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

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

For temporary pits, closed-loop systems, and below-grade tanks, submit to the appropriate NMOCD District Office.

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

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

Please be advised that approval of this request does not relieve the operator of lia						
	ply with any other applicable governmental authority's rules, regulations or ordinances.					
Operator:Rosetta Resources	OGRID #:239235RCVD JUL 25 'OB					
Address:c/o Walsh Engineering, 7415 E. Main St. Farmington, NM 87402 III CONS. DTU.						
Facility or well name:Tsah Tah 2 #1R						
API Number:30-045-34697	OCD Permit Number:					
U/L or Qtr/QtrGSection2_ Township24	4N Range 10W County: San Juan					
Center of Proposed Design: Latitude36.34.582 N Longitude107.86.205 W NAD: ☐1927 🔀 1983						
Surface Owner: 🗌 Federal 🔀 State 🔲 Private 🔲 Tribal Trust or Indian .	Allotment					
Pit: Subsection F or G of 19 15.17.11 NMAC	Closed-loop System: Subsection H of 19.15.17.11 NMAC					
Temporary. ✓ Drilling Workover	☐ Drying Pad ☐ Tanks ☐ Haul-off Bins ☐ Other					
Permanent Emergency Cavitation Steel Pit	Lined Unlined					
☑ Lined ☐ Unlined	Liner type: Thicknessmil					
Liner type: Thickness20mll \bigsquare LLDPE \bigsquare HDPE \bigsquare PVC	Other					
Other String-Reinforced	Seams: Welded Factory Other					
Seams: 🛛 Welded 🔀 Factory 🗌 Other	Volume:bblyd ³					
Volume:1700bbl Dimensions: L60x W20x D8_ Dimensions: Lengthx Width						
Below-grade tank: Subsection I of 19.15.17.11 NMAC	Fencing: Subsection D of 19.15.17.11 NMAC					
Volume [.] bbi	Chain link, six feet in height, two strands of barbed wire at top					
Type of fluid:	Four foot height, four strands of barbed wire evenly spaced between one and					
Tank Construction material:	four feet					
Secondary containment with leak detection	Netting: Subsection E of 19.15.17.11 NMAC					
☐ Visible sidewalls, liner, 6-inch lift and automatic overflow shut-off	Screen Netting Other					
☐ Visible sidewalls and liner	☐ Monthly inspections					
☐ Visible sidewalls only	Signs: Subsection C of 19.15.17.11 NMAC					
Other •	12'x24', 2' lettering, providing Operator's name, site location, and					
Liner type: Thicknessmil HDPE PVC	emergency telephone numbers					
Other	Signed in compliance with 19.15.3.103 NMAC					
Alternative Method:	Administrative Approvals and Exceptions:					
Submittal of an exception request is required. Exceptions must be submitted to the Santa Fe Environmental Bureau office for consideration	Justifications and/or demonstrations of equivalency are required. Please refer to 19.15.17 NMAC for guidance.					
of approval.	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					

Siting Criteria (regarding permitting): 19.15.17.10 NMAC Instructions: The applicant must demonstrate compliance for each siting criteria below in the application. Recommendations of acceptable source material are provided below. Requests regarding changes to certain siting criteria may require administrative approval from the appropriate district office or may be considered an exception which must be submitted to the Santa Fe Environmental Bureau office for consideration of approval. Applicant must attach justification for request. Please refer to 19.15.17.10 NMAC for guidance. Siting criteria does not apply to drying pads or above-grade tanks associated with a closed-loop system.				
Ground water is less than 50 feet below the bottom of the temporary pit, permanent pit, or below-grade tank. - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	☐ Yes ☐ No			
Within 300 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse or lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark). - Topographic map, Visual inspection (certification) of the proposed site				
Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. (Applies to temporary, emergency, or cavitation pits and below-grade tanks) - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	Yes No			
Within 1000 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. (Applies to permanent pits) - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image				
Within 500 horizontal feet of a private, domestic fresh water well or spring that less than five households use for domestic or stock watering purposes, or within 1000 horizontal feet of any other fresh water well or spring, in existence at the time of initial application. - NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site	☐ Yes ☐ No			
Within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance adopted pursuant to NMSA 1978, Section 3-27-3, as amended. - Written confirmation or verification from the municipality; Written approval obtained from the municipality	☐ Yes ☐ No			
Within 500 feet of a wetland. - US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site	☐ Yes ☐ No			
Within the area overlying a subsurface mine. - Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division				
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 19.15.17.12 NMAC Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC Closure Plan - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC				
Closed-loop Systems Permit Application Attachment Checklist: Subsection B of 19.15.17.9 NMAC				
Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached. Geologic and Hydrogeologic Data (required for on-site closure) - based upon the requirements of Paragraph (3) of Subsection B of 19.15.17.9 Siting Criteria Compliance Demonstrations (required for on-site closure) - based upon the appropriate requirements of 19.15.17.10 NMAC Design Plan - based upon the appropriate requirements of 19 15.17.11 NMAC Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC Closure Plan - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC				
Previously Approved Design (attach copy of design) API Number:				

