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

State of New Mexico
Energy Minerals and Natural Resources
Department
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-144
June 16, 2008

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

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

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

Instructions: Please submit one application (Form C-144) per individual pit, closed-loop system, below-grade tank or alternative request

Please be advised that approval of this request does not relieve the operator of liability should operations result in pollution of surface water, ground water or the environment Nor does approval relieve the operator of its responsibility to comply with any other applicable governmental authority's rules, regulations or ordinances.

Operator: Dugan Production Corp. OGRID #: 006515 RCVD JUL 30 '08
Address: 709 East Murray Drive, Farmington, New Mexico 87401 OIL CONS. DIV.
Facility or well name: Mexico Federal M #1 DIST. 3
API Number: 30-045-10897 OCD Permit Number:
U/L or Qtr/Qtr NE/4 SW/4 Section 12 Township 31N Range 13W County: San Juan
Center of Proposed Design: Latitude 36.91212 North Longitude 108.15731 West NAD: [X] 1927 [ ] 1983
Surface Owner: [X] Federal [ ] State [ ] Private [ ] Tribal Trust or Indian Allotment

[ ] **Pit:** Subsection F or G of 19.15.17.11 NMAC
Temporary: [ ] Drilling [ ] Workover
[ ] Permanent [ ] Emergency [ ] Cavitation
[ ] Lined [ ] Unlined
Liner type: Thickness _____mil [ ] LLDPE [ ] HDPE [ ] PVC
[ ] Other _____ [ ] String-Reinforced
Seams: [ ] Welded [ ] Factory [ ] Other _____
Volume: _____bbl Dimensions: L_____ x W_____ x D_____

[ ] **Closed-loop System:** Subsection H of 19.15.17.11 NMAC
[ ] Drying Pad [ ] Tanks [ ] Haul-off Bins [ ] Other _____
[ ] Lined [ ] Unlined
Liner type: Thickness _____mil [ ] LLDPE [ ] HDPE [ ] PVC
[ ] Other _____
Seams: [ ] Welded [ ] Factory [ ] Other _____
Volume: _____bbl _____yd^3
Dimensions: Length_____ x Width_____

[X] **Below-grade tank:** Subsection I of 19.15.17.11 NMAC
Volume: 55 bbl
Type of fluid: Produced H2O, Compressed fluids
Tank Construction material: Fiberglass
[ ] Secondary containment with leak detection
[ ] Visible sidewalls, liner, 6-inch lift and automatic overflow shut-off
[ ] Visible sidewalls and liner
[ ] Visible sidewalls only
[X] Other No visible sidewalls, No leak detection
Liner type: Thickness _____mil [ ] HDPE [ ] PVC
[ ] Other _____

Fencing: Subsection D of 19.15 17.11 NMAC
[ ] Chain link, six feet in height, two strands of barbed wire at top
[ ] Four foot height, four strands of barbed wire evenly spaced between one and four feet Other Fencing 4'=3' Hog wire + 3 Strand barbed wire
Netting: Subsection E of 19.15.17.11 NMAC
[ ] Screen [X] Netting [ ] Other _____
[X] Monthly inspections
Signs: Subsection C of 19.15.17.11 NMAC
[X] 12'x24', 2' lettering, providing Operator's name, site location, and emergency telephone numbers
[ ] Signed in compliance with 19.15.3.103 NMAC

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

Administrative Approvals and Exceptions:
Justifications and/or demonstrations of equivalency are required. Please refer to 19.15.17 NMAC for guidance
Please check a box if one or more of the following is requested, if not leave blank:
[X] Administrative approval(s): Requests must be submitted to the appropriate division district or the Santa Fe Environmental Bureau office for consideration of approval
[ ] Exception(s): Requests must be submitted to the Santa Fe Environmental Bureau office for consideration of approval.

Siting Criteria (regarding permitting): 19.15.17.10 NMAC ***Instructions: The applicant must demonstrate compliance for each siting criteria below in the application. Recommendations of acceptable source material are provided below. Requests regarding changes to certain siting criteria may require administrative approval from the appropriate district office or may be considered an exception which must be submitted to the Santa Fe Environmental Bureau office for consideration of approval. Applicant must attach justification for request. Please refer to 19.15.17.10 NMAC for guidance.*** **Siting criteria does not apply to drying pads or above-grade tanks associated with a closed-loop system.**	
Ground water is less than 50 feet below the bottom of the temporary pit, permanent pit, or below-grade tank. - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	☐ Yes ☒ No
Within 300 feet of a continuously flowing watercourse, or 200 feet of any other watercourse, lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark). - Topographic map; Visual inspection (certification) of the proposed site	☐ Yes ☒ No
Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. *(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

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 19.15.17.15 NMAC
- ☐ Hydrogeologic Data (Temporary and Emergency Pits) - based upon the requirements of Paragraph (2) of Subsection B of 19.15 17.15 NMAC
- ☒ Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC
- ☒ Design Plan - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☒ Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC
- ☒ Closure Plan - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC

☐ Previously Approved Design (attach copy of design) API Number: 30-045-_____ or Permit Number. _____

Closed-loop Systems Permit Application Attachment Checklist: Subsection B of 19.15.17.9 NMAC

Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached.

- ☐ Geologic and Hydrogeologic Data (required for on-site closure) - based upon the requirements of Paragraph (3) of Subsection B of 19.15.17.15
- ☐ Siting Criteria Compliance Demonstrations (required for on-site closure) - based upon the appropriate requirements of 19.15.17.10 NMAC
- ☐ Design Plan - based upon the appropriate requirements of 19.15.17 11 NMAC
- ☐ Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC
- ☐ Closure Plan - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15 17.13 NMAC

NMAC

☐ Previously Approved Design (attach copy of design) API Number _____

Permanent Pits Permit Application Checklist: Subsection B of 19.15.17.9 NMAC

Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached.

