ENVIRONMENTAL PLUS, INC.
CONSULTING AND REMEDIAL CONSTRUCTION

26 February 2008

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HOBBS OCD

PLAN APPROVED 2.28.08 LT

Mr. Larry Johnson
Environmental Engineer Specialist
New Mexico Oil Conservation Division
1625 North French Drive
Hobbs, NM 88240

Re: Remediation Proposal
Apache Corporation – North Monument Grayburg San Andres Unit (NMGSAU) #368
1RP# 1746 [API # 30-025-038459, NMSLO ROE # 1638, EPI Ref. # 240017]
UL-O (SW¼ of the SE¼) Section 19, Township 19 South, Range 37 East
Latitude N 32° 38' 29.54" and Longitude W 103° 17' 24.07"

Dear Mr. Johnson:

In January 2008, Environmental Plus, Inc. (EPI) was retained by Apache Corporation to investigate a release of approximately 45 barrels of drilling brine (~25 barrels on location and ~20 barrels off location). This letter reports delineation activities and proposes remedial action.

The site is located approximately 2 miles northwest of Monument, New Mexico (reference *Figure 1*) on land owned by the State of New Mexico (administered by the New Mexico State Land Office) and agriculturally leased by Mr. Jimmie T. Cooper.

Information obtained from the New Mexico Office of the State Engineer's website and United States Geological Survey (USGS) database indicates no water supply wells exist within a 1,000-foot radius of the release site. However, eight (8) water supply wells are located within a 1.0-mile radius of the release site (reference *Figure 2*). Groundwater level data indicates an average depth of approximately 40-feet below ground surface (reference *Table 1*). Utilizing this information, New Mexico Oil Conservation Division (NMOCD) Remedial Goals for this site are as follows:

Parameter	Remedial Goal*
Benzene	10 parts per million
BTEX	50 parts per million
TPH	100 parts per million

*Chloride residuals may not be capable of impacting local groundwater above NMWQCC Groundwater Standards of 250 mg/L.

Field Activities

On 3 January 2008, EPI conducted an initial site assessment of the site. Activities included photographing the site, recording surface features and surveying impacted surface area utilizing a hand held GPS (reference *Figure 3*).

P. O. BOX 1558 ••• 2100 AVENUE O ••• EUNICE, NEW MEXICO 88231
TELEPHONE 575•394•3481 ••• FAX 575•394•2601

On 7 January 2008, a total of fifteen (15) soil samples were collected from the pasture portion of the release area at a depth of approximately 6-inches below ground surface (bgs). Eight (8) soil samples were collected from within the release area and seven (7) background samples from approximately 3- to 8-feet outside the release boundaries. Soil samples were analyzed in the field for chloride concentrations utilizing a La Motte Field Chloride Test Kit (titration type).

Based on initial assessment activities, EPI continued delineating of the site from 5 - 8 February 2008 via pairs of North-South and East-West test trenches for collection of soil samples to further establish horizontal and vertical extents of impacted soil (reference *Figure 5*). Soil samples were collected from discreet locations within the test trench. Upon collection, soil samples were analyzed in the field to quantify chloride concentrations. Test trenches were excavated until soil sample field analyses indicated chloride residuals were within remedial goals (i.e., $\leq$ 250 mg/Kg). However, indurated subsurface conditions prevented excavation to necessary depth in several locations [i.e., soil samples T1-2 (1.5'), T1-3 (2'), T4-1 (1.5') and T4-5 (1')]. Based on field analyses, a portion of the total soil samples were submitted to an independent laboratory for analyses of chloride concentration. In addition, a select number of soil samples were analyzed for the presence of gasoline and diesel range hydrocarbons (i.e., TPH) (reference *Figure 5*).

Field and Laboratory Analyses

Field chloride analyses of samples collected on 7 January 2008 indicated chloride concentrations of 4,000 + mg/Kg for fourteen (14) of fifteen (15) sample locations within the release area at a depth of approximately 0.5-feet bgs. Background soil sample chloride concentrations were reported as 240 mg/Kg (reference Figure 4).

Field and laboratory analyses of soil samples collected from test trenches indicate bulk of chloride residuals were limited to approximately 1- to 1.5-feet bgs (reference *Table 2* and *Figure 5*).

Recommendations

Based upon delineation activities, EPI recommends excavation of chloride impacted material from the release area and well pad. Excavation and disposal of approximately 1- to 1.5-feet of soil in the majority of the pasture release area will remove the bulk of chloride impacted soil. Additionally, the removal of approximately 0.5- to 1-feet of material from the flowpath area of the well pad will reduce the risk to pasture areas from chloride impacted runoff.

Soil samples will be collected from the excavation and analyzed in the field to verify remedial goals have been achieved. Upon receipt of satisfactory field analyses results, soil samples will be submitted to an independent laboratory for verification.

Upon approval, EPI will implement activities outlined in this *Remediation Proposal.* A *Closure Report* documenting remediation activities will be provided upon completion of the project.

Should you have any questions or concerns, please contact me at (575) 394-3481 or via email at jstegemoller@envplus.net or Mr. Harold Swain at (575) 390-4368 or via email at harold.swain@usa.apachecorp.com. All official correspondence should be addressed to:

Mr. Harold Swain
Apache Corporation
P.O. Box 848
Wink, TX 79789

Sincerely,

ENVIRONMENTAL PLUS, INC.

Jason Stegemoller
Environmental Scientist

cc: Harold Swain, Apache Corp. – Wink, TX
Jimmy Cooper, Agricultural Lessee – Monument, NM
Thaddeus Kostrubala, NMSLO – Sante Fe, NM
Myra Meyers, NMSLO – Hobbs, NM
File

encl. Figure 1 – Area Map
Figure 2 – Site Location Map
Figure 3 – Site Map
Figure 4 – Pasture Area Sample Location and Field Analytical Data
Figure 5 – Test Trench Sample Location Map
Table 1 – Well Data
Table 2 – Test Trench Soil Sample Analytical Data
Attachment I – Laboratory Analytical Data
Attachment II – Site Photographs
Attachment III – Information Copy of Initial C-141

