

**Jones, Brad A., EMNRD**

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**From:** Cathy Smith [CSmith@huntingtonenergy.com]  
**Sent:** Friday, March 30, 2012 3:38 PM  
**To:** Jones, Brad A., EMNRD  
**Subject:** CLU BGT List for Approvals 3\_30\_12.xls  
**Attachments:** CLU BGT List for Approvals 3\_30\_12.xls

Brad,

Please see attached list for Huntington Energy, L.L.C. The CLU 342, 476 & 477 wells will be plugged in the next 30 days. I did not realize the C-144 BGT approvals had not been done for these wells. We will need BGT approval for the attached list. We should be getting closer to the end of our original C-144s. I will send the rest of the wells for approval next week.

Thank you so much for your help with this!  
Have a great weekend!

Cathy Smith  
Huntington Energy, L.L.C.  
908 N.W. 71<sup>st</sup> St.  
Oklahoma City, OK 73116  
(405) 840-9876 ext. 129

HUNTINGTON ENERGY, L.L.C. BGT APPLICATION LIST

WELL TYPE	WELL NAME	API#	LOCATION				LONGITUDE	COUNTY	ST
			UL SEC/TOWNSHIP/RANGE	FOOTAGES	LATITUDE	LONGITUDE			
F	CANYON LARGO UNIT 300	30-039-22440	I SE/4 SEC 8-24N-6W	1980' FSL & 1500' FEL	36.32547	-107.48376	RIO ARRIBA	NM	
S	CANYON LARGO UNIT 327	30-039-23242	O SEC 32-25N-6W	790' FSL & 1850' FEL	36.35126	-107.48769	RIO ARRIBA	NM	
F	CANYON LARGO UNIT 342	30-039-23385	K SEC 20-25N-6W	1775' FSL & 1840' FWL	36.38283	-107.49283	RIO ARRIBA	NM	
F	CANYON LARGO UNIT 356	30-039-23863	P SEC 20-25N-6W	910' FSL & 860' FEL	36.38051	-107.48398	RIO ARRIBA	NM	
F	CANYON LARGO UNIT 359	30-039-23878	K SEC 31-25N-6W	1595' FSL & 1850' FWL	36.35391	-107.51060	RIO ARRIBA	NM	
F	CANYON LARGO UNIT 437	30-039-29640	L NW/SW Sec 25-24N-6W	1450' FSL & 800' FWL	36.28070	-107.42536	RIO ARRIBA	NM	
F	CANYON LARGO UNIT 447	30-039-25480	G SEC 24-25N-7W	1510' FNL & 1615' FEL	36.38832	-107.52242	RIO ARRIBA	NM	
F	CANYON LARGO UNIT 453	30-039-27583	N SE/SW SEC 24-25N-7W	1195' FSL & 1570' FWL	36.38150	-107.52905	RIO ARRIBA	NM	
F	CANYON LARGO UNIT 455	30-039-27749	P E2 SEC 1-25N-7W	1285' FSL & 1300' FEL	36.42440	-107.52133	RIO ARRIBA	NM	
F	CANYON LARGO UNIT 456	30-039-27743	O E2 SEC 3-24N-7W	1065' FSL & 1470' FEL	36.33762	-107.55872	RIO ARRIBA	NM	
S	CANYON LARGO UNIT 457	30-039-29282	M W2 SEC 36-25N-7W	1150' FSL & 1310' FWL	36.35281	-107.53061	RIO ARRIBA	NM	
S	CANYON LARGO UNIT 458	30-039-29283	H E2 SEC 2-25N-7W	2338' FNL & 1282' FEL	36.42920	-107.53899	RIO ARRIBA	NM	
F	CANYON LARGO UNIT 459	30-039-27746	D W2 SEC 7-25N-6W	1290' FNL & 1310' FWL	36.41724	-107.51239	RIO ARRIBA	NM	
F	CANYON LARGO UNIT 476	30-039-29651	B NW/NE SEC 26-24N-6W	1310' FNL & 1665' FEL	36.28763	-107.43397	RIO ARRIBA	NM	
F	CANYON LARGO UNIT 477	30-039-29715	A SW/NE/NE SEC 27-24N-6W	1060' FNL & 860' FEL	36.28791	-107.44930	RIO ARRIBA	NM	

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

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.

RECEIVED

2009 MAY 29 AM 11 24

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

- Type of action:  Permit of a pit, closed-loop system, below-grade tank, or proposed alternative method  
 Closure of a pit, closed-loop system, below-grade tank, or proposed alternative method  
 Modification to an existing permit  
 Closure plan only submitted for an existing permitted or non-permitted pit, closed-loop system, below-grade tank, or proposed alternative method

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

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

1.  
Operator: Huntington Energy, L.L.C. OGRID #: 208706  
Address: 908 N.W. 71<sup>st</sup> St., Oklahoma City, OK 73116  
Facility or well name: Canyon Largo Unit #447  
API Number: 30-039-25480 OCD Permit Number: \_\_\_\_\_  
U/L or Qtr/Qtr G Section 24 Township 25N Range 7W County: Rio Arriba  
Center of Proposed Design: Latitude 36.38832 Longitude -107.52242 NAD:  1927  1983  
Surface Owner:  Federal  State  Private  Tribal Trust or Indian Allotment

2.  
 **Pit:** Subsection F or G of 19.15.17.11 NMAC  
Temporary:  Drilling  Workover  
 Permanent  Emergency  Cavitation  P&A  
 Lined  Unlined Liner type: Thickness \_\_\_\_\_ mil  LLDPE  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: 120 bbl Type of fluid: Produced Water  
Tank Construction material: Metal  
 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 60 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.





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	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> 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	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> 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	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> 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	<input type="checkbox"/> Yes <input type="checkbox"/> 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	<input type="checkbox"/> Yes <input type="checkbox"/> 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	<input type="checkbox"/> Yes <input type="checkbox"/> 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	<input type="checkbox"/> Yes <input type="checkbox"/> No
Within 500 feet of a wetland. - US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site	<input type="checkbox"/> Yes <input type="checkbox"/> No
Within the area overlying a subsurface mine. - Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division	<input type="checkbox"/> Yes <input type="checkbox"/> No
Within an unstable area. - Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map	<input type="checkbox"/> Yes <input type="checkbox"/> No
Within a 100-year floodplain. - FEMA map	<input type="checkbox"/> Yes <input type="checkbox"/> 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): Catherine Smith Title: Regulatory

Signature: Catherine Smith Date: 5/6/2009

e-mail address: csmith@huntingtonenergy.com Telephone: 405-840-9876

20.

