Revised 3/93

State of New Mexico
Energy, Minerals and Natural Resources Department
OIL CONSERVATION DIVISION
P.O. Box 2088
Santa Fe, NM 87501

APPLICATION FOR SURFACE WASTE DISPOSAL FACILITY

(Refer to OCD Guidelines for assistance in completing the application)

[X] Commercial [ ] Centralized

I. Type: [ ] Produced Water [ ] Drilling Muds [ ] Other _____
[X] Solids/Landfarm [ ] Treating Fluids

II. OPERATOR: Gandy Marley, Inc.

ADDRESS: 1109 E. Broadway, P.O. Box 827, Tatum, NM 88267

CONTACT PERSON: Larry Gandy PHONE: (505) 398-4960

III. LOCATION: Parts of Sections 4, 5, 8, and 9 Township 11S Range 31E
Submit large scale topographic map showing exact location.

IV. IS THIS AN EXPANSION OF AN EXISTING FACILITY? [ ] Yes [X] No

V. Attach the name and address of the landowner of the disposal facility site and landowners of record within one-half mile o the site.

VI. Attach discription of the facility with a diagram indicating location of fences, pits, dikes, and tanks on the facility.

VII. Attach detailed engineering designs with diagrams prepared in accordance with Division guidelines for the construction/installation of the following: pits or ponds, leak-detection systems, aerations sytems, enhanced evaporation (spray) systems, waste treating systems, security systems, and landfarm facilities.

VIII. Attach a contingency plan for reporting and clean-up of spills or releases.

IX. Attach a routine inspection and maintenance plan to ensure permit compliance.

X. Attach a closure plan.

XI. Attach geological/hydrological evidence demonstrating that disposal of oil field wastes will not adversely impact fresh water. Depth to and quality of ground water must be included.

XII. Attach proof that the notice requirements of OCD Rule 711 have been met (Commercial facilities only).

XIII. Attach a contingency plan in the event of a release of H_2S.

XIV. Attach such other information as necessary to demonstrate compliance with any other OCD rules, regulations and/or orders.

XV. CERTIFICATION

I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.

Name: Hart M. Greenwood, III Title: Agent

Signature: _____ Date: 10/6/94

EXHIBIT
tabbies CRI 4

DISTRIBUTION: Original and one copy to Santa Fe with one copy to appropriate Division District Office.

Application for Surface Waste Disposal Facility
Gandy Marley, Inc.

I. Type of Operation

The proposed facility will operate as a soil remediation, recycling, and landfarm facility.

II. Operator

Gandy Marley, Inc.
Attn: Larry Gandy
1109 East Broadway
PO Box 827
Tatum, New Mexico 88267
505/398-4960

III. Location of Landfarm

The facility is located in Southeastern New Mexico, southeast of Roswell, New Mexico. The facility is situated on privately-owned land in Chaves County, New Mexico, in parts of Sections 4, 5, 8, and 9 of T11S, R31E.

This location is approximately 39 miles eastsoutheast of Roswell and approximately 33 miles northwest of Tatum. As illustrated in Figure 1, US Highway 380, which runs east and west, is located approximately 2 1/2 miles to the north. State Highway 172, which runs north and south, is approximately four miles to the east and above the Caprock from the proposed site. State Highway 172 does not provide access to the facility.

IV. Expansion Request

This permit application relates to proposed construction of a new surface waste disposal facility. This is not a request to expand an existing facility.

V. Land and Ownership

As illustrated in Figure 2, the proposed facility site is situated on privately-owned land. There are no other landowners of record within one-half mile of the proposed facility location and there are no private residences within one mile of the proposed site.

VI. Facility Description

The purpose of the proposed facility will be to remediate contaminated soils generated as a result of oilfield activities in southeastern New Mexico and west Texas.

The site will be contained within a five-strand barbed wire fence. Entrance to the facility will be gained through one of several gates which will remain locked when the facility is not in operation. Points of access are identified in Figure 3.

A perimeter berm will be built which will serve as the outer boundary of each cell developed within the facility. The perimeter berm will be three feet in height and located 100 feet to the inside of the perimeter fence on all sides. This area is depicted in Figure 3 and will meet the 100 foot buffer requirements set forth in OCD Rule 711.

An elevated, interior road will be developed which runs east and west along the middle portion of the facility. A similar interior road will run north and south to connect the main facility entrances to the interior road described above. These roads will be used by transporters to unload contaminated soils into respective cells. The roads will be elevated to a height of three feet and will serve dually as interior berms.

The size of each cell will be less than five acres. Each cell will be enclosed by berms which will be constructed to a minimum height of 1 1/2 feet.

VII. Facility Construction/Operation & Waste Classification

The proposed site is situated on the western edge of a geological bench known locally as The Caprock. The Caprock is characterized by rocky terrain and runs in a north-south direction.

There are no watercourses, lakebeds, sink-holes, or other depressions located adjacent to the proposed site. Thus, no stormwater runoff plan is required to accompany this permit application.

