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

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

Pit, Closed-Loop System, Below-Grade Tank, or							
Proposed Alternative Method Permit or Closure Plan Application							
Type of action: Permit of a pit, closed-loop system, below-grade tank, or proposed alternative method Closure of a pit, closed-loop system, below-grade tank, or proposed alternative method Modification to an existing permit Closure plan only submitted for an existing permitted or non-permitted pit, closed-loop system, below-grade tank, or proposed alternative method							
Instructions: Please submit one application (Form C-144) per individual pit, closed-loop system, below-grade tank or alternative request							
Please be advised that approval of this request does not relieve the operator of liability should operations result in pollution of surface water, ground water or the environment. Nor does approval relieve the operator of its responsibility to comply with any other applicable governmental authority's rules, regulations or ordinances.							
Operator: Merrion Oil & Gas Corporation OGRID #: 14634							
Address: 610 Reilly Ave Farmington, NM 87401							
Facility or well name: Sullivan 15 #1							
API Number: 30-045-34309 OCD Permit Number:							
U/L or Qtr/Qtr I Section 15 Township 26N Range 12W County: San Juan							
Center of Proposed Design: Latitude 36.485713 N Longitude 108.092791W NAD: ⊠1927 □ 1983							
Surface Owner: Federal State Private Tribal Trust or Indian Allotment							
Zeit: Subsection F or G of 19.15.17.11 NMAC Temporary: Drilling Workover Permanent Emergency Cavitation P&A Lined Unlined Liner type: Thickness 20 mil LLDPE HDPE PVC Other String-Reinforced String-Reinforced Volume: 1140 bbl Dimensions: L 80 x W 40 x D 8							
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)							
Desire Red Above County Steel Tools							
☐ Lined ☐ Unlined Liner type: Thicknessmil ☐ LLDPE ☐ HDPE ☐ PVC ☐ Other							
Liner Seams: Welded Factory Other Other BECEIVED							
Drying Pad Above Ground Steel Tanks Haut-off Bins Other Lined Unlined Liner type: Thickness mil LLDPE HDPE PVC Other Liner Seams: Welded Factory Other							
Secondary containment with leak detection Visible sidewalls, liner, 6-inch lift and automatic overflow shut-off Visible sidewalls and liner Visible sidewalls only Other							
□ Visible sidewalls and liner □ Visible sidewalls only □ Other Liner type: Thicknessmil □ 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.

Fencing: Subsection D of 19.15.17.11 NMAC (Applies to permanent pits, temporary pits, and below-grade tanks)	
Chain link, six feet in height, two strands of barbed wire at top (Required if located within 1000 feet of a permanent residence, school, institution or church)	hospital,
⊠ Four foot height, four strands of barbed wire evenly spaced between one and four feet	
Alternate. Please specify:	
7.	
Netting: Subsection E of 19.15.17.11 NMAC (Applies to permanent pits and permanent open top tanks)	
Screen Netting Other Marthly importing (If notting on agreening is not physically faceible)	
Monthly inspections (If netting or screening is not physically feasible)	
8. Signs: Subsection C of 19.15.17.11 NMAC	
☐ 12"x 24", 2" lettering, providing Operator's name, site location, and emergency telephone numbers	
☑ Signed in compliance with 19.15.3.103 NMAC	
9. Administrative Approvals and Exceptions:	
Justifications and/or demonstrations of equivalency are required. Please refer to 19.15.17 NMAC for guidance.	
Please check a box if one or more of the following is requested, if not leave blank: Administrative approval(s): Requests must be submitted to the appropriate division district or the Santa Fe Environmental Bureau	office for
consideration of approval. Exception(s): Requests must be submitted to the Santa Fe Environmental Bureau office for consideration of approval.	
10.	
Siting Criteria (regarding permitting): 19.15.17.10 NMAC Instructions: The applicant must demonstrate compliance for each siting criteria below in the application. Recommendations of accept material are provided below. Requests regarding changes to certain siting criteria may require administrative approval from the approoffice or may be considered an exception which must be submitted to the Santa Fe Environmental Bureau office for consideration of a Applicant must attach justification for request. Please refer to 19.15.17.10 NMAC for guidance. Siting criteria does not apply to dry	priate district pproval.
above-grade tanks associated with a closed-loop system.	
Ground water is less than 50 feet below the bottom of the temporary pit, permanent pit, or below-grade tank. - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	☐ Yes ☑ No
Within 300 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse or lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark). - Topographic map; Visual inspection (certification) of the proposed site	☐ Yes ☒ No
Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. (Applies to temporary, emergency, or cavitation pits and below-grade tanks)	☐ Yes ☒ No ☐ NA
- Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	
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 importing (contification) of the proposed site. A crief photos Satallite image.	☐ Yes ☐ No ☑ NA
- Visual inspection (certification) of the proposed site; Aerial photo; Satellite image Within 500 horizontal fact of a private, domestic fresh water well or spring that less than five households use for domestic or stock	☐ 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 search; Visual inspection (certification) of the proposed site	
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.	☐ Yes ⊠ No
- Written confirmation or verification from the municipality; Written approval obtained from the municipality	
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 19.15.17.9 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 NMA and 19.15.17.13 NMAC	AC
☐ Previously Approved Design (attach copy of design) API Number: or Permit Number:	
12.	
Closed-loop Systems Permit Application Attachment Checklist: Subsection B of 19.15.17.9 NMAC Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached.	
Geologic and Hydrogeologic Data (only for on-site closure) - based upon the requirements of Paragraph (3) of Subsection B of 19.15.17.9 Siting Criteria Compliance Demonstrations (only for on-site closure) - based upon the appropriate requirements of 19.15.17.10 NMAC Design Plan - based upon the appropriate requirements of 19.15.17.11 NMAC Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC	
Closure Plan (Please complete Boxes 14 through 18, if applicable) - based upon the appropriate requirements of Subsection C of 19.15.17.9 NM and 19.15.17.13 NMAC	1AC
☐ 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 ☑ 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 Above Ground Instructions: Please indentify the facility or facilities for the disposal of liquids, 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 o ☐ Yes (If yes, please provide the information below) ☐ No	ccur on or in areas that will not be used for future serv	vice and operations?			
Required for impacted areas which will not be used for future service and operation Soil Backfill and Cover Design Specifications based upon the appropriate Re-vegetation Plan - based upon the appropriate requirements of Subsection Site Reclamation Plan - based upon the appropriate requirements of Subsection	e requirements of Subsection H of 19.15.17.13 NMA I of 19.15.17.13 NMAC	C			
Siting Criteria (regarding on-site closure methods only): 19.15.17.10 NMAC Instructions: Each siting criteria requires a demonstration of compliance in the provided below. Requests regarding changes to certain siting criteria may requiconsidered an exception which must be submitted to the Santa Fe Environmenta demonstrations of equivalency are required. Please refer to 19.15.17.10 NMAC.	re administrative approval from the appropriate dist. I Bureau office for consideration of approval. Justi	rict 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; Database search;	a 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; Database search;	a 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; Database search;	a obtained from nearby wells	☐ Yes ☐ No ☐ NA			
Within 300 feet of a continuously flowing watercourse, or 200 feet of any other siglake (measured from the ordinary high-water mark). - Topographic map; Visual inspection (certification) of the proposed site	gnificant watercourse or lakebed, sinkhole, or playa	☐ Yes ☒ No			
Within 300 feet from a permanent residence, school, hospital, institution, or church - Visual inspection (certification) of the proposed site; Aerial photo; Satellit		☐ Yes ⊠ No			
Within 500 horizontal feet of a private, domestic fresh water well or spring that les watering purposes, or within 1000 horizontal feet of any other fresh water well or some NM Office of the State Engineer - iWATERS database; Visual inspection	spring, in existence at the time of initial application.	☐ Yes ☑ No			
Within incorporated municipal boundaries or within a defined municipal fresh wat adopted pursuant to NMSA 1978, Section 3-27-3, as amended. - Written confirmation or verification from the municipality; Written approx	·	☐ Yes ☐ No			
Within 500 feet of a wetland US Fish and Wildlife Wetland Identification map; Topographic map; Visu	al 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	g and Mineral Division	☐ Yes ⊠ No			
Within an unstable area. - Engineering measures incorporated into the design; NM Bureau of Geolog Society; Topographic map	y & Mineral Resources; USGS; NM Geological	☐ Yes ☑ No			
Within a 100-year floodplain FEMA map		☐ Yes ⊠ No			
On-Site Closure Plan Checklist: (19.15.17.13 NMAC) Instructions: Each of the by a check mark in the box, that the documents are attached. Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of Construction/Design Plan of Burial Trench (if applicable) based upon the appropriate requirements of Construction/Design Plan of Temporary Pit (for in-place burial of a drying protocols and Procedures - based upon the appropriate requirements of 19.1 Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of Disposal Facility Name and Permit Number (for liquids, drilling fluids and Soil Cover Design - based upon the appropriate requirements of Subsection Re-vegetation Plan - based upon the appropriate requirements of Subsection Site Reclamation Plan - based upon the appropriate requirements of Subsection	uirements of 19.15.17.10 NMAC f Subsection F of 19.15.17.13 NMAC propriate requirements of 19.15.17.11 NMAC pad) - based upon the appropriate requirements of 19. 5.17.13 NMAC uirements of Subsection F of 19.15.17.13 NMAC Subsection F of 19.15.17.13 NMAC drill cuttings or in case on-site closure standards cann H of 19.15.17.13 NMAC I of 19.15.17.13 NMAC	15.17.11 NMAC			

