

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 ☒

Operator: Nadel & Gussman Permian, LLC Telephone: 432-682-4429 e-mail address: kemm@naguss.com		
Address: 601 N. Marienfeld, Suite 508, Midland, Texas 79701		
Facility or well name: Dinero State No. 5 API: 3001534492 U/L or Qtr/Qtr Lot G Sec 16 T22S R28E 1980'FNL 1980'FEL		
County: Eddy		
Surface Owner: Federal <input type="checkbox"/> State X Private <input type="checkbox"/> Indian <input type="checkbox"/>		
Pit Type: Drilling <input checked="" type="checkbox"/> Production <input type="checkbox"/> Disposal <input type="checkbox"/> Workover <input type="checkbox"/> Emergency <input type="checkbox"/> Lined <input checked="" type="checkbox"/> Unlined <input type="checkbox"/> Liner type: Synthetic <input checked="" type="checkbox"/> Thickness: 12ml HDPE liner Clay <input type="checkbox"/> Pit Volume: 2200 bbl. Approximately	Below-grade tank N/A Volume: N/A bbl Type of fluid: N/A Construction material: N/A Double-walled, with leak detection? <input type="checkbox"/> If not, explain why not.	
Depth to ground water (vertical distance from bottom of pit to seasonal high water elevation of groundwater.)	Less than 50 feet	(20 points)
	50 feet or more, but less than 100 feet	(10 points) 10pts.
	100 feet or more	(0 points)
Wellhead protection area: (Less than 200 feet from a private domestic water source, or less than 1000 feet from all other water sources.)	Yes	(20 points)
	No	(0 points) 0pts.
Distance to surface water: (horizontal distance to all wetlands, playas, irrigation canals, ditches, and perennial and ephemeral watercourses.)	Less than 200 feet	(20 points)
	200 feet or more, but less than 1000 feet	(10 points) 0pts.
	1000 feet or more	(0 points)
Ranking Score (Total Points)		10pts.

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: **onsite insitu pit** If offsite, name of facility: (3) Attach a general description of remedial action taken including remediation start date and end date. (4) Groundwater encountered: No ☒ 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: **THIS C-144 PRESENTS GROUNDWATER DEPTH INVESTIGATION IN THE AREA OF POTENTIAL INSITU DISPOSAL. 70' BORE HOLE PRODUCED NO GROUNDWATER FOR 72 HOURS (see Closure Report). WATER SAMPLE TAKEN SHOWS HIGH CHLORIDES AND WILL NOT PROVIDE POTABLE RESOURCE PREDICATED ON PRIMARY OR SECONDARY EPA DRINKING WATER QUALITY STANDARDS.**

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 May 2006

Printed Name/Title Lee Ledbetter, SENM Field Superintendent

Signature

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 ground water 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: 5/26/06

③

Mr. Lee Ledbetter
Southeast New Mexico Field Superintendent
NADEL AND GUSSMAN PERMIAN, LLC
2408 Freeman
Artesia, NM 88210

25 May 2006

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

Re: Dinero State No. 5 Pit Closure Documents

30-015-34492

Dear Mr. Bratcher:

Pursuant to the State of New Mexico regulatory requirements for permanent closure of drilling pits, please be advised the following documents are herewith enclosed: (1) Form C-144, (2) digital photos of existing pit (forwarded in final report), (3) sample location diagram (forwarded in final report) and (4) additional information constituting the proposed "Closure Plan" for closure of the Nadel and Gussman Permian, LLC, hereinafter "NGP", Dinero State No. 5 drilling pit, hereinafter "Dinero", (API No. 30-015-34492) located in U/L G S16 T22S, R28E, 1,980 FNL and 1,980 FEL of Eddy County, New Mexico.

INTRODUCTION

Remediation of the NGP, Dinero drilling pit is targeted to begin 30 May 2006 with completion expected by 09 June 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. NGP intends to maintain its commitment to environmental health and safety and fully comply with the Regulatory Performance of the State of New Mexico, OCD regarding this disposal action culminating in permanent closure of the Dinero drilling pit.

