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
July 21, 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.

3581

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
- ☐ Modification to an existing permit
- ☐ Closure plan only submitted for an existing permitted or non-permitted 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.

1.
Operator: Synergy Operating, LLC OGRID #: 163458
Address: PO Box 5513, Farmington, NM 87499
Facility or well name: Synergy 21-7-5 # 142
API Number: 30-043-21036 OCD Permit Number:
U/L or Qtr/Qtr J Section 5 Township 21 N Range 7 W County: Sandoval County
Center of Proposed Design: Latitude 36.07855 deg North Longitude - 107.59733 deg West NAD: ☐ 1927 ☒ 1983
Surface Owner: ☒ Federal ☐ State ☐ Private ☐ Tribal Trust or Indian Allotment

2.
☒ **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: 850 Useable bbl Dimensions: L 60 ' x W 15' x D 10 '

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 approval of a permit or notice of 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

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MAY 2009
OIL CONS. DIV. DIST. 3

4.
☐ **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

5.
☐ **Alternative Method:**
Submittal of an exception request is required. Exceptions must be submitted to the Santa Fe Environmental Bureau office for consideration of approval.

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 4' hog wire type fence to prevent animals getting under, single strand barb wire on top

7.

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

9.

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.

10.

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)* - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	☐ Yes ☒ No ☐ NA
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	☐ 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

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
- ☒ 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: 30-043-21038 ✓ 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)*

13.
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_2S, 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

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
- ☐ 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 (Exceptions must be submitted to the Santa Fe Environmental Bureau for consideration)

15.
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

16.

Waste Removal Closure For Closed-loop Systems That Utilize Above Ground Steel Tanks or Haul-off Bins Only: (19.15.17.13.D NMAC)

Instructions: Please indentify the facility or facilities for the disposal of liquids, drilling fluids and drill cuttings. Use attachment if more than two facilities are required.

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 occur on or in areas that *will not* be used for future service and operations?

☐ 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 I of 19.15.17.13 NMAC

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

17.

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 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. - 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

18.

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 19.15.17.11 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

19.
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): Thomas E. Mullins Title: Engineering Manager

Signature: Date: 05 – 21 – 2009 (Version # 1)

e-mail address: tom.mullins@synergyoperating.com Telephone: 505-320-1751 or 505-599-4905

20.
OCD Approval: ☒ Permit Application (including closure plan) ☐ Closure Plan (only) ☐ OCD Conditions (see attachment)

OCD Representative Signature: **Approval Date:** 5-27-09

Title: Envir/Spec **OCD Permit Number:**

21.
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:**

22.
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.

23.
Closure Report Regarding Waste Removal Closure For Closed-loop Systems That Utilize Above Ground Steel Tanks or Haul-off Bins Only:

Instructions: Please indentify the facility or facilities for where the liquids, drilling fluids and drill cuttings were disposed. Use attachment if more than two facilities were utilized.

Disposal Facility Name: Disposal Facility Permit Number:

Disposal Facility Name: Disposal Facility Permit Number:

Were the closed-loop system operations and associated activities performed on or in areas that *will not* be used for future service and operations?
☐ Yes (If yes, please demonstrate compliance to the items below) ☐ No

Required for impacted areas which will not be used for future service and operations:
☐ Site Reclamation (Photo Documentation)
☐ Soil Backfilling and Cover Installation
☐ Re-vegetation Application Rates and Seeding Technique

24.
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)
☐ 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

25.
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:

DISTRICT I
1625 N. French Dr., Hobbs, N.M. 88240

DISTRICT II
811 South First, Artesia, N.M. 88210

DISTRICT III
1000 Rio Brazos Rd., Aztec, N.M. 87410

DISTRICT IV
2040 South Pacheco, Santa Fe, NM 87505

State of New Mexico
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION
2040 South Pacheco
Santa Fe, NM 87505

Form C-102
Revised August 15, 2000

Submit to Appropriate District Office
State Lease – 4 Copies
Fee Lease – 3 Copies

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

[1] API Number	[2] Pool Code	[3] Pool Name
		FRUITLAND COAL

[4] Property Code	[5] Property Name	[6] Well Number
	SYNERGY 21-7-8	139

[7] OGRID No.	[8] Operator Name	[9] Elevation
163458	SYNERGY OPERATING, L.L.C.	6676'

[10] Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
B	8	21N	7W		710'	NORTH	1495'	EAST	SANDOVAL

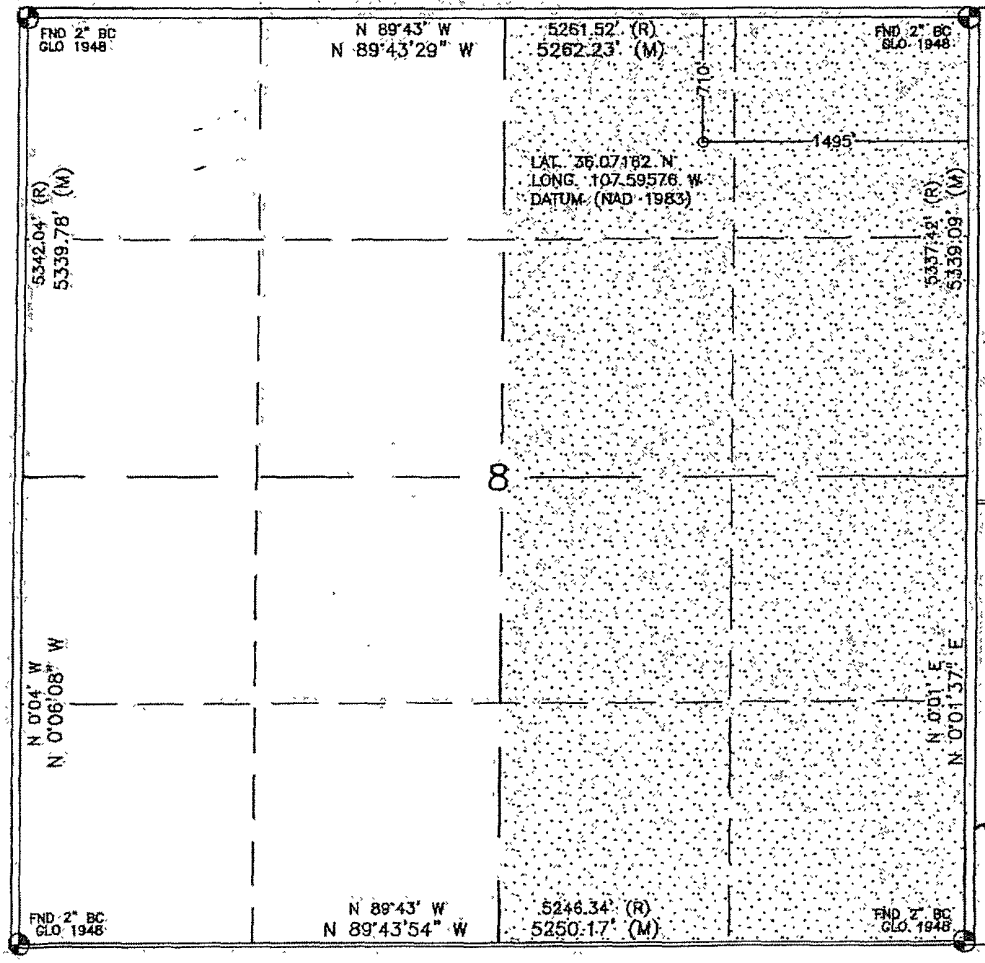
[11] Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County

[12] Dedicated Acres	[13] Joint or Infill	[14] Consolidation Code	[15] Order No.
320 ~~322.13~~ Acres – (E/2)			