Permanent Pits Permit Application Checklist: Subsection B of 19.15.17.9 NMAC					
Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the do	cuments are				
 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 H₂S, Prevention Plan Emergency Response Plan Oil Field Waste Stream Characterization 					
 ☐ Monitoring and Inspection Plan ☐ Erosion Control Plan ☐ Closure Plan - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC 					
Proposed Closure: 19.15.17.13 NMAC					
Type: [X] Drilling Workover Emergency Cavitation Permanent Pit Below-grade Tank Closed-loop System	7 Alternative				
Proposed Closure Method. Waste Excavation and Removal] Alternative				
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 cor	nsideration)				
Siting Criteria (regarding on-site closure methods only): 19.15.17.10 NMAC					
Instructions: Each siting criteria requires a demonstration of compliance in the closure plan. Recommendations of acceptable source material are provided below. Requests regarding changes to certain siting criteria may require administrative approval from the appropriate district office or may be considered an exception which must be submitted to the Santa Fe Environmental Bureau office for consideration of approval. Justifications and/or demonstrations of equivalency are required. Please refer to 19.15.17.10 NMAC for guidance.					
Ground water is less than 50 feet below the bottom of the buried waste. - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	☐ Yes ☐ No ※ NA				
Ground water is between 50 and 100 feet below the bottom of the buried waste - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	☐ Yes ☐ No ☑ NA				
Ground water is more than 100 feet below the bottom of the buried waste. - NM Office of the State Engineer - iWATERS database search, USGS; Data obtained from nearby wells	Yes No				
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. - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	☐ Yes 🎛 No				
Within 500 horizontal feet of a private, domestic fresh water well or spring that less than five households use for domestic or stock watering purposes, or within 1000 horizontal feet of any other fresh water well or spring, in existence at the time of initial application. - NM Office of the State Engineer - iWATERS database; Visual inspection (certification) of the proposed site	Yes 🔀 No				
Within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance adopted pursuant to NMSA 1978, Section 3-27-3, as amended. - Written confirmation or verification from the municipality; Written approval obtained from the municipality	☐ Yes 🗷 No				
Within 500 feet of a wetland US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site	☐ Yes 🗶 No				
Within the area overlying a subsurface mine. - Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division /	☐ Yes 🔀 No				
Within an unstable area. - Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society, Topographic map	☐ Yes 🔀 No				
Within a 100-year floodplain. - FEMA map ✓	☐ Yes 🔀 No				

