

3R -

37

**GENERAL
CORRESPONDENCE**

YEAR(S):

1991

②

OIL CONSERVATION DIVISION
RECEIVED

RECEIVED
NOV 9 1991
OIL CON. DIV.
DIST. 3

NOV 9 1991

Pit Inventory Sheet

Date: 10-9-91

Location: Field Blanco Manzana
Facility Well #1
Lease MARCO Gas Com #1

Cond. Oil ☒ Gas ☒ Both ☐
Other ☐

Site Access Security: None
(Fenced, locked gates, inside operating plant or facility)

4 pits
Approximate size 20'x20' feet each

Operating status Shut-in Indicate: Sweet ☒ Sour ☐
(operating suspended shut-in)

List pit use Blow/Drain Combinations
(flare pit, blow pit, etc.)

Age of pits 1953 (30+ yrs.) List present contents Old reclaimed pits
(oil/water/salt water/sludge/empty)

Frequency of use — Last time used 6 yrs. +

Type and quantity of any other waste disposed in pit UNKNOWN

(Check operating history through discussions with company personnel and review of well file. Determine if well workover fluids, frac fluids, produced water oil spill debris, lube oils, solvents or any other chemicals may have been stored or disposed in pit or pond.)

Summary of historical activities when materials were discharged to the pit:

Produced water and associated liquids
May have been a central disposal site?

Description of cost of pit removal and replacement: —

est. — \$180,000 \$260,000

Note: Additional testing to follow.

Contacts: Names Phone Number

Operator: Amoco

Foreman: Baynard Duke

Env. Contact: Buddy Shaw

Description of neighboring land use and environmental sensitivities:

e.g., agriculture, forest, federal or private lands

Number and location of Residents Glen Rhodes — Scott
MAKette

Indicate type and location of surface waters

3 nearby water wells

Are these waters downlope? Yes

* Comments: All three wells tested OK! ① BTEX and
② State Water
Quality stds.

* Indicate factors affecting prioritizations: i.e. Regulatory request for decommissioning, public complaints, potential for ground water contamination, near surface waters, near residences, site topography and drainage etc., and overall aesthetics.

Attached

PHOTOS AND LAB RESULTS ATTACHED

2 let me know if you need these!

Thanks,
Buddy

DATE RECEIVED
NOV 15 1991

Monitor Well

CLIENT: Amoco

DATE REPORTED: 11/11/91

ID:

SITE: Marcotte # 1 Pit

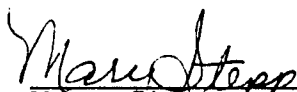
DATE RECEIVED: 10/25/91

LAB NO: F7566

DATE COLLECTED: 10/25/91

Lab pH (s.u.).....	7.59
Lab conductivity, umhos/cm.....	1070
Lab resistivity, ohm-m.....	9.36
Total dissolved solids (180), mg/L..	696
Total dissolved solids (calc), mg/L.	699
Total alkalinity as CaCO ₃ , mg/L.....	346
Total hardness as CaCO ₃ , mg/L.....	105
Sodium absorption ratio.....	9.53
Total nitrate and nitrite, mg/L.....	<0.02

	mg/L	meq/L
Bicarbonate as HCO ₃	422	6.92
Carbonate as CO ₃	0	0
Chloride.....	56.5	1.59
Sulfate.....	166	3.45
Calcium.....	42	2.1
Magnesium.....	0.05	<0.01
Potassium.....	2.6	0.07
Sodium.....	225	9.77
Major cations.....		11.9
Major anions.....		12
Cation/anion difference.....		0.09 %


Mary Stepp
Lab Director


Wanda Orso
Water Lab Supervisor

Monitor well

CLIENT: Amoco

DATE REPORTED: 11/11/91

ID:

SITE: Marcotte #2 - P.†

DATE RECEIVED: 10/30/91

LAB NO: F7574

DATE COLLECTED: 10/29/91

Lab pH (s.u.).....	7.20
Lab conductivity, umhos/cm.....	1060
Lab resistivity, ohm-m.....	9.43
Total dissolved solids (180), mg/L..	552
Total dissolved solids (calc), mg/L.	613
Total alkalinity as CaCO ₃ , mg/L.....	313
Total hardness as CaCO ₃ , mg/L.....	316
Sodium absorption ratio.....	2.40
Total nitrate and nitrite, mg/L.....	<0.02

	mg/L	meq/L
Bicarbonate as HCO ₃	381	6.25
Carbonate as CO ₃	0	0
Chloride.....	31.9	0.9
Sulfate.....	175	3.65
Calcium.....	102	5.08
Magnesium.....	15.2	1.25
Potassium.....	2.8	0.07
Sodium.....	98.2	4.27
Major cations.....		10.7
Major anions.....		10.8
Cation/anion difference.....		0.65 %

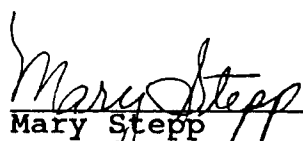
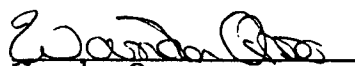
Mary Stepp
Mary Stepp
Lab Director

Wanda Orso
Wanda Orso
Water Lab Supervisor

*Monitor well*CLIENT: Amoco
ID: # 3 - Pit
SITE: Marcotte
LAB NO: F7601DATE REPORTED: 11/11/91
DATE RECEIVED: 11/04/91
DATE COLLECTED: 11/01/91

Lab pH (s.u.).....	7.36
Lab conductivity, umhos/cm.....	996
Lab resistivity, ohm-m.....	10
Total dissolved solids (180), mg/L..	682
Total dissolved solids (calc), mg/L.	688
Total alkalinity as CaCO ₃ , mg/L.....	338
Total hardness as CaCO ₃ , mg/L.....	438
Sodium absorption ratio.....	1.60
Total nitrate and nitrite, mg/L.....	<0.02

	mg/L	meq/L
Bicarbonate as HCO ₃	412	6.76
Carbonate as CO ₃	0	0
Chloride.....	38.3	1.08
Sulfate.....	199	4.15
Calcium.....	150	7.48
Magnesium.....	15.56	1.28
Potassium.....	5.4	0.14
Sodium.....	77.2	3.36
Major cations.....		12.3
Major anions.....		12
Cation/anion difference.....		1.12 %


Mary Stepp
Lab Director
Wanda Orso
Water Lab Supervisor

*Monitor well*CLIENT: Amoco
ID: #4 - P.4
SITE: Marcotte
LAB NO: F7588DATE REPORTED: 11/11/91
DATE RECEIVED: 10/31/91
DATE COLLECTED: 10/31/91

Lab pH (s.u.).....	7.32
Lab conductivity, umhos/cm.....	1080
Lab resistivity, ohm-m.....	9.28
Total dissolved solids (180), mg/L..	630
Total dissolved solids (calc), mg/L.	633
Total alkalinity as CaCO ₃ , mg/L.....	315
Total hardness as CaCO ₃ , mg/L.....	406
Sodium absorption ratio.....	1.50
Total nitrate and nitrite, mg/L.....	0.08

	mg/L	meq/L
Bicarbonate as HCO ₃	384	6.29
Carbonate as CO ₃	0	0
Chloride.....	37.3	1.05
Sulfate.....	179	3.73
Calcium.....	143	7.12
Magnesium.....	12.04	0.99
Potassium.....	3.5	0.09
Sodium.....	69.6	3.03
Major cations.....		11.2
Major anions.....		11.1
Cation/anion difference.....		0.69 %