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

[16]



[17] OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief

Signature

THOMAS E. MULLINS
Printed Name

ENGINEERING MANAGER
Title

4-5-06
Date

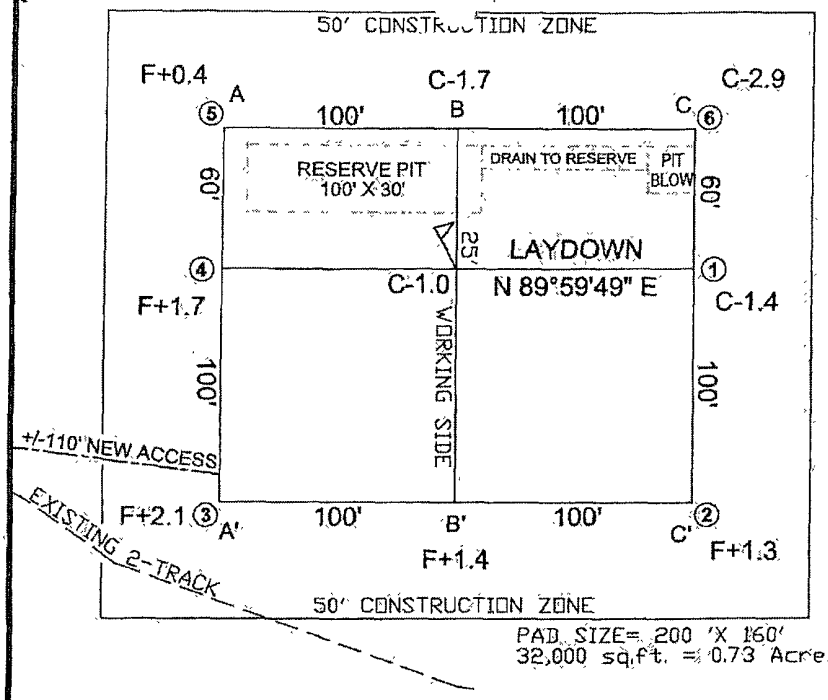
[18] SURVEYOR CERTIFICATION

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.

MARCH 29, 2006
Date of Survey

Signature and Seal of Professional Surveyor:

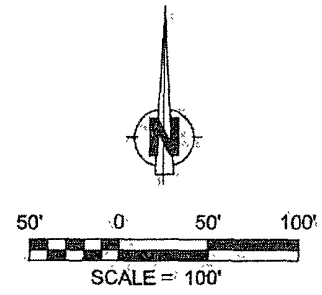
DAVID R. RUSSELL
Certificate Number 10201



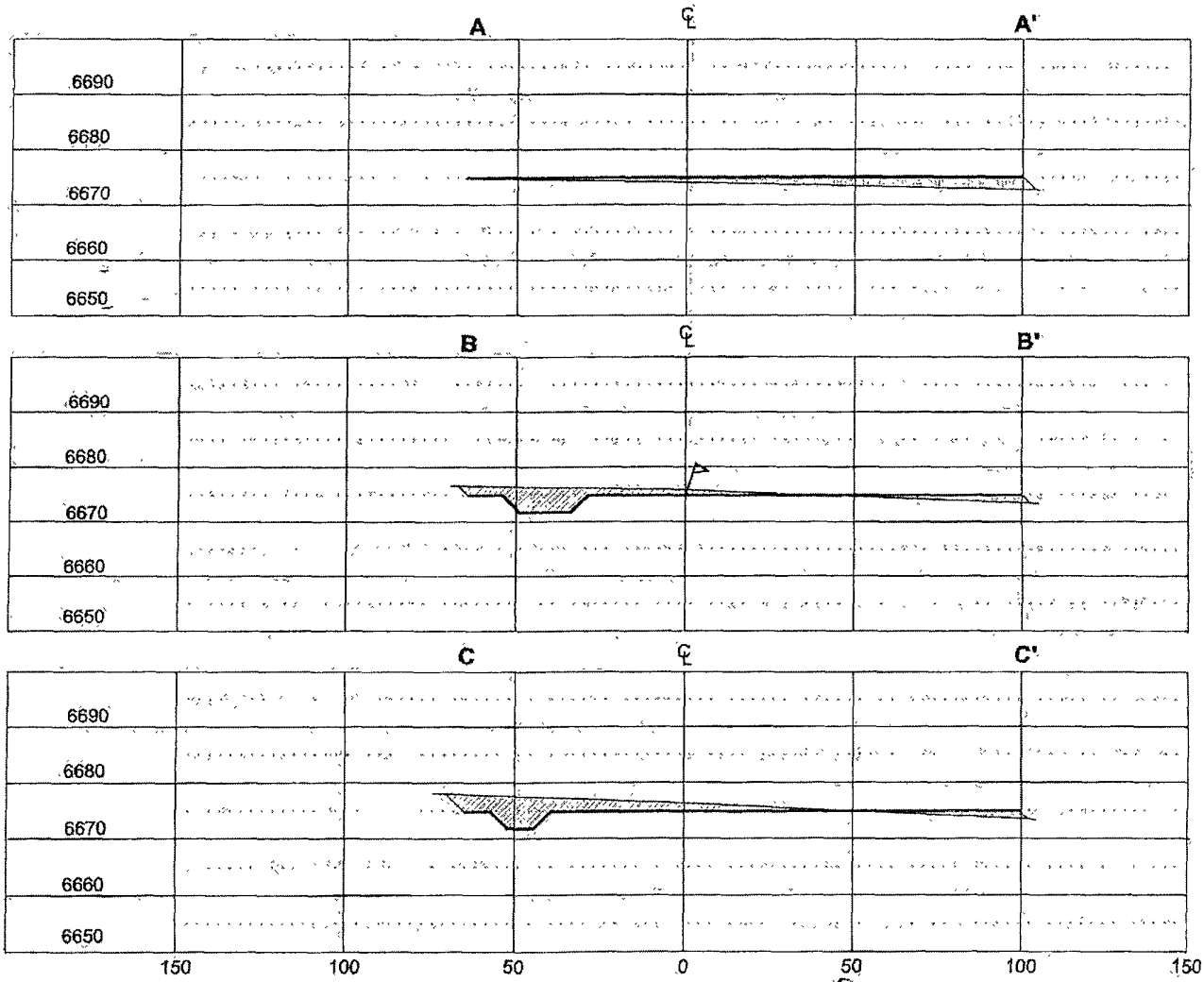
PAD SIZE= 200 'X 160'
32,000 sq.ft. = 0.73 Acres

SYNERGY OPERATING, L.L.C.

