2R - 49

GENERAL CORRESPONDENCE

YEAR(S):
2006-2002

VonGonten, Glenn, EMNRD

From: Biagi, Chris [Chris.Biagi@dvn.com]
Sent: Friday, August 11, 2006 9:43 AM
To: VonGonten, Glenn, EMNRD
Cc: Sanchez, Victoria; Mayberry, Don
Subject: Mesa Com #1 File
Attachments: Mesa Com 1 - Devon File.pdf

Glenn – please find attached a .pdf file containing those documents regarding the above referenced site which you had indicated to Ms. Sanchez were missing from your files. As with your group, we have had personnel changes since this work was conducted and no one associated with the project is currently employed with Devon. I appreciate your help on this and please contact me if you have any questions. Thanks, Chris

<<Mesa Com 1 - Devon File.pdf>>

Chris Biagi, REM
Senior Remediation Specialist
Devon Energy Corporation
405.228.8327 - office
405.850.2649 - cell
405.552.7839 - fax

TO: Mike Stubblefield

Ocean Energy

September 25, 2002

New Mexico Oil Conservation Division – District 2
1301 W. Grand Avenue
Artesia, NM 88210
Attn: Mike Stubblefield

Re: Complaint No. 30-005-60690
Mesa State Com. #1

Dear Mr. Stubblefield:

The following is a workplan to investigate a spill area near the Mesa State Com. # 1 in Chaves County, NM:

1. Soil samples will be taken at 1-foot intervals from one boring in the central portion of the lakebed in which the spill occurred.

2. Samples will be analyzed in the laboratory for total chlorides as part of the full salinity range analysis. The results will then be reviewed to determine if further sampling is necessary (according to guidance given by NMOCD personnel, if chloride levels less than 250 ppm are measured at any depth, no further sampling will be needed).

3. A water sample will be taken from the nearby windmill owned by the Turkey Track Ranch and analyzed for chlorides.

Once we have NMOCD approval of this plan, we will schedule the work. If you have any questions, please call me at (713) 265-6832.

Yours very truly,

Kent Weissling

Kent Weissling, PE
Environmental & Special Projects Manager

cc: Tim Smith
Eric Grossman
Derold Maney

Laurie Cocharo
Exco Resources, Inc.
1775 Sherman Street, Suite 2650
Denver, CO 80203

NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

GARY E. JOHNSON
Governor
Betty Rivera
Cabinet Secretary

Lori Wrotenbery
Director
Oil Conservation Division

10/22/2002

Ocean Energy Inc.
Att: Kent Weissling
1001 Fanning, Suite 1600
Houston, Texas 77002-6794

Re: Workplan received 10/22/2002
Complaint of water contamination/Lewis Derrick
30-015-60690 Mesa State Com. #1

Dear Kent Weissling,

O.C.D. has received the Workplan provided by Ocean Energy Inc. dated September 25, 2002.

The workplan as submitted by Ocean Energy Inc. is accepted with no addition requirements attached.

Please notifie N.M.O.C.D. 24 hours in advace of soil boring actions & soil or water sampling events taken for analyticals that will be conducted at the Mesa State Com. #1, therefore giving O.C.D. the opportunity to witness.

Sincerely,

Mike Stubblefield Envir. Eng. Spec. N.M.O.C.D.

Ocean Energy

January 13, 2003

New Mexico Energy, Minerals and Natural Resources Department
Environmental Bureau
1220 South St. Francis Drive
Santa Fe, New Mexico 87505
Attn: Roger Anderson

Re: Complaint No. 30-005-60690
Mesa State Com. #1

Dear Mr. Anderson:

This letter will respond to the letter dated May 24, 2002 from Mr. Mike Stubblefield to Ms Jeanie McMillian at Ocean Energy (Ocean) in connection with the above-referenced well. That letter referred to a complaint which had apparently been made by Mr. Lewis Derrick, who is the foreman for a ranching operation known as the Turkey Track Ranch.

Personnel from the Turkey Creek Ranch had filed a complaint stating that a livestock water well (Turkey Creek Ranch water well) in Section 31, T15S, R28E had gone salty. The NMOCD notified Ocean that a salt water spill had occurred at the Mesa State Com #1 wellsite in 1980 during drilling operations, and requested that Ocean investigate to determine if the spill was the cause of the water well problems.

At the outset, please be advised that Ocean was not the operator of this well until 2002. Thus, Ocean personnel do not have personal knowledge of the facts and circumstances surrounding the drilling of well, or its operational history, and the information that we are providing in this letter is based on our review of historical documents, and other investigative efforts.

Apparently, the Mesa State Com #1 was drilled by Depco, Inc. in 1980. When drilling reached a depth of approximate 1138', the well apparently began to flow back, and the produced water was then routed to a nearby playa lake. Once the well was under control, the water was pumped and trucked to a salt lake approximately 2 miles east. The affected soil and salt residue were then reportedly excavated and hauled to the salt lake for disposal.

After meeting with representatives from the New Mexico Department of Energy, Minerals and Natural Resources, Ocean began its investigation, consistent with the investigative work plan outlined in a letter dated September 25, 2002, sent by the undersigned to Mr. Mike Stubblefield. Ocean's investigation in November 2002 consisted of sampling the soil at one-foot intervals at a central point in the spill area and analyzing the samples for chlorides. The spill area is located approximately 1700' NW of the Turkey Creek Ranch water well. During soil boring activities,

groundwater was encountered at approximately 6' below ground surface. A sample was collected for major cation and anion analysis. Also, a sample was collected from the Turkey Creek Ranch water well for analysis. A copy of the sampling report is attached, along with previous water analyses of the Turkey Creek Ranch water well.

The soil and water analyses from the spill area showed elevated chlorides and other constituents. However, the sample from the Turkey Creek Ranch water well, while showing elevated chlorides, Total Dissolved Solids (TDS), etc., was much improved compared to a sample analyzed in May 2002. Over that six month period, chlorides in the well water dropped from 3040 mg/L to 1790 mg/L and TDS decreased from 8825 mg/L to 7245 mg/L. The analysis from November 2002 compared closely to a sample taken in September 2002. It should also be noted that the chloride levels measured in the water well were much lower than the shallow groundwater in the spill area. The water analyses from the water well and the groundwater sample are shown in Table 1.

Ocean requests that neither the NMOCD nor the New Mexico Energy, Minerals and Natural Resources Department take any further action in connection with this complaint, based on the foregoing, and for the following reasons:

- The spill occurred in a dry playa lake which may have previously contained salt water and therefore could have contributed to the elevated chloride levels. There are numerous dry playas and salt lakes in the area.

- Based on the relatively small size of the playa in which the spill occurred, the groundwater encountered at 6' is most likely an isolated lens of no beneficial use. There are no known water wells in the area producing from this depth.

- The Turkey Creek Ranch water well produces from a depth of approximately 50' while the groundwater in the spill area was found at 6'. Based on the differences in the water analyses and their corresponding depths, there doesn't seem to be a connection between the two aquifers.

- The Turkey Creek Ranch well water quality has improved considerably over the past six months. In fact, cattle have recently been observed drinking from the well's stock tank. This improvement could be due to a recent increase in rainfall. It is fairly common for well water quality to decline during drought conditions.