FIGURES

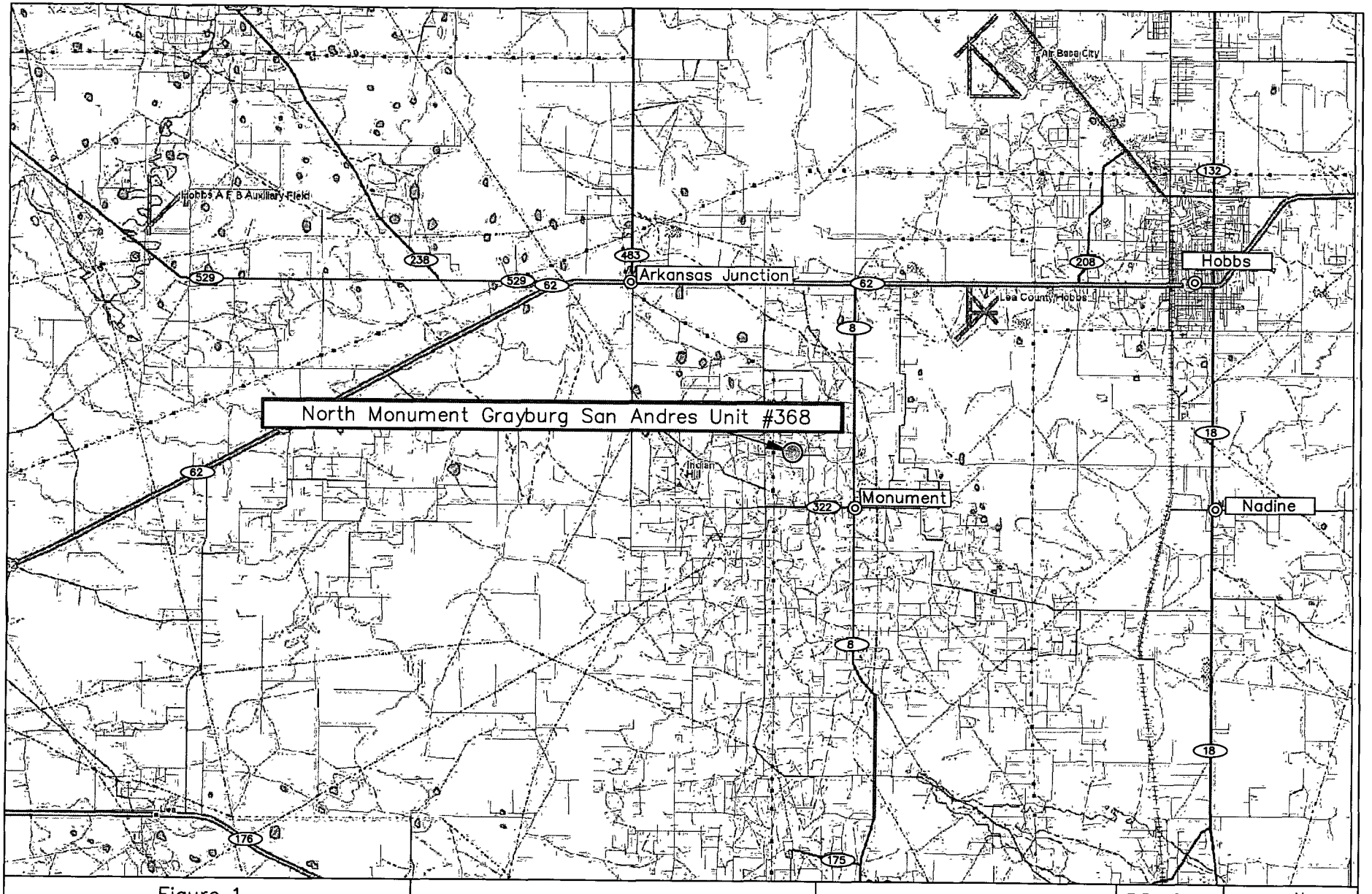

Figure 1
Area Map
Apache Corporation
North Monument Grayburg
San Andres Unit #368

Lea County, New Mexico
SW 1/4 of the SE 1/4, Sec. 19, T19S, R37E
N 32° 38' 29.54" W 103° 17' 24.07"
Elevation: 3,657 feet amsl

DWG By: Jason Stegemoller
January 2008

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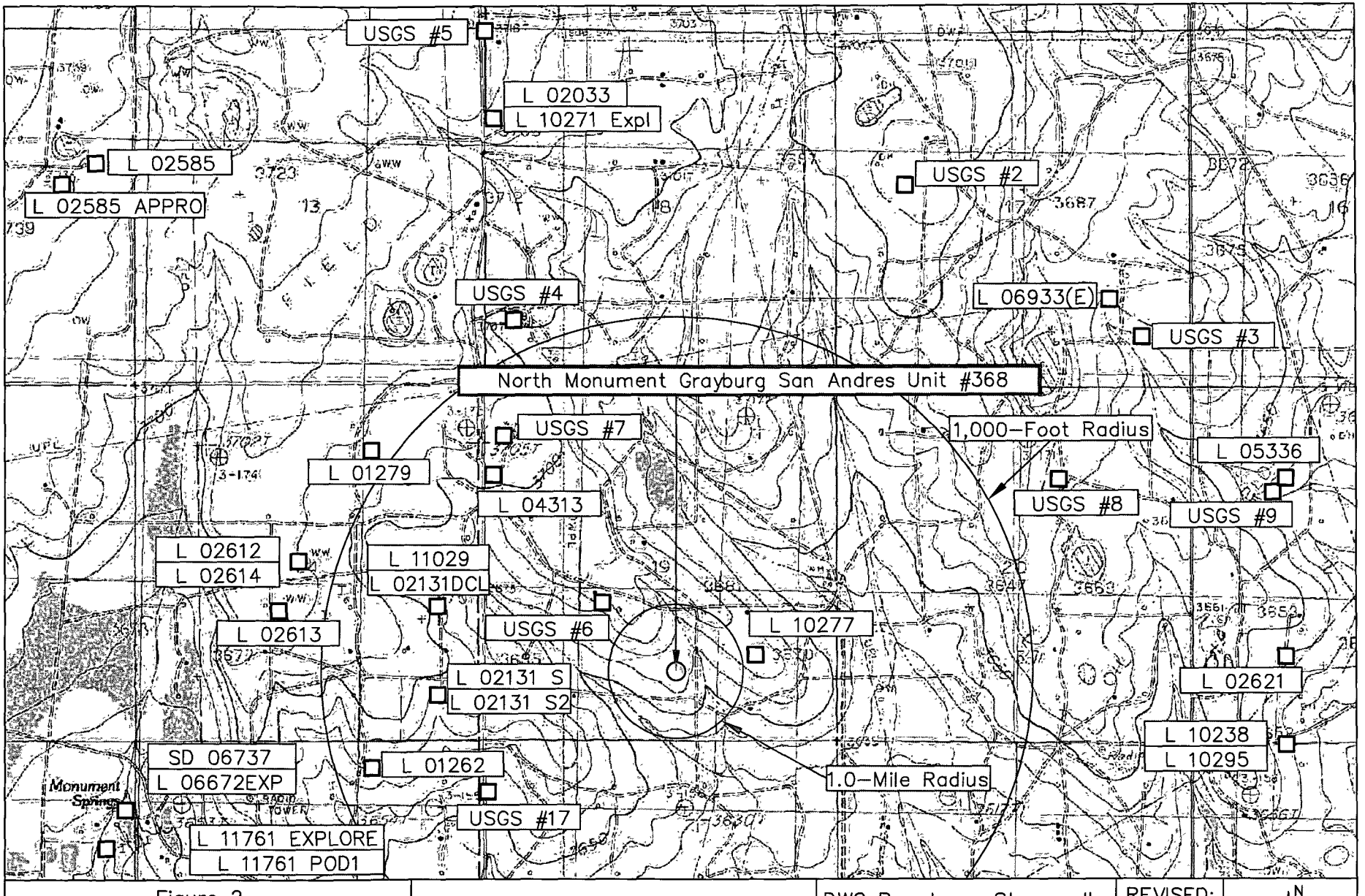

Figure 2
Site Location Map
Apache Corporation
North Monument Grayburg
San Andres Unit #368

Lea County, New Mexico
SW 1/4 of the SE 1/4, Sec. 19, T19S, R37E
N 32° 38' 29.54" W 103° 17' 24.07"
Elevation: 3,657 feet amsl

DWG By: Jason Stegemoller
January 2008

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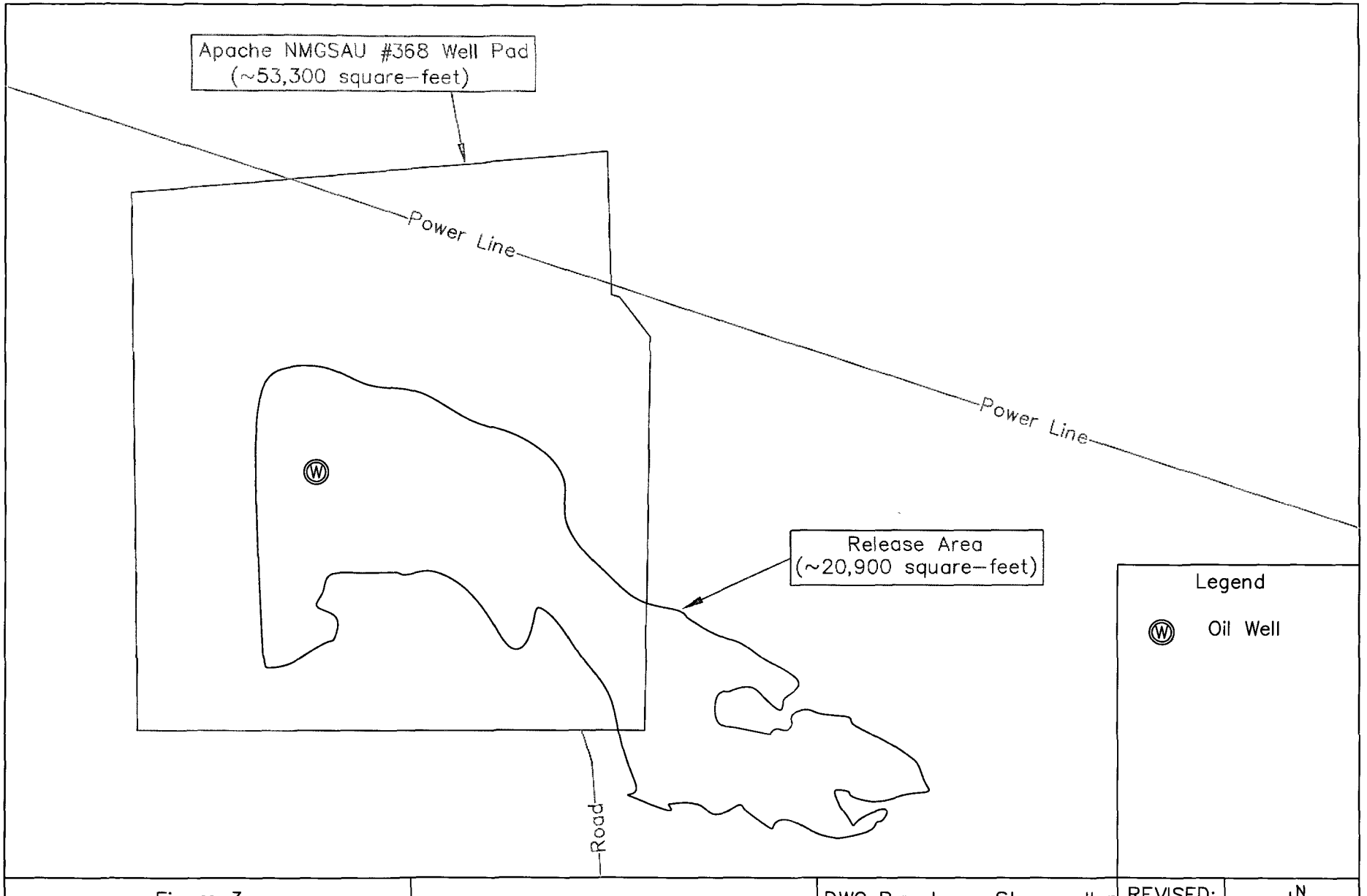

