

HIP -

42

GENERAL CORRESPONDENCE

YEAR(S):

1999 - 1998



Natural Gas Pipeline Company of America

A KN Energy Company

HCR 71 Box 170, Maljamar, NM 88264 (505) 676-2640

MAY - 3 1999

April 29, 1999

Ms. Martyne Kieling
State of New Mexico
Oil Conservation Division
Santa Fe, NM 87505

RE:

Dear Ms. Kieling:

I have enclosed the test results for the sludge from the Hydrostatic Testing Water evaporation pond at Natural's Compressor Station 167. No hazardous materials were found in the sludge.

Per our conversation on the phone, Natural plans to remove and dispose of the liner and back fill the hole where the pond was located.

Please call me at (505) 676-2640 ext. 225 if you have any questions.

Sincerely,

Kenneth H. Havens Jr.

Operations Manager

Natural Gas Pipeline Company of America

A KN Energy Company

Cc: Paul Brown (KN Energy)

TALEM ENVIRONMENTAL SERVICES
306 WEST BROADWAY AVENUE
FORT WORTH, TX 76104
TEL: (817) 335-1186 FAX: (817) 335-9830

Date of Draft Report: 04/27/99

Client Account No: 1960
TALEM Project No: 99042774
TALEM Lab ID No: 99-0005674

Attention: Oscar Martinez
Natural Gas Pipeline
HCR 71 Box 170
Maljamar NM 88264

TALEM SRF No: 31985
Date Collected: 05/06/99 08:30
Collected By: Client
Date Received: 04/08/99

Sample Matrix: Sludge

Client Project No: C18167 Pit in yard used for Hydrotest

Sample Description: Sludge from Hydro Pit

D R A F T R E P O R T

	Result	Unit	PQL	Procedure	Date
WET CHEM					
Acid Reactivity	not reactive	none	1	SW7.3.2.15	04/13
Air reactivity	not reactive	none	1	SW7.3.2.11	04/13
Base Reactivity	not reactive	none	1	SW7.3.2.15	04/13
Corrosivity	0.077	mm/yr	.002	SW11110	04/13
Cyanide, Reactive	<0.20	mg/Kg	.2	SW7.3.3.2	04/13
Flashpoint	>200	Deg F	40	SW1020A	04/14
H2O (Water) Reactivity	not reactive	none	1	SW7.3.2.12	04/13
Ignitability	not ignite	none	1	SW7.1	04/14
pH	8.7 @ 23C	None	4	SW9045B	04/13
Sulfide, Reactive	<5.0	mg/Kg	5	SW7.3.4.2	04/13
INORGANIC					
TCLP-METALS					
Arsenic, TCLP	<0.50	mg/L	.5	SW6010B	04/20
Barium, TCLP	2.9	mg/L	.05	SW6010B	04/20
Cadmium, TCLP	<0.050	mg/L	.05	SW6010B	04/20
Chromium, TCLP	<0.10	mg/L	.1	SW6010B	04/20
Lead, TCLP	<0.25	mg/L	.25	SW6010B	04/20
Mercury, TCLP	<0.0050	mg/L	.005	SW7470A	04/15
Selenium, TCLP	<0.25	mg/L	.25	SW6010B	04/20
Silver, TCLP	<0.10	mg/L	.1	SW6010B	04/20
ORGANIC					
TCLP-VOC					
1,1-Dichloroethene, TCLP	<0.025	mg/L	.025	SW8260B	04/22
1,2-Dichloroethane, TCLP	<0.025	mg/L	.025	SW8260B	04/22
Benzene, TCLP	<0.025	mg/L	.025	SW8260B	04/22
Carbon Tetrachloride, TCLP	<0.025	mg/L	.025	SW8260B	04/22
Chlorobenzene, TCLP	<0.025	mg/L	.025	SW8260B	04/22
Chloroform, TCLP	<0.025	mg/L	.025	SW8260B	04/22
Methyl Ethyl Ketone, (2-butano	<0.025	mg/L	.025	SW8260B	04/22
Tetrachloroethene, TCLP	<0.025	mg/L	.025	SW8260B	04/22
Trichloroethene, TCLP	<0.025	mg/L	.025	SW8260B	04/22
Vinyl Chloride, TCLP	<0.025	mg/L	.025	SW8260B	04/22

TALEM ENVIRONMENTAL SERVICES
306 WEST BROADWAY AVENUE
FORT WORTH, TX 76104
TEL: (817) 335-1186 FAX: (817) 335-9830

Date of Draft Report: 04/27/99

Client Account No: 1960
TALEM Project No: 99042774
TALEM Lab ID No: 99-0005674

Attention: Oscar Martinez
Natural Gas Pipeline
HCR 71 Box 170
Maljamar NM 88264

TALEM SRF No: 31985
Date Collected: 05/06/99 08:30
Collected By: Client
Date Received: 04/08/99

Sample Matrix: Sludge

Client Project No: C1S167 Pit in yard used for Hydrotest

Sample Description: Sludge from Hydro Pit

DRAFT REPORT

	Result	Unit	PQL	Procedure	Date
TCLP-SVOC					
1,4-Dichlorobenzene, TCLP	<0.020	mg/L	.02	SW8270C	04/21
2,4,5-Trichlorophenol, TCLP	<0.020	mg/L	.02	SW8270C	04/21
2,4,6-Trichlorophenol, TCLP	<0.020	mg/L	.02	SW8270C	04/21
2,4-Dinitrotoluene, TCLP	<0.020	mg/L	.02	SW8270C	04/21
Cresol, ortho, TCLP	<0.020	mg/L	.02	SW8270C	04/21
Cresols, meta & para, TCLP	<0.020	mg/L	.02	SW8270C	04/21
Cresols, total, TCLP	<0.060	mg/L	.06	SW8270C	04/21
Hexachlorobenzene, TCLP	<0.020	mg/L	.02	SW8270C	04/21
Hexachlorobutadiene, TCLP	<0.020	mg/L	.02	SW8270C	04/21
Hexachloroethane, TCLP	<0.020	mg/L	.02	SW8270C	04/21
Nitrobenzene, TCLP	<0.020	mg/L	.02	SW8270C	04/21
Pentachlorophenol, TCLP	<0.020	mg/L	.02	SW8270C	04/21
Pyridine, TCLP	<0.020	mg/L	.02	SW8270C	04/21

MEMORANDUM OF MEETING OR CONVERSATION



Telephone



Personal

Time

2:06

Date

4-29-99

Originating Party

Ken Havens.

Other Parties

Martyn Kiehl

Subject

N/G Pipeline Co. Kn Energy

Discussion

Regarding Pond Failure - Test results.
Will send Results & Letter.

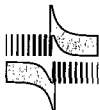
Plans to Remove liner Dispose of as Non Haz Waste. ok ✓
Dose in Pond & Level Area. ✓ ok

Conclusions or Agreements

Distribution

Signed

Martyn Kiehl

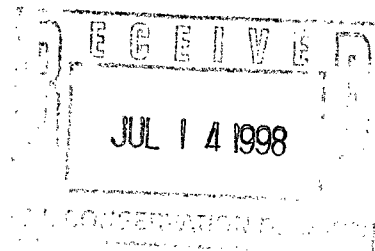


Natural Gas Pipeline Company of America

A MIDCON CORP. COMPANY

701 East 22nd Street
Lombard, Illinois 60148-5072
(630) 691-3000

July 9, 1998



State of New Mexico
Attn: Ms. M. Kieling
Oil Conservation Division
2040 S. Pacheco
Santa Fe, NM 87505

RE: Hydrostatic Test Water Analysis

Dear Ms. Kieling,

Natural Gas Pipeline Company of America (Natural) has completed its hydrostatic test water discharge in Lea County, NM. The discharge was completed on June 5, 1998 and a sample of the water was obtained. Talem Environmental Services in Fort Worth, Texas analyzed the sample. Natural provides the analysis as required by the OCD authorization dated April 30, 1998.

If there are questions concerning the discharge or analysis, I can be contacted at (630) 691-3791.

Sincerely,

Paul S. Brown
Environmental Coordinator

Attachment:
Lab analysis



TALEM ENVIRONMENTAL SERVICES
306 WEST BROADWAY AVENUE
FORT WORTH, TX 76104
TEL: (817) 335-1186
FAX: (817) 335-9830

Date of Report: 06/24/98

TALEM SRF No: 21767
Date Collected: 06/05/98 Time: 07:00
Collected By: Client
Date Received: 06/09/98

Attention: Ken Havens
Natural Gas Pipeline
RGR 71 Box 170
Maljamar NM 88264

TALEM Project No: 98063572
TALEM Lab ID No: 98-0007067

Sample Matrix: Water

Client Account No: 1960
Client Project No:
Sample Description: Hydrostatic Test Discharge Water Composite

	Result	Unit	Diln Fctr	Test Procedure	LOQ	Test A/I Date	QC Ref Number
WET CHEM							
Alkalinity, Hydroxide as CaCO ₃	<20	mg/L	1	EPA310.1	20	VKJ 06/19	24694
Alkalinity, Total, as CaCO ₃	180	mg/L	1	EPA110.1	20	VKJ 06/10	24620
Chloride, Total	55	mg/L	1	EPA325.3	2.0	VKJ 06/10	24644
Conductivity, Specific	400 @ 25C	umhos/cm	1	EPA120.1	5.0	VKJ 06/15	24726
Dissolved Solids, Total	410	mg/L	1	EPA160.1	25	DAK 06/10	24673
pH	8.2 @ 21C	None	1	EPA150.1	4.0	TMT 06/10	24608
Sulfate, Total	53	mg/L	5	EPA375.4	25	VKJ 06/19	24674
INORGANIC METALS							
Arsenic, Total	<0.050	mg/L	1	EPA200.7	0.050	DAB 06/12	24689
Barium, Total	0.10	mg/L	1	EPA200.7	0.010	DAB 06/12	24689
Cadmium, Total	<0.010	mg/L	1	EPA200.7	0.010	DAB 06/12	24689
Calcium, Total	59	mg/L	1	EPA200.7	0.60	DAB 06/22	24925
Chromium, Total	<0.020	mg/L	1	EPA200.7	0.020	DAB 06/12	24689
Iron, Total	<0.50	mg/L	1	EPA200.7	0.50	DAB 06/22	24925
Lead, Total	<0.040	mg/L	1	EPA200.7	0.040	DAB 06/12	24689
Magnesium, Total	12	mg/L	1	EPA200.7	0.30	DAB 06/22	24925
Manganese, Total	<0.020	mg/L	1	EPA200.7	0.020	DAB 06/12	24689
Mercury, Total	<0.0010	mg/L	1	EPA245.2	0.0010	BSW 06/19	24687
Potassium, Total	3.7	mg/L	1	EPA258.1	2.0	DAB 06/10	24659
Selenium, Total	<0.050	mg/L	1	EPA200.7	0.050	DAB 06/12	24689
Silver, Total	<0.010	mg/L	1	EPA200.7	0.010	DAB 06/12	24689
Sodium, Total	41	mg/L	1	EPA200.7	1.0	DAB 06/22	24925
ORGANIC GC/MS VOC							
1,1,1,2-Tetrachloroethane	<5.0	ug/L	1	SW8260A	5.0	JDS 06/12	24738
1,1,1-Trichloroethane	<5.0	ug/L	1	SW8260B	5.0	JDS 06/12	24738
1,1,2,2-Tetrachloroethane	<5.0	ug/L	1	SW8260C	5.0	JDS 06/12	24738
1,1,2-Trichloroethane	<5.0	ug/L	1	SW8260D	5.0	JDS 06/12	24738
1,1-Dichloroethane	<5.0	ug/L	1	SW8260E	5.0	JDS 06/12	24738
1,1-Dichloroethene	<5.0	ug/L	1	SW8260F	5.0	JDS 06/12	24738
1,2,3-Trichloropropane	<5.0	ug/L	1	SW8260G	5.0	JDS 06/12	24738
1,2-Dibromo-3-Chloropropane (DBCP)	<5.0	ug/L	1	SW8260H	5.0	JDS 06/12	24738
1,2-Dibromoethane	<5.0	ug/L	1	SW8260I	5.0	JDS 06/12	24738
1,2-Dichlorobenzene	<5.0	ug/L	1	SW8260J	5.0	JDS 06/12	24738
1,2-Dichloroethane	<5.0	ug/L	1	SW8260K	5.0	JDS 06/12	24738
1,2-Dichloropropane	<5.0	ug/L	1	SW8260L	5.0	JDS 06/12	24738
1,4-Dichlorobenzene	<5.0	ug/L	1	SW8260M	5.0	JDS 06/12	24738
2-Chloroethyl Vinyl Ether	<5.0	ug/L	1	SW8260N	5.0	JDS 06/12	24738
2-Hexanone (Methyl butyl ketone)	<5.0	ug/L	1	SW8260O	5.0	JDS 06/12	24738
Acetone	<5.0	ug/L	1	SW8260P	5.0	JDS 06/12	24738
Acrylonitrile	<5.0	ug/L	1	SW8260Q	5.0	JDS 06/12	24738
Benzene	<5.0	ug/L	1	SW8260R	5.0	JDS 06/12	24738
Bromodichloromethane	<5.0	ug/L	1	SW8260S	5.0	JDS 06/12	24738
Bromoform	<5.0	ug/L	1	SW8260T	5.0	JDS 06/12	24738
Bromomethane (Methyl Bromide)	<5.0	ug/L	1	SW8260U	5.0	JDS 06/12	24738
Carbon Disulfide	<5.0	ug/L	1	SW8260V	5.0	JDS 06/12	24738
Carbon Tetrachloride	<5.0	ug/L	1	SW8260W	5.0	JDS 06/12	24738
Chlorobenzene	<5.0	ug/L	1	SW8260X	5.0	JDS 06/12	24738
Chloroethane	<5.0	ug/L	1	SW8260Y	5.0	JDS 06/12	24738
Chloroform	<5.0	ug/L	1	SW8260Z	5.0	JDS 06/12	24738