If you have any questions, please call me at (713) 265-6832.

Yours very truly,

Kent Weissling

Kent Weissling, PE
Environmental & Special Projects Manager

cc: Mike Stubblefield
New Mexico Oil Conservation Division - District 2
1301 W. Grand Avenue
Artesia, New Mexico 88210

Laurie Cocharo
Exco Resources, Inc.
1775 Sherman Street, Suite 2650
Denver, Colorado 80203

Highlander Environmental Corp.

Midland, Texas

November 26, 2002

Mr. Kent M. Weissling
Ocean Energy, Inc.
Environmental & Special Projects Manager
1001 Fannin, Suite 1600
Houston, Texas 77002-6794

RE: Mesa State Com #1 Spill Assessment, Chaves County, New Mexico.

Dear Mr. Weissling:

Highlander Environmental Corp. (Highlander) was contacted by Mr. Kent Weissling, with Ocean Energy (Ocean), to perform an investigation of an historic produced water spill. The spill occurred approximately 22 years ago at the Mesa State Com #1 in Chaves County, New Mexico, when the well flowed back during drilling operations. The produced water flowed into a nearby dry playa, where it was contained and transferred to a salt lake approximately 2 miles to the east for disposal. The well is located in the SE/4 Section 31, T-15-S, R-28-E, Chaves County, New Mexico (Site). The general location is shown on Figure 1.

Highlander personnel met onsite with Mr. Kent Weissling of Ocean and Mr. Mike Stubblefield of the New Mexico Oil Conservation Division (NMOCD) on November 14, 2002. The scope of work consisted of installing a single auger hole in the center of the playa bed to collect subsurface soil samples for chloride evaluation, installation of one auger hole north of the location for background chloride evaluation, and collecting a water sample from the Derrick windmill for major anion and cation analysis.

One auger hole (AH-1) was placed south-southeast of the tank battery in the playa to an approximate depth of 6.5' below ground surface (BGS) as shown in Figure 2. Soil samples were collected at 1-foot intervals for potential laboratory testing. Water was encountered at approximately 6.0' BGS. It was decided to bail a sample of water from this auger hole for major anion and cation analysis. A clean, dedicated bailer was used to collect a water sample from this auger hole. After sampling, the auger hole was backfilled with bentonite and hydrated.

Two background samples (0-1.0' and 1.0'-2.0' BGS) were take in an area north of the location for background chloride evaluation. The location was sufficiently far from the

location as not to have had any potential impact from the well site. The location of the background point is shown on Figure 2.

One sample of water was collected for the Derrick windmill. It appeared at the time of sampling that the windmill was not pumping efficiently, however, sufficient sample was collected over time for full analysis of major anions, cations and total dissolved solids.

All samples collected for laboratory analysis were preserved according to EPA protocols and analyzed within appropriate holding times. Selected soil samples were evaluated for chloride by method 9253. The laboratory reports and the chain of custody documentation are included in Appendix A.

If you require any additional information or have any questions or comments concerning the assessment, please call.