- ☐ Hydrogeologic Report - based upon the requirements of Paragraph (1) of Subsection B of 19.15.17.15 NMAC
- ☐ Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC
- ☐ Climatological Factors Assessment
- ☐ Certified Engineering Design Plans - based upon the appropriate requirements of 19 15.17.11 NMAC
- ☐ Dike Protection and Structural Integrity Design - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ Leak Detection Design - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ Liner Specifications and Compatibility Assessment - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ Quality Control/Quality Assurance Construction and Installation Plan
- ☐ Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC
- ☐ Freeboard and Overtopping Prevention Plan - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ Nuisance or Hazardous Odors, including H_2S, Prevention Plan
- ☐ Emergency Response Plan
- ☐ Oil Field Waste Stream Characterization
- ☐ Monitoring and Inspection Plan
- ☐ Erosion Control Plan
- ☐ Closure Plan - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC

Proposed Closure: 19.15.17.13 NMAC

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

Proposed Closure Method: ☒ Waste Excavation and Removal
☐ On-site Closure Method (only for temporary pits and closed-loop systems)
☐ In-place Burial ☐ On-site Trench Burial
☐ Alternative Closure Method (Exceptions must be submitted to the Santa Fe Environmental Bureau for consideration)

Siting Criteria (regarding on-site closure methods only): 19.15.17.10 NMAC

Instructions: Each siting criteria requires a demonstration of compliance in the closure plan. Recommendations of acceptable source material are provided below. Requests regarding changes to certain siting criteria may require administrative approval from the appropriate district office or may be considered an exception which must be submitted to the Santa Fe Environmental Bureau office for consideration of approval. Justifications and/or demonstrations of equivalency are required. Please refer to 19.15.17.10 NMAC for guidance.

Ground water is less than 50 feet below the bottom of the buried waste. - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	☐ Yes ☐ No ☐ NA
Ground water is between 50 and 100 feet below the bottom of the buried waste - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	☐ Yes ☐ No ☐ NA
Ground water is more than 100 feet below the bottom of the buried waste. - NM Office of the State Engineer - iWATERS database search, USGS; Data obtained from nearby wells	☐ Yes ☐ No ☐ NA
Within 300 feet of a continuously flowing watercourse, or 200 feet of any other watercourse, lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark). - Topographic map; Visual inspection (certification) of the proposed site	☐ Yes ☐ No
Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	☐ Yes ☐ No
Within 500 horizontal feet of a private, domestic fresh water well or spring that less than five households use for domestic or stock watering purposes, or within 1000 horizontal feet of any other fresh water well or spring, in existence at the time of initial application. - NM Office of the State Engineer - iWATERS database; Visual inspection (certification) of the proposed site	☐ Yes ☐ No
Within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance adopted pursuant to NMSA 1978, Section 3-27-3, as amended. - Written confirmation or verification from the municipality; Written approval obtained from the municipality	☐ Yes ☐ No
Within 500 feet of a wetland. - US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site	☐ Yes ☐ No
Within the area overlying a subsurface mine. - Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division	☐ Yes ☐ No
Within an unstable area. - Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map	☐ Yes ☐ No
Within a 100-year floodplain. - FEMA map	☐ Yes ☐ No

Waste Excavation and Removal Closure Plan Checklist: (19.15.17.13 NMAC) ***Instructions: Each of the following items must be attached to the closure plan. Please indicate, by a check mark in the box, that the documents are attached.***

- [X] Protocols and Procedures - based upon the appropriate requirements of 19.15.17.13 NMAC
- [X] Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC
- [X] Disposal Facility Name and Permit Number (for liquids, drilling fluids and drill cuttings)
- [X] Soil Backfill and Cover Design Specifications - based upon the appropriate requirements of Subsection H of 19 15.17.13 NMAC
- [X] Re-vegetation Plan - based upon the appropriate requirements of Subsection I of 19.15.17.13 NMAC
- [X] Site Reclamation Plan - based upon the appropriate requirements of Subsection G of 19.15.17.13 NMAC

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

Disposal Facility Name: _____ Disposal Facility Permit Number: _____

On-Site Closure Plan Checklist: (19.15.17.13 NMAC) ***Instructions: Each of the following items must be attached to the closure plan. Please indicate, by a check mark in the box, that the documents are attached.***

- [ ] Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC
- [ ] Proof of Surface Owner Notice - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC
- [ ] Construction and Design of Burial Trench (if applicable) based upon the appropriate requirements of 19.15.17.11 NMAC
- [ ] Protocols and Procedures - based upon the appropriate requirements of 19.15.17.13 NMAC
- [ ] Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC
- [ ] Waste Material Sampling Plan - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC
- [ ] Disposal Facility Name and Permit Number (for liquids, drilling fluids and drill cuttings or in case on-site closure standards cannot be achieved)
- [ ] Soil Cover Design - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC
- [ ] Re-vegetation Plan - based upon the appropriate requirements of Subsection I of 19.15.17.13 NMAC
- [ ] Site Reclamation Plan - based upon the appropriate requirements of Subsection G of 19.15.17.13 NMAC

Operator Application Certification:

I hereby certify that the information submitted with this application is true, accurate and complete to the best of my knowledge and belief.

Name (Print): Kurt Fagrelius Title: Vice President, Exploration

Signature: Kurt Fagrelius Date: 7-28-08

e-mail address: kfagrelius@duganproduction.com Telephone: 505-325-1821 (O), 505-320-8248 (C)

OCD Approval: [X] Permit Application (including closure plan) [ ] Closure Plan (only)

OCD Representative Signature: _____ **Approval Date:** 8-4-08

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

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

[ ] **Closure Completion Date:** _____

Closure Method:

[ ] Waste Excavation and Removal [ ] On-Site Closure Method [ ] Alternative Closure Method

[ ] If different from approved plan, please explain.

