District I 1625 N. French Dr., Hobbs, NM 88240 District II 1301 W. Grand Avenue, Artesia, NM 88210 1000 Rio Brazos Road, Aztec, NM 87410 <u>District IV</u> 1220 S. St. Francis Dr., Santa Fe, NM 87505

HOBBS OCD State of New Montes
Energy Minerals and Natural Resources State of New Mexico Department JUN 29 2011 Oil Conservation Division

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

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

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

| 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. |
| Operator: Great Western Drilling Co. OGRID#: 9338 Address: P.O. Box 1659 Midland Texas 79702 |
| Address: P.O. Box 1659 Midland Texas 79702 |
| Facility or well name: Madera 25 Federal # 2 |
| API Number: 30-025-40168 OCD Permit Number: |
| U/L or Qtr/Qtr 2 Section 30 Township 265 Range 35E County: Lea |
| Center of Proposed Design: Latitude 32.015944 N Longitude 103.41Z528 W NAD: 1927 1983 |
| Surface Owner: Federal State Private Tribal Trust or Indian Allotment |
| Pit: Subsection F or G of 19.15.17.11 NMAC Temporary: Drilling Workover Permanent Emergency Cavitation P&A Lined Unlined Liner type: Thickness 20 mil LLDPE HDPE PVC Other String-Reinforced Liner Seams: Welded Factory Other Volume: 13,000 bbl Dimensions: L 120′ x W 120′ x D 5′ |
| 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 |
| 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 |

Alternative Method:

Liner type: Thickness

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

mil HDPE PVC Other

| 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, institution or church) | hospital, |
| 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 | |
| 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 acceptant material are provided below. Requests regarding changes to certain siting criteria may require administrative approval from the appropriate or may be considered an exception which must be submitted to the Santa Fe Environmental Bureau office for consideration of a Applicant must attach justification for request. Please refer to 19.15.17.10 NMAC for guidance. Siting criteria does not apply to dry above-grade tanks associated with a closed-loop system. | priate district pproval. |
| 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 |
| 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 |

Page 2 of 5

| 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: |
|--|
| |
| 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: |
| 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 ₂ S, Prevention Plan Emergency Response Plan Oil Field Waste Stream Characterization Monitoring and Inspection Plan Erosion Control Plan Erosion Control Plan Erosion Control Plan Erosion Control Plan Closure Plan - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC |
| Proposed Closure: 19.15.17.13 NMAC 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) |
| 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 G of 19.15.17.13 NMAC |

| Waste Removal Closure For Closed-loop Systems That Utilize Above Ground Ste Instructions: Please indentify the facility or facilities for the disposal of liquids, drill facilities are required. | | |
|---|---|------------------------|
| | sposal Facility Permit Number: | |
| | sposal Facility Permit Number: | |
| Will any of the proposed closed-loop system operations and associated activities occur ☐ Yes (If yes, please provide the information below) ☐ No | | vice and operations? |
| 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 I of Re-vegetation Plan - based upon the appropriate requirements of Subsection Site Reclamation Plan - based upon the appropriate requirements of Subsection | 19.15.17.13 NMAC | C |
| 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 clos provided below. Requests regarding changes to certain siting criteria may require a considered an exception which must be submitted to the Santa Fe Environmental Bu demonstrations of equivalency are required. Please refer to 19.15.17.10 NMAC for g | dministrative approval from the appropriate dist areau office for consideration of approval. Just | trict office or may be |
| 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 ob | tained from nearby wells | Yes No |
| 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 ob | tained from nearby wells | Yes No |
| 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 ob | tained from nearby wells | Yes No |
| Within 300 feet of a continuously flowing watercourse, or 200 feet of any other significal lake (measured from the ordinary high-water mark). - Topographic map; Visual inspection (certification) of the proposed site | ant watercourse or lakebed, sinkhole, or playa | ☐ Yes ☑ No |
| Within 300 feet from a permanent residence, school, hospital, institution, or church in e - Visual inspection (certification) of the proposed site; Aerial photo; Satellite im- | | Yes No |
| Within 500 horizontal feet of a private, domestic fresh water well or spring that less that watering purposes, or within 1000 horizontal feet of any other fresh water well or spring - NM Office of the State Engineer - iWATERS database; Visual inspection (cert | g, in existence at the time of initial application. | Yes No |
| Within incorporated municipal boundaries or within a defined municipal fresh water wadopted pursuant to NMSA 1978, Section 3-27-3, as amended. - Written confirmation or verification from the municipality; Written approval | | ☐ Yes ☑ No |
| Within 500 feet of a wetland US Fish and Wildlife Wetland Identification map; Topographic map; Visual in | spection (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 & Society; Topographic map | Mineral Resources; USGS; NM Geological | Yes No |
| Within a 100-year floodplain FEMA map | | ☐ Yes ☑ No |
| On-Site Closure Plan Checklist: (19.15.17.13 NMAC) Instructions: Each of the followy a check mark in the box, that the documents are attached. Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of Sub Construction/Design Plan of Burial Trench (if applicable) based upon the appropriate Construction/Design Plan of Temporary Pit (for in-place burial of a drying pad) Protocols and Procedures - based upon the appropriate requirements of 19.15.17. Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of Subsection Soil Cover Design - based upon the appropriate requirements of Subsection H of Re-vegetation Plan - based upon the appropriate requirements of Subsection I of Site Reclamation Plan - based upon the appropriate requirements of Subsection I of | nents of 19.15.17.10 NMAC section F of 19.15.17.13 NMAC oriate requirements of 19.15.17.11 NMAC based upon the appropriate requirements of 19.1 3 NMAC nents of Subsection F of 19.15.17.13 NMAC section F of 19.15.17.13 NMAC cuttings or in case on-site closure standards cannot 19.15.17.13 NMAC 19.15.17.13 NMAC | 15.17.11 NMAC |

