

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

JUN - 3 2009

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.

**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
X 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: Nadel & Gussman Permian, LLC OGRID #: _____
Address: 601 N. Marienfeld, Suite 508, Midland, TX 79701
Facility or well name: Manco Federal No. 1 Lease No. NMNM100524
API Number: 30-015-35553 30-015-35553 OCD Permit Number: _____
U/L or Qtr/Qtr D Section 26 Township 21S Range 21E County: Eddy
Center of Proposed Design. Latitude _____ Longitude _____ NAD: ☐ 1927 X 1983
Surface Owner: X Federal ☐ State ☐ Private ☐ Tribal Trust or Indian Allotment

2.
X **Pit:** Subsection F or G of 19.15.17.11 NMAC
Temporary: X Drilling ☐ Workover
☐ Permanent ☐ Emergency ☐ Cavitation ☐ P&A
☐ Lined ☐ Unlined Liner type: Thickness 12 mil ☐ LLDPE X HDPE ☐ PVC ☐ Other _____
☐ String-Reinforced
Liner Seams: ☐ Welded ☐ Factory ☐ Other _____ Volume: _____ bbl Dimensions: L _____ x W _____ x D _____

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 _____

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.

Rule 50 *permitted*

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*)

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

☐ Alternate. Please specify _____

7.

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

☐ Screen ☐ Netting ☐ Other _____ N/A _____

☐ 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

X 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: _____ 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 H₂S, Prevention Plan
- ☐ Emergency Response Plan
- ☐ Oil Field Waste Stream Characterization
- ☐ Monitoring and Inspection Plan
- ☐ Erosion Control Plan
- ☐ Closure Plan - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC

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 identify 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): Kem McCready Title: Engineering Operations Manager

Signature: Kem McCready Date: 3 June 2009

e-mail address: kemmm@naguss.com Telephone: 432-682-4429

20.

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

OCD Representative Signature: Signed By Mike Beaman Approval Date: JUN 03 2009

Title: Env. 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: _____

New Mexico Energy, Minerals and Natural Resources Department

Bill Richardson
Governor

Joanna Prukop
Cabinet Secretary
Reese Fullerton
Deputy Cabinet Secretary

Mark Fesmire
Division Director
Oil Conservation Division



Conditions of approval for onsite disposal of drilling pit contents:

Samples are to be obtained from pit contents and analyses ran per 19.15.17.13. Paragraph F [NMAC]. In the event the analytical requirements are not met, onsite disposal will not be permitted and the alternative closure method will be required.

Sample analyses of pit contents are to be submitted to NMOCD and approval granted prior to onsite disposal of contents.

Notify NMOCD District 2 Office 48 hours prior to commencement of closure activities.

Notify NMOCD District 2 Office 48 hours prior to obtaining samples from drilling pit contents.

Notify NMOCD District 2 Office 48 hours prior to obtaining samples from drilling pit bottom.

Adherence to all requirements per 19.15.17 [NMAC]

One burial trench only will be allowed and is to be used for drill cuttings only.



Mr. Kern McCreedy
Operations Engineer
NADEL AND GUSSMAN PERMIAN, LLC
601 N. Marienfeld
Suite 508
Midland, TX 79701

3 June 2009

Mr. Mike Bratcher
OIL CONSERVATION DIVISION
1301 West Grand Avenue
Artesia, NM 88210

Re: Manco Federal No. 1 Drilling Pit Closure

Dear Mr. Bratcher:

Pursuant to the State of New Mexico regulatory requirements for permanent closure of drilling pits, enclosed herewith is the completed Form C-144, "Proposed Closure Plan" and additional information constituting the "Closure Plan" for closure of the Nadel and Gussman Permian, LLC, hereinafter "NGP", Manco Federal No. 1 drilling pit (API No. 30-015-35553) located in U/L D S26 T21S, R21E, 660' FNL, 1240' FWL of Eddy County, New Mexico.

INTRODUCTION

Remediation of the NGP, Manco Federal No. 1 (Manco) drilling pit is targeted to begin 6 June 2009 with completion expected by 18 June 2009, permitting weather and the occurrence of unexpected conditions not within the Operator's control do not create delays or exacerbate the proposed schedule. NGP intends to maintain its commitment to environmental health and safety and fully comply with the Regulatory Performa of the State of New Mexico, Oil Conservation Division (NMOCD) regarding this disposal action culminating in permanent closure of the Manco drilling pit. Forthwith, please also be advised, NGP has complied with the "New Pit Rule" for deep burial on location, engaging no exceptions in said process, including but not limited to:

1. Manco drilling pit is a Rule 50 permitted pit.
2. No administrative approvals or exceptions are required under the New Pit Rule.
3. Surface owner is in agreement with lined trench burial on location.
4. Depth to groundwater verified at greater than 1,000 feet.
5. Manco well was a dry hole, no anhydrite zones penetrated – plugged and abandoned.

Potential, temporary contamination from the Manco drilling pit site, should any exist, resulted solely from oil and gas production activities. Potential contaminants are lower levels of cut brine concentrations, polymers (such as xanthium gum and starch) and in general, the drilling mud remaining upon completion of said drilling operations. However, as is evidenced by the analytical

data results, the Manco drilling pit contents exhibited very low brine results due to the fact that (1) this well did not pass through an anhydrite zone, (2) was drilled with air down to approximately 3,500 feet, (3) used fresh water when possible, (4) employed a restricted use of cut brine only when necessary and (5) never produced – dry hole.

Area land use is primarily ranching with domestic pasturage commensurate with significant oil and gas production activities. The NGP Manco Federal No. 1 drilling pit is located in an area wherein NMOCD map shows no depth to groundwater data, nor does the State Engineer's Office. NGP drilled a borehole on location adjacent to the pit and found no water to a depth of 70'. Consultation with the local rancher verified he had three windmills producing water at 930', 1100' and 1280' respectively. The last one is located closest to the Manco and lies in S30 21S 21E. Thus deep trench burial disposal is appropriate for this location.

Consequently, deep trench disposal shall be engaged in accordance with the conditions of the approved Form C-144. It is the belief of NGP that compliant environmental performance and reduction of liability in this area pursuant to NMOCD regulations can be achieved with deep burial predicated on the evidentiary groundwater table data heretofore presented. Further, should future Regulatory Performa mandate additional action or should the Operator choose to take additional action, the deep burial option, in this case, (1) limits the environmental impact in general, (2) allows the Operator or government immediate access to said, heretofore, defined liability, and (3) contains said material within the Operator's lease boundary. All actions would cease and NMOCD would immediately be notified should an unexpected issue occur.

CLOSURE PLAN

Prior to commencement of closure activities, the NGP contractor shall contact One-Call for line spot clearance and notify NMOCD at least 24 hours prior to initiation of any closure action on said drilling pit. The following "Closure Plan" shall be strictly adhered to by NGP's contractor for removal of approximately 500 bbls of liquid followed by the removal of all fines (drill cuttings) assuming (1) these fines have sufficiently dried allowing for maneuverability of heavy equipment in the pit area or (2) mixing shall occur in order to achieve the 3:1 ratio and attain sufficient dryness of said fines prior to deposit into the 20 ml HDPE liner, enabling deep burial application to take place and final pit closure.

Environmental health and safety regulations mandate control of pit volumes at all times. Thus, the liquid material was pumped off as needed and properly disposed of during active drilling operations. Water accumulated since this time is either due to liquids resurfacing after the hydrostatic head has been altered through hauling of earlier fluids or rain. Such water, should it exist, has subsequently been hauled from the drilling pit and properly disposed of in accordance with NMOCD Regulatory Performa.