TALEM ENVIRONMENTAL SERVICES
306 WEST BROADWAY AVENUE
FORT WORTH, TX 76104
TEL: (817) 335-1186
FAX: (817) 335-8830

Date of Report: 06/24/98

TALEM REF No: 21767
Date Collected: 06/05/98 Time: 07:00
Collected By: Client
Date Received: 06/09/98

Attention: Ken Havens
Natural Gas Pipeline
RCR 71 Box 170
Maljamar NM 88264

TALEM Project No: 98063572
TALEM Lab ID No: 98-0007867

Sample Matrix: Water

Client Account No: 1960

Client Project No:

Sample Description: Hydrostatic Test Discharge Water Composite

	Result	Unit	Uln Fctr	Test Procedura	LOQ	Test A/I	Date	QC Ref Number
Chloromethane	<5.0	ug/L	1	SW8260B	5.0	JDS	06/12	24738
cis-1,2-Dichloroethane	<5.0	ug/L	1	SW8260H	5.0	JDS	06/12	24738
cis-1,3-Dichloropropene	<5.0	ug/L	1	SW8260H	5.0	JDS	06/12	24738
Dibromochloromethane	<5.0	ug/L	1	SW8260B	5.0	JDS	06/12	24738
Dibromomethane	<5.0	ug/L	1	SW8260H	5.0	JDS	06/12	24738
Dichlorodifluoromethane (Freon 12)	<5.0	ug/L	1	SW8260B	5.0	JDS	06/12	24738
Dichloromethane (Methylene Chloride)	<5.0	ug/L	1	SW8260H	5.0	JDS	06/12	24738
Ethylbenzene	<5.0	ug/L	1	SW8260H	5.0	JDS	06/12	24738
Iodomethane	<5.0	ug/L	1	SW8260B	5.0	JDS	06/12	24738
Methyl Ethyl Ketone	<5.0	ug/L	1	SW8260H	5.0	JDS	06/12	24738
Methyl Isobutyl Ketone (4-Me-2-pentanone)	<5.0	ug/L	1	SW8260H	5.0	JDS	06/12	24738
Styrene	<5.0	ug/L	1	SW8260B	5.0	JDS	06/12	24738
Tetrachloroethene	<5.0	ug/L	1	SW8260H	5.0	JDS	06/12	24738
Toluene	<5.0	ug/L	1	SW8260B	5.0	JDS	06/12	24738
trans-1,2-Dichloroethane	<5.0	ug/L	1	SW8260B	5.0	JDS	06/12	24738
trans-1,3-Dichloropropene	<5.0	ug/L	1	SW8260H	5.0	JDS	06/12	24738
trans-1,4-Dichloro-2-Butene	<5.0	ug/L	1	SW8260B	5.0	JDS	06/12	24738
Trichloroethene	<5.0	ug/L	1	SW8260H	5.0	JDS	06/12	24738
Trichlorofluoromethane	<5.0	ug/L	1	SW8260H	5.0	JDS	06/12	24738
Vinyl Acetate	<5.0	ug/L	1	SW8260B	5.0	JDS	06/12	24738
Vinyl Chloride	<5.0	ug/L	1	SW8260H	5.0	JDS	06/12	24738
Xylene, meta & para	<5.0	ug/L	1	SW8260B	5.0	JDS	06/12	24738
Xylene, ortho	<5.0	ug/L	1	SW8260H	5.0	JDS	06/12	24738
GCMS SVOC								
Acenaphthene	<10	ug/L	1	SW8270C	10	JDS	06/15	24778
Anthracene	<10	ug/L	1	SW8270C	10	JDS	06/15	24778
Benzo(a)anthracene	<10	ug/L	1	SW8270C	10	JDS	06/15	24778
Benzo(a)pyrene	<10	ug/L	1	SW8270C	10	JDS	06/15	24778
Benzo(b)fluoranthene (3,4-Benzofluorant)	<10	ug/L	1	SW8270C	10	JDS	06/15	24778
Benzo(k)fluoranthene	<10	ug/L	1	SW8270C	10	JDS	06/15	24778
Chrysene	<10	ug/L	1	SW8270C	10	JDS	06/15	24778
Dibenzo(a,h)anthracene	<10	ug/L	1	SW8270C	10	JDS	06/15	24778
Fluoranthene	<10	ug/L	1	SW8270C	10	JDS	06/15	24778
Fluorene	<10	ug/L	1	SW8270C	10	JDS	06/15	24778
Indeno(1,2,3-c,d)pyrene	<10	ug/L	1	SW8270C	10	JDS	06/15	24778
Naphthalene	<10	ug/L	1	SW8270C	10	JDS	06/15	24778
Pyrene	<10	ug/L	1	SW8270C	10	JDS	06/15	24778

Distribution of Report
Ken Havens
David Vicini

Reviewed and Approved By:

J. R. "Tag" Connelley
President

Facsimile Transmittal☐ MidCon Corp.☒ Natural Gas Pipeline Company of America701 East 22nd Street
Lombard, IL 60148-5072

Attention: Martyne Kieling	
City/State: Santa Fe, NM	
To (Company Name): NM OCD	
Fax No.: 505-827-8177	
Confirmation No.:	
From: PAUL BROWN	
Phone No.: 630-691-3791	Room No.: E-378

11 Number of pages including transmittal

Date: 06/29/98

If you do not receive all pages,
please call (630) 691-3825
as soon as possible.**Check One**

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☐ Confidentially Destroy
☐ Return

Do you require the confirmation slip
be returned for retention in your files?☐ Yes ☒ No

Messages/instructions may be written in the space below.

Martyne,

To follow-up on our phone conversation from this morning, attached are the analytical results of the pigging waste collected prior to our hydrostatic test. Approximately 115 bbls. of water was collected. Natural's pipeline construction contractor hauled the water to a salt water disposal well before the results were obtained. The water was disposed of at the Shell State Salt Water Disposal #1 in Section 32, T14S, R34E, in Lea County (Permit #104).

I can be contacted at (630)691-3791 if there are questions concerning the waste.

Thank you,

**Confidentiality Notice**

This facsimile transmission contains confidential information. The information is intended only for the use of the individual or entity names above. If you are not the intended recipient, please call us (630) 691-3825 to arrange for the return of this document.

FAX Numbers: (630) 691-3832
(630) 691-3831
(630) 691-3830
(630) 691-3829
(630) 691-3828
(630) 691-3827

Fax: Operator



TALEM ENVIRONMENTAL SERVICES
306 WEST BROADWAY AVENUE
FORT WORTH, TX 76104
TEL: (817) 335-1186
FAX: (817) 335-9830

Date of Report: 06/19/98

TALEM SRF No: 21882
Date Collected: 06/08/98 Time: 13:30
Collected By: Client
Date Received: 06/11/98

Attention: Ken Havens
Natural Gas Pipeline
HCR 71 Box 170
Maljamar NM 88264

TALEM Project No: 98063631
TALEM Lab ID No: 98-0008023

Sample Matrix: Water

Client Account No: 1960
Client Project No:
Sample Description: Piggings Waste

Result	Unit	Dltn Fctr	Test Procedure	LOQ	Test A/I Date	QC Ref Number
WET CHEM						
Air Reactivity	not reactive	none	1	SW7.3.2.11	1.0	VKJ 06/16 24766
Base Reactivity	not reactive	none	1	SW7.3.2.15	1.0	VKJ 06/16 24766
H2O (Water) Reactivity	not reactive	none	1	SW7.3.2.12	1.0	VKJ 06/16 24766
Ignitability	not ignite	none	1	SW7.1	1.0	VKJ 06/16 24765
pH	8.1 @ 22C	None	1	EPA150.1	4.0	TMT 06/17 24788
INORGANIC						
TCLP-METALS						
Arsenic, TCLP	<0.050	mg/L	1	SW6010B	0.050	DAB 06/12 24687
Barium, TCLP	0.12	mg/L	1	SW6010B	0.010	DAB 06/12 24687
Cadmium, TCLP	<0.010	mg/L	1	SW6010B	0.010	DAB 06/12 24687
Chromium, TCLP	<0.020	mg/L	1	SW6010B	0.020	DAB 06/12 24687
Lead, TCLP	<0.050	mg/L	1	SW6010B	0.050	DAB 06/12 24687
Mercury, TCLP	0.0068	mg/L	1	SW7470A	0.0050	BSW 06/17 24786
Selenium, TCLP	<0.050	mg/L	1	SW6010B	0.050	DAB 06/12 24687
Silver, TCLP	<0.010	mg/L	1	SW6010B	0.010	DAB 06/12 24687
ORGANIC						
GCMS SWOC						
1,2,4,5-Tetrachlorobenzene	<10	ug/L	1	SW8270C	10	JDS 06/15 24778
1,2,4-Trichlorobenzene	<10	ug/L	1	SW8270C	10	JDS 06/15 24778
1,2-Dichlorobenzene	<10	ug/L	1	SW8270C	10	JDS 06/15 24778
1,2-Diphenylhydrazine	<10	ug/L	1	SW8270C	10	JDS 06/15 24778
1,3-Dichlorobenzene	<10	ug/L	1	SW8270C	10	JDS 06/15 24778
1,4-Dichlorobenzene	<10	ug/L	1	SW8270C	10	JDS 06/15 24778
2,4,6-Trichlorophenol	<10	ug/L	1	SW8270C	10	JDS 06/15 24778
2,4,6-Trichlorophenol	<10	ug/L	1	SW8270C	10	JDS 06/15 24778
2,4-Dichlorophenol	<10	ug/L	1	SW8270C	10	JDS 06/15 24778
2,4-Dimethylphenol	<10	ug/L	1	SW8270C	10	JDS 06/15 24778
2,4-Dinitrophenol	<10	ug/L	1	SW8270C	10	JDS 06/15 24778
2,4-Dinitrotoluene (SV)	<10	ug/L	1	SW8270C	10	JDS 06/15 24778
2,6-Dinitrotoluene (SV)	<10	ug/L	1	SW8270C	10	JDS 06/15 24778
2-Chloronaphthalene	<10	ug/L	1	SW8270C	10	JDS 06/15 24778
2-Chlorophenol	<10	ug/L	1	SW8270C	10	JDS 06/15 24778
2-Methylnaphthalene	<10	ug/L	1	SW8270C	10	JDS 06/15 24778
2-Nitroaniline	<10	ug/L	1	SW8270C	10	JDS 06/15 24778
2-Nitrophenol	<10	ug/L	1	SW8270C	10	JDS 06/15 24778
3,3'-Dichlorobenzidine	<10	ug/L	1	SW8270C	10	JDS 06/15 24778
3-Nitroaniline	<10	ug/L	1	SW8270C	10	JDS 06/15 24778
4,6-Dinitro-2-Methylphenol	<10	ug/L	1	SW8270C	10	JDS 06/15 24778
4-Bromophenyl Phenyl Ether	<10	ug/L	1	SW8270C	10	JDS 06/15 24778
4-Chloro-3-methylphenol (p-Cl-m-Cresol)	<10	ug/L	1	SW8270C	10	JDS 06/15 24778
4-Chloroaniline	<10	ug/L	1	SW8270C	10	JDS 06/15 24778
4-Chlorophenyl Phenyl Ether	<10	ug/L	1	SW8270C	10	JDS 06/15 24778
4-Nitroaniline	<10	ug/L	1	SW8270C	10	JDS 06/15 24778
4-Nitrophenol	<10	ug/L	1	SW8270C	10	JDS 06/15 24778
Acenaphthene	<10	ug/L	1	SW8270C	10	JDS 06/15 24778
Acenaphthylene	<10	ug/L	1	SW8270C	10	JDS 06/15 24778
Anthracene	<10	ug/L	1	SW8270C	10	JDS 06/15 24778
Benzidine	<10	ug/L	1	SW8270C	10	JDS 06/15 24778
Benzo(a)anthracene	<10	ug/L	1	SW8270C	10	JDS 06/15 24778
Benzo(a)pyrene	<10	ug/L	1	SW8270C	10	JDS 06/15 24778
Benzo(b)fluoranthene (3,4-Benzofluorant)	<10	ug/L	1	SW8270C	10	JDS 06/15 24778



TALEM ENVIRONMENTAL SERVICES
306 WEST BROADWAY AVENUE
FORT WORTH, TX 76104
TEL: (817) 335-1186
FAX: (817) 335-9830

Date of Report: 06/19/98

TALEM SRF No: 21882
Date Collected: 06/08/98 Time: 13:30
Collected By: Client
Date Received: 06/11/98