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

OCD Representative Signature: [Signature] Approval Date: 4/3/12

Title: Environmental Engineer 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 Office of the State Engineer  
POD Reports and Downloads

Township:  Range:  Sections:

NAD27 X:  Y:  Zone:  Search Radius:

County:  Basin:  Number:  Suffix:

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

WATER COLUMN REPORT 04/09/2009

(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 01613	25N	07W	12	4						1083	730	353

Record Count: 1

New Mexico Office of the State Engineer  
POD Reports and Downloads

Township:  Range:  Sections:

NAD27 X:  Y:  Zone:  Search Radius:

County:  Basin:  Number:  Suffix:

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

AVERAGE DEPTH OF WATER REPORT 04/09/2009

Bsn	Tws	Rng	Sec	Zone	X	Y	Wells	(Depth Water in Feet)		
								Min	Max	Avg
SJ	25N	07W	12				1	730	730	730

Record Count: 1

New Mexico Office of the State Engineer  
 POD Reports and Downloads

Township:  Range:  Sections:

NAD27 X:  Y:  Zone:  Search Radius:

County:  Basin:  Number:  Suffix:

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

POD / SURFACE DATA REPORT 04/09/2009

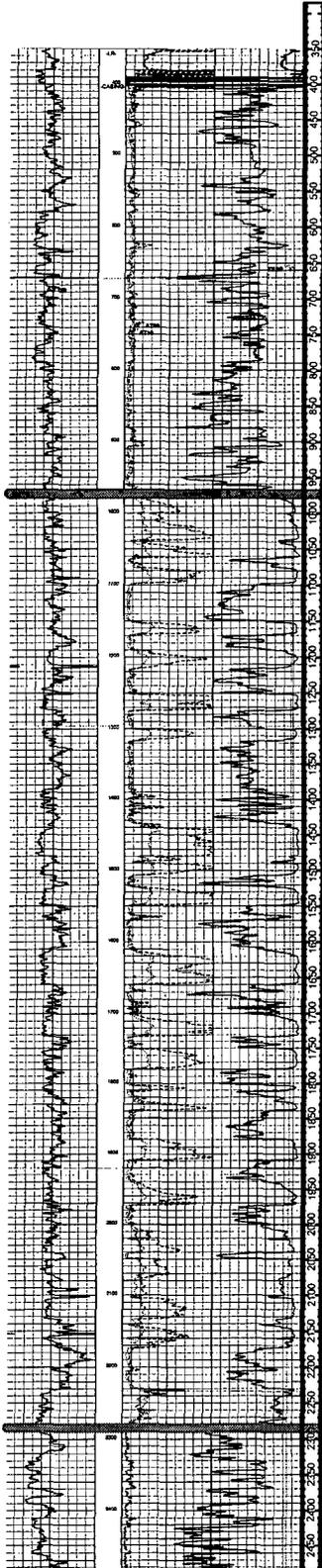
DB File Nbr	Use	(acre ft per annum)	Diversion	Owner	POD Number	Source	(quarters are 1=NW 2=NE 3=SW 4=SE)				X Y are in Feet			UTM are in Meters	
							Tw	Rng	Sec	q	q	Zone	X	Y	UTM_Zone
<u>SJ_00681</u>	STK		8	HOMER C. BERRY	<u>SJ_00681_43</u>		25N	07W	17	2	2	3	13	267630	
<u>SJ_00681_40</u>	STK		48	HOMER C. BERRY	<u>SJ_00681_40</u>		25N	07W	30	4	4	1	13	265817	
<u>SJ_00681_41</u>	STK		32	HOMER C. BERRY	<u>SJ_00681_41</u>		25N	07W	33	1	3	2	13	267980	
<u>SJ_00681_43</u>	STK		10	HOMER C. BERRY	<u>SJ_00681_43</u>		25N	07W	17	2	2	3	13	267630	
<u>SJ_00681_44</u>	STK		10	HOMER C. BERRY	<u>SJ_00681_44</u>		25N	07W	17	2	2	2	13	267830	
<u>SJ_01613</u>	STK		3	BUREAU OF LAND MANAGEMENT	<u>SJ_01613</u>	Shallow	25N	07W	12	4			13	273879	
<u>SJ_02418</u>	STK		3	RICHARD BOYD	<u>SJ_02418</u>		25N	07W	04	4	1	3	13	268786	
<u>SJ_02423</u>	STK		3	RICHARD BOYD	<u>SJ_02423</u>		25N	07W	04	4	3	1	13	268742	