As outlined in Figure 3, access to the facility will be restricted by perimeter fencing. Gates to the facility will remain locked. Only authorized personnel will be given access to gate keys.

Appropriate signs will be posted at the gate and at various other locations along the perimeter fence which will: (1) warn against unauthorized entry, (2) list the name of the facility, (3) list the precise legal description of the facility by Section/Township/Range, and (4) list the telephone number of the appropriate person to call in the event of an emergency. Sign lettering will be of such size that the sign will be legible from at least 50 feet.

No contaminated soils will be placed within 100 feet of the fenced facility boundary. The buffer zone is illustrated in Figure 3.

As illustrated in Figure 2, no pipelines run through the proposed site. The nearest pipeline lies approximately 2 1/2 miles to the northeast of the proposed site. No pipeline buffer zone is required.

The perimeter of the facility will be bermed to alleviate stormwater run-off and run-on. The perimeter berm will be constructed to a height of three feet. This will be adequate to contain precipitation in the event of a 100-year storm event.

Prior to facility operation, a soil sample will be collected and analyzed to establish background levels of Total Petroleum Hydrocarbons (TPH), major cations and anions, volatile aromatic organics (BTEX), and heavy metals. It will be verified that laboratory analysis is done in accordance with EPA-approved methods. The background sample will be collected from the center portion of the facility.

A treatment zone not to exceed two feet beneath the facility will be monitored. Six months following the placement of contaminated soils, a minimum of one random soil

sample will be taken from the cell in which the soils were placed. Subsequent soil samples will be taken quarterly thereafter. Samples will be analyzed to identify any variation in levels of constituents found in the background sample taken prior to operation. This sampling and analysis schedule will apply to each respective cell.

Analysis will be conducted in accordance with EPA-approved methods. All analytical results will be submitted to the Santa Fe, New Mexico office of the OCD within 30 days after they are received from the laboratory.

Subsequent to collecting required soil samples, boreholes will be filled with an impermeable material such as cement or bentonite to prevent contamination below the native ground surface.

Further treatment zone monitoring will be conducted in the event of unusually high precipitation and upon the recommendation of the OCD. Precipitation will be removed within 72 hours following the discovery of ponding, pooling, or run-off.

As necessary, moisture will be added to appropriate cells to diminish blowing dust and to enhance biological remediation of contaminated soils. Caution will be observed in order to ensure that added moisture does not result in ponding, pooling, or run-off.

A double-lined system with leak detection equipment is not necessary. The treatment zone will be sampled.

All material accepted at the facility will be spread and disked within 72 hours of receipt. Soils will be spread on the surface in six inch lifts, and soils will be disked a minimum of once every two weeks in order to enhance remediation of contaminants. Additional lifts of soils will be spread only after laboratory analysis is conducted to verify that: (1) TPH level in the previous lift is less than 100 ppm, (2) that the sum of all BTEX is less than 50 ppm, and (3) the benzene level is less than 10 ppm.

All laboratory analysis results as well as sampling location description will be maintained at the facility. No new lifts will be added without prior authorization from the OCD.

Site security will be the responsibility of facility personnel. Employees will verify that each transporter holds appropriate permits. Loads will be accepted only during daylight hours, unless other prior arrangements have been made. When the facility is closed, the site will be locked to prevent unauthorized dumping.

The facility will only accept solids which are classified as non-hazardous by RCRA Subtitle C exemption or by characteristic testing. Prior to placement of any contaminated soils into the facility, it will be verified that the wastes are accompanied by a "Certification of Waste Status" from the generator. Wastes from operations not currently exempt under RCRA Subtitle C or mixed exempt and non-exempt wastes will be sampled and analyzed to determine whether any hazardous constituents are present. Results of all analyses will be submitted to the OCD. No such wastes will be placed in the facility without prior approval from the OCD.

All wastes accepted by this facility will be documented and logged at the time they are placed in the disposal facility. Each load will be inspected to ensure that only acceptable wastes are placed in the facility. At the time of the load inspection, the following information will be recorded on an inspection form and maintained at the facility for a period of two years:

- origin of material
- verification of analysis (if applicable)
- name and signature of transporter
- cell in which waste is placed
- date waste is received
- quantity of waste
- name and signature of authorized disposal facility employee
- verification of accompanying "Certification of Waste Status"

Monthly reporting will be made to the District OCD office on appropriate OCD reporting forms and in accordance with OCD Rule 711.

VIII. Spill/Leak Prevention and Reporting (Contingency Plans)

Wastewater and other liquids are prohibited at the facility. Therefore, risk of spills or leaks is negligible. Perimeter berms will serve to prevent stormwater run-on and run-off. Equipment and machinery will be at or near the facility at all times which could be used in the event of any spill or leak. Should a leak or spill occur, notification to the OCD would be made immediately in accordance with OCD Rule 116.

IX. Inspection, Maintenance, and Reporting

The facility will be inspected on a regular basis and immediately following significant precipitation and/or wind. Inspections will include examination of berms, fences, and the remediation area. Perimeter and interior berms will be maintained to prevent erosion. General maintenance will be routinely performed. Any necessary repairs will be made immediately.

