

District III *Denny & Zant*
1000 Rio Brazos Rd
Aztec, NM 87410
DEPUTY OIL & GAS INSPECTOR

State of New Mexico
Energy, Minerals and Natural Resources Department

Submit 1 copy to
Appropriate District
and 1 copy to
Santa Fe Office

JAN 27 1999

OIL CONSERVATION DIVISION
2040 S. PACHECO
Santa Fe, New Mexico 87505

PIT REMEDIATION AND CLOSURE REPORT

RECEIVED
AUG 24 1998

OIL CON. DIV.

Operator:	<u>Apache Corporation \ MW Petroleum</u>		Telephone:	<u>505-325-0318</u>	
Address:	<u>2855 Southside River Road, Suite A, Farmington, NM 87401</u>				
Facility or Well Name:	<u>Jic Apache Tribal 396 #8</u>				
Location: Unit or Qtr/Qtr Sec	<u>NE/SE</u>	<u>Sec 17</u>	<u>T 23 N</u>	<u>R 3W</u>	County <u>Rio Arriba</u>
Pit Type: Separator:			Dehydrator		
			Other	<u>Blow Pit</u>	
Land Type:	<u>Jicarilla Tribal</u>				
Beginning Pit Dimensions:	Length	<u>10'</u>	Width	<u>10'</u>	Depth <u>5'</u>
Pit Location: Ending Pit Dimensions:	Length	<u>20'</u>	Width	<u>20'</u>	Depth <u>20'</u>
(Attach diagram)	Reference:	Wellhead	<u>XXX</u>	Other	
	Footage from reference:	<u>60'</u>			
	Direction from reference:	<u>330</u>	Degrees	<u>X</u>	East West South
					<u>xx</u>
Depth To Groundwater:					
(vertical distance from	Less than 50 feet		(20 points)		
contaminants to seasonal	50 feet to 99 feet		(10 points)		
high water elevation of	Greater than 100 feet		(0 points)		<u>0</u>
groundwater)					
Wellhead Protection Area:					
(Less than 200 feet from a private	Yes		(20 points)		
domestic water source, or; less than	No		(0 points)		<u>0</u>
1000 feet from all other water sources)					
Distance To Surface Water:					
(Horizontal distance to perennial	Less than 200 feet		(20 points)		
lakes, ponds, rivers, streams, creeks,	200 feet to 1000 feet		(10 points)		
irrigation canals and ditches)	Greater than 1000 feet		(0 points)		<u>0</u>
	RANKING SCORE (TOTAL POINTS)				<u>0</u>

Date Remediation Started:		<u>5/8/97</u>	Date Completed:		<u>5/27/97</u>
Remediation Method: (Check all appropriate sections)	Excavation	<u>XXX</u>	Approx. cubic yards	<u>350</u>	
	Landfarmed	<u>XX</u>	Insitu Bioremediation		
	Other				
Remediation Location: (i.e. landfarmed onsite, name and location of offsite facility)		Onsite	<u>XX</u>	Offsite	
General Description of Remedial Action:		<u>Excavate pit to 15' below pit bottom, 10' off pit sides.</u>			
<u>Lay soil out on location in three dirt farm cells. Hit bedrock @ 20'. Sprayed w/liquid fertilizer.</u>					
Groundwater Encountered:		No	<u>XX</u>	Yes	Depth <u> </u>
Final Pit:	Sample location <u>4 point composite sample taken 8 to 10" into pit sidewalls,</u>				
Closure Sampling: (in multiple samples, attach sample results and diagram of sample locations and depths)	<u>Grab sample taken 10" into pit bottom center.</u>				
	Sample depth	<u>20'</u>	<u>8 to 10" into pit sidewalls 10" into pit bottom</u>		
	Sample Date	<u>5/27/97</u>	Sides	Sample Time	<u>12:15 PM</u>
	Sample results				
	Benzene	(ppm)	<u>ND</u>		
	Total BTEX	(ppm)	<u>ND</u>		
	Field Headspace	(ppm)	<u>52.6</u>		
	TPH		<u>4700\Sides</u>		
			<u>7800\BTM</u>		
Groundwater Sample:		Yes	<u> </u>	No	<u>XX</u> (If yes attach sample results)
I HEREBY CERTIFY THAT THE INFORMATION ABOVE IS TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE AND BELIEF.					
DATE <u>August 10, 1998</u>		PRINTED NAME		<u>Jeff Cross</u>	
SIGNATURE <u>Jeff Cross</u>		AND TITLE		<u>Project Manager</u>	



Well Name:	JAT 396 #8
Well Site Location:	Unit K, Sec 17, T23N, R3W
Pit Type:	Blow Pit
Producing Formation:	Lindrith Gallup/Dakota West
Pit Category:	Non-Vulnerable
Horizontal Distance to Surface Water:	Greater than – 1000 Ft.
Vicinity Groundwater Depth:	Greater than – 100 Ft.

RISK ASSESSMENT

Pit remediation activities were terminated when Backhoe encountered sandstone bedrock at 20 feet below grade.

No past or future threat to surface water or groundwater is likely based on the following considerations:

1. Past production fluids were contained locally by a relatively shallow sandstone bedrock located 20 feet below grade. Groundwater levels located on or close to the well pad are estimated to be at a much greater depth below sandstone bedrock.
2. Daily discharge into the earthen pit has been terminated. Prior discharge into the pit is believed to be under one barrel per day.
3. Test results of pit sides showed total BTEX to be non-detected and TPH to be 4,700.
4. Pit bottom test results showed total BTEX to be non-detected with a TPH of 11,000 PPM.

Based upon the information given, we conclude that the surface lateral impact from the earthen pit is very limited and that the sandstone bottom creates enough of a permeable barrier as to subdue impact into groundwater below it. Apache Corporation requests pit closure approval on this location.