Record Count: 8

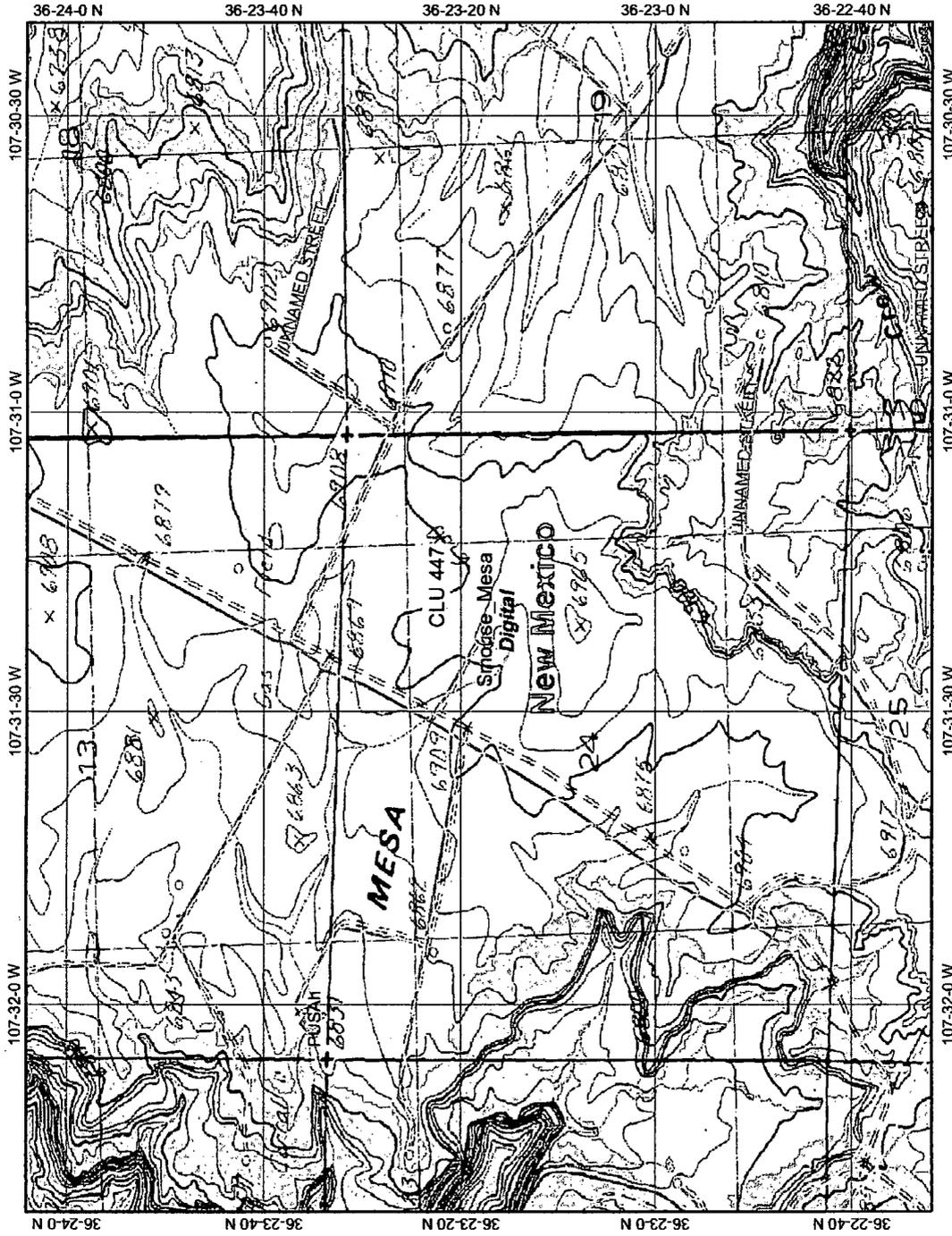


Canyon Largo Project

3003925480000  
MERIDIAN OIL INC  
CANYON LARGO UNIT  
447  
T25N R7W S24  
20.112  
470,466  
13,344



# CLU 447 USGS TOPO MAP



- ### Legend
- Ohio\_wet\_scan
  - 0
  - 1
  - Out of range
  - Interstate
  - Major Roads
  - Other Road
  - Interstate
  - State highway
  - US highway
  - Roads
  - Cities
  - USGS Quad Index 24K
  - Lower 48 Wetland Polygons
  - Estuarine and Marine Deepwater
  - Estuarine and Marine Wetland
  - Freshwater Emergent Wetland
  - Freshwater Forested/Shrub Wetland
  - Freshwater Pond
  - Lake
  - Other
  - Riverine
  - Lower 48 Available Wetland Data
  - Non-Digital
  - Digital
  - No Data
  - Scan
  - NHD Streams
  - Counties 100K
  - States 100K
  - South America
  - North America

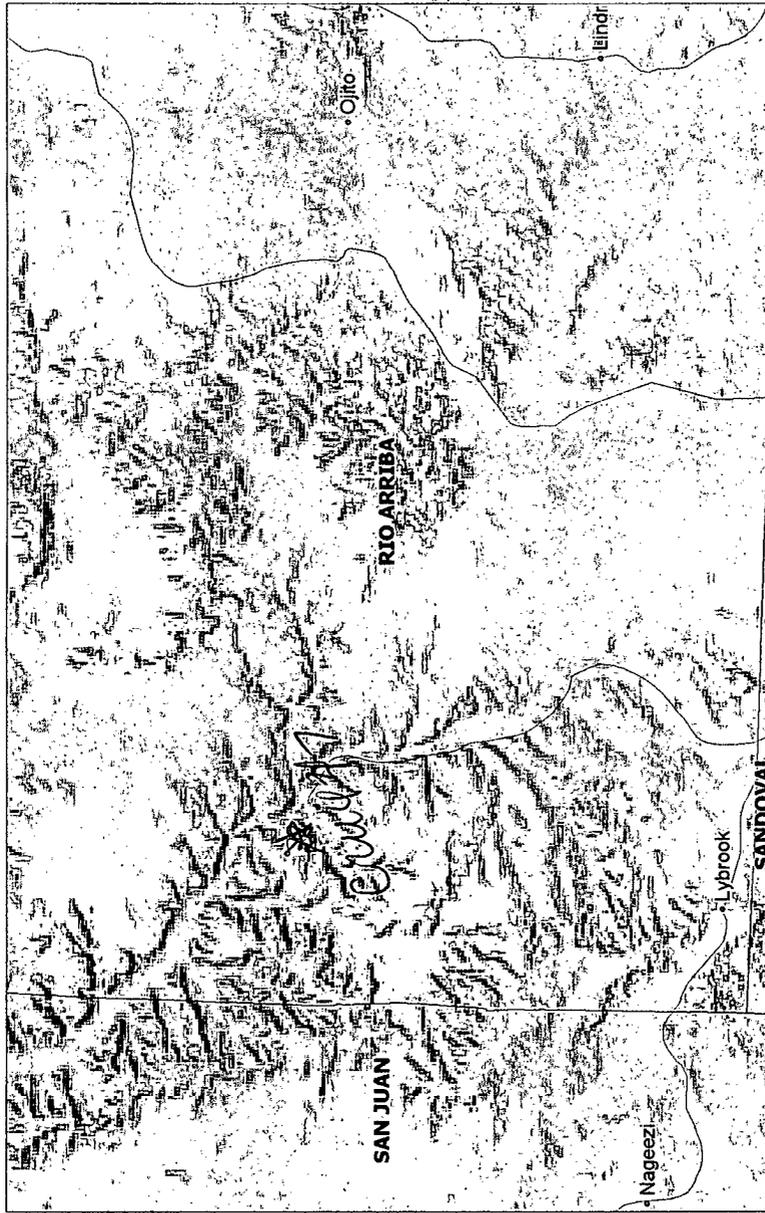
Scale: 1:20,000

Map center: 36° 23' 18" N, 107° 31' 21" W

This map is a user generated static output from an internet mapping site and is for general reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable. THIS MAP IS NOT TO BE USED FOR NAVIGATION.