Very truly yours,

Tim Reed

Timothy M. Reed, REM
Vice President

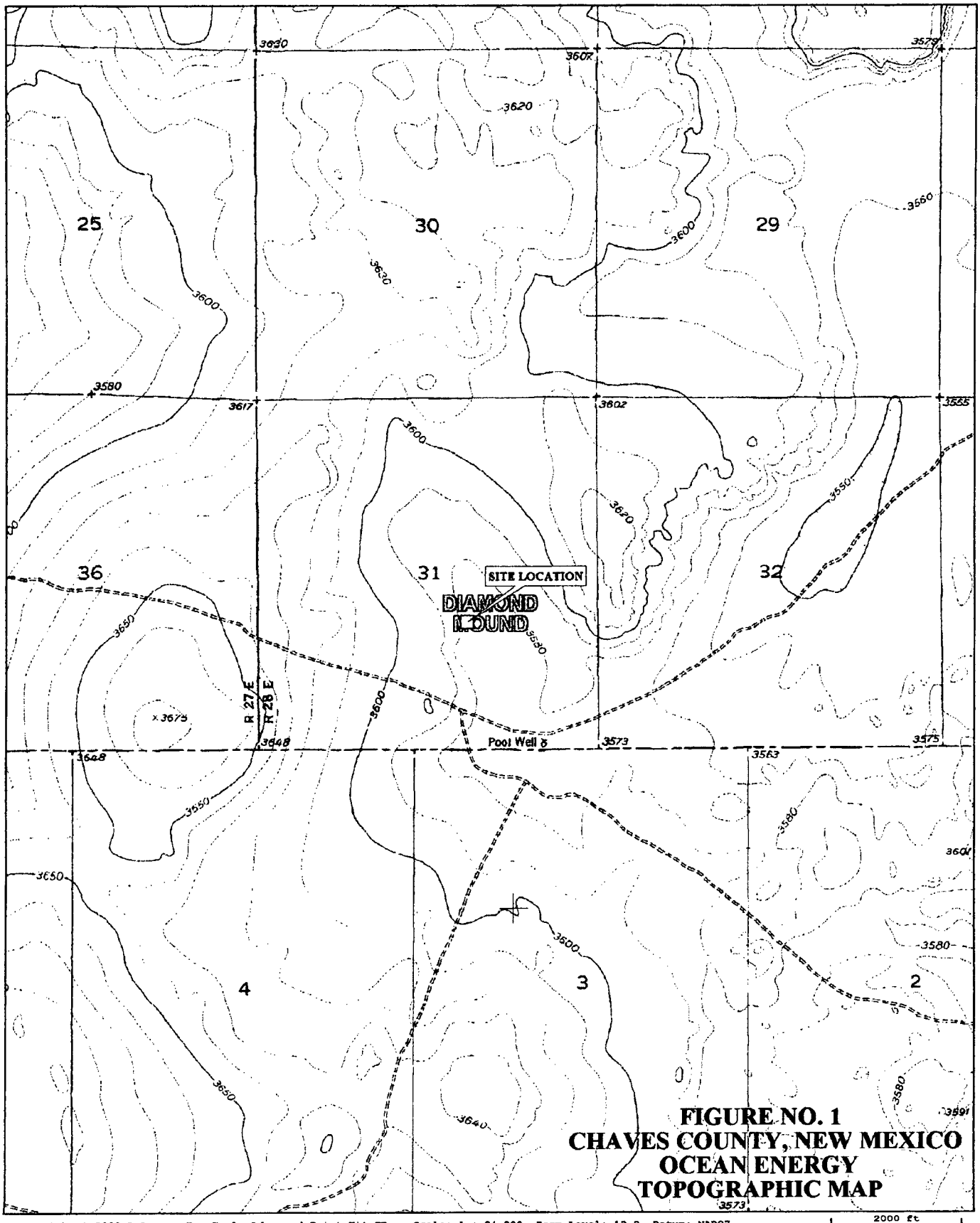

FIGURE NO. 1
CHAVES COUNTY, NEW MEXICO
OCEAN ENERGY
TOPOGRAPHIC MAP

 Scale: 1 : 24,000 Zoom Level: 13-0 Datum: NAD27

2000 ft

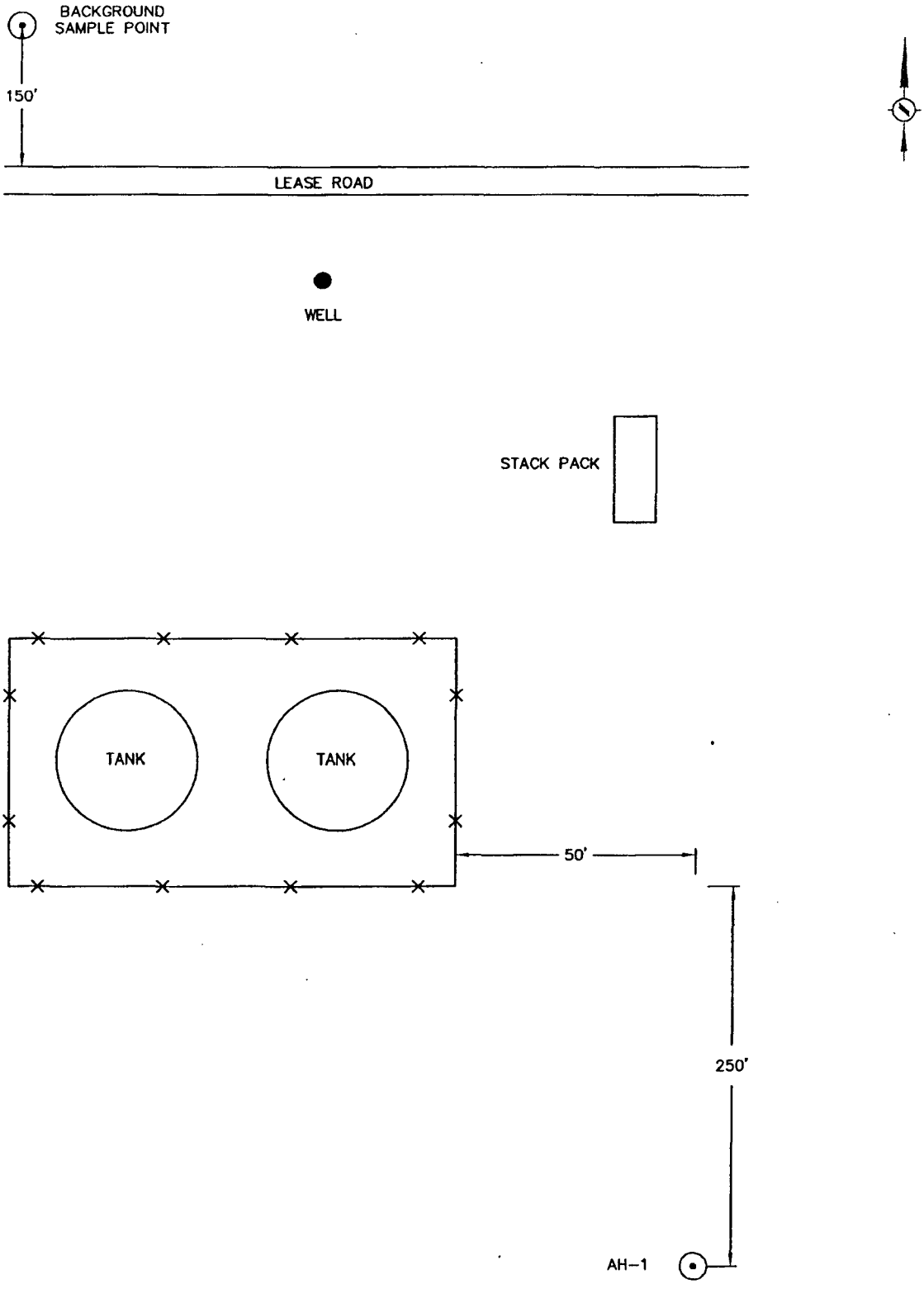

FIGURE NO. 2

CHAVES COUNTY, NEW MEXICO

OCEAN ENERGY

MESA STATE COM #1 TB
SITE MAP

DATE: 12/9/02
DWG. BY: JDA
FILE: C:\OCEAN\MESA-1

HIGHLANDER ENVIRONMENTAL CORP.
MIDLAND, TEXAS

NOT TO SCALE

Summary Report

Tim Reed
Highlander Environmental Services
1910 N. Big Spring St.
Midland, TX 79705

Report Date: November 27, 2002

Order ID Number: A02111802

Project Number: 1868
Project Name: Charez Co. N.M. Mesa State Com #1
Project Location: N/A

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
213670	AH-1 Water Sample	Water	11/14/02	12:05	11/16/02
213671	Derrick Windmill	Water	11/14/02	12:40	11/16/02

0 This report consists of a total of 2 page(s) and is intended only as a summary of results for the sample(s) listed above.

Sample: 213670 - AH-1 Water Sample

Param	Flag	Result	Units
Hydroxide Alkalinity		<1.0	mg/L as CaCo3
Carbonate Alkalinity		<1.0	mg/L as CaCo3
Bicarbonate Alkalinity		100	mg/L as CaCo3
Total Alkalinity		100	mg/L as CaCo3
Specific Conductance		94200	µMHOS/cm
Hardness		28968	mg/L as CaCo3
Chloride		68900	mg/L
Fluoride		<10.0	mg/L
Nitrate-N		54.2	mg/L
Sulfate		18100	mg/L
Dissolved Calcium		1030	mg/L
Dissolved Magnesium		6410	mg/L
Dissolved Potassium		1030	mg/L
Dissolved Sodium		34200	mg/L
Total Dissolved Solids		124800	mg/L
pH	[1]	7.2	s.u.

Sample: 213671 - Derrick Windmill

Param	Flag	Result	Units
Hydroxide Alkalinity		<1.0	mg/L as CaCo3
Carbonate Alkalinity		<1.0	mg/L as CaCo3
Bicarbonate Alkalinity		138	mg/L as CaCo3
Total Alkalinity		138	mg/L as CaCo3

Continued on next page ...

[1]The sample was received out of holding time

This is only a summary. Please, refer to the complete report package for quality control data.

Sample 213671 continued ...

Param	Flag	Result	Units
Specific Conductance		8940	μMHOS/cm
Hardness		3674	mg/L as CaCo3
Chloride		1790	mg/L
Fluoride		2.00	mg/L
Nitrate-N		12.42	mg/L
Sulfate		3740	mg/L
Dissolved Calcium		581	mg/L
Dissolved Magnesium		540	mg/L
Dissolved Potassium		68.6	mg/L
Dissolved Sodium		710	mg/L
Total Dissolved Solids		7245	mg/L
pH	[2]	8.4	s.u.

