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.
11 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

For permanent pits and exceptions submit to the Santa Fe Environmental Bureau office and provide a copy to the appropriate NMOCD District Office.

Proposed Alternative Method Permit or Closure Plan Application

T	
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.

Fencing: Subsection D of 19.15.17.11 NMAC (Applies to permanent pits, temporary pits, and below-grade tanks) Chain link, six feet in height, two strands of barbed wire at top (Required if located within 1000 feet of a permanent residence, school,	hospital		
institution or church) Four foot height, four strands of barbed wire evenly spaced between one and four feet	нозриш,		
✓ Alternate. Please specify 4' tall hogwire fencing with pipe railing			
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)			
s. Signs: Subsection C of 19.15.17.11 NMAC			
⊠ Signed in compliance with 19.15.3.103 NMAC			
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.	office for		
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. The attached iWATERS database search shows a nearby water well with a depth of 80 feet to groundwater. This water well is approximately 3 miles west of this oil well site. The BGT is approximately 200 foot higher in elevation than the water well, indicating groundwater is greater than 50 feet.	☐ 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). The nearest watercourse is 5,172.1 ft. northeast per attached topographic map. These findings are reflected by the attached visual inspection sheet.	☐ Yes ⊠ No		
Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. The attached aerial photograph and visual inspection sheet indicate that none of the above locations are within 1000 feet of the well site.	☐ Yes ☑ No ☐ NA		
Within 1000 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application.	☐ 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. The attached iWATERS database search and visual inspection sheet indicate that there are no water wells within 1000 feet of the well 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. The attached visual inspection sheet and topographical map indicate that the well site is not within a municipality.	☐ Yes ⊠ No		
Within 500 feet of a wetland. The USFWS data file, WetlandsData.kmz, dated July 2, 2008, was opened using Google Earth. Electronic data was not available. Wetland-type vegetation was not noted during the site visit.	☐ Yes ⊠ No		
Within the area overlying a subsurface mine. The attached NM EMNRD web map indicates that the well site is not within an area overlying a subsurface mine.	☐ Yes ⊠ No		
Within an unstable area. The attached topographical map and visual inspection sheet indicate the well site is not within an unstable area.	☐ Yes ⊠ No		
Within a 100-year floodplain. The attached FEMA map shows the well site to be outside any 100- year floodplain.	☐ 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 19.15.17.9 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: (Applies only to closed-loop system that use above ground steel tanks or haul-off bins and propose to implement waste removal for closure)
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 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 Steel		
Instructions: Please indentify the facility or facilities for the disposal of liquids, drillin facilities are required.	g fluias ana ariii cuitings. Ose attachment if m	iore inan iwo
•	osal Facility Permit Number:	
	osal Facility Permit Number:	
Will any of the proposed closed-loop system operations and associated activities occur of ☐ Yes (If yes, please provide the information below) ☐ No	n or in areas that will not be used for future servi	ice 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 requi Re-vegetation Plan - based upon the appropriate requirements of Subsection I of 1 Site Reclamation Plan - based upon the appropriate requirements of Subsection G	9.15.17.13 NMAC	
Siting Criteria (regarding on-site closure methods only): 19.15.17.10 NMAC Instructions: Each siting criteria requires a demonstration of compliance in the closus provided below. Requests regarding changes to certain siting criteria may require adm considered an exception which must be submitted to the Santa Fe Environmental Bure demonstrations of equivalency are required. Please refer to 19.15.17.10 NMAC for guidance.	ninistrative approval from the appropriate distri cau office for consideration of approval. Justifi	ict 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 obta	ined 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 obta	ined 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 obta	ined from nearby wells	☐ Yes ☐ No ☐ NA
Within 300 feet of a continuously flowing watercourse, or 200 feet of any other significant lake (measured from the ordinary high-water mark). - Topographic map; Visual inspection (certification) of the proposed site	nt watercourse or lakebed, sinkhole, or playa	Yes No
Within 300 feet from a permanent residence, school, hospital, institution, or church in ex - Visual inspection (certification) of the proposed site; Aerial photo; Satellite imag		☐ Yes ☐ No
Within 500 horizontal feet of a private, domestic fresh water well or spring that less than 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 (certification)	in existence at the time of initial application.	Yes No
Within incorporated municipal boundaries or within a defined municipal fresh water well adopted pursuant to NMSA 1978, Section 3-27-3, as amended. - Written confirmation or verification from the municipality; Written approval obtains		Yes No
Within 500 feet of a wetland US Fish and Wildlife Wetland Identification map; Topographic map; Visual insp	pection (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 N	Mineral Division	☐ Yes ☐ No
 Within an unstable area. Engineering measures incorporated into the design; NM Bureau of Geology & M Society; Topographic map 	lineral 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 foliable by a check mark in the box, that the documents are attached. Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of Subsettion 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 19.15.17.11 Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of Subsettion Disposal Facility Name and Permit Number (for liquids, drilling fluids and drill cut Soil Cover Design - based upon the appropriate requirements of Subsection H of 1 Re-vegetation Plan - based upon the appropriate requirements of Subsection G Site Reclamation Plan - based upon the appropriate requirements of Subsection G	ents of 19.15.17.10 NMAC ection F of 19.15.17.13 NMAC iate requirements of 19.15.17.11 NMAC based upon the appropriate requirements of 19.1 3 NMAC ents of Subsection F of 19.15.17.13 NMAC ection F of 19.15.17.13 NMAC attings or in case on-site closure standards canno 9.15.17.13 NMAC 9.15.17.13 NMAC	5.17.11 NMAC

