

GW - 103

**GENERAL
CORRESPONDENCE**

YEAR(S):
1998 - 1992



NEW MEXICO ENERGY, MINERALS
& NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION
2040 South Pacheco Street
Santa Fe, New Mexico 87505
(505) 827-7131

March 31, 1998

CERTIFIED MAIL
RETURN RECEIPT NO. P-288-259-005

Ms. Lisa Norton
Yates Petroleum Corporation
105 S. 4th Street
Artesia, New Mexico 88210

**RE: Closure Approval of Discharge Plan GW-103
Livingston Ridge Compressor Station
Lea County, New Mexico**

Dear Ms. Norton:

The New Mexico Oil Conservation Division (OCD) has received the letter for the closure of the Yates Petroleum Corporation (Yates) GW-103 Discharge Plan located in the SW/4 SW/4 of Section 7, Township 22 South, Range 32 East, NMPM, Lea County, New Mexico. The closure of the Livingston Ridge Compressor Station was submitted pursuant to Section 3107 A.11 of the Water Quality Control Commission Regulations and is hereby approved, and discharge plan GW-103 is hereby repealed.

Please be advised that OCD approval of the closure for this facility does not relieve Yates from liability should it later be found that contamination exists at the GW-103 site. Further, OCD approval does not relieve Yates from compliance with other Federal, State, or Local rules and regulations.

On behalf of the staff of the Oil Conservation Division, I wish to thank the staff of Yates for your cooperation during this discharge plan closure. If Yates has any further questions or comments please contact Mark Ashley at (505)-827-7155.

Sincerely,

Roger C. Anderson
Environmental Bureau Chief

RCA/mwa
xc: OCD Hobbs Office

PS Form 3800, April 1995

US Postal Service Receipt for Certified Mail No Insurance Coverage Provided. Do not use for International Mail (See reverse)	
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P 288 259 005

Price, Wayne

From: Price, Wayne
Sent: Tuesday, March 31, 1998 9:05 AM
To: Mark Ashley
Cc: Chris Williams
Subject: Yates Livingston Ridge Comp. St GW-103

Re: Field Trip Report:

Dear Mark:

Please note I met Yate's environmental rep. at the site and took pictures. Visual observation reflect a clean site. Also I discussed the issue of the remaining equipment on site with the BLM (Jim Amos) . He indicated he did not have a problem with the equipment since Yates still has a lease for the SWD.

If Yates closes out the SWD then BLM will address the surface issue.

I am dropping the pictures in the mail today.

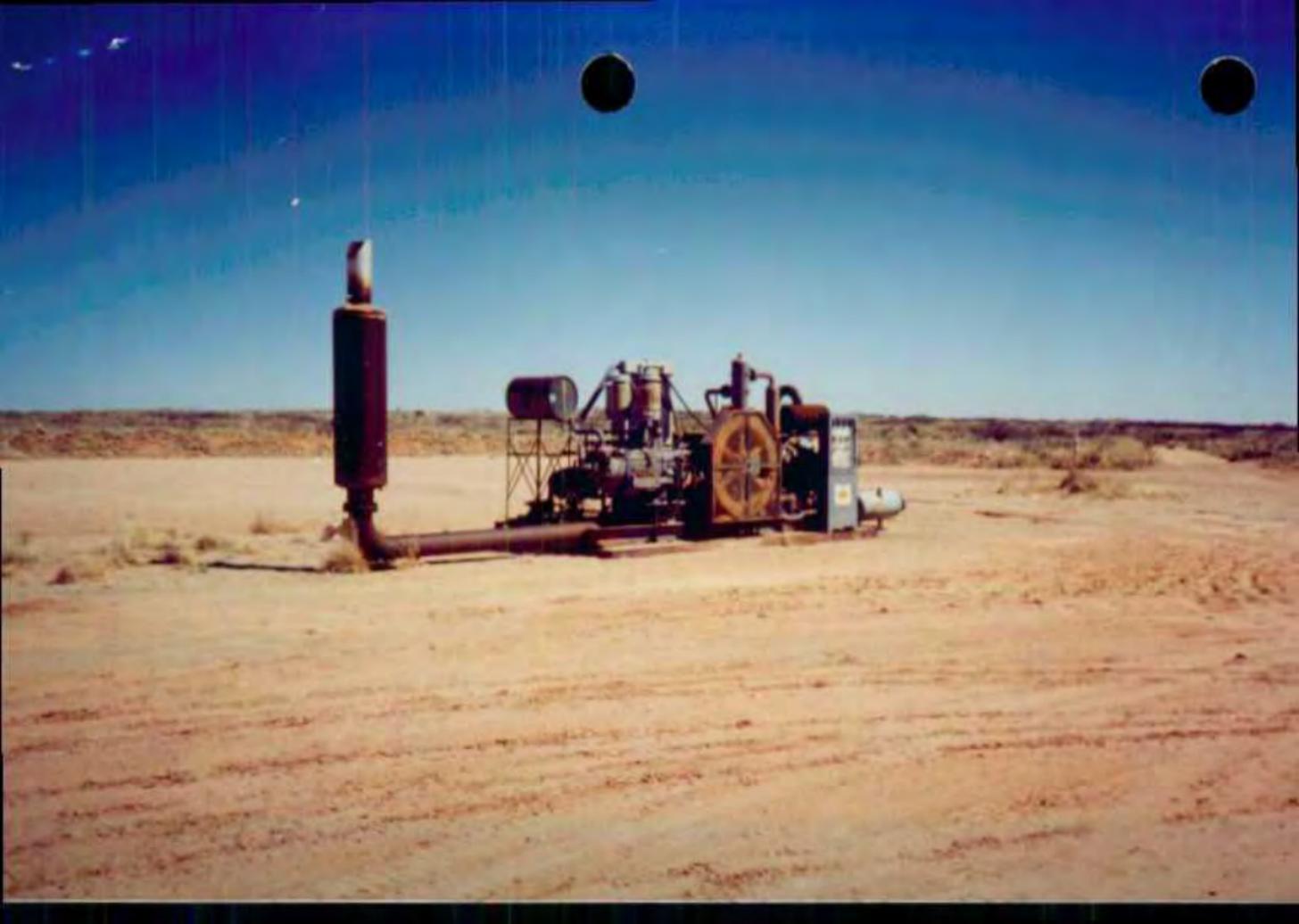
I have attached these pictures using the wang Imaging system. Let me know if it works.



yates.tif.tiff



NMOCID: ID#. 138817 By: W Price #1
Date/Time: March 24, 1998 2pm
Site/Co. Yates Comp. St. GW-103
Location: Livingston Ridge
Subject: Picture looking SW back-
ground shows Yates SWD.



NMOCD: ID#, 138817 By: W Price #2
Date/Time: March 24, 1998 2pm
Site/Co. Yates Comp. St. GW-103
Location: Livingston Ridge
Subject: Picture looking SE. Old Comp
remaining.

MARTIN YATES, III
1912 - 1985
FRANK W. YATES
1936 - 1986



105 SOUTH FOURTH STREET
ARTESIA, NEW MEXICO 88210
TELEPHONE (505) 748-1471

S. P. YATES
CHAIRMAN OF THE BOARD
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TREASURER

Mr. Mark Ashley
New Mexico Energy, Minerals &
Natural Resources Department
Oil Conservation Division
2040 South Pacheco Street
Santa Fe, New Mexico 87505

Re: Closure Plan
Livingston Ridge Compressor Station GW-103
Lea County, New Mexico

Dear Mark,

Yates has completed all closure activities and is submitting the enclosed final closure report on the Livingston Ridge Compressor Station.

The report contains a description of all activities and a summary of laboratory analytical results of soil sampling.

Yates requests that final closure of discharge plan GW-103 be issued.

If you have any questions, please call me at (505) 748-4185.

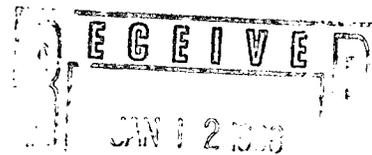
Sincerely,

A handwritten signature in cursive script that reads 'Lisa Norton'.

Lisa Norton
Environmental
Coordinator

enc.

cc: Wayne Price
OCD Hobbs District Office
P. O. Box 1980
Hobbs, NM 88240





December 29, 1997

HLA Project 39394, 1

Ms. Lisa Norton
Environmental Program Coordinator
Yates Petroleum Corporation
105 South Fourth Street
Artesia, New Mexico 88210

**Report on Post-Closure Confirmation Soil Sampling
Discharge Plan GW-103
Former Livingston Ridge Compressor Station
SW/4 SW/4 Sec. 7 T22S R32E
Lea County, New Mexico**

Dear Lisa:

Harding Lawson Associates (HLA), on behalf of Yates Petroleum Corporation (Yates), has completed post-closure confirmation soil sampling at the former Livingston Ridge Compressor Station. This report presents the details of the closure and sampling activities.

Background

The Livingston Ridge Natural Gas Compressor Station (Station) operated under Discharge Plan GW-103, which expired April 29, 1997. Prior to April 29, 1997 the Station was removed from service and under the conditions of Discharge Plan GW-103 a Closure Plan was required by the Oil Conservation Division (OCD) of the New Mexico Oil Conservation Commission.

During its operation, the Station consisted of an inlet separator, a gas flare, a 250-barrel (bbl) oil storage tank, a 500-gallon underground storage tank (UST), AJAX DP-180 natural gas compressor, and associated piping.

On July 21, 1997 HLA visited the Station to observe current site conditions and to observe any potential conditions that would require remediation prior to OCD closure approval. Based on this site visit, HLA prepared a Closure Plan, which was submitted to the OCD on August 8, 1997.

Field Activities

After submission of the Livingston Ridge Compressor Station Closure Plan to the OCD, Yates performed Station closure activities as described in Section 4.2 of the Closure Plan. These activities included breaking the connections to the high pressure gas sales line, emptying the liquids from the 250-bbl storage tank, removal of the approximately 500-gallon double-wall fiberglass process UST; removal of piping and connections to the existing AJAX compressor; removal or onsite remediation of surface-stained soil; and disconnection of piping from the inlet separator, flare, and 250-bbl storage tank. All equipment other than piping was left in place after removal from service. The 250-bbl storage tank will be used at the adjacent Flamenco Salt Water Disposal (SWD) well. The flare and compressor may be used in the future at other compressor stations, however, they will remain at the former Station due to economic reasons.

Upon completion of decommissioning and closure activities, HLA collected post-closure soil samples from the Station. The soil samples were collected from the surface soil areas previously identified as potentially contaminated. One soil sample was also collected from a shallow depth in the area of the former process UST. A total of three soil samples were

Ms. Lisa Norton
Environmental Program Coordinator
Yates Petroleum Corporation
December 29, 1997
Page 2

Harding Lawson Associates

collected from the former Station. Soil sample LR-01 was collected from a depth of 0-6" at the former location of the fiberglass process UST. Soil sample LR-02 was collected from the same location at a depth of 2-2.5 feet below grade. Both samples were collected from native soil on the edge of the backfilled excavation. Photograph No. 1 shows the location of samples LR-01 and LR-02. Soil sample LR-03 was collected from the former location of the surface spill located midway between the 250-bbl storage tank and the compressor. This sample was collected from a depth of 0-6". This area had previously been observed to have an approximately ten by fifteen feet area of surface staining. Photograph No. 2 shows the sampling location LR-03. The stained soil was disked and turned during Station closure activities. One additional soil sample, F-01, was collected approximately 30 feet west of the Flamenco SWD, which had previously had a surface spill of petroleum and salt water which had been remediated by disking and turning. Soil sample F-01 was collected from a depth of 0-6". Photograph No. 3 shows the location of soil sample F-01. The four soil samples were analyzed for benzene, toluene, ethylbenzene, and total xylenes (BTEX) using EPA Method 8020 and total petroleum hydrocarbons (TPH) in the gasoline and diesel fuel ranges using EPA Method 8015 Modified.

Results

The analytical results of the four soil samples did not indicate the presence of BTEX above the method detection limits in the soil samples. The analytical results for soil sample F-01 indicated the presence of 52 mg/kg of TPH, the remaining samples did not have TPH detected above the method detection limit. None of the four soil samples were observed to contain concentrations of BTEX or TPH above OCD action levels. Table 1 presents a summary of the soil analytical results. The complete laboratory deliverable package is included as an attachment.

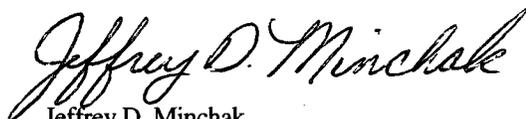
Discussion and Conclusions

Soil samples collected from areas of previously noted surface soil staining did not contain quantities of BTEX or TPH above OCD action levels. Also a soil sample collected from a depth of two-feet in the area of the former process UST did not contain quantities of BTEX or TPH above OCD action levels.

HLA did not observe additional soil staining or areas of obvious environmental concern associated with the former Livingston Ridge Compressor Station during the post-closure site visit. Based on the completion of closure activities and the post-closure confirmation soil samples demonstrating compliance with OCD guidelines, Yates requests Final Closure of Discharge Plan GW-103.

If you have any questions or require additional information, please call me at (505) 248-0017.

Sincerely yours,
HARDING LAWSON ASSOCIATES



Jeffrey D. Minchak
Project Geologist

Attachments: Table 1: Summary of Soil Analytical Results
Photo 1: Soil Sampling Locations LR-01 and LR-02
Photo 2: Soil Sampling Location LR-03
Photo 3: Soil Sampling Location F-01
Assaigai Analytical Laboratory Soil Analytical Results

TABLE 1
SUMMARY OF SOIL ANALYTICAL RESULTS
LIVINGSTON RIDGE COMPRESSOR STATION POST-CLOSURE SAMPLING
Sec. 7 T2S R32E SW/4 SW/4 LEA COUNTY, NEW MEXICO

<u>OCD Standard^a</u> Sample Identification Number	<u>Date Sampled</u>	<u>Benzene 10</u>	<u>Toluene Ethylbenzene Total BTEX standard is 50</u>	<u>Xylenes</u>	<u>DRO TPH total is 5,000</u>	<u>GRO</u>	
LR-01	10/23/97	<0.005	<0.005	<0.005	<0.01	<25	<0.25
LR-02	10/23/97	<0.005	<0.005	<0.005	<0.01	<25	<0.25
LR-03	10/23/97	<0.005	<0.005	<0.005	<0.01	<25	<0.25
F-01	10/23/97	<0.005	<0.005	<0.005	<0.01	52	<0.25

NOTES:

All results reported in milligrams per kilogram (mg/kg).

< = Less than the method detection limit shown.

a. Soil remediation standards of the New Mexico Oil Conservation Division, in milligrams per kilogram.
 BTEX analyzed by EPA Method 8020.

DRO = Diesel range organic compounds analyzed by EPA Method 8015 Modified.

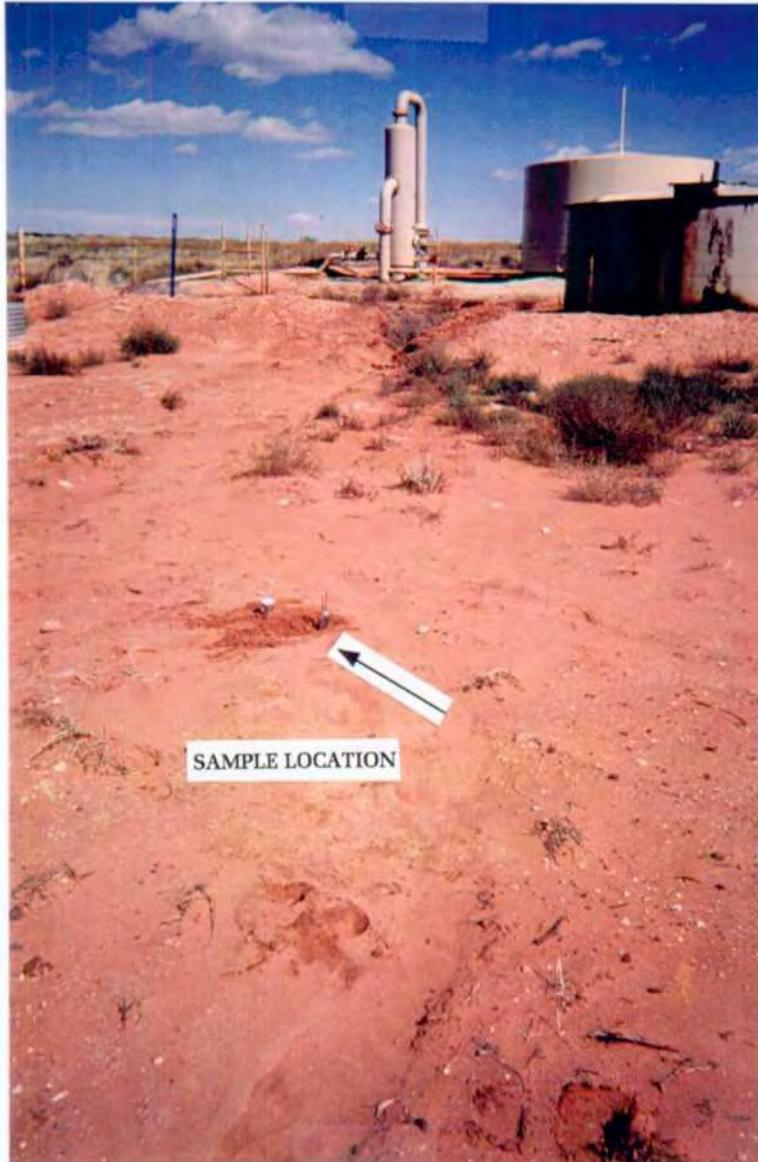
GRO = Gasoline range organic compounds analyzed by EPA Method 8015 Modified.



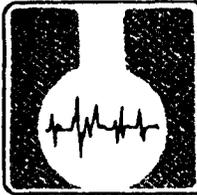
Photograph No. 1. Soil sampling locations LR-01 and LR-02.



Photograph No. 2. Soil sampling location LR-03.



Photograph No. 3. Soil sampling location F-01.



**ASSAIGAI
ANALYTICAL
LABORATORIES, INC.**

7300 Jefferson, N.E. • 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

Report Generated:
November 4, 1997 16:21

**CERTIFICATE OF ANALYSIS
RESULTS BY SAMPLE**

SENT HARDING LAWSON ASSOCIATES
TO: 202 CENTRAL SE, SUITE 102
ALBUQUERQUE, NM 87102

WORKORDER # : 9710239
WORK ID : YATES-LIVINGSTON RIDGE
CLIENT CODE : HARD01
DATE RECEIVED : 10/24/97

ATTN: JEFF MINCHAK

Page: 1

Lab ID: 9710239-01A
Sample ID: LR-01

Collected: 10/23/97 13:00:00
Matrix: SOIL

TEST / METHOD	RESULT	UNITS	LIMIT	D_F	DATE ANAL	BATCH_ID
BTEX/SW846 8020A						
Benzene	ND	mg/kg	0.0050	1.0	10/28/97	X97344
Toluene	ND	mg/kg	0.0050	1.0	10/28/97	X97344
Ethylbenzene	ND	mg/kg	0.0050	1.0	10/28/97	X97344
P-&m-Xylene	ND	mg/kg	0.010	1.0	10/28/97	X97344
O-Xylene	ND	mg/kg	0.0050	1.0	10/28/97	X97344
Diesel Range OG Soil/M8015						
Diesel Range OG in Soil	ND	mg/Kg	25	1.0	11/03/97	X97358
Gasoline Range OG in Soil						
Gasoline Range Organics in H2	ND	mg/Kg	0.25	1.0	10/28/97	X97344

Lab ID: 9710239-02A
Sample ID: LR-02

Collected: 10/23/97 13:20:00
Matrix: SOIL

TEST / METHOD	RESULT	UNITS	LIMIT	D_F	DATE ANAL	BATCH_ID
BTEX/SW846 8020A						
Benzene	ND	mg/kg	0.0050	1.0	10/28/97	X97344
Toluene	ND	mg/kg	0.0050	1.0	10/28/97	X97344
Ethylbenzene	ND	mg/kg	0.0050	1.0	10/28/97	X97344
P-&m-Xylene	ND	mg/kg	0.010	1.0	10/28/97	X97344
O-Xylene	ND	mg/kg	0.0050	1.0	10/28/97	X97344
Diesel Range OG Soil/M8015						
Diesel Range OG in Soil	ND	mg/Kg	25	1.0	11/03/97	X97358
Gasoline Range OG in Soil						
Gasoline Range Organics in H2	ND	mg/Kg	0.25	1.0	10/28/97	X97344

Lab ID: 9710239-03A
Sample ID: LR-03

Collected: 10/23/97 13:30:00
Matrix: SOIL

TEST / METHOD	RESULT	UNITS	LIMIT	D_F	DATE ANAL	BATCH_ID
BTEX/SW846 8020A						
Benzene	ND	mg/kg	0.0050	1.0	10/31/97	X97352
Toluene	ND	mg/kg	0.0050	1.0	10/31/97	X97352



Lab ID: 9710239-03A

Sample ID: LR-03

Collected: 10/23/97 13:30:00

Matrix: SOIL

TEST / METHOD	RESULT	UNITS	LIMIT	D_F	DATE ANAL	BATCH_ID
BTEX/SW846 8020A						
Ethylbenzene	ND	mg/kg	0.0050	1.0	10/31/97	X97352
P-&m-Xylene	ND	mg/kg	0.010	1.0	10/31/97	X97352
O-Xylene	ND	mg/kg	0.0050	1.0	10/31/97	X97352
Diesel Range OG Soil/M8015						
Diesel Range OG in Soil	ND	mg/Kg	25	1.0	11/03/97	X97358
Gasoline Range OG in Soil						
Gasoline Range Organics in H2	ND	mg/Kg	0.25	1.0	10/31/97	X97352

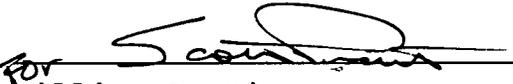
Lab ID: 9710239-04A

Sample ID: F-01

Collected: 10/23/97 13:45:00

Matrix: SOIL

TEST / METHOD	RESULT	UNITS	LIMIT	D_F	DATE ANAL	BATCH_ID
BTEX/SW846 8020A						
Benzene	ND	mg/kg	0.0050	1.0	10/28/97	X97344
Toluene	ND	mg/kg	0.0050	1.0	10/28/97	X97344
Ethylbenzene	ND	mg/kg	0.0050	1.0	10/28/97	X97344
P-&m-Xylene	ND	mg/kg	0.010	1.0	10/28/97	X97344
O-Xylene	ND	mg/kg	0.0050	1.0	10/28/97	X97344
Diesel Range OG Soil/M8015						
Diesel Range OG in Soil	52	mg/Kg	25	1.0	11/03/97	X97358
Gasoline Range OG in Soil						
Gasoline Range Organics in H2	ND	mg/Kg	0.25	1.0	10/28/97	X97344


 William P. Biava
 President

WORKORDER COMMENTS

DATE : 11/04/97

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

Harding Lawson Associates



**CLOSURE PLAN for
Livingston Ridge Compressor Station
T22S, R32E, Sec. 7
Lea County, New Mexico
(Discharge Plan GW-103)**

Prepared for
Yates Petroleum Corporation
105 South Fourth Street
Artesia, New Mexico 88210

HLA Project No. 38871, 1.0

July 30, 1997

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PLATES

- 1 Facility Location Map
- 2 Facility Layout Map

APPENDIX

Discharge Plan GW-103

1.0 INTRODUCTION

Harding Lawson Associates (HLA), on behalf of Yates Petroleum Corporation (Yates), has prepared this Closure Plan for the Livingston Ridge Natural Gas Compressor Station site (Station). This Closure Plan is required under the conditions of existing Discharge Plan GW-103, which expired on April 29, 1997. A Notice of Violation (NOV) was issued by the New Mexico Oil Conservation Division (OCD) on May 1, 1997 for operating the Station with an expired Discharge Plan. Yates had submitted a Discharge Plan renewal application to the OCD on April 28, 1997 for the Station. The NOV was issued by the OCD because the Discharge Plan renewal application was required to be submitted to the OCD at least 120 days prior to expiration of the existing Discharge Plan. However, during this time period, Yates had removed the Station from service and it will not be returned to service. Therefore, in accordance with the conditions in Discharge Plan GW-103 and applicable OCD regulations, the preparation and submission to the OCD of a Closure Plan is required. This plan has been prepared to satisfy those requirements.

