

3R -

100

**GENERAL  
CORRESPONDENCE**

**YEAR(S):**

2000-1997

**BLAGG ENGINEERING, INC.**

P.O. Box 87, Bloomfield, New Mexico 87413

Phone: (505)632-1199 Fax: (505)632-3903

April 19, 2000

Mr. William C. Olson - Hydrologist  
State of New Mexico Oil Conservation Division  
2040 South Pacheco  
State Land Office Building  
Santa Fe, NM 87505

RECEIVED

APR 27 2000

ENVIRONMENTAL BUREAU  
OIL CONSERVATION DIVISION

**RE: 1999 ANNUAL GROUNDWATER REPORTS  
SAN JUAN COUNTY, NEW MEXICO**

Dear Mr. Olson:

Blagg Engineering, Inc., on behalf of Cross Timbers Oil Company, respectfully submits the attached 1999 annual groundwater reports in which quarterly and/or annual sampling is currently being undertaken. This reporting adheres to the NMOCD's previously approved groundwater management plan.

A total of seven (7) well sites, listed on the following page, are associated with this correspondence. All work performed on these well sites have been incorporated into individual packets. Pit and/or landfarm closure documentation was included in the previous submitted reports.

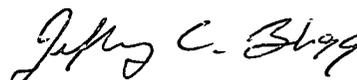
The summary, conclusions, and/or recommendations made within these reports are based on information made available from the enclosed material. Any site specific inquiries should be examined within the individual packets.

If you have questions, please call and contact either myself or Jeffrey C. Blagg. Thank you for your cooperation and assistance.

Sincerely,  
**BLAGG ENGINEERING, INC.**

  
Nelson Velez  
Staff Geologist

Reviewed by:

  
Jeffrey C. Blagg, P.E.  
President

**Attachments: Individual Well site packets**

cc: Denny Foust, Environmental Geologist, NMOCD District III Office, Aztec, NM  
Nina Hutton, Environmental & Safety Manager, Cross Timbers Oil Company, Ft. Worth, TX

NV/nv

PREV-99.CVL

**Cross Timbers Oil Co. 1999 Annual Groundwater Reports**

- |    |                          |                                    |
|----|--------------------------|------------------------------------|
| 1. | <b>Abrams J # 1</b>      | <b>Unit I, Sec. 29, T29N, R10W</b> |
| 2. | <b>Bergin GC # 1E</b>    | <b>Unit F, Sec. 21, T29N, R11W</b> |
| 3. | <b>Bruington GC # 1</b>  | <b>Unit E, Sec. 14, T29N, R11W</b> |
| 4. | <b>Rowland GC # 1</b>    | <b>Unit P, Sec. 25, T30N, R12W</b> |
| 5. | <b>State GC BS # 1</b>   | <b>Unit F, Sec. 21, T29N, R11W</b> |
| 6. | <b>Sullivan GC D # 1</b> | <b>Unit B, Sec. 26, T29N, R11W</b> |
| 7. | <b>Valdez A # 1E</b>     | <b>Unit G, Sec. 24, T29N, R11W</b> |

## **BLAGG ENGINEERING, INC.**

P.O. Box 87, Bloomfield, New Mexico 87413  
Phone: (505) 632-1199 Fax: (505) 632-3903

# RECEIVED

FEB 15 1999

February 11, 1999

ENVIRONMENTAL BUREAU  
OIL CONSERVATION DIVISION

Mr. William C. Olson -Hydrogeologist  
Environmental Bureau  
New Mexico Oil Conservation Division  
2040 Pacheco  
State Land Building  
Santa Fe, New Mexico 87505

RE: Cross Timbers Oil Co. Groundwater Monitoring (Amoco) 1996-1998 Reports  
San Juan County, New Mexico

Dear Mr. Olson:

The attached reports on groundwater monitoring at eight (8) previously owned Amoco well locations is being submitted for your review. These well sites have been acquired by Cross Timbers Co. as of December, 1997. The well names are listed on the following page of this correspondence. The reports for each individual well site are laid out in the following order;

- 1) Brief description of all activities which occurred during the investigation, sampling procedures, and/or interpretations, conclusions, and possible recommendations.
- 2) A summary spreadsheet contains laboratory BTEX, general chemistry (if applicable), and any other pertinent information.. The latest quarter/annual sampling results are shown along with all previous sampling conducted at the specified locations for comparison purposes.
- 3) Site and groundwater gradient maps, boring logs, and monitor well detail schematics.
- 4) Laboratory reports for each quarter/annual sampling event and a field summary spreadsheet revealing well elevations, water elevations, depth to water information, etc.
- 5) Quality Assurance/Quality Control data.