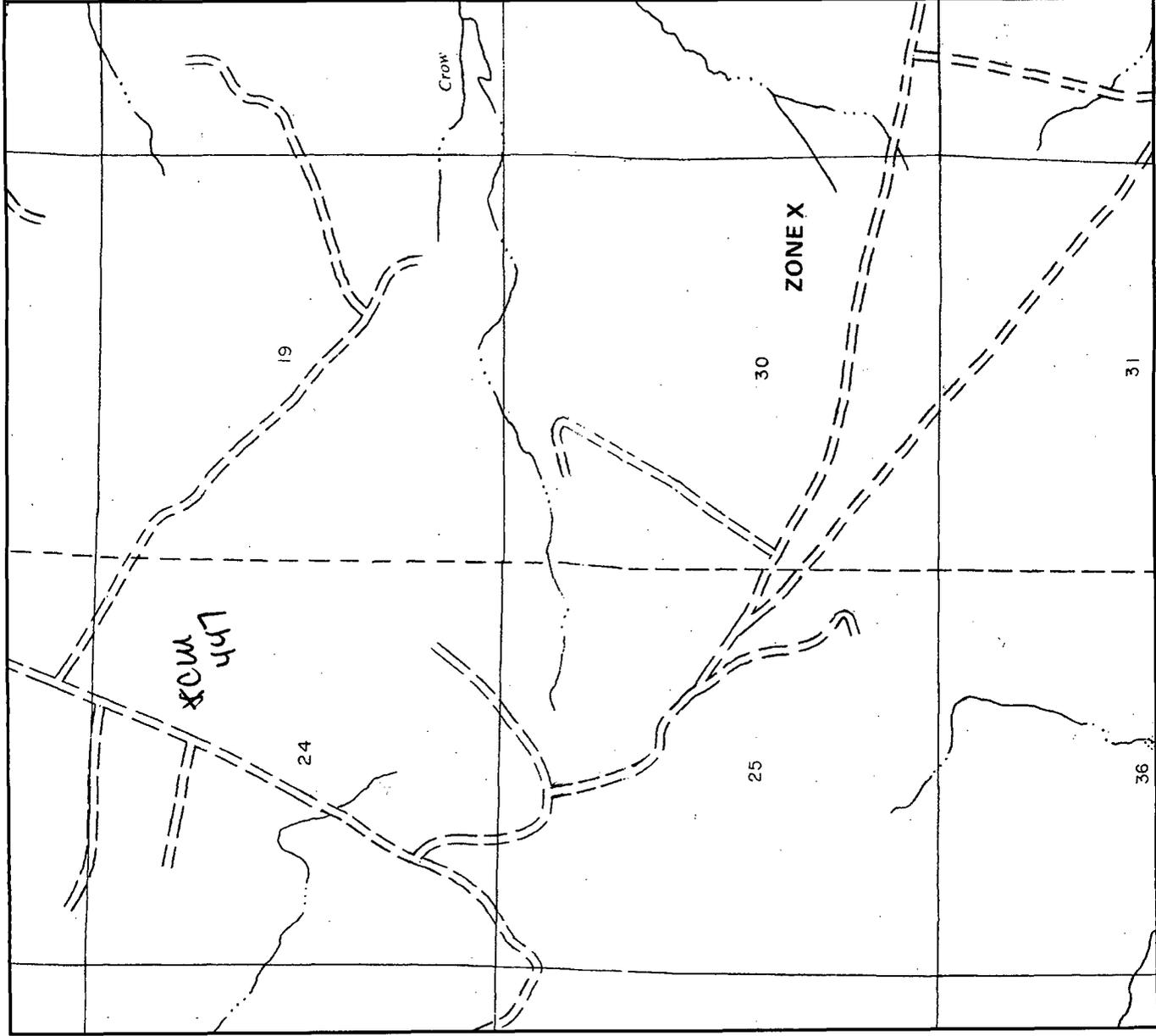
# Canyon Largo Unit 447 Mines, Mills and Quarries Web Map

<b>Mines, Mills &amp; Quarries Commodity Groups</b>	
△	Aggregate & Stone Mines
◆	Coal Mines
★	Industrial Minerals Mines
▼	Industrial Minerals Mills
☒	Metal Mines and Mill Concentrate
☐	Potash Mines & Refineries
⌘	Smelters & Refinery Ops.
✦	Uranium Mines
⊕	Uranium Mills
<b>Population</b>	
○	Cities (2000 Census)
<b>Transportation</b>	
+++	Railways
—	Interstate Highways
---	Major Roads



SCALE 1 : 417,913





**NATIONAL FLOOD INSURANCE PROGRAM**

**FIRM**  
**FLOOD INSURANCE RATE MAP**

**RIO ARriba COUNTY,  
NEW MEXICO**  
UNINCORPORATED AREAS

PANEL 725 OF 1325  
(SEE MAP INDEX FOR PANELS NOT PRINTED)

PANEL LOCATION

**COMMUNITY-PANEL NUMBER**  
350049.0725 B

**EFFECTIVE DATE:**  
JANUARY 5, 1989

Federal Emergency Management Agency

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

## *Hydrogeological Report for Canyon Largo Unit #447*

### **Regional Hydrogeological Context:**

The San Jose Formation of Eocene age occurs in New Mexico and Colorado, and its outcrop forms the land surface over much of the eastern half of the central basin. It overlies the Nacimiento Formation in the area generally south of the Colorado-New Mexico State line and overlies the Animas Formation in the area generally north of the State line.

The San Jose Formation was deposited in various fluvial-type environments. In general, the unit consists of an interbedded sequence of sandstone, siltstone, and variegated shale. Thickness of the San Jose Formation generally increases from west to east (200 feet in the west and south to almost 2,700 feet in the center of the structural basin). Ground water is associated with alluvial and fluvial sandstone aquifers. Thus, the occurrence of ground water is mainly controlled by the distribution of sandstone in the formation. The distribution of such sandstone is the result of original depositional extent plus any post-depositional modifications, namely erosion and structural deformation. Transmissivity data for San Jose Formation are minimal. Values of 40 and 120 feet squared per day were determined from two aquifer tests (Stone et al., 1983, table 5). The reported or measured discharge from 46 water wells completed in San Jose Formation ranges from 0.15 to 61 gallons per minute and the median is 5 gallons per minute. Most of the wells provide water for livestock and domestic use.

The San Jose Formation is a very suitable unit for recharge from precipitation because soils that form on the unit are sandy and highly permeable and therefore readily absorb precipitation. However, low annual precipitation, relatively high transpiration and evaporation rates, and deep dissection of the San Jose Formation by the San Juan River and its tributaries all tend to reduce the effective recharge to the unit.

Stone et al., 1983, Hydrogeology and Water Resources of the San Juan Basin, New Mexico: Socorro, New Mexico Bureau of Mines and Mineral Resources Hydrologic Report 6, 70 p.

## CLU 447

### Siting Criteria Compliance Demonstration & Hydro Geologic Analysis

The subject well is not located in an unstable area. Visual inspection has been performed (see attached siting checklist): location is not within 300' of flowing watercourse or 200' from any other water course or lake bed; not within 300' of any permanent residence, school, or institution; not within 500' of any private water well or spring. The topographic map confirms visual inspection of water course. FEMA Map confirms the location is not within a 100 year floodplain. The location is not over a mine and is not on the side of a hill, as indicated on the Mines, Mills and Quarries Map. iWaters search indicates the closest water well is 1.5 miles, SE Sec 12-25N-R7W # SJ01613, TD 1083', Average Depth of Water 730', Water Column 353'. Huntington Energy CLU 447 reported the top of San Jose water sand at 970', as demonstrated on attached log.