Figure 3
Site Map
Apache Corporation
North Monument Grayburg
San Andres Unit #368

Lea County, New Mexico
SW 1/4 of the SE 1/4, Sec. 19, T19S, R37E
N 32° 38' 29.54" W 103° 17' 24.07"
Elevation: 3,657 feet amsl

DWG By: Jason Stegemoller
January 2008

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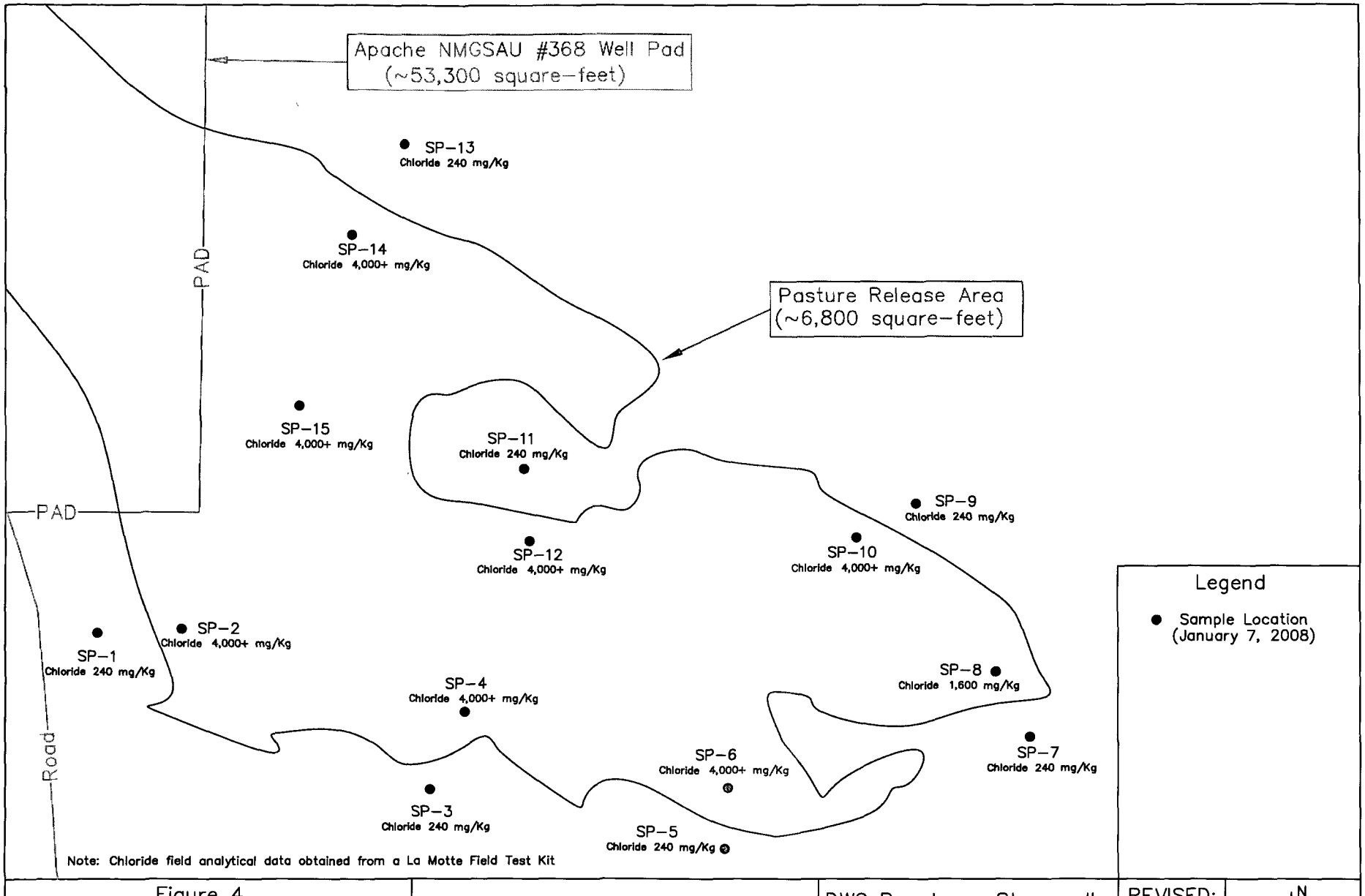

Figure 4
Pasture Area Sample Location
and Field Analytical Data
Apache Corporation
North Monument Grayburg
San Andres Unit #368

Lea County, New Mexico
SW 1/4 of the SE 1/4, Sec. 19, T19S, R37E
N 32° 38' 29.54" W 103° 17' 24.07"
Elevation: 3,657 feet amsl

DWG By: Jason Stegemoller
January 2008

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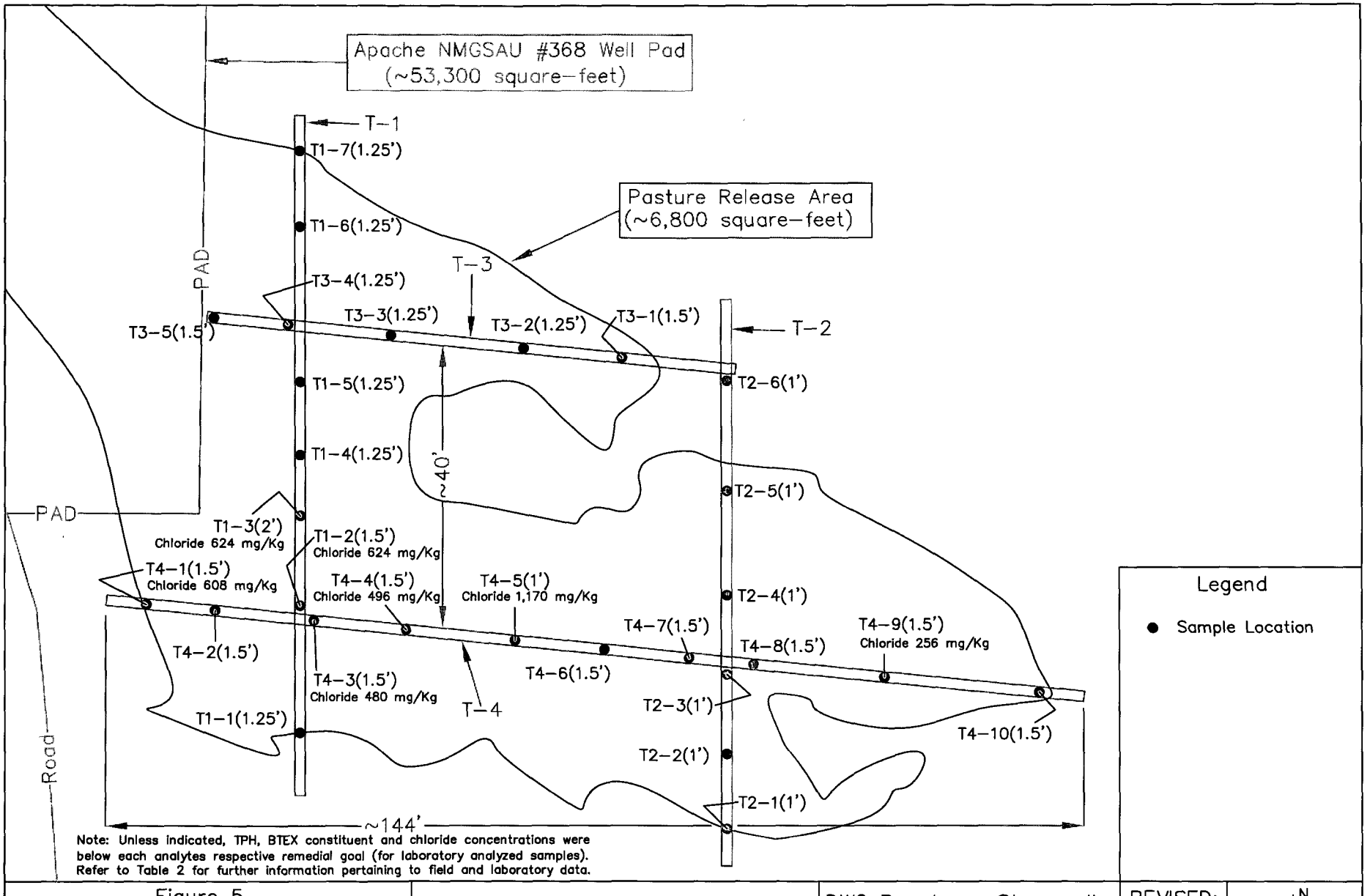