A copy of this report is also being submitted to Mr. Denny Foust at the Aztec NMOCD office. If you have any questions or comments concerning this report, please contact Blagg Engineering at 632-1199.

Respectfully submitted,  
**Blagg Engineering, Inc.**

  
Nelson Velez.  
Staff Geologist

Attachments: Quarter/Annual Monitor Well Sampling Reports

xc: Denny Foust, NMOCD Aztec Office; Nina Hutton, Cross Timbers Oil Co.

NJV/njv

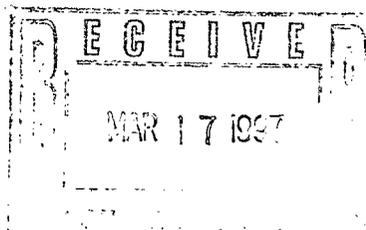
FEB99-WO.COV

Cross Timbers Oil Company  
Groundwater Monitoring Reports 1996-1998  
Well Sites being submitted, February 1999

- |    |                   |                             |
|----|-------------------|-----------------------------|
| 1) | Abrams J # 1      | Unit I, Sec. 29, T29N, R10W |
| 2) | Bergin GC # 1E    | Unit F, Sec. 21, T29N, R11W |
| 3) | Bruington GC # 1  | Unit E, Sec. 14, T29N, R11W |
| 4) | Rowland GC # 1    | Unit P, Sec. 25, T30N, R12W |
| 5) | State GC BS # 1   | Unit K, Sec. 23, T29N, R11W |
| 6) | Sullivan GC D # 1 | Unit B, Sec. 26, T29N, R11W |
| 7) | Valdez A # 1E     | Unit G, Sec. 24, T29N, R11W |

# **BLAGG ENGINEERING, INC.**

P.O. Box 87, Bloomfield, New Mexico 87413  
Phone: (505) 632-1199 Fax: (505) 632-3903



March 13, 1997

Mr. William Olson, Hydrogeologist  
New Mexico Oil Conservation Division  
2040 So. Pacheco  
Santa Fe, New Mexico 87505

**RE: Remedial Action**

**Abrams J1 Well site  
Legal Description: Unit I, Sec. 29, T29N, R10W  
San Juan County, New Mexico**

Dear Mr. Olson:

On behalf of Amoco Production Company, Blagg Engineering, Inc. (BEI) proposes remedial action at the referenced well location. Correspondence transmitted to your office dated June 7, 1996 (attached) outlined physical observations of groundwater indicating contamination in excess of New Mexico Water Quality Control Commission regulatory standards for Benzene, Toluene, Ethylbenzene, and total Xylenes (BTEX). Further investigations have revealed free product in three (3) monitor wells at the site (see attached site map and lab results summary).

As of this date installation of an air sparge remediation system has been initiated for future site reclamation (see attached air sparge system schematic). In order to achieve groundwater clean up standards it is necessary that the air sparge remediation system be installed. The proposed system is designed to contain potential down gradient migration of contamination.

NMOCD's concurrence with reclamation of contamination is requested. If you have any questions concerning this transmittal, please do not hesitate to contact Blagg Engineering at (505) 632-1199. Thank you for your cooperation.

Respectfully submitted,  
**Blagg Engineering, Inc.**

A handwritten signature in black ink, appearing to read "Nelson J. Velez". The signature is fluid and cursive, written over a white background.

Nelson J. Velez  
Staff Geologist

cc: Denny Foust, Deputy Oil & Gas Inspector, NMOCD, Aztec, NM  
Buddy Shaw, Environmental Coordinator, Amoco Production Company, Farmington, NM

Attachments: June 7, 1996 letter, Site Map, Lab Results Summary, & Air Sparge System Schematic.