- Contractor shall mobilize to the Manco Federal No. 1 drilling pit site located off of Box Canyon in Eddy County, New Mexico. Personnel and heavy equipment necessary to provide for the initiation and completion of remediation activities presented above shall be engaged as is appropriate to the mandated exercise.

- All remediation activity shall be confined to (1) the existing pad, (2) already disturbed areas as authorized by the APD and approved Best Management Practices (BMP's) and/or (3) not beyond the lease boundaries without the express written permission of the Operator. NGP's dirt contractor assumes sole responsibility for operations in inclement weather conditions and shall cease and desist infield operations immediately when such conditions become unsafe or would in any way be destructive to NGP's lease or at the mandate of NGP's infield representative. Further, NGP's dirt contractor shall ensure the positioning of their equipment to provide a clear area for adequate staging, site control and safety ensuring operations shall be compliant with OSHA and NMOCD Regulatory Performance at all times.
- The Manco Federal No. 1 drilling pit is currently lined by a 12ml HDPE liner, which shall be removed by heavy equipment and disposed of with the drilling fines in the 20 ml lined trench pursuant to NMOCD requirements. No pit area shall be lined prior to sampling; receipt of analytical results from Trace Analysis, Inc. and NMOCD authorization to proceed with closure operations, which shall include and be applicable to all activities beyond the "mixing stage".
- Burial actions provide for the encasement of all drilling pit contents within a 20 ml HDPE liner placed in the burial chamber sufficiently deep enough to provide a minimum of 4 feet of top cover to match the surrounding topographic relief and general "lay of the land" upon completion. Should the presence of rock exacerbate the potential integrity of the liner in perpetuity, the burial pit shall first be lined with 4 ounce Geotextile Felt placing the 20 ml HDPE liner on top with the sides of the "container" married to previously undisturbed ground ensuring no objects such as sharp rocks, etc. shall be in the contact area reducing the potential of puncturing the "container" resulting from (1) the placement of soil on top of it during the backfilling process and (2) the activity of heavy equipment mandated for the job.
- Once the burial trench/pit has been dug to sufficient dimensions to ensure proper placement of the pit contents, the track hoe shall begin to deposit pit materials within the secured "container" until all contaminated pit material has been placed within it. This 20ml HDPE lined burial site shall not be permanently capped and sealed until after the final drilling pit areas have been sampled and approved for closure by the NMOCD. In the event more material must be harvested to achieve compliance, and said harvest shall increase the volume of the material to such a degree that it will threaten the integrity of the "container" or potentially cause leakage to occur by reason of increased volume, an additional 20ml HDPE lined "container" shall be placed either adjacent (when space and terrain permits) or close to the existing "container". Such action will provide for reasonable assurance that no leakage will occur and maintain all contaminants within a specific geographic location on the lease. NGP's dirt contractor shall make every effort to bury within the existing drilling pit.
- Prior to initiation of backfilling, the Operator shall take appropriate samples of the pit area to ensure compliance with NMOCD Standards for remediation of possible soil chloride levels greater than 250 ppm. However if levels at the bottom of the drilling pit test hot or are not within acceptable range, a background set of samples shall be obtained for testing

from the immediate vicinity and compared to those of the pit bottom. Simultaneously, more soil shall be removed from the "hot spots". Once completed, a new data acquisition shall occur and sample results determine whether or not compliance has been reached in order to begin backfilling.

- Backfilling of the Manco Federal No. 1 drilling pit shall be commensurate with existing topography and terrain relief features (contouring) so as to return it to its "near-as" previous condition, including a contour for prevailing wind conditions and moisture accumulation which prevents abnormal or unsustainable water impoundment resulting in erosive actions. All sites shall be seeded in compliance with BLM seed mixtures, which are currently being used by the NMOCD as well.
- The "Closure Plan" shall include a final C-144, final report providing lab analysis of the trench and backfill material, digital project photos and evidentiary narrative to support the completed disposition of the reclaimed Manco Federal No. 1 drilling pit site.

Should you have questions, please call 432-682-4429 (office) or 432-425-6347 (cell).

Sincerely,


Kem McCready
Operation Manager

Enclosure: As listed above

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT



COPY

FORM APPROVED
OMB No 1004-0137
Expires July 31, 2010

SUNDRY NOTICES AND REPORTS ON WELLS
Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.

5 Lease Serial No
NMNM100524
6 If Indian, Allottee or Tribe Name

SUBMIT IN TRIPLICATE – Other instructions on page 2.

| | | |
|---|--|--|
| 1 Type of Well <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other | | 7 If Unit of CA/Agreement, Name and/or No |
| 2 Name of Operator Nadel & Gussman Permian, LLC | | 8 Well Name and No Manco Fed No 1 |
| 3a Address 601 N Manenfeld, Suite 508, Midland, TX 79701 | 3b Phone No. (include area code) 432-682-4429 | 9 API Well No. 30-015-35553 |
| 4 Location of Well (Footage, Sec, T, R, M, or Survey Description) S26 T21S R21E, 660' FNL & 1240' FWL | | 10 Field and Pool or Exploratory Area |
| | | 11 Country or Parish, State Eddy County, NM |

12 CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT OR OTHER DATA

| TYPE OF SUBMISSION | TYPE OF ACTION | | | |
|--|---|---|--|---|
| <input checked="" type="checkbox"/> Notice of Intent | <input type="checkbox"/> Acidize | <input type="checkbox"/> Deepen | <input type="checkbox"/> Production (Start/Resume) | <input type="checkbox"/> Water Shut-Off |
| <input type="checkbox"/> Subsequent Report | <input type="checkbox"/> Alter Casing | <input type="checkbox"/> Fracture Treat | <input checked="" type="checkbox"/> Reclamation | <input type="checkbox"/> Well Integrity |
| <input type="checkbox"/> Final Abandonment Notice | <input type="checkbox"/> Casing Repair | <input type="checkbox"/> New Construction | <input type="checkbox"/> Recomplete | <input type="checkbox"/> Other _____ |
| | <input type="checkbox"/> Change Plans | <input type="checkbox"/> Plug and Abandon | <input type="checkbox"/> Temporarily Abandon | |
| | <input type="checkbox"/> Convert to Injection | <input type="checkbox"/> Plug Back | <input type="checkbox"/> Water Disposal | |

13 Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.)

Onsite trench burial of the Manco drilling pit shall begin as soon as NMOCD approval is obtained. This pit was approved for deep burial by BLM in the APD under Pit Rule 50.

The ROW for the Manco shall be relinquished to either the BLM or the 4T & K Cattle Company at close of reclamation activities and approval by the BLM.

The well shall be P&Ad within the next couple of weeks so that pit and pad closure can begin

No flood plains, wetlands, or subsurface mines exist in this area.

All of the impacted area to be reclaimed has been arch cleared under the APD.

Seed Mix No. 2 shall be used for re-vegetation of the surface. BLM will be notified prior to seeding applications beginning so that the opportunity to witness shall be provided.

An extension on closure of this pit was obtained from NMOCD/BLM due to the company's research on final disposition of the well.