The New Mexico Water Quality Control Commission (WQCC) regulation 3107.A.11, included by reference in the OCD regulations, requires a Closure Plan to prevent the exceedance of groundwater standards or the presence of toxic pollutants in groundwater after the cessation of operations at a given facility. The closure specified by this Plan will be a clean closure that satisfies this WQCC requirement.

1.1 Facility Location

The Station is located in Section 7, Township 22 South, Range 32 East, SW/4 SW/4. The Station is located in western Lea County, adjacent to the Lea County/Eddy County border. A facility location map which shows the Station location on a U.S. Geological Survey (USGS) Quadrangle map is provided as Plate 1. The Station is located on the The Divide 7.5-minute quadrangle sheet, which was prepared by the USGS in 1984.

1.2 Site Description

The Station is located adjacent to Salt Water Disposal (SWD) injection well Flamenco Federal No. 1. The SWD is currently active and will remain in-service. The SWD and all associated equipment and operations are not subject to this Closure Plan, nor is the SWD subject to Discharge Plan GW-103. The Station is located on portions of an approximately 650 feet by 650 feet pad. The pad is level and consists of compacted gravel and caliche. The pad is not vegetated and access to the site is via an unpaved driveway located in the southwest corner of the pad. Access to the Station and SWD is via Lea County Road 29. Plate 2 shows the layout of the Station.

1.3 History and Current Status

The initial Discharge Plan application was submitted to the OCD during February 1992. The initial Discharge Plan was approved on April 28, 1992 and had a five-year term before expiration. The Station is currently out-of-service and the Station will be decommissioned following this Closure Plan. After closure, Yates will allow the Discharge Plan GW-103 to lapse without renewal. The initial Discharge Plan is presented as an Appendix to this Closure Plan.

2.0 FACILITY OPERATIONS

2.1 Facility Description

The Livingston Ridge Compressor Station served as a collection point for low-pressure natural gas. At the Station the natural gas was separated from any residual petroleum products and water prior to the gas entering the compressor. The natural gas then passed through the compressor where it was discharged at high pressure through a meter into a high pressure sales line.

2.2 Equipment and Materials

The Livingston Ridge Compressor Station currently contains an AJAX DP-180 natural gas compressor, a 250-barrel oil storage tank, an inlet separator, a gas flare, an approximately 500-gallon double-walled fiberglass underground storage tank, an abandoned concrete pad, buried electrical conduit, and associated pipes and valves for the transfer of natural gas and other separated fluids.

2.2.1 Materials Stored at Livingston Ridge Compressor Station

Produced water, waste engine lubricating oils, and drip bucket fluids from the gas separation and compression were all transferred into the 250-barrel AST. The water contents of the AST were transferred to the Flamenco SWD, which shares the site with the Station, and the petroleum products were removed from the Station by a licensed transporter and sent to a permitted oil refiner. Also stored at the Station is a 55-gallon drum of engine lubrication oil for use in the compressor. No other materials, including solid waste or hazardous materials, were used or stored at this facility.

2.3 Facility Permits

The facility operated under Discharge Plan GW-103. The Discharge Plan expired on April 28, 1997, however, the facility is no longer in service. This Closure Plan is required to satisfy the conditions of the Discharge Plan.

3.0 CLOSURE OBJECTIVES

3.1 Applicable Regulations

This closure plan has been prepared to comply with the OCD Guidelines for the Preparation of Discharge Plans at Natural Gas Plants, Refineries, Compressor and Crude Oil Pump Stations (Rev. 12-95).

Incorporated by reference in these Guidelines, are the following applicable regulations, which are specifically addressed by this closure plan:

- OCD Rule 116 - Notification of Fire, Breaks, Leaks, Spills and Blowouts
- WQCC Section 3103 - Standards for Ground Water of 10,000 mg/l TDS Concentration or Less
- WQCC Section 3106 - Application for Discharge Plan Approvals and Renewals
- WQCC Section 3107 - Monitoring Reporting and Other Requirements
- WQCC Section 1203 - Notification of Discharge

3.1.1 OCD Rule 116

Operations at the facility have ceased and all equipment is being decommissioned. Therefore, no fire, breaks, leaks, spills or blowouts will occur as part of the facility operations. However, should any evidence of contamination from past operations be observed or indicated by test results during the closure operations, proper notification will be made to the OCD pursuant to this Rule 116 and Section 11 of the Discharge Plan.

3.1.2 WQCC Section 3103

Depth to water is estimated to be 800 feet below ground surface. The closure operations will consist of equipment dismantling, removal and site cleanup, and should not cause these Standards to be violated.

3.1.3 WQCC Section 3106

Because operations and discharge from the facility have ceased and Yates intends to close the facility and allow the discharge plan to lapse without renewal, this regulation will not apply.

3.1.4 WQCC 3107

Monitoring and reporting consistent with Section 10 of the Discharge Plan will continue until the facility has been properly closed. Because the permitted operations and associated discharge have ceased and the facility will be closed as a clean closure, there will be no need for monitoring or reporting after closure.

3.1.5 WQCC Section 1203

Pursuant to WQCC 1203.A.4, the provisions of this section do not apply to this facility, provided all required notifications pursuant to OCD Rule 116 are made. Yates will comply with Rule 116, as described in Section 3.1.1 of this Closure Plan.

3.2 Applicable Standards

In order to demonstrate compliance with WQCC 3103 Standards, pursuant to WQCC section 3107.A.11, Yates will close the facility to the following standards, based on the OCD Unlined Surface Impoundment Closure Guidelines (although the facility is not an unlined surface impoundment):

<u>Parameter</u>	<u>Maximum Concentration</u>
total benzene, toluene, ethylbenzene, and xylenes (BTEX)	50 ppm in soil
total petroleum hydrocarbons (TPH)	5,000 ppm in soil

One soil sample will be taken from all appropriate locations, as identified in Section 4.2 of this Closure Plan, upon completion of all closure activities to confirm that these standards have been attained in the soil at the Station. Closure will be considered clean when these standards have been demonstrated by the analytical results of these confirmation samples.

4.0 SITE CLOSURE

4.1 Planning

A site visit was performed on July 21, 1997 to review the current environmental conditions at the Station. Based on this site visit, a review of the Discharge Plan GW-103, the OCD Guidelines for the Preparation of Discharge Plans at Natural Gas Plants, Refineries, Compressor and Crude Oil Pump Stations, and the OCD Unlined Surface Impoundment Closure Guidelines, the closure activities specified in this Closure Plan will satisfy all applicable regulations and guidelines for clean closure.

4.1.1 General Site Characteristics

The depth to groundwater has previously been reported as approximately 800 feet below ground surface. The nearest water supply well is approximately 2.5 miles south of the Station. The distance to the nearest surface water body is 1.5-miles. The surface water features in the vicinity of the Station are stock tanks for range cattle.

4.1.2 Soil Characteristics

During the site visit, soil staining was noted adjacent to piping midway between the 250-barrel AST and the compressor. The soil staining covered an approximate area of ten feet by fifteen feet and appeared to be surficial staining common to natural gas production operations. Nothing was observed to indicate contamination of groundwater.

Highly contaminated soils have not been observed at the Station, however, the potential for unsaturated contaminated soils to be present does exist. As described in Section 4.2, samples of visibly stained soils, if observed, will be analyzed for BTEX and TPH to determine if they are classified as unsaturated contaminated soils and to determine if soil remediation will be required to meet the closure standards specified in Section 3.2 of this Plan.

4.1.3 Groundwater Quality

It is not expected that groundwater will be encountered during Station closure activities. Due to the extreme depth to groundwater and the operational activities at the Station, Yates will not perform groundwater assessment, unless soil contamination from operation of the Station is discovered during closure, and such contamination is of sufficient extent to have migrated from the Station to the groundwater.

4.2 Facility Closure

To achieve clean closure of this facility, Yates will implement the following:

1. Yates will break all connections to the high pressure sales line and disconnect all piping and equipment from the natural gas lines to ensure the flow of natural gas has been discontinued. The compressor station equipment will not necessarily be removed from the Station for economic reasons. The decommissioned (clean) equipment will remain at the location until needed elsewhere within Yates' operations.
2. Yates will empty all liquids from the 250-bbl. above ground storage tank (AST) to prevent the potential discharge of any petroleum liquids in this tank. The soil surrounding the 250-barrel AST will be observed for any evidence of surface staining from previous spills. If any soil staining is noted in the vicinity of the 250-bbl. AST, the onsite Yates representative will collect a soil sample for BTEX and TPH analyses.
3. The 500-gallon underground storage tank (UST) will be excavated and removed. During the site visit the tank appeared to be in good condition. The interstitial space between the inner and outer walls was dry, while the tank still held liquid. If any soil staining is noted during the removal of this tank, a soil sample will be collected and analyzed for BTEX and TPH.
4. A soil sample from the stained area located adjacent to the piping between the 250-bbl. AST and the compressor will be collected and analyzed for BTEX and TPH. As the compressor and other appurtenant devices are decommissioned, areas of soil staining will be noted, and , if necessary, soil samples will be collected from within the stained areas for BTEX and TPH analyses.
5. For soil samples which contain concentrations of BTEX and/or TPH which exceed OCD guidelines, soil remediation will be performed. Insitu soil treatment will be the preferred method of soil remediation. The contaminated soil will be disced or otherwise agitated to enhance biodegradation of the petroleum contamination. If necessary, nutrients will be added to the soils to further enhance biodegradation. This will continue until the closure standards have been achieved, based on soil sampling and analysis.

As discussed in Section 4.1, the reported depth to groundwater beneath the Station is approximately 800 feet. Yates does not anticipate performing a groundwater assessment at the Station.

4.3 Certification and Notification

Yates will perform the closure of the Livingston Ridge Compressor Station following the procedures described in Section 4.2. Upon completion of the decommissioning activities and, if necessary, soil remediation, Yates will document the closure to the OCD in a brief Closure Report. This report will describe the closure activities performed and certify that the closure standards have been met.

It is requested that upon OCD approval of the Closure Report, the OCD issue Final Closure of Discharge Plan GW-103 and document that the conditions of the Notice of Violation for operating with an expired plan have been satisfactorily met by Yates.

4.4 Post-Closure Care

Because clean closure will be achieved, no post-closure care or monitoring will be required.

4.5 Financial Assurance

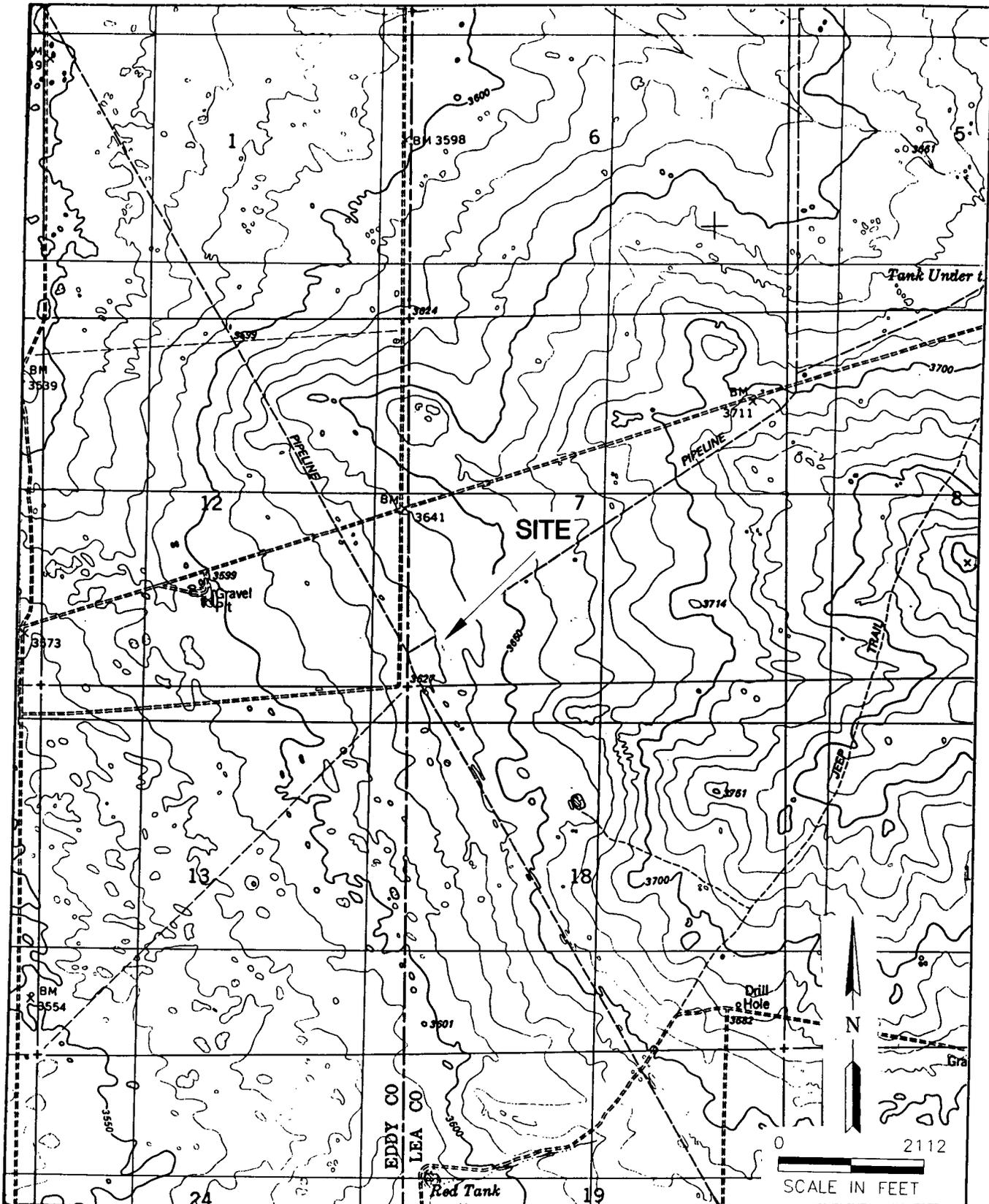
Yates has more than adequate financial resources to complete the closure as specified. Yates will perform all closure activities described in this Closure Plan at its own expense.

5.0 CLOSURE SCHEDULE

5.1 Schedule

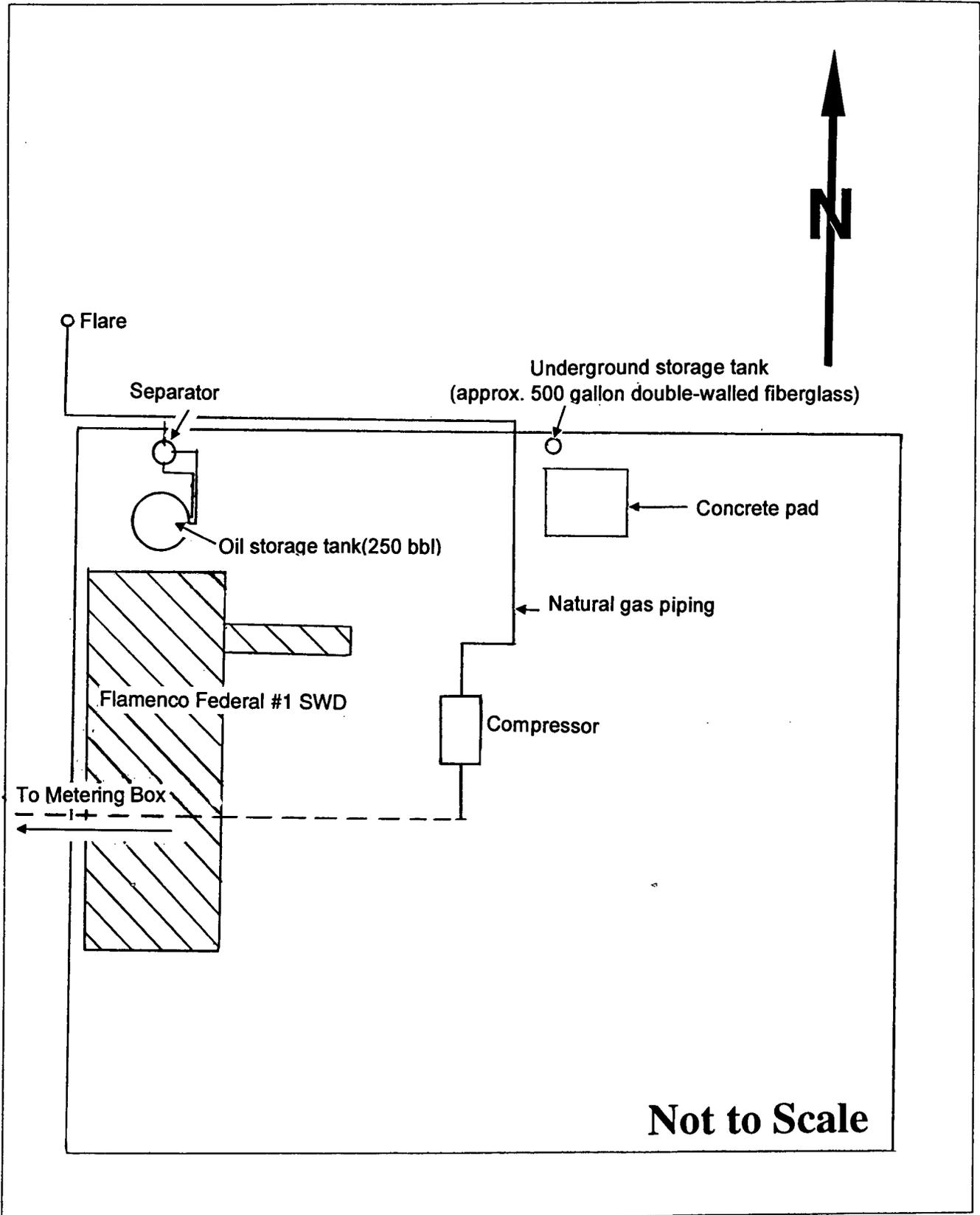
Yates will begin final decommissioning and closure of the Livingston Ridge Compressor Station upon receiving OCD approval of this Closure Plan. Yates anticipates having the closure complete within sixty (60) days from OCD approval of this Closure Plan.

FIGURES



Harding Lawson Associates
 Engineering and
 Environmental Services
 202 Central SE Suite 102
 Albuquerque, New Mexico 87102
 DRAWN: LDS
 PROJECT NUMBER: 38871-10
 APPROVED:

FACILITY LOCATION MAP PLATE
 Yates Petroleum Corporation
 Artesia, New Mexico
 1
 DATE: 7/87
 REVISED DATE:



Harding Lawson Associates

Engineering and
Environmental Services
202 Central SE Suite 102
Albuquerque, New Mexico 87102

DRAWN **LDS** PROJECT NUMBER **38871-10**

FACILITY LAYOUT MAP
Yates Petroleum Corporation
Artesia, New Mexico

PLATE

2

APPROVED

DATE
7/97

REVISED DATE

APPENDIX

Discharge Plan GW-103

Proposed Discharge Plan
Livingston Ridge Compressor Site
Yates Petroleum Corporation

February 1992

Table of Contents

<u>Section</u>	<u>Title</u>
I	General Information and Affirmation
II	Plant Processes
III	Transfer, Storage, and Disposal Procedures
IV	Facility Diagrams A. Current Facility Diagram B. Proposed Expansion Diagram
V	Area Maps A. Topographic Map B. General Area
VI	Injection Well Permit
VII	Terrain and Environment Description
VIII	Sample Analysis

Section I

General Information and Affirmation

Discharge Plan

Facility: Yates Petroleum Livingston Ridge Compressor Site

Operator: Yates Petroleum Corporation
104 S. 4th Street
Artesia, NM 88210
(505)748-1471

Company Representatives: Ed Perry Foreman
Darrell Atkins Superintendent
Chuck Morgan Engineer

(Address and Phone Same as Above)

Location: Sec. 7 T22S R32E
SW/4 SW/4

Operation: Natural Gas Compression:
Low pressure natural gas is compressed and metered
into a high pressure sales line.

Certification: I hereby certify that I am familiar with the information
contained in and submitted with this application, and
that such information is true and accurate to the best of
my knowledge and belief.

Chuck Morgan
(Signature)

2/20/92
(Date)

Chuck Morgan
(Printed Name)

2/20/92
(Date)

Section II

Plant Processes

Plant Processes

Effluent Sources:

1. Fluid Separators: 2 BPD produced fluid (produced water and oil)
2. Engine Cooling Waters: ≤50 gal/yr.
3. Waste Engine Oils: ≤100 gal/yr.
4. Cleaning Operations: ≤75 gal/yr.
 - a) Fresh water with surfactants used for cleaning of facility and equipment.
5. Drip Catch Buckets: ≤100 gal/yr.
6. Miscellaneous: (drips, spills, leaks) ≤10 gal/yr.

Attached samples were collected as follows:

Produced Water: Sample pulled off of tank drain and delivered for analysis to: Southwestern Laboratories
1703 W. Industrial Avenue
Midland, TX 79702

Drip Oil: Samples were pulled from catch buckets and sent to Southwestern Laboratories.

Section III

Transfer, Storage, and Disposal Procedures

Transfer, Storage, and Disposal Procedures

1. Produced water piping is shown in red on the attached plant schematic
2. All separators, unit scrubbers and separators, and line dehydrators are connected together and piped via 1" steel above ground line to the liquid outlet on the Gas Inlet Separator. This outlet is a 2" above ground steel line that transfers all liquids to an above ground 250 BBL internally coated steel storage tank. (All lines are under approximately 2-4# of hydrostatic pressure.)
3. All lines and tanks are visually inspected daily for leaks. Any leaks found are repaired immediately, and any lost fluid is to be recovered with a vacuum unit and placed in the 250 BBL storage tank. The OCD will be notified immediately of any major or serious leaks and/or spills.
4. Any produced water in the 250 BBL stock tank is transferred via a vacuum truck into one of two OCD approved disposal stations (Yates Petroleum: Flamenco (on site) or the Yates Petroleum: David Ross, Sec. 35-T22S-R31E, SE/4 NE/4.)
 - A. Primary Produced Water Disposal Site:
Yates Petroleum Flamenco Injection well:
 1. OCD approved Class II injection well.
 2. Order #SWD-428, dated June 13, 1991
 3. Injecting approximately 2,000 BWPD into the Delaware formation at approximately 4676-5814'.
 - B. Contingency Produced Water Disposal Site:
Yates Petroleum David Ross AIT Fed #1 injection well in Unit H
Sec. 35-T22S-R31E, Eddy County:
 1. Order #SWD-419, dated May 22, 1991
 2. Injecting approximately 1500 BWPD into the Delaware formation at approximately 4500-5670'.
5. Waste engine oils and drip bucket fluids are stored on site in an above ground 250 BBL internally coated steel storage tank. Contents are to be removed from the site by a licensed transporter and sent to a permitted oil refiner.