Attention: Ken Havens
Natural Gas Pipeline
HCR 71 Box 170
Maljamar NM 88264

TALEM Project No: 98063631
TALEM Lab ID No: 98-0008023

Sample Matrix: Water

Client Account No: 1960
Client Project No:
Sample Description: Pigging Waste

Result	Unit	Dltn Fctr	Test Procedure	LOQ	A/I	Test Date	QC Ref Number
Benzo(g,h,i)perylene	<10 ug/L	1	SW8270C	10	JDS	06/15	24778
Benzo(k)fluoranthene	<10 ug/L	1	SW8270C	10	JDS	06/15	24778
Benzoic Acid	<10 ug/L	1	SW8270C	10	JDS	06/15	24778
Benzyl Alcohol	<10 ug/L	1	SW8270C	10	JDS	06/15	24778
Bis(2-chloroethoxy) Methane	<10 ug/L	1	SW8270C	10	JDS	06/15	24778
Bis(2-chloroethyl) Ether	<10 ug/L	1	SW8270C	10	JDS	06/15	24778
Bis(2-chloroisopropyl) Ether	<10 ug/L	1	SW8270C	10	JDS	06/15	24778
Bis(2-ethylhexyl) Phthalate	<10 ug/L	1	SW8270C	10	JDS	06/15	24778
Butyl Benzyl Phthalate	<10 ug/L	1	SW8270C	10	JDS	06/15	24778
Chrysene	<10 ug/L	1	SW8270C	10	JDS	06/15	24778
Cresol, ortho, (2-Methylphenol)	<10 ug/L	1	SW8270C	10	JDS	06/15	24778
Cresols, meta & para, Total	<20 ug/L	1	SW8270C	20	JDS	06/15	24778
Di-n-butyl Phthalate	<10 ug/L	1	SW8270C	10	JDS	06/15	24778
Di-n-octyl Phthalate	<10 ug/L	1	SW8270C	10	JDS	06/15	24778
Dibenzo(a,h)anthracene	<10 ug/L	1	SW8270C	10	JDS	06/15	24778
Dibenzofuran	<10 ug/L	1	SW8270C	10	JDS	06/15	24778
Diethyl Phthalate	<10 ug/L	1	SW8270C	10	JDS	06/15	24778
Dimethyl Phthalate	<10 ug/L	1	SW8270C	10	JDS	06/15	24778
Fluoranthene	<10 ug/L	1	SW8270C	10	JDS	06/15	24778
Fluorene	<10 ug/L	1	SW8270C	10	JDS	06/15	24778
Hexachlorobenzene	<10 ug/L	1	SW8270C	10	JDS	06/15	24778
Hexachlorobutadiene	<10 ug/L	1	SW8270C	10	JDS	06/15	24778
Hexachlorocyclopentadiene	<10 ug/L	1	SW8270C	10	JDS	06/15	24778
Hexachloroethane	<10 ug/L	1	SW8270C	10	JDS	06/15	24778
Indeno(1,2,3-c,d)pyrene	<10 ug/L	1	SW8270C	10	JDS	06/15	24778
Isophorone	<10 ug/L	1	SW8270C	10	JDS	06/15	24778
n-Nitroso-di-n-butylamine	<10 ug/L	1	SW8270C	10	JDS	06/15	24778
n-Nitroso-di-n-propylamine	<10 ug/L	1	SW8270C	10	JDS	06/15	24778
n-Nitrosodiethylamine	<10 ug/L	1	SW8270C	10	JDS	06/15	24778
n-Nitrosodimethylamine	<10 ug/L	1	SW8270C	10	JDS	06/15	24778
n-Nitrosodiphenylamine	<10 ug/L	1	SW8270C	10	JDS	06/15	24778
Naphthalene	<10 ug/L	1	SW8270C	10	JDS	06/15	24778
Nitrobenzene (SV)	<10 ug/L	1	SW8270C	10	JDS	06/15	24778
Pentachlorobenzene	<10 ug/L	1	SW8270C	10	JDS	06/15	24778
Pentachlorophenol	<10 ug/L	1	SW8270C	10	JDS	06/15	24778
Phenanthrene	<10 ug/L	1	SW8270C	10	JDS	06/15	24778
Phenol	<10 ug/L	1	SW8270C	10	JDS	06/15	24778
Pyrene	<10 ug/L	1	SW8270C	10	JDS	06/15	24778
Pyridine	<10 ug/L	1	SW8270C	10	JDS	06/15	24778

Distribution of Report
Ken Havens
David Vignini

Reviewed and Approved By:

J. R. "Tag" Cpolidge
J. R. "Tag" Cpolidge
President

06/19/98 11:13:09 AM

TALEM Laboratory
QC Report by Project Number

PROJQC.PRT
Page: 1

Ken Havers
Natural Gas Pipeline
HCR 71 Box 170
Maljamar NM 88264

Project Number: 98063631

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*****
-->> S P I K E   A C C U R A C Y   D A T A <<--
*****

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QC Number	Test Name	MSR	MS	MS%	MSD	MSD%	SC	Spk% LL	Limits UL	F	TALEM Smp1 ID	Def Rtg
Inorganic												
24687	Arsenic, TCLP	0	.55	110	.528	106	.5	75	125		0008023	100
24687	Barium, TCLP	.125	.643	104	.624	100	.5	75	125		0008023	100
24687	Cadmium, TCLP	0	.528	106	.516	103	.5	75	125		0008023	100
24687	Chromium, TCLP	0	.517	103	.517	103	.5	50	125		0008023	100
24687	Lead, TCLP	0	.52	104	.515	103	.5	75	125		0008023	100
24687	Selenium, TCLP	0	.576	115	.572	114	.5	75	125		0008023	100
24687	Silver, TCLP	0	.529	106	.518	104	.5	75	125		0008023	100
24786	Mercury, TCLP	.00681	.0246	71	.023	65	.025	50	136		0008023	100
Organics												
24778	1,2,4-Trichlorobenzene	0	26.6	53	23.6	47	50.	43	142		0007867	100
24778	1,4-Dichlorobenzene	0	24.3	49	21.7	43	50.	19	121		0007867	100
24778	2,4-Dinitrotoluene (SV)	0	25.3	51	21.	42	50.	33	132		0007867	100
24778	2-Chlorophenol	0	36.2	48	33.2	44	75.	22	135		0007867	100
24778	4-Chloro-3-methylphenol (p-Cl-m-Cresol)	0	35.9	48	31.8	42	75.	20	148		0007867	100
24778	4-Nitrophenol	0	22.5	30	24.2	32	75.	0	134		0007867	100
24778	Acenaphthene	0	25.5	51	23.7	47	50.	50	142	*	0007867	100
24778	n-Nitroso-di-n-propylamine	0	24	48	21.2	42	50.	0	209		0007867	100
24778	Pentachlorophenol	0	57.1	76	48.8	65	75.	12	180		0007867	100
24778	Phenol	0	16.6	22	16.7	22	75.	5	85		0007867	100
24778	Pyrene	0	42.6	85	34.3	69	50.	52	116		0007867	100

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*****
-->> LC5 ACCURACY DATA <--
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QC Number	Test Name	LCS True Val	LCS Measured	LCS % Rec	LCS LL	Limits UL	F	Def Rtg
Inorganic								
24687	Arsenic, TCLP	.5	.503	100.6	85	115		100
24687	Barium, TCLP	.5	.489	97.8	85	115		100
24687	Cadmium, TCLP	.5	.504	100.8	85	115		100
24687	Chromium, TCLP	.5	.496	99.2	85	115		100
24687	Lead, TCLP	.5	.496	99.2	85	115		100
24687	Selenium, TCLP	.5	.528	105.6	85	115		100
24687	Silver, TCLP	.5	.510	102.0	85	115		100
24786	Mercury, TCLP	.0250	.0225	90.0	80	120		100
Organics								
24778	1,2,4-Trichlorobenzene	50	26.5	53.0	56	129	*	100
24778	1,4-Dichlorobenzene	50	24	48.0	38	104		100
24778	2,4-Dinitrotoluene (SV)	50	30	60.0	42	123		100
24778	2-Chlorophenol	75	36.9	49.2	36	121		100
24778	4-Chloro-3-methylphenol (p-Cl-m-Cresol)	75	33.4	44.5	40	129		100
24778	4-Nitrophenol	75	17.7	23.6	11	108		100
24778	Acenaphthene	50	25.4	50.8	61	131	*	100
24778	n-Nitroso-di-n-propylamine	50	24.4	48.8	12	187		100
24778	Pentachlorophenol	75	49.9	66.5	36	155		100
24778	Phenol	75	17	22.7	16	102		100
24778	Pyrene	50	33.8	67.6	69	100	*	100
Wet Chemistry								
24788	pH	9.01 @ 22C	8.99 @ 22C	.0	0	0		100

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*****
--> PRECISION DATA <--
*****

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QC Number	Test Name	LOQ	MS or Dup 1	MSD or Dup 2	Range	RPD	RPD UL	F	TALEM Smpl ID	Def Rtg
Wet Chemistry										

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TALEM Laboratory
QC Report by Project NumberPROJQC.PRT
Page: 2Ken Havens
Natural Gas Pipeline
HCR 71 Box 170
Maljamar NM 88264

Project Number: 98063631

--> PRECISION DATA <--

QC Number	Test Name	LOQ	MS or Dup 1	MSD or Dup 2	Range	RPD	RPD UL	F	TALEM Smpl ID	Def Rtg
24781	pH	4.	8.47	8.47	0	N/A	0	-	0008310	100

--> PRECISION DATA <--

QC Number	Test Name	LOQ	MS or Dup 1	MSD or Dup 2	Range	RPD	RPD UL	F	TALEM Smpl ID	Def Rtg
Inorganics										
24681	Arsenic, TCLP	.05	.55	.528	N/A	4.08163	20		0008023	100
24681	Barium, TCLP	.01	.643	.624	N/A	2.99921	20		0008023	100
24681	Cadmium, TCLP	.01	.528	.516	N/A	2.29885	20		0008023	100
24681	Chromium, TCLP	.02	.517	.517	N/A	0	20		0008023	100
24681	Lead, TCLP	.05	.52	.515	N/A	.966183	20		0008023	100
24681	Selenium, TCLP	.05	.576	.572	N/A	.696864	20		0008023	100
24681	Silver, TCLP	.01	.529	.518	N/A	2.10124	20		0008023	100
24786	Mercury, TCLP	.005	.0246	.023	.0016	6.72268	20		0008023	100
Organics										
24778	1,2,4-Trichlorobenzene	10.	26.6	23.6	3	11.9521	31		0007867	100
24778	1,4-Dichlorobenzene	10.	24.3	21.7	2.6	11.3043	45		0007867	100
24778	2,4-Dinitrotoluene (SV)	10.	25.3	21	4.3	18.5745	36		0007867	100
24778	2-Chlorophenol	10.	36.2	33.2	3	8.64553	44		0007867	100
24778	4-Chloro-3-methylphenol (p-Cl-m-Cresol)	10.	35.9	31.8	4.1	12.1122	47		0007867	100
24778	4-Nitrophenol	10.	22.5	24.2	1.7	7.28051	67		0007867	100
24778	Acenaphthene	10.	25.5	23.7	1.8	7.31707	19		0007867	100
24778	n-Nitroso-di-n-propylamine	10.	24	21.2	2.8	12.3893	67		0007867	100
24778	Pentachlorophenol	10.	57.1	48.8	8.3	15.6751	56		0007867	100
24778	Phenol	10.	16.6	16.7	.1	.600600	58		0007867	100
24778	Pyrene	10.	42.6	34.3	8.3	21.5864	21	*	0007867	100

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TALEM Laboratory
Method Blank Data by Project NumberPROMBD.PRT
Page: 1Ken Havers
Natural Gas Pipeline
HCR 71 Box 170
Maljamar NM 88264

Project Number: 98063631

--> METHOD BLANK DATA <--

QC Number	Test Name	Method Blank	LOQ	Unit	Def Rtg
Inorganic					
24687	Arsenic, TCLP	-.0032	.05	mg/L	100
24687	Barium, TCLP	.0022	.01	mg/L	100
24687	Cadmium, TCLP	-.0037	.01	mg/L	100
24687	Chromium, TCLP	.0011	.02	mg/L	100
24687	Lead, TCLP	-.0089	.04	mg/L	100
24687	Selenium, TCLP	.028	.05	mg/L	100
24687	Silver, TCLP	.0053	.01	mg/L	100
24786	Mercury, TCLP	.00389	.005	mg/L	100
Organics					
24778	1,2,4,5-Tetrachlorobenzene	< 10	10	ug/L	100
24778	1,2,4-Trichlorobenzene	< 10	10	ug/L	100
24778	1,2-Diphenylhydrazine	< 10	10	ug/L	100
24778	1,4-Dichlorobenzene	< 10	10	ug/L	100
24778	2,4,5-Trichlorophenol	< 10	10	ug/L	100
24778	2,4,6-Trichlorophenol	< 10	10	ug/L	100
24778	2,4-Dichlorophenol	< 10	10	ug/L	100
24778	2,4-Dimethylphenol	< 10	10	ug/L	100
24778	2,4-Dinitrophenol	< 10	10	ug/L	100
24778	2,4-Dinitrotoluene (SV)	< 10	10	ug/L	100
24778	2,6-Dinitrotoluene (SV)	< 10	10	ug/L	100
24778	2-Chloronaphthalene	< 10	10	ug/L	100
24778	2-Chlorophenol	< 10	10	ug/L	100
24778	2-Methylnaphthalene	< 10	10	ug/L	100
24778	2-Nitroaniline	< 10	10	ug/L	100
24778	2-Nitrophenol	< 10	10	ug/L	100
24778	3,3'-Dichlorobenzidine	< 10	10	ug/L	100
24778	3-Nitroaniline	< 10	10	ug/L	100
24778	4,6-Dinitro-2-Methylphenol	< 10	10	ug/L	100
24778	4-Bromophenyl Phenyl Ether	< 10	10	ug/L	100
24778	4-Chloro-3-methylphenol (p-Cl-m-Cresol)	< 10	10	ug/L	100
24778	4-Chloroaniline	< 10	10	ug/L	100
24778	4-Chlorophenyl Phenyl Ether	< 10	10	ug/L	100
24778	4-Nitroaniline	< 10	10	ug/L	100
24778	4-Nitrophenol	< 10	10	ug/L	100
24778	Acenaphthene	< 10	10	ug/L	100
24778	Acenaphthylene	< 10	10	ug/L	100
24778	Anthracene	< 10	10	ug/L	100
24778	Benzidine	< 10	10	ug/L	100
24778	Benzo(a)anthracene	< 10	10	ug/L	100
24778	Benzo(a)pyrene	< 10	10	ug/L	100
24778	Benzo(b)fluoranthene (3,4-Benzofluorant)	< 10	10	ug/L	100
24778	Benzo(g,h,i)perylene	< 10	10	ug/L	100
24778	Benzo(k)fluoranthene	< 10	10	ug/L	100
24778	Benzoic Acid	< 10	10	ug/L	100
24778	Benzyl Alcohol	< 10	10	ug/L	100
24778	Bis(2-chloroethoxy) Methane	< 10	10	ug/L	100
24778	Bis(2-chloroethyl) Ether	< 10	10	ug/L	100
24778	Bis(2-chloroisopropyl) Ether	< 10	10	ug/L	100
24778	Bis(2-ethylhexyl) Phthalate	< 10	10	ug/L	100
24778	Butyl Benzyl Phthalate	< 10	10	ug/L	100
24778	Chrysene	< 10	10	ug/L	100
24778	Cresol, ortho, (2-Methylphenol)	< 10	10	ug/L	100
24778	Cresols, meta & para, Total	< 10	10	ug/L	100
24778	Di-n-butyl Phthalate	< 10	10	ug/L	100
24778	Di-n-octyl Phthalate	< 10	10	ug/L	100
24778	Dibenzo(a,h)anthracene	< 10	10	ug/L	100