| A | |
|--|---|
| Operator Application Certification: I hereby certify that the information submitted with this application is true, acc | |
| Name (Print): Louie M. Cure | Title: consultant |
| Name (Print): Louie M. Cure Signature: Joune M. Cure | Date: 24 June 2011 |
| e-mail address: engineer a gwdc. com | Telephone: (432) 682-5241 |
| OCD Approval: Permit Application (including closure plan) Closure | Plan (only) OCD Conditions (see attachment) |
| OCD Representative Signature: | Approval Date: |
| Title: | OCD Permit Number: |
| Closure Report (required within 60 days of closure completion): Subsection Instructions: Operators are required to obtain an approved closure plan prior The closure report is required to be submitted to the division within 60 days of section of the form until an approved closure plan has been obtained and the | r to implementing any closure activities and submitting the closure report. f the completion of the closure activities. Please do not complete this closure activities have been completed. |
| | ☐ Closure Completion Date: |
| Closure Method: Waste Excavation and Removal On-Site Closure Method Alter If different from approved plan, please explain. | native Closure Method Waste Removal (Closed-loop systems only) |
| 23. Closure Report Regarding Waste Removal Closure For Closed-loop System Instructions: Please indentify the facility or facilities for where the liquids, du 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 Yes (If yes, please demonstrate compliance to the items below) No | or in areas that will not be used for future service and operations? |
| Required for impacted areas which will not be used for future service and operation Site Reclamation (Photo Documentation) Soil Backfilling and Cover Installation Re-vegetation Application Rates and Seeding Technique | ttions: |
| 24. Closure Report Attachment Checklist: Instructions: Each of the following 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 Long | |
| 25. | NAD. [1927] 1963 |
| Operator Closure Certification: I hereby certify that the information and attachments submitted with this closure belief. I also certify that the closure complies with all applicable closure require | report is true, accurate and complete to the best of my knowledge and ments and conditions specified in the approved closure plan. |
| Name (Print): | Title: |
| Signature: | Date: |
| e-mail address: | Telephone: |

OCD Form C-144 attachment

Hydrogelogic data: The nearest water well according to the State Engineer's Database is in Section 6 T26S R34E about 7 miles northwest and there are two water wells reported in that section. The water depth is 140' in one and 160' in the other. A visual inspection of the near area indicates a water well about 1 mile to the northeast not reported in the State Engineer's Database.

Design plan: The pit size will be approximately 120' x 120' x 5'. The pit will have a double horseshoe design. A 20 mil LLDPE string reinforced pit liner will be installed.

Operating and maintenance plan: The pit will be monitored daily for proper fluid level during drilling operations and daily log will be kept indicating the fluid level in the pit. Any abnormal fluid level drop will be reported to the NMOCD district office. The pit will be de-watered within 30 days of the drilling rig or completion rig's release.

Closure plan: After de-watering, the pit will be left to dry through natural evaporation. The pit will then be buried on site using the trench burial method.

Maps: A topographic map is attached showing the surrounding area. FEMA reports that a 100-year flood plain map has not been constructed for this area. A visual inspection of the surrounding area indicates that flooding would not occur.