closure plan. Please indicate, by a check mark in the box, that the do Protocols and Procedures - based upon the appropriate requirem Confirmation Sampling Plan (if applicable) - based upon the applicable of possible of	ents of 19.15.17.13 NMAC propriate requirements of Subsection F of 19.15.17.13 NMAC fluids and drill cuttings) appropriate requirements of Subsection H of 19.15.17.13 NMAC Subsection I of 19.15.17.13 NMAC s of Subsection G of 19.15.17.13 NMAC s of Subsection G of 19.15.17.13 NMAC Al-off Bins Only: (19.15.17.13.D NMAC) Instructions: Please indentify the facility s. Disposal Facility Permit Number: Each of the following items must be attached to the closure plan. Please indicate propriate requirements of 19.15.17.10 NMAC	
Construction and Design of Burial Trench (if applicable) based Protocols and Procedures - based upon the appropriate requirem Confirmation Sampling Plan (if applicable) - based upon the appropriate requirem Waste Material Sampling Plan - based upon the appropriate requirem Disposal Facility Name and Permit Number (for liquids, drilling Soil Cover Design - based upon the appropriate requirements of Re-vegetation Plan - based upon the appropriate requirements of Site Reclamation Plan - based upon the appropriate requirements	upon the appropriate requirements of 19.15.17.11 NMAC ents of 19.15.17.13 NMAC propriate requirements of Subsection F of 19.15.17.13 NMAC uirements of Subsection F of 19.15.17.13 NMAC fluids and drill cuttings or in case on-site closure standards cannot be achieved) Subsection H of 19.15.17.13 NMAC Subsection I of 19.15.17.13 NMAC	
Operator Application Certification: I hereby certify that the information submitted with this application is	true, accurate and complete to the best of my knowledge and belief	
Name (Print):Paul C. Thompson, P.E	Title:Agent / Engineer	
Signature Paul C. Thomps-	Date: 7/22/6P	
e-mail address:paul@walsheng net	Telephone:505.327.4892	
OCD Approval: Permit Application (including closure plan)	Closure Plan (only)	_
	orosare rain (omy)	
OCD Representative Signature: Brad Tell	Approval Date: 7-29-08	
		_
OCD Representative Signature: Brad Sal	Approval Date: 7-29-08 OCD Permit Number:	
OCD Representative Signature: Brade State	Approval Date: 7-29-08 OCD Permit Number: Subsection K of 19 15.17.13 NMAC Closure Completion Date:	
OCD Representative Signature: See Signature: Signatu	Approval Date: 7-29-08 OCD Permit Number: Subsection K of 19 15.17.13 NMAC Closure Completion Date: Alternative Closure Method Ollowing items must be attached to the closure report. Please indicate, by a check	
OCD Representative Signature: See Si	Approval Date: 7-29-08 OCD Permit Number: Subsection K of 19 15.17.13 NMAC Closure Completion Date:	
OCD Representative Signature:	Approval Date: 7-29-08 OCD Permit Number: Subsection K of 19 15.17.13 NMAC Closure Completion Date: Alternative Closure Method Ollowing items must be attached to the closure report. Please indicate, by a check Longitude	_
Title:	Approval Date: 7-29-08 OCD Permit Number: Subsection K of 19 15.17.13 NMAC Closure Completion Date: Alternative Closure Method Collowing items must be attached to the closure report. Please indicate, by a check NAD: 1927 1983 is closure report is true, accurate and complete to the best of my knowledge and re requirements and conditions specified in the approved closure plan.	
Title:	Approval Date: 7-29-08 OCD Permit Number: Subsection K of 19 15.17.13 NMAC Closure Completion Date: Alternative Closure Method Ollowing items must be attached to the closure report. Please indicate, by a check Longitude NAD: 1927 1983 is closure report is true, accurate and complete to the best of my knowledge and re requirements and conditions specified in the approved closure plan. Title:	

Rosetta Resources Tsah Tah 2 #1R Reserve Pit Closure Siting Requirements

- 1. According to the iWaters Database from the State Engineers Office, there are only two water wells in this Township. The minimum depth to ground water is 284'. See attached printout.
- 2. As shown on the attached topographic map and site photos, there are no continuously flowing watercourses within 300' of the well, or any significant watercourses, lakebeds, sinkholes, or playa lakes within 200 of the well.
- 3. There are no permanent residences, schools, hospitals, institutions, churches within 300' of the well. In fact, other than the four Rosetta Resources wells, there are no other structures in Section 2.
- 4. There are no domestic water wells or springs within 500' of the well. See iWaters Database printout.
- 5. The well is not located within any municipal boundaries.
- 6. The well is not within 500' of any wetlands. See attached topographic map and photos.
- 7. There are no subsurface mines in Section 2, T24N, R10W. See attached map from the NM EMNRD Mining and Mineral Division.
- 8. The Tsah Tah 2 #1R is not located in an "unstable" area. The location is not over a mine and is not on the side of a hill. The location of the excavated pit material will not be located within 300' of a continuously flowing watercourse or 200' from any other watercourse.
- 9. The well is not located in a 100-year floodplain as visible on the topographic map.
- 10. In the event that the composite pit sample that is mixed 3:1 with native soils does not meet the requirements for onsite burial, the pit contents will be removed and disposed of at the Envirotech Landfarm #2 (NMOCD Permit #11).