Site Characteristics:

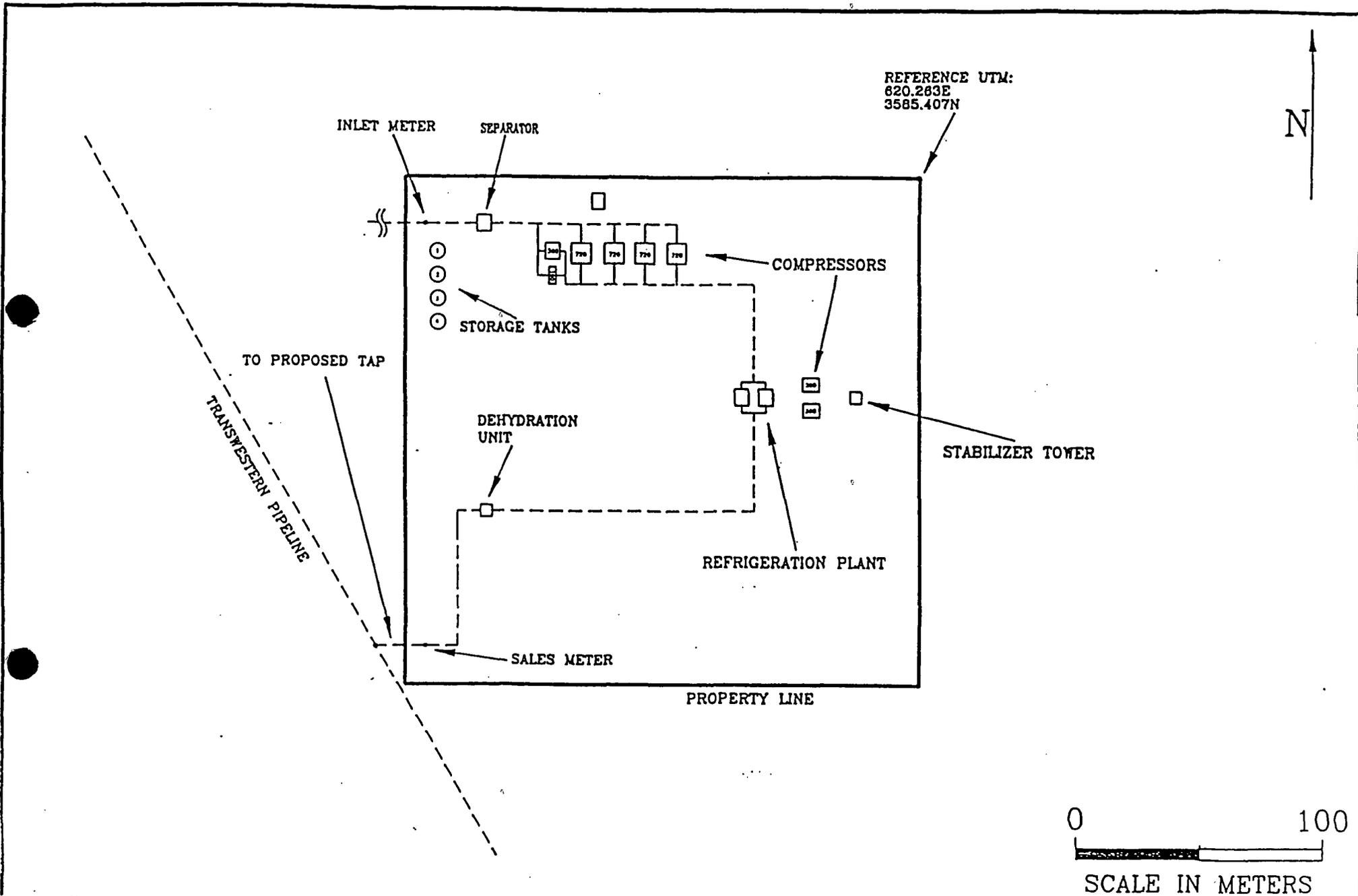
An application for approval of salt water disposal for Yates Petroleum Corporation's Flamenco Federal #1 SWD well accompanies this application. This well shares a site with the Livingston Ridge Compressor installation. All pertinent site characteristic data should be outlined in this application. A brief description of the general surrounding terrain and environmental setting is attached to the back of the SWD application. In addition, the site is not located in a flood plane and no danger of flooding exists.

Section IV

Facility Diagrams

- A. Current Facility Diagram**

- B. Proposed Expansion Diagram**



TITLE: YATES PETROLEUM
LIVINGSTON RIDGE COMPRESSOR STATION

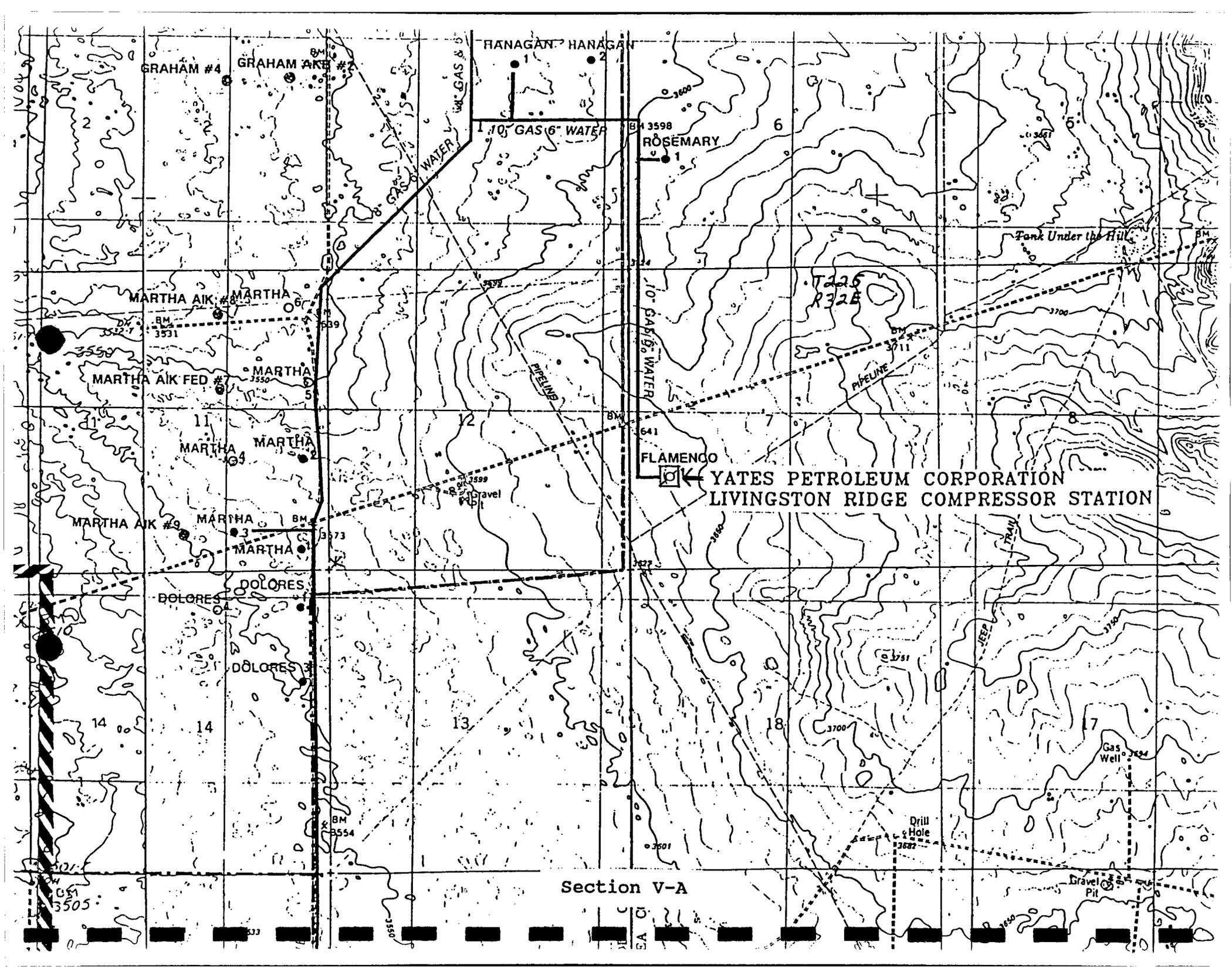
Section IV-B
PROPOSED
SCHEDULES

Section V

Area Maps

A. Topographic Map

B. General Area



GRAHAM #4

GRAHAM AIK #2

HANAGAN #1

HANAGAN #2

1.10" GAS 6" WATER

ROSEMARY

MARTHA AIK #8

MARTHA

MARTHA AIK FED #7

MARTHA

FLAMENCO

YATES PETROLEUM CORPORATION
LIVINGSTON RIDGE COMPRESSOR STATION

DOLORES

DOLORES

Section V-A

Tank Under the Hill

T226

R32B

10" GAS 6" WATER

PIPELINE

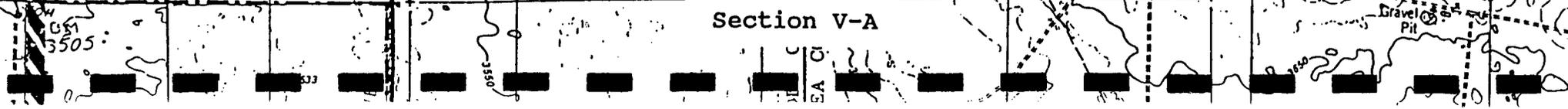
PRELIM

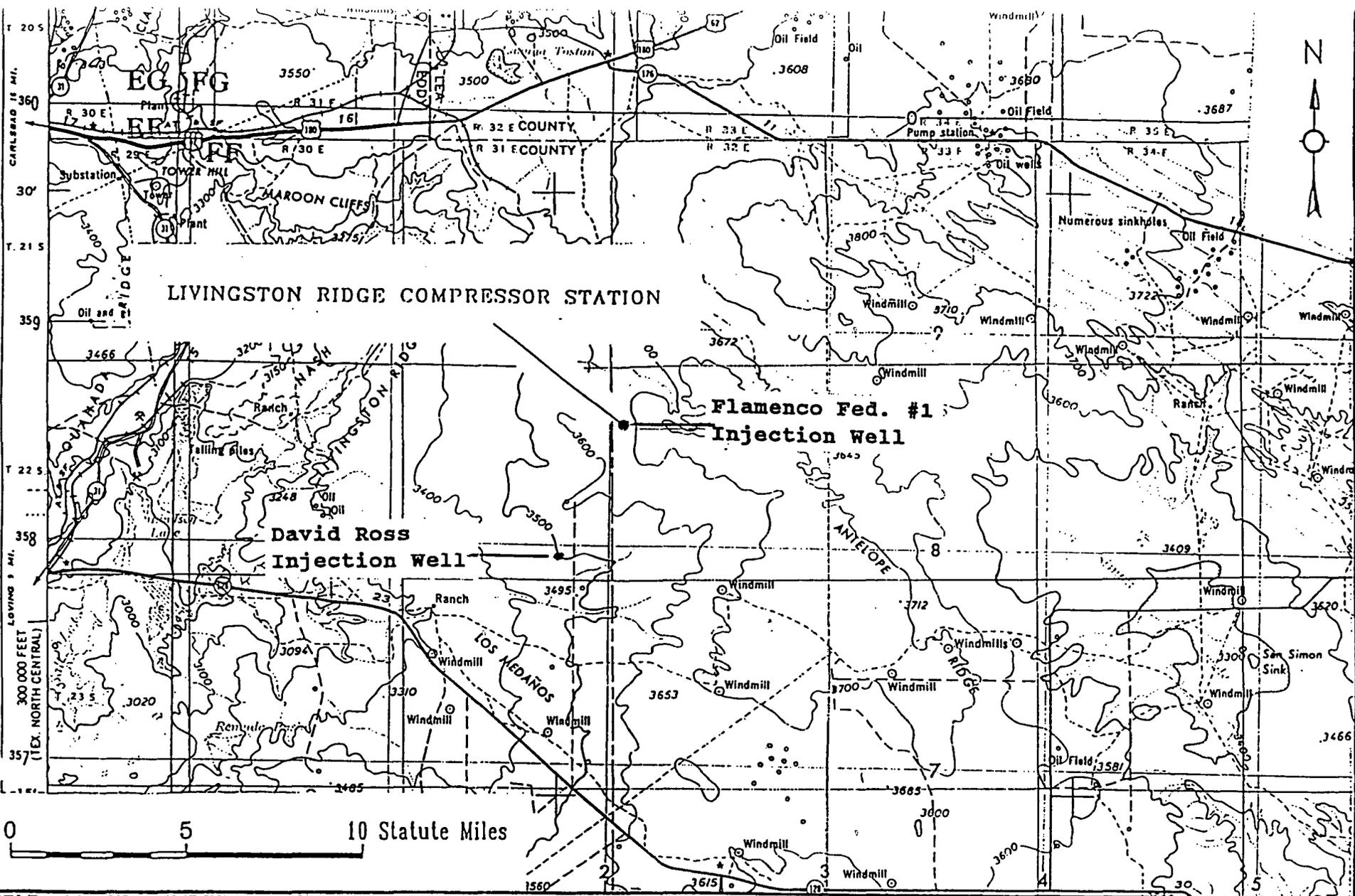
DEEP TRAIL

Gas Well

Drill Hole

Gravel Pit





TITLE: YATES PETROLEUM CORPORATION
 LIVINGSTON RIDGE COMPRESSOR STATION
 GENERAL VICINITY MAP

VI Injection Well Permit

APPLICATION FOR AUTHORIZATION TO INJECT

I. Purpose: Secondary Recovery Pressure Maintenance Disposal Storage
Application qualifies for administrative approval? yes no

II. Operator: Yates Petroleum Corporation
Address: 105 S. 4th Street, Artesia, NM 88210

Contact party: Brian Collins Phone: (505) 748-1471

III. Well data: Complete the data required on the reverse side of this form for each well proposed for injection. Additional sheets may be attached if necessary.

IV. Is this an expansion of an existing project? yes no
If yes, give the Division order number authorizing the project _____

V. Attach a map that identifies all wells and leases within two miles of any proposed injection well with a one-half mile radius circle drawn around each proposed injection well. This circle identifies the well's area of review.

VI. Attach a tabulation of data on all wells of public record within the area of review which penetrate the proposed injection zone. Such data shall include a description of each well's type, construction, date drilled, location, depth, record of completion, and a schematic of any plugged well illustrating all plugging detail.

VII. Attach data on the proposed operation, including:

1. Proposed average and maximum daily rate and volume of fluids to be injected;
2. Whether the system is open or closed;
3. Proposed average and maximum injection pressure;
4. Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and
5. If injection is for disposal purposes into a zone not productive of oil or gas at or within one mile of the proposed well, attach a chemical analysis of the disposal zone formation water (may be measured or inferred from existing literature, studies, nearby wells, etc.).

VIII. Attach appropriate geological data on the injection zone including appropriate lithologic detail, geological name, thickness, and depth. Give the geologic name, and depth to bottom of all underground sources of drinking water (aquifers containing waters with total dissolved solids concentrations of 10,000 mg/l or less) overlying the proposed injection zone as well as any such source known to be immediately underlying the injection interval.

IX. Describe the proposed stimulation program, if any.

X. Attach appropriate logging and test data on the well. (If well logs have been filed with the Division they need not be resubmitted.)

XI. Attach a chemical analysis of fresh water from two or more fresh water wells (if available and producing) within one mile of any injection or disposal well showing location of wells and dates samples were taken.

XII. Applicants for disposal wells must make an affirmative statement that they have examined available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground source of drinking water.

XIII. Applicants must complete the "Proof of Notice" section on the reverse side of this form.

XIV. Certification

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

Name: Brian Collins Title Petroleum Engineer

Signature: *Brian Collins* Date: April 25, 1991

If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be duplicated and resubmitted. Please show the date and circumstance of the earlier submittal. _____

III. WELL DATA

A. The following well data must be submitted for each injection well covered by this application. The data must be both in tabular and schematic form and shall include:

- (1) Lease name; Well No.; location by Section, Township, and Range; and footage location within the section.
- (2) Each casing string used with its size, setting depth, sacks of cement used, hole size, top of cement, and how such top was determined.
- (3) A description of the tubing to be used including its size, lining material, and setting depth.
- (4) The name, model, and setting depth of the packer used or a description of any other seal system or assembly used.

Division District offices have supplies of Well Data Sheets which may be used or which may be used as models for this purpose. Applicants for several identical wells may submit a "Typical data sheet" rather than submitting the data for each well.

B. The following must be submitted for each injection well covered by this application. All items must be addressed for the initial well. Responses for additional wells need be shown only when different. Information shown on schematics need not be repeated.

- (1) The name of the injection formation and, if applicable, the field or pool name.
- (2) The injection interval and whether it is perforated or open-hole.
- (3) State if the well was drilled for injection or, if not, the original purpose of the well.
- (4) Give the depths of any other perforated intervals and detail on the sacks of cement or bridge plugs used to seal off such perforations.
- (5) Give the depth to and name of the next higher and next lower oil or gas zone in the area of the well, if any.

XIV. PROOF OF NOTICE

All applicants must furnish proof that a copy of the application has been furnished, by certified or registered mail, to the owner of the surface of the land on which the well is to be located and to each leasehold operator within one-half mile of the well location.

Where an application is subject to administrative approval, a proof of publication must be submitted. Such proof shall consist of a copy of the legal advertisement which was published in the county in which the well is located. The contents of such advertisement must include:

- (1) The name, address, phone number, and contact party for the applicant;
- (2) the intended purpose of the injection well; with the exact location of single wells or the section, township, and range location of multiple wells;
- (3) the formation name and depth with expected maximum injection rates and pressures; and
- (4) a notation that interested parties must file objections or requests for hearing with the Oil Conservation Division, P. O. Box 2080, Santa Fe, New Mexico 87501 within 15 days.

NO ACTION WILL BE TAKEN ON THE APPLICATION UNTIL PROPER PROOF OF NOTICE HAS BEEN SUBMITTED.

NOTICE: Surface owners or offset operators must file any objections or requests for hearing of administrative applications within 15 days from the date this application was mailed to them.

C-108
Application For Authorization To Inject
Yates Petroleum Corporation
Flamenco Fed #1
L 7-22S-32E
Lea County, New Mexico

- I. The purpose of completing this well is to make a disposal well for produced Delaware Sand water into the Delaware Sand formation.

Yates Petroleum plans to convert this well to a water disposal well into the Delaware Sand.

- II. Operator: Yates Petroleum Corporation
105 South Fourth Street
Artesia, NM 88210
Brian Collins (505) 748-1471
- III. Well Data: See Attachment A
- IV. This is not an expansion of an existing project.
- V. See attached map, Attachment B
- VI. No wells within the area of review penetrate the proposed injection zone.
- VII. 1. Proposed average daily injection volume approximately 5000 BWPD.
Maximum daily injection volume approximately 15000 BWPD.
2. This will be a closed system.
3. Proposed average injection pressure-unknown
Proposed maximum injection pressure--935 psi.
4. Sources of injected water would be produced water from the Delaware Sand. (Attachment C)
5. See Attachment C.
- VIII. 1. The proposed injection interval is the portion of the Delaware Sand formation consisting of porous Sandstone from estimated depths:
- | |
|-------------|
| 4676'-4735' |
| 4745'-4792' |
| 4960'-4976' |
| 5028'-5046' |
| 5083'-5098' |
| 5114'-5142' |
| 5280'-5306' |

Application for Authorization to Inject
Flamenco Fed #1

-2-

5574'-5612'
5648'-5670'
5738'-5754'
5776'-5814'

2. Possible Fresh water zones overlie the proposed injection formations at depths to approximately 850' feet. There are no fresh water zones underlying the formation.
- IX. The proposed disposal interval may be acidized with 7-1/2% HCL acid, or 12-3 HF acid.
- X. Logs were filed at your office when the well was drilled.
- XI. No windmills exist within a one mile radius of the subject location.
- XII. Yates Petroleum Corporation has examined geologic and engineering data and has found that there is no evidence of faulting in the proposed interval.
- XIII. Proof of Notice
- A. Certified letters sent to the surface owner and offset operators-attached. (Attachment D)
- B. Copy of legal advertisement attached. (Attachment E)
- XIV. Certification is signed.

Yates Petroleum Corporation
Flamenco Fed #1
L 7-22S-32E

Attachment A

Page 1

III. Well Data

- A. 1. Lease Name/Location:
Flamenco Fed. #1
L 7-22S-32E
1650' FSL & 660' FWL
2. Casing Strings:
a. Present Well Condition
8-5/8" 36#, J55 @ 850' w/250 sx
(circ)
5-1/2" 15.5#, 17#, J55, N80 @ 8537' w/2850
SX
(TOC 800')
Present Status:
SI. Unsuccessful completion attempt in
Delaware 7085'-8455'.
3. Proposed well condition:
Casing same as above
3 1/2" 9.3 J55 or 2-7/8" 6.5 J55 plastic-
coated injection tubing @ 4600'
4. Propose to use Guiberson or Baker plastic-
coated or nickel-plated packer set at 4600'.
- B. 1. Injection Formation: Delaware Sand
2. Injection Interval will be through perfora-
tions from approximately 4676-5814'.
3. Well was originally drilled as an exploratory
Delaware Sand oil well. Well will be Delaware
Sand water disposal well (4676'-5814') when
work is completed.
4. Perforations: 8449'-8455' Delaware
8312'-8332' Delaware
CIBP + 30' cement 8290'
7184'-7194' Delaware
CIBP + 20' cement 7170'
7085'-7104' Delaware
5. Next higher (shallower) oil or gas zone within
2 miles--None

Section VII

Terrain and Environment Description

REPRESENTATIVE SAMPLE :
SURROUNDING TERRAIN
ENVIRONMENTAL SETTING

Martha "AIK" Federal Well No. 1

Location

The proposed location will measure 400 X 400 ft (actual area surveyed 4.44 acres) on federal land and will be situated 330 ft from the south line and 430 ft from the east line.

Section 11, T22S, R31E, NMPM, Eddy County, NM

Thus it will be situated in the:

SE $\frac{1}{4}$ SE $\frac{1}{4}$, Section 11, T22S, R31E, NMPM, Eddy County, NM

The proposed location will be situated next to an existing lease road.

Map Reference: USGS THE DIVIDE QUADRANGLE, 7.5 Minute Series, 1984.

Level of Previous Impact

A lease road crosses the east side of the location.

Enviromental Setting

YATES' proposed location will be situated on a duned landform located due west of The Divide. Coppice dunes are characteristic of the area as a whole. Areal microrelief ranges between 0.60 and 3.0 m in height. Local soils, dominated by the sand separate, are made up of loose, non-calcareous, sandy loams and loamy sands. Deflation basins are lacking altogether. Lithic inclusions are absent. Pedons are assignable to the Typic Torripsamment subgroup. Depositionally, local soils are subject to limited aeolian activity. Water is scarce albeit seeps and springs occur to the west along the bas of Livingston Ridge. Elevation is 3566 ft. Slope is 0.75°. Aspect is multiple (360°).

The scrub/grassland formation is made up of mesquite, shinnery oak, sand sage, southwest rabbitbush, plains yucca, plains sunflower, many bristle pectis, sand palafoxia, umbrella wart, sandbur, mesa dropseed, sand dropseed, poverty threeawn and false buffalo grass.