NV/nv

AB-J1-WO.LTR

**BLAGG ENGINEERING, INC.**

P.O. Box 87, Bloomfield, New Mexico 87413  
Phone: (505) 632-1199 Fax: (505) 632-3903

June 7, 1996

Mr. Roger Anderson  
Chief of Environmental Bureau  
State of New Mexico Oil Conservation Division  
2040 So. Pacheco  
Santa Fe, New Mexico 87505

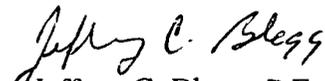
**RE: Groundwater Impact**  
**Amoco Production Company: Abrams J1 Well site**  
**Legal Description: Unit I, Sec. 29, T29N, R10W**  
**San Juan County, New Mexico**

Dear Mr. Anderson:

Physical observation of groundwater after monitor well construction was completed at the above referenced well site indicates contamination to be above the State of New Mexico Water Quality Control Commission's regulatory standards for Benzene, Toluene, Ethylbenzene, and total Xylenes (BTEX). Further assessment will be conducted and a remediation plan drafted after more data is collected.

If you have any questions concerning this information, please do not hesitate to contact us at (505) 632-1199. Thank you for your cooperation.

Respectfully submitted,  
**Blagg Engineering, Inc.**

  
Jeffrey C. Blagg, P.E.  
President

cc: Denny Foust, Deputy Oil & Gas Inspector, NMOCD, Aztec, NM  
Buddy Shaw, Environmental Coordinator, Amoco Production Company, Farmington, NM

NV/uv

ABRAM-J1.LTR

# FIGURE 1

• MW #8



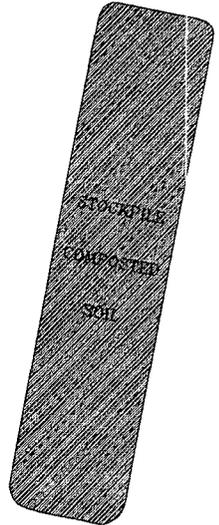
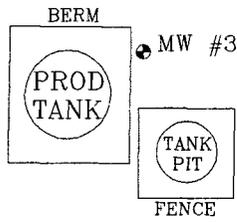
MW #9 •