Inspection and repair records will be maintained and will include time and date of inspection and types of repairs performed. These records will be maintained on site.

X. Closure Plan

Upon closure, and following notification to OCD that operations have ceased, existing soils which have previously been placed at the facility will continue to be managed until such time that remediation meets standards established by the OCD. Within six months following verification that all existing soils have met OCD remediation standards, the site will be covered and mounded to ensure that stormwater does not collect above or leach into the closed cells. The site will be restored with natural vegetation. Existing fences will be maintained following closure and access will be restricted. Any additional closure requirements or conditions of the OCD will be met.

XI. Site Characteristics - Fresh Water Protection Demonstration

There are no stream drainages or water wells within one mile of the facility boundary. Approximately 1/2 mile east of the proposed site, there is a spring at the base of Mescalero Rim. This spring is located topographically higher (200 feet) than the proposed facility and is a result of seepage from an overlying aquifer (Ogallala Fm.) The spring water is collected by the rancher and distributed through an underground pipeline to stock tanks on the ranch property. There are three such stock tanks within one mile of the outside perimeter of the proposed facility.

While there are no water wells within one mile of the outside perimeter of the proposed site, subsurface drilling has encountered groundwater saturation within Upper Triassic sediments. The depth to this groundwater is 150 feet. A sample of the ground water was obtained from three drill holes, the location of which are illustrated in Figure 4. The samples were analyzed at Assaigai Analytical

Laboratories in Albuquerque, New Mexico. A copy of the analytical results is presented in Attachment A. This groundwater flows eastward and is controlled by stratigraphic and structural features within the the Triassic sediments. This information was obtained from geologic data from a subsurface drilling program conducted in the region in July 1994.

The surface geology consists entirely of Quaternary age alluvial deposits. This alluvium is made up of fine yellow-brown sand and clays and contains abundant granitic and chert cobbles. This material was derived from the Tertiary age Ogallala Fm. which is located topographically higher and east of the proposed site. Thickness of the alluvial materials varies from 5-25 feet.

Immediately underlying the alluvial deposits are Upper Triassic sediments. These sediments were deposited in a fluvial environment and consist of fine to very-fine grained sandstones, interbedded with siltstones and mudstones.

The Upper Triassic sediments underlying the proposed site dip approximately one degree to the east. The thickness of these sediments varies from 150 to 25 feet. Groundwater saturation was encountered in sandstone lenses below depths of 150 feet.

The aquifer material consists of thin (10-30 feet), lenticular fine to very-fine grained sandstones. Due to the fluvial nature of these sands, individual sandstone lenses are discontinuous and difficult to correlate.

The proposed site consists of two soil types including Alama Loam and Faskin-Roswell Complex. These soils are typically well-drained with slopes of 0 to 15 percent. Vegetation consists primarily of Tobosa, Buffalo Grass, Vine-Mesquite, Mesquite, Cactus, Sand Dropseed, Little Bluestem, Sand Bluestem, Sandbur, Three-Awn, Shinnery Oak, Yucca, and Sand Sagebrush. No rare or endangered plant species are located near the proposed site or in the surrounding area.

The facility lies outside any 100-year floodplain boundary. The proposed site is in an area found on Federal Insurance Rate Map (FIRM) #3501250850. This map has not been printed because the National Flood Insurance Program has established that this is in an area of minimal flood hazards.

The perimeter berms will be designed to alleviate stormwater run-on and run-off during a 100-year stormwater event. Should such a storm event occur, the OCD will be notified immediately of any flooding or washout.

XII. Proof Of Notice

There are no other owners of surface lands or occupants within one-half mile of the proposed facility boundary. Notification requirements set forth in OCD Rule 117, therefore, do not apply. A legal notice of this pending application was published in the September 29 issue of the Roswell Daily Record. A copy of the notice, along with an *Affidavit of Publication,* is included as Attachment B.

13.0 H_2S Contingency Plan

No hydrogen sulfide is expected to be generated at this facility. If H_2S is encountered, provisions set forth in OCD Rule 118 will be met.

14.0 Additional Information

All regulatory requirements and OCD rules applicable to this facility will be fully complied with.