Form C-144 Oil Conservation Division Page 4 of 5

Operator Application Certification: I hereby certify that the information sub-	omitted with this application is	true, accurate and com	plete to the best of my knowledge	e and belief.
Name (Print): Ms. Amy Mackey		Т	itle: Administrative Man	nager
Signature:	ally		Date: 3 2 09	
E-mail address: amackey1@elm	nridge.net		Gelephone: (505) 632-3476	Ext. 201
OCD Approval: Permit Application	on (including closure plan)	Closure Plan (only)	OCD Conditions (see attachr	ment)
OCD Representative Signature:			Approval Date: _	
Title:		OCD Per	mit Number:	
Closure Report (required within 60 de Instructions: Operators are required to The closure report is required to be subsection of the form until an approved company of the subsection of the subsection of the form until an approved company of the subsection of the subsection of the form until an approved company of the subsection of the	o obtain an approved closure p bmitted to the division within 6	olan prior to implement O days of the complete and the closure active	ting any closure activities and si on of the closure activities. Plea ties have been completed.	ise do not complete this
		Clos	ure Completion Date:	
Closure Method: Waste Excavation and Removal If different from approved plan, plea		☐ Alternative Closur	e Method Waste Removal (Closed-loop systems only)
Closure Report Regarding Waste Rer Instructions: Please indentify the facil two facilities were utilized. Disposal Facility Name:	lity or facilities for where the li	iquids, drilling fluids (Use attachment if more than
			Facility Permit Number:	
Disposal Facility Name: Disposal Facility Permit Number:				
Required for impacted areas which will Site Reclamation (Photo Docume Soil Backfilling and Cover Install Re-vegetation Application Rates	entation) lation	and operations:		
24. Closure Report Attachment Checklist mark in the box, that the documents ar Proof of Closure Notice (surface) Proof of Deed Notice (required for Plot Plan (for on-site closures and Confirmation Sampling Analytica) Waste Material Sampling Analytica Waste Material Sampling Analytica Disposal Facility Name and Perm Soil Backfilling and Cover Install Re-vegetation Application Rates Site Reclamation (Photo Docume On-site Closure Location: Latitu	re attached. owner and division) or on-site closure) d temporary pits) al Results (if applicable) ical Results (required for on-site nit Number lation and Seeding Technique entation)	e closure)	e attached to the closure report.	
25. Operator Closure Certification:				
I hereby certify that the information and belief. I also certify that the closure con				
Name (Print):		Title:		
Signature:		Date:		
F-mail address:		Tala	hone:	

New Mexico Office of the State Engineer **Point of Diversion Summary**

Back

(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

RG 36707

13W 21 3 25N

Driller Licence: 738 TAFOYA, CARLOS J.

Driller Name: CARLOS J. TAFOYA

Log File Date: 07/29/1981

Drill Start Date: 08/13/1981

Pump Type: Casing Size:

Depth Well: 120

Source: Shallow Drill Finish Date: 08/14/1981

PCW Received Date: Pipe Discharge Size:

Estimated Yield: Depth Water: 80

http://iwaters.ose.state.nm.us:7001/iWATERS/WellAndSurfaceDispatcher?email address... 10/21/2008

New Mexico Office of the State Engineer **POD Reports and Downloads**

Township: 25N Range: 13W NAD27 X:

Sections: 13

Y:

Search Radius:

County:

Basin:

Number:

Suffix:

Owner Name: (First)

(Last)

Non-Domestic Domestic • All

Zone:

Clear Form iWATERS Menu Help

POD / SURFACE DATA REPORT 09/11/2008

(acre ft per annum) DB File Nbr Use Diversion Owner

POD Number

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

(quarters are biggest to smallest X Y are in Feet Source Tws Rng Sec q q q Zone x