Figure 5
Test Trench and Sample Location Map
Apache Corporation
North Monument Grayburg San Andres Unit #368

Lea County, New Mexico
SW 1/4 of the SE 1/4, Sec. 19, T19S, R37E
N 32° 38' 29.54" W 103° 17' 24.07"
Elevation: 3,657 feet amsl

DWG By: Jason Stegemoller
January 2008

REVISED:

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SHEET 1 of 1

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TABLES

TABLE 1

Well Data

Apache Corporation - North Monument Grayburg San Andres Unit #368 (Ref. # 240017)

Well Number	Diversion[A]	Owner	Use	Twsp	Rng	Sec q q q	Latitude	Longitude	Date Measured	Surface Elevation[B]	Depth to Water (ft bgs)
L 06933 (E)	0	GULF OIL CORPORATION	PRO	19S	37E	17 4 2 3	N32° 39' 23.47"	W103° 16' 7 86"	12-Apr-72	3,678	65
USGS #2				19S	37E	17 1 3 4			27-Feb-96	3,706	62.54
USGS #3				19S	37E	17 4 3 1			24-Apr-91	3,670	36 96
USGS #4				19S	37E	18 3 3 1			18-Mar-54	3,701	51.93
USGS #5				19S	37E	18 1 1 1			22-Feb-91	3,716	63 87
L 02033	0	MONUMENT WATER USERS	DOM	19S	37E	18 1 1 1	N32° 39' 50.42"	W103° 17' 55 35"	12-Sep-47	3,717	35
L 10271 EXPL	0	INC. SNYDER RANCHES	EXP	19S	37E	18 1 1 1	N32° 39' 50 42"	W103° 17' 55.35"	13-Jul-92	3,717	70
USGS #6				19S	37E	19 3 2 1			21-Feb-91	3,670	58 43
USGS #7				19S	37E	19 1 1 3			06-Mar-96	3,702	57.31
L 04313	3	MCVAY AND STAFFORD DRILLING CO	PRO	19S	37E	19 1 1	N32° 38' 58.03"	W103° 17' 55 36"	23-Oct-59	3,704	52
L 10277	3	INC. SNYDER RANCHES	STK	19S	37E	19 4 2 2	N32° 38' 31.48"	W103° 17' 9.65"	10-Jul-92	3,678	40
USGS #8				19S	37E	20 2 3 1			19-Apr-68	3,662	47 85
L 02621	3	LA MANCE DRILLING COMPANY	PRO	19S	37E	21 3 2 3	N32° 38' 31.20"	W103° 15' 37 02"	14-Sep-54	3,642	40
L 05336	0	GULF OIL CORPORATION	PRO	19S	37E	21 1 2 4	N32° 38' 57.29"	W103° 15' 37.00"	15-Feb-64	3,639	30
L 10238	3	W. S ISRAEL	DOM	19S	37E	21 3 4 3	N32° 38' 18.16"	W103° 15' 37 03"	19-Mar-92	3,637	30
L 10295	3	TERRY ISRAEL	DOM	19S	37E	21 3 4 3	N32° 38' 18.16"	W103° 15' 37.03"	29-Oct-92	3,637	30
USGS #9				19S	37E	21 1 3 2			29-Feb-96	3,640	24.13
USGS #17				19S	37E	30 1 1 1			11-Feb-66	3,654	26 88
L 01262		GULF OIL CORPORATION	PRO	19S	36E	25 2 1 2				3,655	
L 01279		GULF OIL CORPORATION	PRO	19S	36E	24 2 1 4				3,707	
L 02131 DCL		THE TEXAS COMPANY	COM	19S	36E	24 4 2				3,695	
L 02131 S		THE TEXAS COMPANY		19S	36E	24 4 4				3,695	
L 02131 S 2		THE TEXAS COMPANY		19S	36E	24 4 4				3,695	
L 02585		DILLARD & WALTERMIRE DRILLING	PRO	19S	36E	14 2 4			13-Jul-54	3,735	63
L 02585 APPRO		DILLARD & WALTERMIRE DRILLING		19S	36E	14 2 4 3			13-Jul-54	3,735	63
L 02612		VERSADO GAS PROCESSORS, LLC	IND	19S	36E	24 3 2 2				3,710	
L 02613		VERSADO GAS PROCESSORS, LLC	IND	19S	36E	24 3 2 4				3,712	
L 11029		CHEVRON USA INC	POL	19S	36E	24 4 2			14-Oct-99	3,695	59
L 02614		VERSADO GAS PROCESSORS, LLC	IND	19S	36E	24 3 2 2				3,710	
L 06672 EXP		JINNIE T COOPER	DOM	19S	36E	26 2 2 4				3,650	
L 11761 EXPLORE		JIM COOPER	EXP	19S	36E	26 2 4 2				3,645	
L 11761 POD1				19S	36E	26 2 4 2				3,645	
SD 06737		MONUMENT SPRINGS RANCH	PLS	19S	36E	26 2 2 4			12/31/1869	3,650	
L 05123 EXPL		CLIMAX CHEMICAL COMPANY	EXP	19S	36E	14 1 3			15-Feb-64		55
L 02881		HOWARD P. HOLMES DRILLING	PRO	19S	36E	14			30-May-55		50
L 02881 APPRO		HOWARD P. HOLMES DRILLING		19S	36E	14			30-May-55		50
L 03097		OSCAR BOURG DRILLING CO	PRO	19S	36E	14			11-Feb-56		50
L 03097 APPRO		OSCAR BOURG DRILLING CO		19S	36E	14			11-Feb-56		50
L 01140		ELLEN WEIR & SONS	STK	19S	36E	23 1			13-Oct-51		45
L 01140 APPRO		ELLEN WEIR & SONS		19S	36E	23 1			13-Oct-51		45
L 01140 REPAR		ELLEN WEIR & SONS		19S	36E	23 1	N32° 38' 44.26"	W104° 21' 37.39"	18-Jul-53		45
L 03098		THE TEXAS COMPANY	PRO	19S	36E	23 1 2			25-Jan-56		55
L 03098 APPRO		THE TEXAS COMPANY		19S	36E	23 1 2			25-Jan-56		55
L 04719		MONUMENT, LLC	IND	19S	36E	23 1 1	N32° 38' 58.04"	W103° 19' 59.05"			
L 04719		STATE OF NEW MEXICO	IND	19S	36E	23 1 1	N33° 38' 58.04"	W104° 19' 59.05"			
L 04746 EXPL		CLIMAX CHEMICAL COMPANY	EXP	19S	36E	23			29-Nov-61		57
L 04772 EXPL		CLIMAX CHEMICAL COMPANY	EXP	19S	36E	24			28-Dec-61		70

TABLE 1

Well Data

Apache Corporation - North Monument Grayburg San Andres Unit #368 (Ref. # 240017)