**HUNTINGTON ENERGY, L.L.C.**  
**BELOW GRADE TANK**  
**SITING/VISUAL INSPECTION CHECKLIST**

Well Name: CLU 447

Legal Location: SEC 24, T25N R7W

Date of Inspection: 4-1-09

Siting Personnel: David Morales

I observed the following:

	<u>Yes</u>	<u>No</u>
A. 300 ft from flowing watercourse		X
B. 200 ft from any water course or lake bed		X
C. 300 ft from permanent resident, school, or institution		X
D. 500 ft from private fresh water well or spring used by less than 5 households for domestic or stock watering purposes.		X
E. 1000 ft from any other fresh water well or spring		X
F. Incorporated municipal boundaries or within a defined municipal fresh water well field.		X
G. Area overlaying a sub-surface mine		X
H. Unstable area		X
I. 100 year flood plain		X

District I  
 PO Box 1980, Hobbs, NM 88241-1980  
 District II  
 PO Drawer DD, Artesia, NM 88211-0719  
 District III  
 1000 Rio Brazos Rd., Aztec, NM 87410  
 District IV  
 PO Box 2088, Santa Fe, NM 87504-2088

State of New Mexico  
 Energy, Minerals & Natural Resources Department

Form C-1  
 Revised February 21, 1994  
 Instructions on back  
 Submit to Appropriate District Office  
 State Lease - 4 Copies  
 Fee Lease - 3 Copies

OIL CONSERVATION DIVISION  
 PO Box 2088  
 Santa Fe, NM 87504-2088

AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-039-25480		Pool Code 17610/71599	Pool Name Deviils Fork Gallup Basin Dakota
Property Code 6886	Property Name Canyon Largo		Well Number 447
OGRID No. 14538	Operator Name MERIDIAN OIL INC.		Elevation 6915'

10 Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
G	24	25 N	7 W		1510	North	1615	East	R.A.

11 Bottom Hole Location If Different From Surface

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

12 Dedicated Acres E/320	13 Joint or Infill	14 Consolidation Code	15 Order No.
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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

<div data-bbox="224 1178 565 1344" data-label="Text"> <p>RECEIVED          JAN 20 1995          OIL CON. DIV.          DIST. 3</p> </div> <div data-bbox="532 1476 662 1557" data-label="Text"> <p>24</p> </div>	<div data-bbox="532 1038 685 1076" data-label="Text"> <p>5196.84</p> </div> <div data-bbox="743 1115 776 1217" data-label="Text"> <p>1510'</p> </div>	<div data-bbox="906 1293 1010 1332" data-label="Text"> <p>1615'</p> </div>	<div data-bbox="1117 1038 1588 1076" data-label="Section-Header"> <p>17 OPERATOR CERTIFICATION</p> </div> <div data-bbox="1117 1081 1588 1136" data-label="Text"> <p>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.</p> </div> <div data-bbox="1117 1200 1588 1315" data-label="Text"> <p><i>Peggy Bradfield</i>          Signature</p> </div> <div data-bbox="1117 1315 1588 1370" data-label="Text"> <p>Peggy Bradfield          Printed Name</p> </div> <div data-bbox="1117 1370 1588 1434" data-label="Text"> <p>Regulatory Affairs          Title</p> </div> <div data-bbox="1117 1434 1588 1498" data-label="Text"> <p>1-8-95          Date</p> </div>	
	<div data-bbox="61 1421 94 1600" data-label="Text"> <p>5188.92'</p> </div>	<div data-bbox="786 1685 1010 1723" data-label="Text"> <p>SF-078879</p> </div>	<div data-bbox="1058 1455 1101 1600" data-label="Text"> <p>5196.18</p> </div>	<div data-bbox="1117 1519 1588 1557" data-label="Section-Header"> <p>18 SURVEYOR CERTIFICATION</p> </div> <div data-bbox="1117 1561 1588 1668" data-label="Text"> <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> </div> <div data-bbox="1117 1668 1588 1732" data-label="Text"> <p>10-4-94          Date of Survey</p> </div> <div data-bbox="1117 1732 1588 1774" data-label="Text"> <p>Signature and Seal of Professional Surveyor</p> </div> <div data-bbox="1188 1698 1507 1996" data-label="Image"> </div>
	<div data-bbox="539 2004 717 2042" data-label="Text"> <p>5232.48</p> </div>			<div data-bbox="1117 1953 1588 1987" data-label="Text"> <p>Certificate Number</p> </div>

**Huntington Energy, L.L.C.**  
**Below Grade Tank Design and Construction**  
**San Juan Basin**

The design and construction requirements for below-grade tanks include the general provisions of Paragraphs A, C, D, and E of 19.15.17.11 NMAC and the specific requirements of Paragraph I of 19.15.17.11 NMAC. In accordance with Section 11 of 19.15.17 NMAC, the following include all of the appropriate provisions for the design and construction of below grade tanks (BGT) on Huntington Energy, L.L.C. (HE) locations.

General Plan:

1. HE will design and construct a BGT to contain liquids and to prevent contamination of fresh water and protect the public health and environment.
2. Huntington Energy, L.L.C. (HE) shall have signs at the sites as per 19.15.16.8 NMAC of which an existing well is the same operator-Huntington Energy. The sign shall provide the following: Operator's name, location of site by quarter-quarter or unit letter, section, township and range, and emergency numbers. If in case the Below Grade Tank (BGT) does not co-exist with an existing well, the sign shall comply with subsection C of 19.15.17.11 NMAC.
3. HE shall fence the BGT in a manner that prevents unauthorized access and shall maintain the fence in good repair. We shall ensure that all gates associated with the fence are closed and locked when responsible personnel are not on-site.

HE shall construct fencing around the BGT using 4' hogwire fencing topped with two strands of barbed wire, or with a pipe top rail- an alternative to the requirements as set out by Subsection D of 19.15.17.11 - and should provide long term protection and less maintenance. A six foot chain link fence topped with three strands of barbed wire will be used if the well location is within 1000' of a permanent residence, school, hospital, institution, or church.