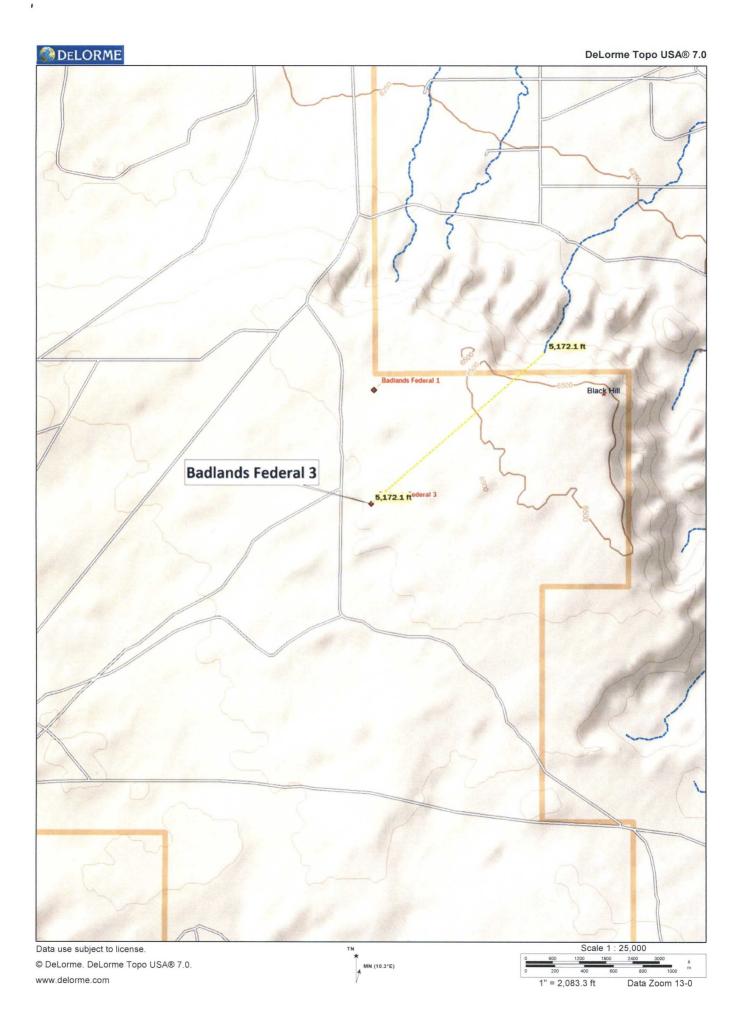
UTM are in Meters) UTM_Zone Easting Northing Date

Start

Finish Date

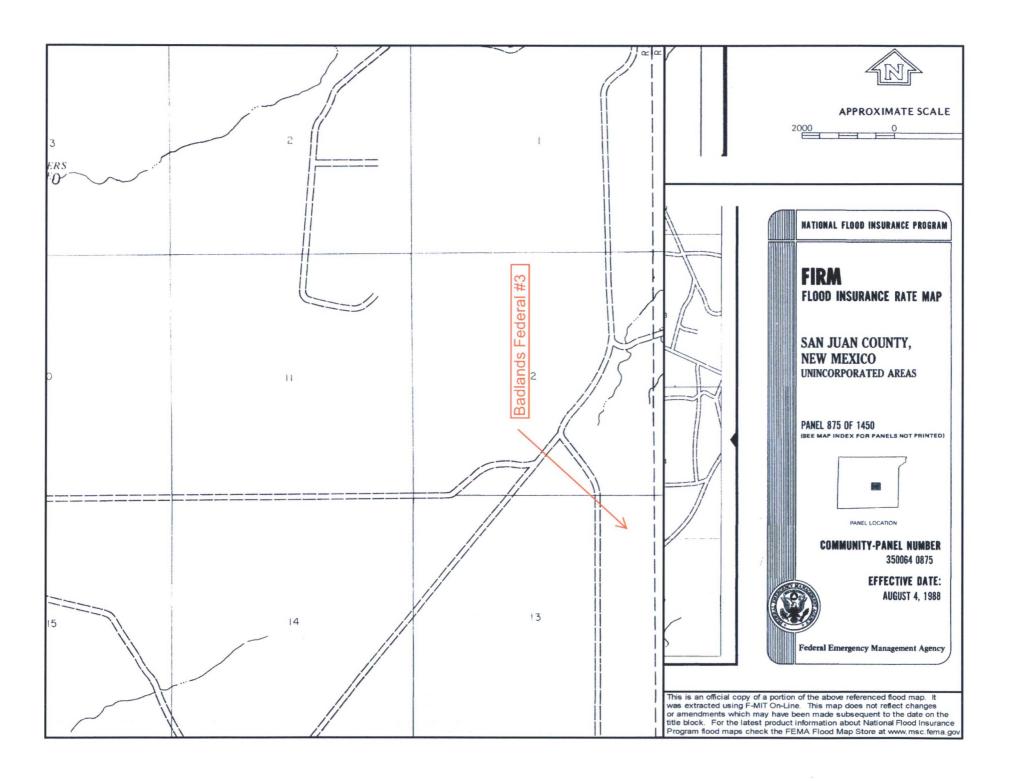
Depth Depth (in feet) Well Water

No Records found, try again



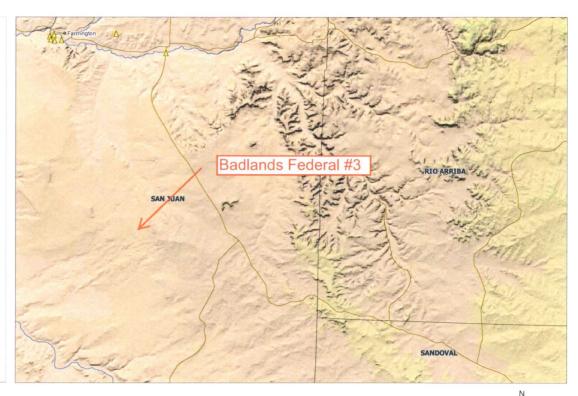
Data Zoom 12-2





Elm Ridge Exploration Mine Map

Mines, Mills & Quarries Commodity Groups **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** Mines, Mills & Quarries Status **Active Mining Active Mining, Active Reclamation** Permanent Closure, Active Reclamation Permanent Closure, Reclaimed Awaiting Bond Release **Temporary Suspension**