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TALEM Laboratory
Method Blank Data by Project NumberPROMBD.PRT
Page: 2Ken Havers
Natural Gas Pipeline
HCR 71 Box 170
Maljamar NM 88264

Project Number: 98063631

-->> METHOD BLANK DATA <--

QC Number	Test Name	Method Blank	LOQ	Unit	Def Rtg
24778	Dibenzofuran	< 10	10	ug/L	100
24778	Diethyl Phthalate	< 10	10	ug/L	100
24778	Dimethyl Phthalate	< 10	10	ug/L	100
24778	Fluoranthene	< 10	10	ug/L	100
24778	Fluorene	< 10	10	ug/L	100
24778	Hexachloroethane	< 10	10	ug/L	100
24778	Indeno(1,2,3-c,d)pyrene	< 10	10	ug/L	100
24778	Isophorone	< 10	10	ug/L	100
24778	n-Nitroso-di-n-butylamine	< 10	10	ug/L	100
24778	n-Nitroso-di-n-propylamine	< 10	10	ug/L	100
24778	n-Nitrosodiethylamine	< 10	10	ug/L	100
24778	n-Nitrosodimethylamine	< 10	10	ug/L	100
24778	n-Nitrosodiphenylamine	< 10	10	ug/L	100
24778	Nitrobenzene (SV)	< 10	10	ug/L	100
24778	Pentachlorobenzene	< 10	10	ug/L	100
24778	Pentachlorophenol	< 10	10	ug/L	100
24778	Phenanthrene	< 10	10	ug/L	100
24778	Phenol	< 10	10	ug/L	100
24778	Pyrene	< 10	10	ug/L	100
24778	Pyridine	< 10	10	ug/L	100

Wet Chemistry

Report Date: 06/19/98

SURROGATE QC REPORT BY PROJECT NUMBER

Page: 1

Ken Havens
Natural Gas Pipeline
HCR 71 Box 170
Maljamar NM 88264

Project Number: 98063631
C-of-C Number: 21882

--->> SURROGATE ACCURACY DATA <---

QC Number 24778 Procedure SW8270C

1,2-Dichlorobenzene-d4

Surro Type	True Val	Measured	%Rec	LL	UL	F	Dup Range	LOQ	RPD	RPD UL
MSD	50.	23.8	48	20	130		2.2	10	8.835	45
MS	50.	26.	52	20	130					
LCS	50.	25.4	51	20	130					
Blank	50.	26.4	53	20	130					

2,4,6-Tribromophenol

Surro Type	True Val	Measured	%Rec	LL	UL	F	Dup Range	LOQ	RPD	RPD UL
MSD	75.	49.1	65	10	123		N/A	10	17.64	54
MS	75.	58.6	78	10	123					
LCS	75.	48.1	64	10	123					
Blank	75.	50.1	67	10	123					

2-Chlorophenol-d4

Surro Type	True Val	Measured	%Rec	LL	UL	F	Dup Range	LOQ	RPD	RPD UL
MSD	75.	33.4	45	20	130		2.2	10	6.376	45
MS	75.	35.6	47	20	130					
LCS	75.	36.1	48	20	130					
Blank	75.	38.5	51	20	130					

2-Fluorobiphenyl

Surro Type	True Val	Measured	%Rec	LL	UL	F	Dup Range	LOQ	RPD	RPD UL
MSD	50.	23.1	46	43	116		2.6	10	10.65	26
MS	50.	25.7	51	43	116					
LCS	50.	25.4	51	43	116					
Blank	50.	26.7	53	43	116					

2-Fluorophenol

Surro Type	True Val	Measured	%Rec	LL	UL	F	Dup Range	LOQ	RPD	RPD UL
MSD	75.	23.6	31	21	100		.1	10	.4228	39
MS	75.	23.7	32	21	100					
LCS	75.	23.7	32	21	100					
Blank	75.	27.9	37	21	100					

Nitrobenzene-d5

Surro Type	True Val	Measured	%Rec	LL	UL	F	Dup Range	LOQ	RPD	RPD UL
MSD	50.	21.5	43	35	114		1.9	10	8.463	31
MS	50.	23.4	47	35	114					

Report Date: 06/19/98

SURROGATE QC REPORT BY PROJECT NUMBER

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Ken Havens
Natural Gas Pipeline
HCR 71 Box 170
Maljamar NM 88264

Project Number: 98063631
C-of-C Number: 21882

----> SURROGATE ACCURACY DATA continued <---

Surro Type	True Val	Measured	%Rec	LL	UL	F	Dup Range	LOQ	RPD	RPD UL
LCS	50.	26.4	53	35	114					
Blank	50.	26.	52	35	114					

p-Terphenyl-d14

Surro Type	True Val	Measured	%Rec	LL	UL	F	Dup Range	LOQ	RPD	RPD UL
MSD	50.	37.6	75	33	141		N/A	8	16.80	37
MS	50.	44.5	89	33	141					
LCS	50.	40.3	81	33	141					
Blank	50.	40.3	81	33	141					

Phenol-d6

Surro Type	True Val	Measured	%Rec	LL	UL	F	Dup Range	LOQ	RPD	RPD UL
MSD	75.	14.6	19	10	94		.7	10	4.682	51
MS	75.	15.3	20	10	94					
LCS	75.	14.6	19	10	94					
Blank	75.	16.2	22	10	94					
98 0008023	75.	23.3	47	20	130					
98 0008023	75.	64.2	86	10	123					
98 0008023	75.	34.1	45	20	130					
98 0008023	75.	23.3	47	43	116					
98 0008023	75.	28.5	38	21	100					
98 0008023	75.	21.3	43	35	114					
98 0008023	75.	42.1	84	33	141					
98 0008023	75.	21.9	29	10	94					

1,2-Dichlorobenzene-d4
2,4,6-Tribromophenol
2-Chlorophenol-d4
2-Fluorobiphenyl
2-Fluorophenol
Nitrobenzene-d5
p-Terphenyl-d14
Phenol-d6

06/11/98 10:02:28 AM

TALUM Laboratory
306 W. Broadway, Ft. Worth TX 76104 (817)335-1186

SCC.PRT

MLS

Page: 1

SAMPLE RECEIPT FORM

SRF No: 21882

Work Order: 002883 Project Leader: MLS

Account: 1960 Natural Gas Pipeline

Contact: Ken Havens

Address: Natural Gas Pipeline

HCR 71 Box 170

Maljamar NM 88264

Phone: 505-676-2640 Ext:

Date and Time Received: 6/11/98 09:50

Temp (deg C): 4

Custody Seals on Cooler Intact?: Y N NA

Preserved By: NA

Custody Seals on Container Intact?: Y N NA

Received By: MLS

Bubbles in Zero Head Space Container?: Y N NA

Audited By: MLS

Remarks: Customer sent limited sample, the appropriate portions were poured off from the Amber Liter TALUM received.

Lab ID	Matrix	Sample Description	Container	Ct Type	Apparent Vol	Init pH	Final pH	Pres Code	Filtration
8023	na	Pigging Waste							

Analytes: pH, Ignite, Air Rx, H2O RX, Base Rx,

Amber

qt

g

500ml

NA

NA

NA

L F

Lt

p

60ml

NA

NA

NA

L F

Lt

p

400ml

NA

NA

NA

L F

Analytes: ag-t, as-t, ba-t, cd-t, cr-t, pb-t,
se-t, hg-t,

Analytes: SW8270C,

Matrix: SL = Soil Container: P = Plastic Preserve: 1 = H2SO4, pH<2 6 = NaOH, pH>12, AAcd if ResCl
 WA = Water G = Glass 2 = HCL, pH<2 7 = NaOH, pH>9, Zn Acetate
 GW = Ground Water O = Other (Specify) 3 = HNO3, pH<2 8 = Pre-Preserved at Lab
 O = Other (Specify) F = Filtered in the field 4 = Na2S2O3
 SI = Sludge L = Filtered in the Lab 5 = MnSO4/A.I.Azide
 DW = Drinking Water V = Vial

TICR: _____

משרד המשפטים

TEL (817) 335-1186
306 W. Broadway Ave., Ft. Worth, TX 76104
FAX (817) 335-9830

Company:

Address:

17 mi. W. of Lovington Hwy 82

Lovington N.M. 88260	District Name/Address
----------------------	-----------------------

Project No:	Project Name/Location:
1	1

Project Name/Location:

Telephone:

505 676 2640

Samplers:

Project Name/Location:

TAT: 3 Days

P.O.#:

ANALYTES

[illegible]

Relinquished by: (Sign)

Date/Time

Received by: (Sign)

Reinquished by: (Sign)

Received by (Sign)

Rick Delmont

1:30p
6-10-98

Fed EX

Fed Ex

83/11/20
05:50

Maria

Relinquished by: (Sign)

Date/Time

Received by: (Sign)

Relinquished by: (Sign)

Received by Signa

A separate Chain-of-Custody must be completed for each day of sample collection.

APR 1 1998

Engineering Division

Natural Gas Pipeline Company of America

701 E. 22nd Street
Lombard, IL 60148-5072
(630) 691-3772
Fax: (630) 691-3832

FAX TRANSMISSION COVER SHEET

Date: April 15, 1998
To: Martyne Keiling
Fax: (505)827-8177
Re: Hydrostatic Test Project
Sender: Claudia Macholz

YOU SHOULD RECEIVE 1 PAGE(S), INCLUDING THIS COVER SHEET. IF YOU DO NOT RECEIVE ALL THE PAGES, PLEASE CALL (708) 691-3772.

Martyne,

I Emailed you the information that you requested yesterday. I haven't received confirmation that you have received it yet. Therefore I am also faxing you the information.

Volume of discharge:	1.2 million gallons
Length of pipe:	10 miles
Diameter of pipe:	24"
Section:	14 and 23
Township:	16S
Range:	33E

As discussed in our telephone conversation the test water will be analyzed for the constituents listed in the GUIDELINES FOR HYDROSTATIC TEST DEWATERING. The pipe will also be dewatered into a lined pit. Let me know if you have any additional questions or comments.

Thanks,
Claudia

Kieling, Martyne

From: Kieling, Martyne
Sent: Friday, April 17, 1998 9:05 AM
To: 'Claudia Macholz'
Subject: RE: Additional Information for Hydrostatic Discharge Permit
Importance: High

Claudia,

I see your E-mail finally made it through. I received your fax 4/15/98 at 10:30 am and your E mail just came in this morning (4/17/98)... the wonders of the Electronic age! Thank you for the Information I will be working on the permit late next week. I will let you know if I have any additional questions.

Thanks you
Martyne Kieling

From: Claudia Macholz[SMTP:Claudia_J. Macholz@knenenergy.com]
Sent: Tuesday, April 14, 1998 8:11 AM
To: Kieling, Martyne
Subject: Additional Information for Hydrostatic Discharge Permit

Martyne,

I have obtained the answers to your questions from our telephone conversation on Thursday April 9, 1998. The volume of the discharge will be 1.2 million gallons. The section township and range for the test location will be:

Sections: 14 and 23
Township: 16 S
Range: 33 E

The length of pipe to be tested is 10 miles and the pipe diameter is 24".

The pipe will be discharged into a lined pit. If you have any more questions, please give me a call at (630) 691-3772.

Thank you,

Claudia Macholz

RECEIVED

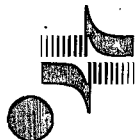
APR 01 1998

Environmental Bureau
Oil Conservation Division

Natural Gas Pipeline Co. of America

**Application for Hydrostatic Test Water
Discharge Permit**

March 27, 1998



Natural Gas Pipeline Company of America

A MIDCON CORP. COMPANY

701 East 22nd Street
Lombard, Illinois 60148-5072
(630) 691-3000



APR 01 1998

Environmental Services
Oil Conservation Division

March 31, 1998

Martyne Kieling
Environmental Geologist
New Mexico Oil Conservation Division
2040 S. Pacheco St.
Santa Fe, NM 87505

Dear Ms. Kieling:

Enclosed please find a copy of Natural Gas Pipeline Company of America's (NGPL) application permit to discharge hydrostatic test water. The anticipated start date for this project is June 1, 1998. If you have any questions or comments regarding this project, please call me at (630) 691-3777 or Claudia Macholz at (630) 691-3772.

Sincerely,

Thomas Bach
Environmental Services Manager

**Application for Hydrostatic Test Water
Discharge Permit**

RECEIVED

APR 01 1998

Environmental Bureau
Oil Conservation Division

- **Map showing the location of the pipelines to be tested;**

Please find a copy of three topographic maps. These maps indicate the pipeline to be tested.