[2]The sample was received out of holding time

TRACEANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1298
155 McCutcheon, Suite H El Paso, Texas 79932 888•588•3443 915•585•3443 FAX 915•585•4944
E-Mail: lab@traceanalysis.com

Analytical and Quality Control Report

Tim Reed
Highlander Environmental Services
1910 N. Big Spring St.
Midland, TX 79705

Report Date: November 27, 2002

Order ID Number: A02111802

Project Number: 1868
Project Name: Charez Co. N.M. Mesa State Com #1
Project Location: N/A

Enclosed are the Analytical Results and Quality Control Data Reports for the following samples submitted to Trace-Analysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
213670	AH-1 Water Sample	Water	11/14/02	12:05	11/16/02
213671	Derrick Windmill	Water	11/14/02	12:40	11/16/02

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. Note: the RDL is equal to MQL for all organic analytes including TPH.
The test results contained within this report meet all requirements of LAC 33:I unless otherwise noted.

This report consists of a total of 10 pages and shall not be reproduced except in its entirety including the chain of custody (COC), without written approval of TraceAnalysis, Inc.

Note: Samples will be disposed of 30 days from the report date unless the lab is contacted before the 30 days has past.

Michael T. Abel
Dr. Blair Leftwich, Director

Analytical Report

Sample: 213670 - AH-1 Water Sample

Analysis:	Alkalinity	Analytical Method:	E 310.1	QC Batch:	QC25139	Date Analyzed:	11/25/02
Analyst:	RS	Preparation Method:	N/A	Prep Batch:	PB23368	Date Prepared:	11/25/02

Param	Flag	Result	Units	Dilution	RDL
Hydroxide Alkalinity		<1.0	mg/L as CaCo3	1	1
Carbonate Alkalinity		<1.0	mg/L as CaCo3	1	1
Bicarbonate Alkalinity		100	mg/L as CaCo3	1	4
Total Alkalinity		100	mg/L as CaCo3	1	4

Sample: 213670 - AH-1 Water Sample

Analysis:	Conductivity	Analytical Method:	SM 2510B	QC Batch:	QC25021	Date Analyzed:	11/19/02
Analyst:	JSW	Preparation Method:	N/A	Prep Batch:	PB23264	Date Prepared:	11/19/02

Param	Flag	Result	Units	Dilution	RDL
Specific Conductance		94200	μMHOS/cm	1	

Sample: 213670 - AH-1 Water Sample

Analysis:	Hardness	Analytical Method:	SM 2340B	QC Batch:	QC25183	Date Analyzed:	11/26/02
Analyst:	BC	Preparation Method:	N/A	Prep Batch:	PB23395	Date Prepared:	11/26/02

Param	Flag	Result	Units	Dilution	RDL
Hardness		28968	mg/L as CaCo3	1	1

Sample: 213670 - AH-1 Water Sample

Analysis:	Ion Chromatography (IC)	Analytical Method:	E 300.0	QC Batch:	QC25076	Date Analyzed:	11/20/02
Analyst:	JSW	Preparation Method:	N/A	Prep Batch:	PB23314	Date Prepared:	11/20/02

Param	Flag	Result	Units	Dilution	RDL
Chloride		68900	mg/L	5000	1
Fluoride		<10.0	mg/L	50	0.20
Nitrate-N		54.2	mg/L	50	0.20
Sulfate		18100	mg/L	1000	1

Sample: 213670 - AH-1 Water Sample

Analysis:	Salts	Analytical Method:	E 200.7	QC Batch:	QC25182	Date Analyzed:	11/25/02
Analyst:	BC	Preparation Method:	S 3005A	Prep Batch:	PB23303	Date Prepared:	11/21/02

Param	Flag	Result	Units	Dilution	RDL
Dissolved Calcium		1030	mg/L	1	0.50
Dissolved Magnesium		6410	mg/L	1	0.50
Dissolved Potassium		1030	mg/L	1	0.50
Dissolved Sodium		34200	mg/L	1	0.50

Sample: 213670 - AH-1 Water Sample

Analysis:	TDS	Analytical Method:	E 160.1	QC Batch:	QC25065	Date Analyzed:	11/22/02
Analyst:	JSW	Preparation Method:	N/A	Prep Batch:	PB23306	Date Prepared:	11/21/02

Param	Flag	Result	Units	Dilution	RDL
Total Dissolved Solids		124800	mg/L	100	10

Sample: 213670 - AH-1 Water Sample

Analysis:	pH	Analytical Method:	E 150.1	QC Batch:	QC25132	Date Analyzed:	11/18/02
Analyst:	RS	Preparation Method:	N/A	Prep Batch:	PB23357	Date Prepared:	11/18/02

Param	Flag	Result	Units	Dilution	RDL
pH	[1]	7.2	s.u.	1	1

Sample: 213671 - Derrick Windmill

Analysis:	Alkalinity	Analytical Method:	E 310.1	QC Batch:	QC25139	Date Analyzed:	11/25/02
Analyst:	RS	Preparation Method:	N/A	Prep Batch:	PB23368	Date Prepared:	11/25/02

Param	Flag	Result	Units	Dilution	RDL
Hydroxide Alkalinity		<1.0	mg/L as CaCo3	1	1
Carbonate Alkalinity		<1.0	mg/L as CaCo3	1	1
Bicarbonate Alkalinity		138	mg/L as CaCo3	1	4
Total Alkalinity		138	mg/L as CaCo3	1	4

Sample: 213671 - Derrick Windmill

Analysis:	Conductivity	Analytical Method:	SM 2510B	QC Batch:	QC25021	Date Analyzed:	11/19/02
Analyst:	JSW	Preparation Method:	N/A	Prep Batch:	PB23264	Date Prepared:	11/19/02

Param	Flag	Result	Units	Dilution	RDL
Specific Conductance		8940	μMHOS/cm	1	

Sample: 213671 - Derrick Windmill

Analysis:	Hardness	Analytical Method:	SM 2340B	QC Batch:	QC25183	Date Analyzed:	11/26/02
Analyst:	BC	Preparation Method:	N/A	Prep Batch:	PB23395	Date Prepared:	11/26/02

Param	Flag	Result	Units	Dilution	RDL
Hardness		3674	mg/L as CaCo3	1	1

Sample: 213671 - Derrick Windmill

Analysis:	Ion Chromatography (IC)	Analytical Method:	E 300.0	QC Batch:	QC25076	Date Analyzed:	11/20/02
Analyst:	JSW	Preparation Method:	N/A	Prep Batch:	PB23314	Date Prepared:	11/20/02

Param	Flag	Result	Units	Dilution	RDL
Chloride		1790	mg/L	100	1

Continued ...