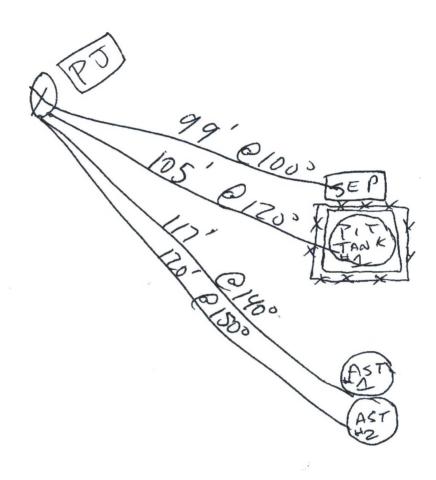
192

Elm Ridge Site Inventory Sheet

	Litt Ridge Site inventory Sheet
•	Date: 8-4-08 Initials: 56 Time: Started: 2:34 Ended: 2:58
•	Well Name & Number: Ballands Fedral #3
•	API#: 300452 4109
•	Lease #: NM NM 58138
•	Quarter/Quarter: 1 Section: 13 Township: 25 N Range: 13 W
•	Lat: N36.399542° Long: W108.163990° GPS Point ID: Bad Fel 3
•	Pit Tank #1: Manufacturer:
•	Serial #: NA DOM: NA Size NA bbl
	o If N/A – Dimensions: Diameter 12 Height 5
•	Material: Steel Galvanized Fiberglass_X
•	Tank Configuration: Double Wall Single Wall X(Buried or Exposed X)
•	Visible Walls: Y_X N Leak Detection: Y N_X
•	Contents: Produced Water NA Condensate NA Recycled Oil NA
•	Tank Top Covering: Solid/Cone-top Netting X (Solid Fiber X)
•	Secondary Containment: Yes_X_ No
•	Fencing around berm: Yes_X No
	o Fence Type: Cattle Panel Field Fence X Barbwire
 •	Pit Tank #2: Manufacturer:
•	Pit Tank #2: Manufacturer:
•	
•	Serial #: DOM:bbl
	Serial #:
•	Serial #:
•	Serial #: DOM: bbl o If N/A - Dimensions: Diameter Height Material: Steel Galvanized Fiberglass Tank Configuration: Double Wall Single Wall (Buried or Exposed)
•	Serial #:

Well Schematic





Schematic Key: Separator	SEP	Artificial Lift	AL	Condensate Tank	COND
Compressor	COM	Meter Run	METER RUN]	
Dehydrator	DEH	Well Head	0	Water Tank	WATER
		ft or less of the fo		ater course. N	A
- From Weime	au to any co	nemous nowing	or argumezant w	ater course	1 1
• From below-	grade tanks	to any permaner	nt residence, sch	ool, church, hospita	l, etc
		NA			

Elm Ridge Site Inventory Sheet

•	Date: Initials: Time: Started: Ended:
•	Well Name & Number: Ballands Fedral #3
•	API#:
•	Lease #:
•	Quarter/Quarter: Section: Township: Range:
•	Lat: GPS Point ID:
•	Pit Tank #1: Manufacturer:
•	Serial #: DOM: Sizebbl
	o If N/A – Dimensions: Diameter Height
•	Material: Steel Galvanized Fiberglass
•	Tank Configuration: Double Wall Single Wall (Buried or Exposed)
•	Visible Walls: Y N Leak Detection: Y N
•	Contents: Produced Water Condensate Recycled Oil
•	Tank Top Covering: Solid/Cone-top Netting (Solid Fiber)
•	Secondary Containment: Yes No
•	Fencing around berm: Yes No
	Fence Type: Cattle Panel Field Fence Barbwire
•	Pit Tank #2: Manufacturer:
•	Serial #:bbl
	o If N/A – Dimensions: Diameter Height
•	Material: Steel Galvanized Fiberglass
•	Tank Configuration: Double Wall Single Wall(Buried or Exposed)
•	Visible Walls: Y N Leak Detection: Y N
•	Contents: Produced Water Condensate Recycled Oil
•	Tank Top Covering: Solid/Cone-top Netting (Solid Fiber)
•	Secondary Containment: Yes No
•	Secondary Containment: Yes No Fencing around berm: Yes No
•	
•	Fencing around berm: Yes No o Fence Type: Cattle Panel Field Fence Barbwire
•	Fencing around berm: Yes No o Fence Type: Cattle Panel Field Fence Barbwire Above-Ground Tank #1: Manufacturer: Termian Tank
•	Fencing around berm: Yes No o Fence Type: Cattle Panel Field Fence Barbwire Above-Ground Tank #1: Manufacturer: Yermian Tank Serial #: 2(103 DOM: 1-85 Size 360 bbl
•	Fencing around berm: Yes No o Fence Type: Cattle Panel Field Fence Barbwire Above-Ground Tank #1: Manufacturer: Yermian Tank Serial #: 2(103 DOM: 1-85 Size 300 bbl
• • • • • • • • • • • • • • • • • • • •	Fencing around berm: Yes No o Fence Type: Cattle Panel Field Fence Barbwire Above-Ground Tank #1: Manufacturer: Permian Tank Serial #: 2(103 DOM: 1-85 Size 360 bbl o If N/A - Dimensions: Diameter 12' Height 15
• • • • • • • • • • • • • • • • • • • •	Fencing around berm: Yes No • Fence Type: Cattle Panel Field Fence Barbwire Above-Ground Tank #1: Manufacturer: Termian Tank Serial #: 2//03 DOM: 1-85 Size 360 bbl • If N/A - Dimensions: Dlameter 12' Height 15 Material: Steel Galvanized Fiberglass

