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

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-144
June 1, 2004

For drilling and production facilities, submit to appropriate NMOCD District Office.
For downstream facilities, submit to Santa Fe office

Pit or Below-Grade Tank Registration or Closure

Is pit or below-grade tank covered by a "general plan"? Yes ☐ No ☐
Type of action: Registration of a pit or below-grade tank ☐ Closure of a pit or below-grade tank X

Operator: **MURCHISON OIL AND GAS, INC.** Telephone: **505-628-3932** e-mail address: **tommyfolsom@valornet.com**

Address: **PO Box 627, 406 N. Guadalupe, Suite B, Carlsbad, NM 88221-0627**

Facility or well name: **Red Tank State No. 1** API #: **3001534265** U/L or Qtr/Qtr Lot **H Sec 35 T18S R24E**

County: **Eddy** Latitude N_____ Longitude W_____ NAD: 1927 ☐ 1983 ☐

Surface Owner: **State X**

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OCD-ARTESIA

Pit	**Below-grade tank N/A**	
Type: **Drilling X**	Volume: **N/A** bbl Type of fluid: **N/A**	
Lined **X**	Construction material: **N/A**	
Liner type: Synthetic **X** Thickness: **12ml HDPE Liner**	Double-walled, with leak detection? ☐ If not, explain why not.	
Pit Volume: **2000 bbl. (Approximately)**		

Depth to ground water (vertical distance from bottom of pit to seasonal high water elevation of groundwater.) Yates applied to drill a well in S36 in 2/93 but no water information exists. All other data shows approximately 300' to groundwater.	Less than 50 feet 50 feet or more, but less than 100 feet 100 feet or more	(20 points) (10 points) (0 points)	**0 pts.**
Wellhead protection area: (Less than 200 feet from a private domestic water source, or less than 1000 feet from all other water sources.)	Yes No **X**	(20 points) (0 points)	**0 pts.**
Distance to surface water: (horizontal distance to all wetlands, playas, irrigation canals, ditches, and perennial and ephemeral watercourses.)	Less than 200 feet 200 feet or more, but less than 1000 feet 1000 feet or more	(20 points) (10 points) (0 points)	**10 pts.**
	Ranking Score (Total Points)		**10 pts.**

If this is a pit closure: (1) Attach a diagram of the facility showing the pit's relationship to other equipment and tanks. **Digital photos shall be submitted for before and after remediation activity.** (2) Indicate disposal location: **Insitu as described above.** If offsite, name of facility: **N/A** (4) Groundwater encountered: No **X** Yes ☐ If yes, show depth below ground surface _ ft. and attach sample results. (5) Attach soil sample results and a diagram of sample locations and excavations.

Additional Comments: **Please refer to the attached letter for detailed "Closure Plan" information, digital photos, and sample location diagram. For purposes of continuity, all materials shall be submitted as part of the final closure report.**

#1. 24 Hour Notice is required Prior to ANY Sampling
2. A 20 mil Liner must be placed over All Container pits
3. A minimum of 3' of Cover Must be placed over All Container pits

I hereby certify that the information above is true and complete to the best of my knowledge and belief. I further certify that the above-described pit or below-grade tank has been/will be constructed or closed according to NMOCD guidelines **X**, a general permit ☐, or an (attached) alternative OCD-approved plan ☐.

Date: **25 January 2006**

Printed Name/Title: **Tommy W. Folsom, Production Manager** Signature T W Folsom

Your certification and NMOCD approval of this application/closure does not relieve the operator of liability should the contents of the pit or tank contaminate groundwater or otherwise endanger public health or the environment. Nor does it relieve the operator of its responsibility for compliance with any other federal, state, or local laws and/or regulations.

Approval:

Printed Name/Title: _____ Signature _____ Date: FEB 20 2006

Mr. Tommy W. Folsom
Production Manager
MURCHISON OIL AND GAS, INC.
PO Box 627
Carlsbad, NM 88221-0627

25 January 2006

Mr. Mike Bratcher
OIL CONSERVATION DIVISION
1301 West Grand Avenue
Artesia, NM 88210

Re: Red Tank State Com. No. 1 Pit Closure Documents

Dear Mr. Bratcher:

Pursuant to the State of New Mexico regulatory requirements for permanent closure of drilling pits, enclosed herewith is the completed Form C-144, digital photos of existing pit, sample location diagram and additional information constituting the "Closure Plan" for closure of the Murchison Oil and Gas, Inc., hereinafter "Murchison", Red Tank State Com. No. 1 drilling pit (API No. 3001534265) located in U/L D S35 T18S, R24E of Eddy County, New Mexico.

INTRODUCTION

Remediation of the Murchison, hereinafter Red Tank No. 1, drilling pit is targeted to begin 30 January 2006 with completion expected by 06 February 2006, permitting weather and the occurrence of unexpected conditions not within the Operator's control do not create delays or exacerbate the proposed schedule in any way. Murchison intends to maintain its commitment to environmental health and safety and fully comply with the Regulatory Performa of the State of New Mexico, OCD regarding this disposal action and permanent closure of the Red Tank No. 1 drilling pit.

Potential, temporary contamination from the Red Tank No. 1 drilling pit site, should any exist, resulted solely from oil and gas production activities. Potential contaminates of concern are typical mid to high-level concentrations of brines, typical polymers (such as xanthium gum and starch) and in general, drilling mud and fluids remaining upon completion of said drilling operations.

