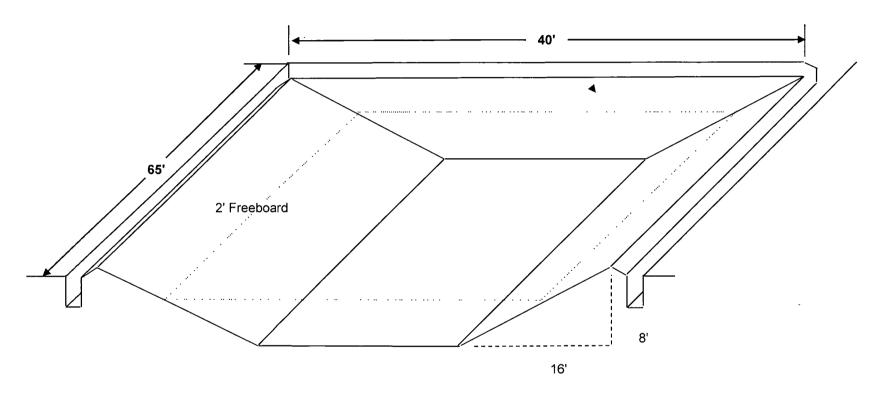
iWaters (Waters Database), New Mexico Office of the State Engineer, 2007

#### SG Interests I, Ltd.

#### **Temporary Pit Design & Construction Plan**

Re: Federal 21-6-28 #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.
- 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.



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: Federal 21-6-28 #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 drilling 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 drilling or completion 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 IADC reports and SGI daily drilling 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: Federal 21-6-28 #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:

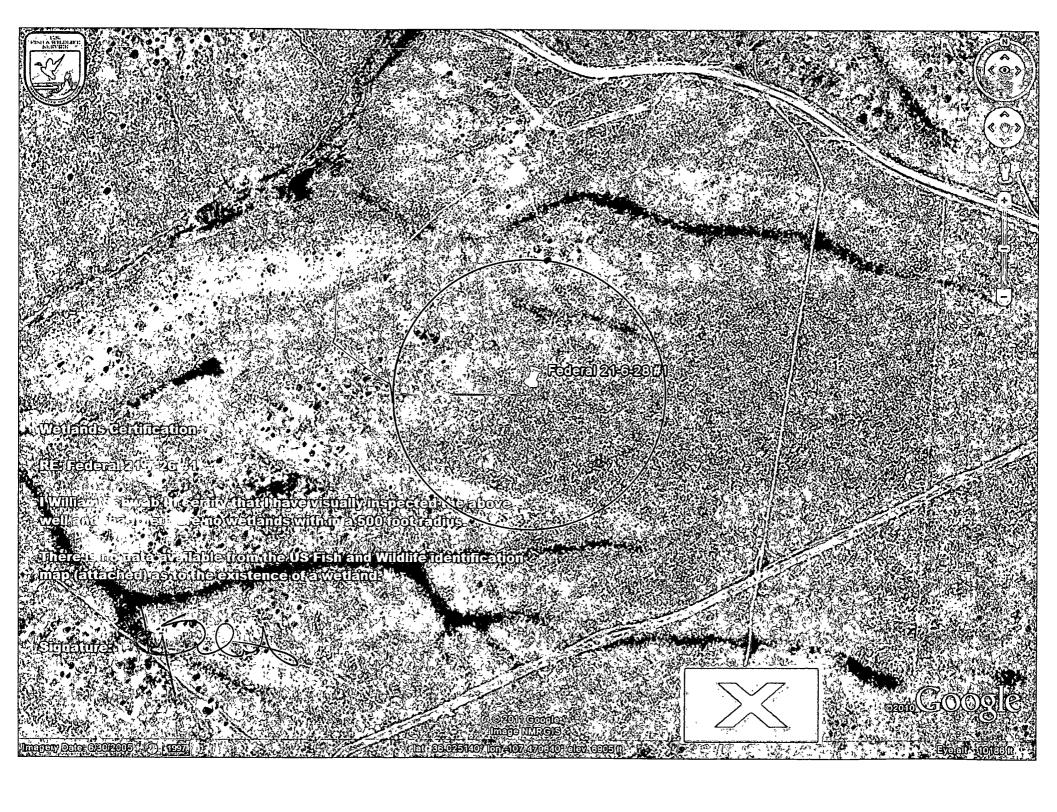
Details on capping and covering (where applicable)
Plot Plan (Pit Diagram)
Inspection Reports
Sampling Results
C-105

- 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

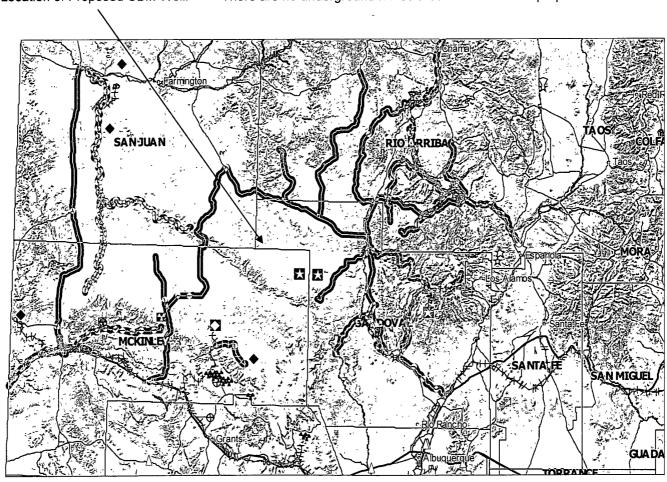
In the event the criteria are not met all contents and remediation will be handled per 19.15.17.13.B.1 NMAC. If ground water is 50'-100' below the bottom of the buried waste all limits are the same except the chloride limit is reduced to 500 mg/kg. The sampling can be taken prior to mixing but if the 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 Federal lands. Vegetative cover will equal 70% of the native perennial vegetative cover (un-impacted) 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 closed temporary pit will have a steel marker no less than four inches in diameter, extending four feet above mean ground level, extending and cemented in a hole three feet deep, in the center of the onsite burial upon completion of the closing. The marker will be permanently welded, stamped or engraved to include the operator name, lease name, well name and number, unit number, section, township, range, and indicator that the marker is an onsite burial location. SGI reserves the right to install a temporary flat plate marker, one foot by two feet, with the same information if it is deemed necessary for safe operation on the wellsite during the productive life of the well. A full size marker will then be installed upon final abandonment.



## Map of Mining Sites in Area of Interest

## Map from NM-EMNRD Website



#### **Unstable Area**

RE: Federal 21-6-28 #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 has a 2' cut and a 2' fill. The temporary drilling pit will be located in the cut of the cut side of the location.