** Subject to like Approval from State*

| | |
|--|---|
| 14 I hereby certify that the foregoing is true and correct Name (Printed/Typed) Kem E McCready | Title Engineering Operations Manager |
| Signature <i>Kem E McCready</i> | Date 6/3/09 |

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

| | | |
|---|----------------------|-------------------|
| Approved by <i>James A. Armes</i> | Title <i>SEAS</i> | Date 3 June 09 |
| Conditions of approval, if any, are attached Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon | Office <i>CFD</i> | |

Title 18 U S C Section 1001 and Title 43 U S C Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false fictitious or fraudulent statements or representations as to any matter within its jurisdiction

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

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

Form C-144
June 1, 2004

For drilling and production facilities, submit to
appropriate NMOC District Office.
For downstream facilities, submit to Santa Fe office

Pit or Below-Grade Tank Registration or Closure

Is pit or below-grade tank covered by a "general plan"? Yes ☐ No ☐

Type of action: Registration of a pit or below-grade tank ☐ Closure of a pit or below-grade tank ☒

Operator: Nadel & Gussman Permian, LLC

Telephone 432-682-4429

e-mail address: kemm@naguss.com

OCT 29 2007

Address 601 N Marienfeld, Suite 508, Midland, Texas 79701

OCD-ARTESIA

Facility or well name: Manco Federal No. 1 API #: 30-015-35553 U/L D S26 T21S R21E 660' FNL 1240' FNL

County: Eddy Latitude N Longitude W NAD: 1927 ☐ 1983 ☐

Surface Owner: Federal Private X Indian ☐

Pit

Type: Drilling X Production ☐ Disposal ☐

Workover ☐ Emergency ☐

Lined X Unlined ☐

Liner type Synthetic X Thickness: 12ml HDPE liner Clay ☐

Pit Volume 1500 bbl. Approximately

Below-grade tank N/A

Volume N/A bbl Type of fluid N/A

Construction material N/A

Double-walled, with leak detection ☐ If not, explain why not

Depth to ground water (vertical distance from bottom of pit to seasonal high water elevation of groundwater.) NMOC map has no depth to groundwater data recorded for this area. NGP drilled a borehole on location adjacent to the pit and found no water to a depth of 70'. Rancher verified three wells (windmills) at 930', 1100' and 1280' and stated no water had ever been located in this area.

Less than 50 feet
50 feet or more, but less than 100 feet
100 feet or more

(20 points)
(10 points)
0 pts

Wellhead protection area (Less than 200 feet from a private domestic water source, or less than 1000 feet from all other water sources)

Yes
No X

(20 points)
(0 points) 0 pts

Distance to surface water (horizontal distance to all wetlands, playas, irrigation canals, ditches, and perennial and ephemeral watercourses)

Less than 200 feet
200 feet or more, but less than 1000 feet
1000 feet or more

(20 points)
(10 points)
(0 points) 0 pts

Ranking Score (Total Points)

0 pts.

If this is a pit closure: (1) Attach a diagram of the facility showing the pit's relationship to other equipment and tanks. Digital Photos shall be submitted for before and after remediation activity with final report. (2) Indicate disposal location: offsite N/A If offsite, name of facility: N/A (3) Attach a general description of remedial action taken including remediation start date and end date (4) Groundwater encountered No X Yes ☐ If yes, show depth below ground surface _ ft. and attach sample results (5) Attach soil sample results and a diagram of sample locations and excavations.

Additional Comments: Please refer to the attached letter for detailed "Closure Plan" and note groundwater information above.

I hereby certify that the information above is true and complete to the best of my knowledge and belief I further certify that the above-described pit or below-grade tank has been/will be constructed or closed according to NMOC guidelines X, a general permit ☐, or an (attached) alternative OCD-approved plan ☐.

Date 26 October 2007

Printed Name/Title Kem McCready, Operations Manager

Signature

Kem McCready

Your certification and NMOC approval of this application/closure does not relieve the operator of liability should the contents of the pit or tank contaminate ground water or otherwise endanger public health or the environment Nor does it relieve the operator of its responsibility for compliance with any other federal, state, or local laws and/or regulations.

Approval

Printed Name/Title

Signature

Signed By *Mike Benavente*

Date:

OCT 29 2007

NOTIFY OCD 24 HOURS PRIOR to beginning closure and 24 HOURS PRIOR to obtaining samples. Samples are to be obtained from pit area and analyses submitted to OCD prior to back-filling.

If burial trench is to be constructed in pit area, samples are to be obtained and analyses submitted to OCD PRIOR to lining trench.

Mr. Kem McCready
Operations Engineer
NADEL AND GUSSMAN PERMIAN, LLC
601 N. Marienfeld
Suite 508
Midland, TX 79701

COPY

26 October 2007

OCT 29 2007

OCD-ARTESIA

Mr. Mike Bratcher
OIL CONSERVATION DIVISION
1301 West Grand Avenue
Artesia, NM 88210

Re: Manco Federal No. 1 Pit Closure Documents

Dear Mr. Bratcher:

Pursuant to the State of New Mexico regulatory requirements for permanent closure of drilling pits, enclosed herewith is the completed Form C-144 and additional information constituting the "Closure Plan" for closure of the Nadel and Gussman Permian, LLC, hereinafter "NGP", Manco Federal No. 1 drilling pit (API No. 30-015-35553) located in U/L D S26 T21S, R21E, 660' FNL, 1240' FWL of Eddy County, New Mexico.

INTRODUCTION

Remediation of the NGP, Manco Federal No. 1 drilling pit is targeted to begin 1 November 2007 with completion expected by 9 November 2007, permitting weather and the occurrence of unexpected conditions not within the Operator's control do not create delays or exacerbate the proposed schedule in any way. NGP intends to maintain its commitment to environmental health and safety and fully comply with the Regulatory Performa of the State of New Mexico, OCD (NMOCD) regarding this disposal action culminating in permanent closure of the Manco Federal No. 1 drilling pit.

Potential, temporary contamination from the Manco Federal No. 1 drilling pit site, should any exist, resulted solely from oil and gas production activities. Potential contaminants are typically mid to high-level concentrations of brines, typical polymers (such as xanthium gum and starch) and in general, drilling mud and fluids remaining upon completion of said drilling operations.

Area land use is primarily ranching with domestic pasturage commensurate with significant oil and gas production activities. The NGP Manco Federal No. 1 drilling pit is located in an area wherein NMOCD map shows no depth to groundwater data. NGP drilled a borehole on location adjacent to the pit and found no water to a depth of 70'. Consultation with the local rancher verified he had three windmills producing water at

930', 1100' and 1280' respectively. Thus an insitu disposal will be conducted on this location.

Consequently, *insitu* disposal shall be engaged in accordance with the conditions of the approved Form C-144. It is the belief of NGP that compliant environmental performance and reduction of liability in this area pursuant to NMOCD regulations can be achieved with *insitu* disposal predicated on the evidentiary groundwater table data heretofore presented. Further, should future Regulatory Performa mandate additional action or should the Operator choose to take additional action, the *insitu* option, in this case, (1) limits the environmental impact in general, (2) allows the Operator or government immediate access to said, heretofore, defined liability, (3) contains said material within the Operator's lease boundary and (4) should groundwater (levels < 50') be discovered as opposed to small perched seasonal or precipitous event accumulations during the construction of the *insitu* pit, all actions would cease and NMOCD would immediately be notified that a (1) haul off or (2) *insitu* solidification should be considered in the form of an amended C-144 for completion of the closure action.

This compliance action shall strictly apply NMOCD standards, i.e. clean-up level for the Manco Federal No. 1 drilling pit shall meet the < 250ppm chlorides unless approved otherwise and substantiated by (1) background analytical data documented to be higher than the above cited indices, (2) geological evidence of salt stringers and/or other geological features which support salt retaining soil types or features, (3) rock to soil ratios predicated upon analytical calculations of infield data acquisitions and (4) soil types which geologically typify, substantiate and uphold analytical investigations in areas with i.e. documented, non-perforated clay lenses, allowing for "risky closures" in non-sensitive groundwater table areas approved by the NMOCD where applicable.

CLOSURE PLAN

Prior to commencement of closure activities, the NGP contractor shall contact One-Call for line spot clearance and notify NMOCD at least 24 hours prior to initiation of any closure action on said drilling pit. The following "Closure Plan" shall be strictly adhered to by NGP's contractor for removal of approximately 1,500 bbls of liquid followed by the removal of all fines (drill cuttings) assuming (1) these fines have sufficiently dried allowing for maneuverability of heavy equipment in the pit area or (2) mixing shall occur in order to attain sufficient dryness of said fines prior to deposit into the *insitu* 20 ml HDPE liner, enabling *insitu* burial application to take place and final pit closure.