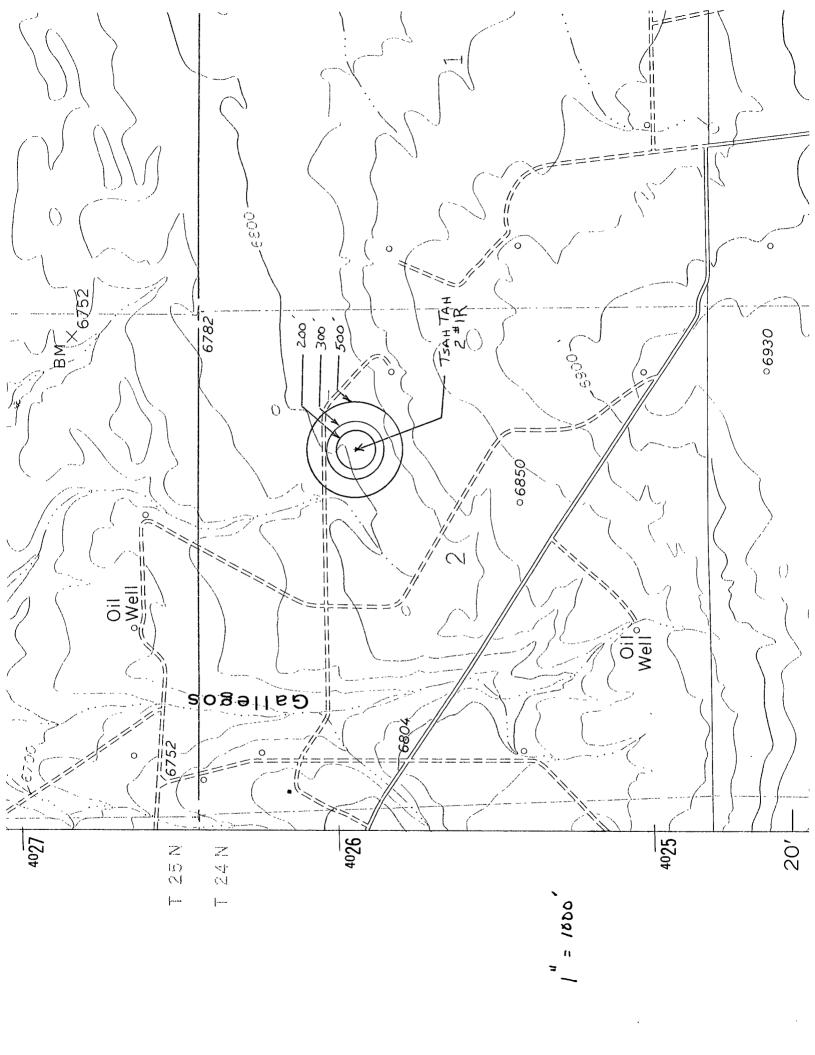
New Mexico Office of the State Engineer POD Reports and Downloads