MW #4 •

• MW #6

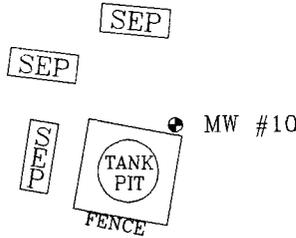
• MW #7

SOLAR PANELS

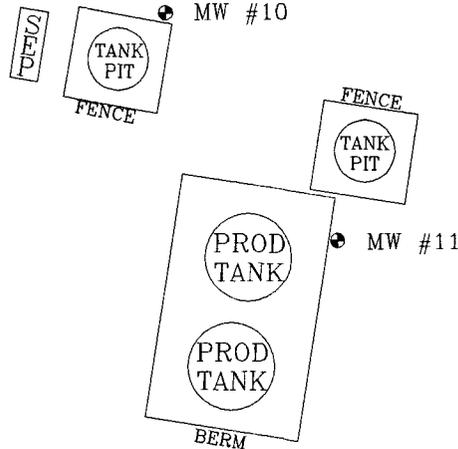


MW #5 •

• MW #1

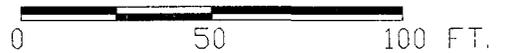


• MW #2



WELL HEAD

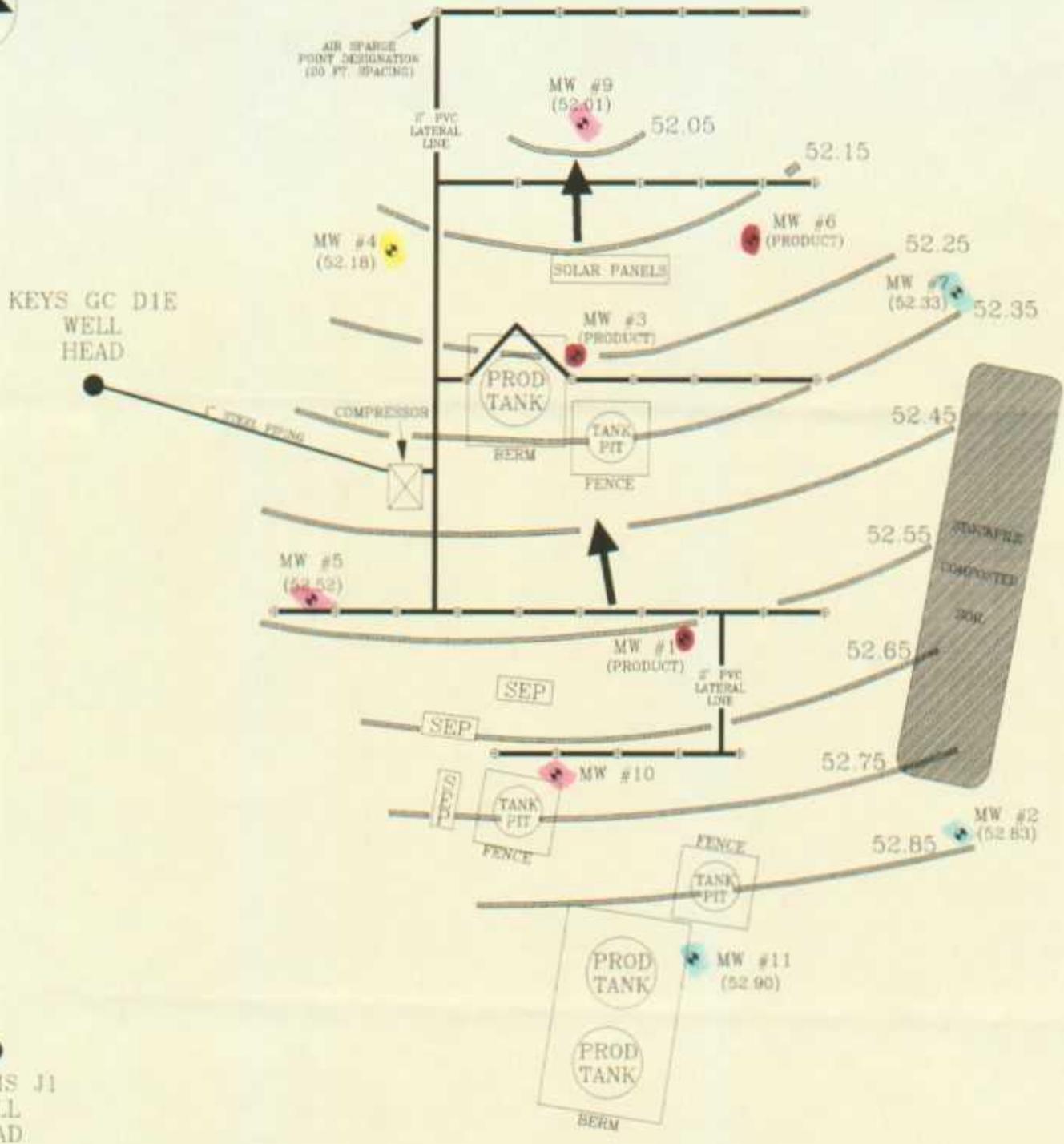
MONITOR WELL LOCATIONS ARE ONLY AS ACCURATE AS THE INSTRUMENTS USED IN OBTAINING THE FOOTAGE AND BEARING FROM THE WELL HEAD (BRUNTON COMPASS AND LASER RANGE FINDER). ALL OTHER STRUCTURES DISPLAYED ON THE SITE MAP ARE SOLELY FOR REFERENCE AND ARE NOT TO SCALE.



<p>AMOCO PRODUCTION COMPANY                  ABRAMS J1                  NE/4 SE/4 SEC. 29, T29N, R10W                  SAN JUAN COUNTY, NEW MEXICO</p>	<p>BLAGG ENGINEERING, INC.                  CONSULTING PETROLEUM / RECLAMATION SERVICES                  P.O. BOX 87                  BLOOMFIELD, NEW MEXICO 87413                  PHONE: (505) 632-1199</p>	<p>PROJECT: MW INSTALL.                  DRAWN BY: NJV                  FILENAME: ABRAM-J1</p>	<p>SITE MAP                  7/96</p>
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FIGURE 2

MW #8  
(CLEAN SOIL)

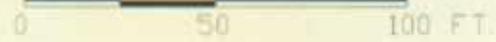


ABRAMS J1  
WELL  
HEAD

**LEGEND**

- 52.85 RELATIVE GROUNDWATER ELEVATION CONTOUR (IN FEET)
- MW #11 (52.90) GROUNDWATER MONITOR WELL LOCATION (WITH relative groundwater elevation)
- APPARENT GROUNDWATER FLOW DIRECTION

MONITOR WELL LOCATIONS ARE ONLY AS ACCURATE AS THE INSTRUMENTS USED IN OBTAINING THE FOOTAGE AND BEARING FROM THE WELL HEAD (BRUNTON COMPASS AND LASER RANGE FINDER). ALL OTHER STRUCTURES DISPLAYED ON THE SITE MAP ARE SOLELY FOR REFERENCE AND ARE NOT TO SCALE.