Section VIII

Sample Analysis

HALLIBURTON DIVISION LABORATORY

HALLIBURTON SERVICES

ARTESIA DISTRICT

LABORATORY REPORT

No. W32-92

TO Mr. Ed Perry
Yates Petroleum Corporation
105 South Fourth Street
Artesia, NM 88210

Date February 12, 1992

This report is the property of Halliburton Services and neither it nor any part thereof, nor a copy thereof, is to be published or disclosed without first securing the express written approval of laboratory management, it may however, be used in the course of regular business operations by any person or concern and employees thereof receiving such report from Halliburton Services

Submitted by _____ Date Rec. February 11, 1992

Well No. Flamenco #1 Depth _____ Formation _____
Field _____ County _____ Source Compressor Water Tank

Resistivity	<u>0.050 @ 70°</u>	_____	_____
Specific Gravity ..	<u>1.2086 @ 70°</u>	_____	_____
pH	<u>7.0</u>	_____	_____
Calcium	<u>25,218</u>	_____	_____
Magnesium	<u>8,732</u>	_____	_____
Chlorides	<u>192,000</u>	_____	_____
Sulfates	<u>200</u>	_____	_____
Bicarbonates	<u>92</u>	_____	_____
Soluble Iron	<u>100</u>	_____	_____
<u>KCL</u>	<u>1.5%</u>	_____	_____
-----	-----	-----	-----
-----	-----	-----	-----

Remarks:

Eric Jacobson
Respectfully submitted

Analyst: Eric Jacobson - Operations Engineer

HALLIBURTON SERVICES

NOTICE:

This report is for information only and the content is limited to the sample described. Halliburton makes no warranties, express or implied, as to the accuracy of the contents or results. Any user of this report agrees Halliburton shall not be liable

PETROLITE

WATER ANALYSIS REPORT

Company : YATES PETROLEUM
 Address : ARTESIA, NM
 Lease : FLAMENCO FEDERAL
 Well : 250 TANK
 Sample Pt. : TANK

Date : 02/12/92
 Date Sampled : 02/10/92
 Analysis No. : 001

ANALYSIS		mg/L		* meq/L
-----		-----		-----
1. pH	6.5			
2. H2S	0			
3. Specific Gravity	1.205			
4. Total Dissolved Solids		297951.3		
5. Suspended Solids				
6. Dissolved Oxygen				
7. Dissolved CO2				
8. Oil In Water				
9. Phenolphthalein Alkalinity (CaCO3)				
10. Methyl Orange Alkalinity (CaCO3)				
11. Bicarbonate	HCO3	85.0	HCO3	1.4
12. Chloride	Cl	185949.0	Cl	5245.4
13. Sulfate	SO4	250.0	SO4	5.2
14. Calcium	Ca	30960.0	Ca	1544.9
15. Magnesium	Mg	5096.9	Mg	419.3
16. Sodium (calculated)	Na	75585.5	Na	3287.8
17. Iron	Fe	0.0		
18. Barium	Ba	25.0		
19. Strontium	Sr	0.0		
20. Total Hardness (CaCO3)		98300.0		

PROBABLE MINERAL COMPOSITION

*milli equivalents per Liter		Compound	Equiv wt	X meq/L	= mg/L
+-----+	+-----+	-----	-----	-----	-----
1545 *Ca <-----	*HCO3	Ca(HCO3)2	81.0	1.4	113
-----	/----->	CaSO4	68.1	5.2	354
419 *Mg ----->	*SO4	CaCl2	55.5	1538.3	85361
-----	<-----/	Mg(HCO3)2	73.2		
3288 *Na ----->	*Cl	MgSO4	60.2		
+-----+	+-----+	MgCl2	47.6	419.3	19962
Saturation Values Dist. Water 20 C		NaHCO3	84.0		
CaCO3	13 mg/L	Na2SO4	71.0		
CaSO4 * 2H2O	2090 mg/L	NaCl	58.4	3287.8	192136
BaSO4	2.4 mg/L				

REMARKS:

----- L. MALLETT / MLAB / FILE

Petrolite Oilfield Chemicals Group

Respectfully submitted,
 LEE MALLETT

PETROLITE

SCALE TENDENCY REPORT

Company : YATES PETROLEUM Date : 02/12/92
Address : ARTESIA, NM Date Sampled : 02/10/92
Lease : FLAMENCO FEDERAL Analysis No. : 001
Well : 250 TANK Analyst : LEE MALLETT
Sample Pt. : TANK

STABILITY INDEX CALCULATIONS
(Stiff-Davis Method)
CaCO3 Scaling Tendency

S.I. = 1.0 at 80 deg. F or 27 deg. C
S.I. = 1.0 at 100 deg. F or 38 deg. C
S.I. = 0.9 at 120 deg. F or 49 deg. C
S.I. = 0.9 at 140 deg. F or 60 deg. C
S.I. = 1.0 at 160 deg. F or 71 deg. C

CALCIUM SULFATE SCALING TENDENCY CALCULATIONS
(Skillman-McDonald-Stiff Method)
Calcium Sulfate

S = 417 at 80 deg. F or 27 deg C
S = 443 at 100 deg. F or 38 deg C
S = 454 at 120 deg. F or 49 deg C
S = 461 at 140 deg. F or 60 deg C
S = 453 at 160 deg. F or 71 deg C

Petrolite Oilfield Chemicals Group

Respectfully submitted,
LEE MALLETT

Mark Ashley

From: Price, Wayne
Sent: Tuesday, March 31, 1998 9:05 AM
To: Mark Ashley
Cc: Chris Williams
Subject: Yates Livingston Ridge Comp. St GW-103

Re: Field Trip Report:

Dear Mark:

Please note I met Yate's environmental rep. at the site and took pictures. Visual observation reflect a clean site. Also I discussed the issue of the remaining equipment on site with the BLM (Jim Amos) . He indicated he did not have a problem with the equipment since Yates still has a lease for the SWD.

if Yates closes out the SWD then BLM will address the surface issue.

I am dropping the pictures in the mail today.

I have attached these pictures using the wang Imaging system. Let me know if it works.



yates.tif.tiff

Mark Ashley

From: Price, Wayne
Sent: Monday, March 16, 1998 9:58 AM
To: Mark Ashley
Cc: Chris Williams
Subject: Yates Livingston Comp St.

Mark:

I am meeting Lisa Norton (Yates Env. rep.) on Next Tuesday March 24, 1998.
I will get you a field report late next week.

Mark Ashley

From: Price, Wayne
Sent: Wednesday, March 11, 1998 10:01 AM
To: Ashley, Mark
Subject: Read: Yates - Livingston Ridge CS
Importance: High

Your message

To: Price, Wayne
Subject: Yates - Livingston Ridge CS
Sent: 3/11/98 9:14:30 AM

was read on 3/11/98 10:01:45 AM

Mark Ashley

From: Price, Wayne
Sent: Wednesday, March 11, 1998 10:04 AM
To: Ashley, Mark
Subject: RE: Yates - Livingston Ridge CS

Mark,

Yates personell and I were going to the site the other day and I was called off for the emergency at the Pecos river inwhich a Rowland truck had rolled over into the river. Now that's a good excuss!!!

I am planning to vist the site next week!

From: Ashley, Mark
Sent: Wednesday, March 11, 1998 9:14 AM
To: Price, Wayne
Subject: Yates - Livingston Ridge CS
Importance: High

Wayne,

I just wanted to follow up to see if you have had a chance to inspect the Livingston Ridge CS yet. Please let me know.

Thanks,

Mark

MEMORANDUM OF MEETING OR CONVERSATION

<input checked="" type="checkbox"/> Telephone	<input type="checkbox"/> Personal	Time 8AM	Date 1-15-98
---	-----------------------------------	----------	--------------

<u>Originating Party</u>	<u>Other Parties</u>
MARK ASALEY	WAYNE PRICE

Subject YATES - LIVINGSTON PEOPLE CS (GLW-103)

Discussion YATES IS REQUESTING CLOSURE OF THE LIVINGSTON PEOPLE CS. BEFORE FINAL CLOSURE AND NEEDS AN INSPECTION. I ASKED WAYNE IF HE COULD MAKE A FINAL INSPECTION FOR ME.

Conclusions or Agreements WAYNE SAID HE COULD MAKE THE FINAL INSPECTION FOR ME.

Distribution _____
Signed Mark Asaley



NEW MEXICO ENERGY, MINERALS
& NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION
2040 South Pacheco Street
Santa Fe, New Mexico 87505
(505) 827-7131

December 29, 1997

CERTIFIED MAIL
RETURN RECEIPT NO. P-288-259-000

Ms. Lisa Norton
Yates Petroleum Corporation
105 S. 4th Street
Artesia, New Mexico 88210

RE: Closure Plan
Livingston Ridge Compressor Station GW-103
Lea County, New Mexico

Dear Ms. Norton:

The New Mexico Oil Conservation Division (OCD) has completed a review of the Yates Petroleum Corporation (Yates) letter dated August 8, 1997 requesting closure of Livingston Ridge Compressor Station. Based on the information received by the OCD, the above referenced closure plan is hereby approved with the following conditions:

1. The OCD Hobbs District Office will be notified 72 hours prior to all closure activities.
2. All wastes generated will be disposed of at an OCD approved site
3. Yates will submit a final closure report to the OCD Santa Fe Office by April 1, 1998. The report will contain:
 - a. A description of all activities.
 - b. A summary of the laboratory analytical results of all soil sampling.
4. Final closure of discharge plan GW-103 will be issued upon review of the final closure report.

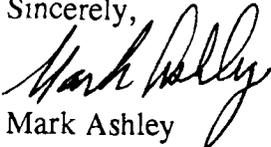
Please be advised that OCD approval does not relieve Yates of liability if contamination exists which is beyond the scope of the closure plan or if the activities fail to adequately determine the

Ms. Lisa Norton
December 29, 1997
Page 2

extent of contamination related to Yates's activities. In addition, OCD approval does not relieve Yates of responsibility for compliance with any other federal, state or local laws and/or regulations.

If you have any questions, please call me at (505) 827-7155.

Sincerely,



Mark Ashley
Geologist

xc: OCD Hobbs Office

P 288 259 000

US Postal Service
Receipt for Certified Mail
No Insurance Coverage Provided.
Do not use for International Mail (See reverse)

Sent to	
Street & Number	
Post Office, State, & ZIP Code	
Postage	\$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, & Addressee's Address	
TOTAL Postage & Fees	\$
Postmark or Date	

PS Form 3800, April 1995

MARTIN YATES, III
1912 - 1985
FRANK W. YATES
1936 - 1986



105 SOUTH FOURTH STREET
ARTESIA, NEW MEXICO 88210
TELEPHONE (505) 748-1471

S. P. YATES
CHAIRMAN OF THE BOARD
JOHN A. YATES
PRESIDENT
PEYTON YATES
EXECUTIVE VICE PRESIDENT
RANDY G. PATTERSON
SECRETARY
DENNIS G. KINSEY
TREASURER

Mr. Roger Anderson
New Mexico Energy Minerals and
Natural Resource Department
2040 S. Pacheco Street
Santa Fe, New Mexico 87504

12

August 8, 1997

Re: Discharge Plan GW-103
Yates Petroleum Corp.
Livingston Ridge Compressor Station
Lea County, New Mexico

Dear Mr. Anderson,

Pursuant to WQCC Section 3107.A.11 we have prepared a Closure Plan for our Livingston Ridge Compressor Station.

Enclosed are two copies and we have forwarded one copy of the plan to Wayne Price at NMOCD Hobbs.

If you have any question, please contact me.

Sincerely,

A handwritten signature in cursive script that reads 'Lisa Norton'.

Lisa Norton
Environmental
Program Coordinator

2 enc.

cc: Wayne Price

MARTIN YATES, III
1912 - 1985
FRANK W. YATES
1936 - 1986



105 SOUTH FOURTH STREET
ARTESIA, NEW MEXICO 88210
TELEPHONE (505) 748-1471

S. P. YATES
CHAIRMAN OF THE BOARD
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PEYTON YATES
EXECUTIVE VICE PRESIDENT
RANDY G. PATTERSON
SECRETARY
DENNIS G. KINSEY
TREASURER

Mr. Bill LeMay
New Mexico Energy Minerals and
Natural Resource Department
Oil Conservation Division
2040 S. Pacheco Street
Santa Fe, New Mexico 87504

June 18, 1997

Re: Discharge Plan GW-103
Yates Petroleum Corp.
Livingston Ridge Compressor Station
Eddy County, New Mexico

Dear Mr. LeMay

The Livingston Ridge Compressor Station is currently inactive and there are no plans to reactivate.

Inadvertently, a discharge plan renewal was submitted instead of a closure plan. Currently we are preparing a closure plan pursuant to WQCC Section 3107.A.11.

If you need further information on this matter please contact me at (505) 748-1471.

Sincerely,

Lisa Norton
Environmental Program
Coordinator

RECEIVED

JUN 23 1997

Environmental Bureau
Oil Conservation Division

MEMORANDUM OF MEETING OR CONVERSATION

cert. mail No. P-326-936-617

Telephone Personal

Time 10:55 AM

Date 6/18/57

Originating Party

Other Parties

Pat Sanchez - OCD

Ms. Lisa Norton

Yates Petroleum Corporation

Subject Livingston Ridge Compressor Station - GW-103

Discussion

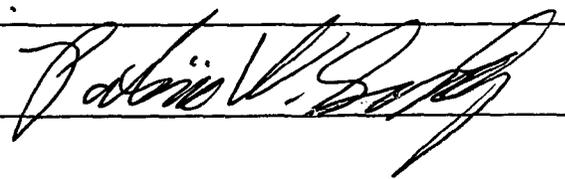
According to Ms. Norton the GW-103 is inactive and Yates now wants to submit a closure plan. I referred her to WRCC regulations regarding proper closure - 20 NMAC 6.2, 3107 A.11. (see pg. 30 of WRCC regulations) Her letter will also say how long the Livingston Ridge compressor station GW-103 has been inactive.

Conclusions or Agreements

Ms. Norton will submit a letter to Director LeMay notifying OCD of the pending closure. Pat Sanchez will send Ms. Norton Discharge plan information - i.e. WRCC regulations, Guidelines, and application forms.

Distribution File - GW-103, Ms. Norton
Wayne Price.

Signed



P 326 436 617

US Postal Service
Receipt for Certified Mail

No Insurance Coverage Provided.
Do not use for International Mail (See reverse)

Sent to <i>Yates - Ms. Norton</i>	
Street & Number <i>Closure of Gm-103.</i>	
Post Office, State, & ZIP Code <i>Gundelings/WACC Regular</i>	
Postage	\$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, & Addressee's Address	
TOTAL Postage & Fees	\$
Postmark or Date	

PS Form 3800 April 1995

ACKNOWLEDGEMENT OF RECEIPT
OF CHECK/CASH

I hereby acknowledge receipt of check No. [redacted] dated 3/21/97

or cash received on _____ in the amount of \$ 50.00

from Yates Pet

for Livingston Ridge GW-103

Submitted by: _____ Date: _____

Submitted to ASD by: R. Anderson Date: 5-23-97

Received in ASD by: _____ Date: _____

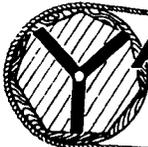
Filing Fee XR New Facility _____ Renewal _____
Modification _____ Other _____

Organization Code 521.07 Applicable FY 97

To be deposited in the Water Quality Management Fund.

Full Payment _____ or Annual Increment _____

NationsBank
NationsBank of Texas, N.A.
32-1
1110

 **YATES
PETROLEUM
CORPORATION**
(505) 748-1471
105 SOUTH 4TH STREET
ARTESIA, NEW MEXICO - 88210

DATE 3/21/97 VENDOR NO. 637315
*****50DOLLARS***00CENTS

PAY TO THE ORDER OF:
NMED-WATER QUALITY MANAGEMENT
NM OIL CONSERVATION DIVISION
2040 PACHERO STREET
SANTA FE NM 87504

AMOUNT
*****50.00

R. Anderson

YATES PETROLEUM CORPORATION

(505) 748-1471

105 SO. 4TH - ARTESIA, NEW MEXICO - 88008

CODE	INVOICE NUMBER	INVOICE DATE	INVOICE AMOUNT	DISCOUNT	NET AMOUNT PAYABLE
1	LIVINGSTON RIDGE <i>GW-103</i>	9/08/91 <i>RENEWAL</i>	50.00 TOTAL FOR CHECK	.00	50.00

CODES

- 1 - YOUR INVOICE
- 2 - YOUR CREDIT MEMO

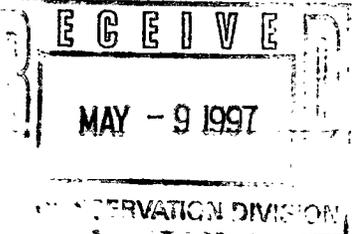
THE ATTACHED CHECK IS IN FULL SETTLEMENT OF INVOICES LISTED ABOVE.
 PLEASE DETACH THIS VOUCHER BEFORE DEPOSITING CHECK. NO RECEIPT NECESSARY.

The Santa Fe New Mexican

Since 1849. We Read You.

NM OIL DIVISION
ATTN: SALLY MARTINEZ
2040 S. PACHECO
SANTA FE, NM 87505

AD NUMBER: 636091 ACCOUNT: 56689
LEGAL NO: 61670 P.O. #: 96-199-002997



164 LINES ONCE at \$ 65.60

Affidavits: 5.25

Tax: 4.43

Total: \$ 75.28

AFFIDAVIT OF PUBLICATION

NOTICE OF PUBLICATION

STATE OF NEW MEXICO

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION

Notice is hereby given that pursuant to New Mexico Water Quality Control Commission Regulations, the following discharge plan renewal application has been submitted to the Director of the Oil Conservation Division, 2040 South Pacheco, Santa Fe, New Mexico, 87505, Telephone (505) 827-7131:

(GW-103) - Yates Petroleum Corporation, Mr. John F. Brown, (505)-748-4219, 105 S. 4th Street, Artesia, NM, 88210, has submitted a Discharge Plan Renewal Application for their Livingston Ridge compressor station located in the SW/4 SW/4, Section 7, Township 22 South, Range 32 East, NMPM, Lea County, New Mexico. Any potential discharge at the facility will be stored in a closed top receptacle. Groundwater most likely to be affected by a spill, leak, or accidental discharge to the surface is at a depth of approximately 800 feet. The discharge plan addresses how spills, leaks, and other accidental discharges to the surface will be managed.

Any interested person may obtain further information from the Oil Conservation Division and may submit written comments to the Director of the Oil Conservation Division at the address given above. The discharge plan renewal application may be viewed at the above address between 8:00 a.m. and 4:00 p.m., Monday through Friday. Prior to ruling on any proposed discharge plan or its modification, the Director of the Oil Conservation Division shall allow at least thirty (30) days after the date of publication of this notice during which comments may be submitted to him and a public hearing may be requested by any interested person. Requests for a public hearing shall set forth the reasons why a hearing should be held. A hearing will be held if the Director determines there is significant public interest.

If no public hearing is held, the Director will approve or disapprove the proposed plan renewal based on information available. If a public hearing is held, the Director will approve or disapprove the proposed plan renewal based on the information in the discharge plan application and information submitted at the hearing.

GIVEN under the Seal of New Mexico Oil Conservation Commission at Santa Fe, New Mexico, on this 1st day of May 1997.

STATE OF NEW MEXICO
OIL CONSERVATION
DIVISION
WILLIAM J. LEMAY,
Director
Legal #61670
Pub. May 7, 1997

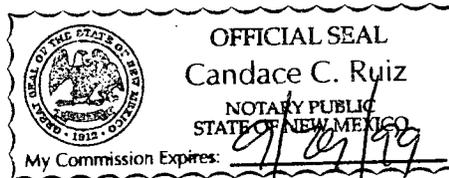
STATE OF NEW MEXICO
COUNTY OF SANTA FE

I, BETSY PERNER being first duly sworn declare and say that I am Legal Advertising Representative of THE SANTA FE NEW MEXICAN, a daily news paper published in the English language, and having a general circulation in the Counties of Santa Fe and Los Alamos, State of New Mexico and being a Newspaper duly qualified to publish legal notices and advertisements under the provisions of Chapter 167 on Session Laws of 1937; that the publication # 61670 a copy of which is hereto attached was published in said newspaper once each WEEK for ONE consecutive week(s) and that the notice was published in the newspaper proper and not in any supplement; the first publication being on the 7 day of MAY, 1997 and that the undersigned has personal knowledge of the matter and things set forth in this affidavit.

/S/ Betsy Perner
LEGAL ADVERTISEMENT REPRESENTATIVE

Subscribed and sworn to before me on this 7 day of MAY A.D., 1997

Notary Candace C. Ruiz
Commission Expires _____



RECEIVED

MAY - 9 1997

Environmental Bureau
Oil Conservation Division

Okay Betsy
5-9-97

Affidavit of Publication

RECEIVED

MAY 14 1997

Okay Judy
5-14-97

Environmental Bureau
Conservation Division

STATE OF NEW MEXICO)
) ss.
COUNTY OF LEA)

Joyce Clemens being first duly sworn on oath deposes and says that he is Adv. Director of THE LOVINGTON DAILY LEADER, a daily newspaper of general paid circulation published in the English language at Lovington, Lea County, New Mexico; that said newspaper has been so published in such county continuously and uninterruptedly for a period in excess of Twenty-six (26) consecutive weeks next prior to the first publication of the notice hereto attached as hereinafter shown; and that said newspaper is in all things duly qualified to publish legal notices within the meaning of Chapter 167 of the 1937 Session Laws of the State of New Mexico.

That the notice which is hereto attached, entitled
Legal Notice

Notice of Publication

and numbered ~~XXXXXX~~

~~XXXXXXXXXX~~

~~XXXXXXXXXXXXXXXXXXXX~~ was published in a regular and entire issue of THE LOVINGTON DAILY LEADER and not in any supplement thereof, ~~XXXXXXXXXXXXXXXXXXXX~~

~~XXXXXXXXXXXXXXXXXXXX~~, for one(1) day

~~XXXXXXXXXXXXXXXXXXXX~~ consecutive ~~XXXX~~ beginning with the issue of

May 7, 19 97

and ending with the issue of

May 7, 19 97

And that the cost of publishing said notice is the

sum of \$ 46.00

which sum has been (Paid) (Assessed) as Court Costs

Joyce Clemens

Subscribed and sworn to before me this 7th

day of May, 19 97

Jean Sevier
Notary Public, Lea County, New Mexico

My Commission Expires Sept. 28, 19 98

Livingston Ridge compressor station located in the SW/4 SW/4, Section 7, Township 22 South, Range 32 East, NMPM, Lea County, New Mexico. Any potential discharge at the facility will be stored in a closed top receptacle. Groundwater most likely to be affected by a spill, leak, or accidental discharge to the surface is at a depth of approximately 800 feet. The discharge plan addresses how spills, leaks, and other accidental discharges to the surface will be managed.

held, the Director will approve or disapprove the proposed plan based on information available. If a public hearing is held, the director will approve or disapprove the proposed plan based on information in the discharge plan application and information submitted at the hearing.

GIVEN under the Seal of New Mexico Oil Conservation Commission at Santa Fe, New Mexico, on this 1st day of May, 1997.

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION
WILLIAM J. LEMAY, Director

SEAL
Published in the Lovington Daily Leader May 7, 1997.

LEGAL NOTICE
NOTICE OF PUBLICATION
STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION

Notice is hereby given that pursuant to New Mexico Water Quality Control Commission Regulations, the following discharge plan renewal application has been submitted to the Director of the Oil Conservation Division, 2040 South Pacheco, Santa Fe, New Mexico 87505, Telephone (505) 827-7131:

(GW-103) - Yates Petroleum Corporation, Mr. John F. Brown, (505)-748-4219, 105 S. 4th Street, Artesia, NM, 88210, has submitted a Discharge Plan Renewal Application for their

Any interested person may obtain further information from the Oil Conservation Division and may submit written comments to the Director of the Oil Conservation Division at the address given above. The discharge plan renewal applications may be viewed at the above address between 8:00 a.m. and 4:00 p.m., Monday through Friday. Prior to ruling on any proposed discharge plan or its modification, the Director of the Oil Conservation Division shall allow at least thirty (30) days after the date of publication of this notice during which comments may be submitted to him and a public hearing may be requested by any interested person. Requests for a public hearing shall set forth the reasons why a hearing should be held. A hearing will be held if the Director determines there is significant public interest.

If no public hearing is

NOTICE OF PUBLICATION

**STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION**

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GIVEN under the Seal of New Mexico Oil Conservation Commission at Santa Fe, New Mexico, on this 1st day of May, 1997.

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

William J. Lemay / By RCA

WILLIAM J. LEMAY, Director

S E A L

WJL/RCA/pws



NEW MEXICO ENERGY, MINERALS
& NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION
2040 South Pacheco Street
Santa Fe, New Mexico 87505
(505) 827-7131

May 1, 1997

CERTIFIED MAIL
RETURN RECEIPT NO. P-288-258-804

Mr. John F. Brown
Yates Petroleum Corporation
105 South 4th Street
Artesia, NM 88210

**RE: Notice of Violation - GW-103 "Livingston Ridge"
Discharge Plan Permit Renewal**

Dear Mr. Brown:

The New Mexico Oil Conservation Division (OCD) received on April 30, 1997 the discharge plan renewal application for GW-103 dated April 28, 1997 from Yates Petroleum Corporation. The purpose of this notice of violation is to inform Yates Petroleum Corporation that you are currently operating with an expired discharge plan permit. The discharge plan renewal application pursuant to 20 NMAC 6.2.3106.F should have been submitted at least 120 days before the expiration date of April 29, 1997. The OCD is currently in the process of reviewing the permit renewal application. Future violations at this facility GW-103 of WQCC regulations will subject Yates Petroleum Corporation to enforcement actions provided for under the New Mexico Water Quality Act.

If you have any questions regarding this matter please feel free to call me at (505)-827-7152.

Sincerely,

Roger C. Anderson
Bureau Chief
Environmental Bureau-OCD

RCA/pws

c: Mr. Jerry Sexton - OCD Hobbs District Supervisor
Mr. Tim Gum - OCD Artesia District Supervisor
Mr. Wayne Price - OCD Hobbs Environmental Engineer

P 288 258 804

US Postal Service

Receipt for Certified Mail

No Insurance Coverage Provided.