Well Number	Diversion[A]	Owner	Use	Twsp	Rng	Sec q q q	Latitude	Longitude	Date Measured	Surface Elevation[B]	Depth to Water (ft bgs)
L 01278		GULF OIL CORPORATION	MUL	19S	36E	26 4 1 2					
L 06121 EXP		W.B. BAUM	DOM	19S	36E	26 2					
L 03982 APPRO				19S	37E	28 3 3	N32° 37' 25.94"	W103° 15' 52.53"	10-Nov-58	3,606	31
L 03884	3	R.L. LEWIS	DOM	19S	37E	28	N32° 37' 25.94"	W103° 15' 52.53"	14-Jun-58	3,606	30
L 02596	3	MAKIN DRILLING COMPANY	PRO	19S	37E	29 3 2	N32° 37' 39.11"	W103° 16' 38.84"	20-Jul-54	3,609	20
L 03922	3	LEON DICKERSON	DOM	19S	37E	29	N32° 37' 26.10"	W103° 16' 54.28"	11-Aug-58	3,596	22
L 03949	3	ROY L. WHEELER	DOM	19S	37E	29	N32° 37' 26.10"	W103° 16' 54.28"	12-Aug-58	3,596	18
L 03956	3	DENNIS C. SMITH	DOM	19S	37E	29	N32° 37' 26.10"	W103° 16' 54.28"	13-Aug-58	3,596	20
L 03995	3	W.E. COPELAND	DOM	19S	37E	30 4 4	N32° 37' 26.16"	W103° 17' 9.72"	26-Sep-58	3,599	20
L 05995	3	H.L. STEPHENS	DOM	19S	37E	30 4 4 4	N32° 37' 26.16"	W103° 17' 9.72"	04-Aug-66	3,599	23
L 03905	3	LILLIE B. LONGNECKER	DOM	19S	37E	30 4 4	N32° 37' 26.16"	W103° 17' 9.72"	12-Aug-58	3,599	20
L 03906	3	ROBET P. III SHORT	DOM	19S	37E	30 4 4	N32° 37' 26.16"	W103° 17' 9.72"	11-Aug-58	3,599	20
L 03954	3	K.W. LITTLE	DOM	19S	37E	30 4 4	N32° 37' 26.16"	W103° 17' 9.72"	10-Aug-58	3,599	20
L 01975 APPRO	3	O & W DRLG. CO.	PRO	19S	37E	16 4 3	N32° 39' 10.30"	W103° 15' 21.56"	12-Feb-53	3,638	20
L 03185	3	CARPER DRILLING CO.	PRO	19S	37E	16 2 4	N32° 39' 36.37"	W103° 15' 6.16"	24-Apr-56	3,668	45
L 03228	3	MAKIN DRILLING COMPANY	PRO	19S	37E	16 4 4	N32° 39' 10.26"	W103° 15' 6.14"	18-Jun-56	3,641	42
USGS #1				19S	37E	16 2 3 3			08-Mar-91	3,648	26.94
L 04108	3	R.H. HUSTON	PRO	19S	37E	21 4 2	N32° 38' 31.15"	W103° 15' 6.17"	01-Apr-59	3,619	22
L 09163	3	LEROY LOTT	DOM	19S	37E	21 2 3 2	N32° 38' 44.21"	W103° 15' 21.58"	16-Apr-83	3,632	47
USGS #10				19S	37E	21 4 3 1			09-Jan-86	3,614	16.19
USGS #11				19S	37E	28 4 2 4			18-Apr-91		20.30
USGS #12				19S	37E	29 3 2 2			16-Jan-81		17.50
USGS #13				19S	37E	29 3 4 4			23-Mar-60		21.50P
USGS #14				19S	37E	29 4 4 4			22-Feb-80		34.45
USGS #15				19S	37E	29 4 4 4			19-Jan-71		35.05
USGS #16				19S	37E	29 3 3 3			18-Apr-91		13.01

[A] = In acre feet per annum

[B] = Elevation interpolated from USGS topographical map based on referenced location

PRO = Prospecting or development of natural resource

DOM = Domestic

EXP = Exploration

STK= Livestock watering

quarters are 1=NW, 2=NE, 3=SW, 4=SE; quarters are biggest to smallest

Shaded areas indicate wells not shown on Figure 2

TABLE 2

Summary of Test Trench Soil Sample Analytical Results

Apache Corporation - North Monument Grayburg San Andres Unit #368 (Ref. #240017)

Location	Sample I.D.	Depth (feet)	PID analysis	Field Chloride Analysis	Soil Status	Sample Date	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethylbenzene (mg/Kg)	Total Xylenes (mg/Kg)	Total BTEX (mg/Kg)	Gasoline Range Organics (C6-C10) (mg/Kg)	Diesel Range Organics (C10-C28) (mg/Kg)	Total TPH (mg/Kg)	Chloride (mg/Kg)
Background	BG-1 (0.5')	0.50	--	240	In Situ	08-Feb-08	--	--	--	--	--	<10.0	<10.0	<20.0	16
Test Trench 1	T1-1 (1.25')	1.25	--	280	In Situ	07-Feb-08	--	--	--	--	--	--	--	--	--
	T1-2 (1.5')	1.50	--	480	In Situ	08-Feb-08	--	--	--	--	--	<10.0	<10.0	<20.0	**624**
	T1-3 (2')	2.00	--	720	In Situ	08-Feb-08	--	--	--	--	--	--	--	--	**624**
	T1-4 (1.25')	1.25	--	440	In Situ	07-Feb-08	--	--	--	--	--	--	--	--	--
	T1-5 (1.25')	1.25	--	360	In Situ	07-Feb-08	--	--	--	--	--	--	--	--	--
	T1-6 (1.25')	1 25	--	280	In Situ	07-Feb-08	--	--	--	--	--	--	--	--	--
	T1-7 (1.25')	1.25	--	240	In Situ	07-Feb-08	--	--	--	--	--	--	--	--	--
Test Trench 2	T2-1 (1')	1.00	--	240	In Situ	06-Feb-08	--	--	--	--	--	--	--	--	32
	T2-2 (1')	1.00	--	240	In Situ	06-Feb-08	--	--	--	--	--	--	--	--	16
	T2-3 (1')	1.00	--	240	In Situ	06-Feb-08	--	--	--	--	--	--	--	--	48
	T2-4 (1')	1.00	--	240	In Situ	06-Feb-08	--	--	--	--	--	--	--	--	<16
	T2-5 (1')	1.00	--	240	In Situ	06-Feb-08	--	--	--	--	--	--	--	--	176
	T2-6 (1')	1.00	--	240	In Situ	06-Feb-08	--	--	--	--	--	--	--	--	<16
Test Trench 3	T3-1 (1.5')	1.50	--	640	In Situ	07-Feb-08	--	--	--	--	--	--	--	--	--
	T3-2 (1.25')	1.25	--	360	In Situ	07-Feb-08	--	--	--	--	--	--	--	--	--
	T3-3 (1.25')	1.25	--	360	In Situ	07-Feb-08	--	--	--	--	--	--	--	--	240
	T3-4 (1.25')	1.25	--	320	In Situ	08-Feb-08	--	--	--	--	--	<10.0	21.3	21.3	192
	T3-5 (1.5')	1.50	--	240	In Situ	07-Feb-08	--	--	--	--	--	--	--	--	--

TABLE 2

Summary of Test Trench Soil Sample Analytical Results

Apache Corporation - North Monument Grayburg San Andres Unit #368 (Ref. #240017)

Location	Sample I.D.	Depth (feet)	PID analysis	Field Chloride Analysis	Soil Status	Sample Date	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethylbenzene (mg/Kg)	Total Xylenes (mg/Kg)	Total BTEX (mg/Kg)	Gasoline Range Organics (C6-C10) (mg/Kg)	Diesel Range Organics (C10-C28) (mg/Kg)	Total TPH (mg/Kg)	Chloride (mg/Kg)
Test Trench 4	T4-1 (1.5')	1.50	--	480	In Situ	05-Feb-08	--	--	--	--	--	--	--	--	**608**
	T4-2 (1.5')	1.50	--	240	In Situ	05-Feb-08	--	--	--	--	--	--	--	--	112
	T4-3 (1.5')	1.50	--	440	In Situ	05-Feb-08	--	--	--	--	--	--	--	--	**480**
	T4-4 (1.5')	1.50	--	440	In Situ	05-Feb-08	--	--	--	--	--	--	--	--	**496**
	T4-5 (1')	1.00	--	1080	In Situ	05-Feb-08	--	--	--	--	--	--	--	--	**1,170**
	T4-6 (1.5')	1.50	--	360	In Situ	05-Feb-08	--	--	--	--	--	--	--	--	224
	T4-7 (1.5')	1.50	--	240	In Situ	05-Feb-08	--	--	--	--	--	--	--	--	48
	T4-8 (1.5')	1.50	--	160	In Situ	05-Feb-08	--	--	--	--	--	--	--	--	16
	T4-9 (1.5')	1.50	--	240	In Situ	05-Feb-08	--	--	--	--	--	--	--	--	**256**
	T4-10 (1.5')	1.50	--	200	In Situ	05-Feb-08	--	--	--	--	--	--	--	--	16
NMOCD Remedial Thresholds							**10**				**50**			**100**	**250** [A]

Bolded *values are in excess of NMOCD Remediation Thresholds*

-- =Not Analyzed

[A] *Chloride and Sulfate residuals may not be capable of impacting local groundwater above the NMWQCC standards of 250 mg/L and 650 mg/L respectively*