SYNERGY 21-7-8 #139
710' FNL & 1495' FEL
LOCATED IN THE NW/4 NE/4 OF SEC. 8,
T21N, R7W, N.M.P.M.,
SANDOVAL COUNTY, NEW MEXICO
ELEVATION: 6676', NAVD 88

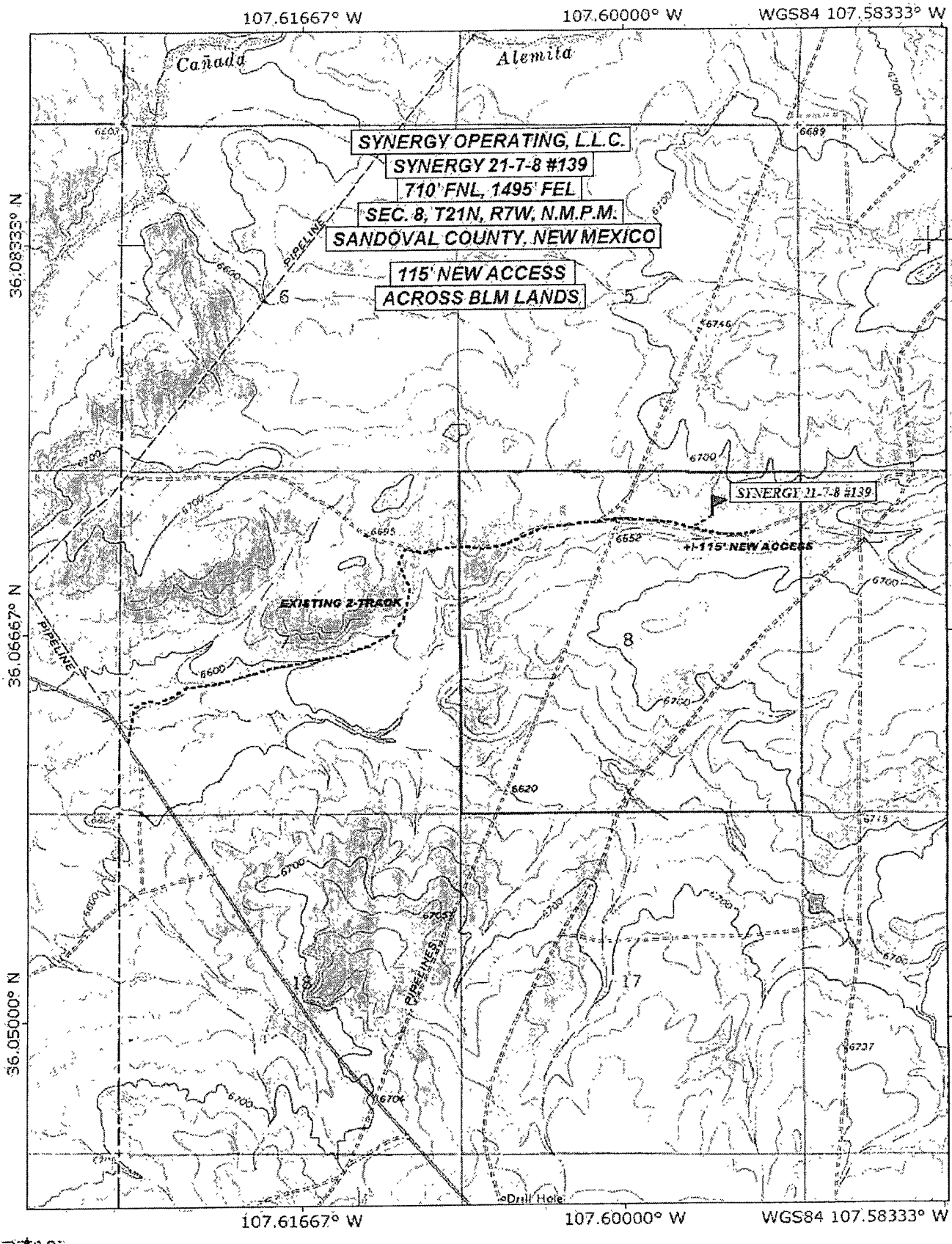


LATITUDE: 36.07162 N
LONGITUDE: 107.59576 W
DATUM: NAD 83



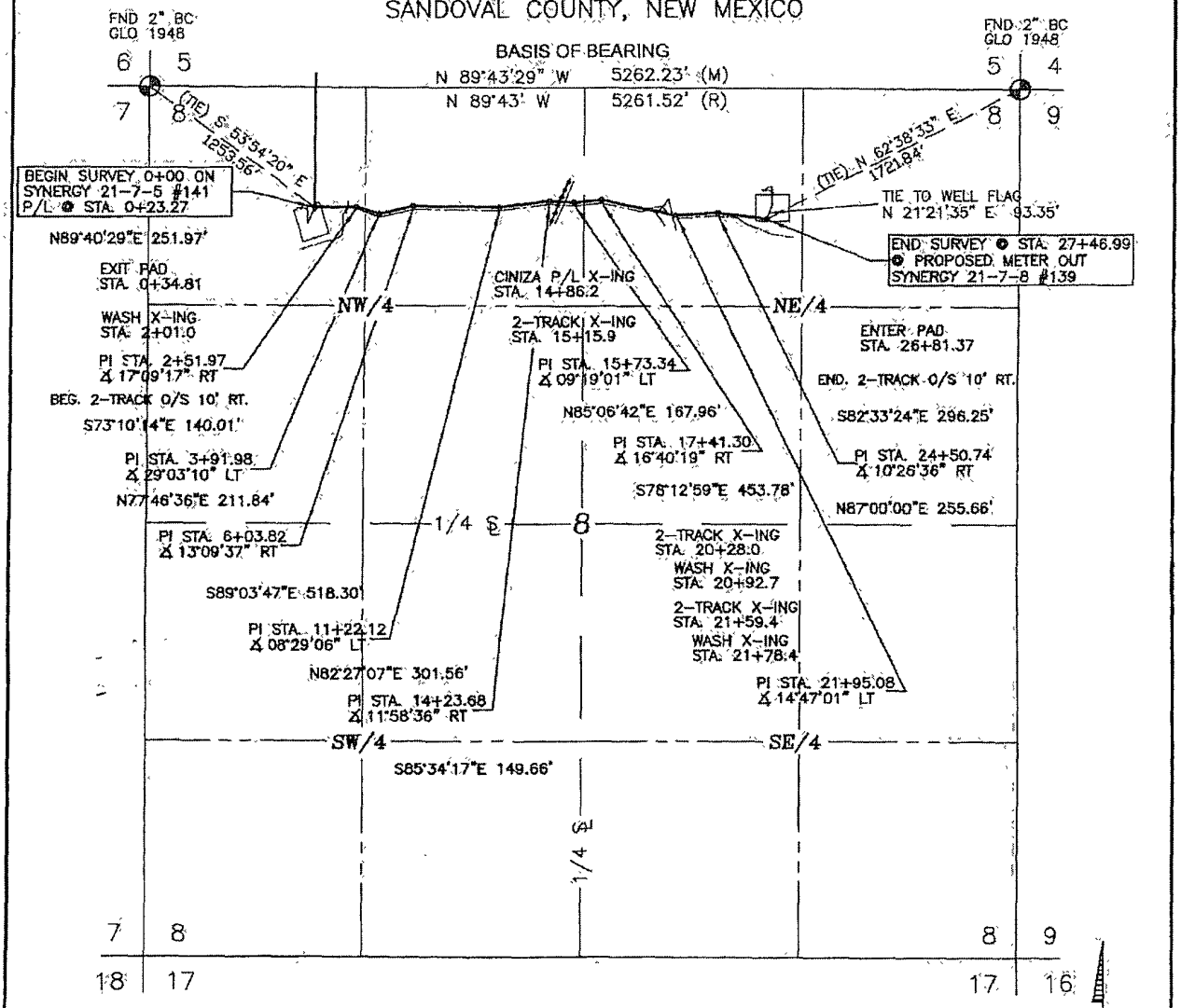
HORIZ. SCALE: 1"=50'
VERT. SCALE: 1"=30'

Russell Surveying
1409 W. Aztec Blvd. #5
Aztec, New Mexico 87410
Office Ph. 505-334-8637



Map created with TOPO!® ©2003 National Geographic (www.nationalgeographic.com/topo)

A PROPOSED PIPELINE AND ACCESS SURVEY
FOR
SYNERGY OPERATING, L.L.C.
SYNERGY 21-7-8 #139
NW/4 AND NE/4 SECTION 8
T21N, R7W, N.M.P.M.
SANDOVAL COUNTY, NEW MEXICO



1.) BASIS OF BEARING: BETWEEN FOUND MONUMENTS AT THE NORTHWEST CORNER AND THE NORTHEAST CORNER OF SECTION 8, TOWNSHIP 21 NORTH, RANGE 7 WEST, N.M.P.M. SANDOVAL COUNTY, NEW MEXICO. LINE BEARS: N 89°43'29" W A DISTANCE OF 5262.23 FEET AS MEASURED BY G.P.S.