Do not use for International Mail (See reverse)

Sent to Yates - Mr. Brown.	
Street & Number Gw-103 Livingston	
Post Office, State, & ZIP Code Ridge.	
Postage	\$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, & Addressee's Address	
TOTAL Postage & Fees	\$
Postmark or Date	

PS Form 3800, April 1995

YATES PETROLEUM CORPORATION

(505) 748-1471
105 SO. 4TH - ARTESIA, NEW MEXICO - 88210

CODE	INVOICE NUMBER	INVOICE DATE	INVOICE AMOUNT	DISCOUNT	NET AMOUNT PAYABLE
1	LIVINGSTON RIDGE FE03/97 <i>GW-103 RENEWAL</i>		50.00	.00	50.00
			TOTAL FOR CHECK		50.00

RECEIVED

APR 30 1997

Environmental Bureau
Oil Conservation Division

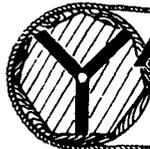
CODES

- 1 - YOUR INVOICE
- 2 - YOUR CREDIT MEMO

THE ATTACHED CHECK IS IN FULL SETTLEMENT OF INVOICES LISTED ABOVE.
PLEASE DETACH THIS VOUCHER BEFORE DEPOSITING CHECK. NO RECEIPT NECESSARY.

NationsBank
NationsBank of Texas, N.A.

32-1
1110



**YATES
PETROLEUM
CORPORATION**

(505) 748-1471
105 SOUTH 4TH STREET

ARTESIA, NEW MEXICO - 88210

DATE 3/21/97 VENDOR NO. 637315
*****50DOLLARS***00CENTS

PAY TO THE ORDER OF:

NMED-WATER QUALITY MANAGEMENT
NM OIL CONSERVATION DIVISION
2040 PACHERO STREET
SANTA FE NM 87504

AMOUNT

*****50.00

[Handwritten Signature]

District I - (505) 393-6161
P. O. Box 1980
Hobbs, NM 88241-1980
District II - (505) 748-1283
811 S. First
Artesia, NM 88210
District III - (505) 334-6178
1000 Rio Brazos Road
Aztec, NM 87410
District IV - (505) 827-7131

New Mexico
Energy Minerals and Natural Resources Department
Oil Conservation Division
2040 South Pacheco Street
Santa Fe, New Mexico 87505
(505) 827-7131

Revised 12/1/9

Submit Origin.
Plus 1 Copy
to Santa Fe
1 Copy to appropriate
District Office

File Copy

DISCHARGE PLAN APPLICATION FOR SERVICE COMPANIES,
GAS PLANTS, REFINERIES, COMPRESSOR, AND CRUDE OIL PUMP STATIONS
(Refer to the OCD Guidelines for assistance in completing the application)

RECEIVED

New

Renewal

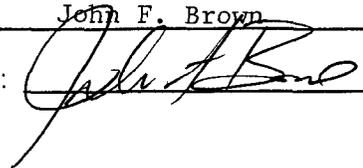
Modification APR 30 1997

Environmental Bureau
Oil Conservation Division

1. Type: Natural Gas Compressor Station
2. Operator: Yates Petroleum Corporation
Address: 105 S. 4th Str., Artesia, NM 88210
Contact Person: John F. Brown Phone: 505-748-4219
3. Location: SW /4 SW /4 Section 7 Township 22S Range 32E
Submit large scale topographic map showing exact location.
4. Attach the name, telephone number and address of the landowner of the facility site.
5. Attach the description of the facility with a diagram indicating location of fences, pits, dikes and tanks on the facility.
6. Attach a description of all materials stored or used at the facility.
7. Attach a description of present sources of effluent and waste solids. Average quality and daily volume of waste water must be included.
8. Attach a description of current liquid and solid waste collection/treatment/disposal procedures.
9. Attach a description of proposed modifications to existing collection/treatment/disposal systems.
10. Attach a routine inspection and maintenance plan to ensure permit compliance.
11. Attach a contingency plan for reporting and clean-up of spills or releases.
12. Attach geological/hydrological information for the facility. Depth to and quality of ground water must be included.
13. Attach a facility closure plan, and other information as is necessary to demonstrate compliance with any other OCD rules, regulations and/or orders.
14. CERTIFICATION

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

NAME: John F. Brown Title: Operations Engineer

Signature:  Date: 4-22-97

DISCHARGE PLAN GW-103 RENEWAL

**YATES PETROLEUM CORPORATION
LIVINGSTON RIDGE COMPRESSOR STATION**

April 28, 1997

SECTIONS 1, 2, 3, 4

General Information

1. Type: Natural Gas Compression; Low pressure natural gas is compressed and metered into high pressure sales line.

2. Operator: Yates Petroleum Corporation
Address: 105 S. 4th
Artesia, NM 88210

Contact: John Brown, Operations Engineer
Phone: 505-748-4219

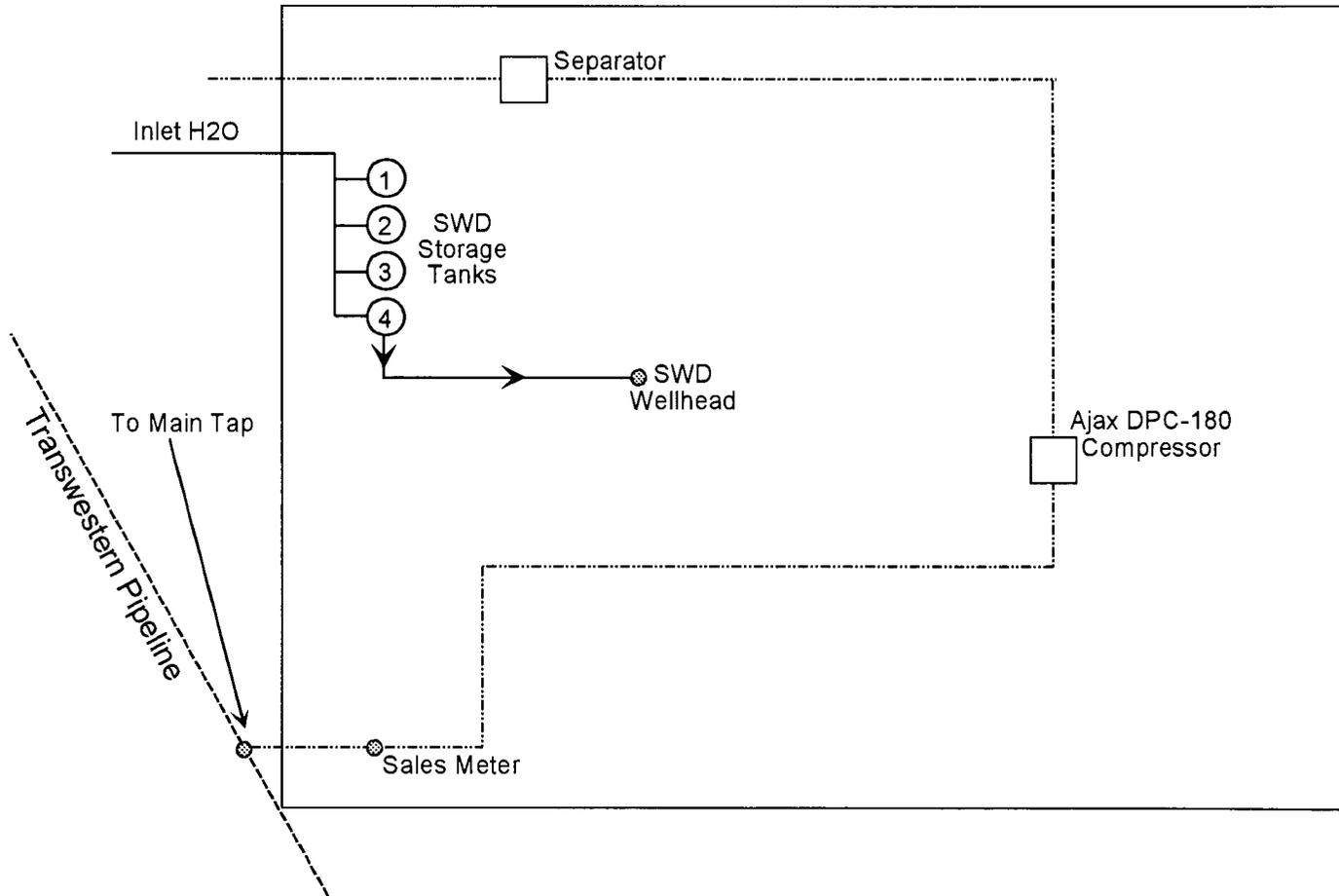
3. Location: SW/4 SW/4
Sec 7-T22S-R32E
Lea County, New Mexico

4. Landowner: Bureau of Land Management
414 W. Taylor
Hobbs, NM 88240

SECTION 5

Facility Description

YATES PETROLEUM CORPORATION LIVINGSTON RIDGE COMPRESSOR STATION



SECTION 6

Materials Stored or Used at Facility

1 - 55 Gallon BBL engine lubrication oil

SECTION 7

Present Sources of Effluent and Waste Solids

Plant Processes

1. Fluid separators: 2 BPD produced fluid (produced water and oil).
2. Engine cooling waters: 50 gallons/year.
3. Waste engine oils: 300 gallons/year.
4. Catch pan effluent
 - a. Cleaning operations (fresh water with surfactants used for cleaning of facility and equipment): 25 bbl/year.
 - b. Miscellaneous: drips, spills, leaks, overflows, etc. (<50 gallons/year)
5. Flare (accidental liquid discharge): 2 BPYR

Attached sample was collected as follows:

Produced water: Sample pulled off of the SWD tank at Livingston Ridge.
Note: This is the same water in the whole system.

Sample sent for analysis to:

Petrolite
510 Texas Avenue
Artesia, NM 88210

6. Solid wastes are incidental to transient occupation by YPC and contract personnel. (ie. cardboard boxes, plastic and paper sacks, styrofoam and paper packing, wooded skids, etc.) These wastes are put in a disposal barrel and hauled to a permitted landfill by a contract hauler.

TRETOLITE DIVISION

(505) 746-3588
Fax (505) 746-3580

Reply to:
P.O. Box FF
Artesia, NM
88211-7531

WATER ANALYSIS REPORT

Company : YATES PETROLEUM Date : 12/27/94
Address : ARTESIA, NEW MEXICO Date Sampled : 12/27/94
Lease : FLAMENCO Analysis No. : 988
Well : SWD
Sample Pt. : TANK

ANALYSIS		mg/L		* meq/L
1. pH	6.4			
2. H2S	0 PPM			
3. Specific Gravity	1.180			
4. Total Dissolved Solids		287251.5		
5. Suspended Solids		NR		
6. Dissolved Oxygen		NR		
7. Dissolved CO2		NR		
8. Oil In Water		NR		
9. Phenolphthalein Alkalinity (CaCO3)				
10. Methyl Orange Alkalinity (CaCO3)				
11. Bicarbonate	HCO3	24.0	HCO3	0.4
12. Chloride	Cl	176790.0	Cl	4987.0
13. Sulfate	SO4	50.0	SO4	1.0
14. Calcium	Ca	13840.0	Ca	690.6
15. Magnesium	Mg	2535.2	Mg	208.6
16. Sodium (calculated)	Na	94012.3	Na	4089.3
17. Iron	Fe	NR		
18. Barium	Ba	NR		
19. Strontium	Sr	NR		
20. Total Hardness (CaCO3)		45000.0		

PROBABLE MINERAL COMPOSITION

*milli equivalents per Liter	Compound	Equiv wt	X meq/L	= mg/L
691 *Ca <----- *HCO3	Ca(HCO3)2	81.0	0.4	32
/----->	CaSO4	68.1	1.0	71
209 *Mg -----> *SO4	CaCl2	55.5	689.2	38243
<-----/	Mg(HCO3)2	73.2		
4089 *Na -----> *Cl	MgSO4	60.2		
	MgCl2	47.6	208.6	9929
Saturation Values Dist. Water 20 C	NaHCO3	84.0		
CaCO3 13 mg/L	Na2SO4	71.0		
CaSO4 * 2H2O 2090 mg/L	NaCl	58.4	4089.3	238977
BaSO4 2.4 mg/L				

REMARKS:
----- A. MILLER

Petrolite Oilfield Chemicals Group

Respectfully submitted,
STEVE TIGERT

SCALE TENDENCY REPORT

Company : YATES PETROLEUM Date : 12/27/94
Address : ARTESIA, NEW MEXICO Date Sampled : 12/27/94
Lease : FLAMENCO Analysis No. : 988
Well : SWD Analyst : STEVE TIGERT
Sample Pt. : TANK

STABILITY INDEX CALCULATIONS
(Stiff-Davis Method)
CaCO3 Scaling Tendency

S.I. = -0.1 at 60 deg. F or 16 deg. C
S.I. = -0.1 at 80 deg. F or 27 deg. C
S.I. = -0.1 at 100 deg. F or 38 deg. C
S.I. = -0.1 at 120 deg. F or 49 deg. C
S.I. = -0.1 at 140 deg. F or 60 deg. C

CALCIUM SULFATE SCALING TENDENCY CALCULATIONS
(Skillman-McDonald-Stiff Method)
Calcium Sulfate

S = 937 at 60 deg. F or 16 deg C
S = 1042 at 80 deg. F or 27 deg C
S = 1107 at 100 deg. F or 38 deg C
S = 1135 at 120 deg. F or 49 deg C
S = 1153 at 140 deg. F or 60 deg C

Petrolite Oilfield Chemicals Group

Respectfully submitted,
STEVE TIGERT

SECTION 8

***Current Liquid and Solid Waste
Collection/Treatment/Disposal Procedures***

1. Produced water piping is shown on the attached plant schematic.
2. All separators, unit scrubbers and separators, and line dehydrators are connected together and piped via a 1" steel above-ground line to the liquid outlet on the gas inlet separator. This outlet is a 2" above-ground steel line that transfers all liquids to an above-ground 250-bbl internally-coated steel storage tank. (All lines are under approximately 2-4# of hydrostatic pressure.)
3. All lines and tanks are visually inspected daily for leaks. Any leaks found are repaired immediately, and any lost fluid is to be recovered with a vacuum unit and placed in the 250-bbl storage tank. The OCD will be notified immediately of any major or serious leaks and/or spills.
4. Any produced water in the 250-bbl stock tank is transferred via a pipeline into one of two OCD approved disposal stations (Yates Petroleum: Flamenco (on site) or the Yates Petroleum: David Ross, Sec. 35-T22S-R31E, SE/4 NE/4.).
 - A. Primary Produced Water Disposal Site
Yates Petroleum Flamenco Injection Well
 1. OCD approved Class II injection well
 2. Order #SWD-428 dated June 13, 1991
 3. Injecting approximately 2000 BWPD into the Delaware formation at approximately 4676-5814'.
 - B. Contingency Produced Water Disposal Site
Yates Petroleum David Ross AIT Fed #1 Injection Well in Unit H
 1. Order #SWD-419 dated May 22, 1991
 2. Injecting approximately 1500 BWPD into the Delaware formation at approximately 4500-5670'.
5. Waste engine oils and drip bucket fluids are stored on site in an above-ground 250-bbl internally-coated steel storage tank. Contents are to be removed from the site by a licensed transporter and sent to a permitted oil refiner.

SECTION 9

Proposed Modifications to Existing Collection/Treatment/Disposal Systems

There are no plans to change the existing systems. If new compressors are installed, they will tie in to the existing system.

SECTION 10

Inspection and Maintenance Plan

1. Yates Petroleum Corporation personnel make a daily inspection of the site and any malfunction or breakdown is noted and repaired.
2. Yates Petroleum Corporation has a regular monthly maintenance program that is diligently carried out on all of the compressors and associated equipment.
3. Any repair work that is needed is performed as required.

SECTION 11

Plan for Reporting and Clean-Up of Spills or Releases

1. S.O.P. for spill is to immediately call a vacuum truck.
2. Notify BLM and/or OCD per regulations.
3. Contain spill as necessary.
4. Apply absorbents and/or bio-remediation materials.
5. Send follow-up reports to the agencies as required.

SECTION 12

Geological/Hydrological Information

1. There is no fresh water well within 2-1/2 miles of this site.
Estimated depth to ground water = 800 ft.
2. The nearest fresh water well is approximately 2-1/2 miles south of the station, and the aquifer formation is the same as would be found beneath the compressor station.
3. The scrub/grassland formation is made up of mesquite, shinnery oak, sand sage, southwest rabbitbush, plains yucca, plains sunflower, many bristle pectis, sand palafoxia, umbrella wart, sandbur, mesa dropseed, sand dropseed, poverty threeawn and false buffalo grass.

SECTION 13

Facility Closure Plan

Although activity has been reduced, there are no plans to close this facility.



NEW MEXICO ENERGY, MINERALS
& NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION
2040 South Pacheco Street
Santa Fe, New Mexico 87505
(505) 827-7131

January 10, 1997

CERTIFIED MAIL
RETURN RECEIPT NO. P-288-258-741

Mr. Paul Ragsdale
Operations Manager
Yates Petroleum Corp.
104 S. 4th Street
Artesia, NM 88210

**RE: Discharge Plan GW-103
Yates Petroleum Corporation (YPC)
Livingston Ridge Compressor Station
Lea County, New Mexico**

Dear Mr. Ragsdale:

On April 29, 1992, the groundwater discharge plan, GW-103, for the **Livingston Ridge Compressor Station** located in the SW/4, Section 7, Township 22 South, Range 32 East, NMPM, Lea County, New Mexico, was approved by the Director of the New Mexico Oil Conservation Division (OCD). This discharge plan was required and submitted pursuant to Water Quality Control Commission (WQCC) regulations and was approved for a period of five years. **The approval will expire on April 29, 1997.**

If the facility continues to have potential or actual effluent or leachate discharges and YPC wishes to continue operation, the discharge plan must be renewed. The OCD is reviewing discharge plan submittals and renewals carefully and the review time can extend for several weeks to months. Please indicate whether YPC has made, or intends to make, any changes in the system, and if so, please include these modifications in the application for renewal.

The discharge plan renewal application for the **Livingston Ridge Compressor Station** is subject to WQCC Regulation 3114. Every billable facility submitting a discharge plan renewal will be assessed a fee equal to the filing fee of \$50 and a flat fee of \$345 for Compressor Stations between 1,000 and 3,000 horsepower. The \$50 filing fee is to be submitted with the discharge plan renewal application and is nonrefundable.

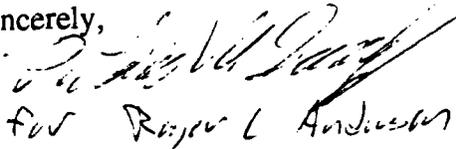
Please make all checks payable to: **NMED-Water Quality Management** and addressed to the OCD Santa Fe Office.

Mr. Paul Ragsdale
 YPC, GW-103
 Renewal Notice
 January 10, 1997
 Page 2

Please submit the original discharge plan renewal application and one copy to the OCD Santa Fe Office and one copy to the OCD Hobbs District Office. **Note that the completed and signed application form must be submitted with your discharge plan renewal request.** (Copies of the WQCC regulations, discharge plan application form, and guidelines have been provided to YPC in the past. If you require copies of these items notify the OCD at (505)-827-7152. A complete copy of the regulations is also available on OCD's website at www.emnrd.state.nm.us/ocd.htm.)

If YPC no longer has any actual or potential discharges and a discharge plan is not needed, please notify this office. If YPC has any questions, please do not hesitate to contact Pat Sanchez at (505) 827-7156.

Sincerely,



Roger C. Anderson
 Environmental Bureau Chief

RCA/pws

P 288 258 741

xc: Mr. Wayne Price - OCD Hobbs District

US Postal Service
Receipt for Certified Mail
 No Insurance Coverage Provided.
 Do not use for International Mail (See reverse)

Sent to	YATES - Ragsdale	
Street & Number	GW-103	
Post Office, State, & ZIP Code		
Postage		\$
Certified Fee		
Special Delivery Fee		
Restricted Delivery Fee		
Return Receipt Showing to Whom & Date Delivered		
Return Receipt Showing to Whom, Date, & Addressee's Address		
TOTAL Postage & Fees		\$
Postmark or Date		

PS Form 3800, April 1995

ACKNOWLEDGEMENT OF RECEIPT
OF CHECK/CASH

I hereby acknowledge receipt of check No. [redacted] dated 5/7/92,
or cash received on 5/14/92 in the amount of \$ 690.00
from Yates Petroleum Corporation
for Livingston Ridge Compressor Station (GW-103)
(Facility Name) (DP No.)

Submitted by: _____ Date: _____

Submitted to ASD by: Kathy Brown Date: 5/14/92

Received in ASD by: Donald C. Montoya Date: 5/14/92

Filing Fee _____ New Facility Renewal _____
Modification _____ Other _____
(specify)

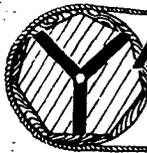
Organization Code 521.07 Applicable FY 80

To be deposited in the Water Quality Management Fund.

Full Payment or Annual Increment _____

NCNB TEXAS

32-2
1110



**YATES
PETROLEUM
CORPORATION**

(505) 748-1471
105 SOUTH 4TH STREET

ARTESIA, NEW MEXICO - 88210

DATE 5/07/92 VENDOR NO. 637315

*****690DOLLARS***00CENTS

PAY TO THE ORDER OF:

NMED-WATER QUALITY MANAGEMENT
P. O. BOX 2088
SANTA FE NM 87504

AMOUNT

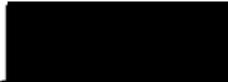
*****690.00

Frank Yates Jr

YATES PETROLEUM CORPORATION

(505) 748-1471

105 SO. 4TH - ARTESIA, NEW MEXICO - 885



CODE	INVOICE NUMBER	INVOICE DATE	INVOICE AMOUNT	DISCOUNT	NET AMOUNT PAYABLE
1	DISCHARGE PLANGW-1005/92		690.00	.00	690.00
			TOTAL FOR CHECK		690.00

*Livingston Ridge CS Flat Fee
(GW-103)*

CODES

- 1 - YOUR INVOICE
- 2 - YOUR CREDIT MEMO

THE ATTACHED CHECK IS IN FULL SETTLEMENT OF INVOICES LISTED ABOVE.
PLEASE DETACH THIS VOUCHER BEFORE DEPOSITING CHECK. NO RECEIPT NECESSARY.



STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION



April 29, 1992

BRUCE KING
GOVERNOR

ANITA LOCKWOOD
CABINET SECRETARY

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87504
(505) 827-5800

CERTIFIED MAIL
RETURN RECEIPT NO. P-670-683-500

Mr. Chuck Morgan
Yates Petroleum Corporation
104 S 4th Street
Artesia, New Mexico 88210

RE: Discharge Plan GW-103
Livingston Ridge Compressor Station
Lea County, New Mexico

Dear Mr. Morgan:

The groundwater discharge plan GW-103 for the Yates Petroleum Livingston Ridge Compressor Station located in the SW/4 SW/4, Section 7, Township 22 South, Range 32 East, NMPM, Lea County, New Mexico **is hereby approved** under the conditions contained in the enclosed attachment. The discharge plan consists of the application dated February 20, 1992.

The discharge plan was submitted pursuant to Section 3-106 of the Water Quality Control Commission Regulations. It is approved pursuant to section 3-109.A. Please note Section 3-109.F., which provides for possible future amendment of the plan. Please be advised that approval of this plan does not relieve you of liability should your operation result in actual pollution of surface or ground waters or the environment which may be actionable under other laws and/or regulations.

Please be advised that all exposed pits, including lined pits and open top tanks (tanks exceeding 16 feet in diameter) shall be screened, netted or otherwise rendered nonhazardous to wildlife including migratory birds.

Please note that section 3-104 of the regulations requires that "When a plan has been approved, discharges must be consistent with the terms and conditions of the plan". Pursuant to Section 3-107.c. you are required to notify the Director of any facility

Mr. Chuck Morgan
April 29, 1992
Page -2-

expansion, production increase, or process modification that would result in any change in the discharge of water quality or volume.

Pursuant to Section 3-109.g.4., this plan approval is for a period of five years. This approval will expire April 29, 1997 and you should submit an application for renewal in ample time before that date.