AMOCO PRODUCTION COMPANY

ABRAMS J1

NE/4 SE/4 SEC. 29, T29N, R10W

SAN JUAN COUNTY, NEW MEXICO

**BLAGG ENGINEERING, INC.**

CONSULTING PETROLEUM / RECLAMATION SERVICES

P.O. BOX 87  
BLOOMFIELD, NEW MEXICO 87413

PHONE (505) 632-1199

PROJECT: MW INSTALL.

DRAWN BY: NJV

FILENAME: ABRAM-GW

GROUNDWATER

CONTOUR

MAP

7/96

# AMOCO GROUNDWATER MONITOR WELL LABORATORY RESULTS

SUBMITTED BY BLAGG ENGINEERING, INC.

**ABRAMS J # 1 - SEPARATOR PIT  
UNIT I, SEC. 29, T29N, R10W**

REVISED DATE: MARCH 9, 1997

FILENAME: (AB-3Q-96.WK3) NJV

SAMPLE DATE	MONITOR WELL No:	D.T.W. (ft)	T.D. (ft)	TDS mg/L	COND. umhos	pH	PRODUCT (in)	BTEX EPA METHOD 8020 (PPB)			
								Benzene	Toluene	Ethyl Benzene	Total Xylene
11-Jun-96	MW #1	45.17	45.73				7.00				
10-Feb-97							21.60				
11-Jun-96	MW #2	42.30	50.00	435	600	7.5		ND	ND	ND	ND
11-Jun-96	MW #3	44.58	50.00				4.00				
10-Feb-97							13.80				
16-Aug-96	MW #4	43.75	50.00					ND	0.56	ND	ND
16-Aug-96	MW #5	45.28	50.00					553	1300	74.3	1077
30-Jun-96	MW #6	-	50.00				8.40				
10-Feb-97							17.40				
16-Aug-96	MW #7	43.32	50.00					ND	ND	ND	ND
16-Aug-96	MW #9	44.59	50.00					74.8	ND	ND	ND
16-Aug-96	MW #10	44.71	50.00					1600	6280	511	6190
16-Aug-96	MW #11	45.76	50.00					ND	ND	ND	ND

Bill Olson

MEMORANDUM OF COMMUNICATION

TRANSMIT TO: B.D. Shaw, Amoco Production Company  
Denny Foust, NMOCD

**RECEIVED**  
FEB 19 1997

DATE: Feb 12, 1997

TIME: 4:15 - 5:05 PM

**OIL CON. DIV.**  
**DIST. 3**

PARTIES: Jeff Blagg, Nelson Velez (Blagg Engineering)  
Paul Velasquez (Paul & Sons Construction)  
Neal Doyle, Renee Doyle (Land Owners) - 632-2128

LOCATION: Amoco Production Company  
Abrams J1 Well Site  
(I) Sec 29 - T29N - R10W, San Juan County, NM (Sullivan Road)

LOG OF COMMUNICATION:

Blagg Engineering and Paul & Sons Construction met with the land owners at the Abrams J1 well location to discuss proposed remediation of hydrocarbon impacts to soil and groundwater. Blagg Engineering outlined previous subsurface investigations to determine the extent of impacts. Site diagrams were presented to the landowners for clarification. A proposed remediation plan to include construction of an air sparge system was outlined. It was discussed that due to the depth of groundwater at the site, in excess of 40 feet below ground surface, it would not be feasible to excavate contaminated media. Therefore, an air sparge system was determined to be the best available technology to remediate the site.

The landowners presented their plan to construct a home near the well site, northeast of the area of contamination impacts. They were concerned with gas vapors from the remediation system impacting their home and crops. Additionally, they presented a plan to construct a water well approximately 300 yards north of the well pad. They had concerns with water contamination of this well.