Closure Report Attachment Checklist: ***Instructions: Each of the following items must be attached to the closure report. Please indicate, by a check mark in the box, that the documents are attached.***

- [ ] Proof of Closure Notice
- [ ] Proof of Deed Notice (if applicable)
- [ ] Plot Plan
- [ ] Confirmation Sampling Analytical Results
- [ ] Waste Material Sampling Analytical Results
- [ ] Disposal Facility Name and Permit Number
- [ ] Soil Backfilling and Cover Installation
- [ ] Re-vegetation Application Rates and Seeding Technique
- [ ] Site Reclamation (Photo Documentation)

On-site Closure Location: Latitude _____ Longitude _____ NAD: [ ] 1927 [ ] 1983

Operator Closure Certification:

I hereby certify that the information and attachments submitted with this closure report is true, accurate and complete to the best of my knowledge and belief. I also certify that the closure complies with all applicable closure requirements and conditions specified in the approved closure plan.

Name (Print): Kurt Fagrelius Title: Vice President, Exploration

Signature: _____ Date: _____

e-mail address: kfagrelius@duganproduction.com Telephone: 505-325-1821

Mexico Federal M #1 Hydrogeologic Report

The Mexico Federal M #1 is located on Federal land near the northwest rim of the San Juan Basin, in San Juan County, New Mexico. The area is characterized as a flat grassy area bordered by low-lying hills to the east covered with pinon and juniper stands and rocky ridges to the west. The area is drained by arroyos that drain to the west into the La Plata River drainage. These arroyos carry water during seasonal periods of rain, snow melt and irrigation.

A records search of the NM Office of the State Engineer –iWATERS database was conducted on a three square mile area centered on the Mexico Federal M #1 location (Exhibit 2). Two water wells were located 8,000 – 9,000 feet to the north and west. One well was drilled to a depth of 114 feet and encountered the top of ground water at 70 feet. The other well was drilled to a depth of 34 feet and encountered ground water at 19 feet. Both wells are located along either the La Plata River or the McDermott drainages, an area with irrigation ditches and stock ponds. The results of the search are shown on Exhibit 1.

The main source of water in the region is from irrigation water that is taken from the La Plata River and transported in unlined ditches to fields north and west of the proposed below grade tank. Also, ground water is encountered in valley-fill deposits in existing arroyos at shallow depths of approximately 20 – 70 feet below the surface. The proposed below grade tank is not located in an arroyo; a very small arroyo is located 500 feet to the north and west.

The Nacimiento Formation extends from the surface down to a depth of approximately 485 feet. Thin silty sands inter-bedded with more dominant mudstones occur near the top. Toward the base of the unit, mud content commonly decreases and sand content increases. Shale content in the Nacimiento increases to the west toward the outcrop and recharge area.

The Nacimiento is a source of ground water for livestock purposes and more rarely domestic use in some areas near the outcrop. With depth and distance from the outcrop, water quality decreases quickly and may be useful for livestock only. Due to the high silt content in the sands, poor reservoir quality and unpredictable nature of sand occurrence, the Nacimiento is not expected to contain significant quantities of ground water in the area of the proposed below grade tank.

Based on electric open hole logs, the iWATERS database, literature reviewed, depth to ground water ranges from 25 - 50 feet below the surface in and along the major drainages in the area. Moving away from the rivers and washes, ground water depth drops rapidly to greater than 200 feet below the surface. At the location of the subject below grade tank, small amounts of ground water might be found at depths of approximately 200 feet from laterally discontinuous sands in the lower Nacimiento Formation. A deeper source of ground water would include the Ojo Alamo at a depth of 500 - 600 feet below the surface and a Fruitland sand at 1160 -1175 feet below the surface..

Stone, W.J., Lyford, F.P., Frenzel, P.F., Mizell, N.H., and Padgett, E.T., 1983, Hydrogeology and water resources of San Juan Basin, New Mexico: New Mexico Bureau of Mines and Mineral Resources Hydrologic Report 6, 70 p.

Brown, D.R., and Stone, W.J., 1979, Hydrogeology of Aztec quadrangle, San Juan County, New Mexico: New Mexico Bureau of Mines and Mineral Resources Hydrogeologic Sheet 1.

Levings, G.W., Craigg, S.D., Dam, W.L. Kernodle, J.M., and Thorn, C.R., 1990, Hydrogeology of the San Jose, Nacimiento, and Animas Formations in the San Juan Structural Basin, New Mexico, Colorado, Arizona and Utah: U.S. Geological Survey, Atlas HA-720-A, Sheet 1 and 2.

Thorn, C.R., Levings, G.W., Craigg, S.D., Dam, W.L., and Kernodle, J.M., 1990, Hydrogeology of the Ojo Alamo Sandstone in the San Juan Structural Basin, New Mexico, Colorado, Arizona and Utah: U.S.G.S, Atlas HA-720-B, Sheet 1 and 2.

EXHIBIT 1.

New Mexico Office of the State Engineer
POD Reports and Downloads

Township: 31N Range: 13W Sections: 1,2,11,12,13,14

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

WATER COLUMN REPORT 07/21/2008

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are biggest to smallest)

POD Number	Tws	Rng	Sec	q	q	q	Zone	X	Y	Depth Well	Depth Water	Water Column (in feet)
SJ 02590	31N	13W	02	1	2	3				114	70	44
SJ 00835	31N	13W	02	2	2					34	19	15

Record Count: 2

New Mexico Office of the State Engineer
POD Reports and Downloads

Township: 31N Range: 12W Sections: 6,7,18

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

WATER COLUMN REPORT 07/21/2008

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are biggest to smallest)

POD Number	Tws	Rng	Sec	q	q	q	Zone	X	Y	Depth Well	Depth Water	Water Column (in feet)

No Records found, try again

Siting Criteria for the Mexico Federal M #1

1. Ground water is not less than 50-feet below the bottom of the below grade tank. Ground water is greater than 100-feet below the bottom of the below grade tank.