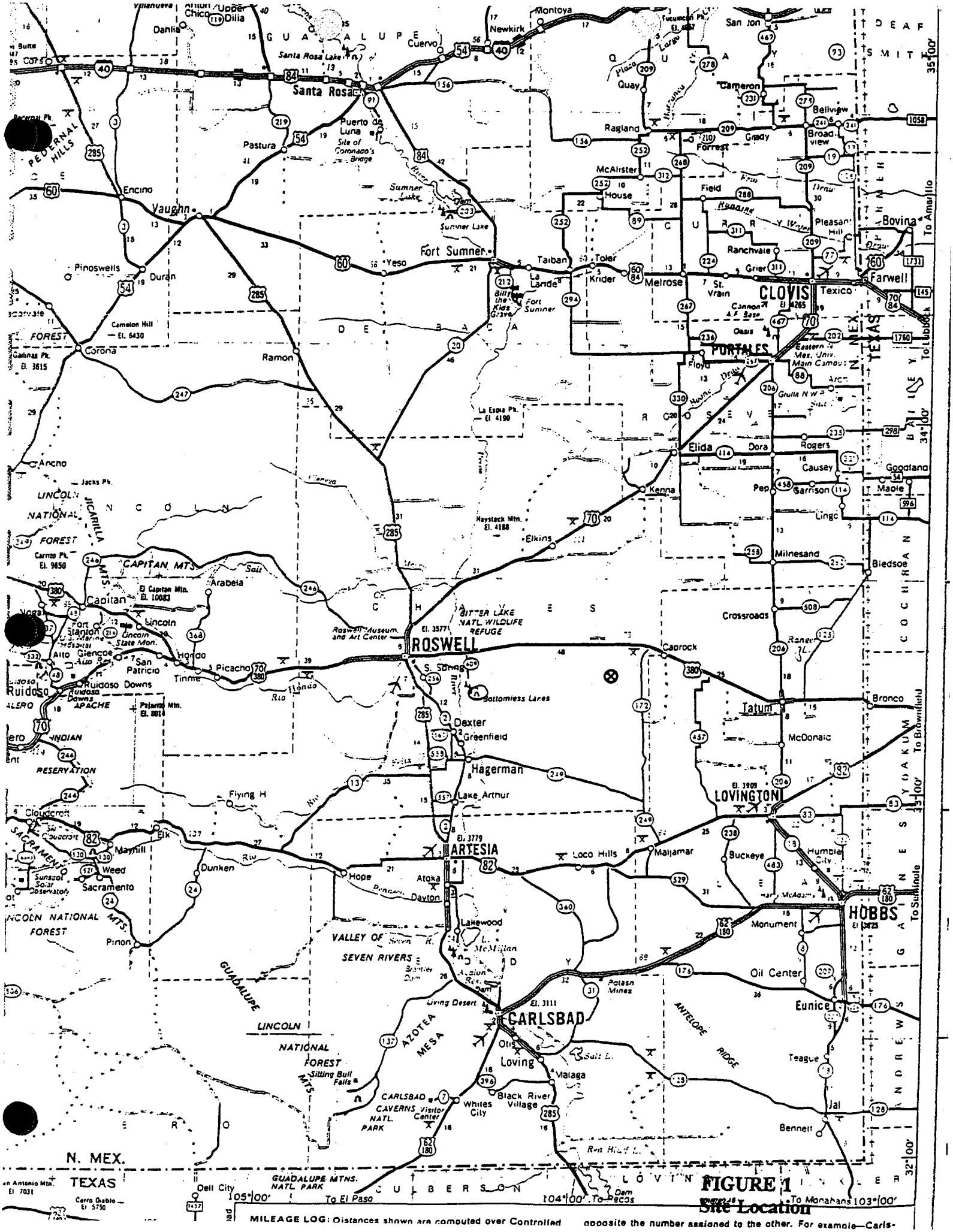


FIGURE 1
Site Location

MILEAGE LOG: Distances shown are computed over Controlled opposite the number assigned to the other. For example—Carls-