Potential, temporary contamination from the Dinero drilling pit site, should any exist, resulted solely from oil and gas production activities. Potential contaminants 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 NGP Dinero drilling pit is located in an area wherein groundwater depth to surface data is shown on the State of New Mexico, State Engineer's web site as ranging between 40 and 50 feet.

Further, 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 does not show elevation definition (flat representation) but does indicate groundwater depth in this area to range between 43 and 47 feet which directs the Operator's disposal activity to follow disposal practices for a water sensitive designation to ensure compliant environmental performance and reduction of liability.

Consequently, as an option to haul off, NGP has engaged in a coring program to investigate the actual depth to groundwater in the specific area to be impacted by an *insitu* pit for purposes of the disposal of drilling fines. This drilling program substantiates groundwater located in this specific area is present at 70

feet following a 72 hour recharge which showed no water for the first 24 hours. Further, a water sample taken from the Dinero at 48 hours and monitored through a 72 hour period demonstrated a 10" recharge, which remained the same throughout the remainder of the 72 hour period. A water sample was taken and submitted for analysis to investigate potable and/or useable water properties predicated upon EPA's Water Quality Standards. The results of this analysis (see enclosed Trace Analysis, Inc.) are enclosed. In summary, the water does not meet the EPA Drinking Water Quality Standards for potable water. As well, the boring documents the presence of groundwater at 70 feet.

Consequently, *insitu* disposal shall be engaged in accordance with the conditions of the approved Form C-144. It is the belief of NGP 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 New Mexico, OCD would immediately be notified that a haul off was necessary.

This compliance action shall strictly apply the State of New Mexico, OCD standards, i.e. clean-up level for the Dinero drilling pit shall meet the less than 100 ppm of TPH, ND for BTEX and the less than 250 ppm 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, the NGP 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 2,500 bbl. of liquid followed by the removal of all fines (drill cuttings) assuming (1) these fines have sufficiently dried allowing for maneuverability of heavy equipment in the pit area or (2) mixing shall occur in order to attain sufficient dryness of said fines prior to deposit into the *insitu* 20 ml HDPE liner, enabling *insitu* burial application to take place and final pit closure.

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 January 2006. 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 in accordance with OCD Regulatory Performa.

- ❖ Contractor shall mobilize to the Dinero drilling pit site located approximately 20 miles southwest of Artesia, New Mexico (see Form C-144) accessing via US Refinery Road. Personnel and heavy equipment necessary to provide for the initiation and completion of 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). NGP 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 Dinero drilling pit is currently double lined by a 12ml HDPE liner, which shall be removed by heavy equipment and disposed of with the drilling fines *insitu* pursuant to New Mexico, OCD requirements. *Insitu* actions provide for the encasement of all drilling pit contents in a 20 ml HDPE liner sewn in a rectangular box shape and placed vertically approximately 25 feet below ground.
- ❖ 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 drilling 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 either adjacent (when space and terrain permits) to or close to the existing "container". Such action will provide for reasonable assurance that no leakage will occur and maintain all contaminants 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 soil chloride levels greater than 250 ppm. However if levels at the bottom of the drilling pit test out or acceptable range, 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 Dinero 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. Pursuant to the APD, the Dinero site shall be seeded in compliance with BLM seed mixtures.
- ❖ 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 Dinero State No. 5 drilling pit site.

Should you have questions, please call 505-746-1428 (office) or 505-631-6071 (cell) or call Cheryl Winkler (406-431-2528).