[1] The sample was received out of holding time

... *Continued* Sample: 213671 Analysis: Ion Chromatography (IC)

Param	Flag	Result	Units	Dilution	RDL
Fluoride		2.00	mg/L	5	0.20
Nitrate-N		12.42	mg/L	5	0.20
Sulfate		3740	mg/L	100	1

Sample: 213671 - Derrick Windmill

Analysis:	Salts	Analytical Method:	E 200.7	QC Batch:	QC25182	Date Analyzed:	11/25/02
Analyst:	BC	Preparation Method:	S 3005A	Prep Batch:	PB23303	Date Prepared:	11/21/02

Param	Flag	Result	Units	Dilution	RDL
Dissolved Calcium		581	mg/L	1	0.50
Dissolved Magnesium		540	mg/L	1	0.50
Dissolved Potassium		68.6	mg/L	1	0.50
Dissolved Sodium		710	mg/L	1	0.50

Sample: 213671 - Derrick Windmill

Analysis:	TDS	Analytical Method:	E 160.1	QC Batch:	QC25065	Date Analyzed:	11/22/02
Analyst:	JSW	Preparation Method:	N/A	Prep Batch:	PB23306	Date Prepared:	11/21/02

Param	Flag	Result	Units	Dilution	RDL
Total Dissolved Solids		7245	mg/L	5	10

Sample: 213671 - Derrick Windmill

Analysis:	pH	Analytical Method:	E 150.1	QC Batch:	QC25132	Date Analyzed:	11/18/02
Analyst:	RS	Preparation Method:	N/A	Prep Batch:	PB23357	Date Prepared:	11/18/02

Param	Flag	Result	Units	Dilution	RDL
pH	[2]	8.4	s.u.	1	1

[2]The sample was received out of holding time

Quality Control Report
Method Blank

Method Blank

QCBatch: QC25021

Param	Flag	Results	Units	Reporting Limit
Specific Conductance		11.0	μMHOS/cm	

Method Blank

QCBatch: QC25065

Param	Flag	Results	Units	Reporting Limit
Total Dissolved Solids		<10	mg/L	10

Method Blank

QCBatch: QC25076

Param	Flag	Results	Units	Reporting Limit
Chloride		<1.0	mg/L	1
Fluoride		<0.2	mg/L	0.20
Nitrate-N		<0.2	mg/L	0.20
Sulfate		<1.0	mg/L	1

Method Blank

QCBatch: QC25139

Param	Flag	Results	Units	Reporting Limit
Hydroxide Alkalinity		<1.0	mg/L as CaCo3	1
Carbonate Alkalinity		<1.0	mg/L as CaCo3	1
Bicarbonate Alkalinity		<4.0	mg/L as CaCo3	4
Total Alkalinity		<4.0	mg/L as CaCo3	4

Method Blank

QCBatch: QC25182

Param	Flag	Results	Units	Reporting Limit
Dissolved Calcium		<0.5	mg/L	0.50
Dissolved Magnesium		0.614	mg/L	0.50
Dissolved Potassium		1.06	mg/L	0.50
Dissolved Sodium		0.911	mg/L	0.50

Method Blank

QCBatch: QC25183

Param	Flag	Results	Units	Reporting Limit
Hardness		<0.5	mg/L as CaCo3	1

Quality Control Report
Duplicate Samples

Duplicate QCBatch: QC25021

Param	Flag	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
Specific Conductance		19800	18900	µMHOS/cm	1	4	20

Duplicate QCBatch: QC25065

Param	Flag	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
Total Dissolved Solids		2022	1938	mg/L	1	4	9.7

Duplicate QCBatch: QC25132

Param	Flag	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
pH		8.4	8.4	s.u.	1	0	0

Duplicate QCBatch: QC25139

Param	Flag	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
Hydroxide Alkalinity		<1.0	<1.0	mg/L as CaCo3	1	0	9.2
Carbonate Alkalinity		<1.0	<1.0	mg/L as CaCo3	1	0	9.2
Bicarbonate Alkalinity		100	100	mg/L as CaCo3	1	0	9.2
Total Alkalinity		100	100	mg/L as CaCo3	1	0	9.2

Quality Control Report
Lab Control Spikes and Duplicate Spikes

Laboratory Control Spikes QCBatch: QC25076

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Chloride	12.10	14.12	mg/L	1	12.50	<1.0	96	15	90 - 110	20
Fluoride	2.49	2.51	mg/L	1	2.50	<0.2	99	0	90 - 110	20

Continued ...

... Continued

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Nitrate-N	2.59	2.69	mg/L	1	2.50	<0.2	103	3	90 - 110	20
Sulfate	13.22	15.32	mg/L	1	12.50	<1.0	105	14	90 - 110	20

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

Laboratory Control Spikes

QCBatch: QC25182

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Dissolved Calcium	108	109	mg/L	1	100	<0.5	108	0	75 - 125	20
Dissolved Magnesium	106	106	mg/L	1	100	0.614	106	0	75 - 125	20
Dissolved Potassium	113	110	mg/L	1	100	1.06	113	2	75 - 125	20
Dissolved Sodium	112	113	mg/L	1	100	0.911	112	0	75 - 125	20

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

Quality Control Report
Matrix Spikes and Duplicate Spikes

Matrix Spikes

QCBatch: QC25076

Param	MS Result	MSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Chloride	141600	140000	mg/L	1	62500	68900	116	2	48 - 127	20
Fluoride	[3] 12800	[4] 12900	mg/L	1	12500	<10.0	102	0	82 - 101	20
Nitrate-N	[5] 14000	[6] 14000	mg/L	1	12500	54.2	111	0	87 - 100	20
Sulfate	[7] 94600	[8] 95800	mg/L	1	62500	18100	122	1	59 - 121	20

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

Matrix Spikes

QCBatch: QC25182

Param	MS Result	MSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Dissolved Calcium	[9] 626	[10] 640	mg/L	1	100	500	126	10	75 - 125	20
Dissolved Magnesium	[11] 240	[12] 255	mg/L	1	100	200	40	31	75 - 125	20

Continued ...

[3]The sample was spiked at a different dilution than that was reported. MS %EA = 103 and RPD = 0.
[4]The sample was spiked at a different dilution than that was reported. MS %EA = 103 and RPD = 0.
[5]The sample was spiked at a different dilution than that was reported. MS %EA = 112 and RPD = 4.
[6]The sample was spiked at a different dilution than that was reported. MS %EA = 112 and RPD = 4.
[7]The sample was spiked at a different dilution than that was reported. MS %EA = 120 and RPD = 10.
[8]The sample was spiked at a different dilution than that was reported. MS %EA = 120 and RPD = 10.
[9]MS RECOVERY INVALID DUE TO MATRIX EFFECT
[10]MS RECOVERY INVALID DUE TO MATRIX EFFECT
[11]MS RECOVERY INVALID DUE TO MATRIX EFFECT
[12]MS RECOVERY INVALID DUE TO MATRIX EFFECT

... *Continued*

Param	MS Result	MSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Dissolved Potassium	[13] 82.9	143	mg/L	1	100	62.5	20	119	75 - 125	20
Dissolved Sodium	[14] 1380	[15] 1440	mg/L	1	100	1170	210	25	75 - 125	20

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

Quality Control Report
Continuing Calibration Verification Standards

CCV (1) QCBatch: QC25021

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Specific Conductance		µMHOS/cm	1412	1420	100	90 - 110	11/19/02

ICV (1) QCBatch: QC25021

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Specific Conductance		µMHOS/cm	1409	1410	100	90 - 110	11/19/02

CCV (1) QCBatch: QC25065

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Dissolved Solids		mg/L	1000	992	99	90 - 110	11/22/02

ICV (1) QCBatch: QC25065

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Dissolved Solids		mg/L	1000	992	99	90 - 110	11/22/02

CCV (1) QCBatch: QC25076

[13]MS RECOVERY INVALID DUE TO MATRIX EFFECT
[14]MS RECOVERY INVALID DUE TO MATRIX EFFECT
[15]MS RECOVERY INVALID DUE TO MATRIX EFFECT