BELOW GRADE TANK (BGT) CLOSURE PLAN

SITE NAME:

BADLANDS FEDERAL 3
UNIT LETTER I, SECTION 13, TOWNSHIP 25N, RANGE 13W
SAN JUAN COUNTY, NEW MEXICO
LATITUDE 36.399542 LONGITUDE -108.163990

SUBMITTED TO:

MR. WAYNE PRICE
NEW MEXICO OIL CONSERVATION DIVISION
1220 SOUTH ST. FRANCIS DRIVE
SANTA FE, NEW MEXICO 87505
(505) 476-3490

SUBMITTED BY:

Ms. AMY MACKEY
ELM RIDGE EXPLORATION
P.O. BOX 156
BLOOMFIELD, NEW MEXICO 87413
(505) 632-3476 EXT. 201

FEBRUARY 2009

BELOW GRADE TANK (BGT) CLOSURE PLAN ELM RIDGE EXPLORATION BADLANDS FEDERAL 3 SAN JUAN COUNTY, NEW MEXICO

TABLE OF CONTENTS

INTRODUCTION	1
SCOPE OF CLOSURE ACTIVITIES	1
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INTRODUCTION

Elm Ridge Exploration would like to submit a closure plan for the below grade tank (BGT) at the Badlands Federal 3 well site located in the NE ¼ SE ¼ of Section 13, Township 25N, Range 13W, San Juan County, New Mexico. This closure plan has been prepared in conformance with the closure requirements of 19.15.17.13 NMAC.

SCOPE OF CLOSURE ACTIVITIES

The purpose of this closure plan is to provide the details of activities involved in the closure of the BGT at the Badlands Federal 3 well site. The following scope of closure activities has been designed to meet this objective:

- 1) Elm Ridge Exploration, or a contractor acting on behalf of Elm Ridge Exploration will close all of the BGTs currently in service within the five (5) years allotted. Elm Ridge Exploration does not operate any BGTs which would qualify to be upgraded or retrofitted; as such they will be closing all their current BGTs and replacing them with above ground storage tanks.
- 2) Elm Ridge Exploration will close BGTs deemed to be an imminent danger to fresh water, public health, or the environment by an earlier date that the division requires as specified in Subsection A of 19.15.17.13 NMAC.
- 3) Elm Ridge Exploration will close any BGT which demonstrates a compromise of integrity before the five (5) years allotted by the division per Paragraph (6) of Subsection I of 19.15.17.11 NMAC.
- 4) Elm Ridge Exploration will close any BGT within 60 days of cessation of the BGTs operation per Subsection A of 19.15.17.13 NMAC.
- 5) No less than 72 hours and no greater than one (1) week prior to BGT removal Elm Ridge Exploration, or a contractor acting on behalf of Elm Ridge Exploration, will provide written notification to the appropriate division district office as well as a schedule of on-site activities, as in accordance with 19.15.17.13 Subsection Paragraph (2) NMAC. Written notification will include the name of the well operator, the well's API number, the well's name and number, and the well's unit letter, section, township, and range.
- 6) No less than 24 hours and no greater than one (1) week prior to beginning BGT closure activities Elm Ridge Exploration, or a contractor acting on behalf of Elm Ridge Exploration, will provide written notification to the appropriate surface owner as in accordance with 19.15.17.13 Subsection J Paragraph (1) NMAC. Elm Ridge Exploration, or a contractor acting on behalf of Elm Ridge Exploration, will notify the surface owner by certified mail, return receipt requested, that the operator plans to close a below-grade tank. The return receipt will be used to ensure that the surface owner has received written notification no less than 24 hours and no greater than one (1) week prior to the beginning of BGT closure activities. Evidence of mailing of the notice to the address of the surface owner shown in the county tax records is sufficient to demonstrate compliance with this requirement. Closure activities that will take place on tribal land will have notifications sent by certified mail, return

receipt requested, to the appropriate tribal office. Elm Ridge Exploration, or a contractor acting on behalf of Elm Ridge Exploration, will notify the Bureau of Land Management (BLM) of closure activities for wells located on federal land per a Sundry Notice, as in accordance with 19.15.17.13 Subsection J Paragraph (1) NMAC. All notices will be sent in such a way that the surface owner received notice at least 24 hours prior to the beginning of closure activities.