2.) LOCATION OF UNDERGROUND UTILITIES DEPICTED ARE APPROXIMATE. PRIOR TO EXCAVATION UNDERGROUND UTILITIES SHOULD BE FIELD VERIFIED. ALL CONSTRUCTION ACTIVITIES SHOULD BE FIELD VERIFIED WITH NEW MEXICO ONE-CALL AUTHORITIES AT LEAST 48 HOURS PRIOR TO CONSTRUCTION.

~ SURFACE OWNERSHIP ~		
BLM LANDS:		
0+00 TO 27+46.99		
2746.99 FT/. 166.48 RODS		
DATE OF SURVEY	3/29/06	JE,RR

SCALE IN FEET
0 500 1000

I, DAVID R. RUSSELL, A NEW MEXICO REGISTERED PROFESSIONAL SURVEYOR, CERTIFY THAT I CONDUCTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THAT THIS SURVEY AND PLAT MEET THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO.

DAVID R. RUSSELL, PLS
NEW MEXICO L.S. #10201

DATE: 2006

Russell Surveying, Inc.
Specializing in Oil Field Surveying
1409 W. Aztec Blvd. #5, Aztec, N.M. 87410
Phone (505) 334-8637
REGISTERED LAND SURVEYOR
NEW MEXICO LS #10201

DRAWN BY: R.R. R.O.W. #SYN021 CAD FILE: SYN021PL DATE: 3/31/06

Synergy Operating, LLC
New Mexico

Pit Design and Construction Plan

In accordance with Rule 19.15.17, the following information describes the design and construction of our temporary reserve pit for drilling shallow (< 2500') Fruitland Coal/Pictured Cliffs locations. This should be considered Synergy's standard for our drilling reserve pits. A separate plan would be submitted for any other temporary reserve pit or workover pit that does not conform to this plan.

General Plan:

1. Synergy will design and construct a temporary pit to contain liquids and solids and prevent contamination of fresh water resources, ground water resources, and to protect the public health and the environment.
2. Prior to constructing the pit, topsoil will be stockpiled in the construction zone areas for later use in the revegetation and restoration of the well location.
3. Synergy will post a well sign, not less than 12" x 24", on the well site prior to construction of the temporary pit. The sign will list the operator of record, the location of the well, lease number, and emergency contact information.
4. **ADMINISTRATIVE APPROVAL:** Synergy shall construct all new fences of 48" steel mesh field fence, with a single strand of barb wire on top. T-posts shall be installed every 10 to 12 feet and the corners shall be anchored utilizing a secondary T-post. Temporary pits will be fenced at all times excluding the drilling operation, when the front side (working side) of the fence will be temporarily removed for operational purposes. No fence posts or T-posts shall be driven through the liner material nor the anchor trench area. Due to sheep in the area, this fencing is more protective of the wildlife and grazing animals.
5. Synergy shall construct the temporary pit so that the foundation and interior slopes are firm, free of rocks, debris, sharp edges, or irregularities to prevent liner failure.
6. **ADMINISTRATIVE APPROVAL**: Synergy requests an exemption to the sloping criteria on two of the four sides of the drilling reserve pit. The working side and far side of the pit shall have a steeper slope (almost vertical) to reduce pad size per compliance with BLM rules, facilitate proper liquid suction to the pumping equipment. Ample liner material will be utilized to avoid stress to the liner. The other 2 sides of the pit shall have a 2 to 1 slope. In addition two (2) rope ladders will be placed on these non-conforming sides of the pit should a worker unintentionally enter the drilling reserve pit and require assistance to climb out of the pit without damaging the liner material. **USE OF THIS DESIGN MINIMIZES FIELD SEAMS.**
7. Pit walls will be walked down by a crawler type tractor following construction for the 2 to 1 slope portion.
8. All temporary pits will be lined with a minimum of a 20-mil, string reinforced, LLDPE liner, complying with EPA SW-846 method 9090A requirements.
9. Geo-textile will be installed beneath the liner when rocks, debris, sharp edges, or irregularities cannot be avoided.

10. All liners will be anchored in the bottom of a compacted earth filled trench at least 18 inches deep.
11. Synergy will endeavor to minimize the use of liner seams and orient them up and down, not across slope. Factory seams will be used whenever possible. Synergy will ensure that all field seams are welded by qualified personnel. Field seams will be overlapped four to six inches and will be oriented parallel to the line of maximum slope. Synergy will minimize the number of field seams in corners and irregularly shaped areas.
12. The liner material shall be protected from any fluid force or mechanical damage through the use of mud pit slides/boards, PVC, or a manifold system.
13. The pit shall be protected from run-off by constructing and maintaining diversion ditches around the location and around the perimeter of the pit in some instances as necessary.
14. The volume of the pit shall not exceed 10-acre feet, including freeboard area.
15. No temporary blow pit area is required for this drilling reserve pit design.
16. No drainage area is necessary for this drilling reserve pit design.

Synergy Operating, LLC
New Mexico

Operating and Maintenance Plan

In accordance with Rule 19.15.17 the following information describes the operation and maintenance of temporary pits on Synergy locations. This plan should be considered standard procedure for all shallow Fruitland Coal/Pictured Cliffs wells less than (2,500') in depth. A separate plan will be submitted for any temporary pit which does not conform to this plan.

General Plan:

1. Synergy will design and construct a temporary pit to contain liquids and solids and prevent contamination of fresh water resources, ground water resources, and to protect the public health and the environment.
2. Synergy will conserve drilling fluids by transferring liquids to this reserve pit prior to the rig arrival. All other drilling fluids will be disposed at Basin Disposal Inc., permit # NM-01-005.
3. Synergy will not discharge nor store any hazardous waste in any temporary pit.
4. If any pit liner's integrity is compromised, or if any penetration of the liner occurs above the liquid's surface, then Synergy shall notify the Aztec Division office by phone, or e-mail within 48 hours of the discovery and Synergy shall repair or replace the damaged liner.
5. If a leak develops below the liquid's level, Synergy shall remove all liquids above the damaged liner within 48 hours and repair or replace the damaged liner. Synergy shall notify the Aztec Division office (334-6178) by phone, facsimile, or e-mail within 48 hours of the discovery of leak(s) less than 25 bbls. Synergy shall immediately notify the Aztec Division office as required pursuant to Subsection B of 19.15.3.116 NMAC with 24 hours of discovery of a leak(s) greater than 25 bbls. *Immediate verbal notification shall be Synergy's standard for any/all leak(s) that are identified, regardless of the suspected volume.*
6. The liner material shall be protected from any fluid force or mechanical damage through the use of mud pit slides/boards, PVC, or a manifold system.
7. The pit shall be protected from run-off by constructing and maintaining diversion ditches around the location and around the perimeter of the pit in some instances as necessary.
8. Synergy shall immediately remove any visible layer of oil from the surface of the temporary pit after cessation of drilling operations. Oil absorbent booms will be utilized to contain and remove oil from the pit's surface. No oil formations are anticipated for penetration during these shallow drilling operations. An oil absorbent boom will be stored on-site until pit closure.
9. Only fluids which are generated during the drilling process may be discharged into this temporary lined reserve pit.
10. Synergy will maintain the temporary pit free of miscellaneous solid waste, trash, or debris.
11. During drilling operations, Synergy will inspect the temporary pit at least once daily to ensure compliance with this plan. Inspections will be logged in the IADC report.