JICARILLA APACHE TRIBE
ENVIRONMENTAL PROTECTION OFFICE
P. O. BOX 507
DULCE, NEW MEXICO 87528

Submit 1 copy to
Natural Resource Dept.
and Oil & Gas Administration

PIT REMEDIATION AND CLOSURE REPORT

Operator: <u>M W PETROLEUM</u>		Telephone <u>505-325-0318</u>																										
Address: <u>304 N. BEHREND, FARMINGTON, N.M. 84701</u>																												
Facility or Well Name: <u>JIC. TRIBAL 396#8</u>																												
Location:	Unit or Qtr/Qtr Sec	<u>NE\SW SEC 17 T 23N R 3W</u>	County <u>RIO ARRIBA</u>																									
Pit Type:	Separator: <u> </u>	Dehydrator <u> </u>	Other <u>BLOW PIT</u>																									
Land Type: <u>JIC. TRIBAL</u>																												
<table border="0" style="width: 100%;"> <tr> <td>Pit Location:</td> <td>Pit Dimensions:</td> <td>Length <u>20'</u></td> <td>Width <u>20'</u></td> <td>Depth <u>20'</u></td> </tr> <tr> <td>(Attach diagram)</td> <td>Reference:</td> <td>Wellhead <u>XXX</u></td> <td>Other <u> </u></td> <td></td> </tr> <tr> <td></td> <td>Footage from reference:</td> <td><u>60'</u></td> <td></td> <td></td> </tr> <tr> <td></td> <td>Direction from reference:</td> <td><u>330</u> Degrees</td> <td><u> </u> East</td> <td>North <u>XX</u></td> </tr> <tr> <td></td> <td></td> <td></td> <td><u>X</u> West</td> <td>of South <u> </u></td> </tr> </table>				Pit Location:	Pit Dimensions:	Length <u>20'</u>	Width <u>20'</u>	Depth <u>20'</u>	(Attach diagram)	Reference:	Wellhead <u>XXX</u>	Other <u> </u>			Footage from reference:	<u>60'</u>				Direction from reference:	<u>330</u> Degrees	<u> </u> East	North <u>XX</u>				<u>X</u> West	of South <u> </u>
Pit Location:	Pit Dimensions:	Length <u>20'</u>	Width <u>20'</u>	Depth <u>20'</u>																								
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			<u>X</u> West	of South <u> </u>																								
Depth To Groundwater: (vertical distance from contaminants to seasonal high water elevation of groundwater)		Less than 50 feet	(20 points) <u> </u>																									
		50 feet to 99 feet	(10 points) <u> </u>																									
		Greater than 100 feet	(0 points) <u>0</u>																									
Distance to an Ephemeral Stream: (Downgradient dry wash greater than ten feet in width)		Less than 100 feet	(10 points) <u> </u>																									
		Greater than 100 feet	(0 points) <u>0</u>																									
Distance to Nearest Lake, Playa, or Watering Pond: (Downgradient lakes, playas and livestock or wildlife watering ponds)		Less than 100 feet	(10 points) <u> </u>																									
		Greater than 100 feet	(0 points) <u>0</u>																									
Wellhead Protection Area: (Less than 200 feet from a private domestic water source, or less than 1000 feet from all other water sources)		Yes	(20 points) <u> </u>																									
		No	(0 points) <u>0</u>																									
Distance To Surface Water: (Horizontal distance to perennial lakes, ponds, rivers, streams, creeks, irrigation canals and ditches)		Less than 100 feet	(20 points) <u> </u>																									
		100 feet to 1000 feet	(10 points) <u> </u>																									
		Greater than 1000 feet	(0 points) <u>0</u>																									
		RANKING SCORE (TOTAL POINTS)	<u>0</u>																									

Date Remediation Started: 5/8/97 Date Completed: 5/27/97

Remediation Method: Excavation XXX Approx. cubic yards 350
 (Check all appropriate sections) Landfarmed XXX Insitu Bioremediation _____
 Other _____

Remediation Location: Onsite XXX Offsite _____
 (i.e. landfarmed onsite, name and location of offsite facility)

General Description of Remedial Action: Excavate pit to 15' below pit bottom, 10' off pit sides.

Lay soil out on location in three dirt farm cells. HIT BEDROCK @ 20'
SPRAYED with Liquid Fertilizer.

Groundwater Encountered: No XXX Yes _____ Depth _____

Final Pit: Sample location 4 POINT COMPOSITE SAMPLE TAKEN 10" INTO PIT SIDEWALL

Closure Sampling: GRAB SAMPLE TAKEN 10" INTO PIT BOTTOM CENTER.
 (in multiple samples, attach sample results and diagram of sample locations and depths) Sample depth 20' 8" to 10" into pit side walls, 10" into pit bottom.

Sample Date 5/27/97 Sample Time 12:15PM

Sample results

Soil:	Benzene	(ppm)	<u>ND</u>	Water:	Benzene	(ppb)	<u>NA</u>
	Total BTEX	(ppm)	<u>ND</u>		Toluene	(ppb)	<u>NA</u>
	Field Headspace	(ppm)	<u>52.6</u>		Ethylbenzene	(ppb)	<u>NA</u>
	TPH	(ppm)	<u>4700\SIDE</u> <u>7800\BTM</u>		Total Xylenes	(ppb)	<u>NA</u>

Groundwater Sample: Yes _____ No XXX (If yes attach sample results)

I HEREBY CERTIFY THAT THE INFORMATION ABOVE IS TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE AND BELIEF.

DATE 7/9/97 PRINTED NAME JEFF CROSS
 SIGNATURE Jeff Cross AND TITLE PROJECT MANAGER

AFTER REVIEW OF THE PIT CLOSURE INFORMATION, PIT CLOSURE IS APPROVED IN ACCORDANCE TO THE JICARILLA APACHE TRIBE PIT CLOSURE ORDINANCE.

APPROVED: YES X NO _____ (REASON) SPRAY + close

SIGNED: Kevin C Marshall DATE: 7-30-97

M W PETROLEUM/FARMING DISTRICT PIT EXCAVATION AND CLOSURE REPORT

LOCATION JAT. 396 # 8

PIT COUNT 1

Jicarilla Apache Tribal EPO/OCD/BLM

Review and Approval

OCD-BLM

EPO Representative

Date of Review

Excavation								
DIMENSIONS		START: 5/8/97			FINISH: 5/27/97			
	W	L	D		W	L	D	CU YDS
Pit 1	10'	10'	5'	Pit 1	20'	20'	20'	350
Pit 2				Pit 2				
Pit 3				Pit 3				
DATE: 5/8/97	Pit 1 @ 8'	Pit 2 @	Pit 3 @	Date: 5/27/97	Pit 1 @ 20'	Pit 2 @	Pit 3 @	
P	Center	500		P	Center	95.4		
I	NW Corner	650		I	NW Corner	100.3		
D	NE Corner	600		D	NE Corner	10.5		
	SW Corner	1100			SW Corner	73.5		
	SE Corner	900			SE Corner	45.7		

NOTES:

5/8/97 START EXCAVATION ON PIT, DARK STAINING DOWN 2' BELOW PIT BOTTOM, HEAVY ODOR.

PID READINGS WERE HIGH @ 8' . EXCAVATE DOWN TO 9' , PID READINGS DROPPED BELOW 100 ppm.

5/10/97 EXCAVATE SIDE WALLS OUT TO 15' PID READINGS WERE GOOD.

5/12/97 TOOK SOIL SAMPLES AND SENT TO ASSAIGAI LABS TPH WAS @ 4700 ppm ON SIDE WALLS ,

11000 ppm ON PIT BOTTOM.

5/27/97 CONTINUE EXCAVATING PIT DOWN TO 20' BOTTOM DEPTH, 20' SIDE WALLS. HIT BED ROCK!!!

5/27/97 TOOK SOIL SAMPLE OF PIT BOTTOM. TPH STILL HIGH @ 7800 ppm. DISCONTINUE EXCAVATION.