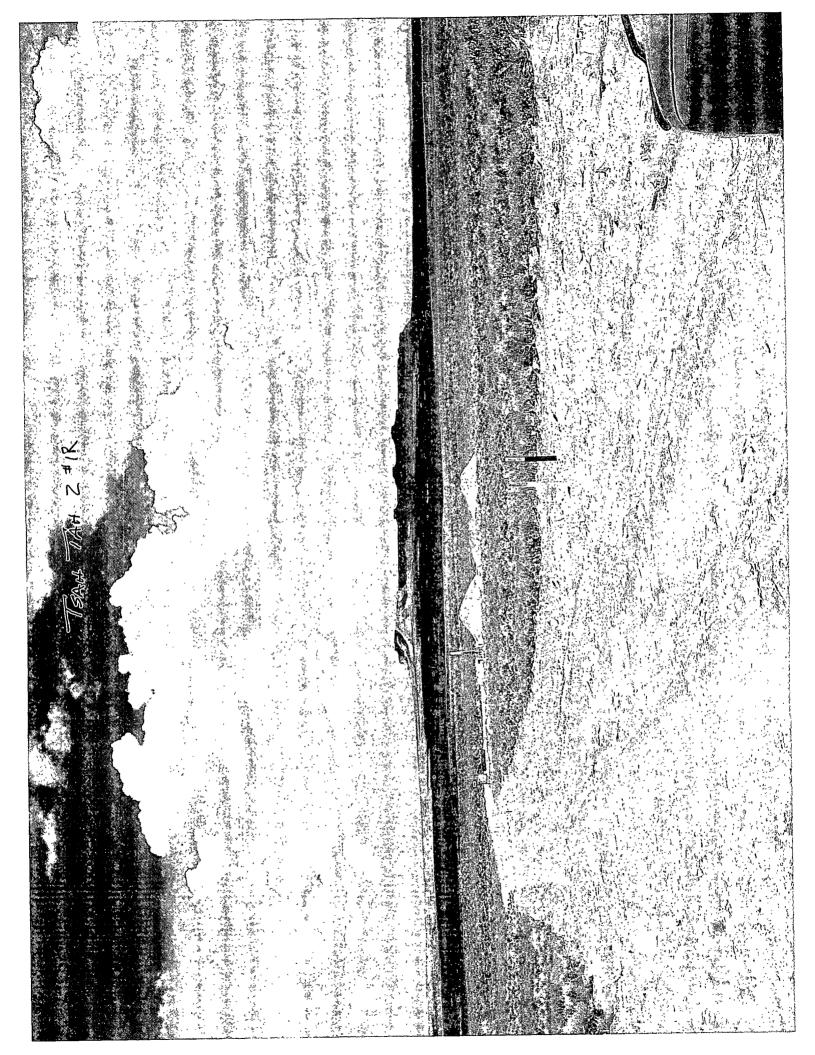
Township: 2	24N Rang	e: 10W	Sections: 1-36			,
NAD27 X:	Y:	•	Zone:		Search Radius:	,
County: SJ	Bas	in: SJ(Sar	n Juan)		Number:	Suffix:
Owner Name: (First)		(Las	st) All	***************************************	○ Non-Domestic	ODomestic
POD / Surface Data Report Avg Depth to Water Report Water Column, Report						
Clear Form WATERS Menu Help						

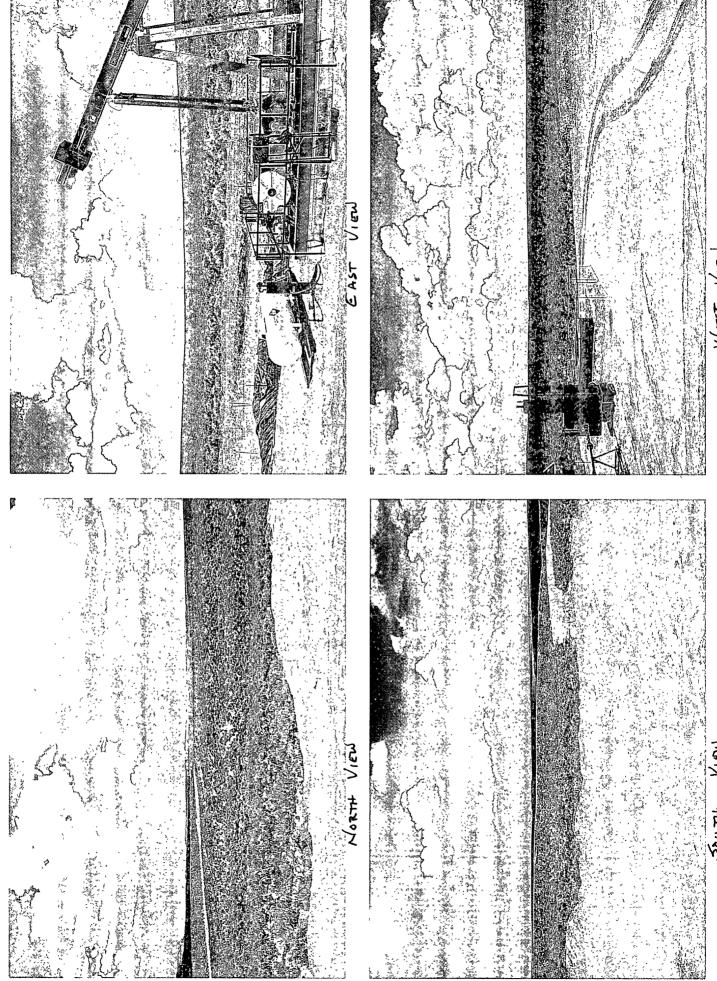
AVERAGE DEPTH OF WATER REPORT 07/17/2008