- **Description of the proposed test including, if applicable, pigging and washing of the line prior to the hydrotest and disposition of these fluids and solids;**

The pipeline will be pigged prior to hydrotesting. All liquids and solids removed by the pigging process will be collected in frac tanks. The frac tanks will be located on the north end of the hydrotest project which is land owned by the state of New Mexico. The pigging waste will be sampled, analyzed and will be properly disposed. The pipeline will be filled and dewatered from NGPL Station 167 property.

- **Source and analysis of test water (unless it is from a public water supply);**

The source water will be untreated drinking water from the Double Eagle Water Company. This source supplies the city of Carlsbad, NM. The water has been sampled and analyzed. A copy of the analysis is attached.

- **Point of discharge of the test water;**

After the hydrotest is complete, the pipe will be dewatered into a pit located on NGPL's Station 167 property.

- **Method and location for collection and retention of fluids and solids;**

The pipeline will be dewatered directly into a pit that will be constructed on NGPL's Station 167 property.

- **A monitoring program which includes sampling approximately every 100,000 gallons with a minimum of two samples, the last being from the last 1/4 mile of pipeline.**

A copy of NGPL's Hydrotest Sampling Plan is attached.

- **Available information on the depth and quality of groundwater at the proposed discharge site;**

Attached are data for water levels in feet below land surface and Well Records for four wells drilled in the area.

- **Geological characteristics of the subsurface at the proposed discharge site;**

An Aggregate Resources and Geology map for the Maljamar Quadrangle is attached.

- **A plan for the disposal of the test water and solids at the completion of the test including closure of any pits.**

All liquid and solids collected from the pre-pigging will be placed in a frac tank and analyzed for hazardous constituents. The disposal of all material will be done according to federal and state regulations.

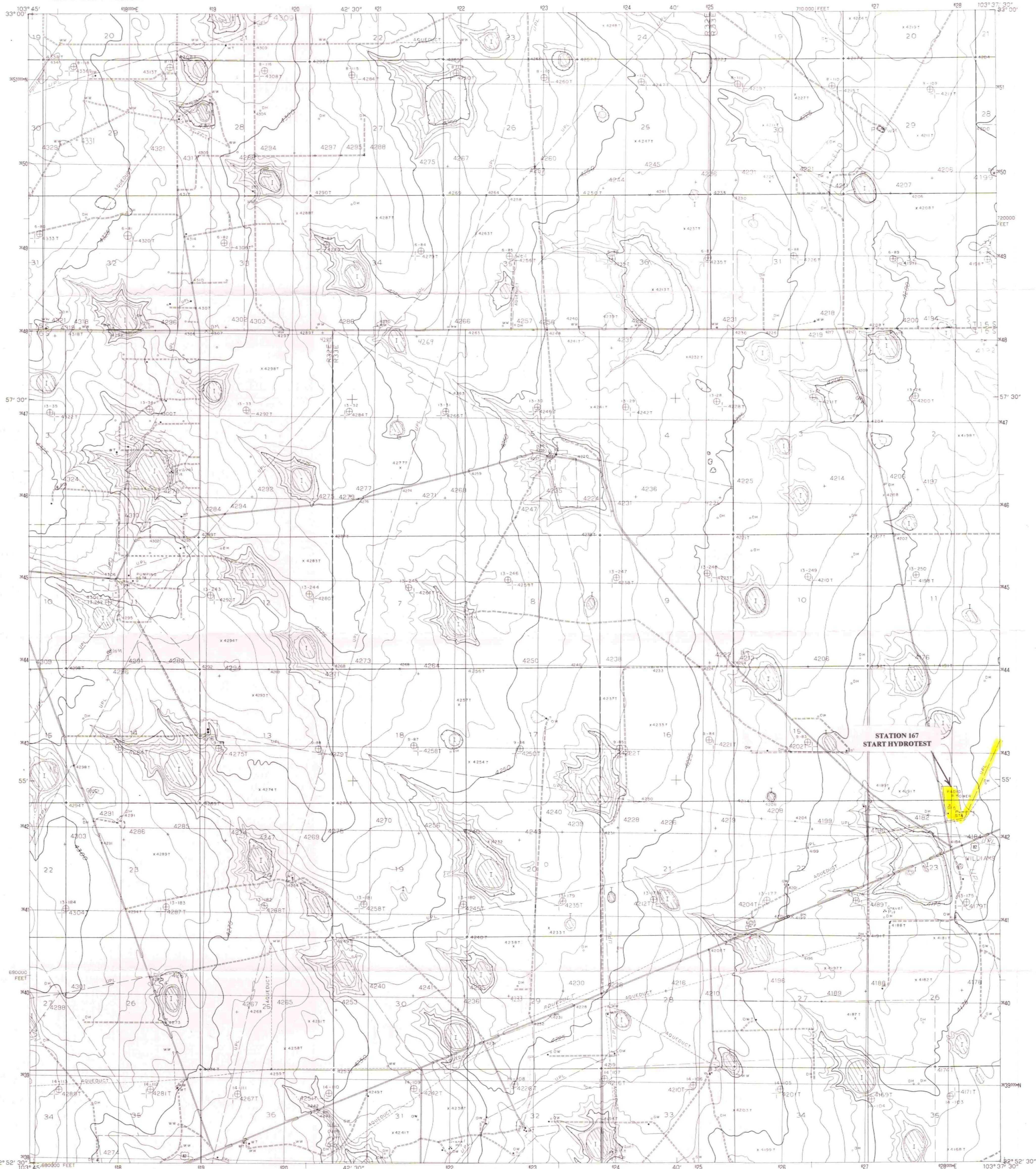
All hydrostatic test water will be dewatered into a pit that will be constructed on NGPL's Station 167 property. The water collected in the pit will be allowed to evaporate. Prior to closure of the pit all remaining residue will be analyzed for the presence of hazardous constituents and disposed of appropriately. After the disposal of the residue from the pit the pit will be dismantled and the area will be returned to its present condition.

- **Identification of landowners at and adjacent to the discharge and collection site;**

Natural Gas Pipeline Company of America is the landowner of record at the discharge and collection site. The State of New Mexico is the only adjacent property owner.

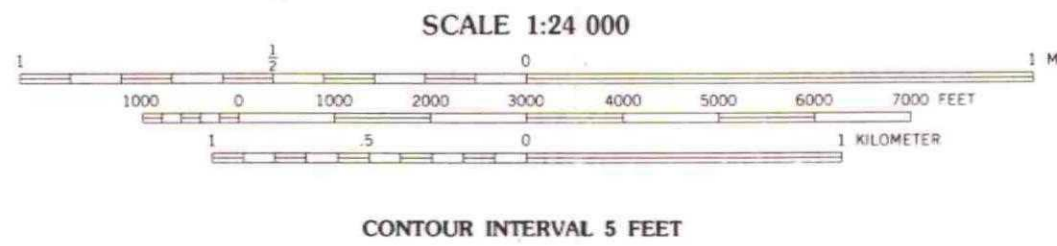
- **Written permission from the landowner of the collection/retention site;**

Natural Gas Pipeline Company of America is the landowner of record at the collection/retention site.



PRODUCED BY THE UNITED STATES GEOLOGICAL SURVEY
CONTROL BY USGS, NOS/NOAA
COMPILED FROM AERIAL PHOTOGRAPHS TAKEN 1978
FIELD CHECKED 1979 MAP EDITED 1985
PROJECTION TRANSVERSE MERCATOR
GRID: 1000-METER UNIVERSAL TRANSVERSE MERCATOR ZONE 13
10,000-FOOT STATE GRID TICKS NEW MEXICO, EAST ZONE
UTM GRID DECLINATION 943 EAST
1985 MAGNETIC NORTH DECLINATION 10° EAST
VERTICAL DATUM NATIONAL GEODETIC VERTICAL DATUM OF 1929
HORIZONTAL DATUM 1927 NORTH AMERICAN DATUM
To place on the predicted North American Datum of 1983, move
the projection lines as shown by dashed corner ticks
(8 meters south and 46 meters east)
There may be private inholdings within the boundaries of any
Federal and State Reservations shown on this map

PROVISIONAL MAP
Produced from original
manuscript drawings. Informa-
tion shown as of date of
field check.

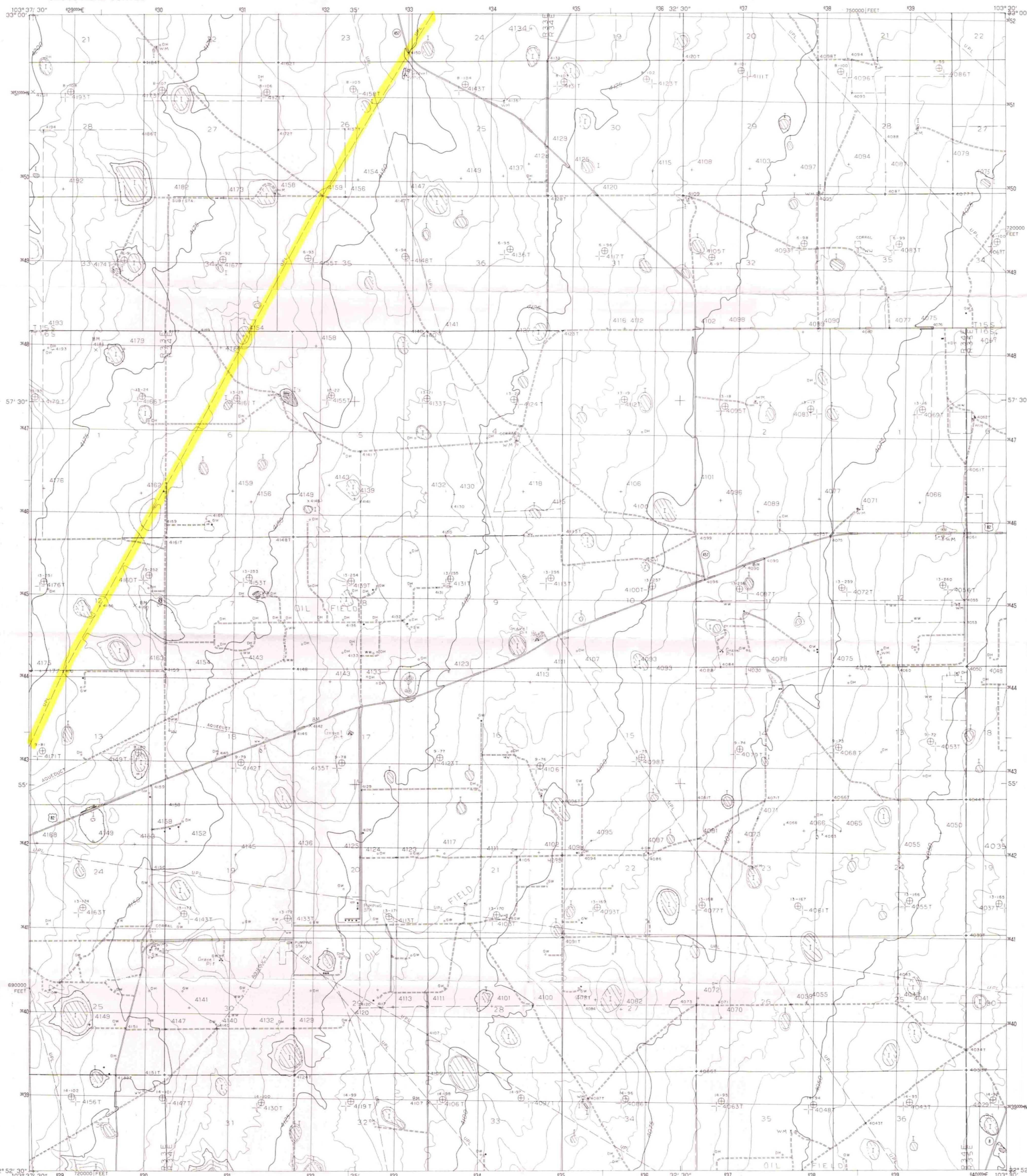


QUADRANGLE LOCATION							
1	2	3	4	5	6	7	8
ADJOINING 7.5 QUADRANGLE NAMES							
1 Cedar Point SE 2 Dean Ranch 3 Fort Ranch 4 Malheur NE 5 Malheur 6 Malheur 7 Dog Lake 8 Buckeye							

RECEIVED BUCKEYE NW, NEW MEXICO
APR 01 1998
PROVISIONAL EDITION 1985
Environmental Bureau
Oil Conservation Division
32103-H6-TF-024
SH. 143

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

BUCKEYE NE QUADRANGLE
NEW MEXICO-LEA CO.
7.5 MINUTE SERIES (TOPOGRAPHIC)



PRODUCED BY THE UNITED STATES GEOLOGICAL SURVEY
CONTROL BY USGS, NOS-NOAA
COMPILED FROM AERIAL PHOTOGRAPHS TAKEN 1978
FIELD CHECKED 1979 MAP EDITED 1985
PROJECTION TRANSVERSE MERCATOR
GRID: 100-METER UNIVERSAL TRANSVERSE MERCATOR ZONE 13
18,000-FOOT STATE GRID TICS NEW MEXICO, EAST ZONE
UTM GRID DECLINATION 0°47' EAST
1985 MAGNETIC NORTH DECLINATION 9°30' EAST
VERTICAL DATUM NATIONAL GEODETTIC VERTICAL DATUM OF 1929
HORIZONTAL DATUM 1927 NORTH AMERICAN DATUM
To place on the predicted North American Datum of 1983, move
the projection lines as shown by dashed corner ticks
(8 meters south and 48 meters east)
There may be private inholdings within the boundaries of any
Federal and State Reservations shown on this map

PROVISIONAL MAP
Produced from original
manuscript drawings. Infor-
mation shown as of date of
field check.

THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS
FOR SALE BY U.S. GEOLOGICAL SURVEY, DENVER, COLORADO 80225
OR RESTON, VIRGINIA 22092

1	2	3	1 Dean Ranch
4	5	2 Fort Ranch	3 Hillburn City SW
6	7	4 Buckeye NW	5 Lovington NW
		6 Dog Lake	7 Buckeye
		8 Lovington SW	

ADJOINING 7.5 QUADRANGLE NAMES

RECEIVED
APR 01 1998
Environmental Bureau
Oil Conservation Division

ROAD LEGEND
Improved Road
Unimproved Road
Trail
Interstate Route U.S. Route State Route

BUCKEYE NE, NEW MEXICO
PROVISIONAL EDITION 1985

32103-HS-TF-024

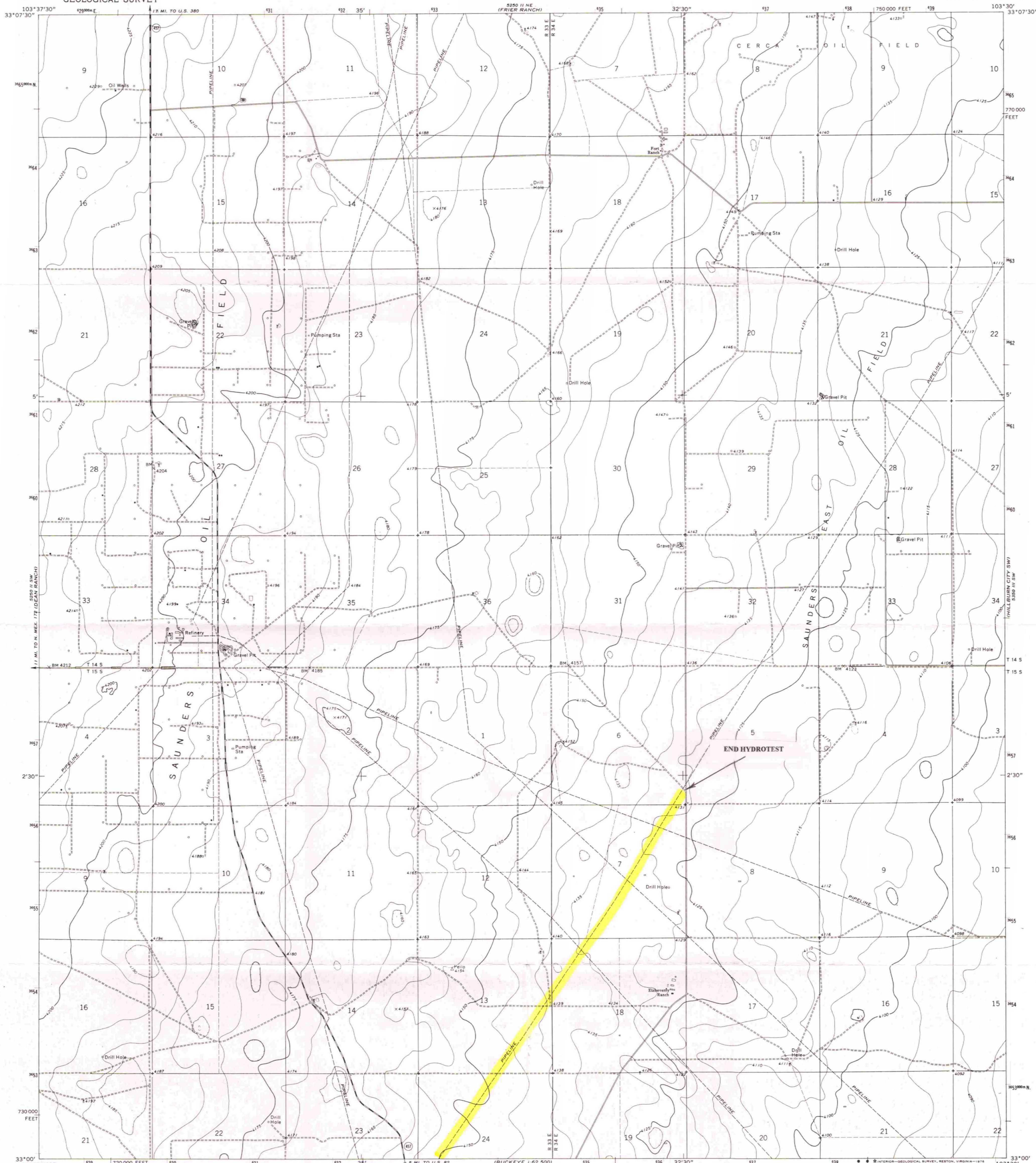
SHT. 2 of 3

5250 II NW
(COOPER-RAND)
RANCH

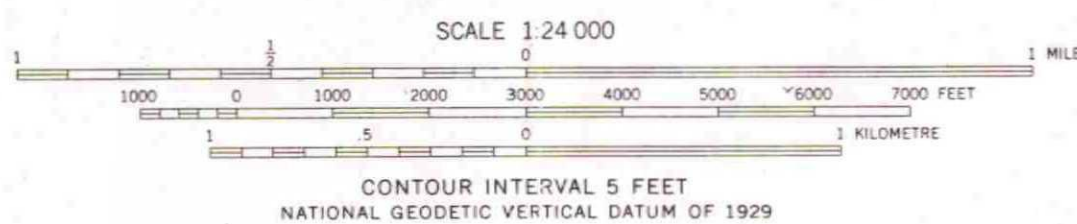
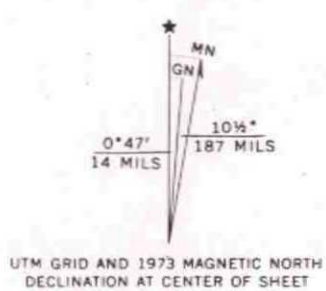
UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

FORT RANCH QUADRANGLE
NEW MEXICO—LEA CO.
7.5 MINUTE SERIES (TOPOGRAPHIC)

5250 III NW
(ALSTON RANCH)
RANCH



Mapped, edited, and published by the Geological Survey
Control by USGS and NOS/NOAA
Topography by photogrammetric methods from aerial
photographs taken 1971. Field checked 1973
Projection and 10,000-foot grid ticks: New Mexico
coordinate system, east zone (transverse Mercator)
1000-metre Universal Transverse Mercator grid ticks,
zone 13, shown in blue. 1927 North American datum
Fine red dashed lines indicate selected fence lines



ROAD CLASSIFICATION	
Primary highway, hard surface	Light-duty road, hard or improved surface
Secondary highway, hard surface	Unimproved road
Interstate Route	U. S. Route
	State Route



THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS
FOR SALE BY U.S. GEOLOGICAL SURVEY, DENVER, COLORADO 80225, OR RESTON, VIRGINIA 22092
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

RECEIVED
APR 01 1998
Environmental Bureau
Oil Conservation Division

FORT RANCH, N. MEX.
N3300—W10330/7.5
1973
AMS 5250 II SE—SERIES V881

SHT. 3 of 3

Laboratory Data



TALEM ENVIRONMENTAL SERVICES
306 WEST BROADWAY AVENUE
FORT WORTH, TX 76104
TEL: (817) 335-1186
FAX: (817) 335-9830

Date of Report: 03/06/98

TALEM SRF No: 19228
Date Collected: 02/24/98 Time: 09:30
Collected By: Client
Date Received: 02/26/98

Attention: Ken Havens
Natural Gas Pipeline
HCR 71 Box 170
Maljamar NM 88264

TALEM Project No: 98021186
TALEM Lab ID No: 98-0002834

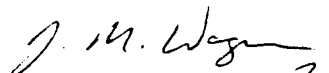
Sample Matrix: Water

Client Account No: 1960
Client Project No: 901-7102-9111
Sample Description: 167-Pigging Project-Smart Pig/Hydro WO Fill Water

	Result	Unit	Dltn Fctr	Test Procedure	LOQ	Test A/I Date	QC Ref Number
WET CHEM							
Alkalinity, Bicarbonate as CaCO3	150	mg/L	1	EPA310.1	20	VKJ 03/04	22059
Alkalinity, Carbonate as CaCO3	<20	mg/L	1	EPA310.1	20	VKJ 03/04	22059
Alkalinity, Phenolphthalein as CaCO3	<20	mg/L	1	EPA310.1	20	VKJ 03/04	22059
Alkalinity, Total, as CaCO3	150	mg/L	1	EPA310.1	20	VKJ 03/04	22059
Chemical Oxygen Demand	<25	mg/L	1	EPA410.4	25	VKJ 02/27	21973
Chloride, Total	48	mg/L	1	EPA325.3	2.0	VKJ 03/04	22062
Conductivity, Specific	500 @ 25C	umhos/cm	1	EPA120.1	5.0	VKJ 03/05	22089
pH	7.3 @ 22C	None	1	EPA150.1	4.0	TMT 02/26	21937
Solids, Total Suspended	<2.0	mg/L	1	EPA160.2	2.0	DAK 02/27	21962
Sulfate, Total	43	mg/L	5	EPA375.4	25	VKJ 03/04	22064
INORGANIC METALS							
Calcium, Total	53	mg/L	1	SW6010A	0.60	DAB 03/04	22075
Iron, Total	1.3	mg/L	1	SW6010A	0.50	DAB 03/04	22075
Magnesium, Total	10	mg/L	1	SW6010A	0.30	DAB 03/04	22075
ORGANIC							
Oil & Grease, Gravimetric, Total	<6.1	mg/L	1.227	EPA413.1	6.1	KCB 03/03	22035

Distribution of Report
Ken Havens
David Vicini

Reviewed and Approved By:


J. R. "Tag" Coolidge
President

fks
.prt
03/06/98 10:52:01 AM
1

TALEM Laboratory
QC EXECUTIVE SUMMARY REPORT

execs

Ken Havens
Natural Gas Pipeline
HCR 71 Box 170
Maljamar NM 88264

Project Number: 98021186

THE FOLLOWING IS A SUMMARY OF THE QA/QC DATA EVALUATION FOR ALL QC DATA ASSOCIATED WITH THE PROJECT NUMBER REFERENCED ABOVE. ACCURACY AND PRECISION DATA ARE AVAILABLE ON THE ATTACHED QC DATA REPORT.

QC Number	QUALITY CONTROL COMMENTS
-----	-----
22075	High method blank indicates all reported sample results are positive biased. SW-846 guidance does not support blank subtraction by the lab when reporting sample results.

03/06/98 10:52:09 AM

TALEM Laboratory
QC Report by Project NumberPROJQC.PRT
Page: 1Ken Havens
Natural Gas Pipeline
71 Box 170
Jamar NM 88264

Project Number: 98021186

-->> SPIKE ACCURACY DATA <--

QC Number	Test Name	NSR	MS	MS%	MSD	MSD%	SC	Spk% LL	Limits UL	F	TALEM Smpl ID	Def Rtg
Inorganic												
22075	Iron, Total	1.26	6.27	100	6.35	102	5.	80	120		0002834	95
22075	Magnesium, Total	9.98	12.8	94	12.9	97	3.	80	120		0002834	95
Organics												
22035	Oil & Grease, Gravimetric, Total	485.9	398.4	0	439.1	0	15.	46	168	*	0002868	100
Wet Chemistry												
21973	Chemical Oxygen Demand	39.6	133	93	133.	93	100.	56	137		0002774	100
22062	Chloride, Total	7.5	18.5	110	17.5	100	10.	71	128		0002781	100
22064	Sulfate, Total	8.64	13.8	103	13.4	95	5.	70	130		0002834	100

-->> LCS ACCURACY DATA <--

QC Number	Test Name	LCS True Val	LCS Measured	LCS % Rec	LCS LL	Limits UL	F	Def Rtg
Inorganic								
22075	Calcium, Total	6	6.03	100.5	90	110		95
22075	Iron, Total	5	5	100.0	90	110		95
22075	Magnesium, Total	3	3.01	100.3	90	110		95
Organics								
22035	Oil & Grease, Gravimetric, Total	15	11.6	77.3	72	138		100
Wet Chemistry								
21937	pH	9.01 @ 22C	9.00 @ 22C	.0	0	0		100
21962	Solids, Total Suspended	59	62	105.1	77	127		100
21973	Chemical Oxygen Demand	100	112	112.0	70	130		100
22059	Alkalinity, Bicarbonate as CaCO3	250	250	100.0	90	109		100
22059	Alkalinity, Total, as CaCO3	250	250	100.0	90	109		100
22062	Chloride, Total	50.0	49.5	99.0	91	111		100
22064	Sulfate, Total	10.0	9.75	97.5	83	112		100
22089	Conductivity, Specific	1410 @ 25C	1470 @ 25C	104.0	94	109		100

--> PRECISION DATA <--

QC Number	Test Name	LOQ	MS or Dup 1	MSD or Dup 2	Range	RPD	RPD UL	F	TALEM Smpl ID	Def Rtg
Inorganic										
22075	Calcium, Total	.6	53.4	54.5	N/A	2.03892	10		0002834	95
Wet Chemistry										
21937	pH	4.	7.27	7.24	.03	N/A	0		0002834	100
21962	Solids, Total Suspended	2.	.5	1.5	1	100	29	*	0002767	100
22059	Alkalinity, Bicarbonate as CaCO3	20.	150	150	N/A	0	10		0002834	100
22059	Alkalinity, Carbonate as CaCO3	20.	<20	<20	0	0	10		0000000	100
22059	Alkalinity, Phenolphthalein as CaCO3	20.	<20	<20	0	0	10		0002834	100
22059	Alkalinity, Total, as CaCO3	20.	150	150	N/A	0	10		0002834	100
22089	Conductivity, Specific	5.	498	498	N/A	0	10		0002834	100