2. The below grade tank is not within 300-feet of a continuously flowing water course, or 200 feet of any other watercourse, lakebed, sinkhole, or playa lake (measured from ordinary high water mark). See the attached Topographic map (Exhibit 2) and Visual Inspection Certification of the location and area around the subject below grade tank.

3. The below grade tank is not within 300-feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. See the attached Satellite Image (Exhibit 3) and Visual Inspection certification of the location and area around the subject below grade tank.

4. The below grade tank is not within 500-feet of a private, domestic fresh water well or spring that less than five households use for domestic or stock watering purposes, or within 1000 horizontal feet of any other fresh water well or spring, in existence at the time of initial application. See the attached NM Office of the State Engineer iWATERS database search (Exhibit 4) and Visual Inspection certification of the location and area around the subject below grade tank.

5. The below grade tank is not located within the 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. See the attached Topographic map of the location and area around the subject below grade tank.

6. The below grade tank is not located within 500-feet of a wetland. See the attached Topographic map and Visual Inspection Certification of the location and area around the subject below grade tank.

7. The below grade tank is not located within the area overlying a subsurface mine. See the attached Mine, Mills and Quarry Map of New Mexico (New Mexico, EMND 2008) (Exhibit 5) showing the location and area around the subject pit.

8. The below grade tank is not located within an unstable area. See the attached Topographic map of the location and area around the subject below grade tank.

9. The below grade tank is not located within a 100-year floodplain area. See the attached FEMA map (Exhibit 6) of the 100 year floodplain showing the location and area around the subject pit.

Mexico Federal M #1 Visual Inspection Certification

I, Kurt Fagrelius, Vice President of Exploration for Dugan Production Corp. 709 East Murray Drive, Farmington, New Mexico hereby certify that I or persons under my direct supervision, prepared the attached exhibits and conducted a Visual Inspection of the location and area around the Mexico Federal M #1 below grade tank (Week of July 14, 2008). This application is in full compliance with all siting criteria and standards for below grade tanks established by the State of New Mexico, Energy Minerals and Natural Resources Department 19.15.17.10 NMAC.

Kurt Fagrelius

Kurt Fagrelius

7-28-08

Date

EXHIBIT 2.