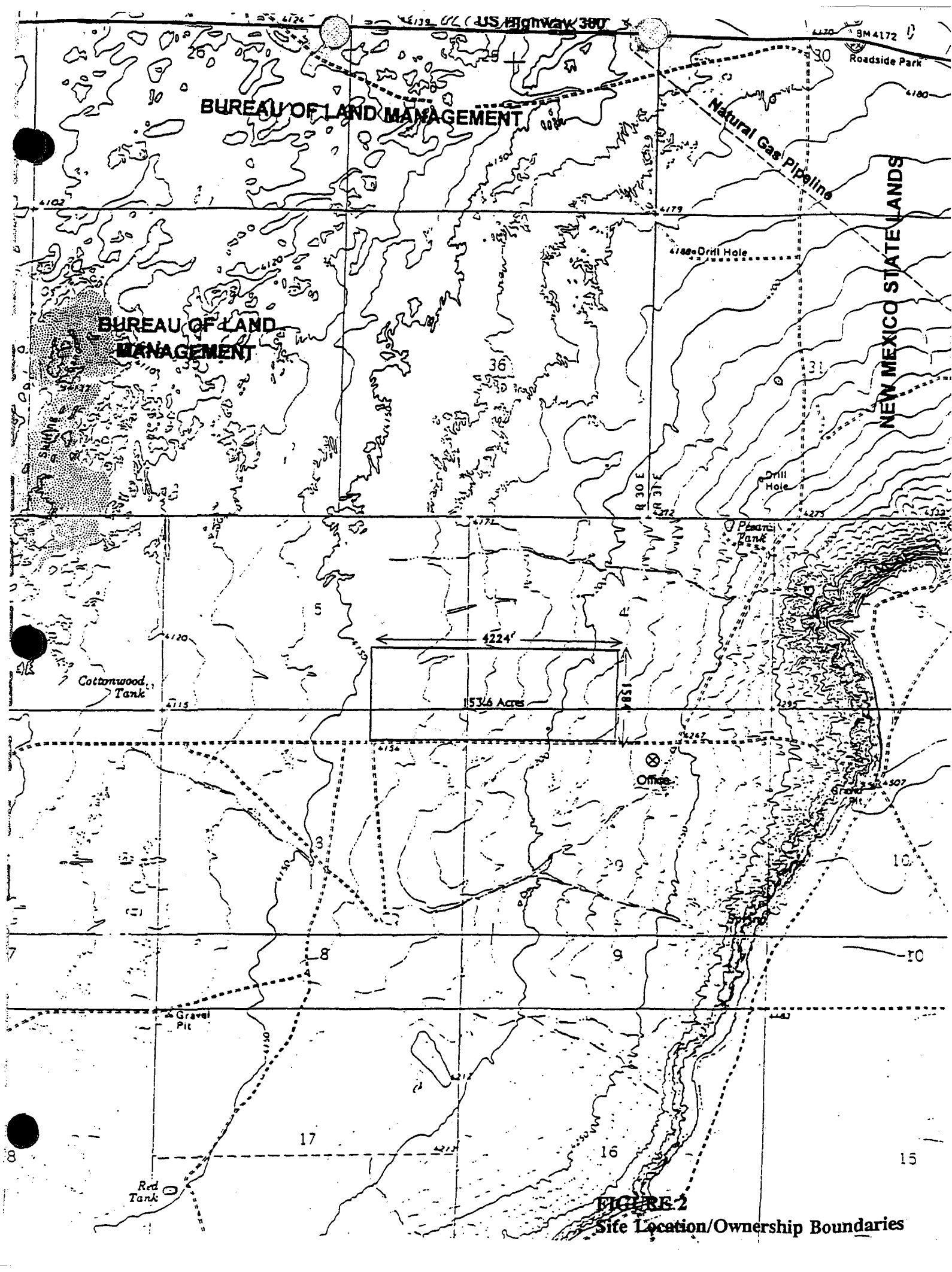
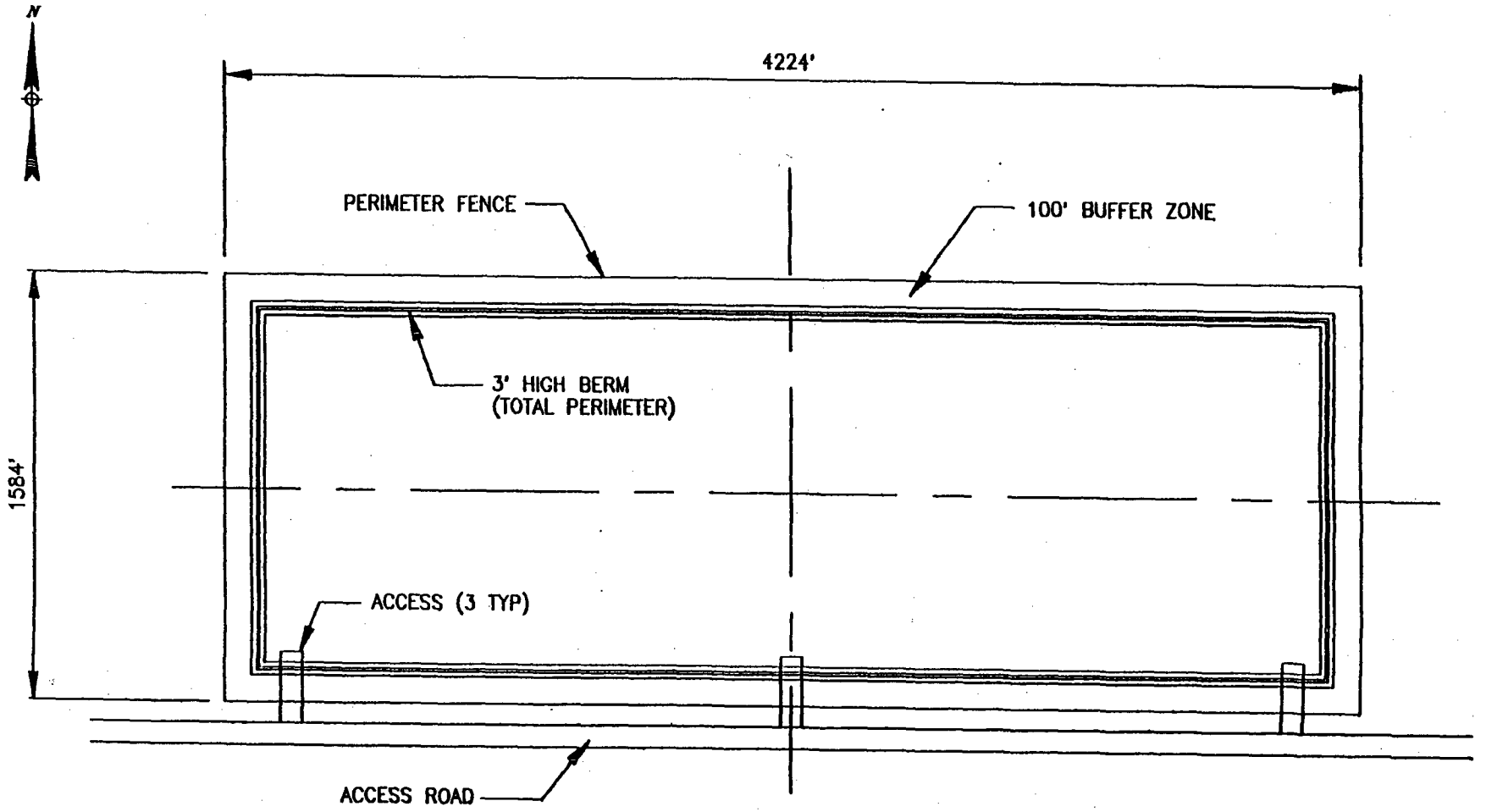