Mary Stepp
Lab Director
Wanda Orso
Water Lab Supervisor

CLIENT: Amoco
ID: 1215
SITE: Scott
LAB NO: F6993

*Domestic Water
Well - North of
Location*

DATE REPORTED: 08/30/91
DATE RECEIVED: 08/26/91
DATE COLLECTED: 08/26/91

6-9 Lab pH (s.u.)..... 7.52
Lab conductivity, umhos/cm..... 1350
Lab resistivity, ohm-m..... 7.43
1000 Total dissolved solids (180), mg/l.. 784
Total dissolved solids (calc), mg/l. 846
Total alkalinity as CaCO₃, mg/l..... 325
Total hardness as CaCO₃, mg/l..... 499
Sodium absorption ratio..... 1.98

	mg/l	meq/l
250 Bicarbonate as HCO ₃	397	6.5
600 Carbonate as CO ₃	0	0
Chloride.....	110	3.09
Sulfate.....	257	5.35
Calcium.....	146	7.3
Magnesium.....	32.5	2.67
Potassium.....	4.3	0.11
Sodium.....	102	4.43
Major cations.....		14.5
Major anions.....		14.9
Cation/anion difference.....		1.45 %

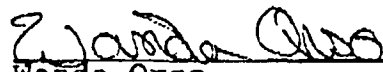
Wanda Orso

Wanda Orso
Water Lab Manager

CLIENT: Amoco *Domestic water* DATE REPORTED: 08/30/91
ID: 1220
SITE: Rhodes *well - South of* DATE RECEIVED: 08/26/91
LAB NO: F6994 *location* DATE COLLECTED: 08/26/91

Lab pH (s.u.)..... 7.69
Lab conductivity, umhos/cm..... 722
Lab resistivity, ohm-m..... 13.9
Total dissolved solids (180), mg/l.. 400
Total dissolved solids (calc), mg/l. 454
Total alkalinity as CaCO₃, mg/l..... 283
Total hardness as CaCO₃, mg/l..... 360
Sodium absorption ratio..... 0.627

	mg/l	meq/l
Bicarbonate as HCO ₃	346	5.67
Carbonate as CO ₃	0	0
Chloride.....	18.8	0.53
Sulfate.....	101	2.11
Calcium.....	119	5.95
Magnesium.....	15.1	1.24
Potassium.....	1.96	0.05
Sodium.....	27.4	1.19
Major cations.....		8.44
Major anions.....		8.3
Cation/anion difference.....		0.78 %


Wanda Orso
Water Lab Manager

CLIENT: Amoco
ID: 1210
SITE: Marcotte
LAB NO: F6995

Domestic water
well - East of
location

DATE REPORTED: 08/30/91
DATE RECEIVED: 08/26/91
DATE COLLECTED: 08/26/91

Lab pH (s.u.).....	7.61
Lab conductivity, umhos/cm.....	846
Lab resistivity, ohm-m.....	11.8
Total dissolved solids (180), mg/l..	570
Total dissolved solids (calc), mg/l.	571
Total alkalinity as CaCO ₃ , mg/l.....	311
Total hardness as CaCO ₃ , mg/l.....	406
Sodium absorption ratio.....	0.997

	mg/l	meq/l
Bicarbonate as HCO ₃	379	6.22
Carbonate as CO ₃	0	0
Chloride.....	28.5	0.8
Sulfate.....	160	3.34
Calcium.....	122	6.1
Magnesium.....	24.6	2.02
Potassium.....	2.74	0.07
Sodium.....	46.2	2.01
Major cations.....		10.2
Major anions.....		10.4
Cation/anion difference.....		0.75 %

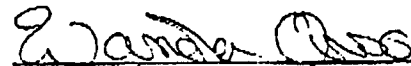

Wanda Orso
Water Lab Manager

CLIENT: Amoco
ID: 1200
SITE: #1 - P:†
LAB NO: F6991

DATE REPORTED: 08/30/91
DATE RECEIVED: 08/26/91
DATE COLLECTED: 08/26/91

Lab pH (s.u.).....	7.47
Lab conductivity, umhos/cm.....	1840
Lab resistivity, ohm-m.....	5.45
Total dissolved solids (180), mg/l..	1070
Total dissolved solids (calc), mg/l.	1210
Total alkalinity as CaCO ₃ , mg/l.....	749
Total hardness as CaCO ₃ , mg/l.....	255
Sodium absorption ratio.....	10.1

	mg/l	meq/l
Bicarbonate as HCO ₃	915	15
Carbonate as CO ₃	0	0
Chloride.....	113	3.18
Sulfate.....	181	3.77
Calcium.....	84.2	4.2
Magnesium.....	10.9	0.89
Potassium.....	2.74	0.07
Sodium.....	372	16.2
Major cations.....		21.3
Major anions.....		21.9
Cation/anion difference.....		1.41 %