Environmental health and safety regulations mandate control of pit volumes at all times. Thus, the liquid material was pumped off as needed and properly disposed of during active drilling operations. Water accumulated since this time is either due to liquids resurfacing after the hydrostatic head has been altered through hauling of earlier fluids or rain. Such water, should it exist, has subsequently been hauled from the drilling pit and properly disposed of in accordance with NMOCD Regulatory Performa.


- Contractor shall mobilize to the Manco Federal No. 1 drilling pit site located off of Box Canyon in Eddy County, New Mexico. Personnel and heavy equipment necessary to provide for the initiation and completion of remediation activities presented above shall be engaged as is appropriate to the mandated exercise.
- All remediation activity shall be confined to (1) the existing pad, (2) already disturbed areas as authorized by the APD and approved Best Management Practices (BMP's) and/or (3) not beyond the lease boundaries without the express written permission of the Operator. NGP's dirt contractor assumes sole responsibility for operations in inclement weather conditions and shall cease and desist infield operations immediately when such conditions become unsafe or would in any way be destructive to NGP's lease or at the mandate of NGP's infield representative. Further, NGP's dirt contractor shall ensure the positioning of their equipment to provide a clear area for adequate staging, site control and safety ensuring operations shall be compliant with OSHA and NMOCD Regulatory Performance at all times.
- The Manco Federal No. 1 drilling pit is currently lined by a 12ml HDPE liner, which shall be removed by heavy equipment and disposed of with the drilling fines *insitu* pursuant to NMOCD requirements. No pit area shall be lined prior to sampling, receipt of analytical results from Trace Analysis, Inc. and NMOCD authorization to proceed with closure operations, which shall include and be applicable to all activities beyond the "mixing stage".
- *Insitu* actions provide for the encasement of all drilling pit contents within a 20 ml HDPE liner placed in the *insitu* burial chamber sufficiently deep enough to provide a minimum of 4 feet of top cover to match the surrounding topographic relief and general "lay of the land" upon completion. Should the presence of rock exacerbate the potential integrity of the liner in perpetuity, the *insitu* pit shall first be lined with 4 ounce Geotextile Felt placing the 20 ml HDPE liner on top with the sides of the "container" married to previously undisturbed ground ensuring no objects such as sharp rocks, etc. shall be in the contact area reducing the potential of puncturing the "container" resulting from (1) the placement of soil on top of it during the backfilling process and (2) the activity of heavy equipment mandated for the job.
- Once the burial trench/pit has been dug to sufficient dimensions to ensure proper placement of the pit contents, the track hoe shall begin to deposit pit materials within the secured "container" until all contaminated pit material has been placed within it. This 20ml HDPE lined burial site shall not be permanently capped and sealed until after the final drilling pit areas have been sampled and approved for closure by the NMOCD. In the event more material must be harvested to achieve compliance, and said harvest shall increase the volume of the *insitu* material to such a degree that it will threaten the integrity of the "container" or potentially cause leakage to occur by reason of increased volume, an additional *insitu* 20ml HDPE lined "container" shall be placed either adjacent (when space and terrain

permits) or close to the existing "container". Such action will provide for reasonable assurance that no leakage will occur and maintain all contaminants within a specific geographic location on the lease. NGP's dirt contractor shall make every effort to bury within the existing drilling pit.

- Prior to initiation of backfilling, the Operator shall take appropriate samples of the pit area to ensure compliance with NMOCD Standards for remediation of possible soil chloride levels greater than 250 ppm. However if levels at the bottom of the drilling pit test hot or are not within acceptable range, a background set of samples shall be obtained for testing from the immediate vicinity and compared to those of the pit bottom. Simultaneously, more soil shall be removed from the "hot spots". Once completed, a new data acquisition shall occur and sample results determine whether or not compliance has been reached in order to begin backfilling.
- Backfilling of the Manco Federal No. 1 drilling pit shall be commensurate with existing topography and terrain relief features (contouring) so as to return it to its "near-as" previous condition, including a contour for prevailing wind conditions and moisture accumulation which prevents abnormal or unsustainable water impoundment resulting in erosive actions. All sites shall be seeded in compliance with BLM seed mixtures, which are currently being used by the NMOCD as well.
- The "Closure Plan" shall include a final report providing lab analysis of the backfill material, digital project photos and evidentiary narrative to support the completed disposition of the reclaimed Manco Federal No. 1 drilling pit site.

Should you have questions, please call 432-682-4429(office) or 432-425-6347 (cell).

Sincerely,


Kem McCready
Operation Manager

Enclosure: C-144

COPY

TO WHOM IT MAY CONCERN

Please be advised that the 4T & K Cross Cattle Company herewith verifies that it has a well supported by windmill delivery to the surface located in Section 30 T21S R21E having a depth to water greater than 1,000 feet.

4T & K Cross Cattle Company also verifies that regarding the closure and reclamation of the Manco Federal No. 1 well operated by Nadel & Gussman Permian, LLC the following is applicable:

1. That topsoil shall be sold at \$2/yard, excavated from a dirt tank located in the immediate area;
2. That the uncontaminated caliche, which shall be removed from location and the spur road, shall be place on the local access roads in the area currently surfaced with caliche;
3. That Nadel & Gussman Permian, LLC shall remove the existing gate leaving it as a fence line, returning access to the area to its previous point along the fence where a gate exists;
4. That Nadel & Gussman, LLC shall reclaim only the 0.1 mile spur road connecting to the pad from the caliche road, accessing the area from the County Road;
5. That Nadel & Gussman Permian, LLC shall remove the pea gravel and possibly some caliche from the location to the watering tank in the area which will provide for better conditions for the cattle utilizing the area;
6. That 4T & K Cross Cattle Company agrees to the lined (20 ml liner), trench burial of the drilling fines and mud generated by the drilling of the Manco Federal No. 1 well on location.

Agreed to and signed by this day 3rd of June, 2009:


Sandi Wilkie, 4T & K Cross Cattle Company


Kem McCready, Nadel & Gussman Permian, LLC

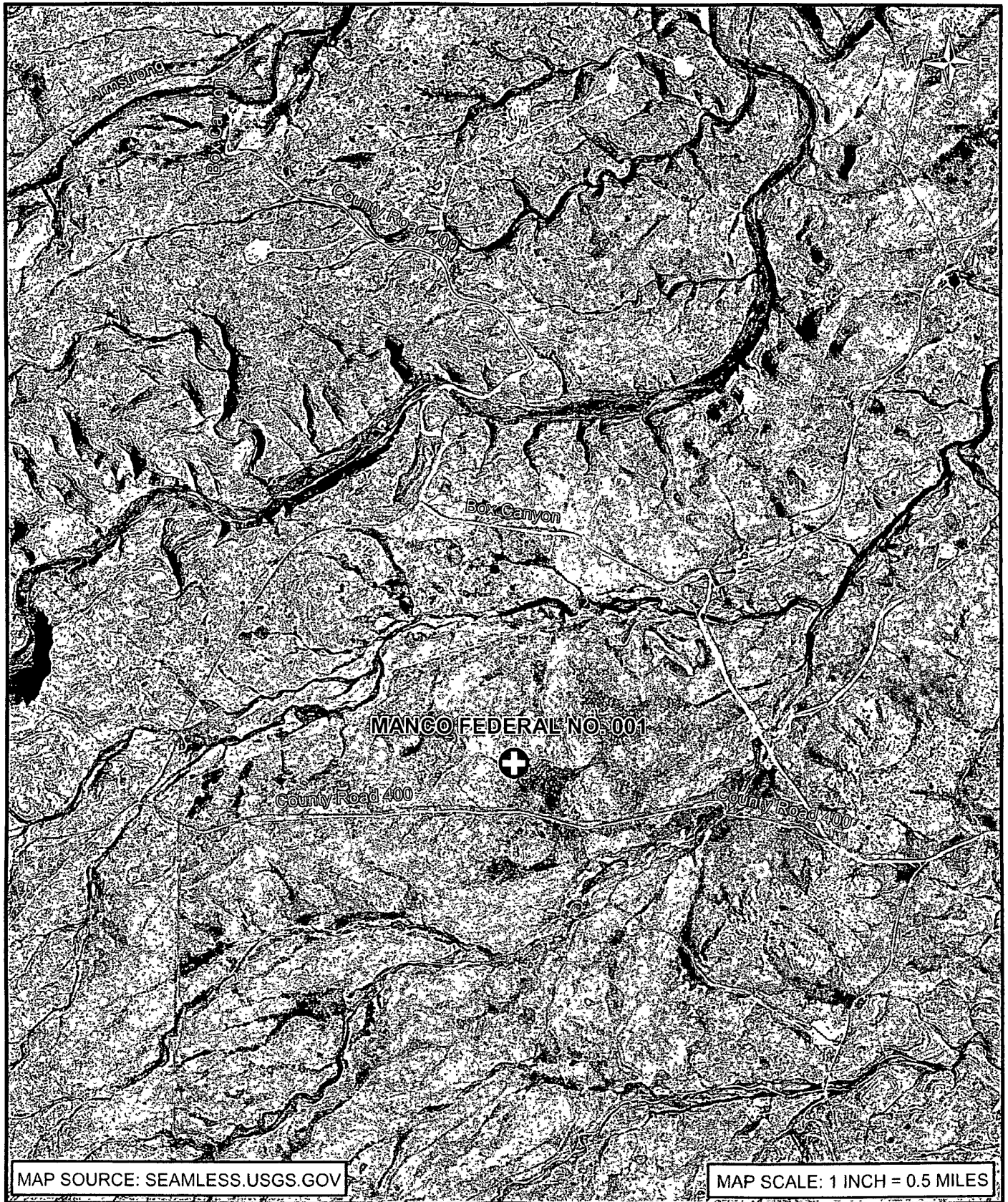


VICINITY MAP
MANCO FEDERAL NO. 001
32° 27' 16" N 104° 46' 45.4" W
EDDY COUNTY - CARLSBAD, NEW MEXICO
PRODUCTION MANGEMENT INDUSTRIES, LLC - HARVEY, LOUISIANA





SITE MAP
MANCO FEDERAL NO. 001
32° 27' 16.9" N 104° 46' 45.4" W
EDDY COUNTY - CARLSBAD, NEW MEXICO
PRODUCTION MANGEMENT INDUSTRIES, LLC - HARVEY, LOUISIANA



AREA MAP
MANCO FEDERAL NO. 001
32° 27' 16.9" N 104° 46' 45.4" W
EDDY COUNTY - CARLSBAD, NEW MEXICO
PRODUCTION MANGEMENT INDUSTRIES, LLC - HARVEY, LOUISIANA

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

| | | |
|---------------|---------------------------|--|
| API Number | Pool Code | Pool Name |
| | | WILDCAT (MORROW), BOX CANYON (UPPER-PENNSYLVANIAN) |
| Property Code | Property Name | Well Number |
| | MANCO FEDERAL | 1 |
| OGRID No. | Operator Name | Elevation |
| | NADEL AND GUSSMAN PERMIAN | 4640' |

Surface Location

| UL or lot No. | Section | Township | Range | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County |
|---------------|---------|----------|-------|---------|---------------|------------------|---------------|----------------|--------|
| D | 26 | 21 S | 21 E | | 660 | NORTH | 1240 | WEST | EDDY |

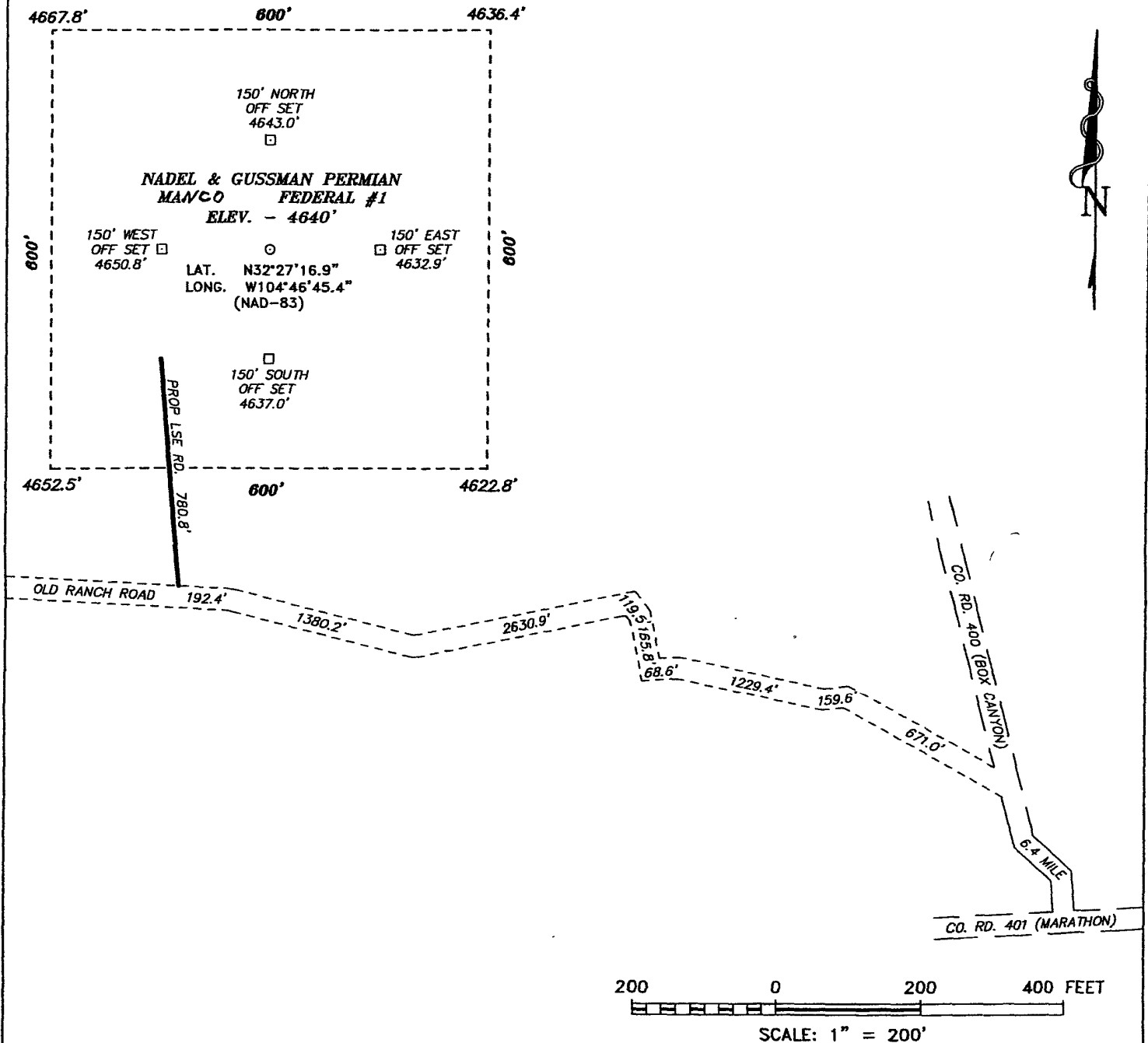
Bottom Hole Location If Different From Surface

| UL or lot No. | Section | Township | Range | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County |
|-----------------|-----------------|--------------------|-----------|---------|---------------|------------------|---------------|----------------|--------|
| | | | | | | | | | |
| Dedicated Acres | Joint or Infill | Consolidation Code | Order No. | | | | | | |
| 320 | | | | | | | | | |