SOIL SAMPLING

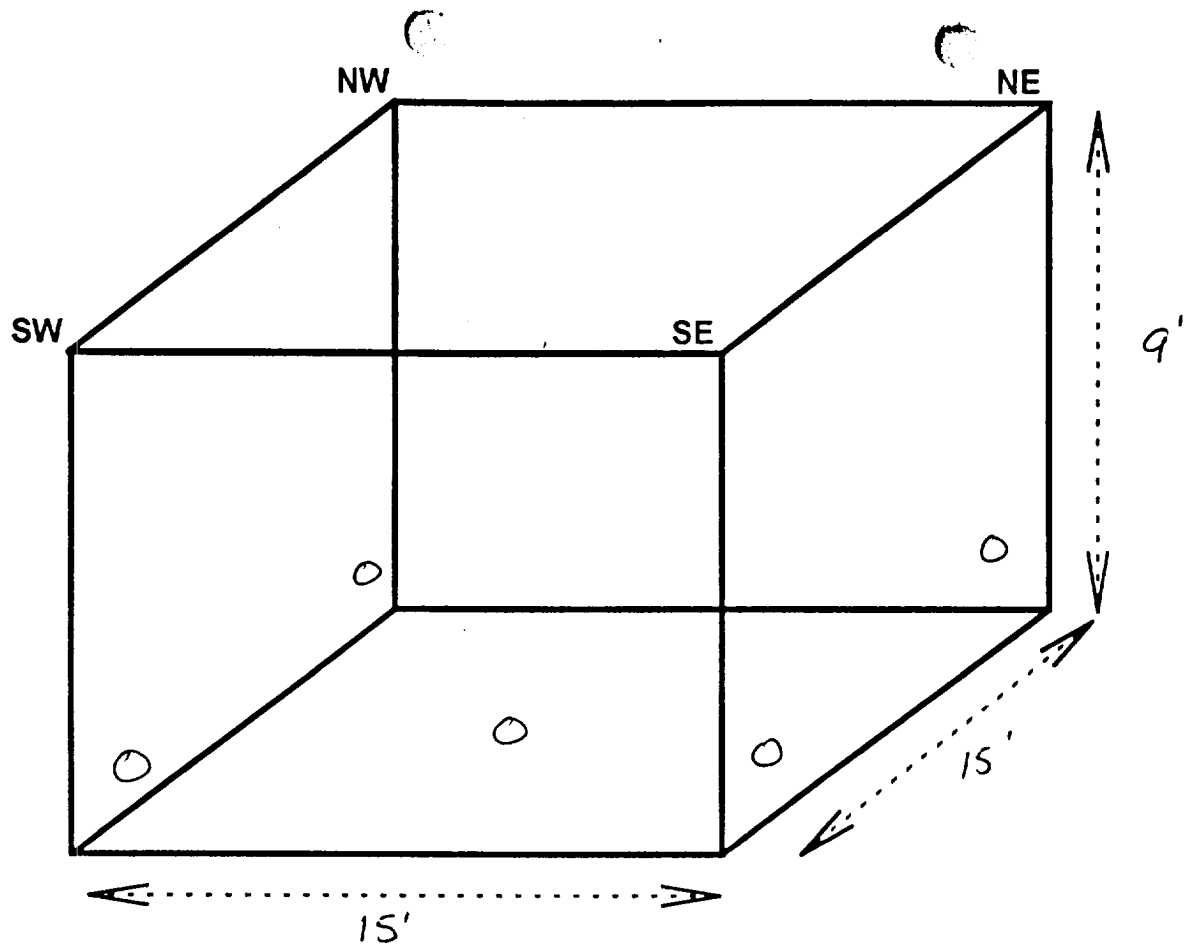
DATE: 5/12/97		Pit 1 @ 9'	Pit 2 @	Pit 3 @	ANALYSIS RESULTS			PER LAB	ASSAIGAI
P	Center	95.6			PIT NO	TPH	BETEX	WITNESS	DATE
I	NW Corner	92			1	4700\11000	ND\ND	JEFF C.	5/16/97
D	NE Corner	3			2				
	SW Corner	97.4			3				
	SE Corner	50.7							

RE-SAMPLE OR CELL(S) SAMPLE

DATE: 5/27/97		Pit 1 @ 20'	Pit 2 @	Pit 3 @	ANALYSIS RESULTS			PER LAB	ASSAIGAI
P	Center	78.7			PIT NO	TPH	BETEX	WITNESS	DATE
I	NW Corner	85.4			1	7800\BTM	ND \BTM	JEFF C.	5/30/97
D	NE Corner	1.3			2				
	SW Corner	58.9			3				
	SE Corner	38.7							

RE-SAMPLE OR CELL(S) SAMPLE

DATE:		Pit 1 @	Pit 2 @	Pit 3 @	ANALYSIS RESULTS			PER LAB	
P	Center				PIT NO	TPH	BETEX	WITNESS	DATE
I	NW Corner				1				
D	NE Corner				2				
	SW Corner				3				
	SE Corner								

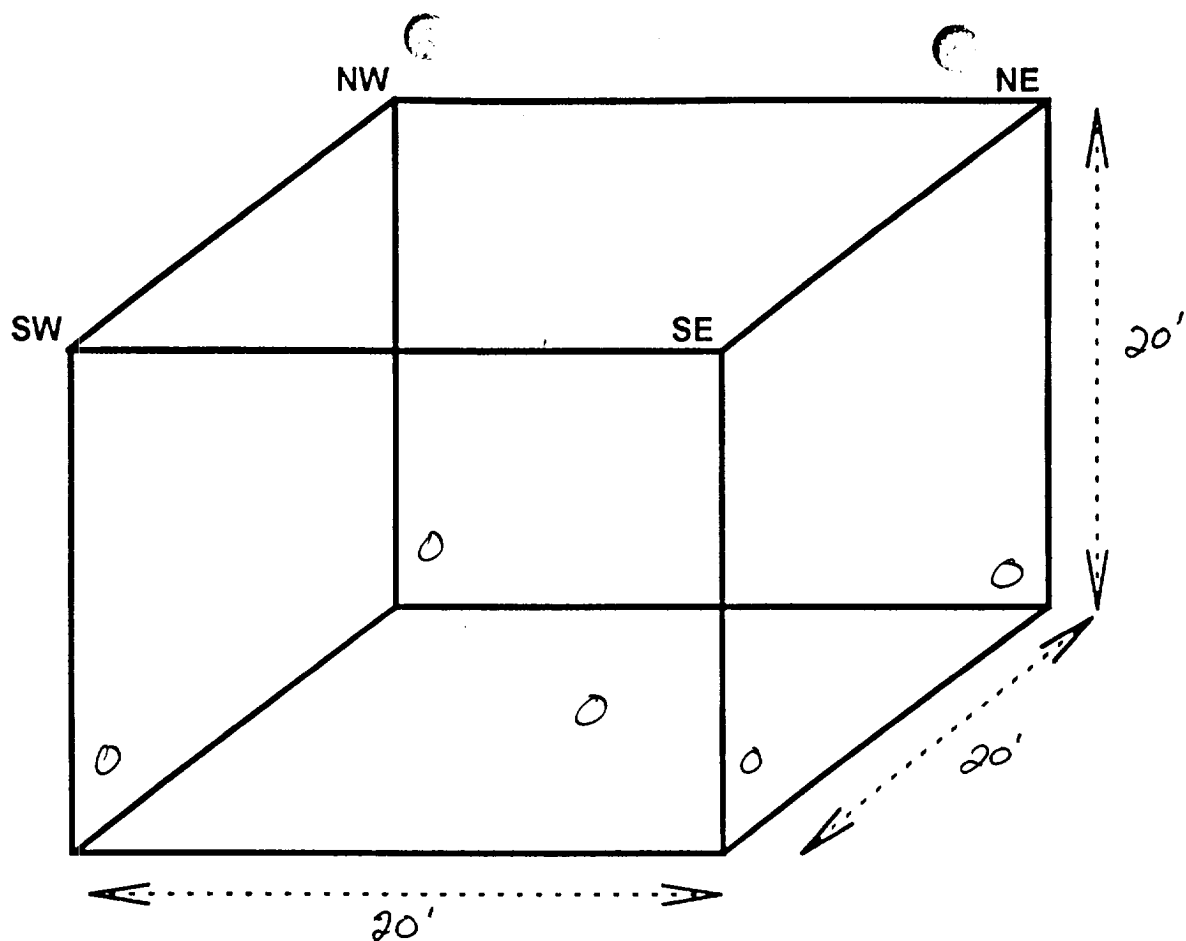


○ = SAMPLE AREA

WELL NAME JAT 346 #8 1st sample (failed)