4. HE will construct an expanded metal covering on the top of the BGT.
5. HE shall ensure that a below-grade tank is constructed of materials resistant to the below-grade tank's particular contents and damage from sunlight.
6. HE will construct a properly constructed foundation consisting of a firm, unyielding base, smooth and free of rocks, debris, sharp edges, or irregularities to prevent the liner's rupture or tear. Once the hole is constructed with a backhoe and firmed, shovels are used to smooth and remove all rocks, debris, or edges that might rupture the liner. In addition, I-beams placed below the tank are wrapped with 60 mil HPDE material to prevent any punctures of liner.
7. HE shall construct a BGT to prevent overflow and the collection of surface water run-on by constructing an inner crib, which the height extends above ground level by 6" preventing water from entering. The BGT is also elevated 6" above ground level as well. The berm, which is constructed approximately 3' tall by 5' wide for containment and any fluids entering outside of the fenced area. Auto shut-off controls are installed using a radar that is set at 14" of freeboard. When water level reaches that point, a signal is sent

and sends an alarm to the pumper. If 10" of freeboard is reached, a signal is sent to a valve which shuts the gas line on discharge of separator. This in turn causes a pressure increase to 200 psi, which closes the motor valve on the inlet side of the separator, shutting the well down. A manual valve is also placed on the 2" line from separator to BGT shutting off any water to BGT.

8. HE will construct a BGT system employing an external crib that stands between the wall of the foundation of the hole and the BGT. The crib will be placed on top of the 60 mil liner and will extend 6" above ground level. It is made of steel with a grey coating. The BGT side walls will be visible and open for visual inspection. Dirt is placed outside of crib filling void. (Liner is extended to ground level on outside of crib.)

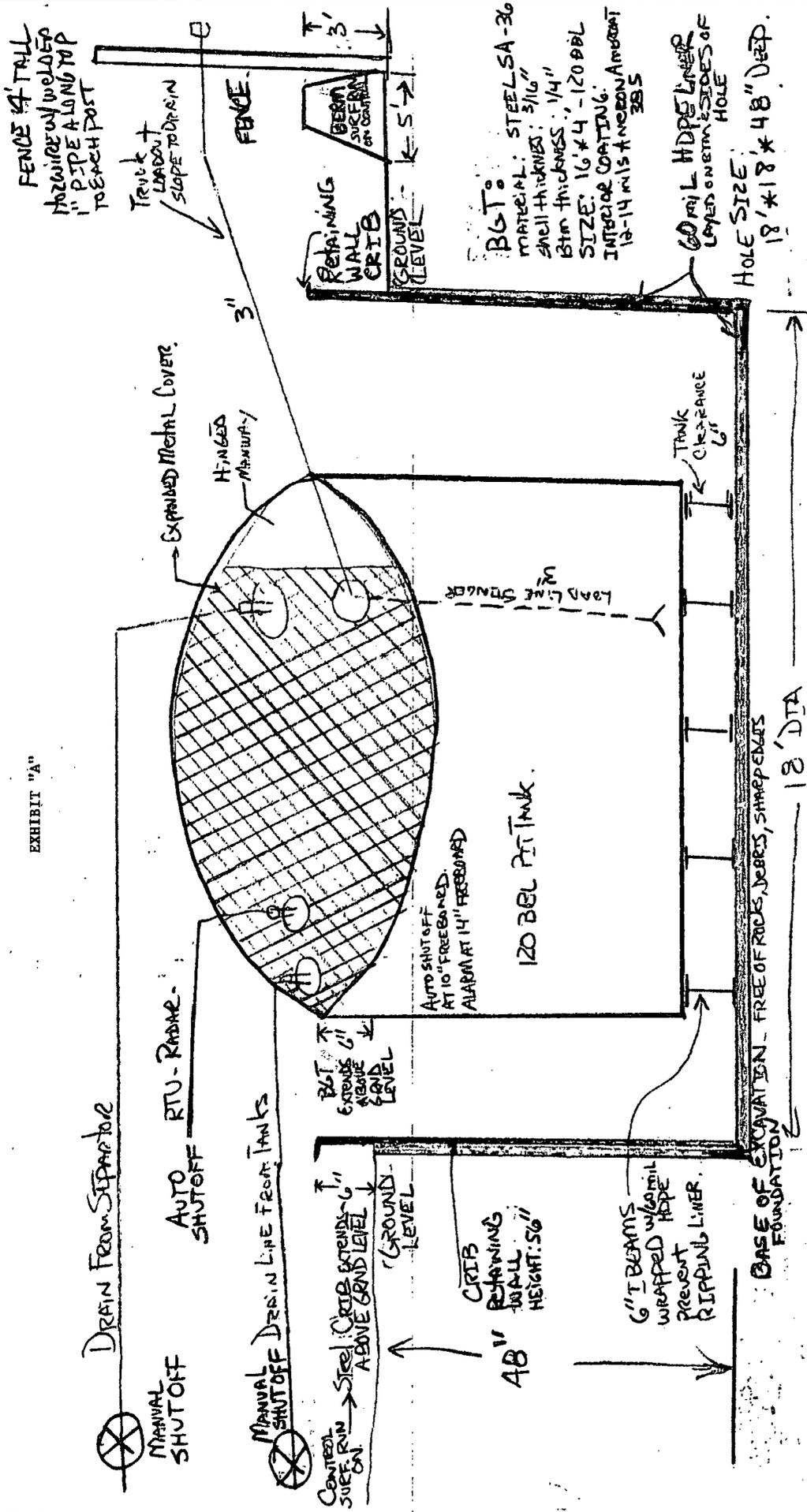
The BGT will be steel and elevated 6" above underlying ground surface using 6" I-Beam (I-Beams wrapped to prevent edges from rupturing the liner), which elevates the BGT 6" above ground level to prevent surface run-on.

9. HE shall equip below-grade tanks designed in this manner with a properly operating automatic high-level shut-off control device and manual controls to prevent overflows. Auto shut-off controls are installed using a radar that is set at 14" of freeboard and when water level reaches that point, a signal is sent and it in turns sends an alarm to the pumper. If 10" of freeboard is reached, a signal is sent to a valve which shuts the gas line on discharge of separator. This in turn causes a pressure increase to 200 psi which closes the motor valve on the inlet side of separator shutting the well down. A manual valve is also placed on the 2" line from separator to BGT shutting off any water to BGT.
10. The geomembrane liner shall consist of 30-mil flexible PVC or 60-mil HDPE liner, or an equivalent liner material that the appropriate division district office approves. The geomembrane liner shall have a hydraulic conductivity no greater than  $1 \times 10^{-9}$  cm/sec. The geomembrane liner shall be composed of an impervious, synthetic material that is resistant to petroleum hydrocarbons, salts and acidic and alkaline solutions. The liner material shall be resistant to ultraviolet light. Liner compatibility shall comply with EPA SW-846 method 9090A.