[B] = *Estimated value, analyte detected below reporting limit*

ATTACHMENT I

LABORATORY ANALYTICAL DATA

CARDINAL LABORATORIES

PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR
ENVIRONMENTAL PLUS, INC.
ATTN: JASON STEGEMOLLER
P.O. BOX 1558
EUNICE, NM 88231
FAX TO: (575) 394-2601

Receiving Date: 02/08/08
Reporting Date: 02/11/08
Project Owner: APACHE CORPORATION (240017)
Project Name: NMGSAU #368
Project Location: UL-O, SEC. 19, T19S, R37E

Analysis Date: 02/11/08
Sampling Date: 02/05/08
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: ML
Analyzed By: KS

LAB NUMBER	SAMPLE ID	Cl^- (mg/kg)
H14224-1	T4-1 (1.5')	608
H14224-2	T4-2 (1.5')	112
H14224-3	T4-3 (1.5')	480
H14224-4	T4-4 (1.5')	496
H14224-5	T4-5 (1')	1,170
H14224-6	T4-6 (1.5')	224
H14224-7	T4-7 (1.5')	48
H14224-8	T4-8 (1.5')	16
H14224-9	T4-9 (1.5')	256
H14224-10	T4-10 (1.5')	16
Quality Control		490
True Value QC		500
% Recovery		98.0
Relative Percent Difference		2.0

METHOD: Standard Methods	4500-ClB

Note: Analyses performed on 1:4 w:v aqueous extracts.

Kristy Sepulveda
Chemist

02/11/08
Date

H14224 EPI

Environmental Plus, Inc.

Chain of Custody Form

2100 Avenue O, Eunice, NM 88231 *P.O. Box 1558, Eunice, NM 88231*
(505) 394-3481 FAX: (505) 394-2601

Company Name	Environmental Plus, Inc.
EPI Project Manager	Jason Stegemoller
Mailing Address	P.O. BOX 1558
City, State, Zip	Eunice New Mexico 88231
EPI Phone#/Fax#	505-394-3481 / 505-394-2601
Client Company	Apache Corporation
Facility Name	NMGSAU# 368
Location	UL-O, Sec 19, T19S, R37E
Project Reference	240017
EPI Sampler Name	D. Deaton/G. Blackburn

Bill To

Attn: Jason Stegemoller
P.O. Box 1558
Eunice, NM 88231

ANALYSIS REQUEST

LAB I.D.		SAMPLE I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUND WATER	MATRIX: WASTEWATER	MATRIX: SOIL	MATRIX: CRUDE OIL	MATRIX: SLUDGE	MATRIX: OTHER:	PRESERV.: ACID/BASE	PRESERV.: ICE/COOL	PRESERV.: OTHER	SAMPLING: DATE	SAMPLING: TIME	BTEX 8021B	TPH 8015M	CHLORIDES (Cl^-)	SULFATES ($SO_4^=$)	pH	TCLP	OTHER >>>	PAH			
H14224-1	1	T4-1 (1.5')	G	1			1					X		05-Feb-08	13:00			X							
-2	2	T4-2 (1.5')	G	1			1					X		05-Feb-08	13:05			X							
-3	3	T4-3 (1.5')	G	1			1					X		05-Feb-08	13:10			X							
-4	4	T4-4 (1.5')	G	1			1					X		05-Feb-08	13:15			X							
-5	5	T4-5 (1')	G	1			1					X		05-Feb-08	13:20			X							
-6	6	T4-6 (1.5')	G	1			1					X		05-Feb-08	13:25			X							
-7	7	T4-7 (1.5')	G	1			1					X		05-Feb-08	14:05			X							
-8	8	T4-8 (1.5')	G	1			1					X		05-Feb-08	14:10			X							
-9	9	T4-9 (1.5')	G	1			1					X		05-Feb-08	14:15			X							
-10	10	T4-10 (1.5')	G	1			1					X		05-Feb-08	14:20			X							

Sampler Relinquished: [signature] Date: 2-8-08 Time: 4:25p Received By: [signature]

Relinquished by: Date: Time: Received By: (lab staff)

Delivered by: [signature] Sample Cool & Intact: (Yes) No Checked By: MCB

E-mail results to: jstegemoller@envplus.net

NOTES:

CARDINAL LABORATORIES

PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR
ENVIRONMENTAL PLUS, INC.
ATTN: JASON STEGEMOLLER
P.O. BOX 1558
EUNICE, NM 88231
FAX TO: (575) 394-2601

Receiving Date: 02/08/08
Reporting Date: 02/11/08
Project Owner: APACHE CORPORATION (240017)
Project Name: NMGSAU #368
Project Location: UL-O, SEC. 19, T19S, R37E

Analysis Date: 02/11/08
Sampling Date: 02/06/08
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: ML
Analyzed By: KS

LAB NUMBER	SAMPLE ID	Cl^- (mg/kg)
H14225-1	T2-1 (1')	32
H14225-2	T2-2 (1')	16
H14225-3	T2-3 (1')	48
H14225-4	T2-4 (1')	< 16
H14225-5	T2-5 (1')	176
H14225-6	T2-6 (1')	< 16
Quality Control		490
True Value QC		500
% Recovery		98.0
Relative Percent Difference		2.0

METHOD: Standard Methods	4500-Cl⁻B

Note: Analyses performed on 1:4 w:v aqueous extracts.

Kristen Sypuda (signature)
Chemist

02/11/08
Date

H14225 EPI

Environmental Plus, Inc.

Chain of Custody Form

2100 Avenue O, Eunice, NM 88231 P.O. Box 1558, Eunice, NM 88231
(505) 394-3481 FAX: (505) 394-2601

Company Name	Environmental Plus, Inc.
EPI Project Manager	Jason Stegemoller
Mailing Address	P.O. BOX 1558
City, State, Zip	Eunice New Mexico 88231
EPI Phone#/Fax#	505-394-3481 / 505-394-2601
Client Company	Apache Corporation
Facility Name	NMGSAU# 368
Location	UL-O, Sec 19, T19S, R37E
Project Reference	240017
EPI Sampler Name	D. Deaton/G. Blackburn

Bill To

Attn: Jason Stegemoller
P.O. Box 1558
Eunice, NM 88231

ANALYSIS REQUEST

LAB I.D.		SAMPLE I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUND WATER	WASTEWATER	SOIL	CRUDE OIL	SLUDGE	OTHER:	PRESERV.: ACID/BASE	ICE/COOL	OTHER	SAMPLING: DATE	TIME	BTEX 8021B	TPH 8015M	CHLORIDES (Cl)	SULFATES (SO_4^{-})	pH	TCLP	OTHER >>>	PAH			
H14225-1	1	T2-1 (1')	G	1			1					X		06-Feb-08	9:00			X							
-2	2	T2-2 (1')	G	1			1					X		06-Feb-08	10:00			X							
-3	3	T2-3 (1')	G	1			1					X		06-Feb-08	11:15			X							
-4	4	T2-4 (1')	G	1			1					X		06-Feb-08	13:10			X							
-5	5	T2-5 (1')	G	1			1					X		06-Feb-08	13:50			X							
-6	6	T2-6 (1')	G	1			1					X		06-Feb-08	14:45			X							
	7																								
	8																								
	9																								
	10																								

Sampler Relinquished: Date 2-8-08 Time 4:35 Received By:

Relinquished by: Date Time Received By: (lab staff)

Delivered by: Sample Cool & Intact Yes / No Checked By:

E-mail results to: jstegemoller@envplus.net

NOTE:

CARDINAL LABORATORIES

PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR
ENVIRONMENTAL PLUS, INC.
ATTN: JASON STEGEMOLLER
P.O. BOX 1558
EUNICE, NM 88231
FAX TO: (575) 394-2601

Receiving Date: 02/11/08
Reporting Date: 02/12/08
Project Owner: APACHE CORPORATION (240017)
Project Name: NMGSAU #368
Project Location: UL-O, SEC. 19, T19S, R37E

Sampling Date: 02/08/08
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: ML
Analyzed By: BC

LAB NUMBER	SAMPLE ID	GRO (C_6-C_{10}) (mg/kg)	DRO (>C_{10}-C_{28}) (mg/kg)
ANALYSIS DATE:		02/11/08	02/11/08
H14240-1	T1-2 (1.5')	<10.0	<10.0
H14240-3	BG-1 (0.5')	<10.0	<10.0
H14240-5	T3-4 (1.5')	<10.0	21.3
Quality Control		733	740
True Value QC		800	800
% Recovery		94.2	92.5
Relative Percent Difference		1.0	1.2

METHOD: SW-846 8015 M

Chemist

2/12/08
Date

H14240A EPI

CARDINAL LABORATORIES

PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR
ENVIRONMENTAL PLUS, INC.
ATTN: JASON STEGEMOLLER
P.O. BOX 1558
EUNICE, NM 88231
FAX TO: (575) 394-2601

Receiving Date: 02/11/08
Reporting Date: 02/12/08
Project Owner: APACHE CORPORATION (240017)
Project Name: NMGSAU #368
Project Location: UL-O, SEC. 19, T19S, R37E

Analysis Date: 02/11/08
Sampling Date: 02/08/08
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: ML
Analyzed By: KS

LAB NUMBER	SAMPLE ID	Cl^- (mg/kg)
H14240-1	T1-2 (1.5')	624
H14240-2	T1-3 (2')	624
H14240-3	BG-1 (0.5')	16
H14240-4	T3-3 (1.25')	240
H14240-5	T3-4 (1.5')	192
Quality Control		500
True Value QC		500
% Recovery		100
Relative Percent Difference		2.0

METHOD: Std. Methods	4500-Cl^-B

NOTE: Analyses performed on 1:4 w:v aqueous extracts.