SAMPLE DATE 5-12-97

NOTES 4 POINT COMPOSITE SAMPLE TAKEN 8" TO 10" INTO PIT
SIDEWALL
1 POINT GRAB SAMPLE TAKEN 10" TO 12" INTO BOTTOM CENTER



○ = SAMPLE AREA

WELL NAME

JAT 396 #8

SAMPLE DATE

5-27-97 Resample

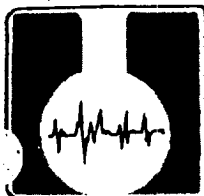
NOTES

4 POINT COMPOSITE SAMPLE TAKEN 8" TO 10" INTO PIT

SIDEWALL

1 POINT GRAB SAMPLE TAKEN 10" TO 12" INTO BOTTOM CENTER

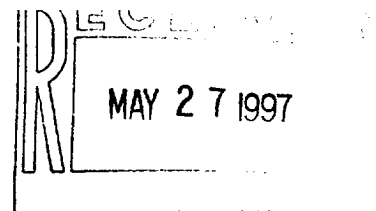
Pit Bottom @ Bed Rock



**ASSAIGAI
ANALYTICAL
LABORATORIES, INC.**

7300 Jefferson, N.E. • Albuquerque, New Mexico 87109 • (505) 345-8964 • FAX (505) 345-7259

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Report Generated:
May 21, 1997 15:04

**CERTIFICATE OF ANALYSIS
RESULTS BY SAMPLE**

SENT APACHE CORPORATION
TO: 304 N. BEHREND
FARMINGTON, NM 87401

WORKORDER # : 9705140
WORK ID : JICARILLA PIT CLOSURES
CLIENT CODE : APA01
DATE RECEIVED : 05/14/97

ATTN: JEFF CROSS

Page: 1

Lab ID: 9705140-01A
Sample ID: JAT 396 #8 PIT 1 SIDES

Collected: 05/12/97 14:40:00
Matrix: SOIL

TEST / METHOD	RESULT	UNITS	LIMIT	D_F	DATE ANAL	BATCH_ID
BTEX/SW846 8020A						
Benzene	ND	mg/Kg	0.0010	5000	05/16/97	SBTXME162
Toluene	ND	mg/Kg	0.0010	5000	05/16/97	SBTXME162
Ethylbenzene	ND	mg/Kg	0.0010	5000	05/16/97	SBTXME162
P-&m-Xylene	ND	mg/Kg	0.0020	5000	05/16/97	SBTXME162
O-Xylene	ND	mg/Kg	0.0010	5000	05/16/97	SBTXME162

Lab ID: 9705140-01B
Sample ID: JAT 396 #8 PIT 1 SIDES

Collected: 05/12/97 14:40:00
Matrix: SOIL

TEST / METHOD	RESULT	UNITS	LIMIT	D_F	DATE ANAL	BATCH_ID
Diesel Range OG Soil/M8015						
Diesel Range OG in Soil	4700	mg/Kg	50	5.0	05/16/97	SDRO26

*Reexcavate pit Bottom Hit Bed Rock
Resample pit Bottom*

Lab ID: 9705140-02A
Sample ID: JAT 396 #8 PIT 1 BOTTOM
Collected: 05/12/97 15:00:00
Matrix: SOIL

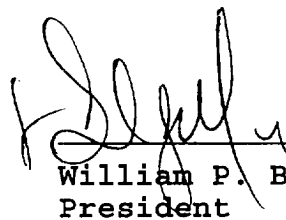
TEST / METHOD	RESULT	UNITS	LIMIT	D_F	DATE ANAL	BATCH_ID
BTEX/SW846 8020A						
Benzene	ND	mg/Kg	0.0010	10000	05/16/97	SBTXME163
Toluene	ND	mg/Kg	0.0010	10000	05/16/97	SBTXME163
Ethylbenzene	ND	mg/Kg	0.0010	10000	05/16/97	SBTXME163
P-&m-Xylene	ND	mg/Kg	0.0020	10000	05/16/97	SBTXME163
O-Xylene	ND	mg/Kg	0.0010	10000	05/16/97	SBTXME163



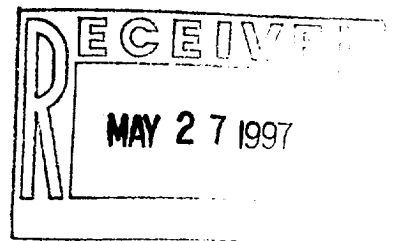
Lab ID: 9705140-02B
Sample ID: JAT 396 #8 PIT 1 BOTTOM

Collected: 05/12/97 15:00 00
Matrix: SOIL

TEST / METHOD	RESULT	UNITS	LIMIT	D_F	DATE ANAL	BATCH_ID
Diesel Range OG Soil/M8015 Diesel Range OG in Soil	11000	mg/Kg	50	10	05/16/97	SDRO26



William P. Biava
President



WORKORDER COMMENTS

DATE : 05/21/97
WORKORDER:

DEFINITIONS/DATA QUALIFIERS

The following are definitions, abbreviations, and data qualifiers which may have been utilized in your report:

- ND = Analyte "not detected" in analysis at the sample specific detection limit.
- D_F = Sample "dilution factor"
- NT = Analyte "not tested" per client request.
- B = Analyte was also detected in laboratory method QC blank.
- E = Analyte concentration (result) is an estimated value or exceeds analysis calibration range.
- LIMIT = The minimum amount of the analyte that AAL can detect utilizing the specified analysis.

Please Note: Multiply the "Limit" value (AAL's Detection Limit) by Dilution Factor (D_F) to obtain the sample specific Detection Limit.

REPORT COMMENTS



**ASSAIGAI
ANALYTICAL
LABORATORIES, INC.**

7300 Jefferson, N.E. • Albuquerque, New Mexico 87109 • (505) 345-8964 • FAX (505) 345-7259

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Report Generated:
June 2, 1997 15:29

**CERTIFICATE OF ANALYSIS
RESULTS BY SAMPLE**

SENT APACHE CORPORATION
TO: 304 N. BEHREND
FARMINGTON, NM 87401

WORKORDER # : 9705242
WORK ID : JICARILLA PIT CLOSURES
CLIENT CODE : APA01
DATE RECEIVED : 05/29/97

ATTN: JEFF CROSS

Page: 1

Lab ID: 9705242-01A
Sample ID: JAT 396 #8 PIT 1 BOTTOM

Collected: 05/27/97 12:15:00
Matrix: SOIL

TEST / METHOD	RESULT	UNITS	LIMIT	D_F	DATE ANAL	BATCH_ID
BTEX/SW846 8020A						
Benzene	ND	mg/Kg	0.0010	5000	05/30/97	SBTXME166
Toluene	ND	mg/Kg	0.0010	5000	05/30/97	SBTXME166
Ethylbenzene	ND	mg/Kg	0.0010	5000	05/30/97	SBTXME166
P-&m-Xylene	ND	mg/Kg	0.0020	5000	05/30/97	SBTXME166
O-Xylene	ND	mg/Kg	0.0010	5000	05/30/97	SBTXME166

Lab ID: 9705242-01B
Sample ID: JAT 396 #8 PIT 1 BOTTOM

Collected: 05/27/97 12:15:00
Matrix: SOIL

TEST / METHOD	RESULT	UNITS	LIMIT	D_F	DATE ANAL	BATCH_ID
Diesel Range OG Soil/M8015						
Diesel Range OG in Soil	7800	mg/Kg	50	25	05/30/97	SDRO029

William P. Biava

William P. Biava
President



WORKORDER COMMENTS

DATE : 06/02/97

WORKORDER:

DEFINITIONS/DATA QUALIFIERS

The following are definitions, abbreviations, and data qualifiers which may have been utilized in your report:

ND = Analyte "not detected" in analysis at the sample specific detection limit.