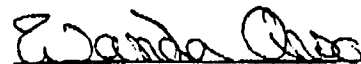

Wanda Orso
Water Lab Manager

CLIENT: Amoco
ID: 1205
SITE: #2-P.t
LAB NO: F6992

DATE REPORTED: 08/30/91
DATE RECEIVED: 08/26/91
DATE COLLECTED: 08/26/91

Lab pH (s.u.).....	7.41
Lab conductivity, umhos/cm.....	1070
Lab resistivity, ohm-m.....	9.33
Total dissolved solids (180), mg/l..	498
Total dissolved solids (calc), mg/l.	686
Total alkalinity as CaCO ₃ , mg/l.....	415
Total hardness as CaCO ₃ , mg/l.....	389
Sodium absorption ratio.....	2.19

	mg/l	meq/l
Bicarbonate as HCO ₃	506	8.29
Carbonate as CO ₃	0	0
Chloride.....	51.2	1.44
Sulfate.....	141	2.94
Calcium.....	122	6.1
Magnesium.....	20.5	1.68
Potassium.....	2.35	0.06
Sodium.....	99.6	4.33
Major cations.....		12.2
Major anions.....		12.7
Cation/anion difference.....		2.02 %


Wanda Orso
Water Lab Manager



2506 West Main Street
Farmington, New Mexico 87401
Tel. (505) 326-4737

SEP 1 1991

Case Narrative

On August 26, 1991 a sample set consisting of five samples was received by Inter-Mountain Laboratories - Farmington, NM. Enclosed is a copy of the chain of custody indicating the analytical parameters for which analysis was requested.

It is the policy of this laboratory to employ, whenever possible, analytical methods which have been approved by regulatory agencies. The methods which we use are referenced in SW-846, "Test Methods for Evaluating Solid Waste", USEPA, 1986; "Chemical Analysis of Water and Waste", USEPA, 1978; and other references as applicable. All reports in this package have the analytical methods and the references footnoted.

A Hewlett-Packard Gas Chromatograph was used for the analysis which determined the presence of target BTEX compounds in sample numbers Pit 1 and Pit 2.

Quality Assurance reports have been included in this package. These reports can be identified by the notation in the upper left hand corner of the report.

Please feel free to call if you have any questions.

Tony Tristano

Tony Tristano
Senior Analytical Chemist



2506 West Main Street
Farmington, New Mexico 87401
Tel. (505) 326-4737

VOLATILE AROMATIC HYDROCARBONS

Client:	Amoco Production	Report Date:	08-28-91
Sample ID:	Pit 1	Date Sampled:	08-26-91
Laboratory Number:	6991	Date Received:	08-26-91
Analysis Requested:	BTEX	Date Analyzed:	08-27-91
Sample Matrix:	Water	Preservative:	cool
Condition:	Ambient & Intact		

Parameter	Concentration (ug/L)	Det. Limit (ug/L)
-----	-----	-----
Benzene	2.7	2.5
Toluene	2.8	2.5
Ethylbenzene	ND	2.5
p,m-Xylene	22.2	2.5
o-Xylene	ND	2.5

SURROGATE RECOVERIES:	Parameter	Percent Recovery
	-----	-----
	Bromfluorobenzene	105.4 %

Method: Method 8020, Aromatic Volatile Organics, SW-846,
USEPA, (Sept. 1986).

ND - Parameter not detected at the stated detection limit.