Area land use is primarily ranching with domestic pasturage and oil and gas production activities. The Murchison Red Tank No. 1 drilling pit is located in an area wherein groundwater depth to surface data from water wells is not readily available on the State of New Mexico, State Engineer's web site. However, in conjunction with their normal online databank, the State of New Mexico, OCD is cross-referencing with a groundwater map titled "Eddy County Depth to Groundwater", produced by Wayne Johnson at Chevron/Texaco, dated 9 February 2005. This map indicates the presence of groundwater in the area to be > 300' feet but lacks actual elevation cross-referencing with topographical indices. The nearest recorded water well lies within the Section and was drilled by Yates in February 1993 but no water information is available. Therefore, it is reasonable to utilize the "Eddy County Depth to Groundwater" map.

Consequently, *insitu* disposal is herewith the preferred choice for the Red Tank No. 1 drilling pit closure. It is the belief of Murchison that compliant environmental performance and reduction of liability in this area pursuant to New Mexico; OCD regulations can be achieved with *insitu* disposal predicated on the evidentiary data heretofore presented. Further, should future Regulatory Performa mandate additional action or should the Operator choose to take additional action, the insitu option, in this case, (1) limits the environmental impact in general, (2) allows the Operator/government immediate access to said liability, (3) contains said material within the Operator's lease boundary and (4) in the event evidence of water is discovered during the digging of the *insitu* pit, all actions would cease and the State would be immediately notified that a haul off was necessary.

Murchison intends to engage in *insitu* disposal upon approval from the New Mexico, OCD. This compliance action shall strictly apply the State of New Mexico, OCD standards, i.e. clean-up level for the Red Tank No. 1 drilling pit shall meet the less than 100ppm of TPH, ND for BTEX and the less than 250ppm of chlorides unless approved otherwise and substantiated by background information documented to be higher than the above cited indices.

CLOSURE PLAN

Prior to commencement of closure activities, Murchison contractor will contact One-Call for line spot clearance confirming the State of New Mexico, OCD is in agreement with the proposed "Closure Plan" for removal of approximately 2,000 bbl. of liquid followed by the removal of all fines (drill cuttings) assuming these fines have sufficiently dried allowing for maneuverability of heavy equipment in the pit area, enabling *insitu* burial application to take place and final closure of the pit occur.

Environmental health and safety regulations mandate control of pit volumes at all times. Thus, the liquid material was pumped off as needed and properly disposed of during active drilling operations in August 2005. Water accumulated since this time is either due to liquid material not completely hauled from actual drilling operations or rain. This water has subsequently been hauled from the location and properly disposed of pursuant to OCD Regulatory Performa.

- Contractor shall mobilize to Red Tank No. 1 drilling pit site located East of Artesia, New Mexico (see Form C-144) accessing via the Four Dinkas Road. Personnel and heavy equipment necessary to provide for the initiation and completion of said remediation activities presented above shall be engaged as is appropriate to the mandated exercise.

- No remediation activity shall occur off the existing pad or already disturbed areas as authorized by the APD and approved Best Management Practices (BMP's). Murchison shall consider weather conditions and necessary equipment positioning to provide a clear area for adequate staging for site control and safety compliance, ensuring operations shall be compliant with New Mexico, OCD Regulatory Performa.

- The Red Tank No. 1 drilling pit is currently lined with a 12ml HDPE liner, which shall be removed by heavy equipment and disposed of with the drilling fines *inistu* pursuant to New Mexico, OCD requirements. *Insitu* actions provide for the encasement of all drilling pit contents in a 20 ml liner sewn in a rectangular box shape and placed vertically 10 feet below ground. The bottom and sides of the "container" shall be married to undisturbed ground ensuring no objects such as sharp rocks, etc. shall be in the contact area to reduce the potential of puncturing a highly pressured "container" resulting from (1) the placement of soil on top of it during the burying process and (2) the composition of the pit material contained within it, which over time will exude gaseous buildup.

- Once the burial trench/pit has been dug to sufficient dimensions to ensure proper placement of the pit contents, the track hoe shall begin to deposit pit materials within the secured "container" until all pit material has been placed within it. This 20ml HDPE liner "container" shall not be permanently sealed until after the pit bottom has been sampled and approved for closure by the State of New Mexico, OCD. In the event more material must be harvested to achieve compliance, and said harvest shall increase the volume of the *insitu* material to such a degree that it will threaten the integrity of the "container" or potentially cause leakage to occur by reason of increased volume, an additional *insitu* 20ml HDPE liner "container" shall be placed adjacent (when space and terrain permits) to the existing "container". Such action will provide for reasonable assurance that no leakage will occur and maintain all contaminates within a specific geographic location within the lease boundary.

- Prior to initiation of backfilling, the Operator shall take appropriate samples of the pit area to ensure compliance with OCD Standards for remediation of possible TPH, ND for BTEX and levels of less than 250ppm of chlorides. However if levels at the bottom of the drilling pit test too high, a background set of samples shall be obtained for testing from the immediate vicinity and compared to those of the pit bottom. Simultaneously, more soil shall be removed from the "hot spots". Once completed, new data acquisition shall occur and sample results determine whether or not compliance has been reached in order to begin backfilling. No backfilling shall begin without authorization by the State of New Mexico, OCD.

- Backfilling of the Red Tank No. 1 drilling pit shall be commensurate with existing topography and terrain relief features (contouring) so as to return it to its "near-as" previous condition, including a contour for moisture accumulation which prevents abnormal or unsustainable water impoundment resulting in erosive actions.

- The "Closure Plan" shall include a final report providing lab analysis of the backfill material, digital project photos and evidentiary narrative to support the completed disposition of the reclaimed Red Tank No. 1 drilling pit site.

Should you have questions, please call 505-628-3932 (office) or 505-706-0667 (cell).

Sincerely,

Tommy W. Folsom
Production Manager

cc: State of New Mexico, OCD, Form C-144 and photo