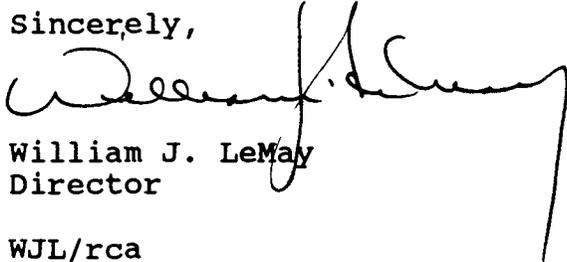
The discharge plan application for the Yates Petroleum Livingston Ridge Compressor Station is subject to the WQCC Regulation 3-114 discharge plan fee. Every billable facility submitting a discharge plan will be assessed a fee equal to the filing fee of fifty (50) dollars plus the flat rate of six-hundred and ninety (690) dollars for compressor stations with between 1000 and 3000 Horsepower.

The OCD has received your \$50 filing fee. The flat fee for an approved discharge plan may be paid in a single payment due at the time of approval, or in equal annual installments over the duration of the plan, with the first payment due upon receipt of this approval.

Please make all checks payable to: **NMED-Water Quality Management** and addressed to the OCD Santa Fe Office.

On behalf of the staff of the Oil Conservation Division, I wish to thank you and your staff for your cooperation during this discharge plan review.

Sincerely,



William J. LeMay
Director

WJL/rca

xc: OCD Hobbs Office

**ATTACHMENT TO DISCHARGE PLAN GW-103 APPROVAL
YATES PETROLEUM LIVINGSTON RIDGE COMPRESSOR STATION
DISCHARGE PLAN REQUIREMENTS
(April 29, 1992)**

1. Payment of Discharge Plan Fees: The \$690 flat fee (either total payment or installment) will be paid upon receipt of this approval.
2. Drum Storage: All drums will be stored on pad and curb type containment.
3. Sump Inspection: All pre-existing sumps at this facility will be cleaned and visually inspected on an annual basis. Any new sumps or below-grade will be approved by the OCD prior to installation and will incorporate leak detection in their designs.



RECEIVED
OIL CONSERVATION DIVISION

MAR 23 AM 9 08

**UNITED STATES
DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE
Ecological Services**
Suite D, 3530 Pan American Highway, NE
Albuquerque, New Mexico 87107

March 19, 1992

Mr. Roger Anderson
Acting Bureau Chief
Environmental Bureau
Oil Conservation Division
P.O. Box 2088
Santa Fe, New Mexico 87504-2088

Dear Mr. Anderson:

This responds to the Notice of Publication dated March 12, 1992, regarding the Oil Conservation Division discharge permit applications GW-108, GW-103, and GW-107 on fish, shellfish, and wildlife resources in New Mexico.

The U.S. Fish and Wildlife Service (Service) has determined there are no wetlands or other environmentally sensitive habitats, plants, or animals that will be adversely affected by the following discharges.

GW-108 - Williams Field Services San Juan 30-5 No. 1 C.D.P.,
NW 1/4, SW 1/4, and NE 1/4, SW 1/4 of Section 18, T30N, R5W, Rio
Arriba County, New Mexico.

GW-103 - Yates Petroleum Corporation Livingston Ridge Compressor
Station, SW 1/4, SW 1/4 of Section 7, T22S, R32E, Lea County, New
Mexico.

GW-107 - Sid Richardson Carbon and Gasoline Company Jal #4
Compressor Facility, SE 1/4 of Section 31, T23S, R37E, Lea County,
New Mexico.

If you have any questions concerning our comments, please contact Laurie S. Shomo at (505) 883-7877.

Sincerely,

Jennifer Fowler-Propst
Jennifer Fowler-Propst
Field Supervisor

cc:
Director, New Mexico Department of Game and Fish, Santa Fe, New Mexico
Regional Director, U.S. Fish and Wildlife Service, Fish and Wildlife
Enhancement, Albuquerque, New Mexico.

**NOTICE OF PUBLICATION
STATE OF NEW MEXICO
ENERGY, MINERALS AND
NATURAL RESOURCES
DEPARTMENT**

OIL CONSERVATION DIVISION
Notice is hereby given that pursuant to New Mexico Water Quality Control Commission Regulations, the following discharge plan renewal applications have been submitted to the Director of the Oil Conservation Division, State Land Office Building, P.O. Box 2088, Santa Fe, New Mexico 87504-2088, Telephone (505) 827-5800:

(GW-108) - Williams Field Services, Robert Peacock, Project Manager, P.O. Box 58900, M.S. 10368, Salt Lake City, Utah, 84168, has submitted a discharge plan application for their San Juan 30-5 No. 1 C.D.P., located in the NW/4 SW/4 and NE/4 SW/4, Section 18, Township 30 North, Range 5 West, NMPM, Rio Arriba County, New Mexico. Approximately 5 gallons per day of wastewater will be contained in above ground tanks prior to disposal in an OCD approved disposal facility. Groundwater most likely to be affected by an accidental discharge is at a depth of approximately 100 feet with a total dissolved solids concentration of approximately 2000 mg/l. The discharge plan address how spills, leaks, and other accidental discharges to the surface will be managed.

(GW-103) - Yates Petroleum corporation, Chuck Morgan, 105 south Fourth Street, Artesia, New Mexico, 88210, has submitted a discharge plan application for their Livingston Ridge Compressor Station located in the SW/4 SW/4, Section 7, Township 22 south, Range 32 East, NMPM, Lea County, New Mexico. Approximately 100 gallons per day of waste water is contained in above ground tanks prior to disposal in an OCD approved Class II disposal well. There is no known protectable groundwater below the site. The discharge plan addresses how spills, leaks, and other accidental discharges to the surface will be managed.

(GW-107) - 3rd Richardson Carbon & Gasoline Company, Wayne J. Farley, Manager, Gas Operations, 201 Main Street, Fort Worth, Texas 76102, has submitted a discharge plan renewal application for their Jal #4 compressor Facility located in the SE/4, Section 31, Township 232 South, Range 37 East, NMPM, Lea County, New Mexico. This facility is the compressor portion of the former El Paso Natural Gas Company Jal #4 Gas Processing Plant (GW-7). Approximately 3500 gallons per day of wastewater is collected in above ground tanks prior to disposal in an OCD approved Class II disposal well. Groundwater most likely to be affected by an accidental discharge is at a depth of approximately 7500 mg/l. The discharge plan addresses how spills, leaks, and other accidental discharges to the surface will be managed.

Any interested person may obtain further information from the Oil conservation Division and may submit written comments to the Director of the Oil Conservation Division at the address given above. The discharge plan application may be viewed at the above address between 8:00 a.m. and 5:00 p.m., Monday through Friday. Prior to ruling on any proposed discharge plan or its modification, the Director of the Oil Conservation Division shall allow at least thirty (30) days after the date of publication of this notice during which comments may be submitted to him and public hearing may be requested by any interested person. Requests for public hearing shall set forth the reasons why a hearing should be held. A hearing will be held if the Director determines there is significant public interest.

If no public hearing is held, the Director will approve or disapprove the proposed plan based on information available. If a public hearing is held, the director will approve or disapprove the proposed plan based on information in the plan and information submitted at the hearing.

**STATE OF NEW MEXICO
County of Bernalillo**

ss

Thomas J. Smithson being duly sworn declares and says that he is National Advertising manager of the **Albuquerque Journal**, and that this newspaper is duly qualified to publish legal notices or advertisements within the meaning of Section 3, Chapter 167, Session Laws of 1937, and that payment therefore has been made or assessed as court costs; that the notice, a copy of which is hereto attached, was published in said paper in the regular daily edition,

for.....1.....times, the first publication being on the.....19.....day
of.....Mar....., 1992, and the subsequent consecutive
publications on....., 1992.

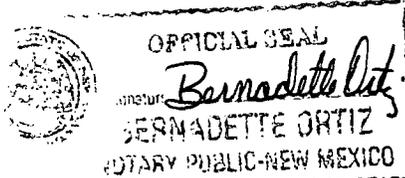
Thomas J. Smithson

Sworn and subscribed to before me, a Notary Public in and for the County of Bernalillo and State of New Mexico, this19..... day of.....Mar....., 1992.

PRICE.....\$ 35.69.....

Statement to come at end of month.

ACCOUNT NUMBER.....C 81184.....



NOTARY PUBLIC FILED WITH SECRETARY OF STATE
My Commission Expires: 12-18-93

CLA-22-A (R-12/92)

Affidavit of Publication

LEGAL NOTICE
 NOTICE OF PUBLICATION
 STATE OF NEW MEXICO
 ENERGY, MINERALS &
 NATURAL RESOURCES
 DEPARTMENT
 OIL CONSERVATION
 DIVISION

Notice is hereby given that pursuant to New Mexico Water Quality Control Commission Regulations, the following discharge plan renewal applications have been submitted to the Director of the Oil Conservation Division, State Land Office Building, P.O. Box 2088, Santa Fe, New Mexico 87504-2088, Telephone (505) 827-5800:

(GW-108) - Williams Field Services, Robert Peacock, Project Manager, P.O. Box 58900, M.S. 10368, Salt Lake City, Utah, 84158-0900, has submitted a discharge plan application for their San Juan 30-5 No. 1 C.D.P., located in the NW/4 SW/4 and NE/4 SW/4, Section 18, Township 30 North, Range 5 West, NMPM, Rio Arriba County, New Mexico. Approximately 5 gallons per day of wastewater will be contained in above ground tanks prior to disposal in an OCD approved disposal facility. Groundwater most likely to be affected by an accidental discharge is at a depth of approximately 160 feet with a total dissolved solids concentration of approximately 2000 mg/l. The discharge plan addresses how spills, leaks, and other accidental discharges to the surface will be managed.

(GW-103) - Yates Petroleum Corporation, Chuck Morgan, 105 South Fourth Street, Artesia, New Mexico, 88210, has submitted a discharge plan application for their Livingston Ridge Compressor Station located in the SW/4 SW/4, Section 7, Township 22 South, Range 32 East, NMPM, Lea County, New Mexico. Approximately 100 gallons per day of waste water is contained in above ground tanks prior to disposal in an OCD approved Class II disposal well. There is no known protectable groundwater below the site. The discharge plan addresses how spills, leaks, and other accidental discharges to the surface will be managed.

(GW-107) - Sid Richardson Carbon & Gasoline Company, Wayne J. Farley, Manager, Gas Operations, 201 Main Street, Fort Worth, Texas 76102, has submitted a discharge plan renewal application for their Jal #4 Compressor Facility located in the SE/4, Section 31, Township 23 South, Range 37 East, NMPM, Lea County, New Mexico. This facility is the compressor portion of the former El Paso Natural Gas Company, Jal #4 Gas Processing Plant (GW-7). Approximately 3500 gallons per day of wastewater is collected in above ground tanks prior to disposal in an OCD approved Class II disposal well. Groundwater most likely

reasons why a hearing should be held. A hearing will be held if the Director determines there is significant public interest.

If no public hearing is held, the Director will approve or disapprove the proposed plan based on information available. If a public hearing is held, the director will approve or disapprove the proposed plan based on information in the plan and information submitted at the hearing.

GIVEN under the Seal of New Mexico Oil Conservation Commission at Santa Fe, New Mexico, on this 9th day of March, 1992.

STATE OF NEW MEXICO
 OIL CONSERVATION
 DIVISION
 WILLIAM J. LEMAY,
 DIRECTOR

SEAL

Published in the Lovington Daily Leader March 18, 1992.

discharge is at a depth of approximately 105 feet with a total dissolved solids concentration of approximately 7500 mg/l. The discharge plan addresses how spills, leaks, and other accidental discharges to the surface will be managed.

Any interested person may obtain further information from the Oil Conservation Division and may submit written comments to the Director of the Oil Conservation Division at the address given above. The discharge plan application may be viewed at the above address between 8:00 a.m. and 5:00 p.m., Monday through Friday. Prior to ruling on any proposed discharge plan or its modification, the Director of the Oil Conservation Division shall allow at least thirty (30) days after the date of publication of this notice during which comments may be submitted to him and public hearing may be requested by any interested person. Requests for public hearing shall set forth the

STATE OF NEW MEXICO)
) ss.
 COUNTY OF LEA)

Joyce Clemens being first duly sworn on oath deposes and says that he is Adv. Director of THE LOVINGTON DAILY LEADER, a daily newspaper of general paid circulation published in the English language at Lovington, Lea County, New Mexico; that said newspaper has been so published in such county continuously and uninterruptedly for a period in excess of Twenty-six (26) consecutive weeks next prior to the first publication of the notice hereto attached as hereinafter shown; and that said newspaper is in all things duly qualified to publish legal notices within the meaning of Chapter 167 of the 1937 Session Laws of the State of New Mexico.

That the notice which is hereto attached, entitled

Notice Of Publication

and numbered _____ in the

_____ Court of Lea County, New Mexico, was published in a regular and entire issue of THE LOVINGTON DAILY LEADER and not in any supplement thereof, ~~once each week on the~~

same day of the week, for ~~one (1)~~ one (1) day

consecutive _____, beginning with the issue of _____

March 18, 19 92

and ending with the issue of _____

March 18, 19 92

And that the cost of publishing said notice is the sum of \$ 39.42

which sum has been (Paid) ~~(Assessed)~~ as Court Costs

Joyce Clemens

Subscribed and sworn to before me this 18th

day of March 19 92

Mrs Jean Serice
 Notary Public, Lea County, New Mexico

Sept. 28 94

My Commission Expires _____, 19 _____

NOTICE OF PUBLICATION

**STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION**

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(GW-103) - Yates Petroleum Corporation, Chuck Morgan, 105 South Fourth Street, Artesia, New Mexico, 88210, has submitted a discharge plan application for their Livingston Ridge Compressor Station located in the SW/4 SW/4, Section 7, Township 22 South, Range 32 East, NMPM, Lea County, New Mexico. Approximately 100 gallons per day of waste water is contained in above ground tanks prior to disposal in an OCD approved Class II disposal well. There is no known protectable groundwater below the site. The discharge plan addresses how spills, leaks, and other accidental discharges to the surface will be managed.

(GW-107) - Sid Richardson Carbon & Gasoline Company, Wayne J. Farley, Manager, Gas Operations, 201 Main Street, Fort Worth, Texas 76102, has submitted a discharge plan renewal application for their Jal #4 Compressor Facility located in the SE/4, Section 31, Township 23 South, Range 37 East, NMPM, Lea County, New Mexico. This facility is the compressor portion of the former El Paso Natural Gas Company Jal #4 Gas Processing Plant (GW-7). Approximately 3500 gallons per day of wastewater is collected in above ground tanks prior to disposal in an OCD approved Class II disposal well. Groundwater most likely to be affected by an accidental discharge is at a depth of approximately 105 feet with a total dissolved solids concentration of approximately

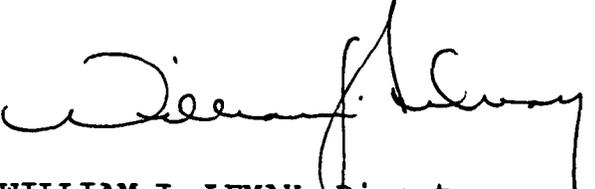
7500 mg/l. The discharge plan addresses how spills, leaks, and other accidental discharges to the surface will be managed.

Any interested person may obtain further information from the Oil Conservation Division and may submit written comments to the Director of the Oil Conservation Division at the address given above. The discharge plan application may be viewed at the above address between 8:00 a.m. and 5:00 p.m., Monday through Friday. Prior to ruling on any proposed discharge plan or its modification, the Director of the Oil Conservation Division shall allow at least thirty (30) days after the date of publication of this notice during which comments may be submitted to him and public hearing may be requested by any interested person. Requests for public hearing shall set forth the reasons why a hearing should be held. A hearing will be held if the Director determines there is significant public interest.

If no public hearing is held, the Director will approve or disapprove the proposed plan based on information available. If a public hearing is held, the director will approve or disapprove the proposed plan based on information in the plan and information submitted at the hearing.

GIVEN under the Seal of New Mexico Oil Conservation Commission at Santa Fe, New Mexico, on this 9th day of March, 1992.

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION



WILLIAM J. LEMAY, Director

S E A L

ACKNOWLEDGEMENT OF RECEIPT
OF CHECK/CASH

I hereby acknowledge receipt of check No. [redacted] dated 2/21/92,
or cash received on 2/27/92 in the amount of \$ 50.00
from YATES PETROLEUM CORP
for LIVINGSTON RIDGE GW-103

Submitted by: Roger A. Anderson (Facility Name) Date: 2/27/91 (DP No.)

Submitted to ASD by: _____ Date: _____

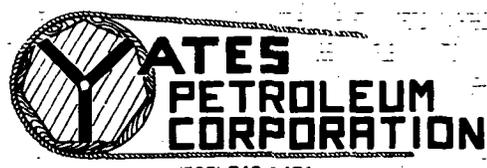
Received in ASD by: Marty C. Montoya Date: 2/27/92

Filing Fee New Facility _____ Renewal _____
Modification _____ Other _____
(specify)

Organization Code 521.07 Applicable FY 80

To be deposited in the Water Quality Management Fund.
Full Payment _____ or Annual Increment _____

NCNB TEXAS
32-2
1110



(505) 748-1471
105 SOUTH 4TH STREET
ARTESIA, NEW MEXICO - 88210

DATE 2/21/92 VENDOR NO. 637315
*****50DOLLARS**00CENTS

PAY TO THE ORDER OF:
NMED-WATER QUALITY MANAGEMENT
P. O. BOX 2088
SANTA FE NM 87504

AMOUNT
*****50.00

ma [signature]

YATES PETROLEUM CORPORATION

(505) 748-1471

105 SO. 4TH - ARTESIA, NEW MEXICO - 88008

CODE	INVOICE NUMBER	INVOICE DATE	INVOICE AMOUNT	DISCOUNT	NET AMOUNT PAYABLE
1	FILE/FEE/LIV. RIDGE	02/92	50.00	.00	50.00
			TOTAL FOR CHECK		50.00

CODES

- 1 - YOUR INVOICE
- 2 - YOUR CREDIT MEMO

THE ATTACHED CHECK IS IN FULL SETTLEMENT OF INVOICES LISTED ABOVE.
PLEASE DETACH THIS VOUCHER BEFORE DEPOSITING CHECK. NO RECEIPT NECESSARY.

MARTIN YATES
1912-1985
FRANK W. YATES
1936-1986

IN DIVISION

REC'D

'91 NOV 25 AM 9 31



105 SOUTH FOURTH STREET
ARTESIA, NEW MEXICO 88210
TELEPHONE (505) 748-1471

S. P. YATES
CHAIRMAN OF THE BOARD
JOHN A. YATES
PRESIDENT
PEYTON YATES
EXECUTIVE VICE PRESIDENT
RANDY G. PATTERSON
SECRETARY
DENNIS G. KINSEY
TREASURER

November 22, 1991

CERTIFIED MAIL -- RETURN RECEIPT REQUESTED

State of New Mexico - Oil Conservation Division
State Land Office Building
P.O. Box 2088
Santa Fe, NM 87504

ATTN: William LeMay, Director

Dear Mr. LeMay,

The letter and attachment is to inform you that Yates Petroleum Corporation is applying to the New Mexico Health and Environment Department, Air Quality Bureau for an expansion project on the Livingston Ridge Compressor Station. Yates Petroleum Corporation anticipates submitting the permit application on or about December 1, 1991. For further details and information, please refer to the enclosed notice.

The owners and operators of the facility are:
Yates Petroleum Corporation
105 South 4th Street
Artesia, New Mexico 88210

Comments and inquiries regarding this permit application or the permitting process may be directed to:

Program Manager, Technical Analysis and Permits Section
New Mexico Environment Department - Air Quality Bureau
1190 St. Francis Drive - P.O. Box 26110
Santa Fe, New Mexico 87502

Sincerely,


Paul Ragsdale
Operations Engineer

PR/pbs

Enclosure

xc: Mike Williams, OCD-Artesia

**Notice of
Yates Petroleum Corporation
Livingston Ridge Compressor Station Expansion Project**

Yates Petroleum Corporation, located at 105 South Fourth Street in Artesia, New Mexico, 88210, is making application with the New Mexico Environment Department for authorization of an expansion project at the Livingston Ridge Compressor Station. Yates Petroleum Corporation anticipates submitting the permit application to the New Mexico Environment Department on or about December 1, 1991. The affected facility, a natural gas compressor station owned by Yates Petroleum Corporation, is located in Section 7, Township 22 South, Range 32 East, Lea County, New Mexico. This facility is used to compress and transfer natural gas via pipeline, and is scheduled to operate continuously throughout the year (24 hrs/day, 7 days/week, 52 wks/year).

The proposed expansion project will consist of the installation of six new compressors, a mechanical refrigeration plant (including a stabilizer tower gas burner), and various auxiliary equipment. This project will result in increased allowable emissions from the facility equivalent to 95.95 ton/yr of nitrogen oxides (NOx), 31.44 ton/yr of carbon monoxide (CO), and 23.68 ton/yr of non-methane hydrocarbons (NMHC). Upon completion of the proposed project, the compressor station will be authorized to emit a total of 119.41 ton/yr of NOx, 36.13 ton/yr of CO, and 28.90 ton/yr of NMHC to the atmosphere.

Any comments or inquiries should be directed to the New Mexico Environment Department at the following address:

New Mexico Environment Department
Air Quality Bureau
Technical Analysis and Permits Section
1190 St. Francis Drive
P.O. Box 26110
Santa Fe, New Mexico 87502
(505) 827-0070

November 22, 1991

State of New Mexico
ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT
Santa Fe, New Mexico 87505

OIL CONSERVATION DIVISION



BRUCE KING
GOVERNOR

ANITA LOCKWOOD
CABINET SECRETARY

MATTHEW BACA
DEPUTY SECRETARY

November 27, 1991

CERTIFIED MAIL
RETURN RECEIPT NO. P-756-903-911

Mr. John A. Yates
Yates Petroleum Corporation
105 South Fourth Street
Artesia, New Mexico 88210

**RE: DISCHARGE PLAN REQUIREMENT
LIVINGSTON RIDGE COMPRESSOR STATION
LEA COUNTY, NEW MEXICO**

Dear Mr. Yates:

Under the provisions of the New Mexico Water Quality Control Commission (WQCC) Regulations, you are hereby notified that the filing of a discharge plan is required for your existing Livingston Ridge Compressor Station located in Section 7, Township 22 South, Range 32 East, Lea County, New Mexico.

This notification of discharge plan requirement is pursuant to Part 3-104 and Part 3-106 of the WQCC Regulations. The discharge plan, defined in Part 1.101.P. of the WQCC Regulations, should cover all discharges of effluent or leachate at the facility or adjacent to the facility site. Included in the application should be plans for controlling spills and accidental discharges at the facility (including detection of leaks in below grade sumps, buried underground process tanks and/or piping), and closure plans for any pits or ponds whose use will be discontinued.

VILLAGRA BUILDING - 408 Galisteo

Forestry and Resources Conservation Division
P.O. Box 1948 87504-1948
827-5830

Park and Recreation Division
P.O. Box 1147 87504-1147
827-7465

2040 South Pacheco

Office of the Secretary
827-5950

Administrative Services
827-5925

Energy Conservation & Management
827-5900

Mining and Minerals
827-5970

LAND OFFICE BUILDING - 310 Old Santa Fe Trail

Oil Conservation Division
P.O. Box 2088 87504-2088
827-5800

Mr. John A Yates
November 27, 1991
Page - 2

A copy of the regulations is enclosed for your convenience. Also enclosed is a copy of OCD Guidelines for the Preparation of Ground Water Discharge Plans at Natural Gas Processing Plants. Three copies of your discharge plan should be submitted for review purposes.

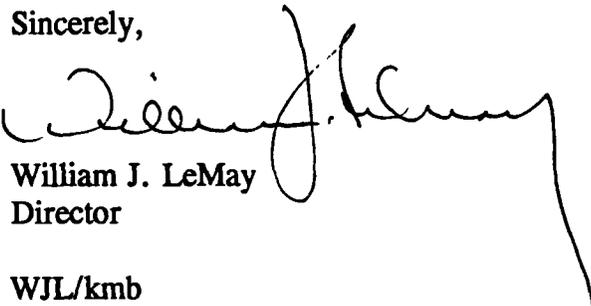
Section 3-106.A. of the regulations requires a submittal of the discharge plan within 120 days of receipt of this notice unless an extension of this time period is sought and approved for good cause. Part 3-106.A. also allows the discharge to continue without an approved discharge plan until 240 days after written notification by the Director of the OCD that a discharge plan is required. An extension of this time may be sought and approved for good cause.