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

| | | | |
|--|---|--|---|
| | <p>Lat.: N32°27'16.9"</p> <p>Long.: W104°46'45.4"</p> <p>(NAD-83)</p> | | <p>OPERATOR CERTIFICATION</p> <p>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.</p> <p><i>Terry West</i> 2/22/07 Signature Date</p> <p>TERRY WEST Printed Name</p> |
| | | | <p>SURVEYOR CERTIFICATION</p> <p>I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.</p> <p>SEPTEMBER 13, 2006</p> <p>Date Surveyed</p> <p><i>Gary L. Jones</i> Signature of Professional Surveyor</p> <p>NEW MEXICO Professional Surveyor W.S. No. 7062</p> <p>Certificate No. Gary L. Jones 7977 PROFESSIONAL LAND SURVEYOR</p> |
| | | | |
| | | | |

SECTION 26, TOWNS IP 21 SOUTH, RANGE 1 EAST, N.M.P.M.,
EDDY COUNTY, NEW MEXICO.



Directions to Location:

FROM THE JUNCTION OF CO. RD. 401 (MARATHON)
AND CO. RD. 400 (BOX CANYON) PROCEED
NORTHWEST ON CO. RD. 400 FOR 6.4 MILE TO
RANCH ROAD AND PROPOSED LEASE ROAD.

BASIN SURVEYS P.O. BOX 1786—HOBBS, NEW MEXICO

W.O. Number: 7062 Drawn By: J. M. SMALL

Date: 09-14-2006 Disk: JMS 7062W

NADEL AND GUSSMAN PERMIAN

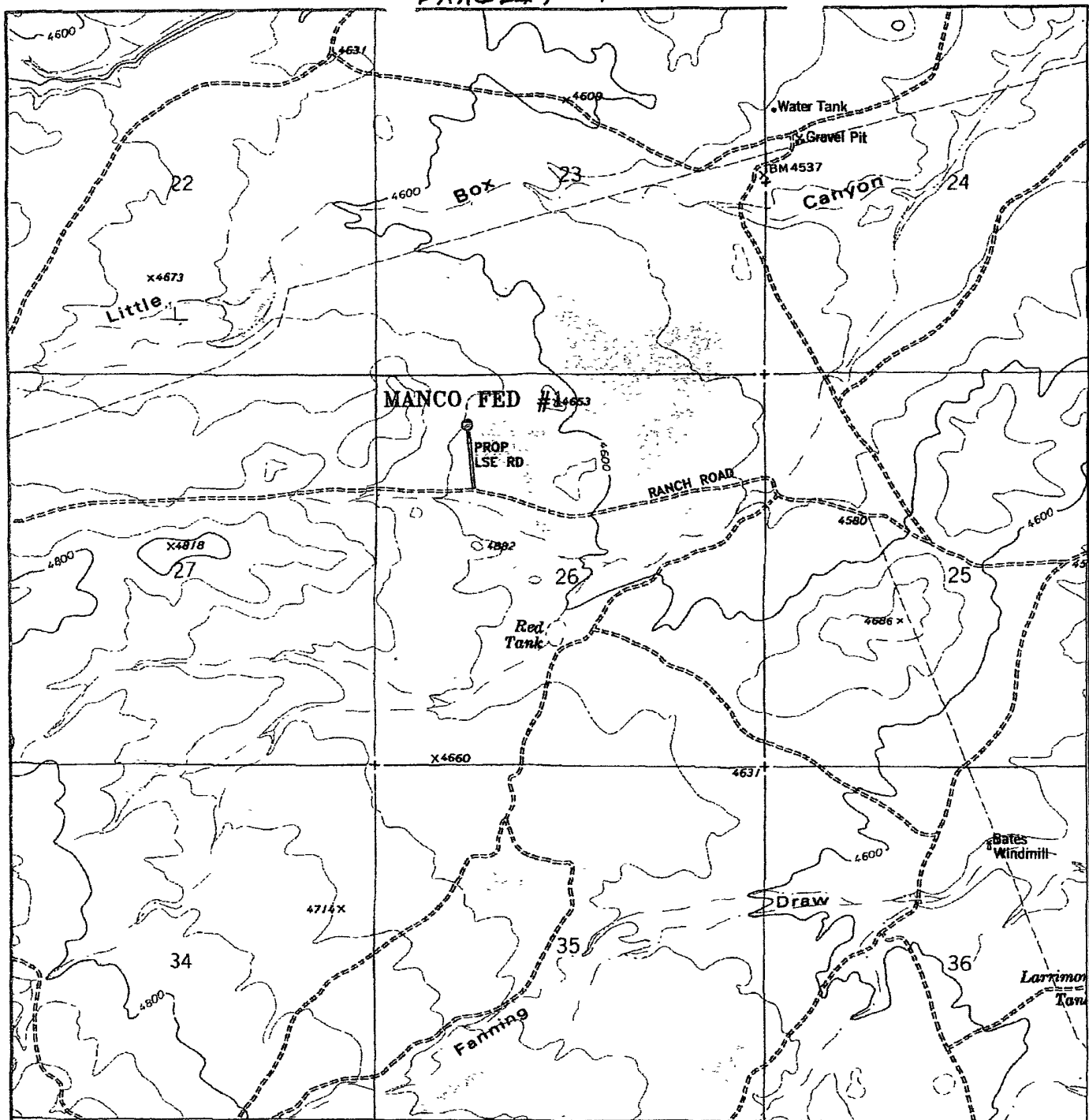
REF: MANCO FEDERAL #1/ Well Pad Topo

MANCO FEDERAL NO. 1 LOCATED 660' FROM
THE NORTH LINE AND 1240' FROM THE WEST LINE OF
SECTION 26, TOWNSHIP 21 SOUTH, RANGE 21 EAST,

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

Survey Date: 09-13-2006 Sheet 1 of 1 Sheets

EXHIBIT 4



MANCO FEDERAL #1

Located at 660' FNL & 1240' FWL
 Section 26, Township 21 South, Range 21 East,
 N.M.P.M., EDDY County, New Mexico.

basin
surveys
 focused on excellence
 in the oilfield

P.O. Box 1786
 1120 N. West County Rd.
 Hobbs, New Mexico 88241
 (505) 393-7316 - Office
 (505) 392-3074 - Fax
 basin-surveys.com

W.O. Number: JMS 7062T

Survey Date 09-13-2006

Scale: 1" = 2000'

Date 09-14-2006

NADEL AND
GUSSMAN
PERMIAN

Report Date: May 6, 2009
Manco Fed. #1

Work Order: 9042317
Manco Pit Closure

Page Number: 1 of 3

Summary Report

Kem McCreedy
Nadel & Gussman Permian LLC
601 N. Marienfeld
Suite 508
Midland, TX 79701

Report Date: May 6, 2009

Work Order: 9042317



Project Name: Manco Pit Closure
Project Number: Manco Fed. #1

| Sample | Description | Matrix | Date Taken | Time Taken | Date Received |
|--------|--------------------|--------|------------|------------|---------------|
| 193810 | 15-Point Composite | soil | 2009-04-21 | 12:30 | 2009-04-23 |

| Sample - Field Code | BTX | | | | TPH 418.1 | TPH DRO | TPH GRO |
|-----------------------------|--------------------|--------------------|-------------------------|-------------------|------------------|----------------|----------------|
| | Benzene (mg/Kg) | Toluene (mg/Kg) | Ethylbenzene (mg/Kg) | Xylene (mg/Kg) | TRPHC (mg/Kg) | DRO (mg/Kg) | GRO (mg/Kg) |
| 193810 - 15-Point Composite | <0.0200 | <0.0200 | <0.0200 | <0.0200 | 346 | 104 | 1.97 |