HE will demonstrate to the NMOCD that the liner complies with the specifications within Subparagraph (a) of Paragraph (4) of Subsection I of 19.15.17.11 NMAC and obtain approval from the NMOCD prior to the installation of the new design.

11. HE BGT's constructed and installed prior to June 16, 2008, that do not comply with 19.15.17.11 NMAC Paragraph 1-4 of Subsection I, shall be equipped or retrofitted or closed within 5 years after June 16, 2008. If the existing BGT does not demonstrate integrity, the BGT will be removed and a BGT that meets criteria set forth by Paragraphs 1 thru 4 of Subsection I of 19.15.17.11 NMAC will be installed.

EXHIBIT "A"



60 mil HDPE



Table 1.1: Minimum Values for Smooth Black-Surfaced HDPE Geomembranes

TESTED PROPERTY	TEST METHOD	FREQUENCY	MINIMUM VALUE					
			HDE 030A000	HDE 040A000	HDE 060A000	HDE 080A000	HDE 100A000	
Product Code								
Thickness, (minimum average) mil (mm)	ASTM D 5199	Every roll	30 (0.75)	40 (1.00)	60 (1.50)	80 (2.00)	100 (2.50)	120 (3.00)
Lowest individual reading (-10%)			27 (0.69)	36 (0.91)	54 (1.40)	72 (1.80)	90 (2.30)	108 (2.70)
Density, g/cm <sup>3</sup>	ASTM D 1505	200,000 lb	0.94	0.94	0.94	0.94	0.94	0.94
Tensile Properties (each direction)	ASTM D 6893, Type IV	20,000 lb						
Strength at Break, lb/in (N/mm)	Dumbbell, 2 lpm		114 (20)	152 (27)	228 (40)	304 (53)	396 (69)	504 (89)
Strength at Yield, lb/in (N/mm)			83 (11)	84 (15)	128 (22)	168 (29)	216 (38)	288 (51)
Elongation at Break, %	G.L. 2.0 in (51 mm)		700	700	700	700	700	700
Elongation at Yield, %	G.L. 1.3 in (33 mm)		12	12	12	12	12	12
Tear Resistance, lb (N)	ASTM D 1004	45,000 lb	21 (93)	28 (125)	42 (187)	58 (249)	79 (349)	106 (471)
Puncture Resistance, lb (N)	ASTM D 4833	45,000 lb	54 (240)	72 (320)	108 (480)	144 (640)	198 (870)	270 (1200)
Carbon Black Content, %	ASTM D 1603/4218	20,000 lb	2.0	2.0	2.0	2.0	2.0	2.0
Carbon Black Dispersion	ASTM D 5595	45,000 lb	+ Note 1	+ Note 1	+ Note 1	+ Note 1	+ Note 1	+ Note 1
Notched Constant Tensile Load, hr	ASTM D 5367, Appendix	200,000 lb	300	300	300	300	300	300
REFERENCE PROPERTY	TEST METHOD	FREQUENCY	NOMINAL VALUE					
Oxidative Induction Time, min	ASTM D 3895, 200° C; O <sub>2</sub> , 1 atm	200,000 lb	>100	>100	>100	>100	>100	>100
Roll Length <sup>(1)</sup> (approximate), ft (m)			1,120 (341)	870 (265)	560 (171)	430 (131)	345 (105)	265 (81)
Roll Width <sup>(1)</sup> , ft (m)			22.5 (6.9)	22.5 (6.9)	22.5 (6.9)	22.5 (6.9)	22.5 (6.9)	22.5 (6.9)
Roll Area, ft <sup>2</sup> (m <sup>2</sup> )			25,200 (2,341)	19,575 (1,810)	12,600 (1,171)	9,675 (890)	7,665 (708)	5,963 (551)

NOTES:

- \*Note: Dispersion only applies to near spherical agglomerates. 9 of 10 views shall be Category 1 or 2. No more than 1 view from Category 3.
- GSG HD is available in rolls weighing about 3,900 lb (1,769 kg)
- All GSS geomembranes have dimensional stability of ±2% when tested with ASTM D 1204 and LT8 of <77° C when tested with ASTM D 740.
- <sup>(1)</sup>Roll lengths and widths have a tolerance of ±1%.
- \*Modified.

**Huntington Energy, L.L.C.**  
**Below Grade Tank Operational Plan**  
**San Juan Basin**

The operation requirements for below-grade tanks include the general provisions of Paragraph A of 19.15.17.12 NMAC and the specific requirements of Paragraph E of 9.15.17.12 NMAC.

General Plan:

1. HE will operate and maintain a BGT to contain liquids and solids and prevent contamination of fresh water and protect public health and environment. Maintaining and operating all equipment in a satisfactory working order is accomplished by daily and monthly inspections to assure all systems are performing. These inspections should include: operations of equipment-functioning properly, observance of any surface run-on, checking for visible leaks, assure correct freeboard of liquids in BGT, berms integrity is good, fencing in compliance, assure no oil sludge, miscellaneous, expanded metal cover integrity is good, and all signs are in order.
2. HE shall construct a BGT to prevent overflow and the collection of surface water run-on by constructing an inner crib which the height extends above ground level by 6" preventing water from entering. The BGT is also elevated 6" above ground level as well as the berm constructed approximately 3' tall by approximately 5' wide for containment and any fluids entering outside of fenced area. Auto shut-off controls are installed using a radar that is set at 14" of freeboard and when water level reaches that point, a signal is sent and it in turns sends an alarm to the pumper. If 10" of freeboard is reached, a signal is sent to a valve which shuts the gas line on discharge of separator. This in turn causes a pressure increase to 200 psi which closes the motor valve on the inlet side of separator shutting the well down. A manual valve is also placed on the 2" line from separator to BGT shutting off any water to BGT.

Each lease operator gets a daily report containing water levels in each location. If auto shut-off control shuts well in, well is not opened until sufficient freeboard is reestablished and no alarms are activated. HE will maintain a 14" freeboard policy for alarm notification and a complete shut down when freeboard reaches 10" from top of BGT.

Berms will be maintained at 5' wide and 3' tall to assure prevention of surface run on and containment.

3. HE shall continuously remove any visible or measurable layer of oil from the fluid surface of a below-grade tank in an effort to prevent significant accumulation of oil over time.
4. HE monthly inspection report involves both lease operator and foreman reviewing each report monthly to assure integrity of the BGT system. This includes equipment functioning correctly, observance of any surface run-on, spills, or leak detection, check freeboard of liquids in BGT, berm integrity, all fencing in good condition, all gates in working condition, expanded metal cover in good condition, remove any visible layer of sludge from fluid level in tank, and document review on monthly gauge sheet of each

BGT system. If any issue arises, immediate action should commence to repair or replace in order to prevent any contamination of fresh water and protect public health and the environment.