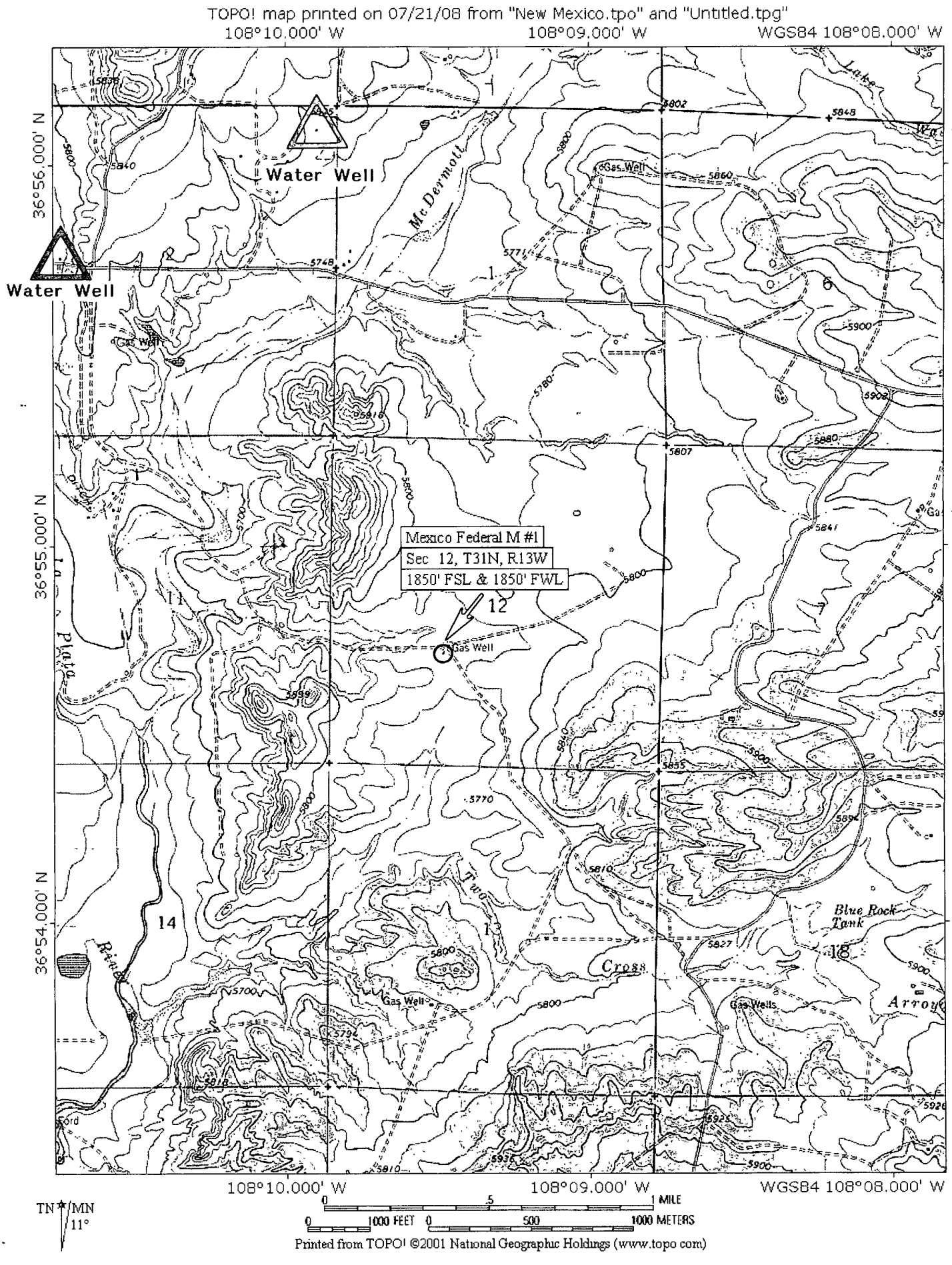

TOPO! map printed on 07/21/08 from "New Mexico.tpo" and "Untitled.tpg"
108°10.000' W
108°09.000' W
WGS84 108°08.000' W
36°56.000' N
36°55.000' N
36°54.000' N
Water Well
Water Well
Mc Dermott
Gas Well
Mexico Federal M #1
Sec 12, T31N, R13W
1850' FSL & 1850' FWL
Gas Well
Gas Well
Gas Wells
Blue Rock Tank
Cross
Arroy
Lord
TN 11°/MN
0 5 1 MILE
0 1000 FEET 0 500 1000 METERS
Printed from TOPO! ©2001 National Geographic Holdings (www.topo.com)

EXHIBIT 3.

36.91212 N 108.15731W Mexico Federal #1
Image © 2008 DigitalGlobe
Image © 2008 NMRGIS
Google
Eye alt 36939ft
Jun 2005
36°54'44.05" N 108°08'55.26" W
2.02mi

EXHIBIT 4.

New Mexico Office of the State Engineer
POD Reports and Downloads

Township: 31N Range: 13W Sections: 12

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

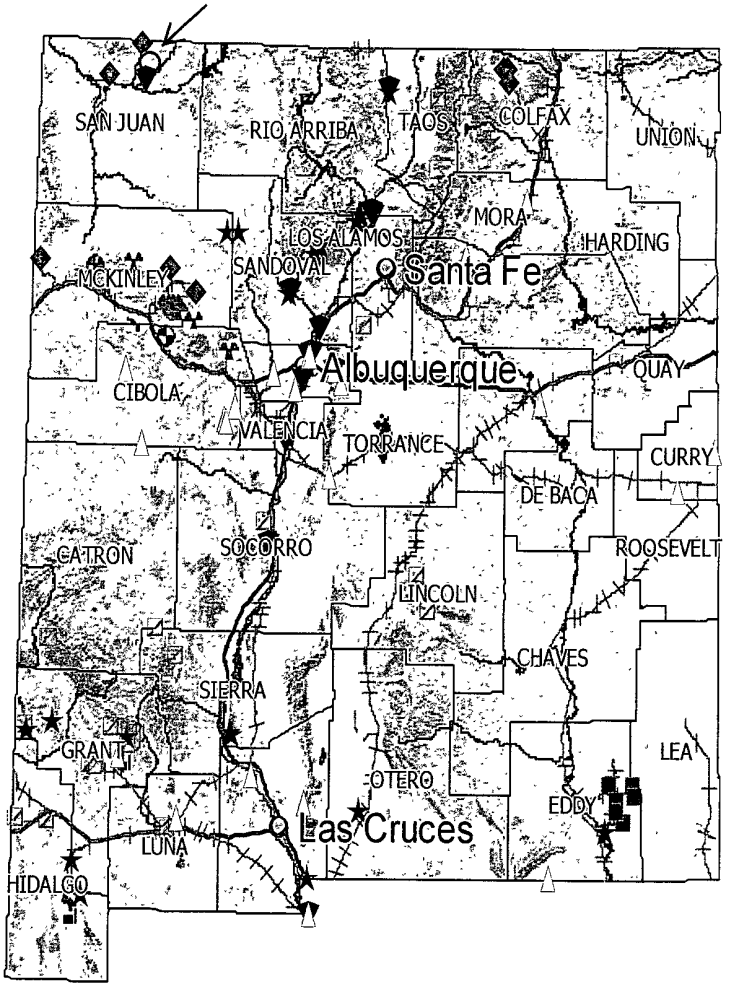
WATER COLUMN REPORT 07/21/2008

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are biggest to smallest)

POD Number	Tws	Rng	Sec	q	q	q	Zone	X	Y	Depth Well	Depth Water	Water Column (in feet)

No Records found, try again

EXHIBIT 5.