Operator Application Certification:	
I hereby certify that the information submitted with this application is true, a	accurate and complete to the best of my knowledge and belief.
Name (Print): _Philana Thompson Title: Regulatory	Compliance Specialist
Signature: MMMMITHMAN	1 Date: 9-16-08
e-mail address: pthompson@merrion.bz	Telephone: 505-324-5336
OCD Approval: Permit Application (including closure plan) Closure	re Plan (only) OCD Conditions (see attachment)
OCD Representative Signature:	Approval Date: <u>10-10-08</u>
Title: Enviro/spec	OCD Permit Number:
Closure Report (required within 60 days of closure completion): Subsections: Operators are required to obtain an approved closure plan parties closure report is required to be submitted to the division within 60 days section of the form until an approved closure plan has been obtained and to	rior to implementing any closure activities and submitting the closure report. s of the completion of the closure activities. Please do not complete this
	Closure Completion Date:
22. Closure Method: Waste Excavation and Removal On-Site Closure Method Al If different from approved plan, please explain.	Iternative Closure Method Waste Removal (Closed-loop systems only)
23. Closure Report Regarding Waste Removal Closure For Closed-loop Systemstructions: Please indentify the facility or facilities for where the liquids, two facilities were utilized.	tems That Utilize Above Ground Steel Tanks or Haul-off Bins Only: , drilling fluids and drill cuttings were disposed. Use attachment if more than
Disposal Facility Name:	Disposal Facility Permit Number:
Disposal Facility Name:	Disposal Facility Permit Number:
Were the closed-loop system operations and associated activities performed of Yes (If yes, please demonstrate compliance to the items below) N	
Required for impacted areas which will not be used for future service and op Site Reclamation (Photo Documentation) Soil Backfilling and Cover Installation Re-vegetation Application Rates and Seeding Technique	erations:
24.	
Closure Report Attachment Checklist: Instructions: Each of the following mark in the box, that the documents are attached. ☐ Proof of Closure Notice (surface owner and division) ☐ Proof of Deed Notice (required for on-site closure) ☐ Plot Plan (for on-site closures and temporary pits) ☐ Confirmation Sampling Analytical Results (if applicable)	ng items must be attached to the closure report. Please indicate, by a check
 ☐ Waste Material Sampling Analytical Results (required for on-site closs ☐ Disposal Facility Name and Permit Number ☐ Soil Backfilling and Cover Installation 	ure)
☐ Re-vegetation Application Rates and Seeding Technique ☐ Site Reclamation (Photo Documentation) On-site Closure Location: Latitude	ongitude NAD:
Operator Closure Certification: I hereby certify that the information and attachments submitted with this closurely belief. I also certify that the closure complies with all applicable closure requirements.	sure report is true, accurate and complete to the best of my knowledge and
Name (Print):	Title:
Signature:	Date:
e-mail address:	Telephone:

New	Mexico	Office	of-the	State	Engineer-	
	POD R	eports	and I	ownia	ads	

Township 26N Range 12W	Sections
NAD27 X Y	Zone Search Radius
County Basin	Number Suffix
Owner Name (First) (Last)	Non-Domestic C Domestic & All
POD/Surface Data Report A Avg I	Depth to Water Report

Clear Form

			POD / SUI	RFACE DATA REPORT	09/04/2008									••					
								W 2=NE 3=SW 4=SE					_						
	(acre	ft per ann	(מעטו	i		(quarters are	pigg	gest to smallest	X Y are	a in Feet		UTM are			Start	Finish	Depth	Depth (in	£€
)B File Nbr	Use	Diversion	Owner		POD Number	Source	Tws	Rng Sec q q q	Zone	x	Y	UTM_Zone	Easting	Northing	Date	Date	Well	Water	
RG 30567	_ DOM	3	LEROY BENDE	ER	RG 30567	Shallow	26N	12W 25 2				13	225906	4039642	05/29/1978	05/30/1978	102	45	
₹G 34247	DOM	0	EDWARD L. N	AYOTION	RG 34247		26N	12W 05				13	219249	4045920				_	
RG 45509	DOM	0	DAVID A & I	LESLIE H. DELANEY	RG 45509		26N	12W 06				13	217660	4045971				<i></i>	=
₹G 50222	_ DOM	o ´	KINLOCK BRO	NWC .	RG 50222	Shallow		12W 04				13	220855			12/29/1988	258	180	
3J 01058	DOM	3	PETE WILFOR	RD	SJ 01058	Shallow	26N	12W 03 1 4				13	222289	4046001	09/18/1979	09/28/1979	254	220	-

Record Count: 5

CHANGE FROM GALLEGOS-GALLUP POOL

1625 N. French Dr., Hobbs, NM 88240 1301 W. Grand Ave. Artosia, NM 88210 District II 1000 Rio Brazos Rd. Aztec. NM 87410

160

'State of New Mexico Energy. Minerals & Mining Resources Department OIL CONSERVATION DIVISION 2040 South Pachaco Santa Fe. NM 87505

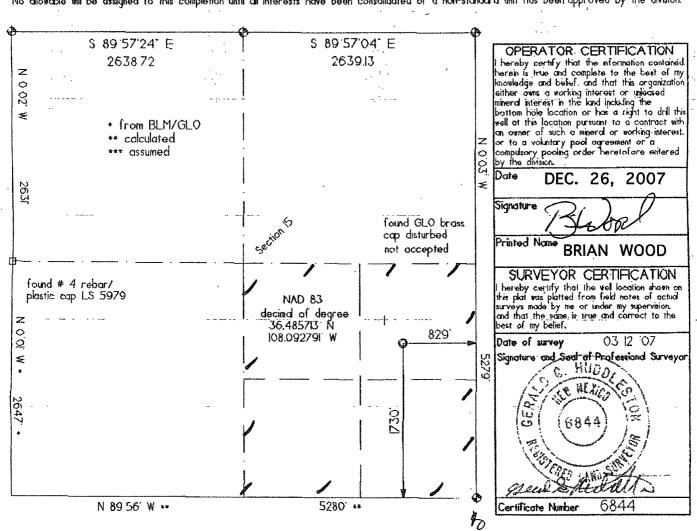
Form C - 102 Revised October 12, 2005 Submit to Appropriate District Office State Lease - 4 Copies Fee Lease - 3 Copies