D_F = Sample "dilution factor"

NT = Analyte "not tested" per client request.

B = Analyte was also detected in laboratory method QC blank.

E = Analyte concentration (result) is an estimated value or exceeds analysis calibration range.

LIMIT = The minimum amount of the analyte that AAL can detect utilizing the specified analysis.

Please Note: Multiply the "Limit" value (AAL's Detection Limit) by Dilution Factor (D_F) to obtain the sample specific Detection Limit.

REPORT COMMENTS

Chain of Custody Record

7300 JEFFERSON, N.E.
ALBUQUERQUE, NEW MEXICO
(505) 345-8964

Lab job no.: 5696 Date: 12/8/87

**3332 WEDGEWOOD
EL PASO, TEXAS 79925
(915) 593-6000**

**1910 N. BILBO AVE.
MIDLAND, TEXAS 79705
(915) 570-1116**

Page 1 of 1

**MELQUIADES ALANIS
6411 LOCAL UNO
CIUDAD JUAREZ, CHIHUAHUA MEX**

Client Apache Corporation Project Manager / Contact Jeff Cross

Address 304 N. Behrend
Telephone No. (505) 774-6643

City/State/Zip Farmington, NM 87401 Fax No. (505) 774-6624

Project Name / Number JICARILLA PIT CLOSURES

Samplers: (Signature) *Jeff Cox*

Contract / Purchase Order / Quote _____

[illegible]

Relinquished by: Signature <u>[Signature]</u> Printed <u>JOSEPH CROSS</u> Company <u>Apache Corp.</u> Reason _____	Date <u>5-28-97</u> Time <u>8:40</u>	Received by: Signature <u>[Signature]</u> Printed <u>ELVIN J. BAKER</u> Company <u>AAI</u> Reason _____	Relinquished by: Signature _____ Printed _____ Company _____ Reason _____
--	---	---	---

Method of Shipment: _____	Comments: _____
Shipment No. _____	_____
Special Instructions: _____	_____
_____	_____

[illegible]

After analysis, samples are to be:

☐ Disposed of (additional fee)

☐ Stored (30 days max)

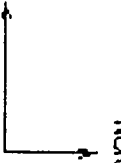
☐ Stored over 30 days (additional fee)

☐ Returned to customer

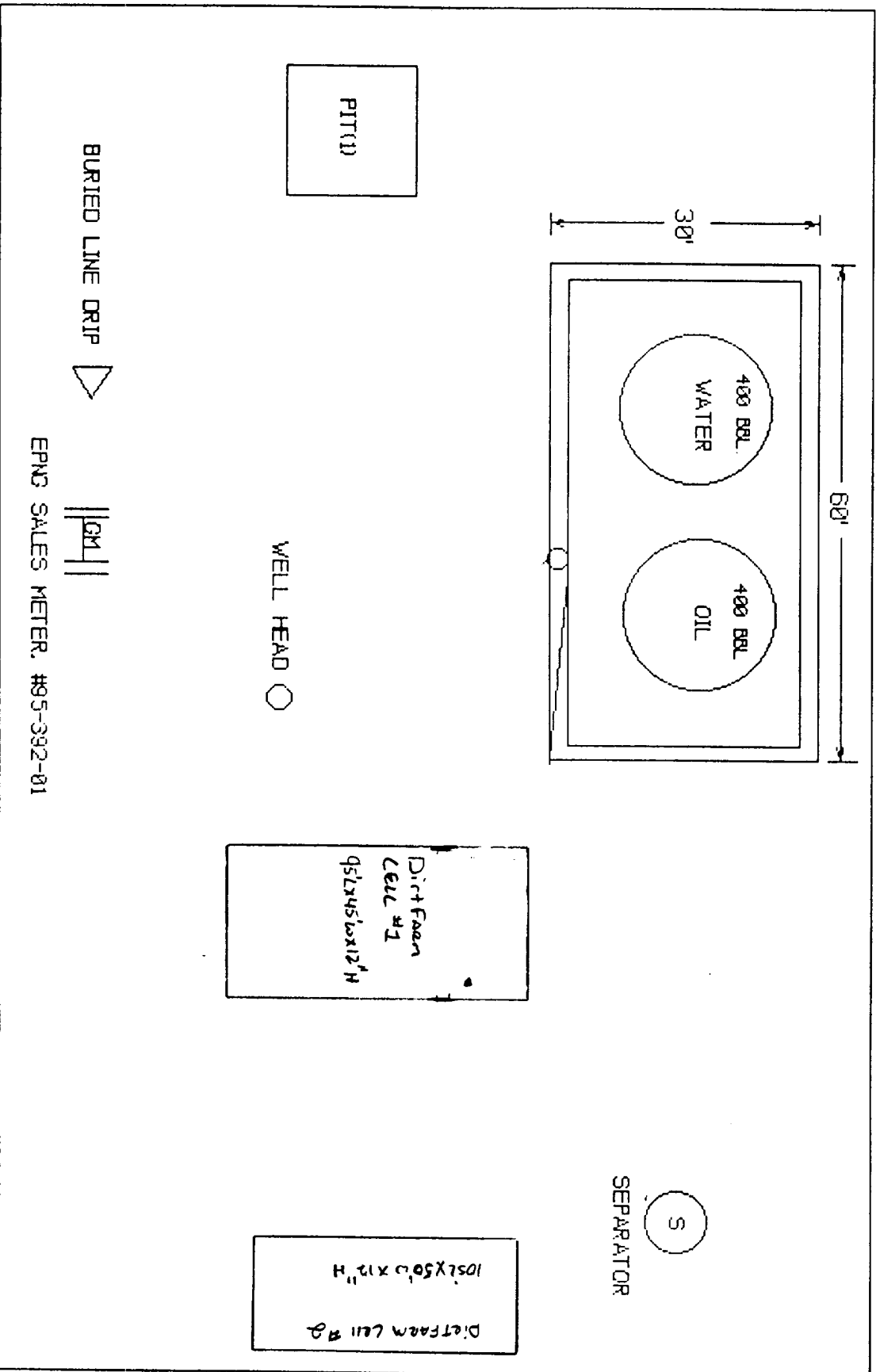
LABORATORY

NORTH

GENERAL DRAINAGE



MW PETROLEUM
JICARILLA TRIBAL 396 NUMBER 8
NE/4 SW/4 Lease #JAT 396
SECTION 17, TOWNSHIP 23N RANGE 3W
RIO ARriba COUNTY, NM
Revised 6/3/97 MG