- 7) Elm Ridge Exploration, or a contractor acting on behalf of Elm Ridge Exploration, will remove all liquids, and/or sludge, if applicable, prior to closure. Material will be disposed of at Envirotech's Landfarm #2, Permit # NM-01-0011, TNT Environmental Inc. Landfarm, Permit # NM-01-0008, Industrial Ecosystems Inc. (IEI) Landfarm, Permit # NM-01-0010B or Basin Disposal, Permit # NM-01-0005, depending on the consistence of the material removed, as in accordance with 19.15.17.13 Subsection E Paragraph (1) NMAC.
- 8) Elm Ridge Exploration, or a contractor acting on behalf of Elm Ridge Exploration, will remove all on-site equipment associated with this BGT that is no longer required for some other purpose, as in accordance with 19.15.17.13 Subsection E Paragraphs (3) NMAC.
- 9) If applicable, any liners or leak detection systems removed from a BGT closure will be cleaned off and disposed of at San Juan County Regional Landfill in accordance with Subparagraph (m) of Paragraph (1) of Subsection D of 19.15.9.712 NMAC.
- 10) Elm Ridge Exploration, or a contractor acting on behalf of Elm Ridge Exploration, will obtain prior approval from the OCD to dispose, recycle, reuse or reclaim the BGT. Elm Ridge Exploration, or a contractor acting on behalf of Elm Ridge Exploration, will provide the OCD with documentation concerning the final disposition of the BGT with the closure report.
- 11) Once the BGT is removed a five (5)-point composite sample will be collected from directly below the tank or below the leak detection system if present. Grab samples will be collected from any areas that are wet, discolored, or showing other evidence of a release. All samples being collected will be analyzed for benzene and total BTEX via USEPA Method 8021B, TPH via USEPA Method 418.1, and chlorides via USEPA 300.1, as in accordance with 19.15.17.13 Subsection E Paragraph (4) NMAC.
- 12) Depending on soil sample results the area will be either backfilled or the area will be excavated.
 - a. If soil samples do not exceed the regulatory standards of 0.2 mg/kg benzene, 50 mg/kg BTEX, 100 mg/kg TPH, and 250 mg/kg or background concentration of chlorides, as in accordance with 19.15.17.13 Subsection E Paragraph (4) NMAC.
 - i. Elm Ridge Exploration, or a contractor acting on behalf of Elm Ridge Exploration, shall submit a Form C-141 with the laboratory results so that the division may review the results to determine if additional delineation is required in accordance with Paragraph (5) of Subsection E of 19.15.17.13 NMAC.
 - ii. Elm Ridge Exploration, or a contractor acting on behalf of Elm Ridge Exploration, will backfill the excavation or impacted area with non-waste containing, earthen material, in accordance with 19.15.17.13

Subsection E Paragraph (6) NMAC. A soil cover shall be installed for all backfilled excavations consisting of the background thickness of topsoil or one foot of suitable material to establish vegetation at the site, whichever is greater in accordance with Subsections H of 19.15.17.13 NMAC. The operator shall construct the soil cover to the site's existing grade and prevent ponding of water and erosion of the cover material.

- iii. All areas of the well site that are no longer utilized on a day to day basis for the production of oil and/or gas, Elm Ridge Exploration, or a contractor acting on behalf of Elm Ridge Exploration, will substantially restore, re-contour, and re-vegetate the areas, in accordance with 19.15.17.13 Subsections G and I NMAC. The operator shall notify the division when it has been re-seeded and when it has achieved successful re-vegetation. For re-vegetation methods, please see attached re-vegetation plan.
- b. If soil samples exceed the regulatory standards stated above.
 - i. Elm Ridge Exploration will submit a Release Notification by Form C-141 with the appropriate analytical laboratory results to the appropriate division district office, in accordance with 19.15.17.13 Subsection E Paragraph (4) NMAC.
 - ii. In accordance with Paragraph (5) of Subsection E of 19.15.17.13 NMAC, once the operator or the OCD has determined that a release has occurred, Elm Ridge Exploration, or a contractor acting on behalf of Elm Ridge Exploration, will comply with rule 19.15.3.116 NMAC and 19.15.1.19 NMAC as appropriate.

REPORTING

Elm Ridge Exploration will submit a closure report within 60 days following the BGT closure. The closure report will consist of a form C-144 with all supporting data, and a form C-141 with all supporting data. The supporting data will include proof of closure notice to the surface owner and the OCD, confirmation sampling analytical results, a site diagram, soil backfilling and cover installation, re-vegetation rates, re-seeding techniques, and site reclamation photo documentation, if applicable, along with all other information related to the onsite activities.

We appreciate the opportunity to be of service. If you have any questions or require further information, please do not hesitate to contact our office at (505) 632-3476 Ext. 201.

Respectfully Submitted:

Elm Ridge Exploration

Amy Mackey

Elm Ridge Exploration

Elm Ridge Exploration

Re-Seeding Techniques and Seed Mixture Ratios

These applied practices by Elm Ridge Exploration will at a minimum comply with the New Mexico Oil Conservation Divisions rule 19.15.17.13, Subsection I NMAC Elm Ridge Exploration has adopted these re-seeding application techniques, ratios and mixtures as their standard operating procedures.