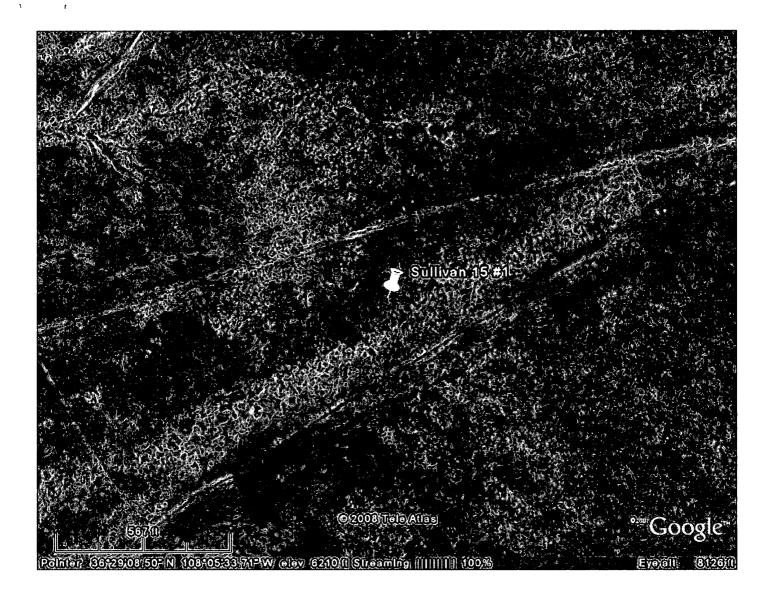
DIST. 3

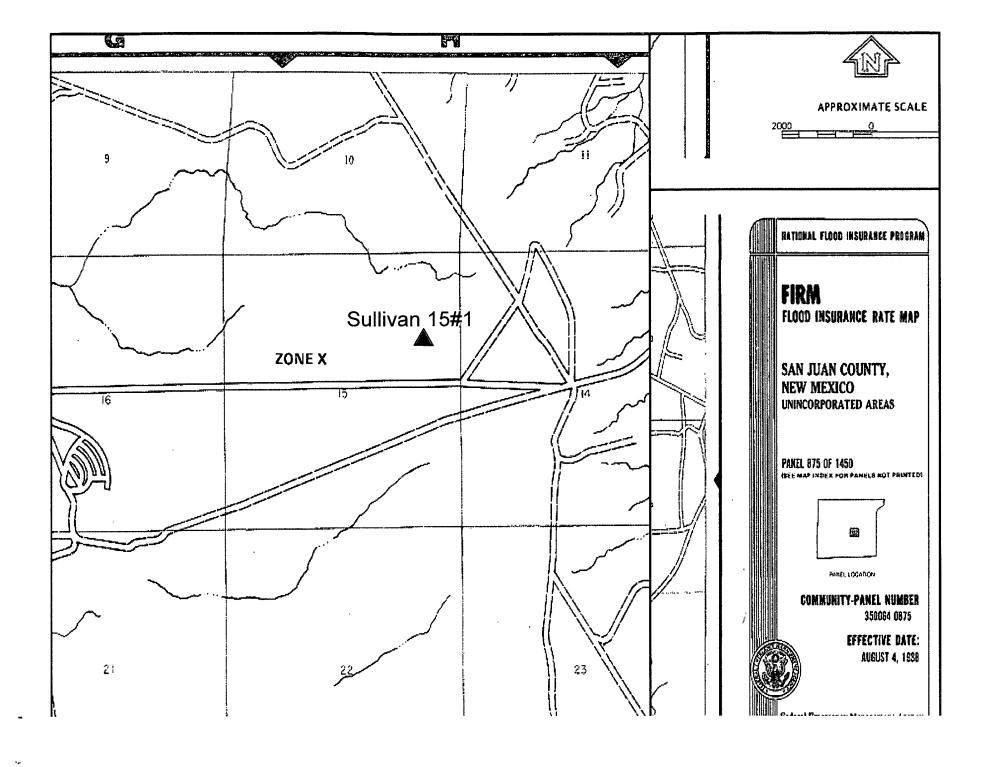
TRAMENDED REPORT

1220 S. St Francis Dr., Santa Fe. NM 87505 WELL LOCATION AND ACREAGE DEDICATION PLAT APA Number Pool Code Paul Name 30-045- 34309 97232 WC BASIN MANCOS Property Code. Well Number Property None 3405 Sullivan 15 0GRD No. 014634 **Bevation** Operator Name 6202 MERRION OIL & GAS Surface Location County Feet From North/South Lot lon UL or Lot Tep. Rge. Faet from> East/West 8291 San Juan .15 1730 South East . 1 26 N. 12 W. Bottom Hole Location If Different From Surface Feet From> North/South Feet Iros> East/West County UL or Lot Rga. RCVD JAN 2'08 Dedicated Acres OIL CONS. DIV. Joint or Infil Consolidation Code Order Na

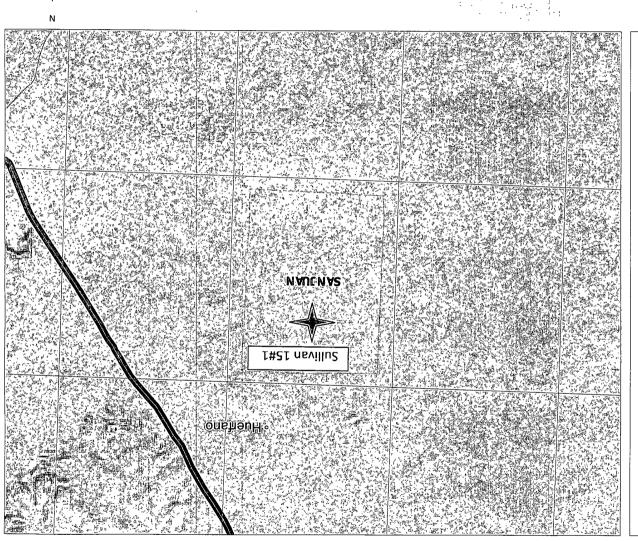
No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.