Synergy will file a written notice of this inspection log and its associated information with the OCD upon closure of this pit.

12. After drilling operations, Synergy will immediately remove the fluids in the temporary pit and then inspect the temporary pit at least once weekly to ensure compliance with this plan. Inspections will be logged into internal Synergy reports and Synergy will file a written notice of this continued inspection log and its associated information with the OCD upon closure of this pit.
13. Synergy shall maintain at least two (2) feet of freeboard for this temporary pit.
14. Synergy shall remove all free liquids from a temporary pit within 30 days from the date of drilling rig release.

Synergy Operating, LLC
New Mexico

Closure Plan

In accordance with Rule 19.15.17 the following information describes the operation and maintenance of temporary pits on Synergy locations. This plan should be considered standard procedure for all shallow Fruitland Coal/Pictured Cliffs wells less than (2,500') in depth. A separate plan will be submitted for any temporary pit which does not conform to this plan.

All closure activities will include proper documentation and be available for review upon request and will be submitted to OCD within 60 days of completion of the pit closure. The closure report will be filed on C-144 and incorporate the following:

a) Details of the mixing, capping, and covering, where applicable
b) Seed mix and labels from reseeding.
c) Plot Plan (Pit Diagram)
d) Inspection Reports and Detail
e) Sampling results
f) C-105 plat
g) Copy of deed notice, Private or State lands, will be filed in County Clerk. Notice will be filed with BLM on federal lands.

General Plan:

1. All freestanding liquids will be removed at the start of the pit closure process. These liquids will be recycled, reused, reclaimed, or disposed of in a Division approved facility. This facility will be Basin Disposal Inc., permit # NM-01-005.
2. The preferred method of closure for all temporary pits will be on-site IN-PLACE burial, assuming that all the criteria listed in sub-section (B) of 19.15.17.13 NMAC are met.
3. The surface owner shall be notified of Synergy's closing of this temporary reserve pit as per the approved closure plan using certified mail, return receipt, or e-mail notification and receipt.
4. Within 6 months of the drilling rig departing the location, Synergy will ensure that this temporary pit is closed, re-contoured, and reseeded.
5. Prior to commencing final closure activities. Notice of Closure will be given to the Aztec Division office between 72 hours (3 days) and one week of the closure via e-mail, or verbally. The notification of closure will include the following: Operator's Name, Well Name, Location, and API number.
6. The liner of the temporary pit shall be removed above the "mud level" line after stabilization. Removal of the liner will consist of manually or mechanically cutting the liner at the mud level and removing all the remaining liner material from the well site. Extra care will be taken to remove all of the liner including the edges entrenched or buried. All of this excess liner material will be taken to a licensed disposal facility. San Juan County Landfill.
7. Pit contents shall be mixed with non-waste containing earthen 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 earthen 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. Please note there will be solid cement material within the pit.

8. A five-point composite sample will be taken of the pit using sampling tools and all samples tested per Subsection (B) of 19.15.17.13 (B)-1-b. In the event that the criteria are not met, a second confirmation sample will be taken prior to requesting permission to "Dig and Haul" the contents.
9. Standards that must be met include: Benzene less than 0.2 mg/Kg, BTEX less than 50 mg/Kg, TPH less than 2,500 mg/Kg, GRO/DRO less than 500 mg/Kg, Chlorides less than 1000 mg/Kg as appropriate per the depth to ground water.

Components	Tests 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	1000/500

10. Upon completion of the solidification and testing standards being passed, the pit area will be back filled with compacted, non-waste containing, earthen material. A minimum of four (4) feet of cover shall be achieved and the cover shall include one foot of suitable material to establish vegetation at the site.
11. During the stabilization process, if the liner is ripped or torn by equipment, the Aztec Division (334-6178) shall be notified immediately. The liner will be repaired if possible. If the liner cannot be repaired, then the contents of the pit above the liner tear or hole will be removed and hauled to a permitted facility.
12. If the contents of the reserve pit need to be hauled, then they will be transported to the Envirotech Land Farm located approximately 16 miles south of Bloomfield on Angel Peak Road, Permit # NM-01-0011.
13. Recontouring of the location will match fit, shape, line, form, and texture of the surroundings. Reshaping will include drainage control, prevent ponding, and prevent erosion. Natural drainages will be unimpeded and water bars, and/or silt traps will be placed in areas where needed to minimize erosion. Final re-contour shall have a uniform appearance with smooth surface, fitting the natural landscape.
14. Notification will be sent to the OCD when the reclaimed area is re-seeded.
15. Synergy shall seed the disturbed areas the first growing season after the operator closes the pit. Seeding will be accomplished bia drilling on the contour whenever practical or by other division approved methods. BLM or Forest Service stipulated seed mixes will be used on Federal lands per the APD COAs. Vegetative cover will equal 70 percent of the native perennial vegetative cover (un-impacted) consisting of at least 3 native plant species, including at least one grass, but not including noxious weeds, and maintain that cover through two (2) successive growing seasons. Repeat seeding or planting will be continued until successful vegetative growth occurs.
16. **ADMINISTRATIVE APPROVAL:** The temporary pit will be located with a steel plate marker set below ground level at least 3 feet, such that equipment can travel above the ground and it does not pose a vehicle hazard or perching location for birds of prey. This marker shall contain a flat 12" square steel plat that clearly identifies the well name, the

location, and that an in-place burial of pit contents occurred at this location. Final GPS coordinates of this marker will be submitted on the closure form. After final P&A of the well, the above ground riser will be installed.

Project Particulars
Synergy 21-7-5 # 142 well location

Review of this proposed location indicates 7" of annual precipitation and 55" of potential evaporation. No flood plain impacts, nor other surface impacts are identified. Surface soil conditions appear to contain a significant quantity of native salt due to erosion of surface features.

Synergy Operating, LLC proposes to construct a temporary lined reserve pit to drill this shallow Fruitland Coal well to a depth of 950 feet. The mud system will utilize sacked Sodium Bentonite clay "gel" in Fresh Water. One 5 gallon container of Poly-Plus polymer will also be utilized to clean the hole and stabilize the hole. No other additives are anticipated. These are the exact same additives used to drill water wells.

A background soil sample will be taken at the bottom of the reserve pit, prior to liner installation.

There will be no Blow/Burn pit as drawn on the original Survey plat. Instead the pit design incorporates best management practices to minimize the location size and facilitate safe operational access to the well and associated drilling equipment.

The dimensions of the proposed reserve pit are shown on the diagram. 60 feet in length, 15 feet in width, and at least 10 feet in depth. Two of the sides will have the requested 2 to 1 slope, the other 2 sides will have a rather steep slope. Liner seams will be oriented properly to minimize any possible stretching, tearing, or fluid leakage. The useable volume of this pit design will be approximately 850 bbls after consideration for slope design.

The projected hole volume is: 18.2 bbls for the surface hole and 43.67 bbls for the 7-7/8" production hole. This total cuttings volume of 61.8 bbls will likely increase in volume due to real world effects by a factor of 4. Therefore expected hole volume will approach 247 bbls of cuttings. An additional 15 to 20 bbls of solid cement material will be placed into the reserve pit.

Following dewatering and drying, it is expected that the cuttings/cement volume will be approximately 100 bbls. Up to 20% of this material may be cement. This material will then be blended with up to 300 bbls of clean material. This combined 400 bbls of material will then be buried at least four (4) feet below the projected surface grade level.