-->> PRECISION DATA <--

QC Number	Test Name	LOQ	MS or Dup 1	MSD or Dup 2	Range	RPD	RPD UL	F	TALEM Smpl ID	Def Rtg
Inorganic										
22075	Iron, Total	.5	6.27	6.35	N/A	1.26782	20		0002834	95

03/06/98 10:52:15 AM

TALEM Laboratory
QC Report by Project Number

PROJQC.PRT
Page: 2

Ken Havens
Natural Gas Pipeline
R 71 Box 170
Aljamar NM 88264

Project Number: 98021186

--> PRECISION DATA <--

QC Number	Test Name	LOQ	MS or Dup 1	MSD or Dup 2	Range	RPD	RPD UL	F	TALEM Smpl ID	Def Rtg
22075	Magnesium, Total	.3	12.8	12.9	N/A	.778210	20	-	0002834	95
Organics										
22035	Oil & Grease, Gravimetric, Total	5.	398.4	439.1	N/A	9.71940	34		0002868	100
Wet Chemistry										
21973	Chemical Oxygen Demand	25.	133	133	N/A	0	24		0002774	100
22062	Chloride, Total	2.	18.5	17.5	N/A	5.55555	16		0002781	100
22064	Sulfate, Total	5.	13.8	13.4	.4	2.94117	16		0002834	100

03/06/98 10:52:21 AM

TALEM Laboratory
Method Blank Data by Project NumberPROMBD.PRT
Page: 1Ken Havens
Natural Gas Pipeline
R 71 Box 170
Jamar NM 88264

Project Number: 98021186

--> METHOD BLANK DATA <--

QC Number	Test Name	Method Blank	LOQ	Unit	Def Rtg
Inorganic					
22075	Calcium, Total	.0302	.6	mg/L	95
22075	Iron, Total	.0644	.05	mg/L	95
22075	Magnesium, Total	.00333	.3	mg/L	95
Organics					
22035	Oil & Grease, Gravimetric, Total	.2	5	mg/L	100
Wet Chemistry					
21962	Solids, Total Suspended	-2	2	mg/L	100
21973	Chemical Oxygen Demand	1.28	25	mg/L	100
22059	Alkalinity, Bicarbonate as CaCO3	2.5	20	mg/L	100
22059	Alkalinity, Carbonate as CaCO3	2.5	20	mg/L	100
22059	Alkalinity, Phenolphthalein as CaCO3	2.5	20	mg/L	100
22059	Alkalinity, Total, as CaCO3	2.5	20	mg/L	100
22062	Chloride, Total	.5	2	mg/L	100
22064	Sulfate, Total	-.983	5	mg/L	100
22089	Conductivity, Specific	< 5	5	umhos/cm	100

SAMPLE RECEIPT FORM

Work Order: 002672 Project Leader: MLS
 Account: 1960 Natural Gas Pipeline
 Contact: Ken Havens
 Address: Natural Gas Pipeline
 HCR 71 Box 170
 Maljamar NM 88264

Phone: 505-676-2640 Ext:

Date and Time Received: 2/26/98 12:14

Custody Seals on Cooler Intact?: Y N NA

Custody Seals on Container Intact?: Y N NA

Bubbles in Zero Head Space Container?: Y N NA

SRF No: 19228

Temp (deg C): 17.5

Preserved By: LAS

Received By: TJB

Audited By: TJB

Remarks:

Lab ID	Matrix	Sample Description	Container	Ct Type	Apparent Vol	Init pH	Final pH	Pres Code	Filtrati
<u>2834</u>	<u>wa</u>	<u>Fill Water</u>							
Analytes: Conduct, pH, TSS, Turb, Alknty-P, Alknty-C, Alknty-B, Alknty, Cl-, SO ₄ , COD, EPA413.1, Ca, Fe, Mg,									
			Lt	p	<u>1 Liter</u>	<u>N/A</u>	<u>6</u>	<u>N/A</u>	L F
			Lt	p	<u>↓</u>	<u>↓</u>	<u>6</u>	<u>↓</u>	L F
			Lt	p	<u>↓</u>	<u>↓</u>	<u>6</u>	<u>↓</u>	L F
			Lt	p	<u>↓</u>	<u>↓</u>	<u>6</u>	<u>↓</u>	L F
			Qt	g	<u>1 QUART</u>	<u>↓</u>	<u>6</u>	<u>↓</u>	L F
			Lt	p	<u>1 LITER</u>	<u>↓</u>	<u>6</u>	<u>↓</u>	L F
			40 ml	g	<u>40 ml</u>	<u>↓</u>	<u>N/A</u>	<u>N/A</u>	L F

Matrix: SL = Soil Container: P = Plastic Preserve: 1 = H₂SO₄, pH<2 6 = NaOH, pH>12, AAcd if Res
 WA = Water G = Glass 2 = HCL, pH<2 7 = NaOH, pH>9, Zn Acetate
 GW = Ground Water O = Other (Specify) 3 = HNO₃, pH<2 8 = Pre-Preserved at Lab
 OT = Other (Specify) F = Filtered in the field 4 = Na₂S₂O₃
 SG = Sludge L = Filtered in the Lab 5 = MnSO₄/A.I. Azide
 DW = Drinking Water V = Vial

TICR: _____



TEL (817) 335-1186

306 W. Broadway Ave., Ft. Worth, TX 76104

FAX (817) 335-9830

CHAIN-OF-CUSTODY RECORD

Fill all containers and make sure the 40ml vial is without air bubbles for pH analysis.

Account #

1960

(w.o. 2012)

2-26-98

SPF # 19228

Contact: Ken Havens

Company:

Naturel Gas Pipeline

Address:

HCE 71 Box 170

Telephone:

505-676-2640

Project No:

08-7102-9111

Project Name/Location:

Maljamar, NM 88264
167-Pigging Project - Smart Pig/
Hydro W.O

TAT: Normal

PO#: Ken Havens

ANALYSES

SAMPLE INFORMATION

COLLECTION TYPE

CONTAINER/PRESERVATION

No.

Sample Identification

Matrix

Date* Time

G

C

#

Volume

G

P

Preservation

Z#

Ca, Mg, Fe

COD

O: & G: Tot

pH

Cl⁻, SO₄, TSS,

Conduct, Turb,

Alkalinity (all)

Fill water

Matrix

Date* Time

G

C

#

Volume

G

P

Preservation

Z#

Ca, Mg, Fe

COD

O: & G: Tot

pH

Cl⁻, SO₄, TSS,

Conduct, Turb,

Alkalinity (all)

Wt

Matrix

Date* Time

G

C

#

Volume

G

P

Preservation

Z#

Ca, Mg, Fe

COD

O: & G: Tot

pH

Cl⁻, SO₄, TSS,

Conduct, Turb,

Alkalinity (all)

Wt

Matrix

Date* Time

G

C

#

Volume

G

P

Preservation

Z#

Ca, Mg, Fe

COD

O: & G: Tot

pH

Cl⁻, SO₄, TSS,

Conduct, Turb,

Alkalinity (all)

Wt

Matrix

Date* Time

G

C

#

Volume

G

P

Preservation

Z#

Ca, Mg, Fe

COD

O: & G: Tot

pH

Cl⁻, SO₄, TSS,

Conduct, Turb,

Alkalinity (all)

Relinquished by: (Sign)

Date/Time

Received by: (Sign)

Relinquished by: (Sign)

Date/Time

Received by: (Sign)

Relinquished by: (Sign)

Date/Time

Received by: (Sign)

Relinquished by: (Sign)

Date/Time

Received by: (Sign)

A separate Chain-of-Custody must be completed for each day of sample collection.



ENVIRONMENTAL SERVICES
306 W. Broadway Avenue
Fort Worth, TX 76104
TEL: (817) 335-1186
FAX: (817) 335-9830

Attention: Ken Havens
Natural Gas Pipeline
HCR 71 Box 170
Maljamar NM 88264

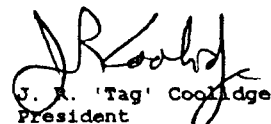
Client Account No: 1960
Client Project No: 001-7102-9111
Sample Description: Pigging and Hydrotesting Line, Per.

Page: 1
Date of Report: 03/10/98
TALEM SRF No: 19422
Date Collected: 03/04/98 Time: 00:00
Collected By: Client
Date Received: 03/05/98
TALEM Project No: 98031345
TALEM Lab ID: 98-0003162
Sample Matrix: Water

Wet Chemistry	Result	Unit	Diltn Fctr	Test Procedure	LOQ	A/I	Test Date	Test Time
Turbidity	3.0	NTU	1	EPA180.1	0.10	VKJ	03/06/98	12:30
QUALITY CONTROL INFORMATION	Blank	LCS Measured	LCS True	% Recovery	Dup 1	Dup 2		
Turbidity	0.0465-	3.05	3.20	95.3	0.000	0.000		

Distribution of Report: David Vicini - Natural Gas Pipeline

Reviewed and Approved By:


J. A. 'Tag' Coolidge
President

03/05/98 12:38:08 PM

TALAM Laboratory
306 W. Broadway, Ft. Worth TX 76104 (817)355-1186SCC.PR
TJB
Page:

SAMPLE RECEIPT FORM

Work Order: 002672 Project Leader: MLS
 Account: 1960 Natural Gas Pipeline
 Contact: Ken Havens
 Address: Natural Gas Pipeline
 HCR 71 Box 170
 Maljamar NM 88264

Phone: 505-676-2640 Ext:

Date and Time Received: 3/5/98 11:53

SRF No: 19422

Temp (deg C): 4.5Custody Seals on Cooler Intact?: Y N NAPreserved By: N/ACustody Seals on Container Intact?: Y N NAReceived By: TJBBubbles in Zero Head Space Container?: Y N NAAudited By: TJB

Remarks: Sample manager assumes that the sample
was collected on 3/4/98. Confirmed (MLS)

Lab ID	Matrix	Sample Description	Container	Ct Type	Apparent Vol	Init pH	Final pH	Pres Code	Filtrati
<u>3162</u>	<u>wa</u>	<u>Project 001-7102-9111: Rigging</u> <u>and hydrotesting line, per.</u>							

Analytes: Turb,

Liter p 1 Liter N/A 5 N/A L F

Matrix: SL = Soil	Container: P = Plastic	Preserve: 1 = H2SO4, pH<2	6 = NaOH, pH>12, AAcid if Res
WA = Water	G = Glass	2 = HCL, pH<2	7 = NaOH, pH>9, Zn Acetate
GW = Ground Water	O = Other (Specify)	3 = HNO3, pH<2	8 = Pre-Preserved at Lab
OT = Other (Specify)	F = Filtered in the field	4 = NaS2O3	
SG = Sludge	L = Filtered in the Lab	5 = MnSO4/A.I. Azide	
DW = Drinking Water	V = Vial		

TICR: _____

Hydrotest Sampling Plan

Natural Gas Pipeline Co. of America
Hydrotest Sampling Plan

Upon completion of the hydrostatic test, the water is now ready for discharge. Discharge requirements stipulated under permit conditions shall be incorporated during de-watering operations.

1. Personnel responsible for the hydrostatic test shall conduct an analytical laboratory at least two weeks prior to the scheduled test to allow sufficient shipping time of sample containers. Only containers supplied by a laboratory shall be utilized for sampling hydrostatic test water. Contact the Environmental, Safety and Health Division for a list of currently approved laboratories for analytical services.
2. The hydrostatic test water must be discharged directly into the pit under a controlled rate.
3. Discharge water must be controlled to prevent contact with ground surfaces surrounding the pit.
4. Obtain water samples approximately every 100,000 gallons with a minimum of two samples. The last sample must be taken from the last 1/4 mile of pipeline. Care should be taken not to contaminate the sample with any miscellaneous ground debris.
5. Sample, label and package in accordance with specific laboratory requirements. Complete and forward chain-of-custody forms to laboratory.
6. In addition to the reporting requirements prior to discharge, the following information shall be recorded for each discharge point and reported along with the monitoring requirements required by the state.
 - a. Location of discharge point.
 - b. Date(s) that discharge occurred.
 - c. Starting and ending time of discharge.
 - d. Approximate total volume of the discharge.
 - e. Any other pertinent information or comments.
7. Forward a copy of all water analysis and discharge information to Environmental Services within a 30 day period.

Water Level Data
Well Records

DTID 11066
ELEV: 4229.40
USE: S
DEPTH:
GEO. UNIT: 1210GLL

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM

DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS
MAR 22, 1961	157.39 F	MAR 23, 1971	154.49 R	APR 06, 1981	160.07 R	DEC 20, 1990	162.19 S
FEB 15, 1965	157.49 R	MAY 13, 1976	157.47	FEB 25, 1986	161.09		

HIGHEST 157.47 MAY 13, 1976
LOWEST 161.09 FEB 25, 1986

SITE ID: 325600103412401
LOC: 169.33E.08.31133
DTID 11067
ELEV: 4239.00
USE: S
DEPTH:
GEO. UNIT: 1210GLL

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM

DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS
MAR 27, 1961	161.22 F	MAR 23, 1971	162.41 R	APR 06, 1981	164.48	DEC 12, 1990	166.29
FEB 15, 1965	171.07 R	MAY 13, 1976	162.50	FEB 25, 1986	165.39	FEB 13, 1996	168.40 S

HIGHEST 162.50 MAY 13, 1976
LOWEST 166.29 DEC 12, 1990

10DATE: 03/04/97

PROVISIONAL GROUNDWATER DATA LEA COUNTY, NM.