- 1. The first growing season after closure of a below grade tank or pit, all areas of the well site not utilized for the production of oil and/or gas on a daily basis will be re-seeded with the specified seed mixture.
- 2. The seed mixture used will be certified with no primary or secondary noxious weeds in seed mixtures. The seed labels from each bag shall be available for inspection while seed is being sown.
- 3. The operator shall accomplish seeding by drilling on the contour whenever practical or by other division-approved methods. The operator 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 plant species, including at least one grass, but not including noxious weeds, and maintain that cover through two successive growing seasons. During the two growing seasons that prove viability, there shall be no artificial irrigation of the vegetation.
- 4. Hand seeding with hydro-mulch, excelsior netting or mulch with netting is required on the cut/fill slopes. Mulch will be spread at a rate of 2,000-3,000 pounds per acre.
- 5. Compacted areas determined by visual inspection will be ripped to a depth of twelve (12) inches below ground surface and disked to a depth of six (6) inches before seeding. Seeding shall be done with a disk type drill with two (2) boxes for various seed sizes. The drill rows shall be eight (8) to ten (10) inches apart. Seed shall be planted at no less than one-half (1/2) inch deep or more than one (1) inch deep. The seeder shall be followed with a drag, packer, or roller to ensure uniform coverage of the seed and adequate compaction. Drilling shall be done on the contour where possible, but not up and down the slope.
- 6. Where slopes are too steep for contour drilling a hand seeder shall be used. Seed shall be covered to the depth stated above by whatever means is practical. If the seed is unable to be covered by the means listed above, the prescribed seed mixture amount will be doubled.

- 7. Elm Ridge Exploration shall repeat seeding or planting until it successfully achieves the required vegetative cover of 70% of the native perennial vegetation cover.
- 8. Upon abandonment of a well site, if the retention of the access road is not considered necessary for the management and multiple uses of the natural resources, or by the surface owner, it will be ripped a minimum of twelve (12) inches in depth. After ripping water bars will be installed. All ripped surfaces are to be protected from vehicular travel by construction of a dead end ditch and earthen barricade at the entrance to these ripped areas. Re-seeding of areas affected by the ditch and barriers will be re-seeded if necessary.
- 9. Elm Ridge Exploration, or a contractor acting on behalf of Elm Ridge Exploration, will inform the division once successful re-vegetation has occurred.

Elm Ridge Exploration

San Juan Basin

Below Grade Tank Maintenance and Operating Plan

In accordance with Rule 19.15.17 the following information describes the operation and maintenance of a Below Grade Tank (BGT) on Elm Ridge Exploration locations. This particular location does not meet the siting criteria to operate a BGT, and thus will be closing the BGT within five (5) years, or upon failure of integrity, and replacing it with an above ground storage tank.

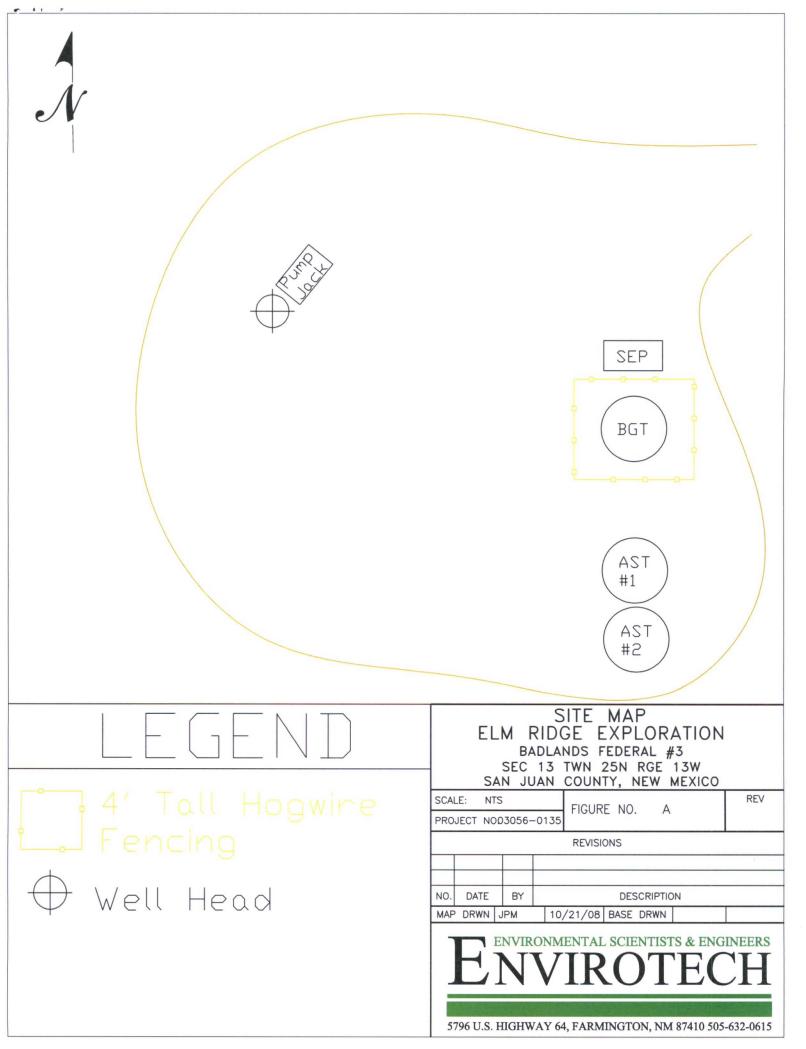
GENERAL PLAN:

- 1. Elm Ridge Exploration, or a contractor representing Elm Ridge Exploration, will operate and maintain a BGT to contain liquids and solids to prevent contamination of fresh water and to protect public health and environment. This will be accomplished by performing monthly inspections of the BGT, any liners or leak detection if applicable, netting, secondary containment, fencing and maintaining adequate freeboard.
- 2. Elm Ridge Exploration, or a contractor representing Elm Ridge Exploration, shall not allow a BGT to overflow or allow surface water run-on to enter the BGT. This will be accomplished by a secondary containment consisting of a soil berm around the BGT that will be monitored by monthly inspections. Overflowing will be prevented by maintaining an adequate freeboard of eight (8) inches, maintained by monthly inspections. This process will be performed on the current BGT located at this well site.
- 3. Elm Ridge Exploration, or a contractor representing Elm Ridge Exploration, shall continuously remove any visible or measurable layer of oil from the fluid surface of a BGT in an effort to prevent the accumulation of oil over time.
- 4. Elm Ridge Exploration, or a contractor representing Elm Ridge Exploration, shall inspect the BGT at least once monthly and maintain a written record of each inspection for at least five (5) years. The monthly inspection form to be used by Elm Ridge Exploration is attached to this document.
- 5. Elm Ridge Exploration, or a contractor representing Elm Ridge Exploration, shall maintain adequate freeboard to prevent overtopping of the BGT. The standard freeboard to be maintained by Elm Ridge Exploration is eight (8) inches.
- 6. Elm Ridge Exploration, or a contractor representing Elm Ridge Exploration, shall maintain an expanded metal covering on the BGT.

- 7. Elm Ridge Exploration will not discharge into or store any hazardous wastes into the BGT.
- 8. If Elm Ridge Exploration, or a contractor representing Elm Ridge Exploration, determines that a BGT has developed a leak below the liquid's surface, then Elm Ridge Exploration, or a contractor representing Elm Ridge Exploration, will notify the appropriate division office within 48 hours of discovering the leak. Elm Ridge Exploration, or a contractor representing Elm Ridge Exploration, shall remove all liquids above the damage or leak line within 48 hours in accordance with Subsection A of 19.15.17.12 NMAC. The damaged tank will then be removed, and closure activities will begin in accordance with the submitted closure plan.
- 9. Elm Ridge Exploration will close any BGT within 60 days of cessation of the BGTs operation per Subsection A of 19.15.17.13 NMAC.
- 10. Elm Ridge Exploration, or a contractor representing Elm Ridge Exploration, will close the BGT within the NMOCD allotted five (5) years, within 60 days of cessation of operation of the BGT or upon failure of integrity, and put into service an above ground storage tank to meet the needs previously fulfilled by the BGT.

Figure A, Site Map

Figure B, Monthly BGT Inspection Form



Elm Ridge Exploration, LLC

Monthly Below Grade Tank Inspection Form

Inspection Performed By: Date:
Well Site Name:
Unit: Section: Township: Range: County:
Quarter Footage:
Latitude: Longitude:
Below Grade Tank
Construction Material of BGT (circle one): Steel Fiberglass Galvanized Other:
Tank Capacity (BBLS):
Status of Tank (circle one): NA poor fair good excellent
Leaks Detected (circle one): Yes No Unknown
Liquid level in tank from the top:
Recent overflow detected (circle one): Yes No Unknown
BGT Cover present: Yes No NA
Cover Type (circle one): wire mesh steel mesh fibrous netting other:
Berm Present (circle one): Yes No
Secondary Containment
Type of secondary containment:
Status of secondary containment (circle one): NA poor fair good excellent
Fencing
Fencing Present (circle one): Yes No
Describe Fencing:
Status of Fencing (circle one): NA poor fair good excellent

^{*}Maintain this document on record for a minimum of five (5) years from the date performed.

OCD Aztec District III ELM RIDGE Checklist Below Grade Tank Closure Plans

19.15.17.9 Permit application
Signed C-144 (Page 5 of C-144)
Site Specific Hydrogeology (Iwaters)
19.15.17.10 Siting requirements
Proximity to watercourses (Topo map)
Proximity to Permanent Structure (Aerial Map)
Proximity to Flood Plain Map (Aerial Map)
Proximity to Subsurface Mines Map (Aerial Map)
19.15.17.13 Closure Plan
Below Grade Tank Closure Plan
19.15.17.12 Operating and Maintenance Plan Below Grade Tank Operating and Maintenance Plan
Requirements: (Application Marked Closure Plan Only
Registration Date: VF CS
McBistration parc.