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/L	12.50	12.11	96	90 - 110	11/20/02
Fluoride		mg/L	2.50	2.53	101	90 - 110	11/20/02
Nitrate-N		mg/L	2.50	2.61	104	90 - 110	11/20/02
Sulfate		mg/L	12.50	13.74	109	90 - 110	11/20/02

ICV (1) QCBatch: QC25076

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/L	12.50	13.01	104	90 - 110	11/20/02
Fluoride		mg/L	2.50	2.25	90	90 - 110	11/20/02
Nitrate-N		mg/L	2.50	2.39	95	90 - 110	11/20/02
Sulfate		mg/L	12.50	12.66	101	90 - 110	11/20/02

CCV (1) QCBatch: QC25132

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
pH		s.u.	7	7.1	101	-0.1 s.u. - +0.1 s.u.	11/18/02

ICV (1) QCBatch: QC25132

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
pH		s.u.	7	7.0	100	-0.1 s.u. - +0.1 s.u.	11/18/02

CCV (1) QCBatch: QC25139

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Hydroxide Alkalinity		mg/L as CaCo3	0	0	0	-	11/25/02
Carbonate Alkalinity		mg/L as CaCo3	0	228	0	-	11/25/02
Bicarbonate Alkalinity		mg/L as CaCo3	0	8	0	-	11/25/02
Total Alkalinity		mg/L as CaCo3	250	236	94	90 - 110	11/25/02

ICV (1) QCBatch: QC25139

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Hydroxide Alkalinity		mg/L as CaCo3	0	0	0	-	11/25/02
Carbonate Alkalinity		mg/L as CaCo3	0	232	0	-	11/25/02
Bicarbonate Alkalinity		mg/L as CaCo3	0	6	0	-	11/25/02
Total Alkalinity		mg/L as CaCo3	250	238	95	90 - 110	11/25/02

CCV (1)

QCBatch: QC25182

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Dissolved Calcium		mg/L	25	24.6	98	90 - 110	11/25/02
Dissolved Magnesium		mg/L	25	22.8	91	90 - 110	11/25/02
Dissolved Potassium		mg/L	25	25.9	103	90 - 110	11/25/02
Dissolved Sodium		mg/L	25	25.5	102	90 - 110	11/25/02

ICV (1)

QCBatch: QC25182

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Dissolved Calcium		mg/L	25	24.9	99	95 - 105	11/25/02
Dissolved Magnesium		mg/L	25	25.7	102	95 - 105	11/25/02
Dissolved Potassium		mg/L	25	26.8	107	95 - 105	11/25/02
Dissolved Sodium		mg/L	25	24.9	99	95 - 105	11/25/02

A02111802

Analysis Request and Chain of Custody Record

PAGE: 2 OF: 2

HIGHLANDER ENVIRONMENTAL CORP.

1910 N. Big Spring St.
Midland, Texas 79705
(915) 682-4559 Fax (915) 682-3946

CLIENT NAME: Ocean Energy
SITE MANAGER: Tim Reed
PROJECT NO.: 1868
PROJECT NAME: Chavez Co. N.M. Mesa State Com #1

ANALYSIS REQUEST (Circle or Specify Method No.)

LAB I.D. NUMBER	DATE	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	HCL	HNO3	ICE	NONE	BTEX 8020/602	MTBE 8020/602	TPH 418.1 8015 MOD. TX1005	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Cr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC.MS Vol. 8240/8260/624	GC.MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 808/608	BOD, TSS, pH, TDS, (Chloride)	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)
213672	11/14/02	1310	S		X	Background Sample 0-6"	1					X														X			
23	11/14/02	1320	S		X	Background Sample 2.0'	1					X														X			

RELINQUISHED BY: (Signature) Tim Reed Date: 11/15/02 Time: 1545
RECEIVED BY: (Signature) Helen Shelton Date: 11/15/02 Time: 1545
RELINQUISHED BY: (Signature) Helen Shelton Date: 11/15/02 Time: 1830
RECEIVED BY: (Signature) Date: Time:
RELINQUISHED BY: (Signature) Date: Time:
RECEIVED BY: (Signature) Date: Time:

SAMPLED BY: (Print & Sign) Tim Reed Tim Reed Date: 11/15/02 Time: 10:00
SAMPLE SHIPPED BY: (Circle) Greyhound
FEDEX (BUS) AIRBILL #
HAND DELIVERED UPS OTHER:

RECEIVING LABORATORY: Trace Analysis
ADDRESS:
CITY: Lubbock STATE: ZIP:
CONTACT: PHONE:
RECEIVED BY: (Signature) [signature]
DATE: 11-16-02 TIME: 0903

HIGHLANDER CONTACT PERSON: Tim Reed
Results by:
RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED: 3°C
MATRIX: W-Water A-Air SD-Solid (S-Soil) SL-Sludge O-Other
REMARKS:

Please Fill out all copies – Laboratory retains yellow copy – Return original copy to Highlander Enviromental Corp. – Project Manager retains pink copy – Accounting receives Gold copy.

Summary Report

Tim Reed
Highlander Environmental Services
1910 N. Big Spring St.
Midland, TX 79705

Report Date: November 27, 2002

Order ID Number: A02111802

Project Number: 1868
Project Name: Charez Co. N.M. Mesa State Com #1
Project Location: N/A

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
213663	AH-1 0-6	Soil	11/14/02	11:00	11/16/02
213664	AH-1 1.0'	Soil	11/14/02	11:05	11/16/02
213665	AH-1 2.0'	Soil	11/14/02	11:15	11/16/02
213666	AH-1 3.0'	Soil	11/14/02	11:20	11/16/02
213667	AH-1 4.0'	Soil	11/14/02	11:25	11/16/02
213668	AH-1 5.0'	Soil	11/14/02	11:30	11/16/02
213669	AH-1 6.0'	Soil	11/14/02	11:55	11/16/02
213672	Background Sample 0-6	Soil	11/14/02	13:10	11/16/02
213673	Background Sample 2.0'	Soil	11/14/02	13:20	11/16/02

0 This report consists of a total of 2 page(s) and is intended only as a summary of results for the sample(s) listed above.