Blagg Engineering stated that if the land owners constructed a home near the area to be remediated, one or more monitor wells would be installed between the home and the remediation system to monitor groundwater impacts to insure that no movement toward the home was occurring. Additionally, it was stated that at other Amoco remediation sites near residences, sensitive explosive gas monitors with alarms were installed in the homes as a precautionary measure. Additionally, we have had no indication of gas migration to any of these homes.

The landowners stated that they had several disagreements with Amoco over the past years with respect to operations at the well site. They stated that they were not prepared to allow Amoco to install the remediation system, and that Blagg Engineering and Paul and Sons were not to begin installation until after the landowners had contacted their attorneys. Blagg Engineering and Paul and Sons agreed to transmit this information to Amoco.

J. P. Blagg

# FIGURE 1

• MW #8



MW #9 •

MW #4 •

• MW #6

• MW #7

SOLAR PANELS

BERM

• MW #3



MW #5 •

• MW #1

SEP

SEP

• MW #10

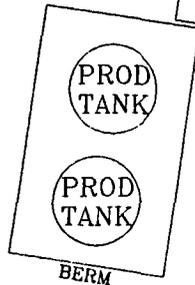
SEP



FENCE

• MW #2

• MW #11



●  
WELL  
HEAD

MONITOR WELL LOCATIONS ARE ONLY AS ACCURATE AS THE INSTRUMENTS USED IN OBTAINING THE FOOTAGE AND BEARING FROM THE WELL HEAD (BRUNTON COMPASS AND LASER RANGE FINDER). ALL OTHER STRUCTURES DISPLAYED ON THE SITE MAP ARE SOLELY FOR REFERENCE AND ARE NOT TO SCALE.

0 50 100 FT.

AMOCO PRODUCTION COMPANY

ABRAMS J1

NE/4 SE/4 SEC. 29, T29N, R10W

SAN JUAN COUNTY, NEW MEXICO

**BLAGG ENGINEERING, INC.**  
CONSULTING PETROLEUM / RECLAMATION SERVICES

P.O. BOX 87  
BLOOMFIELD, NEW MEXICO 87413

PHONE: (505) 632-1199

PROJECT: MW INSTALL.