FIGURE 2
Site Location/Ownership Boundaries



127 AC. W/IN PERIMETER BERM / 31.96 AC. W/IN EACH QUADRANT

SCALE: NONE

9-21-94

FIGURE 3
Site Diagram

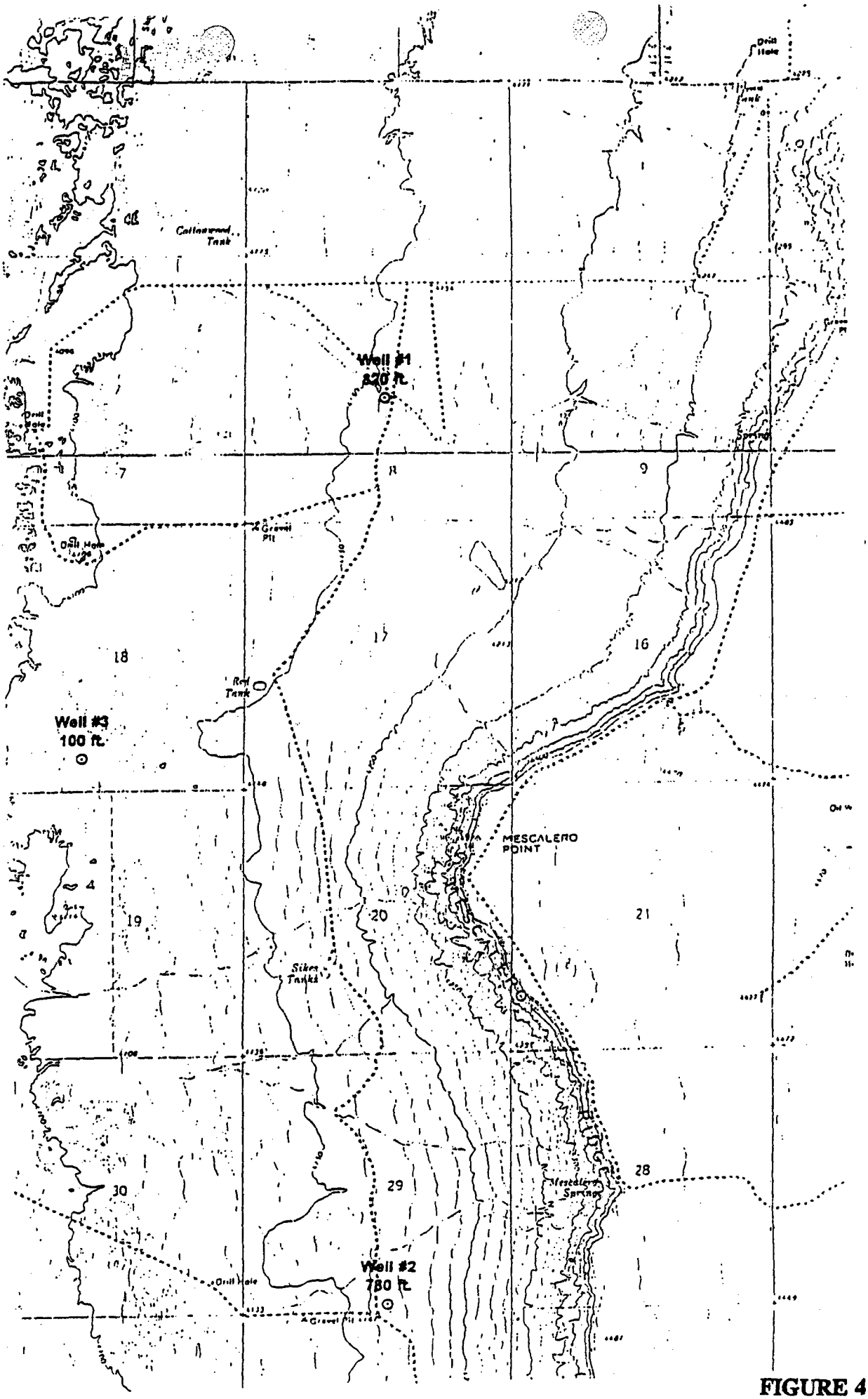


FIGURE 4
Well Locations

ASSAIGAI ANALYTICAL LABORATORIES
7300 Jefferson, N.E. • Albuquerque, New Mexico 87109 • (505) 345-8964 • FAX (505) 345-7259
3332 Wedgewood, E-5 • El Paso, Texas 79925 1910 N. Big Springs • Midland, Texas 79705