Sample: 213663 - AH-1 0-6

Param	Flag	Result	Units
Chloride		1820	mg/Kg

Sample: 213664 - AH-1 1.0'

Param	Flag	Result	Units
Chloride		1950	mg/Kg

Sample: 213665 - AH-1 2.0'

Param	Flag	Result	Units
Chloride		4470	mg/Kg

Sample: 213666 - AH-1 3.0'

Param	Flag	Result	Units
Chloride		1890	mg/Kg

Sample: 213667 - AH-1 4.0'

Param	Flag	Result	Units
Chloride		4740	mg/Kg

Sample: 213668 - AH-1 5.0'

Param	Flag	Result	Units
Chloride		6480	mg/Kg

Sample: 213669 - AH-1 6.0'

Param	Flag	Result	Units
Chloride		8210	mg/Kg

Sample: 213672 - Background Sample 0-6

Param	Flag	Result	Units
Chloride		< 5	mg/Kg

Sample: 213673 - Background Sample 2.0'

Param	Flag	Result	Units
Chloride		< 50	mg/Kg

TRACEANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1298
155 McCutcheon, Suite H El Paso, Texas 79932 888•588•3443 915•585•3443 FAX 915•585•4944
E-Mail: lab@traceanalysis.com

Analytical and Quality Control Report

Tim Reed
Highlander Environmental Services
1910 N. Big Spring St.
Midland, TX 79705

Report Date: November 27, 2002

Order ID Number: A02111802

Project Number: 1868
Project Name: Charez Co. N.M. Mesa State Com #1
Project Location: N/A

Enclosed are the Analytical Results and Quality Control Data Reports for the following samples submitted to Trace-Analysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
213663	AH-1 0-6	Soil	11/14/02	11:00	11/16/02
213664	AH-1 1.0'	Soil	11/14/02	11:05	11/16/02
213665	AH-1 2.0'	Soil	11/14/02	11:15	11/16/02
213666	AH-1 3.0'	Soil	11/14/02	11:20	11/16/02
213667	AH-1 4.0'	Soil	11/14/02	11:25	11/16/02
213668	AH-1 5.0'	Soil	11/14/02	11:30	11/16/02
213669	AH-1 6.0'	Soil	11/14/02	11:55	11/16/02
213672	Background Sample 0-6	Soil	11/14/02	13:10	11/16/02
213673	Background Sample 2.0'	Soil	11/14/02	13:20	11/16/02

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. Note: the RDL is equal to MQL for all organic analytes including TPH.
The test results contained within this report meet all requirements of LAC 33:I unless otherwise noted.

Note: Samples will be disposed of 30 days from the report date unless the lab is contacted before the 30 days has past.

Analytical Report

Sample: 213663 - AH-1 0-6

Analysis: Ion Chromatography (IC) Analytical Method: E 300.0 QC Batch: QC25153 Date Analyzed: 11/25/02
Analyst: JSW Preparation Method: N/A Prep Batch: PB23377 Date Prepared: 11/25/02

Param	Flag	Result	Units	Dilution	RDL
Chloride		1820	mg/Kg	100	1

Sample: 213664 - AH-1 1.0'

Analysis: Ion Chromatography (IC) Analytical Method: E 300.0 QC Batch: QC25153 Date Analyzed: 11/25/02
Analyst: JSW Preparation Method: N/A Prep Batch: PB23377 Date Prepared: 11/25/02

Param	Flag	Result	Units	Dilution	RDL
Chloride		1950	mg/Kg	100	1

Sample: 213665 - AH-1 2.0'

Analysis: Ion Chromatography (IC) Analytical Method: E 300.0 QC Batch: QC25153 Date Analyzed: 11/25/02
Analyst: JSW Preparation Method: N/A Prep Batch: PB23377 Date Prepared: 11/25/02

Param	Flag	Result	Units	Dilution	RDL
Chloride		4470	mg/Kg	500	1

Sample: 213666 - AH-1 3.0'

Analysis: Ion Chromatography (IC) Analytical Method: E 300.0 QC Batch: QC25153 Date Analyzed: 11/25/02
Analyst: JSW Preparation Method: N/A Prep Batch: PB23377 Date Prepared: 11/25/02

Param	Flag	Result	Units	Dilution	RDL
Chloride		1890	mg/Kg	500	1

Sample: 213667 - AH-1 4.0'

Analysis: Ion Chromatography (IC) Analytical Method: E 300.0 QC Batch: QC25153 Date Analyzed: 11/25/02
Analyst: JSW Preparation Method: N/A Prep Batch: PB23377 Date Prepared: 11/25/02

Param	Flag	Result	Units	Dilution	RDL
Chloride		4740	mg/Kg	500	1

Sample: 213668 - AH-1 5.0'

Analysis: Ion Chromatography (IC) Analytical Method: E 300.0 QC Batch: QC25153 Date Analyzed: 11/25/02
Analyst: JSW Preparation Method: N/A Prep Batch: PB23377 Date Prepared: 11/25/02

Param	Flag	Result	Units	Dilution	RDL
Chloride		6480	mg/Kg	500	1

Sample: 213669 - AH-1 6.0'

Analysis: Ion Chromatography (IC) Analytical Method: E 300.0 QC Batch: QC25153 Date Analyzed: 11/25/02
Analyst: JSW Preparation Method: N/A Prep Batch: PB23377 Date Prepared: 11/25/02

Param	Flag	Result	Units	Dilution	RDL
Chloride		8210	mg/Kg	1000	1

Sample: 213672 - Background Sample 0-6

Analysis: Ion Chromatography (IC) Analytical Method: E 300.0 QC Batch: QC25154 Date Analyzed: 11/25/02
Analyst: JSW Preparation Method: N/A Prep Batch: PB23378 Date Prepared: 11/25/02

Param	Flag	Result	Units	Dilution	RDL
Chloride		< 5	mg/Kg	5	1

Sample: 213673 - Background Sample 2.0'

Analysis: Ion Chromatography (IC) Analytical Method: E 300.0 QC Batch: QC25154 Date Analyzed: 11/25/02
Analyst: JSW Preparation Method: N/A Prep Batch: PB23378 Date Prepared: 11/25/02

Param	Flag	Result	Units	Dilution	RDL
Chloride		< 50	mg/Kg	50	1

Quality Control Report
Method Blank

Method Blank QCBatch: QC25153

Param	Flag	Results	Units	Reporting Limit
Chloride		<1.0	mg/Kg	1

Method Blank QCBatch: QC25154

Param	Flag	Results	Units	Reporting Limit
Chloride		<1.0	mg/Kg	1

Quality Control Report
Lab Control Spikes and Duplicate Spikes

Laboratory Control Spikes QCBatch: QC25153

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Chloride	25.42	25.45	mg/Kg	1	12.50	<1.0	203	0	90 - 110	20

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

Laboratory Control Spikes QCBatch: QC25154

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Chloride	[1] 25.59	[2] 25.62	mg/Kg	1	12.50	<1.0	204	0	90 - 110	20

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

Quality Control Report
Matrix Spikes and Duplicate Spikes

Matrix Spikes QCBatch: QC25153

[1]The soil blank needs to be subtracted from the sample spiked. %EA = 93 and RPD = 0.
[2]The soil blank needs to be subtracted from the sample spiked. %EA = 93 and RPD = 0.