The area will be covered and revegetated with the prescribed BLM seed mix at different pounds live seed per acre or greater:

Western Wheatgrass (4.0 PLS/A), Indian Ricegrass (2.5 PLS/A), Glue Gramma (1.5 PLS/A), Antelope Bitterbrush (0.1 PLS/A), Four-wing Saltbrush (0.25 PLS/A), Small Burnet (1.0 PLS/A).

A sample of the blended stabilized material will be taken and sampled for the various constituent levels.

It is anticipated that the well will be drilled with a daylight drilling operation and take between 3 and 5 days to complete. The pit will be emptied of free liquids as rapidly as possible and the closure process commenced appropriately.

Synergy Operating, LLC
New Mexico

Synergy 21-7-5 # 142
Siting Critera Discussion

1. Based upon area historical information. Groundwater is projected to be greater than 100 feet below the bottom of the temporary lined reserve pit.

2. The temporary pit is not within 300 feet of a continuously flowing water course, or 200 feet of any other watercourse, lakebed, sinkhole, or playa lake measured (measured from ordinary high water mark). See the attached Topographic map.

3. The temporary pit is not within 300 feet of a permanent residence, school, hospital, institution, or church in existence at the time of initial application. See the attached Aerial photograph.

4. The temporary pit is not within 500 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. See the iWATERS database.

5. The temporary pit is not located within the incorporated municipal boundaries or with a defined municipal fresh water well field covered under a municipal ordinance adopted pursuant to NMSA 1978 Section 3-27-3, as amended.

6. The temporary pit is not located within 500 feet of a wetland.

7. The temporary pit is not located within the area overlying a subsurface mine.

8. The temporary pit is not located within an unstable area.

9. The temporary pit is not located within a 100-year floodplain area.

Synergy Operating, LLC
New Mexico

Synergy 21-7-5 # 142
Hydro-Geologic Information

The Synergy # 142 well is located on Federal surface in the Chaco Slope portion of the San Juan Basin of New Mexico. The region is characterized by broad, gentle, arid mesas, broken by numerous, small deep cutting arroyos and larger, westerly trending valleys drained by large arroyos.

A records search of the NM Office of the State Engineer – iWATERS database was conducted for the entire township, with a single well located in Section 7 of the township with a depth to water of 240 feet. Personal conversations with area residents gave an indication that water was not obtained until actually drilling to a depth of almost 500 feet. This water well is located almost 1.5 miles from the subject drilling location.

Water was not used for drinking purposes, but used to flush toilets, wash, and shower. This water could not be used on plants as the salt content killed their plants.

The main source of stock water in the region is encountered in valley-fill deposits in existing arroyos at shallow depths. Synergy has repaired an earthen dam near the location to collect rain and surface water for livestock approximately 1 mile southwest from this well location, per BLM range management request.

The proposed temporary pit area is not located in an arroyo, the closest arroyo is over 300 feet away.

The surface formation in this area is the Ojo Alamo interval. The Kirtland (265' Top) & Fruitland formation top (453') would be the next formations of interest. It is believed that the Fruitland formation is the likely groundwater reservoir in this area.

References:

Stone, Lyford, Frenzel, Mizell and Padgett (1983) – Hydrogeology and water resources of San Juan Basin, New Mexico – Hydrologic Report # 6 – New Mexico Bureau of Mines and Mineral Resources

Stone, W. J. (2002) – Ground Water and Energy Development in the San Juan Basin – Decision Maker's Field Guide 2002 – Los Alamos National Laboratory – Chapter 1 – Background Geology

Personal Communication with Mr. Rodney Vincent – Bible Baptist Shepherd – Caleb Mesa School

New Mexico Office of the State Engineer
Water Column/Average Depth to Water

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are smallest to largest) (NAD83 UTM in meters) (In feet)

POD Number	Sub basin	Use	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Depth Well	Depth Water	Water Column
SJ 01824		MUL	SA	3	3	1	07	21N	07W	263575	3994603*	100		
SJ 03562		SAN	SA	3	3	1	07	21N	07W	263575	3994603*	680	240	440

Average Depth to Water **240 feet**
Minimum Depth **240 feet**
Maximum Depth **240 feet**

Record Count: 2

PLSS Search:

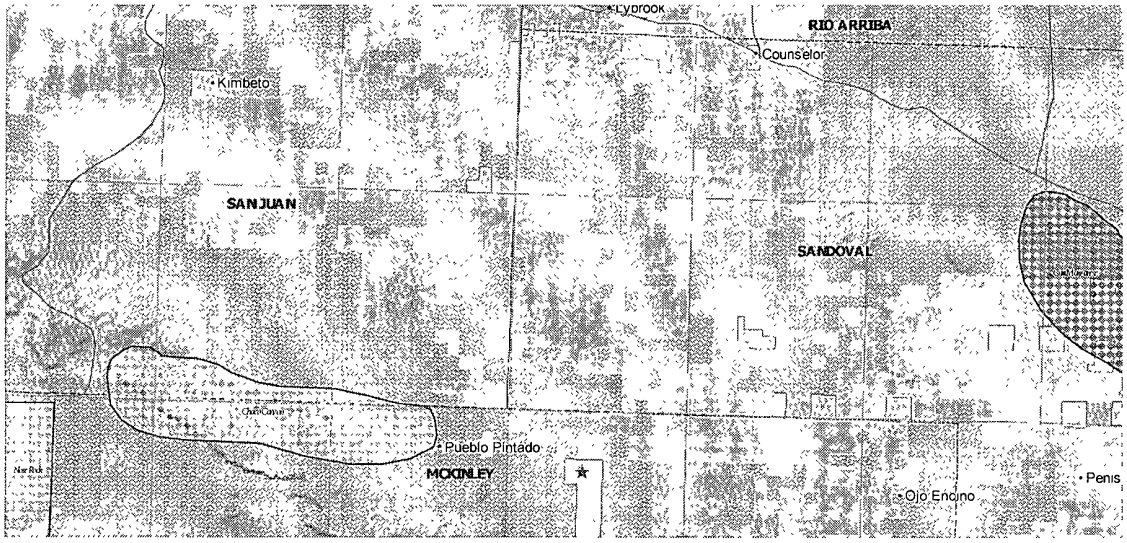
Township: 21N Range: 07W

? This is the same well? Synergy has logged this water well which supplies the Bible Baptist Shepard School and Mr. Vincent's Home. It is located a significant distance from our activity in Section 5