STOLLER CORPORATION
1717 LOUISIANA BLVD.
ABQ., NM 87110

Attn: JIM BONNER
Invoice Number:

Order #: 94-08-072
Date: 08/19/94 16:28
Work ID: GANDY
Date Received: 08/05/94
Date Completed: 08/19/94
Client Code: ST001

SAMPLE IDENTIFICATION

Sample Number	Sample Description
01	WELL #1
02	WELL #2
03	WELL #3

ND = None Detected D_F = Dilution Factor NT = Not Tested
B = Analyte was present in the blank
E = Estimated Value or Result exceeds calibration range
MULTIPLY THE LIMIT(= AAL'S DETECTION LIMIT) BY DILUTION FACTOR

Certified By

ATTACHMENT A
Water Sample Analysis Results

REPORT

Work Ord[illegible] # 94-08-072

Received: 08/05/94

Results By Test

TEST CODE default units	Sample 01 (entered units)	Sample 02 (entered units)	Sample 03 (entered units)
MFAAX N/A	N/A	N/A	N/A

Received: 08/05/94 Results by Sample

SAMPLE ID WELL #1 FRACTION 01A TEST CODE TDS NAME TDS/EPA 160.1

Date & Time Collected 07/20/94 Category WATER

PARAMETER	RESULT	LIMIT	D_F	DATE_ANAL
Total Dissolved Solids	11900	1.0	1.0	08/09/94

Notes and Definitions for this Report:

EXTRACTED

ANALYST JCB

UNITS mg/L

BATCH_ID WTDS-140

COMMENTS N/A

Received: 08/05/94 Results by Sample

SAMPLE ID WELL #1 FRACTION 01A TEST CODE WALK NAME ALKALINITY/EPA 310.1

Date & Time Collected 07/20/94 Category WATER

PARAMETER	RESULT	LIMIT	D_F	DATE_ANAL
Alkalinity	3.8	2.0	1.0	08/09/94

Notes and Definitions for this Report:

EXTRACTED

ANALYST DES

UNITS mg/L

BATCH_ID WALK-66

COMMENTS N/A

Received: 08/05/94 Results by Sample

SAMPLE ID WELL #1 FRACTION 01B TEST CODE WFAAMG NAME MAGNESIUM (FAA)/EPA 242.1

Date & Time Collected 07/20/94 Category WATER

PARAMETER	RESULT	LIMIT	D_F	DATE_EXT	DATE_ANAL
Magnesium, Mg	51.4	1.0	10	08/09/94	08/19/94

Notes and Definitions for this Report:

ANALYST KH

UNITS mg/L

BATCH_ID WFAA-181

COMMENTS RESULTS REFLECT TOTAL METALS ANALYSIS

Received: 08/05/94 *Results by Sample*

SAMPLE ID WELL #1 FRACTION 01B TEST CODE WFAANA NAME SODIUM (FAA)/EPA 273.1

Date & Time Collected 07/20/94 Category WATER

PARAMETER	RESULT	LIMIT	D_F	DATE_EXT	DATE_ANAL
Sodium, Na	4,600	1.0	500	08/09/94	08/19/94

Notes and Definitions for this Report:

ANALYST KH
UNITS mg/L
BATCH_ID WFAA-181
COMMENTS RESULTS REFLECT TOTAL METALS ANALYSIS

Received: 08/05/94 Results by Sample

SAMPLE ID WELL #2 FRACTION 02A TEST CODE TDS NAME TDS/EPA 160.1

Date & Time Collected 07/20/94 Category WATER

PARAMETER	RESULT	LIMIT	D_F	DATE_ANAL
Total Dissolved Solids	18800	1.0	1.0	08/09/94

Notes and Definitions for this Report:

EXTRACTED

ANALYST JCB

UNITS mg/L

BATCH_ID WTDS-140

COMMENTS N/A

Received: 08/05/94 Results by Sample

SAMPLE ID WELL #2 FRACTION 02A TEST CODE WALK NAME ALKALINITY/EPA 310.1

Date & Time Collected 07/20/94 Category WATER

PARAMETER	RESULT	LIMIT	D_F	DATE_ANAL
Alkalinity	83.0	2.0	1.0	08/09/94

Notes and Definitions for this Report:

EXTRACTED

ANALYST DES

UNITS mg/L

BATCH_ID WALK-66

COMMENTS N/A

Received: 08/05/94

REPORT

Work Order # 94-08-072

Results by Sample

SAMPLE ID WELL #2

FRACTION 02B TEST CODE WFAAMG NAME MAGNESIUM (FAA)/EPA 242.1

Date & Time Collected 07/20/94 Category WATER

PARAMETER	RESULT	LIMIT	D_F	DATE_EXT	DATE_ANAL
Magnesium, Mg	87.8	1.0	15	08/09/94	08/19/94

Notes and Definitions for this Report:

ANALYST KH

UNITS mg/L

BATCH_ID WFAA-181

COMMENTS RESULTS REFLECT TOTAL METALS ANALYSIS

Received: 08/05/94 Results by Sample

SAMPLE ID WELL #2 FRACTION 02B TEST CODE WFAANA NAME SODIUM (FAA)/EPA 273.1

Date & Time Collected 07/20/94 Category WATER

PARAMETER	RESULT	LIMIT	D_F	DATE_EXT	DATE_ANAL
Sodium, Na	7,030	1.0	1,000	08/09/94	08/19/94

Notes and Definitions for this Report:

ANALYST KH

UNITS mg/L

BATCH_ID WFAA-181

COMMENTS RESULTS REFLECT TOTAL METALS ANALYSIS

SAMPLE ID WELL #3 FRACTION 03A TEST CODE TDS NAME TDS/EPA 160.1
Date & Time Collected 07/20/94 Category WATER

PARAMETER	RESULT	LIMIT	D_F	DATE_ANAL
Total Dissolved Solids	4920	1.0	1.0	08/09/94

Notes and Definitions for this Report:

EXTRACTED
ANALYST JCB
UNITS mg/L
BATCH_ID WTDS-140
COMMENTS N/A

Received. 08/05/94 Results by Sample

SAMPLE ID WELL #3 FRACTION 03A TEST CODE WALK NAME ALKALINITY/EPA 310.1

Date & Time Collected 07/20/94 Category WATER

PARAMETER	RESULT	LIMIT	D_F	DATE_ANAL
Alkalinity	396	2.0	1.0	08/09/94

Notes and Definitions for this Report:

EXTRACTED

ANALYST DES

UNITS mg/L

BATCH_ID WALK-66

COMMENTS N/A

Received. 08/05/94 Results by Sample

SAMPLE ID WELL #3 FRACTION 03B TEST CODE WFAAMG NAME MAGNESIUM (FAA)/EPA 242.1

Date & Time Collected 07/20/94 Category WATER

PARAMETER	RESULT	LIMIT	D_F	DATE_EXT	DATE_ANAL
Magnesium, Mg	103	1.0	20	08/09/94	08/19/94

Notes and Definitions for this Report:

ANALYST KH

UNITS mg/L

BATCH_ID WFAA-181

COMMENTS RESULTS REFLECT TOTAL METALS ANALYSIS

Received: 08/05/94 Results by Sample

SAMPLE ID WELL #3 FRACTION 03B TEST CODE WFAANA NAME SODIUM (FAA)/EPA 273.1

Date & Time Collected 07/20/94 Category WATER

PARAMETER	RESULT	LIMIT	D_F	DATE_EXT	DATE_ANAL
Sodium, Na	1,640	1.0	200	08/09/94	08/19/94

Notes and Definitions for this Report:

ANALYST KH

UNITS mg/L

BATCH_ID WFAA-181

COMMENTS RESULTS REFLECT TOTAL METALS ANALYSIS

ATTACHMENT B

Proof of Public Notice

AFFIDAVIT OF PUBLICATION

[redacted]y of Chaves
State of New Mexico

I, Jean M. Pettit,
Bus. Manager,

Of the Roswell Daily Record, a daily newspaper published at Roswell, New Mexico, do solemnly swear that the clipping hereto attached was published once a week in the regular and entire issue of said paper and not in a supplement thereof for a period
of: one time weeks
.....
beginning with issue dated
September 29th , 1994
.....
and ending with the issue dated
September 29th ,1994
.....

Jean M. Pettit
.....
Manager

[redacted]

Sworn and subscribed to before me

this 29th day of
.....
September ,1994
....

Marylon L. Shipley
.....
Notary Public

My Commission expires

.....
July 25, 1998
.....
(SEAL)

Publish September 29, 1994

LEGAL NOTICE

Pursuant to Rule 711 of the Oil Conservation Commission State of New Mexico, notice is hereby given that Gandy Marley, Inc. will be filing an application for surface waste, storage and remediation facility. The proposed facility will encompass approximately 154 acres of deeded land located in Sections 7, 8, and 9, Township 11 South, Range 31 East. The facility site will be situated in Chaves County, approximately 39 miles, eastsoutheast of Roswell, New Mexico and 33 miles northwest of Tatum, New Mexico. The purpose of the proposed facility is provide a safe place for remediation of contaminated soils from oil and gas operations. No produced water or tank bottoms will be allowed on site.

Any questions about the Application can be directed to Trey Greenwood, of the S.M. Stoller Corporation, at (505) 885-0172. Any comments or objections must be made to Roger Anderson, State of New Mexico, Oil Conservation Division, PO Box 2088, Santa Fe, NM 89501, within 30 days.