Param	MS Result	MSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Chloride	38860	38700	mg/Kg	1	12500	27900	87	1	35 - 144	20

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

Matrix Spikes

QCBatch: QC25154

Param	MS Result	MSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Chloride	9550	8860	mg/Kg	1	6250	3220	101	11	35 - 144	20

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

Quality Control Report
Continuing Calibration Verification Standards

CCV (1)

QCBatch: QC25153

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/L	12.50	11.53	92	90 - 110	11/25/02

ICV (1)

QCBatch: QC25153

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/L	12.50	11.51	92	90 - 110	11/25/02

CCV (1)

QCBatch: QC25154

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/L	12.50	11.43	91	90 - 110	11/25/02

ICV (1)

QCBatch: QC25154

Param	MS Result	MSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Chloride	38860	38700	mg/Kg	1	12500	27900	87	1	35 - 144	20

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

Matrix Spikes

QCBatch: QC25154

Param	MS Result	MSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Chloride	9550	8860	mg/Kg	1	6250	3220	101	11	35 - 144	20

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

Quality Control Report
Continuing Calibration Verification Standards

CCV (1)

QCBatch: QC25153

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/L	12.50	11.53	92	90 - 110	11/25/02

ICV (1)

QCBatch: QC25153

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/L	12.50	11.51	92	90 - 110	11/25/02

CCV (1)

QCBatch: QC25154

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/L	12.50	11.43	91	90 - 110	11/25/02

ICV (1)

QCBatch: QC25154

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/L	12.50	11.53	92	90 - 110	11/25/02

213663-73

AO2111802

Analysis Request and Chain of Custody Record

HIGHLANDER ENVIRONMENTAL CORP.

1910 N. Big Spring St.
Midland, Texas 79705

(915) 682-4559 Fax (915) 682-3946

PAGE: 1 OF: 2

CLIENT NAME: Ocean Energy

SITE MANAGER: Tim Reed

PROJECT NO.: 1868

PROJECT NAME: Chavez Co. N.M., Mesa State Com #1

LAB I.D. NUMBER	DATE	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	ANALYSIS REQUEST (Circle or Specify Method No.): BTEX 8020/602	MTBE 8020/602	TPH 418.1 8015 MOD. TX1005	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Cr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC/MS Vol. 8240/8260/624	GC/MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 608/808	BOD, TSS, pH, TDS, (Chloride)	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	TDS	Major Anions & Cations
213663	11/14/02	1100	S		X	AH-1 0-6"	1																			X					
64		1105	S		X	AH-1 1.0'	1																			X					
65		1115	S		X	AH-1 2.0'	1																			X					
66		1120	S		X	AH-1 3.0'	1																			X					
67		1125	S		X	AH-1 4.0'	1																			X					
68		1130	S		X	AH-1 5.0'	1																			X					
69		1155	S		X	AH-1 6.0'	1																			X					
70		1205	W		X	AH-1 Water Sample	1	X			X																		X	X	
71		1240	W		X	Derrick Windmill	1	X			X																		X	X	

RELINQUISHED BY: (Signature) Tim Reed — Date: 11/15/02 Time: 1545

RECEIVED BY: (Signature) Helen Shelton — Date: 11/15/02 Time: 1545

RELINQUISHED BY: (Signature) Helen Shelton — Date: 11/15/02 Time: 1830

RECEIVED BY: (Signature) — Date: — Time:

RELINQUISHED BY: (Signature) — Date: — Time:

RECEIVED BY: (Signature) — Date: — Time:

SAMPLED BY: (Print & Sign) Tim Reed Tim Reed — Date: 11/15/02 Time: 10:00

SAMPLE SHIPPED BY: (Circle) FEDEX BUS UPS HAND DELIVERED — AIRBILL #: — OTHER:

RECEIVING LABORATORY: Trace Analysis

ADDRESS:

CITY: Lubbock STATE: ZIP:

CONTACT: PHONE:

RECEIVED BY: (Signature)

DATE: 11-16-02 TIME: 0903

HIGHLANDER CONTACT PERSON: Tim Reed

Results by:

RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED: 3°C

MATRIX: W-Water S-Soil A-Air SL-Sludge SD-Solid O-Other

REMARKS:

Please Fill out all copies – Laboratory retains yellow copy – Return original copy to Highlander Environmental Corp. – Project Manager retains pink copy – Accounting receives Gold copy.

MS

1 of 2

SAMPLE LOG

Boring /Well: **Auger Hole 1 (AH-1)**
Investigated Area: **Mesa State Com #1**
Location: **Chaves County, New Mexico**
Total Depth: **6.5'**
Date Installed: **11/14/02**

DEPTH (Ft)	SAMPLE DESCRIPTION
0-0.5'	Brown Top soil, with roots.
0.5'-1.0'	Dark brown silty loam.
1.0'-2.0'	Dark brown silty loam.
2.0'-3.0'	Dark brown silty loam, some silty clay loam, some evaporates.
3.0'-4.0'	Silty loam to silty clay loam, some evaporates.
4.0'-5.0'	Clay loam to clay.
5.0'-6.0'	Clay loam to clay, large evaporite crystals, damp.
6.0'-6.5'	Clay and gray clayey caliche, wet.
	TD – 6.5'

NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

GARY E. JOHNSON
Governor
Betty Rivera
Cabinet Secretary

Lori Wrotenbery
Director
Oil Conservation Division

5/10/2002

Copy

OCEAN ENERGY, INC.
ATT: JEANIE McMILLIAN
1001 FANNIN, SUITE 1600
DALLAS, TX 75206

RE : COMPLAINT OF WATER CONTAMINATION
30-005-60690 J-31-15s-28e MESA STATE COM. #1

DEAR JEANIE McMILLIAN,

O.C.D. HAS RECEIVED A COMPLAINT MADE BY LEWIS DERRICK WHO IS THE RANCH FOREMAN FOR THE TURKEY TRACK RANCH ON WHICH THE MESA STATE COM.#1 IS LOCATED.
MR. DERRICK HAS INFORMED O.C.D. THAT THE WATER QUALITY IN A WINDMILL LOCATED OFF SET THE MESA STATE COM. #1 HAS DECLINED AND IN NOW NOT USABLE TO WATER HIS COWS.
HE REPORTED A LOSS OF FIFTEEN COWS FROM DRINKING THE WATER BEFORE IT WAS TAKEN OUT OF SERVICE.
MR. DERRICK SAYS THE WATERS IN HIS WINDMILL ARE BEING AFFECTED BY SALT RESIDUES LEFT IN THE LAKE PLAYAS ON WHICH THE MESA STATE COM. #1 AND THE WINDMILL RESIDE.
THE MESA STATE COM. # 1 ENCOUNTERED A "BRINE WATER FLOW AT 1138' WHILE DRILLING TO SET 8.625" CASING AT 1949'.
THE BRINE WATER FLOW WAS NOT CONTAINED TO THE WELL LOCATION DUE TO A FAILURE OF BLOWOUT PREVENTORS DURING DRILLING OPERATIONS.
A RELEASE OF 117,500 BARRELS OF SALT WATER INTO THE DRY LAKE AREA COVERING TWO ACRES WAS REPORTED.

PLEASE SEND TO O.C.D. A WORKPLAN FOR APPROVAL WITH ACTIONS TO BE TAKEN IN ADDRESSING THIS COMPLAINT MADE BY MR. DERRICK AND THE TURKEY TRACK RANCH.

PLEASE SEND THIS REQUESTED WORKPLAN WITHIN THIRTY DAYS FROM THE DATE OF THIS LETTER .

IF I CAN BE OF ASSISTANCE PLEASE DO NOT HESTATE TO CALL ME AT 505-748-1283 OR E-MAIL ME AT MSTUBBLEFIELD@STATE.NM.US.

SINCERELY,

MIKE STUBBLEFIELD ENVIR. ENG. SPEC.

C.C. ROGER ANDERSON
LEWIS DERRICK