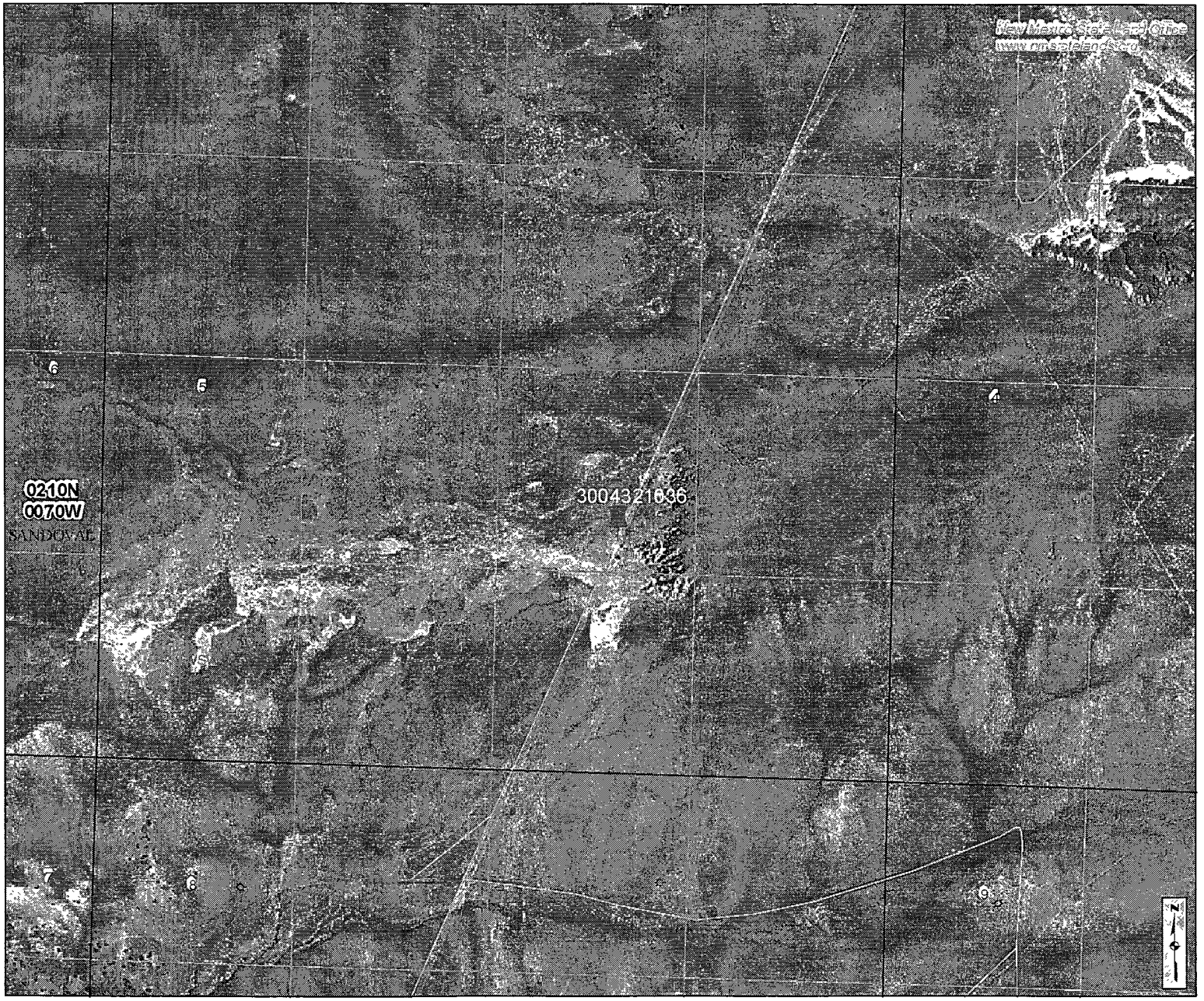
5-22-09

*UTM location was derived from PLSS - see Help

Coal Mining Maps. No Mines in the Area
NMERD Mining & Mineral Division Map



Mining Maps. No Mines in the area.
NMERD Mining & Mineral Division Map



New Mexico State Land Office

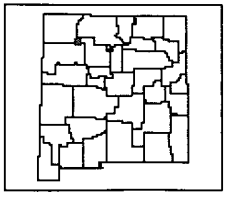
Oil, Gas, and Minerals Land/Lease Information Map

0 0.03 0.06 0.12 0.18 0.24 Miles

Universal Transverse Mercator Projection, Zone 13
1983 North American Datum

Land Office Geographic Information Center
logic@slo.state.nm.us

Created On: 5/21/2009 5:46:59 PM



LEGEND

- County Seats
- SLO District Offices
- City, Town or Village
- Volcanic Vents
- Highway Mileposts

NMOCD Oil, Gas Wells

- Carbon Dioxide
- Gas
- Injection
- Miscellaneous
- Oil
- Salt Water Disposal
- Water
- DA or PA

Federal Subsurface Ownership

- All Minerals
- Coal Only
- Oil and Gas Only
- Oil, Gas and Coal Only
- Other Minerals

State Trust Lands Ownership

- Surface Estate
- Subsurface Estate
- Both Estates

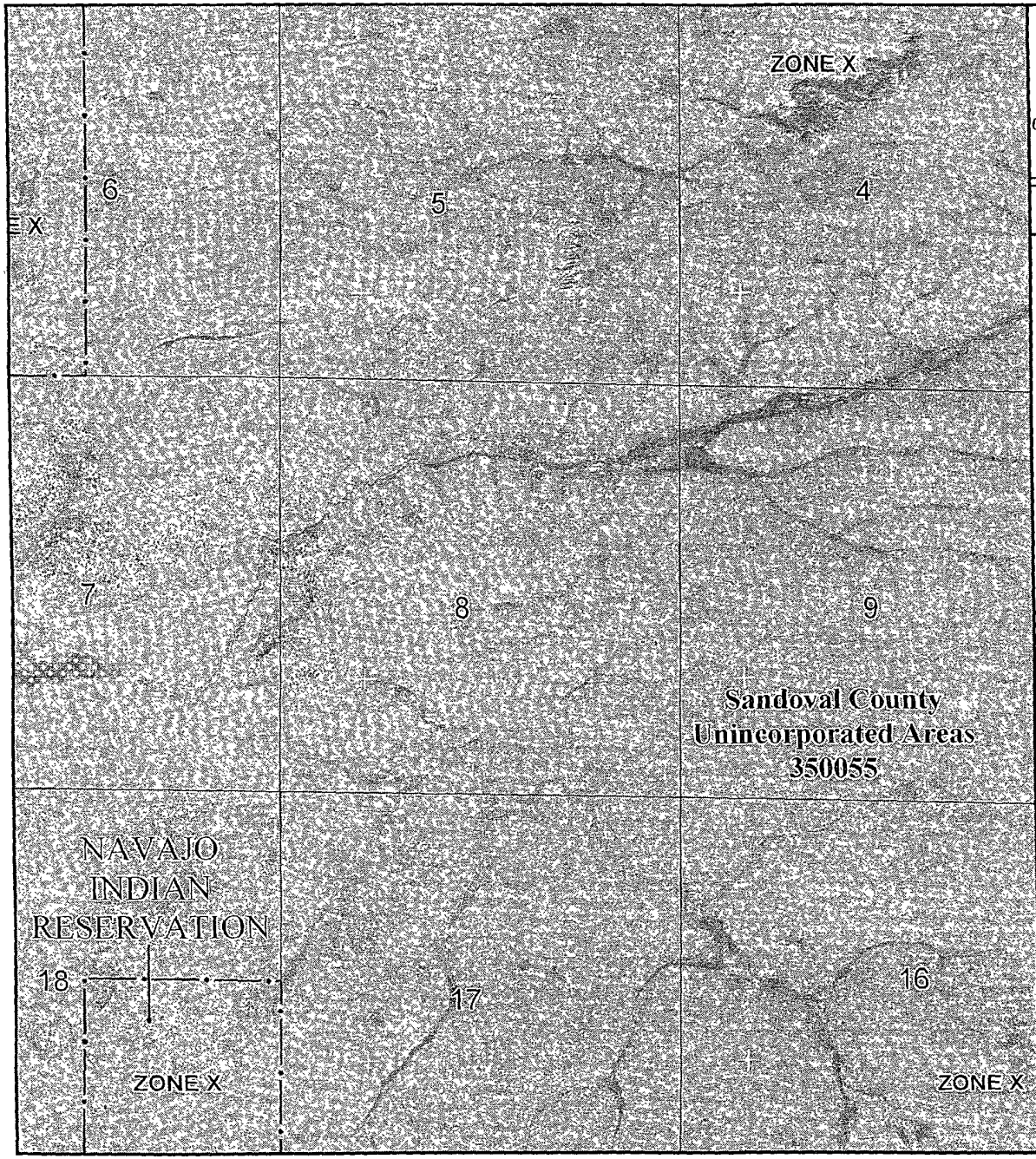
State Lease Types

- Commercial Leases
- Minerals Leases
- Oil and Gas Leases
- Agricultural Leases
- Oil, Gas Leasing Influenced By Restriction
- Not Available for Oil, Gas Leasing