JICARILLA APACHE TRIBE
ENVIRONMENTAL PROTECTION OFFICE
P. O. BOX 507
DULCE, NEW MEXICO 87528

Submit 1 copy to
Natural Resource Dept.
and Oil & Gas Administration

ON-SITE SOIL REMEDIATION REPORT

Operator: <u>M W PETROLUEM</u> Telephone <u>505-325-0318</u>	
Address: <u>2855 SOUTHSIDE RIVER ROAD /SUITE A/FARMINGTON, N.M. 87401-7947</u>	
Facility or Well Name: <u>JAT 396 #8 CELL # 1</u>	
Location: Unit or Qtr/Qtr Sec <u>NE\SW</u> Sec <u>17</u> T <u>23 N</u> R <u>3 W</u> County <u>RIO ARRIBA</u>	
Land Type <u>JIC. TRIBAL</u>	
Date Remediation Started: <u>5/8/97</u> Date Completed: <u>6/10/98</u>	
Remediation Method: Landfarmed <u>XXX</u> Approx. cubic yards <u>158</u>	
Composted _____	
Other <u>SOIL TO BE SPREAD ON LOCATION</u>	
Depth to Groundwater: (pts) <u>0</u>	Final Closure Sampling Sampling Date: <u>6/10/98</u> Time: <u>11:35AM</u> Sample Results: Field Headspace (ppm) <u>0</u> TPH (ppm) <u>1900</u> Method <u>M8015</u> Other <u>BTEX \ SW846 , 8020A (ND)</u>
Distance to an Ephemeral Stream: (pts) <u>0</u>	
Distance to Nearest Lake, Playa, or Watering Pond: (pts) <u>0</u>	
Wellhead Protection Area: (pts) <u>0</u>	
Distance To Surface Water: (pts) <u>0</u>	
RANKING SCORE (TOTAL POINTS) <u>0</u>	
I HEREBY CERTIFY THAT THE INFORMATION ABOVE IS TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE AND BELIEF	
DATE: <u>7/16/98</u>	PRINTED NAME <u>JEFF CROSS</u>
SIGNATURE <u>Jeff Cross</u>	TITLE <u>PROJECT MANAGER</u>
AFTER REVIEW OF THE SOIL REMEDIATION INFORMATION. ON-SITE REMEDIATION IS APPROVED IN ACCORDANCE TO THE JICARILLA APACHE TRIBE PIT CLOSURE ORDINANCE.	
APPROVED: YES <u>X</u> NO _____ (REASON) _____	
SIGNED: <u>Kent Marshall</u> DATE: <u>7-29-98</u>	

JICARILLA APACHE TRIBE
ENVIRONMENTAL PROTECTION OFFICE
P. O. BOX 507
DULCE, NEW MEXICO 87528

Submit 1 copy to
Natural Resource Dept.
and Oil & Gas Administration

ON-SITE SOIL REMEDIATION REPORT

Operator: <u>M W PETROLUEM</u> Telephone <u>505-325-0318</u>	
Address: <u>2855 SOUTHSIDE RIVER ROAD /SUITE A/FARMINGTON, N.M. 87401-7947</u>	
Facility or Well Name: <u>JAT 396 #8 CELL # 2</u>	
Location: Unit or Qtr/Qtr Sec <u>NE1SW</u> Sec <u>17</u> T <u>23 N</u> R <u>3 W</u> County <u>RIO ARRIBA</u>	
Land Type <u>JIC. TRIBAL</u>	
Date Remediation Started: <u>5/8/97</u> Date Completed: <u>9/11/97</u>	
Remediation Method: Landfarmed <u>XXX</u> Approx. cubic yards <u>192</u>	
Composted _____	
Other <u>SOIL TO BE SPREAD ON LOCATION</u>	
Depth to Groundwater: (pts) <u>0</u>	Final Closure Sampling Sampling Date: <u>9/11/97</u> Time: <u>11:45AM</u> Sample Results: Field Headspace (ppm) <u>0</u> TPH (ppm) <u>4400</u> Method <u>M8015</u> Other <u>BTEX \ SW846 , 8020A (ND)</u>
Distance to an Ephemeral Stream: (pts) <u>0</u>	
Distance to Nearest Lake, Playa, or Watering Pond: (pts) <u>0</u>	
Wellhead Protection Area: (pts) <u>0</u>	
Distance To Surface Water: (pts) <u>0</u>	
RANKING SCORE (TOTAL POINTS) <u>0</u>	
I HEREBY CERTIFY THAT THE INFORMATION ABOVE IS TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE AND BELIEF	
DATE: <u>7/16/98</u>	PRINTED NAME <u>JEFF CROSS</u>
SIGNATURE <u>Jeff Cross</u>	TITLE <u>PROJECT MANAGER</u>
AFTER REVIEW OF THE SOIL REMEDIATION INFORMATION. ON-SITE REMEDIATION IS APPROVED IN ACCORDANCE TO THE JICARILLA APACHE TRIBE PIT CLOSURE ORDINANCE.	
APPROVED: YES <u>X</u> NO _____ (REASON) _____	
SIGNED: <u>Kevin M. [Signature]</u>	DATE: <u>7-29-98</u>

M W PETROLEUM/FARMINGTON DISTRICT SOIL REMEDIATIONS STATUS REPORT

REMEDIATION SITE JAT 396 # 8

* AMOUNT OF SOIL UNDERGOING REMEDIATION 350 Yds.

CELL No. <u>1</u>	SampDATE 6/10/98	TPH 1900	BTEX ND
DIMENSIONS(LxWxH) <u>95' X 45' X 12"</u>			
CELL LOCATION (dir. from well head) <u>EAST</u>			
* DATE BEGAN: <u>5/8/97</u>			
DATE TERMINATED (TPH <5,000 ppm/BTEX< 50 ppm/Benzene < 10 ppm) <u>6/10/98</u>			
CELL No. <u>2</u>	SampDATE 9/11/97	TPH 4400	BTEX ND
DIMENSIONS(LxWxH) <u>105' X 50' X 12"</u>			
CELL LOCATION (dir. from well head) <u>EAST</u>			
* DATE BEGAN: <u>5/8/97</u>			
DATE TERMINATED (TPH <5,000 ppm/BTEX< 50 ppm/Benzene < 10 ppm) <u>9/11/97</u>			
CELL No. <u>3</u>	SampDATE	TPH	BTEX
DIMENSIONS(LxWxH)			
CELL LOCATION (dir. from well head)			
* DATE BEGAN:			
DATE TERMINATED (TPH <5,000 ppm/BTEX< 50 ppm/Benzene < 10 ppm)			
REMEDIATION RECORD: (Date, Treatment, Tilling)			
5/30/97 TREA T BOTH CELLS WITH 46-0-0 FERTILIZER,WATER,PLOW AND TILL SOIL.			
6/9/97 PLOW AND TILL BOTH CELLS.			
6/21/97 TILL SOIL.			
7/7/97WATER ,PLOW AND TILL BOTH CELLS.			
8/7/97 TREAT CELLS WITH 65LBS PHOSPHORUS, 88LBS LIME.			
4/28/98,4/29/98 PLOW AND TILL CELL # 1			
6/2/98 WATER AND PLOW CELL # 1			
6/3/98 TILL CELL # 1.			