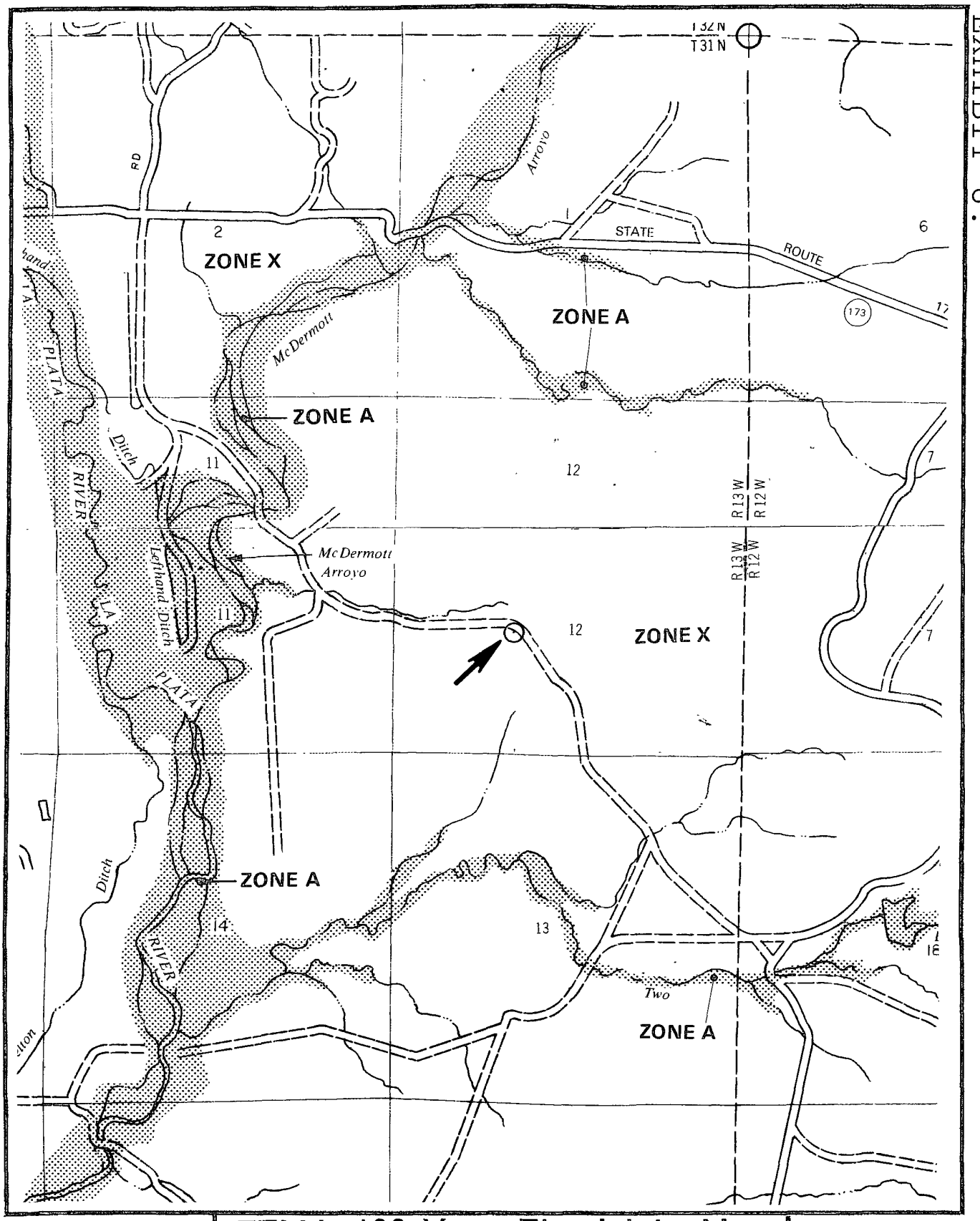
Mine, Mills and Quarry Map of New Mexico

Dugan Production Corp.

Mexico Federal M #1

Taken from the New Mexico Energy, Minerals and Natural Resources Department.
Mining and Minerals Division.

EXHIBIT 6.



FEMA 100-Year Floodplain Map

Mexico Federal M #1

Mexico Federal M #1 Design and Construction Plan

The Mexico Federal M #1 below grade tank will be designed and constructed in accordance with the following requirements:

1. Below grade tank will be designed and constructed to contain liquids and solids, prevent contamination of fresh water and protect the public health and environment (Exhibit 7).

2. Stockpile topsoil prior to digging pit, keep separate from subsoil and use as final cover and fill when closing pit.

3. Sign-12" by 24" with operator name, lease name, well #, location (unit letter, qtr/qtr, Sect., Twp., and Rge.) and emergency phone #'s will be posted on location. Sign will be posted in a location where it can be easily read.

4. Fencing around the Mexico Federal M #1 below grade tank will be constructed and operated in a manner that prevents unauthorized access and shall be maintained in good condition to protect the public and wildlife. Fencing will include a 4-foot hog wire fencing with two strands of barbed wire or top rail of re-bar or pipe on top. See the attached request for Administrative Approval. The Mexico Federal M #1 below grade tank is not located within 1000 feet of a house, school, hospital or church.

5. The Mexico Federal M #1 below grade tank will be covered with expanded metal, chicken-wire or a metal lid on top of the tank.

6. Mexico Federal M #1 below grade tank will be designed and constructed to ensure the confinement of liquids and prevent unauthorized releases. Pit will be constructed with a firm foundation and interior slopes, smooth and free of rocks or sharp edges to prevent punctures, cracks or indentations of the liner or tank bottom.

7. Mexico Federal M #1 below grade tank will be constructed of materials resistant to the tank's particular contents and resistant to damage from sunlight.