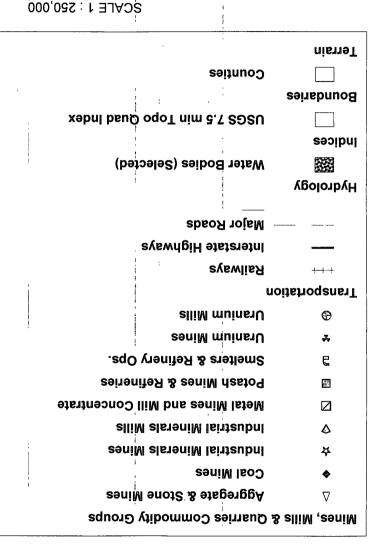




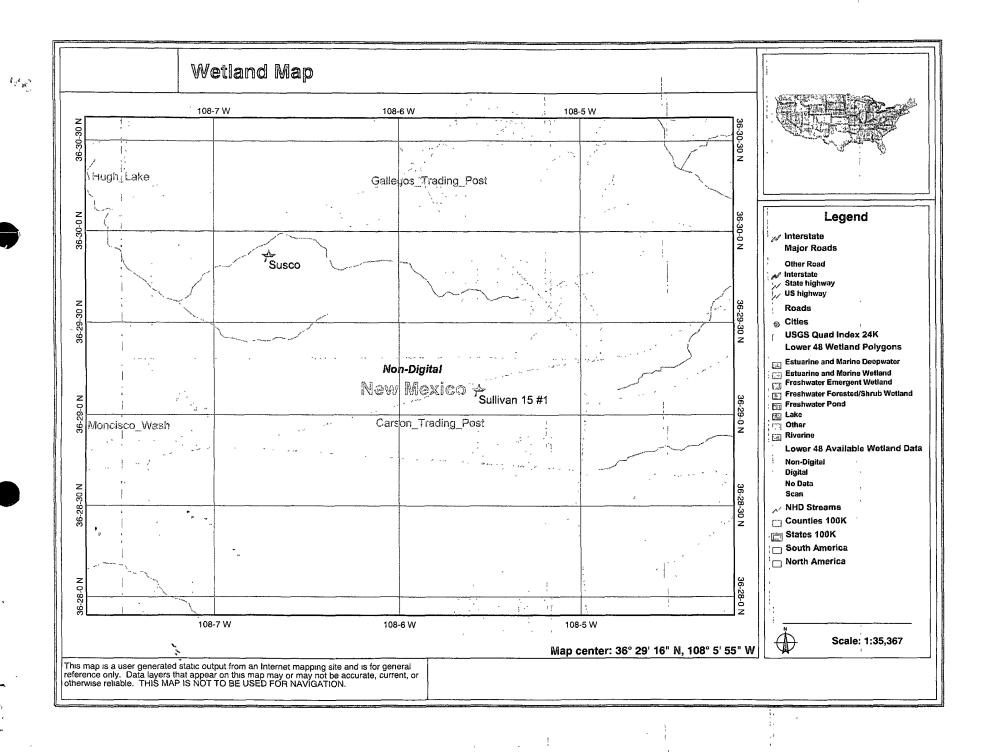


Sullivan 15#1 Mines & Minerals Map







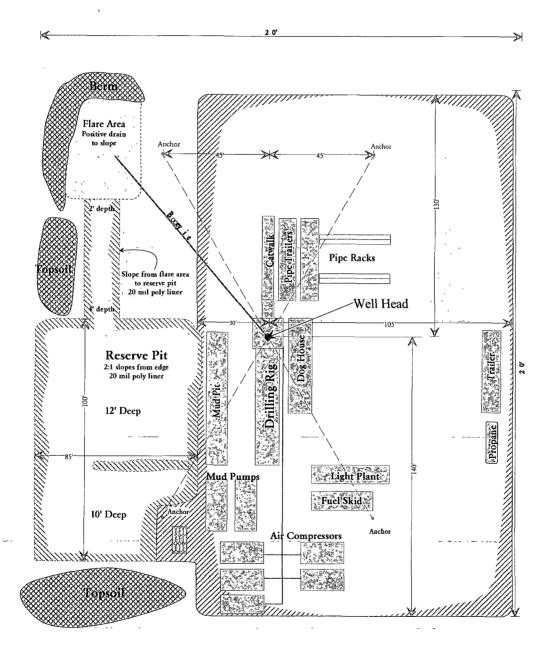




Merrion Oil & Gas Corporation Location Layout Sullivan 15-1

By: TSF Date: 2-SEP-2008





Sullivan 15 #1

Siting Criteria

- 1. Ground water is not less than 50 ft below the bottom of the temporary pit. Ground water is greater than 100 ft below the bottom of the temporary pit.
- 2. The temporary pit is not within 300 ft of a continuously flowing water course, or 200 ft of any other watercourse, lakebed, sinkhole, or playa lake (measured from ordinary high water mark). See attached topographic map and visual inspection certification of the location and area around the subject well.
- 3. The temporary pit is not within 300 ft from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. See the attached satellite image and visual inspection certificate of the location and area around the subject temporary pit.
- 4. The temporary pit is not 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. See attached NM Office of the State Engineer iWaters database search and visual inspection certification of the location and area around the subject temporary pit.
- 5. The temporary pit is not 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. See attached topographic map of the location and area around the subject temporary pit.
- 6. The temporary pit is not within 500 feet of a wetland. See attached satellite and wetland map and visual inspection certification of the location and area around the subject pit.
- 7. The temporary pit is not within the area overlying a subsurface mine. See the attached Mine, Mills and Quarry map of New Mexico (New Mexico, EMND 2008) showing the location and area around the subject pit.
- 8. The temporary pit is not located within an unstable area. See the attached topographic map of the location and area around the subject temporary pit.
- 9. The temporary pit is not located within a 100-year floodplain area. See the attached FEMA map of the 100 year floodplain showing the location and area around the subject pit.

Sullivan 15 #1 S15, T26N, R12W Hydrogeologic Data

Sullivan 15 #1 is located on Navajo Nation Trust Lands within the Navajo Indian Irrigation Project (NIIP) in the San Juan structural basin in San Juan County, New Mexico. The region is a northwest-trending asymmetric structural depression. The basin merges gradually into adjacent depressions or uplifts. The structural boundaries principally consist of large, elongate domai uplifts; low marginal platforms; and abrupt monoclines.

A records search of the NM office of the State Engineer- iWaters database was conducted for the T26N-12W, (iWaters report attached & also indicated on topo). The closest water wells are located in S3, T26N, R12W which is 2.37 miles from the current well location. The well was drilled to a depth of 254', the top of the water was reported at 220'. The water for this well is used for domestic purposes and no other information was available. The next closest water well is located in S25, T26N, R12W which is 2.47 miles from the current location, a well was drilled to a depth of 102', the top of the water was reported at 45'. The water for this well is used also used for domestic purposes only and no other information was available.

GROUND WATER:

í 3 ,

The **Ojo Alamo** Sandstone is a source of water for public supply, domestic and livestock use in areas where water quality is suitable for these uses. Water wells generally are on or near the outcrop areas. The altitude of the potentiometric surface of water in the Ojo Alamo Sandstone at approximately 6,000' +. Water in the Ojo Alamo sandstone occurs under both water-table and artesian conditions although no flowing wells are know to exist.

The **Nacimiento** formation is a source of water for public-supply, commercial, private-domestic, and livestock use where water quality is suitable. The closest altitude of the potentiometric surface ground water to this location is 6603'. Water in the Nacimiento formation occurs under both water-table and artesian conditions.

The combined **Kirtland Shale** formation and Fruitland formation is a source of water for domestic and livestock use where water quality is acceptable. The altitude of the potentiometric surface of water In the Kirtland Shale formation is at approximately 5,885' +. Water in the Kirtland Shale formation occurs under both water-table and artesian conditions although no flowing wells are know to exist. The mining of coal and production of coal-bed methane from the Fruitland formation in parts of the basin also have resulted in significant quantities of water produced as a secondary product.