Sincerely,



Lee Ledbetter
SE New Mexico Field Superintendent



6701 Aberdeen Avenue, Suite 9
155 McCutcheon, Suite H

Lubbock, Texas 79424 800•378•1296
El Paso, Texas 79932 888•588•3443
E-Mail: lab@traceanalysis.com

806•794•1296 FAX 806•794•1298
915•585•3443 FAX 915•585•4944

Analytical and Quality Control Report

Cheryl Winkler
Nade Gussman Permain LLC
Cheryl Winkler
2408 Freeman
Artesia, NM, 88210

Report Date: May 23, 2006

Work Order: 6052209



Project Name: 70' Bore Hole Sample (H20)
Project Number: Dinero State #5

Enclosed are the Analytical Report and Quality Control Report for the following sample(s) submitted to TraceAnalysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
90899	H20 Sample Bore Hole	water	2006-05-19	06:30	2006-05-20

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

This report consists of a total of 6 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

Dr. Blair Leftwich, Director

Analytical Report

Sample: 90899 - H20 Sample Bore Hole

Analysis: Cations
QC Batch: 26717
Prep Batch: 23456

Analytical Method: S 6010B
Date Analyzed: 2006-05-22
Sample Preparation: 2006-05-22

Prep Method: S 3005A
Analyzed By: TP
Prepared By: DS

Parameter	Flag	RL Result	Units	Dilution	RL
Dissolved Calcium		570	mg/L	10	0.500
Dissolved Potassium		12.3	mg/L	1	1.00
Dissolved Magnesium		158	mg/L	10	1.00
Dissolved Sodium		278	mg/L	10	1.00

Sample: 90899 - H20 Sample Bore Hole

Analysis: Chloride (IC)
QC Batch: 26747
Prep Batch: 23487

Analytical Method: E 300.0
Date Analyzed: 2006-05-22
Sample Preparation: 2006-05-22

Prep Method: N/A
Analyzed By: WB
Prepared By: WB

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		84.7	mg/L	5	0.500

Sample: 90899 - H20 Sample Bore Hole

Analysis: TDS
QC Batch: 26762
Prep Batch: 23496

Analytical Method: SM 2540C
Date Analyzed: 2006-05-23
Sample Preparation: 2006-05-22

Prep Method: N/A
Analyzed By: WB
Prepared By: WB

Parameter	Flag	RL Result	Units	Dilution	RL
Total Dissolved Solids		3620	mg/L	5	10.00

Method Blank (1) QC Batch: 26717

Parameter	Flag	MDL Result	Units	RL
Dissolved Calcium		<0.0950	mg/L	0.5
Dissolved Potassium		1.37	mg/L	1
Dissolved Magnesium		<0.704	mg/L	1
Dissolved Sodium		1.09	mg/L	1

Method Blank (1)

QC Batch: 26747
Prep Batch: 23487

Date Analyzed: 2006-05-22
QC Preparation: 2006-05-22

Analyzed By: WB
Prepared By: WB

Parameter	Flag	MDL Result	Units	RL
Chloride		<0.0552	mg/L	0.5

Method Blank (1)

QC Batch: 26762
Prep Batch: 23496

Date Analyzed: 2006-05-23
QC Preparation: 2006-05-22

Analyzed By: WB
Prepared By: WB

Parameter	Flag	MDL Result	Units	RL
Total Dissolved Solids		<5.000	mg/L	10

Duplicates (1)

QC Batch: 26762
Prep Batch: 23496

Date Analyzed: 2006-05-23
QC Preparation: 2006-05-22

Analyzed By: WB
Prepared By: WB

Param	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
Total Dissolved Solids	4090	3620	mg/L	5	12	14.4

Laboratory Control Spike (LCS-1)

QC Batch: 26717
Prep Batch: 23456

Date Analyzed: 2006-05-22
QC Preparation: 2006-05-22

Analyzed By: TP
Prepared By: DS

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Dissolved Calcium	52.8	51.0	mg/L	1	50.0	<0.0950	106	4	89.2 - 115	20
Dissolved Potassium	49.0	45.7	mg/L	1	50.0	<0.377	98	7	88.9 - 113	20
Dissolved Magnesium	49.3	47.2	mg/L	1	50.0	<0.704	99	4	89.1 - 113	20
Dissolved Sodium	47.4	45.5	mg/L	1	50.0	<0.261	95	4	89 - 111	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