Comments:

Tony Tristano
Analyst



2506 West Main Street
Farmington, New Mexico 87401
Tel. (505) 326-4737

VOLATILE AROMATIC HYDROCARBONS

Client:	Amoco Production	Report Date:	08-28-91
Sample ID:	Pit 2	Date Sampled:	08-26-91
Laboratory Number:	6992	Date Received:	08-26-91
Analysis Requested:	BTEX	Date Analyzed:	08-27-91
Sample Matrix:	Water	Preservative:	cool
Condition:	Ambient & Intact		

Parameter	Concentration (ug/L)	Det. Limit (ug/L)
Benzene	0.5	0.5
Toluene	ND	0.5
Ethylbenzene	ND	0.5
p,m-Xylene	3.7	0.5
o-Xylene	ND	0.5

SURROGATE RECOVERIES:	Parameter	Percent Recovery
	Bromfluorobenzene	104.8 %

Method: Method 8020, Aromatic Volatile Organics, SW-846,
USEPA, (Sept. 1986).

ND - Parameter not detected at the stated detection limit.

Comments:

Tony Tristano
Analyst

VOLATILE AROMATIC HYDROCARBONS

Client: Amoco Production
Sample ID: Scott — Domestic
Laboratory Number: 6993 water well
Analysis Requested: BTEX
Sample Matrix: Water
Condition: Ambient & Intact
Report Date: 08-28-91
Date Sampled: 08-26-91
Date Received: 08-26-91
Date Analyzed: 08-27-91
Preservative: cool

Parameter	Concentration (ug/L)	Det. Limit (ug/L)
-----	-----	-----
Benzene	ND	0.5
Toluene	ND	0.5
Ethylbenzene	ND	0.5
p,m-Xylene	ND	0.5
o-Xylene	ND	0.5

SURROGATE RECOVERIES:	Parameter	Percent Recovery
	-----	-----
	Bromfluorobenzene	103.0 %

Method: Method 8020, Aromatic Volatile Organics, SW-846,
USEPA, (Sept. 1986).

ND - Parameter not detected at the stated detection limit.

Comments:

Tony Triestino
Analyst



2506 West Main Street
Farmington, New Mexico 87401
Tel. (505) 326-4737

VOLATILE AROMATIC HYDROCARBONS

Client: Amoco Production
Sample ID: Rhodes - Domestic
Laboratory Number: 6994 water well
Analysis Requested: BTEX
Sample Matrix: Water
Condition: Ambient & Intact
Report Date: 08-28-91
Date Sampled: 08-26-91
Date Received: 08-26-91
Date Analyzed: 08-28-91
Preservative: cool

Parameter	Concentration (ug/L)	Det. Limit (ug/L)
Benzene	ND	0.5
Toluene	ND	0.5
Ethylbenzene	ND	0.5
p,m-Xylene	ND	0.5
o-Xylene	ND	0.5

SURROGATE RECOVERIES:	Parameter	Percent Recovery
	Bromfluorobenzene	88.3 %

Method: Method 8020, Aromatic Volatile Organics, SW-846,
USEPA, (Sept. 1986).

ND - Parameter not detected at the stated detection limit.

Comments:

Tony Tristano
Analyst



2506 West Main Street
Farmington, New Mexico 87401
Tel. (505) 326-4737

VOLATILE AROMATIC HYDROCARBONS

Client: Amoco Production
Sample ID: Marcotte - Domestic
Laboratory Number: 6995 water well
Analysis Requested: BTEX
Sample Matrix: Water
Condition: Ambient & Intact
Report Date: 08-28-91
Date Sampled: 08-26-91
Date Received: 08-26-91
Date Analyzed: 08-28-91
Preservative: cool

Parameter	Concentration (ug/L)	Det. Limit (ug/L)
Benzene	ND	0.5
Toluene	ND	0.5
Ethylbenzene	ND	0.5
p,m-Xylene	ND	0.5
o-Xylene	ND	0.5

SURROGATE RECOVERIES:	Parameter	Percent Recovery
	Bromfluorobenzene	87.6 %

Method: Method 8020, Aromatic Volatile Organics, SW-846,
USEPA, (Sept. 1986).

ND - Parameter not detected at the stated detection limit.

Comments:

Tony Tristano
Analyst