Chemist

02/12/08
Date

H14240C EPI

Environmental Plus, Inc.

Chain of Custody Form

2100 Avenue O, Eunice, NM 88231 P.O. Box 1558, Eunice, NM 88231
(505) 394-3481 FAX: (505) 394-2601

Company Name	Environmental Plus, Inc.
EPI Project Manager	Jason Stegemoller
Mailing Address	P.O. BOX 1558
City, State, Zip	Eunice New Mexico 88231
EPI Phone#/Fax#	505-394-3481 / 505-394-2601
Client Company	Apache Corporation
Facility Name	NMGSAU# 368
Location	UL-O, Sec 19, T19S, R37E
Project Reference	240017
EPI Sampler Name	D. Deaton

Bill To

Attn: Jason Stegemoller
P.O. Box 1558
Eunice, NM 88231

ANALYSIS REQUEST

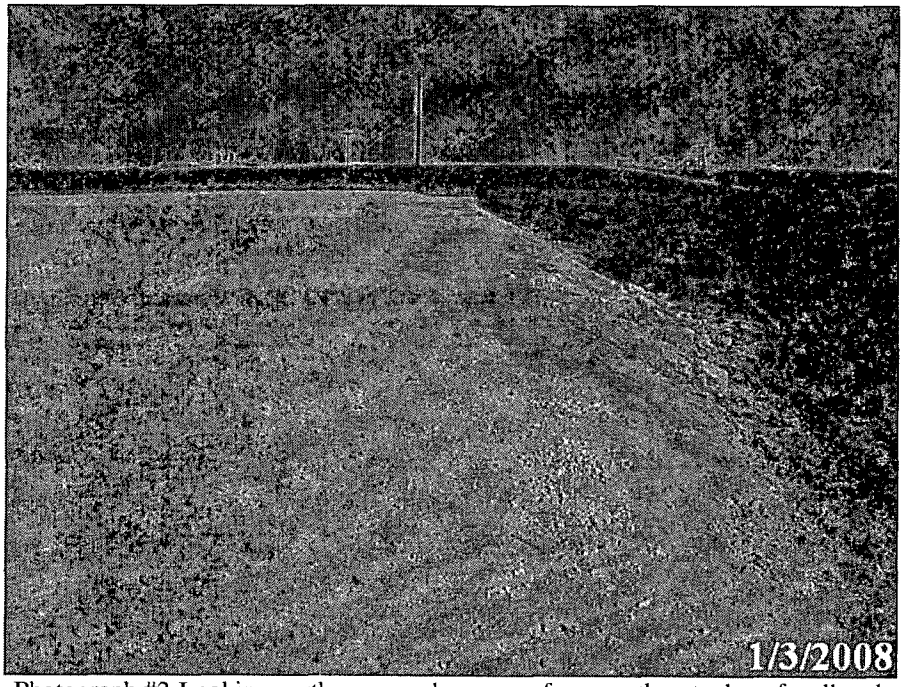
LAB I.D.		SAMPLE I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUND WATER	WASTEWATER	SOIL	CRUDE OIL	SLUDGE	OTHER:	PRESERV.: ACID/BASE	ICE/COOL	OTHER	SAMPLING: DATE	TIME	BTEX 8021B	TPH 8015M	CHLORIDES (Cl^-)	SULFATES ($SO_4^{=}$)	pH	TCLP	OTHER >>>	PAH
H14240-1	1	T1-2 (1.5')	G	1			1					X		08-Feb-08	11:30		X	X				
-2	2	T1-3 (2')	G	1			1					X		08-Feb-08	11:35			X				
-3	3	BG-1 (0.5')	G	1			1					X		08-Feb-08	14:05		X	X				
-4	4	T3-3 (1.25')	G	1			1					X		08-Feb-08	14:10			X				
-5	5	T3-4 (1.5')	G	1			1					X		08-Feb-08	14:20		X	X				
	6																					
	7																					
	8																					
	9																					
	10																					

Sampler Relinquished: Donny Deaton	2/11/2008 Time 0100	Received By:	E-mail results to: jstegemoller@envplus.net
Relinquished by:	2/11/2008 Time 4:05	Received By: (lab staff) Misty LeBert	NOTES:
Delivered by:	Sample Cool & Intact: Yes / No	Checked By: MAB	

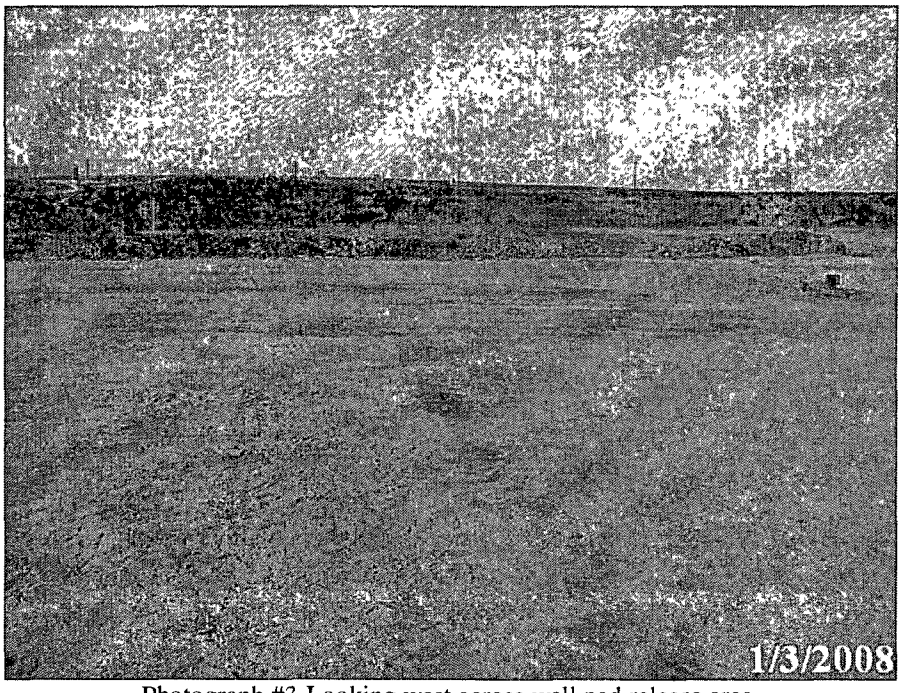
ATTACHMENT II

SITE PHOTOGRAPHS

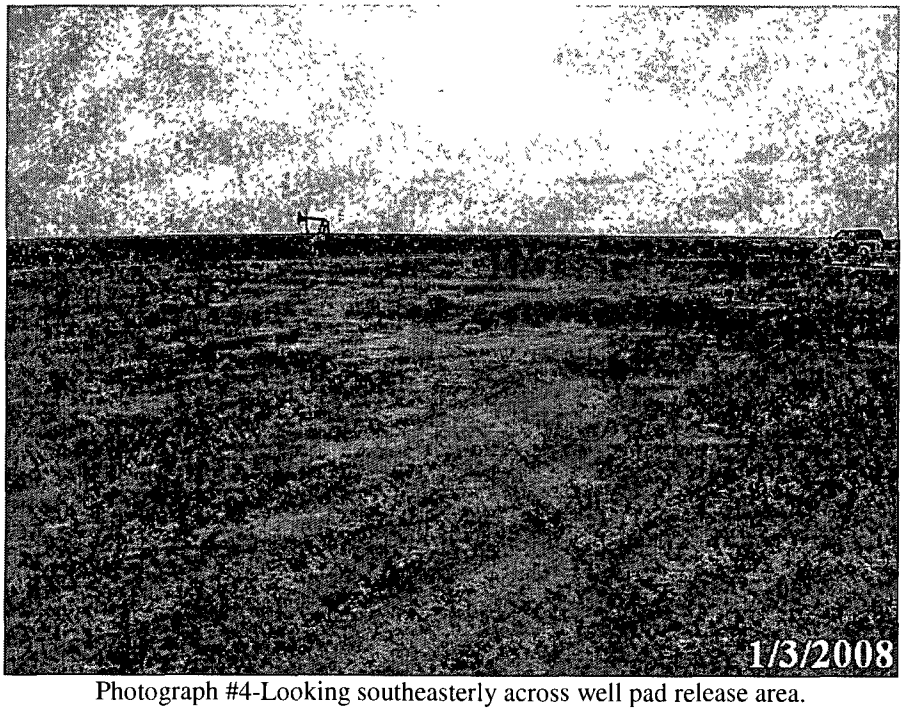
Photograph #1-Well Lease Sign



Photograph #2-Looking north across release area from southeast edge of well pad.