Sample: 193810 - 15-Point Composite

| Param | Flag | Result | Units | RL |
|----------------|------|-----------|-------|----------|
| SPLP Silver | | <0.00300 | mg/L | 0.00300 |
| SPLP Arsenic | | <0.0100 | mg/L | 0.0100 |
| SPLP Barium | | 0.256 | mg/L | 0.100 |
| SPLP Cadmium | | <0.00500 | mg/L | 0.00500 |
| SPLP Chloride | | 24.7 | mg/L | 0.500 |
| SPLP Chromium | | <0.00500 | mg/L | 0.00500 |
| SPLP Cyanide | | <0.0150 | mg/L | 0.0150 |
| SPLP Fluoride | | <1.00 | mg/L | 0.200 |
| SPLP Mercury | | <0.000200 | mg/L | 0.000200 |
| Nitrate-N | | <1.00 | mg/L | 0.200 |
| Naphthalene | | <0.000200 | mg/L | 0.000200 |
| Acenaphthylene | | <0.000200 | mg/L | 0.000200 |
| Acenaphthene | | <0.000200 | mg/L | 0.000200 |
| Dibenzofuran | | <0.000200 | mg/L | 0.000200 |
| Fluorene | | <0.000200 | mg/L | 0.000200 |
| Anthracene | | <0.000200 | mg/L | 0.000200 |
| Phenanthrene | | <0.000200 | mg/L | 0.000200 |
| Fluoranthene | | <0.000200 | mg/L | 0.000200 |

continued ...

TraceAnalysis, Inc. • 6701 Aberdeen Ave., Suite 9 • Lubbock, TX 79424-1515 • (806) 794-1296
This is only a summary. Please, refer to the complete report package for quality control data.

sample 193810 continued ...

| Param | Flag | Result | Units | RL |
|---------------------------------|------|-------------|-------|----------|
| Pyrene | | <0.000200 | mg/L | 0.000200 |
| Benzo(a)anthracene | | <0.000200 | mg/L | 0.000200 |
| Chrysene | | <0.000200 | mg/L | 0.000200 |
| Benzo(b)fluoranthene | | <0.000200 | mg/L | 0.000200 |
| Benzo(k)fluoranthene | | <0.000200 | mg/L | 0.000200 |
| Benzo(a)pyrene | | <0.000200 | mg/L | 0.000200 |
| Indeno(1,2,3-cd)pyrene | | <0.000200 | mg/L | 0.000200 |
| Dibenzo(a,h)anthracene | | <0.000200 | mg/L | 0.000200 |
| Benzo(g,h,i)perylene | | <0.000200 | mg/L | 0.000200 |
| SPLP Lead | | <0.0100 | mg/L | 0.0100 |
| Total PCB | | <0.000500 | mg/L | 0.000500 |
| Aroclor 1016 (PCB-1016) | | <0.000500 | mg/L | 0.000500 |
| Aroclor 1221 (PCB-1221) | | <0.000500 | mg/L | 0.000500 |
| Aroclor 1232 (PCB-1232) | | <0.000500 | mg/L | 0.000500 |
| Aroclor 1242 (PCB-1242) | | <0.000500 | mg/L | 0.000500 |
| Aroclor 1248 (PCB-1248) | | <0.000500 | mg/L | 0.000500 |
| Aroclor 1254 (PCB-1254) | | <0.000500 | mg/L | 0.000500 |
| Aroclor 1260 (PCB-1260) | | <0.000500 | mg/L | 0.000500 |
| Aroclor 1268 (PCB-1268) | | <0.000500 | mg/L | 0.000500 |
| SPLP Selenium | | <0.0500 | mg/L | 0.0500 |
| SPLP U | | <0.0500 | mg/L | 0.0500 |
| Bromochloromethane | | <1.00 | µg/L | 1.00 |
| Dichlorodifluoromethane | | <1.00 | µg/L | 1.00 |
| Chloromethane (methyl chloride) | | <1.00 | µg/L | 1.00 |
| Vinyl Chloride | | <1.00 | µg/L | 1.00 |
| Bromomethane (methyl bromide) | | <5.00 | µg/L | 5.00 |
| Chloroethane | | <1.00 | µg/L | 1.00 |
| Trichlorofluoromethane | | <1.00 | µg/L | 1.00 |
| Acetone | | <10.0 | µg/L | 10.0 |
| Iodomethane (methyl iodide) | | <5.00 | µg/L | 5.00 |
| Carbon Disulfide | | <1.00 | µg/L | 1.00 |
| Acrylonitrile | | <1.00 | µg/L | 1.00 |
| 2-Butanone (MEK) | | <5.00 | µg/L | 5.00 |
| 4-Methyl-2-pentanone (MIBK) | | <5.00 | µg/L | 5.00 |
| 2-Hexanone | | <5.00 | µg/L | 5.00 |
| trans 1,4-Dichloro-2-butene | | <10.0 | µg/L | 10.0 |
| 1,1-Dichloroethene | | <1.00 | µg/L | 1.00 |
| Methylene chloride | | 9.35 | µg/L | 5.00 |
| MTBE | | <1.00 | µg/L | 1.00 |
| trans-1,2-Dichloroethene | | <1.00 | µg/L | 1.00 |
| 1,1-Dichloroethane | | <1.00 | µg/L | 1.00 |
| cis-1,2-Dichloroethene | | <1.00 | µg/L | 1.00 |
| 2,2-Dichloropropane | | <1.00 | µg/L | 1.00 |
| 1,2-Dichloroethane (EDC) | | <1.00 | µg/L | 1.00 |
| Chloroform | | <1.00 | µg/L | 1.00 |
| 1,1,1-Trichloroethane | | <1.00 | µg/L | 1.00 |
| 1,1-Dichloropropene | | <1.00 | µg/L | 1.00 |

continued ...

sample 193810 continued ...