Other Boundaries

- Continental Divide
- State Boundary
- County Boundaries
- Oil and Gas Unit Boundary
- Participating Areas in Units
- Geologic Regions
- NMOCD Order R-111-P Potash Enclave Outline

For detailed legend of the Geologic Map of New Mexico, please see http://geoinfo.nmt.edu/



MAP SCALE 1" = 2000'

000 0 2000 4000

FEET

METERS

NFIP

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0225D

FIRM

FLOOD INSURANCE RATE MAP

SANDOVAL COUNTY, NEW MEXICO AND INCORPORATED AREAS

PANEL 225 OF 2225

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS

COMMUNITY	NUMBER	PANEL	SUFFIX
SANDOVAL COUNTY UNINCORPORATED AREAS	350055	0225	D

Notice to User: The Map Number shown below should be used when placing map orders; the Community Number shown above should be used on insurance applications for the subject community.

MAP NUMBER
35043C0225D

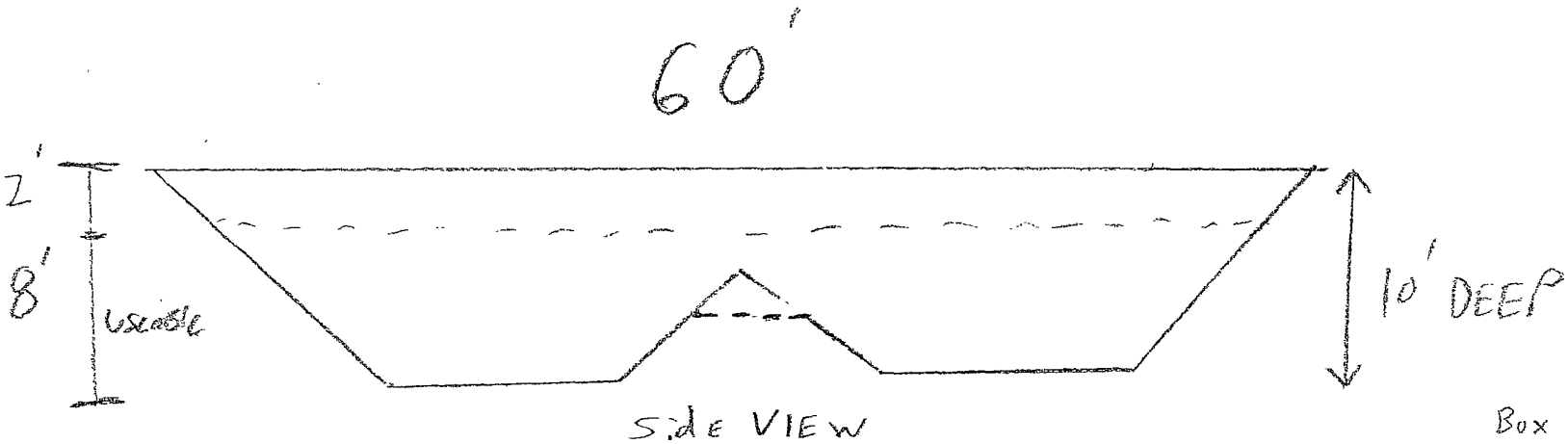
MAP REVISED
MARCH 18, 2008

Federal Emergency Management Agency

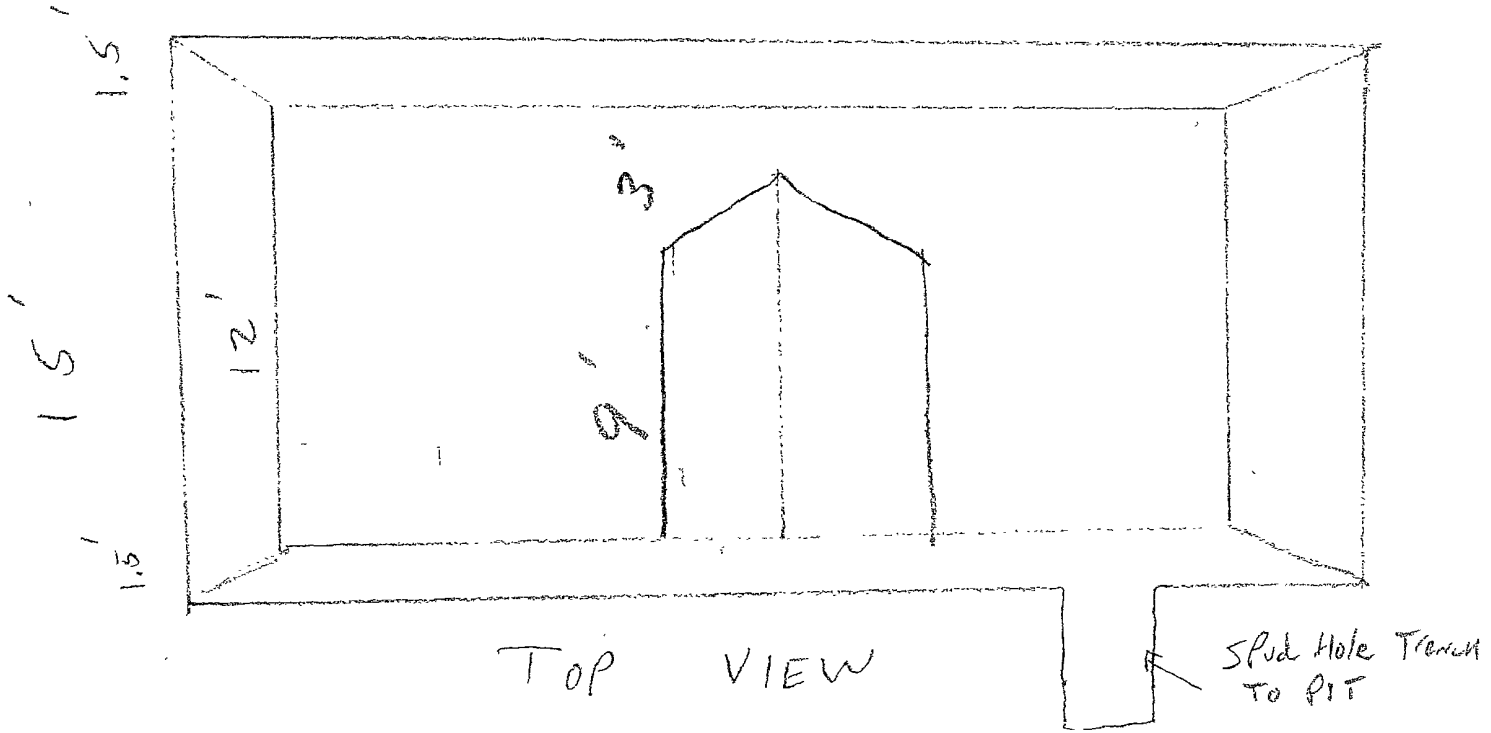
This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov

NOT IN FLOOD PLAIN 100 YR MAP

No Drain Hole



SIDE VIEW



TOP VIEW

Box Dimensions

12' × 8' × 55' =

5,280 ft³ ÷ 5.615 ft³/BBL

= 940 BBLS

Less Center Area + Side Slopes

= 850 BBLS

Useable Volume

* NOT TO SCALE

Tom Mullins
9-23-05