Pursuant to the New Mexico Water Quality Control Commission (WQCC) Regulation 3-114 "every billable facility submitting a discharge plan for approval, modification or renewal shall pay the fees specified in this section to the Water Quality Management Fund". WQCC Rule 3-114 became effective as of August 18, 1991, and is found on page 33.1 of the enclosed WQCC Rules and Regulations.

Every billable facility submitting a new discharge plan will be assessed a fee equal to the filing fee plus either a flat fee or discharge fee. The filing fee is fifty (50) dollars and shall be submitted with the discharge plan application (nonrefundable). The remainder of the "total fee" for gas compressor stations falls under the "flat fee" category and is determined by the maximum number of horsepower available. Please provide to the OCD the maximum number of horsepower available at your Livingston Compressor Station to determine the correct flat fee. The flat fee for an approved discharge plan may be paid in a single payment due at the time of approval, or in equal annual installments over the duration of the discharge plan, with the first payment due at the time of approval. Please make all checks out to the **NMED - Water Quality Management**.

If there are any questions on this matter, please feel free to contact Roger Anderson at (505) 827-5812 or Kathy Brown at (505) 827-5884 as they have the assigned responsibility for review of all discharge plans.

Sincerely,



William J. LeMay
Director

WJL/kmb

xc: Chris Eustice - OCD Hobbs Office

REGULATORY DIVISION

SEP 9 '86

Proposed Discharge Plan
Livingston Ridge Compressor Site
Yates Petroleum Corporation

February 1992

Table of Contents

<u>Section</u>	<u>Title</u>
I	General Information and Affirmation
II	Plant Processes
III	Transfer, Storage, and Disposal Procedures
IV	Facility Diagrams A. Current Facility Diagram B. Proposed Expansion Diagram
V	Area Maps A. Topographic Map B. General Area
VI	Injection Well Permit
VII	Terrain and Environment Description
VIII	Sample Analysis

Section I

General Information and Affirmation

Discharge Plan

Facility: Yates Petroleum Livingston Ridge Compressor Site

Operator: Yates Petroleum Corporation
104 S. 4th Street
Artesia, NM 88210
(505)748-1471

Company Representatives: Ed Perry Foreman
Darrell Atkins Superintendent
Chuck Morgan Engineer

(Address and Phone Same as Above)

Location: Sec. 7 T22S R32E
SW/4 SW/4

Operation: Natural Gas Compression:
Low pressure natural gas is compressed and metered
into a high pressure sales line.

Certification: I hereby certify that I am familiar with the information
contained in and submitted with this application, and
that such information is true and accurate to the best of
my knowledge and belief.

Chuck Morgan
(Signature)

2/20/92
(Date)

Chuck Morgan
(Printed Name)

2/20/92
(Date)

Section II

Plant Processes

Plant Processes

Effluent Sources:

1. Fluid Separators: 2 BPD produced fluid (produced water and oil)
2. Engine Cooling Waters: ≤50 gal/yr.
3. Waste Engine Oils: ≤100 gal/yr.
4. Cleaning Operations: ≤75 gal/yr.
 - a) Fresh water with surfactants used for cleaning of facility and equipment.
5. Drip Catch Buckets: ≤100 gal/yr.
6. Miscellaneous: (drips, spills, leaks) ≤10 gal/yr.

Attached samples were collected as follows:

Produced Water: Sample pulled off of tank drain and delivered for analysis
to: Southwestern Laboratories
1703 W. Industrial Avenue
Midland, TX 79702

Drip Oil: Samples were pulled from catch buckets and sent to Southwestern
Laboratories.

Section III

Transfer, Storage, and Disposal Procedures

Transfer, Storage, and Disposal Procedures

1. Produced water piping is shown in red on the attached plant schematic
2. All separators, unit scrubbers and separators, and line dehydrators are connected together and piped via 1" steel above ground line to the liquid outlet on the Gas Inlet Separator. This outlet is a 2" above ground steel line that transfers all liquids to an above ground 250 BBL internally coated steel storage tank. (All lines are under approximately 2-4# of hydrostatic pressure.)
3. All lines and tanks are visually inspected daily for leaks. Any leaks found are repaired immediately, and any lost fluid is to be recovered with a vacuum unit and placed in the 250 BBL storage tank. The OCD will be notified immediately of any major or serious leaks and/or spills.
4. Any produced water in the 250 BBL stock tank is transferred via a vacuum truck into one of two OCD approved disposal stations (Yates Petroleum: Flamenco (on site) or the Yates Petroleum: David Ross, Sec. 35-T22S-R31E, SE/4 NE/4.)
 - A. Primary Produced Water Disposal Site:
Yates Petroleum Flamenco Injection well:
 1. OCD approved Class II injection well.
 2. Order #SWD-428, dated June 13, 1991
 3. Injecting approximately 2,000 BWPD into the Delaware formation at approximately 4676-5814'.
 - B. Contingency Produced Water Disposal Site:
Yates Petroleum David Ross AIT Fed #1 injection well in Unit H
Sec. 35-T22S-R31E, Eddy County:
 1. Order #SWD-419, dated May 22, 1991
 2. Injecting approximately 1500 BWPD into the Delaware formation at approximately 4500-5670'.
5. Waste engine oils and drip bucket fluids are stored on site in an above ground 250 BBL internally coated steel storage tank. Contents are to be removed from the site by a licensed transporter and sent to a permitted oil refiner.

Site Characteristics:

An application for approval of salt water disposal for Yates Petroleum Corporation's Flamenco Federal #1 SWD well accompanies this application. This well shares a site with the Livingston Ridge Compressor installation. All pertinent site characteristic data should be outlined in this application. A brief description of the general surrounding terrain and environmental setting is attached to the back of the SWD application. In addition, the site is not located in a flood plane and no danger of flooding exists.

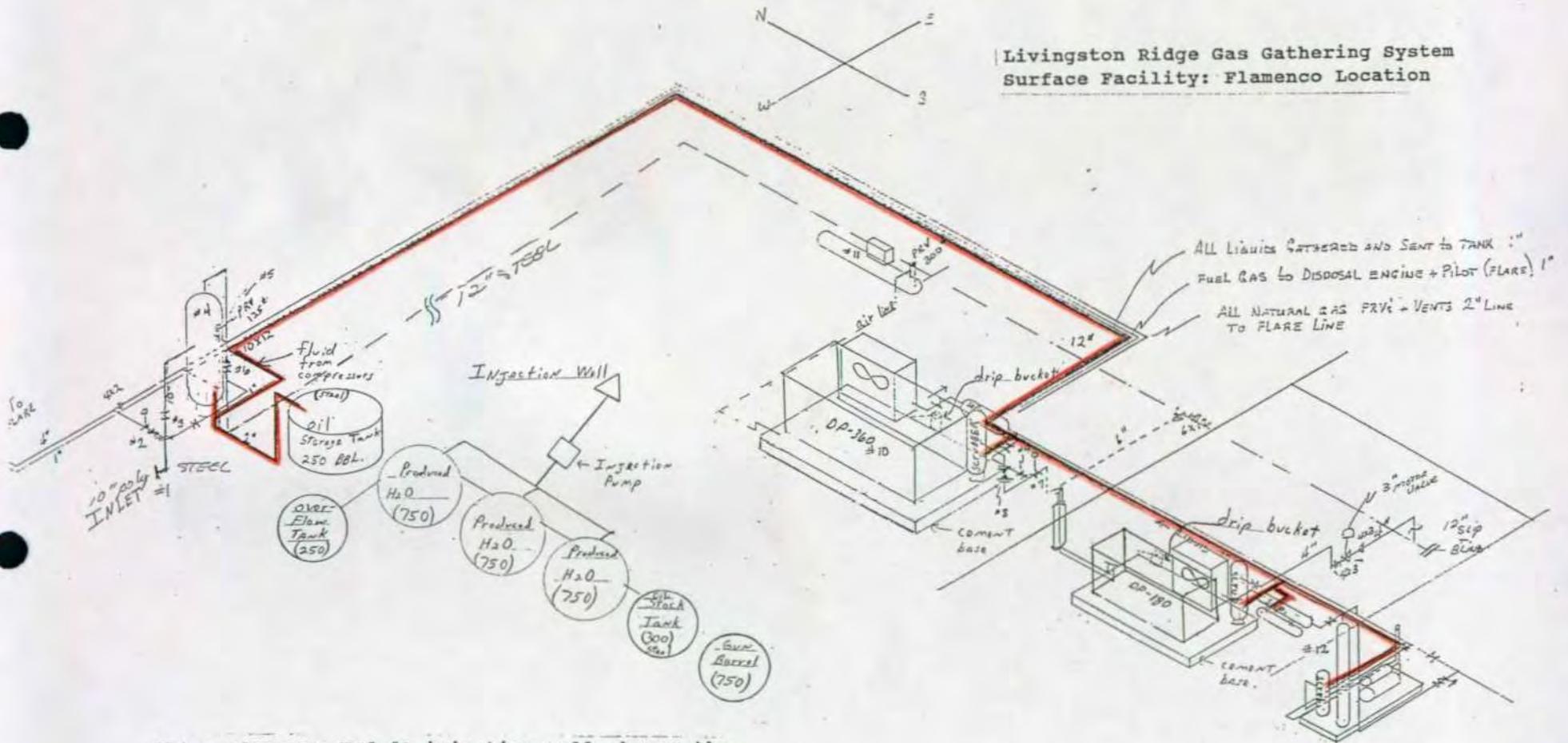
Section IV

Facility Diagrams

- A. Current Facility Diagram**

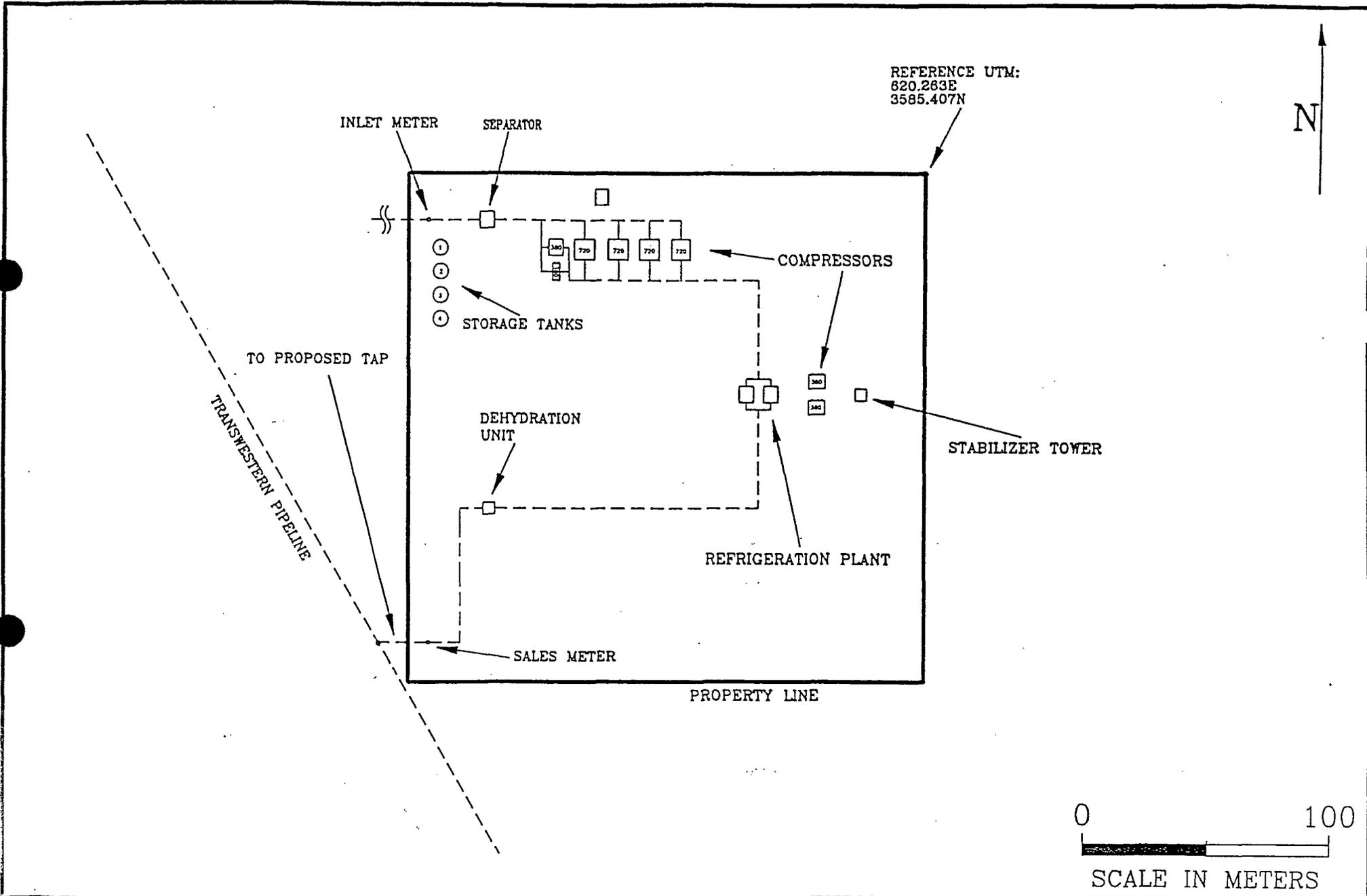
- B. Proposed Expansion Diagram**

Livingston Ridge Gas Gathering System
Surface Facility: Flamenco Location



Note: Flamenco Fed.#1 injection well shares the site with Livingston Ridge compressor facility.

Section IV-A
Current Facility Diagram



TITLE: YATES PETROLEUM
LIVINGSTON RIDGE COMPRESSOR STATION

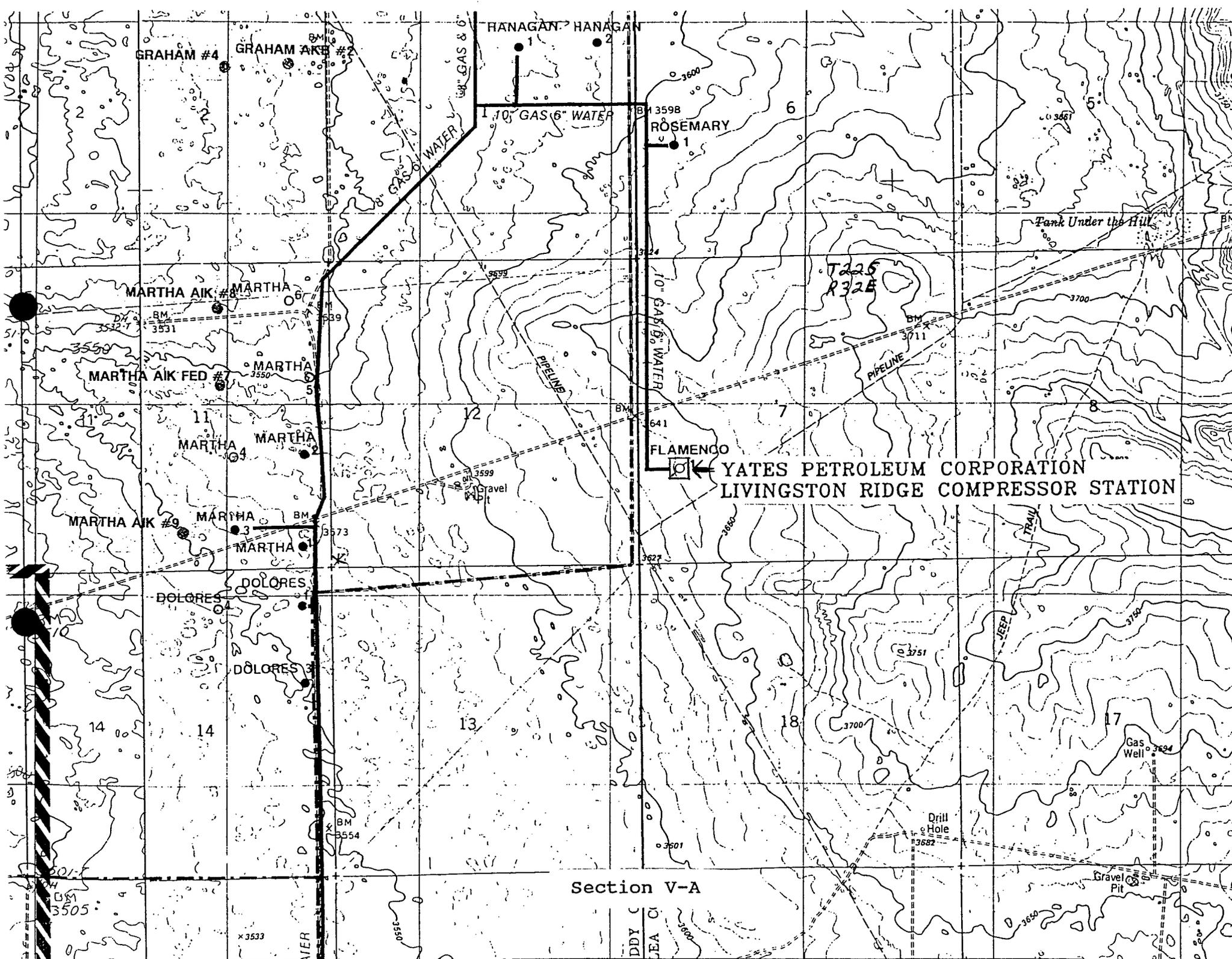
Section IV-B
PROPOSED
FACILITIES

Section V

Area Maps

A. Topographic Map

B. General Area



YATES PETROLEUM CORPORATION
LIVINGSTON RIDGE COMPRESSOR STATION

Section V-A

DDY C
LEA C



Tank Under the Hill

T226
R32E

TRAIL

DEEP

Gas Well

Gravel Pit

Drill Hole

PIPELINE

PIPELINE

10" GAS 5" WATER

10" GAS 6" WATER

10" GAS & 6" WATER

HANAGAN HANAGAN

ROSEMARY

FLAMENCO

GRAHAM #4

GRAHAM AKE #2

MARTHA AIK #8

MARTHA AIK FED #7

MARTHA #4

MARTHA AIK #9

DOLORES

DOLORES

14

14

13

18

17

BM 3505

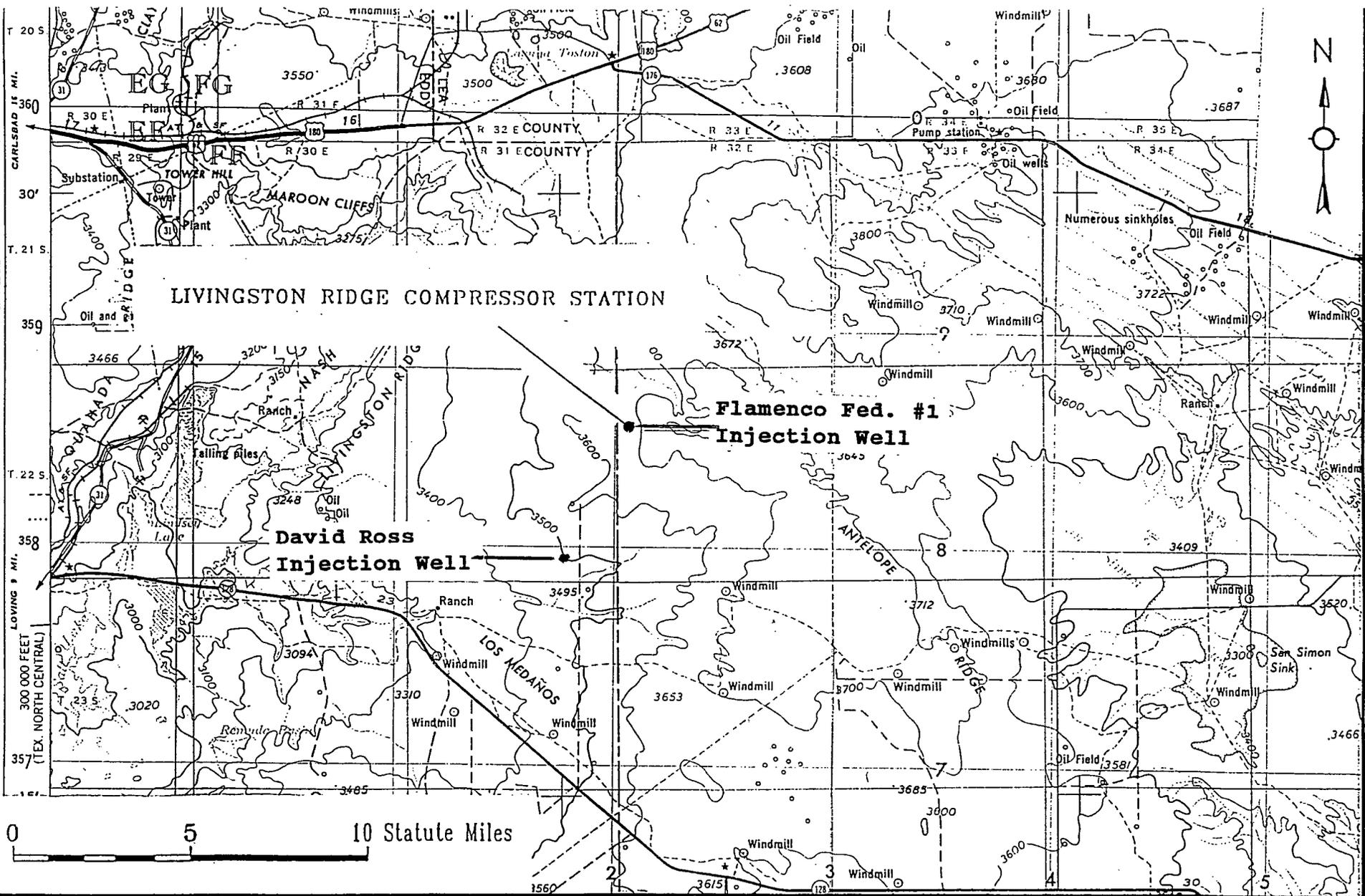
x3533

WATER

055E

3000

3650



TITLE: YATES PETROLEUM CORPORATION
 LIVINGSTON RIDGE COMPRESSOR STATION
 GENERAL VICINITY MAP

VI Injection Well Permit

APPLICATION FOR AUTHORIZATION TO INJECT

- I. Purpose: Secondary Recovery Pressure Maintenance Disposal Storage
Application qualifies for administrative approval? yes no
- II. Operator: Yates Petroleum Corporation
Address: 105 S. 4th Street, Artesia, NM 88210
Contact party: Brian Collins Phone: (505) 748-1471
- III. Well data: Complete the data required on the reverse side of this form for each well proposed for injection. Additional sheets may be attached if necessary.
- IV. Is this an expansion of an existing project? yes no
If yes, give the Division order number authorizing the project _____.
- V. Attach a map that identifies all wells and leases within two miles of any proposed injection well with a one-half mile radius circle drawn around each proposed injection well. This circle identifies the well's area of review.
- * VI. Attach a tabulation of data on all wells of public record within the area of review which penetrate the proposed injection zone. Such data shall include a description of each well's type, construction, date drilled, location, depth, record of completion, and a schematic of any plugged well illustrating all plugging detail.
- VII. Attach data on the proposed operation, including:
1. Proposed average and maximum daily rate and volume of fluids to be injected;
 2. Whether the system is open or closed;
 3. Proposed average and maximum injection pressure;
 4. Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and
 5. If injection is for disposal purposes into a zone not productive of oil or gas at or within one mile of the proposed well, attach a chemical analysis of the disposal zone formation water (may be measured or inferred from existing literature, studies, nearby wells, etc.).
- *VIII. Attach appropriate geological data on the injection zone including appropriate lithologic detail, geological name, thickness, and depth. Give the geologic name, and depth to bottom of all underground sources of drinking water (aquifers containing waters with total dissolved solids concentrations of 10,000 mg/l or less) overlying the proposed injection zone as well as any such source known to be immediately underlying the injection interval.
- IX. Describe the proposed stimulation program, if any.
- * X. Attach appropriate logging and test data on the well. (If well logs have been filed with the Division they need not be resubmitted.)
- * XI. Attach a chemical analysis of fresh water from two or more fresh water wells (if available and producing) within one mile of any injection or disposal well showing location of wells and dates samples were taken.
- XII. Applicants for disposal wells must make an affirmative statement that they have examined available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground source of drinking water.
- XIII. Applicants must complete the "Proof of Notice" section on the reverse side of this form.
- XIV. Certification
- I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.
- Name: Brian Collins Title Petroleum Engineer
Signature: *Brian Collins* Date: April 25, 1991
- * If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be duplicated and resubmitted. Please show the date and circumstance of the earlier submittal.