GEOLOGY

The *Ojo Alamo* formation crops out inside the central basin and typically forms cliffs and dipslopes or caps low mesa and forms rounded hills. The majority of Ojo Alamo rocks occur in New Mexico. The unit pinches out in the northwest about halfway between Farmington and the Colorado state line west of the La Plata River. In general the OJo Alamo Sandstone consists of overlapping sheet like sequences of conglomeratic sandstones and sandstones which locally contain Inter-bedded shale lenses. The sandstones are arkosic, light brown to rusty brown or buff and tan and contain abundant silicified wood. The sandstones are medium to very coarse grained and often conglomeratic containing pebbles of various compositions that decrease in size and quantity from west to east across the basin. Thickness of the OJo Alamo Sandstone is variable, it ranges from 70 feet to a max of 200 feet.

The *Nacimiento* formation crops out in a broad band inside the southern and western margins of the central basin, and in a narrow band along the west face of the Nacimiento uplift. The Nacimiento is a nonresistant unit and typically erodes to low, rounded hills or forms badlands topography. The Nacimiento formation occurs only in approximately the southern two-thirds of the basin where it conformably overlies and intertongues with the Ojo Alamo Sandstone. Along a line from Dulce, New Mexico to the La Plata River valley near the New Mexico-Colorado State line, the Nacimiento formation grades laterally into the main part of the Animas Formation thus, in this area the two formations occupy the same stratigraphic interval. Strata of the Nacimiento formation were mainly deposited in lake beds in the central basin area with lesser deposition in stream channels. Total thickness of the Nacimiento formation ranges from about 500' to 1300'.

The *Kirtland Shale* formation occurs in New Mexico in the San Juan structural basin and is a northwest-trending asymmetric structural depression. The principal boundaries prinicipally consist of large, elongate, domal uplifts; low, marginal platforms; and abrupt monoclines. The Kirtland shale formation and Fruitland formation are treated as a single hydrogeologic unit because they are commonly mapped together. The San Juan structural basin contains a thick sequence of sedimentary rocks ranging in age from Cambrian through Tertiary but principally from Pennsylvanian through Tertiary. The maximum thickness of the sequence of rocks is about 14,000'. Topography formed on the unit typically varies from rolling to rough, and commonly, badlands are developed. In general the undivided Kirtland Shale and Fruitland Formation consists of varous thicknesses of inter-bedded and repetitive sequences of non-marine channel sandstone, siltstone, shale, and claystone. Coal beds and carbonaceous shales are common in the Fruitland Formation. The Kirtland Shale does not contain coal and has been divided into three members which in ascending order are the lower shale member Farmington Sand stone Member and upper shale member.

Reference:

- HA-720B Hydrogeology of the Ojo Alamo Sandstone in the San Juan structural basin, New Mexico, Colorado, Arizona, and Utah, Thorn, C. R.; Levings, G. W.; Craigg, S. D.; Dam, W. L.; Kernodle, J. M., 1990, USGS, atlas format. (1,000,000 and 2,000,000 scale)
- HA-720C Hydrogeology of the Kirtland Shale and Fruitland Formation in the San Juan structural basin, New Mexico, Colorado, Arizona, and Utah, Kernodle, J. M.; Thorn, C. R.; Levings, G. W.; Craigg, S. C.; Dam, W. L., 1990, USGS, atlas format. (1,000,000 and 2,000,000 scale)
- HA-720A Hydrogeology of the San Jose, Nacimiento, and Animas formations in the San Juan structural basin, New Mexico, Colorado, Arizona, and Utah, Levings, G. W.; Craigg, S. D.; Dam, W. L.; Kernodle, J. M.; Thorn, C. R., 1990, USGS, atlas format. (1,000,000 and 2,000,000 scale)

Philana Thompson

From:

Philana Thompson

Sent:

Thursday, September 04, 2008 3:09 PM

To:

'estherkee@frontiernet.net'

Subject:

Sullivan 15 #1 API 30-045-34309

The following temporary pit will be closed on-site. Per the new New Mexico OCD Pit Rule #17, we are required to notify the surface owner. Please feel free to contact me at any time if you should have any questions or concerns. Thank you ;-)

If you are not the person these notifications should be directed to please let me know;-)

Philana Thompson Merrion Oil & Gas Regulatory Compliance Specialist pthompson@merrion.bz 505-324-5336

Merrion Oil & Gas Corp Pit Design and Construction Plan

In accordance with Rule 19.15.17 the following information describes the design and construction of temporary pits on Merrion Oil & Gas Corp. (MOG) locations. This is MOG's standard procedure for all temporary pits for New Drill purposes. A separate plan will be submitted for any temporary pit which does not conform to this plan.

General Plan:

- 1) MOG will design and construct a temporary pit to contain liquids and solids and prevent contamination of fresh water and protect public health and environment.
- 2) Prior to construction of the pit, topsoil will be stockpiled in the construction zone for later use in restoration. This material will not be stored with in 300 ft. of a continuously flowing water course, or 200 ft of any other significant water course or lake bed, sinkhole, or playa lake.
- 3) MOG will post a well sign on location that lists the following: the operator on record as the operator; the location of the well site by UL, S, T, R; and emergency telephone numbers. The location will be signed in accordance with rule 19.15.3.103 Sign on wells.
- 4) MOG shall construct all new fences utilizing 48" steel mesh field-fence (hog wire) on the bottom with a single strand of barbed wire on top. T-posts shall be installed every 12 feet and corners shall be anchored utilizing a secondary T-post. Temporary pits will be fenced at all times excluding drilling or workover operations, when the front side of the fence will be temporarily removed for operational purposes.
- 5) MOG will construct the temporary pit so that the foundation and interior slopes are firm and free of rocks, debris, sharp edges or irregularities to prevent liner failure.
- 6) MOG shall construct the pit so that the slopes are no steeper than two horizontal feet to 1 vertical foot.
- 7) Pit walls will be walked down by a crawler type tractor following construction.
- 8) All temporary pits will be lined with a 20-mil, string reinforced, HDPE liner, complying with EPA SW-846 method 9090A requirements.
- 9) Geotextile will be installed beneath the liner when rocks, debris, sharp edges or irregularities cannot be avoided.
- 10) All liners will be anchored in the bottom of a compacted earth-filled trench at least 18 inches deep.
- 11) MOG will minimize liner seams and orient them up and down, not across a slope. Factory seams will be used whenever possible. MOG will ensure all field seams are welded by qualified personnel. Field seams will be overlapped four to six inches and will be oriented parallel to the line of maximum slope. MOG will minimize the number of field seams in corners and irregularly shaped areas.
- 12) The liner shall be protected from any fluid force or mechanical damage through the use of mud pit slides, or a manifold system.
- 13) The pit shall be protected from run-off and/or run-on by constructing and maintain diversion ditches around the location or around the perimeter of the pit in some cases.
- 14) The volume of the pit shall not exceed 10 acre-feet, including freeboard.
- 15) Temporary blow pits will be constructed to allow gravity flow to discharge into lined drill pit.
- 16) The lower half of the blow pit (nearest lined pit) will be lined with the same 20 ml liner. The upper half of the blow pit will remain unlined as allowed in Rule 19.15.17.11.F.11.
- 17) MOG will not allow freestanding liquids to remain on the unlined portion of a temporary blow pit.