Photograph #3-Looking west across well pad release area.



Photograph #4-Looking southeasterly across well pad release area.

Photo #5- Looking easterly across pasture release area.

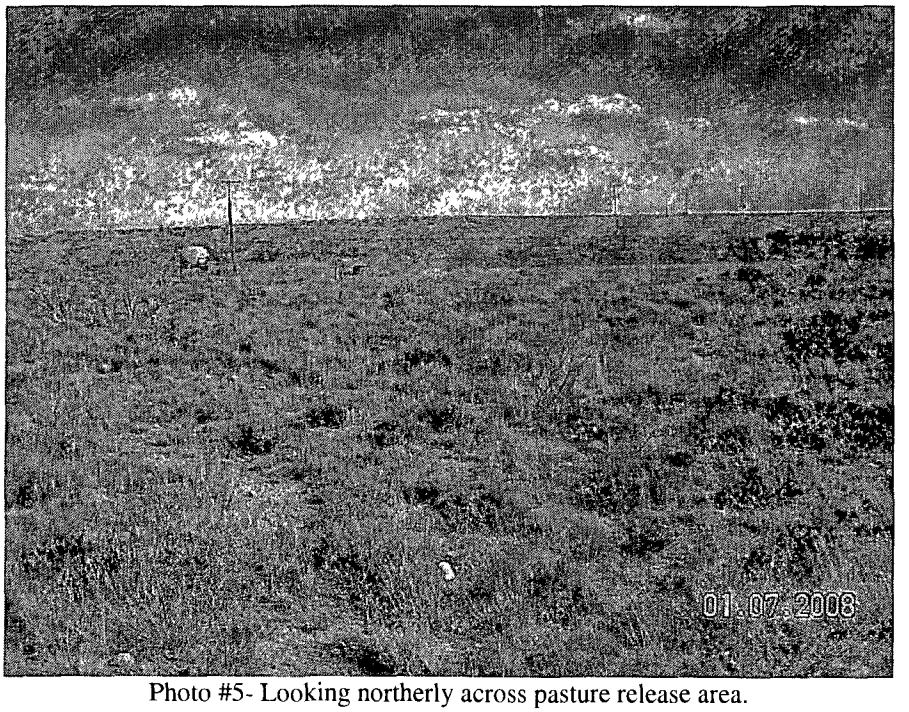


Photo #5- Looking northerly across pasture release area.

ATTACHMENT III

INFORMATIONAL COPY OF INITIAL C-141

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised October 10, 2003

Submit 2 Copies to appropriate District Office in accordance with Rule 116 on back side of form

Informational - Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company: Apache Corporation	**Contact:** Harold Swain
Address: P.O. Box 848, Wink, TX 79789	**Telephone No.:** (915) 527-3311
Facility Name: North Monument Grayburg San Andres Unit (NMGSAU) #368	**Facility Type:** Well Pad (New Well) API #30-025-38459

Surface Owner: State of New Mexico	**Mineral Owner:**	**Lease No.:**

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	~~North~~/South Line	Feet from the	~~East~~/West Line	County
O	19	19S	37E	1,060	South	2,420	East	Lea

Latitude: N 32° 38' 29.54" **Longitude:** W 103° 17' 24.07"

NOTE 70'

NATURE OF RELEASE

Type of Release: Drilling brine	**Volume of Release:** ~45 bbls	**Volume Recovered:** >5 bbls
Source of Release: Overflow of closed loop containment	**Date and Hour of Occurrence:** December 22, 2007 @ 09:00 hrs	**Date and Hour of Discovery:** December 22, 2007 @ 09:00 hrs
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	**If YES, To Whom?** Chris Williams, NMOCD – Hobbs	
By Whom? Billy L. Stockton	**Date and Hour:** December 22, 2007 @ 12:45 hrs	
Was a Watercourse Reached? ☐ Yes ☒ No	**If YES, Volume Impacting the Watercourse:** Not Applicable	

If a Watercourse was Impacted, Describe Fully.* Not Applicable

Describe Cause of Problem and Remedial Action Taken.* Well bore flow back volume during new well logging was in excess of closed loop system capacity. Drilling brine was released onto location (well pad) and flowed southeast off location into pasture. A berm was built around well cellar to contain flow back while vacuum trucks recovered free fluid within bermed area. Well was cemented and flow back ceased. Approximately 45 barrels (~25 bbls on location and ~20 bbls off location) of drilling fluid were released from containment system during drilling operations.

Describe Area Affected and Cleanup Action Taken.* Approximately 20,900 ft^2 of area (~14,100 ft^2 of well pad and ~ 6,800 ft^2 of pasture) were impacted by the release. A backhoe was utilized to blend impacted well pad materials. No actions were performed upon pasture area.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature: Harold Swain	OIL CONSERVATION DIVISION Pete Richards COMPLIANCE OFFICER
Printed Name: Harold Swain	**Approved by ~~District Supervisor~~:** in absence of Gary
Title: Drilling Foreman, Permian Basin	**Approval Date:** 1/17/08 **Expiration Date:** 3/3/08
E-mail Address: Harold.swain@usa.apachecorp.com	**Conditions of Approval:** Submission of work due by: **Attached** ☐
Date: 1-10-08 **Phone:** 915-527-3311	

*** Attach Additional Sheets If Necessary**

RP# 175

Johnson, Larry, EMNRD

From: Johnson, Larry, EMNRD

Sent: Thursday, February 28, 2008 8:49 AM

To: 'David Duncan'

Subject: RE: Apache Corporation, Inc. - North Monument Grayburg San Andres Unit (NMGSAU) #368 (NMOCD Ref. 1RP#1746; EPI Ref. #240017)

Approved. L Johnson NMOCD

From: David Duncan [mailto:dduncan@envplus.net]
Sent: Thursday, February 28, 2008 8:28 AM
To: Johnson, Larry, EMNRD
Cc: harold.swain@usa.apachecorp.com; rboone@envplus.net
Subject: Apache Corporation, Inc. - North Monument Grayburg San Andres Unit (NMGSAU) #368 (NMOCD Ref. 1RP#1746; EPI Ref. #240017)

Mr. Johnson:

Per our conversation of 2-28-08 (Thursday-am), EPI on behalf of Apache Corporation proposes the following remedial activities for the above referenced project:

Based upon delineation activities, EPI recommends excavating chloride impacted material from the off-site release area and well pad. Excavation and disposal of approximately 1- to 1.5-feet of material in the majority of the pasture release area will remove the bulk of chloride impacted soil. Additionally, removal and disposal of approximately 0.5- to 1-foot of material from the well pad flow path will reduce the potential of chloride impacted runoff inundating the pasture land. However, vertical depth and horizontal width of excavations will be dictated by extent of impacted material encountered. Soil Samples will be collected from the excavation and analyzed in the field to verify remedial goals have been achieved. Upon receipt of satisfactory field analyses results, soil samples will be submitted to an independent laboratory for verification. The pasture land will be backfilled with clean top soil and the pad with graded caliche. Disturbed areas will be contoured to allow natural drainage. Pasture land will be disked and seeded with a blend preferred by the property owner.

After approval from the NMOCD of the abbreviated remediation proposal, EPI will commence remedial activities at Apache Corporation discretion.

Should you have questions, concerns or need additional information, please contact me at (575) 394-3481 (office), (575) 441-7802 (cellular) or via e-mail at dduncan@envplus.net.

Sincerely,

ENVIRONMENTAL PLUS, INC.

David P. Duncan
Civil Engineer

Environmental Plus, Inc.
P.O. Box 1558
2100 Avenue "O"
Eunice, New Mexico 88231

(575) 394-3481 (office)
(575) 394-2601 (facsimile)