Proof of surface owner notice: Attached is a copy of the cover page of the APD approved by the BLM showing that the BLM as surface owner is aware of this permit.

Temporary pit design plan: Attached is a drawing showing the pit design.

Burial trench design plan: Attached is a drawing showing the burial trench design.

Confirmation sampling plan: Great Western will contract a qualified environmental consulting firm experienced in soil science to take a 5-point composite soil sample after the pit is dug prior to lining.

Waste material sampling plan: Great Western will contract a qualified environmental consulting firm experienced in soil science will sample the pit contents and determine if the waste meets NMOCD standards for burial.

Disposal facility name and permit number: If the pit contents do not meet NMOCD standards for burial, we will haul the pit contents to Controlled Recovery, Inc. NMOCD permit #R9166.

Soil cover design: Attached is a drawing showing the trench design with a clean soil cover of a 4' including a minimum 1' of top soil.

Re-vegetation and site reclamation plan: The re-vegetation and site reclamation plan will follow the stipulations in the BLM's approval of the drilling permit (page attached).

Energy, Minerals and Natural Resources Department

Pit Plat

I 1

. FRENCH DR., HOBBS, NM 88240

OIL CONSERVATION DIVISION 1220 SOUTH ST. FRANCIS DR. Santa Fe, New Mexico 87505

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

1301 W. GRAND AVENUE, ARTESIA, NM 88210

DISTRICT II

DISTRICT IV

DISTRICT III 1000 Rio Brazos Rd., Aztec, NM 87410

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

Form C-102

| API Number | Pool Code | Pool Name | |
|---------------|--------------|----------------------|-------------|
| | | JABALINA-BONE SPRING | |
| Property Code | Prope | rty Name | Well Number |
| | MADERA 3 | 2 | |
| OGRID No. | Opera | tor Name | Elevation |
| 9338 | GREAT WESTER | RN DRILLING CO. | 3189' |