DRAWN BY: NJV

FILENAME: .ABRAM-J1

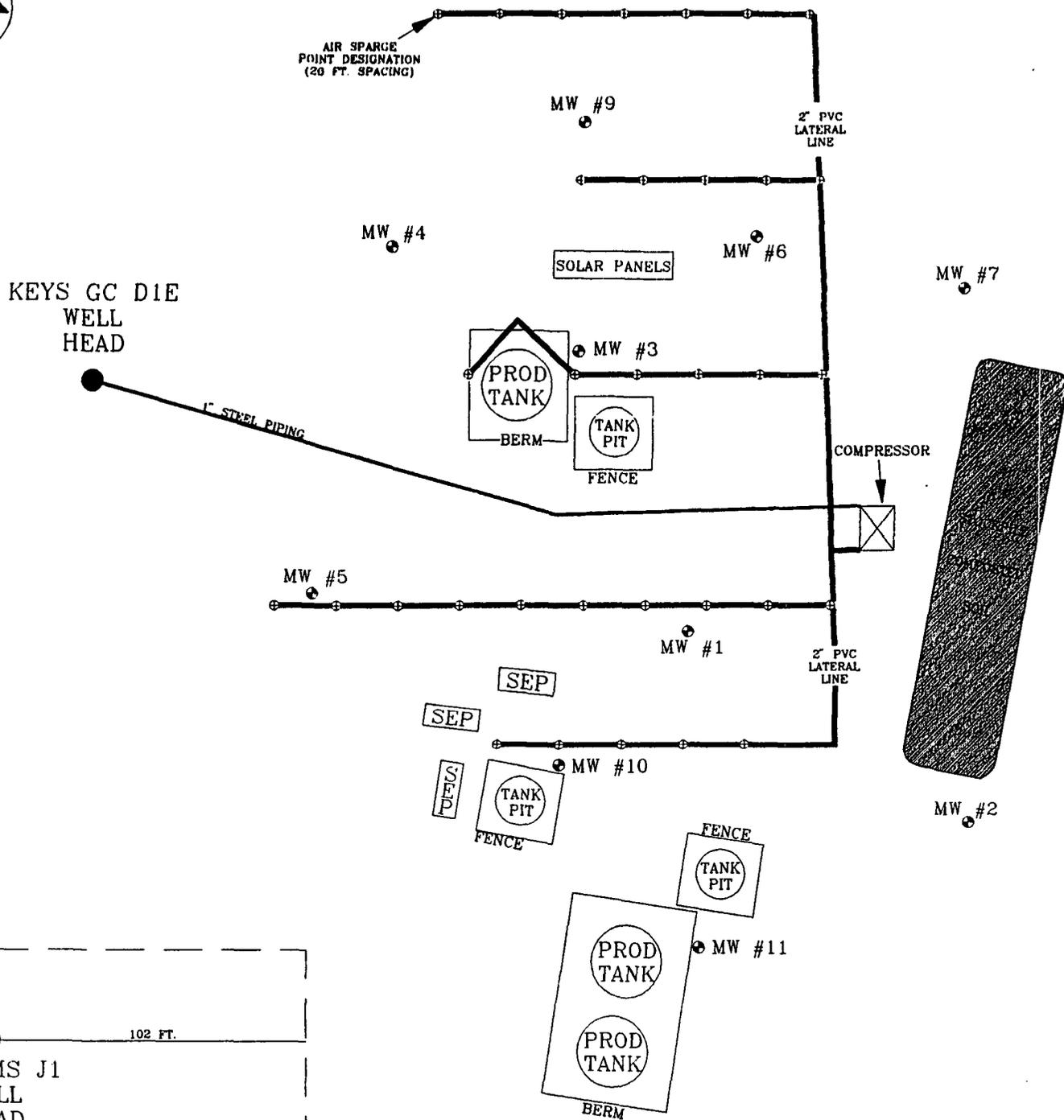
**SITE  
MAP**

7/96

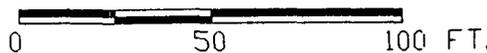
# FIGURE 3



NEW MW LOCATION  
MW #8 (CLEAN SOIL)



MONITOR WELL LOCATIONS ARE ONLY AS ACCURATE AS THE INSTRUMENTS USED IN OBTAINING THE FOOTAGE AND BEARING FROM THE WELL HEAD (BRUNTON COMPASS AND LASER RANGE FINDER). ALL OTHER STRUCTURES DISPLAYED ON THE SITE MAP ARE SOLELY FOR REFERENCE AND ARE NOT TO SCALE.



ABRAMS J1  
WELL  
HEAD

JUDSON STONEBRAKER  
PROPERTY

AMOCO PRODUCTION COMPANY  
ABRAMS J1  
NE/4 SE/4 SEC. 29, T29N, R10W  
SAN JUAN COUNTY, NEW MEXICO

BLAGG ENGINEERING, INC.  
CONSULTING PETROLEUM / RECLAMATION SERVICES  
P.O. BOX 87  
BLOOMFIELD, NEW MEXICO 87413  
PHONE: (505) 632-1199