QC Batch: 26747
Prep Batch: 23487

Date Analyzed: 2006-05-22
QC Preparation: 2006-05-22

Analyzed By: WB
Prepared By: WB

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Chloride	12.3	12.3	mg/L	1	12.5	<0.0552	98	0	90 - 110	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1)

QC Batch: 26717
Prep Batch: 23456

Date Analyzed: 2006-05-22
QC Preparation: 2006-05-22

Analyzed By: TP
Prepared By: DS

Param	MS Result	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Dissolved Calcium	625	648	mg/L	1	50.0	570	110	4	68.4 - 138	20
Dissolved Potassium	56.3	58.3	mg/L	1	50.0	12.3	88	4	82 - 129	20
Dissolved Magnesium	205	214	mg/L	1	50.0	158	94	4	61.2 - 135	20
Dissolved Sodium	331	338	mg/L	1	50.0	278	106	2	81.8 - 125	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1)

QC Batch: 26747
Prep Batch: 23487

Date Analyzed: 2006-05-22
QC Preparation: 2006-05-22

Analyzed By: WB
Prepared By: WB

Param	MS Result	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Chloride	1620	1660	mg/L	100	12.5	440	94	2	25.4 - 171	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Standard (ICV-1)

QC Batch: 26717

Date Analyzed: 2006-05-22

Analyzed By: TP

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Dissolved Calcium		mg/L	50.0	51.8	104	90 - 110	2006-05-22
Dissolved Potassium		mg/L	50.0	49.7	99	90 - 110	2006-05-22
Dissolved Magnesium		mg/L	50.0	49.8	100	90 - 110	2006-05-22
Dissolved Sodium		mg/L	50.0	50.0	100	90 - 110	2006-05-22

Standard (CCV-1)

QC Batch: 26717

Date Analyzed: 2006-05-22

Analyzed By: TP

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Dissolved Calcium		mg/L	50.0	51.0	102	90 - 110	2006-05-22
Dissolved Potassium		mg/L	50.0	50.7	101	90 - 110	2006-05-22
Dissolved Magnesium		mg/L	50.0	49.8	100	90 - 110	2006-05-22
Dissolved Sodium		mg/L	50.0	49.0	98	90 - 110	2006-05-22

¹ Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control.

Standard (ICV-1)

QC Batch: 26747

Date Analyzed: 2006-05-22

Analyzed By: WB

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/L	12.5	12.0	96	90 - 110	2006-05-22

Standard (CCV-1)

QC Batch: 26747

Date Analyzed: 2006-05-22

Analyzed By: WB

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/L	12.5	12.3	98	90 - 110	2006-05-22

Standard (ICV-1)

QC Batch: 26762

Date Analyzed: 2006-05-23

Analyzed By: WB

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Dissolved Solids		mg/L	1000	1015	102	90 - 110	2006-05-23

Standard (CCV-1)

QC Batch: 26762

Date Analyzed: 2006-05-23

Analyzed By: WB

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Dissolved Solids		mg/L	1000	993.0	99	90 - 110	2006-05-23

TraceAnalysis, Inc.

155 McCutcheon, Suite H
El Paso, Texas 79932
Tel (915) 585-3443
Fax (915) 585-4944
1 (888) 588-3443

LAB Order ID # 6052208

Phone #:

505-746-1428

Fax #:

E-mail:

E-mail:

2152

1. *Adaptation*

Project Name:

70' Borehole sample (H₂O)

Sampler Signature:

[illegible]

Time:

Time:

Time:

LAB USE ONLY

Intact (Y) / N

Headspace Y / N

Temp 17

Log-In-Review

REMARKS:
24 hour turnaround

- ☐ Dry Weight Basis Required
- ☐ TRRP Report Required
- ☐ Check If Special Reporting Limits Are Needed

Carrier # Greyhound Trm # GL 168781

Submittal of samples constitutes agreement to Terms and Conditions listed on reverse side of C. O. C.

ORIGINAL COPY

Report Date: May 23, 2006
Dinero State #5

Work Order: 6052209
70' Bore Hole Sample (H20)

Page Number: 6 of 6