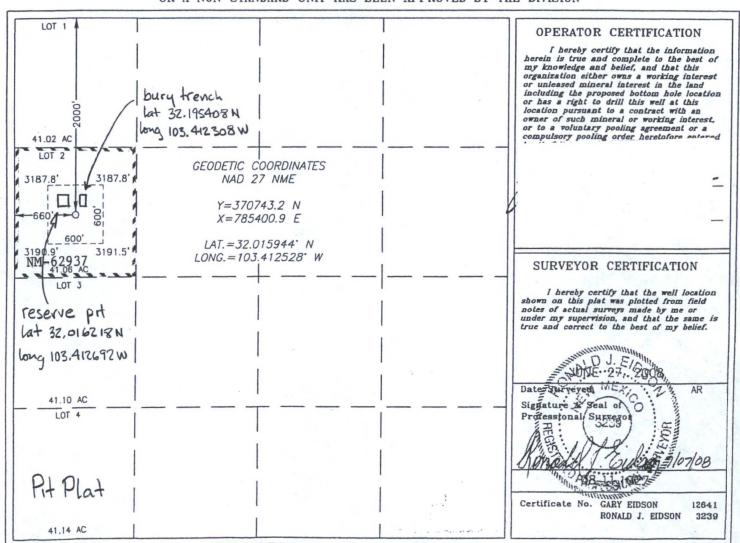
Surface Location

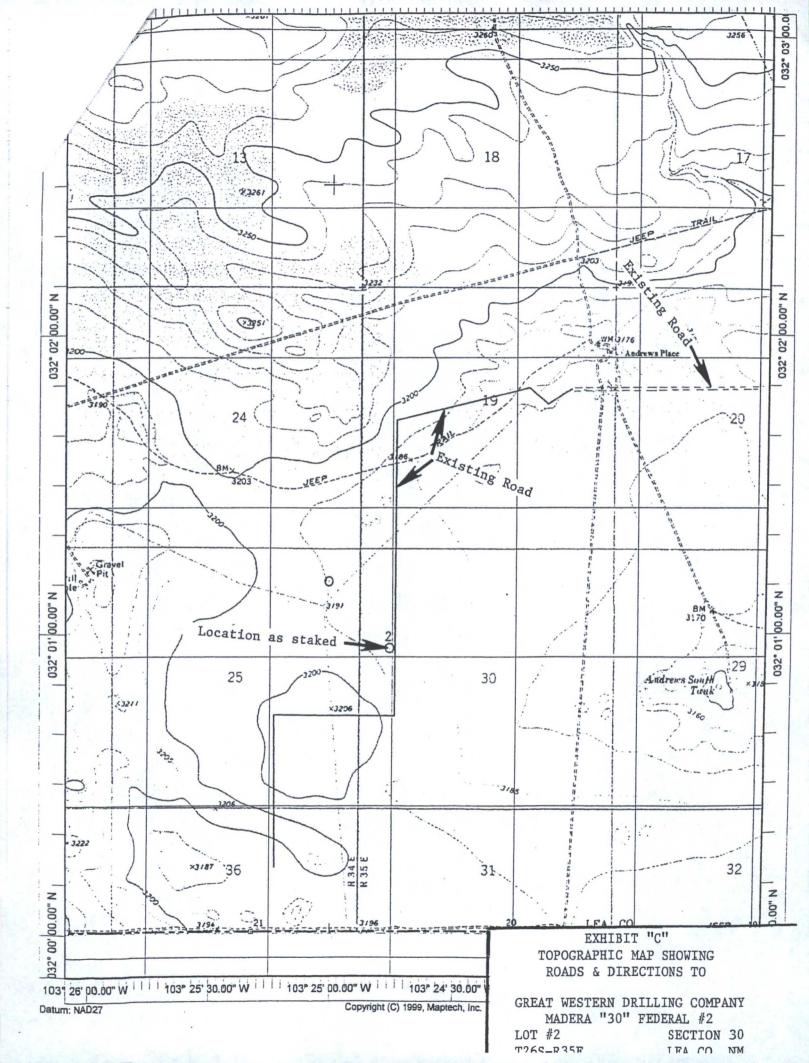
| UL or lot No. | Section | Township | Range | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County |
|---------------|---------|----------|-------|---------|---------------|------------------|---------------|----------------|--------|
| 2 | 30 | 26-S | 35-E | | 2000 | NORTH | 660 | WEST | LEA |

Bottom Hole Location If Different From Surface

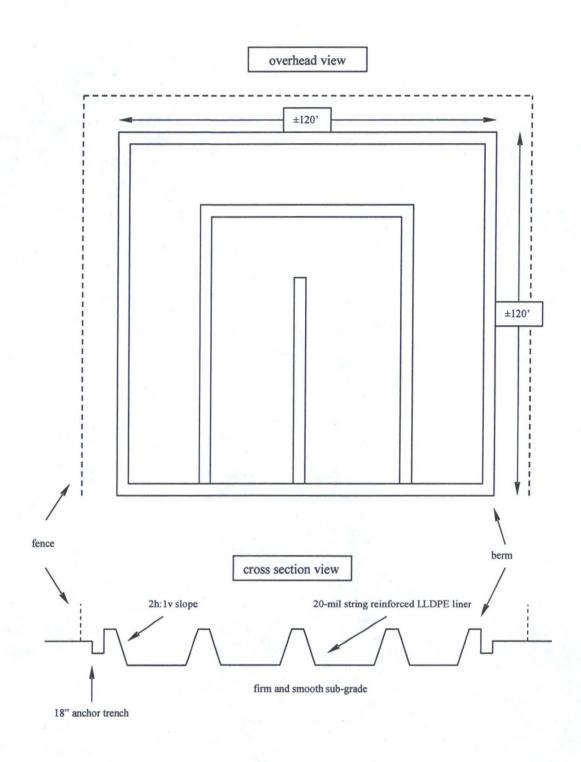
| UL or lot No. | Section | Township | Range | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County |
|-----------------|---------|-------------|-------------|---------|---------------|------------------|---------------|----------------|--------|
| Dedicated Acres | Joint o | r Infill Co | nsolidation | Code Or | der No. | | | | |
| 40 | | | | | | | | | |

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





TEMPORARY PIT DESIGN PLAN

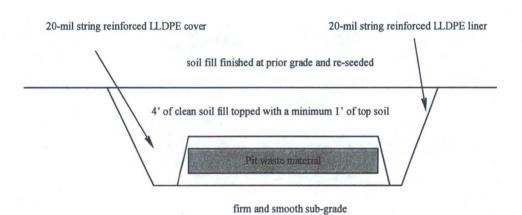


Great Western Drilling Company Madera 30 Federal #2

BURIAL TRENCH DESIGN PLAN

cross section view

The length, width and depth of the on-site trench will be determined after calculating the volume of the waste material



Great Western Drilling Company Madera 30 Federal #2