PAGE 526

SITE ID: 325609103371101
LOC: 169.33E.12.133214
DTID 1013P
ELEV: 4173.10
USE: U
DEPTH: 186
GEO. UNIT: 1210GLL

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM

DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS
FEB 01, 1961	122.05	JAN 04, 1967	121.69	JAN 05, 1970	121.50	MAY 13, 1976	122.63
FEB 16, 1965	121.82	JAN 02, 1968	121.55	JAN 17, 1971	121.91	APR 02, 1981	124.34
FEB 09, 1966	121.71	JAN 14, 1969	121.55	JAN 14, 1972	122.20	JAN 28, 1986	125.93

HIGHEST 121.55 JAN 02, 1968
LOWEST 125.93 JAN 28, 1986

SITE ID: 325446103381801
LOC: 169.33E.08.31133
DTID 11068

ELEV: 4185.00
USE: H
DEPTH: 148
GEO. UNIT: 1210GLL

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM

DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS
MAR 28, 1966	135.18 R	MAY 13, 1976	135.78	JAN 28, 1986	138.51		
MAR 23, 1971	135.67 R	APR 06, 1981	137.25	DEC 20, 1990	140.13		
HIGHEST 135.78		MAY 13, 1976					
LOWEST 140.13		DEC 20, 1990					

SITE ID: 325507103405101
LOC: 168.33E.17.23321
OTID 13308
ELEV: 4241.00
USE: U
DEPTH:
GEO. UNIT: 1210GLL

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM

DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS
APR 07, 1981	175.41	JAN 28, 1986	176.32	DEC 13, 1990	177.31
HIGHEST 175.41		APR 07, 1981			
LOWEST 177.31		DEC 13, 1990			

DATE: 03/04/97

PROVISIONAL GROUNDWATER DATA LEA COUNTY, NM.

PAGE 325

SITE ID: 325354103391001
LOC: 168.33E.22.33434
OTID 11049
ELEV: 4184.90
USE: S
DEPTH:
GEO. UNIT: 1210GLL

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM

DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS
MAR 28, 1961	135.67	MAY 13, 1976	143.70	JAN 17, 1986	147.16	FEB 13, 1996	144.27 S
MAR 23, 1971	142.32 R	APR 07, 1981	145.57	DEC 11, 1990	147.32		
HIGHEST 135.67		MAR 28, 1961					
LOWEST 147.32		DEC 11, 1990					

SITE ID: 325345103365501
LOC: 168.33E.23.123221
OTID 11070
ELEV: 4157.40
USE: U
DEPTH: 160

APR 01 1998

WELL RECORD

INSTRUCTIONS: This form should be executed in triplicate, preferably typewritten, and submitted to the nearest district office of the State Engineer. All sections, except Section 5, shall be answered as completely and accurately as possible when any well is drilled, repaired or deepened. When this form is used as a plugging record, only Section 1A and Section 5 need be completed.

JOHN DRILLING CO.
BOX 6157

Section 1

(Plat of 640 acres)

(A) Owner of well _____
Street and Number _____ TEXAS
City _____ State _____
Well was drilled under Permit No. L-6072 and is located in the
1/4 SW 1/4 SE 1/4 of Section 11 Twp. 18 S Rge. 33E
Drilling Contractor LOVE License No. 1121 S. Love
Street and Number _____
City Red 2 State 67
Drilling was commenced L 19____
Drilling was completed 163 19____

Elevation at top of casing in feet above sea level shallow Total depth of well 80
State whether well is shallow or artesian _____ Depth to water upon completion _____

Section 2 PRINCIPAL WATER-BEARING STRATA

No.	Depth in Feet		Thickness in Feet	Description of Water-Bearing Formation
	From	To		
1				
2				
3				
4				
5				

Section 3 RECORD OF CASING

Dia in	Pounds ft.	Threads in	Depth		Feet	Type Shoe	Perforations	
			Top	Bottom			From	To
<u>65/8</u>								

Section 4 RECORD OF MUDDING AND CEMENTING

Depth in Feet		Diameter Hole in in.	Tons Clay	No. Sacks of Cement	Methods Used
From	To				
			<u>1 sack</u>		<u>gravel packed</u>

Section 5 PLUGGING RECORD

Name of Plugging Contractor _____ License No. _____
Street and Number _____ City _____ State _____
Tons of Clay used _____ Tons of Roughage used _____ Type of roughage _____
Plugging method used _____ Date Plugged _____ 19____
Plugging approved by: _____

Cement Plugs were placed as follows:

No.	Depth of Plug		No. of Sacks Used
	From	To	

Basin Supervisor

FOR USE OF STATE ENGINEER ONLY

Date Received APR 03 1998

82 18 11 03 APR 1998

File No. L-6072 Use OWB Location No. 16.33.23.430

LOG OF WELL

The undersigned hereby certifies that, to the best of his knowledge and belief, the foregoing is a true and correct record of the above described well.

Chas. F. Smith
Well Driller

WELL LOG

WELL RECORD

INSTRUCTIONS: This form should be executed in triplicate, preferably typewritten, and submitted to the nearest district office of the State Engineer. All sections, except Section 5, shall be answered as completely and accurately as possible when any well is drilled, repaired or deepened. When this form is used as a plugging record, only Section 1A and Section 5 need be completed.

Section 1

(A) Owner of well CHARLIE MARTIN
Street and Number 270 S. Eighth St.
City Artesia, New Mexico State
Well was drilled under Permit No. L-5590 and is located in the
SW 1/4 SS 1/4 SW 1/4 of Section 14 Twp. 16 N Rge. 33 E
(B) Drilling Contractor P. Drilling Co. License No. WP-287
Street and Number 1121 S. Love
City Lovington State New Mexico
Drilling was commenced April 5 19 65
Drilling was completed 7 19 65

(Plat of 640 acres)

Elevation at top of casing in feet above sea level Total depth of well 150
State whether well is shallow or artesian Shallow Depth to water upon completion 130

Section 2

PRINCIPAL WATER-BEARING STRATA

No.	Depth in Feet		Thickness in Feet	Description of Water-Bearing Formation
	From	To		
1	120	150		
2				
3				
4				
5				

Section 3

RECORD OF CASING

Dia in.	Pounds ft.	Threads in	Depth		Feet	Type Shoe	Perforations	
			Top	Bottom			From	To
6 1/2"			0	150	150		130	150

Section 4

RECORD OF MUDDING AND CEMENTING

Depth in Feet		Diameter Hole in in.	Tons Clay	No. Sacks of Cement	Methods Used
From	To				
			3 sacks		

Section 5

PLUGGING RECORD

Name of Plugging Contractor License No.
Street and Number City State
Tons of Clay used Tons of Roughage used Type of roughage
Plugging method used Date Plugged 19
Plugging approved by: Cement Plugs were placed as follows:

No.	Depth of Plug		No. of Sacks Used
	From	To	

Basin Supervisor

FOR USE OF STATE ENGINEER ONLY

Date Received

1965 APR 16 AM 8:16
STATE ENGINEER OFFICE

File No. L-5590

Use Don & Slack Location No. 1/4 33, 1/4 33

Section 6

LOG OF WELL

[illegible]

The undersigned hereby certifies that, to the best of his knowledge and belief, the foregoing is a true and correct record of the above described well.

Chas. L. Pratt
Well Driller

WELL RECORD

INSTRUCTIONS: This form should be executed in triplicate, preferably typewritten, and submitted to the nearest district office of the State Engineer. All sections, except Section 5, shall be answered as completely and accurately as possible when any well is drilled, repaired or deepened. When this form is used as a plugging record, only Section 1A and Section 5 need be completed.

Section 1

(Plat of 640 acres)

(A) Owner of well Nathan & Bradshaw Exp. & Drilling Co.
Street and Number 2607 E. Broadway
City Lubbock State Texas
Well was drilled under Permit No. L-2859 and is located in the
1/4 17 1/4 NE 1/4 of Section 11 Twp. 16 N Rge. 23 E
(B) Drilling Contractor Abbott Bros. License No. RD-46
Street and Number 1001 17th
City Lubbock State New Mexico
Drilling was commenced April 28 1955
Drilling was completed April 29 1955

Elevation at top of casing in feet above sea level _____ Total depth of well 255
State whether well is shallow or artesian shallow Depth to water upon completion 130

Section 2 PRINCIPAL WATER-BEARING STRATA

No.	Depth in Feet		Thickness in Feet	Description of Water-Bearing Formation
	From	To		
1	195	255	60	Water Sand
2				
3				
4				
5				

Section 3 RECORD OF CASING

Dia in.	Pounds ft.	Threads in	Depth		Feet	Type Shoe	Perforations	
			Top	Bottom			From	To
7	17	8	0	255	255	none	195	255

Section 4 RECORD OF MUDDING AND CEMENTING

Depth in Feet		Diameter Hole in in.	Tons Clay	No. Sacks of Cement		Methods Used
From	To					

MAY 5 1955

OFFICE

GROUND WATER SUPERVISOR

ROSWELL, NEW MEXICO

Section 5 PLUGGING RECORD

Name of Plugging Contractor _____ License No. _____
Street and Number _____ City _____ State _____
Tons of Clay used _____ Tons of Roughage used _____ Type of roughage _____
Plugging method used _____ Date Plugged _____ 19 _____
Plugging approved by: _____ Cement Plugs were placed as follows:

Basin Supervisor _____

FOR USE OF STATE ENGINEER ONLY

Date Received May 5, 1955

File No. L-2859 Use Oil Location No. 16-33-4-228

No.	Depth of Plug		No. of Sacks Used
	From	To	

LOG OF WELL

The undersigned hereby certifies that, to the best of his knowledge and belief, the foregoing is a true and correct record of the above described well

Marshall Abbott
Well Driller

WELL RECORD

INSTRUCTIONS: This form should be executed in triplicate, preferably typewritten, and submitted to the nearest district office of the State Engineer. All sections, except Section 5, shall be answered as completely and accurately as possible when any well is drilled, repaired or deepened. When this form is used as a plugging record, only Section 1A and Section 5 need be completed.

Section 1

(A) Owner of well NOVAY DRILLING COMPANY
Street and Number BOX 924
City MOORE State N.M.
Well was drilled under Permit No. L-6611(E) and is located in the
SW 1/4 SW 1/4 SW 1/4 of Section 23 Twp. 16 Rge. 33
(B) Drilling Contractor ABBOTT BROS. License No. WD-46
Street and Number BOX 637
City MOORE, N.M. State _____
Drilling was commenced NOV. 17, 1969 19____
Drilling was completed NOV. 19, 1969 19____

(Plat of 640 acres)

Elevation at top of casing in feet above sea level _____ Total depth of well 230
State whether well is shallow or artesian _____ Depth to water upon completion 160

Section 2

PRINCIPAL WATER-BEARING STRATA

No.	Depth in Feet		Thickness in Feet	Description of Water-Bearing Formation
	From	To		
1	160	230	70	water sand
2				
3				
4				
5				

Section 3

RECORD OF CASING

Dia in.	Pounds ft.	Threads in	Depth		Feet	Type Shoe	Perforations	
			Top	Bottom			From	To
7	20	8	1	230	230	none	160	230

Section 4

RECORD OF MUDDING AND CEMENTING

Depth in Feet		Diameter Hole in in.	Tons Clay	No. Sacks of Cement	Methods Used
From	To				

Section 5

PLUGGING RECORD

Name of Plugging Contractor _____ License No. _____
Street and Number _____ City _____ State _____
Tons of Clay used _____ Tons of Roughage used _____ Type of roughage _____
Plugging method used _____ Date Plugged _____ 19____
Plugging approved by: _____

Cement Plugs were placed as follows:

No.	Depth of Plug		No. of Sacks Used
	From	To	

Basin Supervisor

FOR USE OF STATE ENGINEER ONLY

Date Received 93 18 11 00 NOV 1991

Section 6

LOG OF WELL

[illegible]

The undersigned hereby certifies that, to the best of his knowledge and belief, the foregoing is a true and correct record of the above described well.

Well Driller

Aggregate Resources and Geology Map

EXPLANATION

- | | | |
|------------|--|---|
| QUATERNARY | | Eolian deposits
Wind-blown sand, primarily active or recently active dune areas with a significant amount of coppice dunes |
| | | Lake deposits
Very fine-grained silt and clay |
| | | Alluvium and bolson deposits
Sand, silt and clay with local deposits of soft to nodular caliche and relatively well-stabilized, non-dunal sand |
| | | Caliche
Medium to well-indurated, nodular caliche; locally having a well-cemented, laminar caprock |
| | | Pediment deposits
Discontinuous deposits of silt, clay and gravel with local encrustations of soft, nodular caliche; rarely having a thin laminated caprock |
| TERTIARY | | Gatuna Formation
Orange to orange-red silts and clays with discontinuous interbeds of fine-grained, partly cemented sand and gravel derived from the Ogallala Formation; includes collapse breccia from Triassic and Permian rocks |
| | | Ogallala Formation
Usually exposed, well indurated, laminated, often brecciated caliche caprock that grades downward into nodular caliche overlying soft sandstone, clay and cemented gravel |
| TRIASSIC | | Triassic rocks undivided
Maroon sandstone, siltstone and shale |
| | | Dewey Lake Redbeds
Bright-red to reddish-brown silts and shales |
| PERMIAN | | Rustler Formation
Anhydrite, gypsum, interbedded red and green sandy clay, and some beds of dolomite |
| | | Developed pit or quarry |
| | Prospect pit or quarry | |
| | Selected exploration sites and local rock outcrops | |

RECEIVED

APR 01 1998

Environmental Bureau
Oil Conservation Division

PLANNING AND PROGRAMMING DIVISION
BUREAU OF PUBLIC ROADS
R. 29E. R. 30E. R. 31E. R. 32E. R. 33E. R. 34E.

AGGREGATE RESOURCES and GEOLOGY

MALJAMAR QUADRANGLE-107

CHAVES & LEA COUNTIES