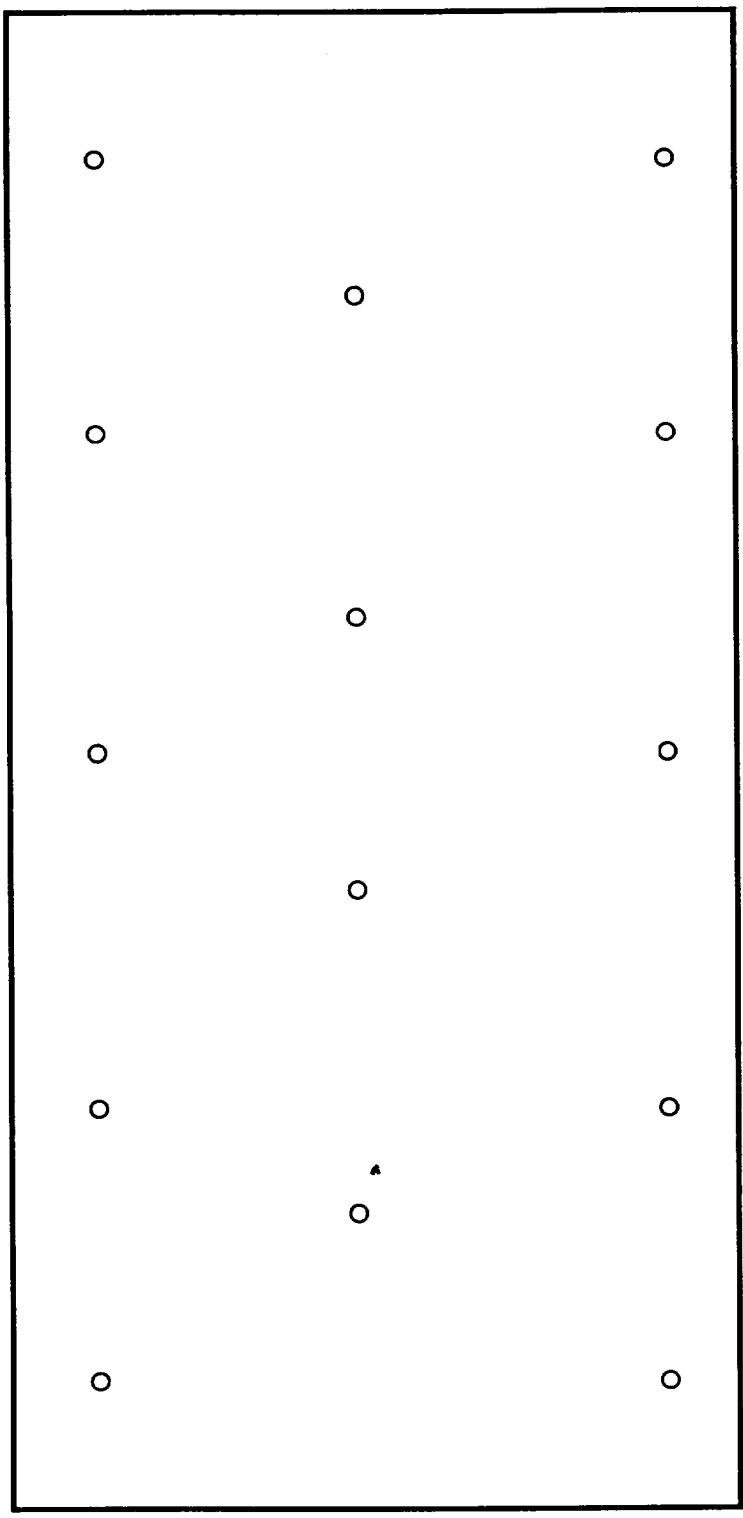
From excavation reports.

WELL NAME: JAT 396 # 8 CELL # 1

SAMPLE DATE: 6/10/98

DIMENSIONS: 95' X 45' X 12"

○ = SAMPLE AREA



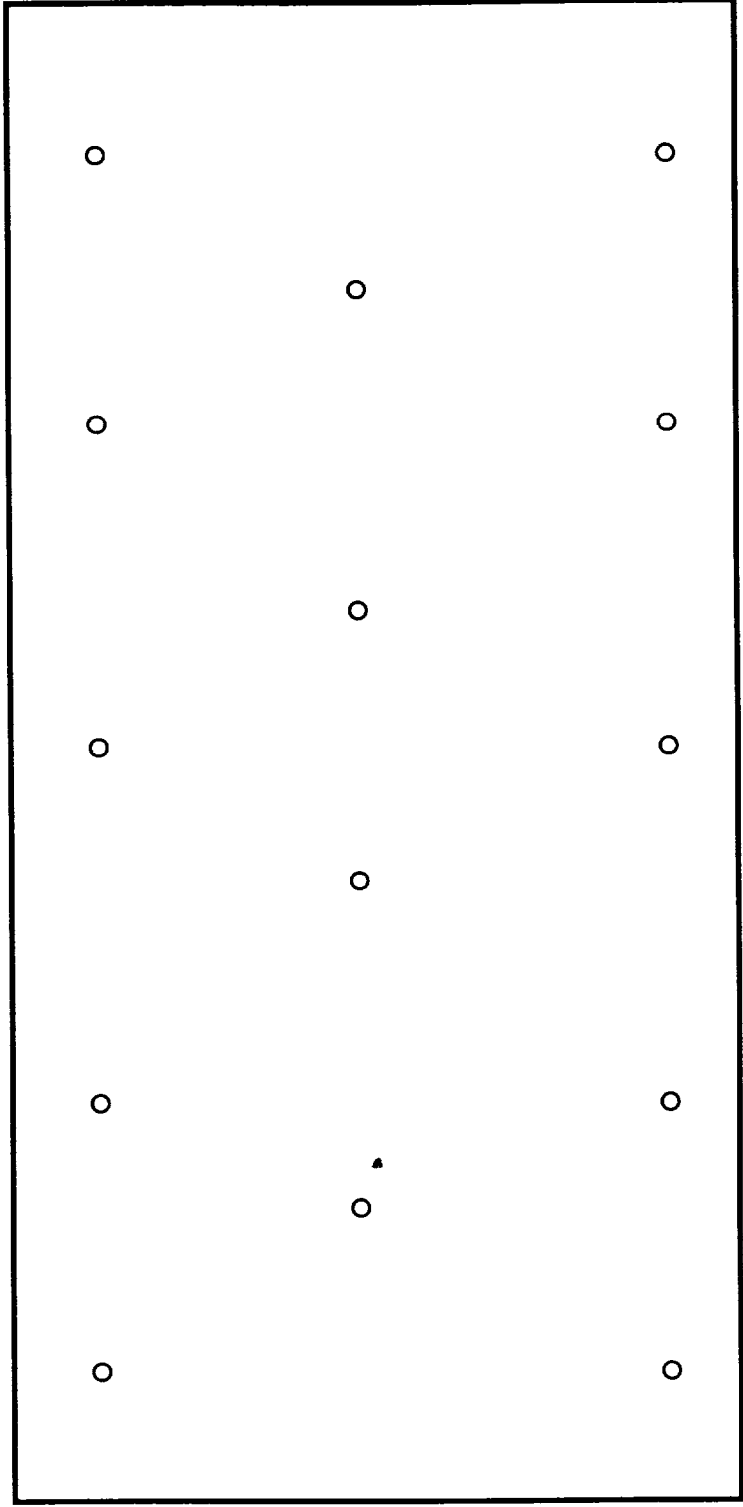
NOTES: ALL SAMPLES TAKEN 10" TO 12" INTO CELL.
14 POINT COMPOSITE SAMPLE

WELL NAME: JAT 396 # 8 CELL # 2

SAMPLE DATE: 9/11/97

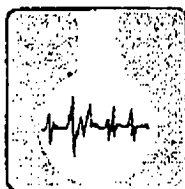
DIMENSIONS: 105' X 50' X 12"

○ = SAMPLE AREA



NOTES: ALL SAMPLES TAKEN 10" TO 12" INTO CELL.