| Param | Flag | Result | Units | RL |
|------------------------------------|------|-------------|-------|------|
| Benzene | | 1.04 | µg/L | 1.00 |
| Carbon Tetrachloride | | <1.00 | µg/L | 1.00 |
| 1,2-Dichloropropane | | <1.00 | µg/L | 1.00 |
| Trichloroethene (TCE) | | <1.00 | µg/L | 1.00 |
| Dibromomethane (methylene bromide) | | <1.00 | µg/L | 1.00 |
| Bromodichloromethane | | <1.00 | µg/L | 1.00 |
| 2-Chloroethyl vinyl ether | | <5.00 | µg/L | 5.00 |
| cis-1,3-Dichloropropene | | <1.00 | µg/L | 1.00 |
| trans-1,3-Dichloropropene | | <1.00 | µg/L | 1.00 |
| Toluene | | 26.7 | µg/L | 1.00 |
| 1,1,2-Trichloroethane | | <1.00 | µg/L | 1.00 |
| 1,3-Dichloropropane | | <1.00 | µg/L | 1.00 |
| Dibromochloromethane | | <1.00 | µg/L | 1.00 |
| 1,2-Dibromoethane (EDB) | | <1.00 | µg/L | 1.00 |
| Tetrachloroethene (PCE) | | 2.08 | µg/L | 1.00 |
| Chlorobenzene | | <1.00 | µg/L | 1.00 |
| 1,1,1,2-Tetrachloroethane | | <1.00 | µg/L | 1.00 |
| Ethylbenzene | | 1.05 | µg/L | 1.00 |
| m,p-Xylene | | 12.8 | µg/L | 1.00 |
| Bromoform | | <1.00 | µg/L | 1.00 |
| Styrene | | <1.00 | µg/L | 1.00 |
| o-Xylene | | 1.85 | µg/L | 1.00 |
| 1,1,2,2-Tetrachloroethane | | <1.00 | µg/L | 1.00 |
| 2-Chlorotoluene | | <1.00 | µg/L | 1.00 |
| 1,2,3-Trichloropropane | | <1.00 | µg/L | 1.00 |
| Isopropylbenzene | | <1.00 | µg/L | 1.00 |
| Bromobenzene | | <1.00 | µg/L | 1.00 |
| n-Propylbenzene | | <1.00 | µg/L | 1.00 |
| 1,3,5-Trimethylbenzene | | <1.00 | µg/L | 1.00 |
| tert-Butylbenzene | | <1.00 | µg/L | 1.00 |
| 1,2,4-Trimethylbenzene | | <1.00 | µg/L | 1.00 |
| 1,4-Dichlorobenzene (para) | | <1.00 | µg/L | 1.00 |
| sec-Butylbenzene | | <1.00 | µg/L | 1.00 |
| 1,3-Dichlorobenzene (meta) | | <1.00 | µg/L | 1.00 |
| p-Isopropyltoluene | | <1.00 | µg/L | 1.00 |
| 4-Chlorotoluene | | <1.00 | µg/L | 1.00 |
| 1,2-Dichlorobenzene (ortho) | | <1.00 | µg/L | 1.00 |
| n-Butylbenzene | | <1.00 | µg/L | 1.00 |
| 1,2-Dibromo-3-chloropropane | | <5.00 | µg/L | 5.00 |
| 1,2,3-Trichlorobenzene | | <5.00 | µg/L | 5.00 |
| 1,2,4-Trichlorobenzene | | <5.00 | µg/L | 5.00 |
| Naphthalene | | <5.00 | µg/L | 5.00 |
| Hexachlorobutadiene | | <5.00 | µg/L | 5.00 |

Blair Leftwich <bleftwich@traceanalysis.com>

SPLP Radium 226 and 228

May 27, 2009 12:35:40 PM MDT (CA)

cheryl winkler <cmwink@mac.com>

The SPLP Radium 226 and 228 combined result for Manco Pit Closure, Manco Fed.#1, sample #193810, received 4-23-09, was 0.489 pico curies per liter. This is ten times lower than the New Mexico ground water limits of 5.0 pico curies per limit, therefore the sample is well below the allowable limits for SPLP Radium.

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Thank you,
Dr. Blair Leftwich
Laboratory Director
TraceAnalysis, Inc.

Phone: (806)794-1296

Fax: (806)794-1298

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2609 North River Road, Port Allen, Louisiana 70767

1 (800) 401-4277 FAX (225) 381-2996

ARS Sample Delivery Group: ARS1-09-01319
Client Sample ID: 193810
Sample Collection Date: 04/21/09 12:30
Sample Matrix: Aqueous

Request or PO Number: 9042317
ARS Sample ID: ARS1-09-01319-001
Date Received: 04/28/09
Report Date: 05/20/09 15:41

| Analysis Description | Analysis Results | Analysis Error +/- 2 s | MDC | DIC | Qual | Analysis Units | Analysis Test Method | Analysis Date/Time | Analysis Technician | Tracer/Chem Recovery |
|----------------------|------------------|------------------------|-------|-------|------|----------------|----------------------|--------------------|---------------------|----------------------|
| RA-226 | 0.489 | 0.499 | 0.233 | 0.077 | | pCi/L | ARS-010/EPA 904.0 | 5/12/09 15:09 | GJ | 130% |
| RA-228 | -0.007 | 0.737 | 1.335 | 0.619 | U | pCi/L | ARS-010/EPA 904.0 | 5/11/09 15:44 | GJ | 100% |

NOTES: Chemical yield for Ra-226 fell outside of acceptance criteria biased high; sample is a produced water. Duplicate samples for the Radiums fell outside of acceptance criteria biased high, data reported per technical review.


Project Manager Review

Notes: American Radiation Services, Inc. assumes no liability for the use or interpretation of any analytical results provided other than the cost of the analysis itself. Reproduction of this report in less than full requires the written consent of the client.

LELAP Certificate# 30658

NELAP Certificate # E87558

Well Selection Criteria Quick Print

(tblWellMaster.api_wellno Like '30015355530000' and opno = 155615)

| # | Well Name and No. | Operator Name | Typ | Stat | County | Surf | UL | Sec | Twp | Rng | Ft N/S | Ft E/W | UICPrmt | Lst Insp Dt |
|------------|-------------------|------------------------------|-----|------|--------|------|----|-----|------|------|--------|--------|---------|-------------|
| 3553-00-00 | MONCO FEDERAL | 001 NADEL AND GUSSMAN PERMIA | G | P | Eddy | F | D | 26 | 21 S | 21 E | 660 N | 1240 W | | 12/12/2008 |

Township: 21S Range: 21E Sections:

NAD27 X: Y: Zone: Search Radius:

County: Basin: Number: Suffix:

Owner Name: (First) (Last) ☐ Non-Domestic ☐ Domestic ☒ All

POD / Surface Data Report

Avg Depth to Water Report

Water Column Report

Clear Form

iWATERS Menu

Help

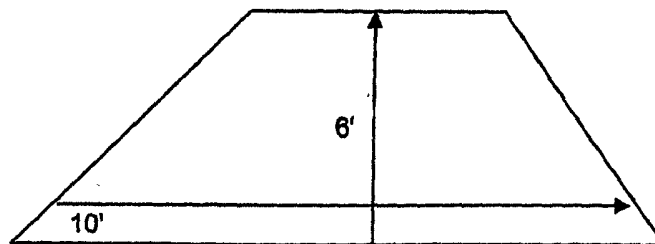
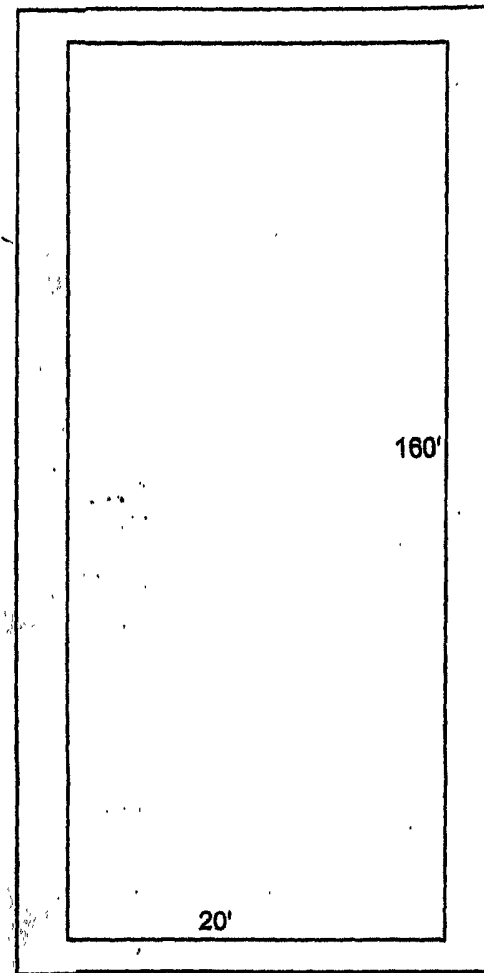
AVERAGE DEPTH OF WATER REPORT 04/16/2009

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

No Records found, try again

Burial Trench Construction/Design Plan

Exhibit
Not to Scale



Soil Cover Design