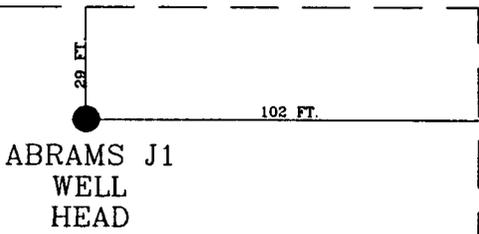
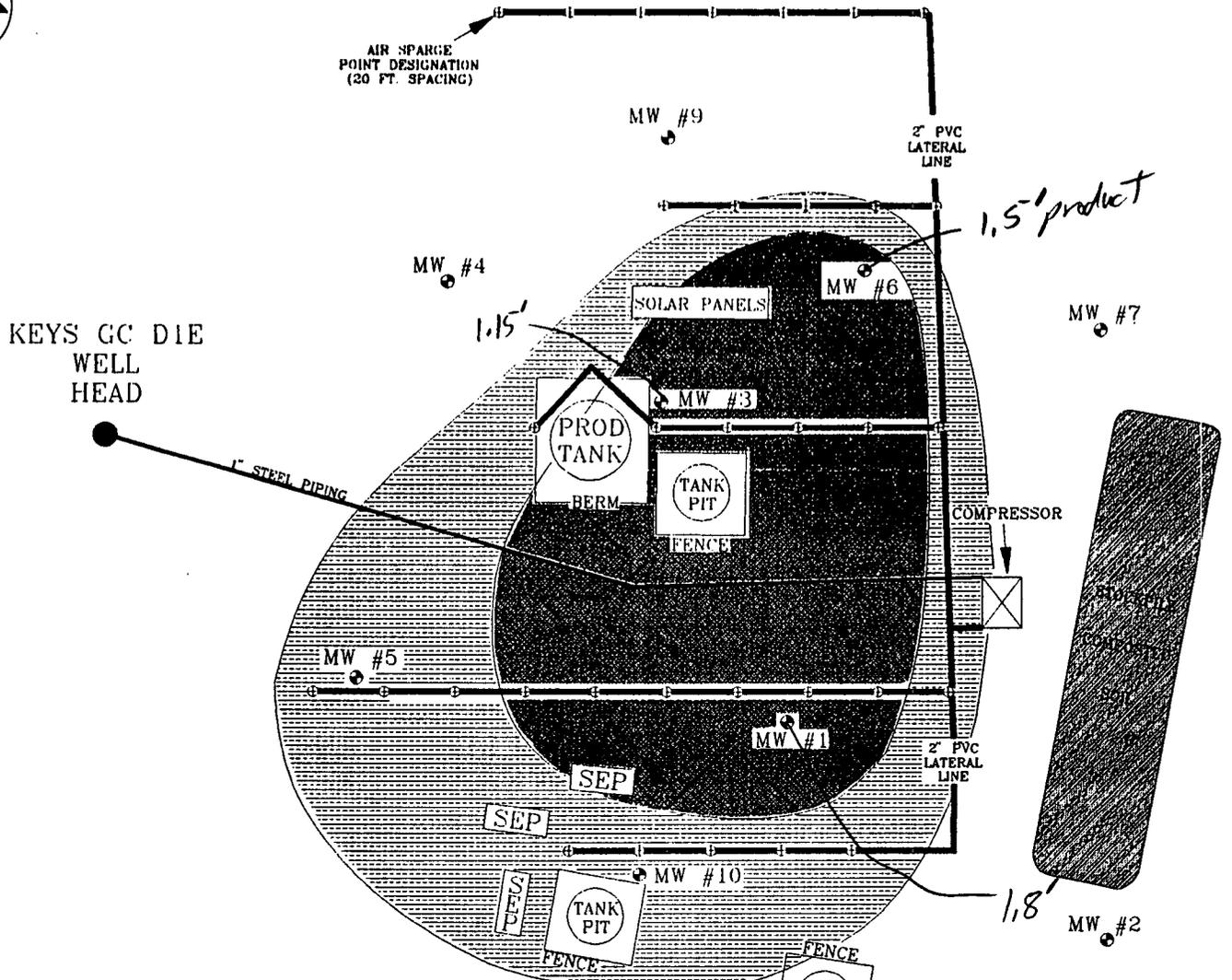
PROJECT: MW INSTALL.  
DRAWN BY: NJV  
FILENAME: ABRAM-AS

AIR SPARGE  
SYSTEM  
LAY OUT  
8/96

# FIGURE 4

NEW MW LOCATION

MW #8 (CLEAN SOIL)



JUDSON STONEBRAKER  
PROPERTY

*6 months to year  
for product.  
2-3yrs minimum*

MONITOR WELL LOCATIONS ARE ONLY AS ACCURATE AS THE INSTRUMENTS USED IN OBTAINING THE FOOTAGE AND BEARING FROM THE WELL HEAD (BRUNTON COMPASS AND LASER RANGE FINDER). ALL OTHER STRUCTURES DISPLAYED ON THE SITE MAP ARE SOLELY FOR REFERENCE AND ARE NOT TO SCALE.



AMOCO PRODUCTION COMPANY  
ABRAMS J1  
NE/4 SE/4 SEC. 29, T29N, R10W  
SAN JUAN COUNTY, NEW MEXICO

BLAGG ENGINEERING, INC.  
CONSULTING PETROLEUM / RECLAMATION SERVICES  
P.O. BOX 87  
BLOOMFIELD, NEW MEXICO 87413  
PHONE: (505) 632-1199

PROJECT: MW INSTALL.  
DRAWN BY: NJV  
FILENAME: AS-1

AIR SPARGE  
SYSTEM  
LAY OUT  
8/96