							(Depth	Water in	Feet)
Bsn	Tws	Rng Sec	Zone	X	Y	Wells	Min	Max	Avg
SJ	24N	10W 29				1	595	595	595
SJ	24N	10W 36				1	284	284	284

Record Count: 2

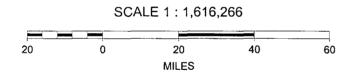






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MMQonline Public Version



TSAA TAH ZIR

Rosetta Resources Operating LP San Juan Basin Closure Plan

In accordance with Rule 19.15.17.12 NMAC the following information describes the closure requirements of temporary pits on Rosetta Resources Operating LP locations. This is Rosetta's standard procedure for all temporary pits. 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 OCD within 60 days of the pit closure. Closure report will be filed on C-144 and incorporated the following:

- Detail on Capping and Covering, where applicable
- Plot Plan (Pit diagram)
- Inspection reports
- Sampling Results
- C-105
- 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 criteria listed in sub-section (B) of 19.15.17.13 are met
- 3 The surface owner shall be notified of Rosetta's proposed closure plan using a means that provides proof of notice i.e., certified mail, return receipt requested
- 4 Within 6 months of the Rig Off status occurring Rosetta will ensure that temporary pits are closed, re-contoured, and reseeded
- Notice of Closure will be given to the Aztec Division 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 Unit Letter, Section, Township, and Range. Well name and API Number
- 6 Liner of temporary pit shall be removed above "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 or remove "All" of the liner i.e., edges of liner entrenched or buried. All excessive liver 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 a safe and stable. The mixing ratio shall not exceed 3 parts clean soil to 1 part pit contents
- A five point composite sample will be taken of the pit using sampling tools and all samples rested 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	Tests 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	1000

- 9 Upon completion of solidification and testing, 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
- 10 Re-contouring of location will match fit, shape, line, form and texture of the surrounding area. 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 smooth surface, fitting the natural landscape
- 11 Notification will be sent to OCD when the reclaimed area is seeded
- Rosetta shall seed the distributed 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 mixed 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 thorough twp successive growing seasons. Repeat seeding or planting will be continued until successful vegetative growth occurs
- 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 be flush with the ground to allow access of the active well pad and for safety concerns. 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 pad are abandoned. The operator's information will include the following: Operator Name, Lease Name, Well Name and Number, unit Number, Section, Township, Range and an indicator that the marker is an onsite burial location





ENGINEERING & PRODUCTION CORP.

Petroleum Engineering Consulting Lease Management Contract Pumping 7415 East Main Farmington, New Mexico 37402 (505) 327-4892 • Fax (505) 327-9834

July 21, 2008

Mr. Patrick H. Lyons Commissioner of Public Lands P.O. Box 1148 Santa Fe, NM 87504-1148

Re:

Temporary Pit Closure Notification

Rosetta Resources Tsah Tah 2 #1R

G Section 2, T24N, R10W San Juan County, NM

Dear Commissioner Lyons,

Pursuant to NMOCD Rule 19.15.17.13 NMAC you are being notified that Rosetta Resources has applied to the NMOCD for approval to close the temporary reserve pit that was used to drill the Tsah Tah 2 #1R well onsite.

Sincerely,

Paul C. Thompson, P.E.

Agent/Engineer