14 POINT COMPOSITE SAMPLE



ASSAIGAI ANALYTICAL LABORATORIES, INC.

7300 Jefferson, NE • Albuquerque, New Mexico 87109 • (505) 345-8964 • FAX (505) 345-7259

3332 Wedgewood, E-5 • El Paso, Texas 79925 • (915) 593-6000 • FAX (915) 593-7820
127 Eastgate Drive, 212-C • Los Alamos, New Mexico 87544 • (505) 662-2558

APACHE CORPORATION
attn: JEFF CROSS
2855 SOUTHSIDE RIVER RD STE A
FARMINGTON, NM 87401-7947

* explanation of codes

B	analyte detected in Method Blank
E	result is estimated
H	analyzed out of hold time
N	tentatively identified compound
S	subcontracted
1-9	see footnote

Assaigai Analytical Laboratories, Inc.

Certificate of Analysis

Client: APACHE CORPORATION
Project: 9806179 JICARILLA

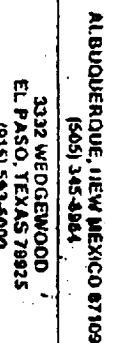
William P. Blevins
William P. Blevins, President of Assaigai Analytical Laboratories, Inc.

Client Sample ID **JAT 396 #8 CELL #1** Sample Matrix **SOIL** Sample Collected **06/10/98 11:35:00**

Fraction	QC Group	CAS #	Result	Units	Dilution Factor	Detection Limit	Sequence	Run Date
SW846-8010/8020 Volatiles								
9806179-01A	X98326	71-43-2	Benzene	ND	mg / Kg	50	0.005	XG.1998.535-11 06/15/98
	X98326	100-41-4	Ethylbenzene	ND	mg / Kg	50	0.005	XG.1998.535-11
	X98326	95-47-4	o-Xylene	ND	mg / Kg	50	0.005	XG.1998.535-11
	X98326		P/M-Xylenes	ND	mg / Kg	50	0.01	XG.1998.535-11
	X98326	106-88-3	Toluene	ND	mg / Kg	50	0.005	XG.1998.535-11
SW846-8015 Modified TPH								
9806179-01B	X98326		Diesel Range Organics	1900	mg / Kg	25	25	XG.1998.556-12 06/20/98

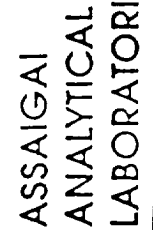
*** Sample specific analytical Detection Limit is determined by multiplying the sample Dilution Factor by the listed method Detection Limit. ***



[illegible][illegible]

 Stored over 30 days (add)

LABORATORY



Chain of Custody Record

1000 JEFFERSON, N.E.
ALBUQUERQUE, NEW MEXICO 87109
(505) 345-8964

**3332 WEDGEWOOD
EL PASO, TEXAS 79925
(915) 593-6000**

Client Apache Corporation

Project Manager / Contact Jeff Cross

Address 2855 Southside River RD, Ste. A Telephone No. (505) 774-6643

City / State / Zip Parminster, NM 87401-7947 Fax No. (505) 774-6624

Project Name / Number :

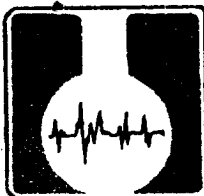
Samplers: (Signature)

Contract / Purchase Order / Quote

[illegible]

Relinquished by: Signature <u>Jefferson</u> Printed <u>Barstcoors</u> Company <u>Apache Corp</u> Reason _____		Date c/12/89 Time 8:30	Received by: Signature <u>Don C. [Signature]</u> Printed <u>ELVIN C. [Signature]</u> Company _____ Reason _____	Relinquished by: Signature <u>[Signature]</u> Printed _____ Company _____ Reason _____	Date c/12/89 Time 1:00	Received by: Signature <u>[Signature]</u> Printed _____ Company _____ Reason _____	After analysis, samples are to be: ☐ Disposed of (additional fee) ☐ Stored (30 days max) ☐ Stored over 30 days (additional fee) ☐ Returned to customer	
Method of Shipment: _____		Comments: _____						
Shipment No. _____								
Special Instructions: _____								

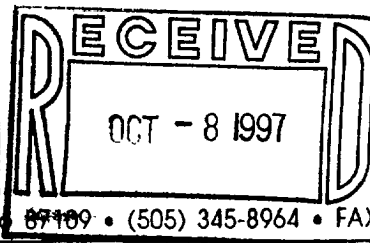
LABORATORY



**ASSAIGAI
ANALYTICAL
LABORATORIES, INC.**

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3332 Wedgewood, E-5 • El Paso, Texas 79925 • (915) 593-6000 • FAX (915) 593-7820



Report Generated:

September 23, 1997 10:28

**CERTIFICATE OF ANALYSIS
RESULTS BY SAMPLE**

SENT APACHE CORPORATION

WORKORDER # : 9709111

TO: 2855 SOUTHSIDE RIVER RD STE AWORC ID : JICARILLA PIT CLOSURES

FARMINGTON, NM 87401-7947 CLIENT CODE : APA01

DATE RECEIVED : 09/12/97

ATTN: JEFF CROSS

Page: 1

Lab ID: 9709111-01A

Collected: 09/11/97 11:45:00

Sample ID: JAT 396-8 CELL 2

Matrix: SOIL

TEST / METHOD	RESULT	UNITS	LIMIT	D_F	DATE ANAL	BATCH_ID
BTEX/SW846 8020A	ND	mg/kg	0.0050	100	09/14/97	X97262
Benzene	ND	mg/kg	0.0050	100	09/14/97	X97262
Toluene	ND	mg/kg	0.0050	100	09/14/97	X97262
Ethylbenzene	ND	mg/kg	0.010	100	09/14/97	X97262
P-&m-Xylene	ND	mg/kg	0.0050	100	09/14/97	X97262
O-Xylene	ND	mg/kg				

Lab ID: 9709111-01B

Collected: 09/11/97 11:45:00

Sample ID: JAT 396-8 CELL 2

Matrix: SOIL

TEST / METHOD	RESULT	UNITS	LIMIT	D_F	DATE ANAL	BATCH_ID
Diesel Range OG Soil/M8015	4400	mg/Kg	25	25	09/18/97	SDR053
Diesel Range OG in Soil						

William P. Biava

William P. Biava
President



WORKORDER COMMENTS

DATE : 09/23/97
WORKORDER:

DEFINITIONS/DATA QUALIFIERS

The following are definitions, abbreviations, and data qualifiers which may have been utilized in your report:

ND = Analyte "not detected" in analysis at the sample specific detection limit.

D_F = Sample "dilution factor"

NT = Analyte "not tested" per client request.

B = Analyte was also detected in laboratory method QC blank.

E = Analyte concentration (result) is an estimated value or exceeds analysis calibration range.

LIMIT = The minimum amount of the analyte that AAL can detect utilizing the specified analysis.

Please Note: Multiply the "Limit" value (AAL's Detection Limit) by Dilution Factor (D_F) to obtain the sample specific Detection Limit.

REPORT COMMENTS