5. If a BGT develops a leak, or if any penetration of the pit liner or BGT occurs below the liquid's surface, HE will remove all liquid above the damage or leak line within 48 hours. HE will notify the appropriate division district office within 48 hours of the discovery and repair the damage or replace the pit liner or BGT.

Existing BGT's installed prior to June 16, 2008, shall comply with Paragraph (1) through (4) of Subsection I of 19.15.17.11 NMAC. If existing BGT does not meet standards, HE will retrofit, remove or replace as per approved Exhibit "A" Design Drawing.

6. HE Operations Plan specifies that the auto shut-off system will send an alarm to HE lease operator and foremen when the freeboard liquid level is 14" from the top of BGT and the auto system will shut in system at 10" of freeboard. A manual valve is in place for complete shut down if needed.
7. HE standard operating procedures will comply with Subsection A of 19.15.17.12 NMAC in accordance with the following requirements:

- 1) Operate and maintain BGT to contain liquids and maintain integrity of the liner, liner system and secondary containment (crib) to prevent contamination of fresh water and protect public health and environment. Daily and written monthly reviews will be executed to assure system is maintained and complies with all Division rules. Records will be kept a minimum of 5 years.

- 2) HE shall not store or discharge any hazardous wastes into a BGT.

**Huntington Energy, L.L.C.**  
**Below Grade Tank Closure Plan**  
**San Juan Basin**

The closure requirements for below-grade tanks include the general provisions of Paragraphs A, G, H, I, J, and K of 19.15.17.13 NMAC and the specific requirements of Paragraph E of 9.15.17.13 NMAC.

Closure Timelines:

1. HE shall close an existing BGT within the time periods provided in 19.15.17.13 NMAC, or by an earlier date that the division requires because of imminent danger to fresh water, public health or the environment. HE will close an existing BGT that does not meet the requirements of Paragraphs (1) through (4) of Subsection I of 19.15.17.11 NMAC or is not included in Paragraph 5 of Subsection I of 19.15.17.11 NMAC within 5 years after June 16, 2008, if not retrofitted to comply with Paragraph (1) through (4) of Subsection I of 19.15.17.11 NMAC.

HE shall close a permitted BGT within 60 days of cessation of the BGT's operation or as required by the provisions of Subsection B of 19.15.17.17 NMAC in accordance with a closure plan the Division District Office approves.

2. HE shall submit closure notice prior to the implementation of any closure operations to the Division District Office and surface owners. HE shall notify surface owners by certified mail, return receipt requested. Evidence of mailing of the notice to the address of the surface owner shown in the county tax records shall be provided in the Closure Report. HE will notify the Division District office at least 72 hours, but not more than one week prior to any closure operation. All operator information shall include the operator's name and the location to be closed by unit letter, section, township and range. If associated with a particular well, the notice shall include the well's name, number and API number.

Closure Method & Procedures:

1. Remove liquids and sludge from a BGT prior to implementing a closure method. These will be disposed in facility IEI, Permit # 01001010B for sludge, and liquids will be disposed at the TNT Environmental, permit # NM 01-0008 or Basin Disposal, Inc., permit # NM-01-005 or Jillson SWD (Conoco-Phillips), R-10168.
2. HE will obtain prior approval from the OCD to dispose, recycle, reuse, or reclaim the BGT and provide documentation of the final disposition of the BGT in the Closure Report.
3. All on-site related equipment with a BGT shall be removed unless equipment is required for some other purpose.
4. If the liner material requires disposal, HE will clean the liner (as per subparagraph (m) of paragraph (1) of Subsection C of 19.15.35.8 NMAC), and can be accepted at a solid waste facility at San Juan County Regional Landfill.
5. HE shall test the soils beneath the below-grade tank to determine whether a release has occurred. HE shall collect, at a minimum, a five point, composite sample; collect individual grab samples from any area that is wet, discolored or showing other evidence of a release; and analyze for BTEX, TPH and chlorides to

demonstrate that the benzene concentration, as determined by EPA SW-846 methods 8021B or 8260B or other EPA method that the division approves, does not exceed 0.2mg/kg; total BTEX concentration, as determined by EPA SW-846 methods 8021B or 8260B or other EPA method that the division approves, does not exceed 50 mg/kg; the TPH concentration, as determined by EPA method 418.1 or other EPA method that the division approves, does not exceed 100 mg/kg; and the chloride concentration, as determined by EPA method 300.1 or other EPA method that the division approves, does not exceed 250 mg/kg, or the background concentration, whichever is greater. HE shall notify the division of its results on form C-141.

6. If we determine a release has occurred, we will comply with 19.15.29 NMAC and 19.15.30 NMAC.
7. If sampling program demonstrates that release has not occurred or that any release does not exceed the concentrations specified in Paragraph (4) of Subsection E of 19.15.17.13 NMAC, then HE shall backfill the excavation with compacted, non-waste earthen material, construct a division prescribed soil cover, and re-contour and re-vegetate the site, as per Subsection G, H and I of 19.15.17.13 NMAC.
8. Once HE has closed the BGT location, including associated access roads to a safe and stable condition that blends with the surrounding undisturbed area, HE will then restore the surface are to prior conditions before operations as provided in Subsection H of 19.15.17.13 NMAC.
9. The soil cover for closure shall consist of the background thickness of topsoil or one foot of suitable material to establish vegetation at the site, whichever is greater. HE will construct the soil cover to the site's existing grade and prevent ponding of water and erosion of the cover material.
10. Re-vegetation: the first growing season after HE closes a BGT, HE shall seed or plant the disturbed area. HE shall accomplish seeding by drilling on the contour whenever practical or by other division-approved methods. HE shall obtain vegetative cover that equals 70% of the native perennial vegetative cover (un-impacted by overgrazing, fire or other intrusion damaging to native vegetation) consisting of at least three native pant species, including at lease one grass, but not including noxious weeds, and maintain the cover through two successive growing seasons. During the two growing seasons that prove viability, there shall be no artificial irrigation of the vegetation. HE shall repeat seeding or planting until the required vegetative cover is achieved. HE shall notify the division when it has seeded or planted and when successful re-vegetation has occurred.
11. Closure Report: Within 60 days of closure, HE shall submit a closure report on form C-144/Checklist Box 24, with the following attachments: Proof of Closure Notice (surface owner and division); Proof of Deed Notice; Plot Plan, Confirmation Sampling Analytical Results (if applicable); 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); and Latitude and Longitude of site.