Merrion Oil & Gas Corp Maintenance and Operating Plan

In accordance with Rule 19.15.17 the following information describes the operation and maintenance of temporary pits on Merrion Oil & Gas Corp. (MOG) locations. This is MOG's standard procedure for all temporary pits for new drill purposes. A separate plan will be submitted for any temporary pit which does not conform to this plan.

General Plan:

- 1) MOG will operate and maintain a temporary pit to contain liquids and solids and prevent contamination of fresh water and protect public health and environment.
- 2) MOG will conserve drilling fluids by transferring liquids to pits ahead of the rigs whenever possible. All other drilling fluids will be disposed of at Pretty_Lady_30_11_34 #1 permit #SWD-1034.
- 3) MOG will not discharge or store any hazardous waste in any temporary pit.
- 4) MOG shall remove any liquids from the temporary pit used for cavitation within 48 hours after completing cavitation. MOG may request and receive additional time to remove the liquids from the temporary pit used for cavitation if the MOG demonstrates to the Aztec OCD district office's satisfaction that it is not feasible to access the location with 48 hours.
- 5) If any pit liner's integrity is compromised, or if any penetration of the liner occurs above the liquid's surface, then MOG shall notify the Aztec OCD office by phone or email within 48 hours of the discovery and repair the damage or replace the liner.
- 6) If a leak develops below the liquid's level, MOG shall remove all liquids above the damaged liner within 48 hours and repair the damage or replace the liner. MOG shall notify the Aztec OCD office by phone or email within 48 hours of the discovery for leaks less than 25 bbls. For discovery of leaks greater than 25 bbls, MOG shall notify the Aztec OCD office as required to Subsection B of 19.15.3.116 NMAC within 24 hours of discovery. In addition, immediate verbal notification pursuant to Subsection B, Paragraph (1), and Subparagraph (d) of 19.15.3.116 NMAC shall be reported to the division's environmental bureau chief.
- The liner shall be protected from any fluid force or mechanical damage through the use of mud pit slides, or a manifold system.
- 8) The pit shall be protected from run-off by constructing and maintaining diversion ditches around the location or around the perimeter of the pit in some cases.
- 9) MOG shall immediately remove any visible layer of oil from the surface of the temporary pit after cessation of a drilling or workover operation. Oil absorbent booms will be utilized to contain and remove oil from the pit's surface. An oil absorbent boom will be stored on-site until closure of the pit.
- 10) Only fluids generated during the drilling or workover process may be discharged into a temporary pit.
- 11) MOG will maintain the temporary pit free of miscellaneous solid waste or debris.
- 12) During drilling or workover operations, MOG will inspect the temporary pit at least once daily to ensure compliance with this plan. Inspections will be logged in the MOG pit tracking system. MOG will file this log with the Aztec OCD office upon closure of the pit.
- 13) After drilling or workover operations, MOG will inspect the temporary pit weekly so long as liquids remain in the temporary pit. A log of the inspections will be stored in MOG's office electronically and will be filed with the Aztec OCD office upon closure of the pit.
- 14) MOG shall maintain at least two feet of freeboard for a temporary pit.
- 15) MOG shall remove all free liquids from a temporary pit within 30 days from the date the operator releases the drilling rig.
- 16) MOG shall remove all free liquids from a cavitation pit within 48 hours after completing cavitation. MOG may request additional time to remove liquids from the Aztec OCD office if it is not feasible to remove liquids within 48 hours.

Merrion Oil & Gas Corp Closure Plan

In accordance with Rule 19.15.17.12 NMAC the following information describes the closure requirements of temporary cavitation pits on Merrion Oil & Gas Corp. (MOG) locations. This is MOG's standard procedure for all temporary pits utilized for new drills. A separate plan will be submitted for any temporary pit which does not conform to this plan.

All closure activities will include proper documentation and be available for review upon request and will be submitted to the OCD within 60 days of closure. Closure reports will be filed on C-144 and incorporate the following:

- Details of Capping and Covering, where applicable.
- Plot Plan (Pit diagram)
- Inspection reports
- Sampling results
- C-105

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Copy of deed notice will be filed with County Clerk

General Plan:

- 1) All free standing liquids will be removed at the start of the pit closure process from the pit and disposed of in a division approved facility or recycle, reuse or reclaim the liquids in a manner that the appropriate division district office approves.
- 2) The preferred method of closure for all temporary pits will be on-site burial, assuming that all the criteria listed in sub-section (B) of 19.15.17.13 are met.
- 3) The surface owner was notified prior to on-site burial of MOG's closing of the temporary pit as per the approved closure plan using email notification, email notification is attached.
- 4) Within 6 months of the Rig off status occurring MOG will ensure that temporary pits are closed, recontoured, and re-seeded.
- 5) Notice of closure will be given to the Aztec OCD office between 72 hours and one week of closure via email, or verbally. The notification of closure will include the following:
 - I. Operator's name
 - II. Location by UL, S, T and R. Well name and API number.
- 6) Liner of temporary pit shall be removed above the "mud level" after stabilization. Removal of liner will consist of manually or mechanically cutting liner at mud level and removing all remaining liner. Care will be taken to remove "ALL" of the liner i.e., edges of liner entrenched or buried. All excessive liner will be disposed of at a licensed disposal facility.
- 7) Pit contents shall be mixed with non-waste containing, earthen material in order to achieve the solidification process. The solidification process will be accomplished using a combination of natural drying and mechanically mixing. Pit contents will be mixed with non-waste, earthen material to a consistency that is deemed safe and stable. The mixing ratio shall not exceed 3 parts clean soil to 1 part pit contents.
- 8) A five point composite sample will be taken of the pit using sampling tools and all samples tested per Subsection B of 19.15.17.13(B)(1)(b). In the event that the criteria are not met, all contents will be handled per Subparagraph (a) of Paragraph (1) of Subsection B of 19.15.17.13 i.e., Dig and haul.

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	2500		
GRO/DRO	EPA SW-846 8015M	500		
Chlorides	EPA 300.1	(DGW >50 & <100) 500		
		(DGW >100) 1000		

9) A five point composite sample will be taken from the cavitation pit pursuant to 19.15.17.13 (B)(1)(b)(i) in order to assure there has not been any type of release.

Components	Test Method	Limit (mg/Kg)
Benzene	EPA SW-846 8021B or 8260B	0.2
BTEX	EPA SW-846 8021B or 8260B	50
ТРН	EPA SW-846 418.1	2500
GRO/DRO	EPA SW-846 8015M	500
Chlorides	EPA 300.1	500

- 10) Upon completion of solidification and testing standards being passed, the pit area will be backfilled with compacted, non-waste containing, earthen material. A minimum of four feet of cover shall be achieved and the cover shall include one foot of suitable material to establish vegetation at the site, or the background thickness of topsoil, whichever is greater. If standard testing fails MOG will dig and haul all contents pursuant to 19.15.17.13.i.a. After doing such, confirmation sampling will be conducted to ensure a release has not occurred.
- 11) During the stabilization process if the liner is ripped by equipment the Aztec OCD office will be notified within 48 hours and the liner will be repaired if possible. If the liner can not be repaired then all contents will be excavated and removed.
- 12) Dig and haul material will be transported to Envirotech and/ or IEI.
- 13) Re-contouring of location will match fit, shape, line, form and texture of the surroundings. Re-shaping will include drainage control, prevent ponding, and prevent erosion. Natural drainages will be unimpeded and water bars and/or silt traps will be placed in areas where needed to prevent erosion on a large scale. Final re-contour shall have a uniform appearance with a smooth surface, fitting the natural landscape.
- 14) Notification will be sent to the OCD when the reclaimed area is seeded.
- 15) MOG shall see the disturbed areas the first growing season after the operator closes the pit. Seeding will be accomplished via drilling on the contour whenever practical or by other division approved methods. BLM or Forest Service stipulated seed mixes will be used on federal lands. Vegetative cover will equal 70% of the native perennial vegetative cover (un-impacted) 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. Repeat seeding or planting will be continued until successful vegetative growth occurs.

Туре	Variety or Cultivator	PLS/A
Western Wheatgrass	Arriba	3.0
Indian Ricegrass	Paloma or rimrock	3.0
Slender Wheatgrass	San Luis	2.0
Crested Wheatgrass	Hy-crest	3.0
Bottlebrush Squirreltail	Unknown	2.0
Four-wing Saltbrush	Delar	.25

Species shall be planted in pounds of pure live seed per acre: Present Pure Live Seed (PLS)= Purity X Germination/100. Two lost of seed can be compared on the basis of PLS as follows:

Source No. One (poor quality)
Purity 50 percent
Germination 40 percent
Percent PLS 20 percent
5lb. bulk seed required to make

1lb. PLS

Source No. two (better quality)
Purity 80 percent
Germination 63 percent
Percent PLS 50 percent
2lb. bulk seed required to make

1lb. PLS

- 16) The temporary pit will be located with a steel marker, no less than four inches in diameter, cemented in a hole three feet deep in the center of the onsite burial upon the abandonment of all the wells on the pad. The marker will include a threaded collar to be used for future abandonment. The top of the marker will contain a welded steel 12" square plate that indicates the onsite burial of the temporary pit. The plate will be easily removable and a four foot tall riser will be threaded into the top of the collar marker and welded around the base with the operator's information at the time of all wells on the well pad are abandoned. The operator's information will include the following:
 - I. Operator name
 - II. Lease name
 - III. Well name and number
 - IV. Unit number
 - V. Section
 - VI. Township
 - VII. Range
 - VIII. An indicator that the marker is an onsite burial location

Pit Inspection Form

Unit Letter: Z Section: /5 Township: 261 Range: 121
County:
Location Name: Sullivan 15 #1
Number of wells to the pit:/
Total daily volume (in barrels) to the pit:
Pit Type:
Temporary: Drilling Workover
Permanent Emergency Cavitation P&A
````````Lined □ Unlined Liner type: Thickness <u>20</u> mil □ LLDPE ( HDPE □ PVC □ Other
∑ String-Reinforced
Liner Seams: Welded Factory Other Volume 140 bbl Dimensions: L 20 x W 40 x D
Visual Inspection: 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)
Yes No within 300 feet from a permanent residence, school, hospital, institution or church in existence at the time of initial application
Yes - No V
within 500 feet of a private, domestic fresh water well or spring used by less than five households for domestic or stock watering purposes, or within 1000 feet of any other fresh water well or spring, in existence at the time of initial application
Yes No within 500 feet of a wetland
Comments:
CERTIFICATION
I hereby certify that the information submitted is true and correct to the best of my knowledge and belief.
Signature: Title: Production Foreman
Printed Name: Land Merilatt Date: 9-4-08
E-mail Address:

A pit is defined as any below grade or surface feature which receives any materials other than fresh water.