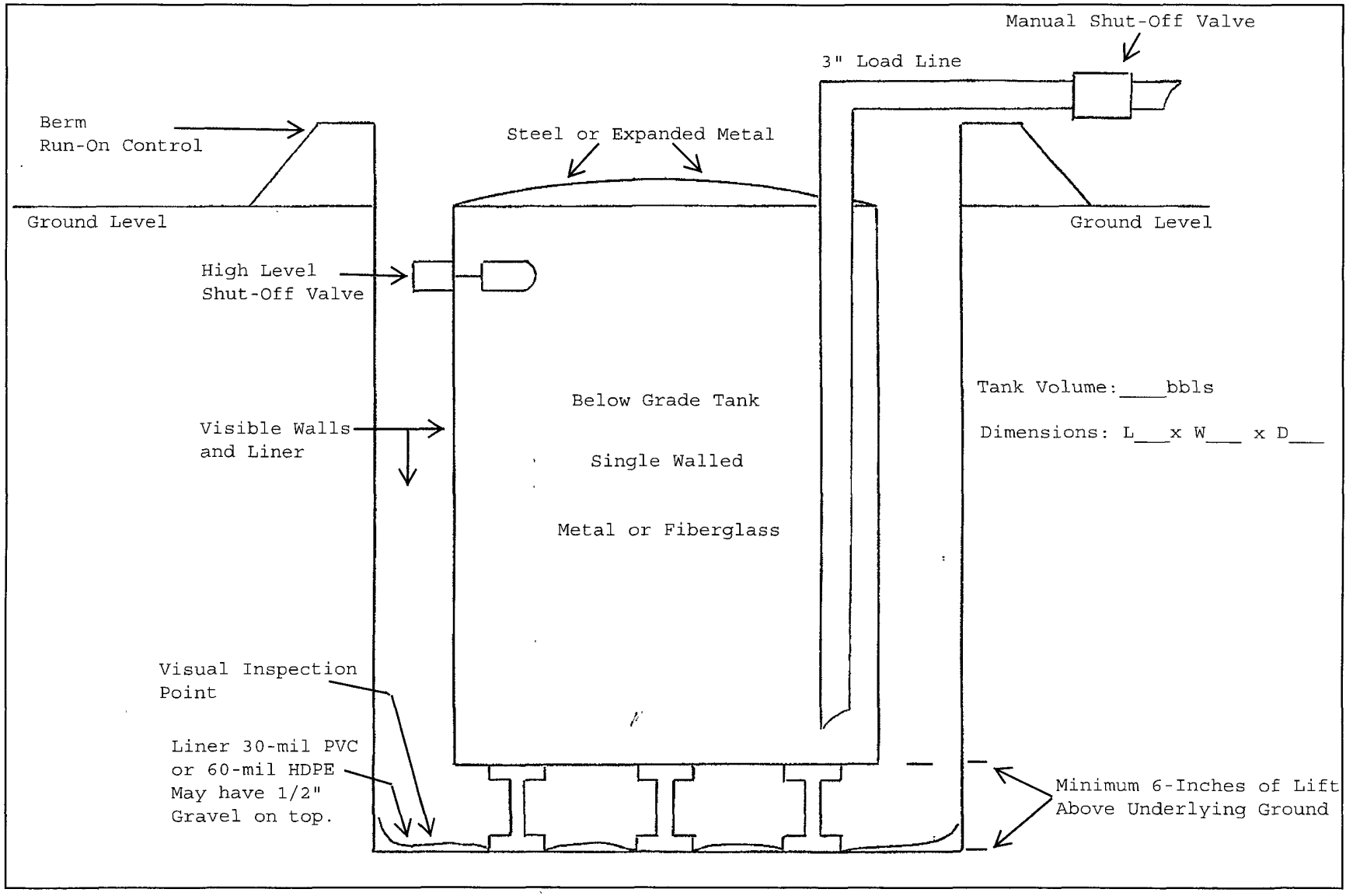
8. Liner will be 30-mil flexible PVC or 60-mil HDPE, string reinforced, impervious material, resistant to UV light, hydrocarbons, salt, acidic or basic liquids. The liner will have a hydraulic conductivity less than 1 x 10-9 cm/sec. Liner compatibility will comply with EPA SW-846.

9. The Mexico Federal M #1 below grade tank will be constructed with single walled sides and bottom which will be open for visual inspection for leaks. The below grade tank will be elevated a minimum of 6-inches above the underlying ground surface. The below grade tank will be underlain with a geo-membrane liner designed to divert any leaked fluid to a visual inspection point. Liner may be covered with gravel.

10. The Mexico Federal M #1 below grade tank will be equipped with a properly operating automatic high-level shut-off control device and manual controls to prevent overflows.

11. Diversionary berms, ditches or sloping will be constructed as necessary to prevent overflow and the collection of surface water entrapment.

Design Plan For Below Grade Tank



Dugan Production Corp.
Mexico Federal M #1

EXHIBIT 7.

Mexico Federal M #1 Operational Requirements

The Mexico Federal M #1 below grade tank will be maintained and operated in accordance with the following requirements:

1. The Mexico Federal M #1 below grade tank will be operated and maintained to contain liquids and solids and maintain the integrity of the tank / liner system or secondary containment system to prevent contamination of fresh water and protect public health and environment.

2. All fluids will be recycled, reused, reclaimed or disposed of in a manner approved by NMOCD rules.

3. Do not dispose of solid waste, trash, debris or hazardous material into the pit.

4. If the Mexico Federal M #1 below grade tank develops a leak or if a penetration occurs below the liquids surface, all liquid will be removed above the damage or leak line within 48-hours. The NMOCD office will be notified within 48-hours of the discovery. The below grade tank / liner system or secondary containment system will then be either replaced or repaired.

5. Below grade tank will be constructed and operated in a manner that prevents the tank from over flow and prevents surface water from entering the pit. Diversion berms will be constructed around the sides of pit and an automatic high level shut-off will be installed.

6. Any measurable oil will be continuously removed from the Mexico Federal M #1 below grade tank to prevent a significant accumulation of oil overtime.

7. The Mexico Federal M #1 below grade tank will be inspected at least monthly and records of each inspection will be maintained for five years.

8. Adequate freeboard will be maintained to prevent overtopping of the Mexico Federal M #1 below grade tank.

Mexico Federal M #1 Closure Plan–Methods, Procedures and Protocols

1. Comply with deadlines for closure of a pit or below grade tank established by the State of New Mexico, Energy Minerals and Natural Resources Department 19.15.17.13 NMAC, or an earlier date if required by the NMOCD in the case of imminent danger to fresh water, public health or the environment.

Existing On June 16, 2008	Permit Applc Submittal or Modification Request	File Closure Plan By	Stop Use By	Close By
Temporary Pit - Unlined	Not Permtd under 19 15.17	7/16/2008	Upon drlg rig release	9/16/2008
Permanent Pit - Unlined or Lined	Not permitted with NMOCD	7/16/2008	6-16-2008	12/16/2008
Permanent Pit - Unlined	Permitted or with NMOCD	12-16-2008	6-16-2010	6-16-2011
BGT-Aprvd. Design	Not Permtd under 19.15 17 Applc by 9-16-2008	12/16/2008	failed integrity replc w/apprvd design	
BGT-Not Aprvd Design Nor Retrofit to Comply w/19 15.17	Not Permtd under 19 15.17 Mod. Rqust by 9-16-2008	12/16/2008	6/16/2013	6-16-2013
BGT-Not Aprvd Design Nor Retrofit to comply w/19.15 17	NA	12/16/2008	6/16/2013	6/16/2013
Permanent Pit-Design and Constr Does not comply w/19 15 17 permitted and lined	Mod. Rqust by 12-16-2008 Comply w/in 18-mos of aprvl	12/16/2008 submit w/mod request	failed integrity replc w/apprvd design	60-days after cessation
Permanent Pit-Design and Constr Does not comply w/19.15 17 Registered and Lined	Permit Applc by 12-16-2008 Comply w/in 18-mos of aprvl	12/16/2008 submit w/permit Applc		60-days after cessation
Permanent Pit	Permitted under 19.15.17	60-Days prior to close		
Temporary Pit	Permitted under 19 15 17	Prior to closure	Upon drlg rig release	6-mos after rig release
BGT	Permitted under 19.15.17	12/16/2013 or prior to closure	failed integrity replc w/apprvd design	60-days after cessation

2. The Mexico Federal M #1 below grade tank was registered under rule 50; however, it is not an approved design under rule 19.15.17. Upon approval of this application, the existing below grade tank will be closed and a new below grade tank that meets the design requirements of rule 19.15.17 will be constructed.

3. Below grade tank will be closed within 60-days after cessation of use.

4. Proof of closure notice will be provided by certified mail to surface owner after closure. Proof of notice will be attached to final closure report.

5. Remove all liquid from below grade tank prior to closure and dispose of at the Dugan Production operated Sanchez O'Brien #1 SWD (permit SWD-694) located 1650 feet from the South line and 990 feet from the West line (Unit L) of Section 6, Township 24 North, Range 9 West.

6. All solids from the below grade tank and all solids removed from the containment pit will be excavated, hauled to and disposed of at either the Envirotech facility (permit #NM-01-0011) facility located in Section 6, Township 26 North, Range 10 West or the IEI facility (permit NM-01-0010B) located in Section 2, Township 29 North, Range 12 West.

7. Remove below grade tank and dispose of in a NMOCD approved facility, or recycle, reuse, or reclaim it in a manner that the NMOCD approves.

8. On site equipment associated with the below grade tank will be removed unless it is needed for some other purpose.

9. Collect a five point, composite sample of the soils beneath the below grade tank (any area that is wet, discolored or shows evidence of a release) to demonstrate that Benzene, BTEX, TPH and chlorides do not exceed the standards as specified in 19.15.17.13.E or the background concentration, whichever is greater.

Components	Test Method	Limit (mg/kg)
Benzene	EPA SW-846 8021B or 8260B	0.2
BTEX	EPA SW-846 8021B or 8260B	50
TPH	EPA SW-846 418.1	100
GRO/DRO	EPA SW-846 8015M	NS
Chlorides	EPA 300.1	250 or Background

10. The NMOCD will be notified of the testing results on form C-141.

11. If it is determined that a release has occurred, rule 19.15.3.116 NMAC and 19.15.1.19 NMAC will be complied with as required.

12. If the sampling results demonstrate that a release has not occurred, or that any release does not exceed the concentrations specified above or background concentrations, the pit will be backfilled with compacted, non-waste containing, earthen material.

13. Stockpiled sub-surface soil will be used to backfill pit and re-contour (to a final or intermediate cover that blends with the surrounding topography). A minimum of four feet of compacted, non-waste containing, earthen material will be used as backfill.

14. Stockpiled surface soil will be used as a cover over the backfilled pit and disturbed area no longer needed for production operations. The soil cover will include either the background thickness of top soil or one foot of suitable material to establish vegetation at the site whichever is greater.

15. The area will be re-seeded as per BLM guidelines. Re-seeding will be repeated until 70% of the native natural cover is achieved and maintained for two successive growing seasons. The first growing season after the pit is closed the disturbed area will be re-seeded. The seeding method will be to drill on contour whenever possible.

16. The NMOCD will be notified within 60-days of closure of the below grade tank. The closure report will be filed on form C-144 and will document all closure activities, sampling results, a plot plan, and details on backfilling and capping where applicable.

17. The NMOCD will be notified once successful re-vegetation has been achieved.

Mexico Federal M #1 Request for Administrative Approval

Administrative approval is hereby requested for an alternative to the fencing design for the Mexico Federal M #1 below grade tank.

The request for administrative approval cited above is needed to help minimize environmental impact and increase safety and protect wildlife and public health. The alternative proposed will protect fresh water, public health, safety and the environment more effectively than the design and construction specifications established by the State of New Mexico, Energy Minerals and Natural Resources Department do in rule 19.15.17.11 NMAC.

1. The proposed alternative fencing design will include T-posts spaced 10-feet apart. Hog wire / field fence 4-feet in height will be strung tightly and anchored to the top and bottom of each T-post. Small holes (3" high X 6" wide) in the hog-wire will be located at ground level with increasing larger holes (up to 7" high X 6" wide) located at the top of the fence. Anchor braces will be put at all four corners to strengthen and tighten the fence. Two strands of barbed wire or a pipe / re-bar top rail will be constructed above the hog wire. This fence design (developed over the last 30-years) has proven to be very effective controlling unauthorized access to below grade tanks.

   The existing rule (19.15.17.11.D.3) would require the operator to fence the below grade tank with a four foot fence that has at least four strands of barbed wire evenly spaced in the interval between on foot and four feet above the ground level. The proposed fencing alternative would provide better security against unauthorized access to below grade tanks. The smaller holes in hog-wire (3" X 6" up to 7" X 6") is more effective at controlling unauthorized access by the public and wildlife than 4-strands of barbed wire spaced 12" apart.

   The proposed fence around the below grade tank will be constructed and operated in a manner that prevents unauthorized access and shall maintain the fence in good condition to protect the public and wildlife.

   The request for administrative approval cited above is needed to help minimize environmental impact, increase safety and protect wildlife and public health. The alternatives proposed will protect fresh water, public health, safety and the environment more effectively than the design and construction specifications established by the State of New Mexico, Energy Minerals and Natural Resources Department do in rule 19.15.17.11 NMAC.