III. WELL DATA

A. The following well data must be submitted for each injection well covered by this application. The data must be both in tabular and schematic form and shall include:

- (1) Lease name; Well No.; location by Section, Township, and Range; and footage location within the section.
- (2) Each casing string used with its size, setting depth, sacks of cement used, hole size, top of cement, and how such top was determined.
- (3) A description of the tubing to be used including its size, lining material, and setting depth.
- (4) The name, model, and setting depth of the packer used or a description of any other seal system or assembly used.

Division District offices have supplies of Well Data Sheets which may be used or which may be used as models for this purpose. Applicants for several identical wells may submit a "typical data sheet" rather than submitting the data for each well.

B. The following must be submitted for each injection well covered by this application. All items must be addressed for the initial well. Responses for additional wells need be shown only when different. Information shown on schematics need not be repeated.

- (1) The name of the injection formation and, if applicable, the field or pool name.
- (2) The injection interval and whether it is perforated or open-hole.
- (3) State if the well was drilled for injection or, if not, the original purpose of the well.
- (4) Give the depths of any other perforated intervals and detail on the sacks of cement or bridge plugs used to seal off such perforations.
- (5) Give the depth to and name of the next higher and next lower oil or gas zone in the area of the well, if any.

XIV. PROOF OF NOTICE

All applicants must furnish proof that a copy of the application has been furnished, by certified or registered mail, to the owner of the surface of the land on which the well is to be located and to each leasehold operator within one-half mile of the well location.

Where an application is subject to administrative approval, a proof of publication must be submitted. Such proof shall consist of a copy of the legal advertisement which was published in the county in which the well is located. The contents of such advertisement must include:

- (1) The name, address, phone number, and contact party for the applicant;
- (2) the intended purpose of the injection well; with the exact location of single wells or the section, township, and range location of multiple wells;
- (3) the formation name and depth with expected maximum injection rates and pressures; and
- (4) a notation that interested parties must file objections or requests for hearing with the Oil Conservation Division, P. O. Box 2000, Santa Fe, New Mexico 87501 within 15 days.

NO ACTION WILL BE TAKEN ON THE APPLICATION UNTIL PROPER PROOF OF NOTICE HAS BEEN SUBMITTED.

NOTICE: Surface owners or offset operators must file any objections or requests for hearing of administrative applications within 15 days from the date this application was mailed to them.

C-108
Application For Authorization To Inject
Yates Petroleum Corporation
Flamenco Fed #1
L 7-22S-32E
Lea County, New Mexico

- I. The purpose of completing this well is to make a disposal well for produced Delaware Sand water into the Delaware Sand formation.
- Yates Petroleum plans to convert this well to a water disposal well into the Delaware Sand.
- II. Operator: Yates Petroleum Corporation
105 South Fourth Street
Artesia, NM 88210
Brian Collins (505) 748-1471
- III. Well Data: See Attachment A
- IV. This is not an expansion of an existing project.
- V. See attached map, Attachment B
- VI. No wells within the area of review penetrate the proposed injection zone.
- VII. 1. Proposed average daily injection volume approximately 5000 BWPD.
Maximum daily injection volume approximately 15000 BWPD.
2. This will be a closed system.
3. Proposed average injection pressure-unknown
Proposed maximum injection pressure--935 psi.
4. Sources of injected water would be produced water from the Delaware Sand. (Attachment C)
5. See Attachment C.
- VIII. 1. The proposed injection interval is the portion of the Delaware Sand formation consisting of porous Sandstone from estimated depths: 4676'-4735'
4745'-4792'
4960'-4976'
5028'-5046'
5083'-5098'
5114'-5142'
5280'-5306'

Application for Authorization to Inject
Flamenco Fed #1

-2-

5574'-5612'
5648'-5670'
5738'-5754'
5776'-5814'

2. Possible Fresh water zones overlie the proposed injection formations at depths to approximately 850' feet. There are no fresh water zones underlying the formation.
- IX. The proposed disposal interval may be acidized with 7-1/2% HCL acid, or 12-3 HF acid.
- X. Logs were filed at your office when the well was drilled.
- XI. No windmills exist within a one mile radius of the subject location.
- XII. Yates Petroleum Corporation has examined geologic and engineering data and has found that there is no evidence of faulting in the proposed interval.
- XIII. Proof of Notice
 - A. Certified letters sent to the surface owner and offset operators-attached. (Attachment D)
 - B. Copy of legal advertisement attached. (Attachment E)
- XIV. Certification is signed.

Yates Petroleum Corporation
Flamenco Fed #1
L 7-22S-32E

Attachment A

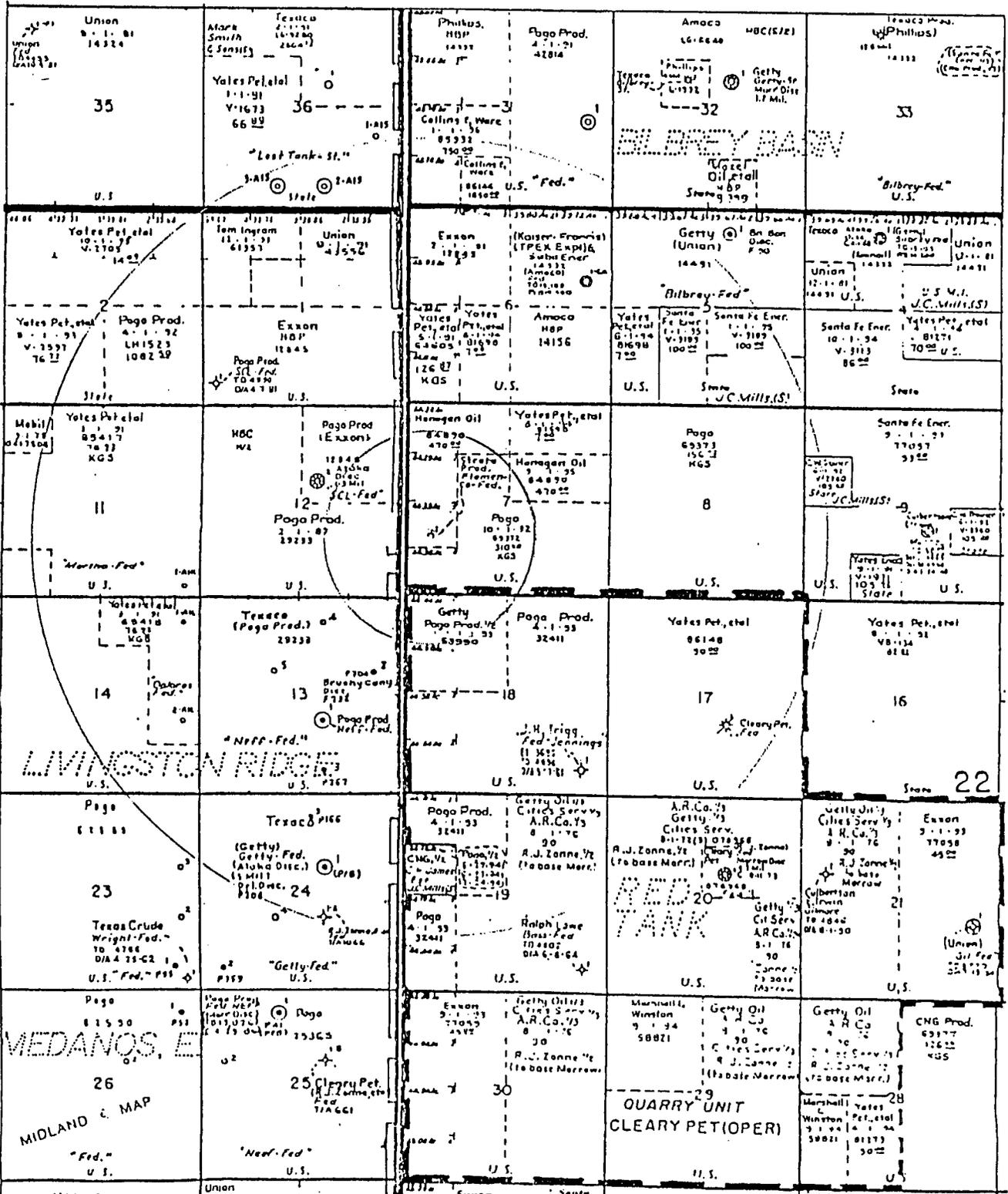
Page 1

III. Well Data

- A. 1. Lease Name/Location:
Flamenco Fed. #1
L 7-22S-32E
1650' FSL & 660' FWL
2. Casing Strings:
a. Present Well Condition
8-5/8" 36#, J55 @ 850' w/250 sx
(circ)
5-1/2" 15.5#, 17#, J55, N80 @ 8537' w/2850
SX
(TOC 800')
Present Status:
SI. Unsuccessful completion attempt in
Delaware 7085'-8455'.
3. Proposed well condition:
Casing same as above
3 1/2" 9.3 J55 or 2-7/8" 6.5 J55 plastic-
coated injection tubing @ 4600'
4. Propose to use Guiberson or Baker plastic-
coated or nickel-plated packer set at 4600'.
- B. 1. Injection Formation: Delaware Sand
2. Injection Interval will be through perfora-
tions from approximately 4676-5814'.
3. Well was originally drilled as an exploratory
Delaware Sand oil well. Well will be Delaware
Sand water disposal well (4676'-5814') when
work is completed.
4. Perforations: 8449'-8455' Delaware
8312'-8332' Delaware
CIBP + 30' cement 8290'
7184'-7194' Delaware
CIBP + 20' cement 7170'
7085'-7104' Delaware
5. Next higher (shallower) oil or gas zone within
2 miles--None

Next lower (deeper) oil or gas zone within 2
miles--Atoka

ATTACHMENT B
Lease Map Exhibit



Section VII

Terrain and Environment Description

REPRESENTATIVE SAMPLE :
SURROUNDING TERRAIN
ENVIRONMENTAL SETTING

Martha "AIK" Federal Well No. 1

Location

The proposed location will measure 400 X 400 ft (actual area surveyed 4.44 acres) on federal land and will be situated 330 ft from the south line and 430 ft from the east line.

Section 11, T22S, R31E, NMPM, Eddy County, NM

Thus it will be situated in the:

SE $\frac{1}{4}$ SE $\frac{1}{4}$, Section 11, T22S, R31E, NMPM, Eddy County, NM

The proposed location will be situated next to an existing lease road.

Map Reference: USGS THE DIVIDE QUADRANGLE, 7.5 Minute Series, 1984.

Level of Previous Impact

A lease road crosses the east side of the location.

Environmental Setting

YATES' proposed location will be situated on a duned landform located due west of The Divide. Coppice dunes are characteristic of the area as a whole. Areal microrelief ranges between 0.60 and 3.0 m in height. Local soils, dominated by the sand separate, are made up of loose, non-calcareous, sandy loams and loamy sands. Deflation basins are lacking altogether. Lithic inclusions are absent. Pedons are assignable to the Typic Torripsamment subgroup. Depositionally, local soils are subject to limited aeolian activity. Water is scarce albeit seeps and springs occur to the west along the base of Livingston Ridge. Elevation is 3566 ft. Slope is 0.75°. Aspect is multiple (360°).

The scrub/grassland formation is made up of mesquite, shinnery oak, sand sage, southwest rabbitbush, plains yucca, plains sunflower, many bristle pectis, sand palafoxia, umbrella wart, sandbur, mesa dropseed, sand dropseed, poverty threeawn and false buffalo grass.

Section VIII

Sample Analysis

HALLIBURTON DIVISION LABORATORY

HALLIBURTON SERVICES

ARTESIA DISTRICT

LABORATORY REPORT

No. W32-92

TO Mr. Ed Perry

Date February 12, 1992

Yates Petroleum Corporation

105 South Fourth Street

Artesia, NM 88210

This report is the property of Halliburton Services and neither it nor any part thereof, nor a copy thereof, is to be published or disclosed without first securing the express written approval of laboratory management. It may however, be used in the course of regular business operations by any person or concern and employees thereof receiving such report from Halliburton Services

Submitted by _____ Date Rec. February 11, 1992

Well No. Flamenco #1 Depth _____ Formation _____

Field _____ County _____ Source Compressor Water Tank

Resistivity 0.050 @ 70°

Specific Gravity .. 1.2086 @ 70°

pH 7.0

Calcium 25,218

Magnesium 8,732

Chlorides 192,000

Sulfates 200

Bicarbonates 92

Soluble Iron 100

KCL 1.5%

Remarks:

Eric Jacobson
Respectfully submitted

Analyst: Eric Jacobson - Operations Engineer

HALLIBURTON SERVICES

NOTICE:

This report is for information only and the content is limited to the sample described. Halliburton makes no warranties, express or implied, as to the accuracy of the contents or results. Any user of this report agrees Halliburton shall not be liable for any loss or damage, regardless of cause, including any act or omission of Halliburton resulting from the use hereof

PETROLITE

WATER ANALYSIS REPORT

Company : YATES PETROLEUM
 Address : ARTESIA, NM
 Lease : FLAMENCO FEDERAL
 Well : 250 TANK
 Sample Pt. : TANK

Date : 02/12/92
 Date Sampled : 02/10/92
 Analysis No. : 001

ANALYSIS		mg/L		* meq/L
-----		----		-----
1. pH	6.5			
2. H2S	0			
3. Specific Gravity	1.205			
4. Total Dissolved Solids		297951.3		
5. Suspended Solids				
6. Dissolved Oxygen				
7. Dissolved CO2				
8. Oil In Water				
9. Phenolphthalein Alkalinity (CaCO3)				
10. Methyl Orange Alkalinity (CaCO3)				
11. Bicarbonate	HCO3	85.0	HCO3	1.4
12. Chloride	Cl	185949.0	Cl	5245.4
13. Sulfate	SO4	250.0	SO4	5.2
14. Calcium	Ca	30960.0	Ca	1544.9
15. Magnesium	Mg	5096.9	Mg	419.3
16. Sodium (calculated)	Na	75585.5	Na	3287.8
17. Iron	Fe	0.0		
18. Barium	Ba	25.0		
19. Strontium	Sr	0.0		
20. Total Hardness (CaCO3)		98300.0		

PROBABLE MINERAL COMPOSITION

*milli equivalents per Liter		Compound	Equiv wt	X meq/L	= mg/L
-----	-----	-----	-----	-----	-----
1545	*Ca <----- *HCO3	Ca(HCO3)2	81.0	1.4	113
	/----->	CaSO4	68.1	5.2	354
419	*Mg -----> *SO4	CaCl2	55.5	1538.3	85361
	<-----/	Mg(HCO3)2	73.2		
3288	*Na -----> *Cl	MgSO4	60.2		
		MgCl2	47.6	419.3	19962
		NaHCO3	84.0		
		Na2SO4	71.0		
		NaCl	58.4	3287.8	192136

Saturation Values Dist. Water 20 C

CaCO3	13 mg/L
CaSO4 * 2H2O	2090 mg/L
BaSO4	2.4 mg/L

REMARKS:

----- L. MALLETT / MLAB / FILE

Petrolite Oilfield Chemicals Group

Respectfully submitted,
 LEE MALLETT

PETROLITE

SCALE TENDENCY REPORT

Company : YATES PETROLEUM Date : 02/12/92
Address : ARTESIA, NM Date Sampled : 02/10/92
Lease : FLAMENCO FEDERAL Analysis No. : 001
Well : 250 TANK Analyst : LEE MALLETT
Sample Pt. : TANK

STABILITY INDEX CALCULATIONS
(Stiff-Davis Method)
CaCO3 Scaling Tendency

S.I. = 1.0 at 80 deg. F or 27 deg. C
S.I. = 1.0 at 100 deg. F or 38 deg. C
S.I. = 0.9 at 120 deg. F or 49 deg. C
S.I. = 0.9 at 140 deg. F or 60 deg. C
S.I. = 1.0 at 160 deg. F or 71 deg. C

CALCIUM SULFATE SCALING TENDENCY CALCULATIONS
(Skillman-McDonald-Stiff Method)
Calcium Sulfate

S = 417 at 80 deg. F or 27 deg C
S = 443 at 100 deg. F or 38 deg C
S = 454 at 120 deg. F or 49 deg C
S = 461 at 140 deg. F or 60 deg C
S = 453 at 160 deg. F or 71 deg C

Petrolite Oilfield Chemicals Group

Respectfully submitted,
LEE MALLETT



SOUTHWESTERN LABORATORIES

Materials, environmental and geotechnical engineering, nondestructive, metallurgical and analytical services
1703 West Industrial Avenue • P.O. Box 2150 • Midland, Texas 79702

Report of tests on Petroleum
Client Yates Petroleum Corporation
Delivered by Federal Express

File No. 6967000
Report No. 76791
Report Date 2-18-92
Date Received 2-4-92

Identification Livingston Ridge Compressor Site

REPORT OF TOTAL METALS

<u>Parameters</u>	<u>Results</u> mg/kg	<u>Date</u> <u>Performed</u>	<u>Analyst</u>	<u>Test Method</u>
Arsenic	* 1.0	2-17-92	G. Bunch	SW846, 7061
Barium	15	2-14-92	G. Bunch	SW846, 7080
Cadmium	* 1.0	2-14-92	G. Bunch	SW846, 7130
Chromium	* 5.0	2-14-92	G. Bunch	SW846, 7190
Lead	* 5.0	2-14-92	G. Bunch	SW846, 7420
Mercury	* 0.5	2-17-92	G. Bunch	SW846, 7471
Selenium	* 1.0	2-18-92	G. Bunch	SW846, 7741
Silver	* 2.0	2-14-92	G. Bunch	SW846, 7760

*Denotes "less than"

Copies: Yates Petroleum Corporation
Attn: C. Morgan

XXC

Reviewed by

SOUTHWESTERN LABORATORIES

Albert Bunch

MARTIN YATES, III
1912 - 1985
FRANK W. YATES
1936 - 1986



105 SOUTH FOURTH STREET
ARTESIA, NEW MEXICO 88210
TELEPHONE (505) 748-1471

S. P. YATES
CHAIRMAN OF THE BOARD
JOHN A. YATES
PRESIDENT
PEYTON YATES
EXECUTIVE VICE PRESIDENT
RANDY G. PATTERSON
SECRETARY
DENNIS G. KINSEY
TREASURER

February 20, 1992

RECEIVED

FEB 27 1992

OIL CONSERVATION DIV.
SANTA FE

State of New Mexico
Oil Conservation Division
P. O. Box 2088
Santa Fe, New Mexico 87504

RE: Livingston Ridge Compressor
State Discharge Plan

ATTN: Roger Anderson

Dear Mr. Anderson:

A discharge plan on our Livingston Ridge Compressor site is hereby submitted for your approval. This application is accompanied with a check for the \$50 filing fee. The current horsepower on site is 540 HP. An immediate expansion should make 1260 HP available and future expansions are being considered. A diagram of all proposed expansions is included in the discharge plan. The 1000-3000 HP flat fee facility category should be the applicable billing rate. An amount of \$690 will be remitted to you upon our notification of the Discharge Plan approval and acceptance. If you have any questions or need any additional information, please contact me at 505-748-1741.

Sincerely,

Chuck Morgan, PE

CM/cvg

Enclosures

RECEIVED

FEB 27 1992

OIL CONSERVATION DIV.
SANTA FE

Proposed Discharge Plan
Livingston Ridge Compressor Site
Yates Petroleum Corporation

February 1992

Table of Contents

<u>Section</u>	<u>Title</u>
I	General Information and Affirmation
II	Plant Processes
III	Transfer, Storage, and Disposal Procedures
IV	Facility Diagrams A. Current Facility Diagram B. Proposed Expansion Diagram
V	Area Maps A. Topographic Map B. General Area
VI	Injection Well Permit
VII	Terrain and Environment Description
VIII	Sample Analysis

Section I

General Information and Affirmation

Discharge Plan

Facility: Yates Petroleum Livingston Ridge Compressor Site

Operator: Yates Petroleum Corporation
104 S. 4th Street
Artesia, NM 88210
(505)748-1471

Company Representatives: Ed Perry Foreman
Darrell Atkins Superintendent
Chuck Morgan Engineer

(Address and Phone Same as Above)

Location: Sec. 7 T22S R32E
SW/4 SW/4

Operation: Natural Gas Compression:
Low pressure natural gas is compressed and metered
into a high pressure sales line.

Certification: I hereby certify that I am familiar with the information
contained in and submitted with this application, and
that such information is true and accurate to the best of
my knowledge and belief.

Chuck Morgan
(Signature)

2/20/92
(Date)

Chuck Morgan
(Printed Name)

2/20/92
(Date)

Section II

Plant Processes

Plant Processes

Effluent Sources:

1. Fluid Separators: 2 BPD produced fluid (produced water and oil)
2. Engine Cooling Waters: <50 gal/yr.
3. Waste Engine Oils: <100 gal/yr.
4. Cleaning Operations: <75 gal/yr.
 - a) Fresh water with surfactants used for cleaning of facility and equipment.
5. Drip Catch Buckets: <100 gal/yr.
6. Miscellaneous: (drips, spills, leaks) <10 gal/yr.

Attached samples were collected as follows:

Produced Water: Sample pulled off of tank drain and delivered for analysis to: Southwestern Laboratories
1703 W. Industrial Avenue
Midland, TX 79702

Drip Oil: Samples were pulled from catch buckets and sent to Southwestern Laboratories.

Section III

Transfer, Storage, and Disposal Procedures

Transfer, Storage, and Disposal Procedures

1. Produced water piping is shown in red on the attached plant schematic
2. All separators, unit scrubbers and separators, and line dehydrators are connected together and piped via 1" steel above ground line to the liquid outlet on the Gas Inlet Separator. This outlet is a 2" above ground steel line that transfers all liquids to an above ground 250 BBL internally coated steel storage tank. (All lines are under approximately 2-4# of hydrostatic pressure.)
3. All lines and tanks are visually inspected daily for leaks. Any leaks found are repaired immediately, and any lost fluid is to be recovered with a vacuum unit and placed in the 250 BBL storage tank. The OCD will be notified immediately of any major or serious leaks and/or spills.
4. Any produced water in the 250 BBL stock tank is transferred via a vacuum truck into one of two OCD approved disposal stations (Yates Petroleum: Flamenco (on site) or the Yates Petroleum: David Ross, Sec. 35-T22S-R31E, SE/4 NE/4.)
 - A. Primary Produced Water Disposal Site:
Yates Petroleum Flamenco Injection well:
 1. OCD approved Class II injection well.
 2. Order #SWD-428, dated June 13, 1991
 3. Injecting approximately 2,000 BWPD into the Delaware formation at approximately 4676-5814'.
 - B. Contingency Produced Water Disposal Site:
Yates Petroleum David Ross AIT Fed #1 injection well in Unit H
Sec. 35-T22S-R31E, Eddy County:
 1. Order #SWD-419, dated May 22, 1991
 2. Injecting approximately 1500 BWPD into the Delaware formation at approximately 4500-5670'.
5. Waste engine oils and drip bucket fluids are stored on site in an above ground 250 BBL internally coated steel storage tank. Contents are to be removed from the site by a licensed transporter and sent to a permitted oil refiner.

Site Characteristics:

An application for approval of salt water disposal for Yates Petroleum Corporation's Flamenco Federal #1 SWD well accompanies this application. This well shares a site with the Livingston Ridge Compressor installation. All pertinent site characteristic data should be outlined in this application. A brief description of the general surrounding terrain and environmental setting is attached to the back of the SWD application. In addition, the site is not located in a flood plane and no danger of flooding exists.

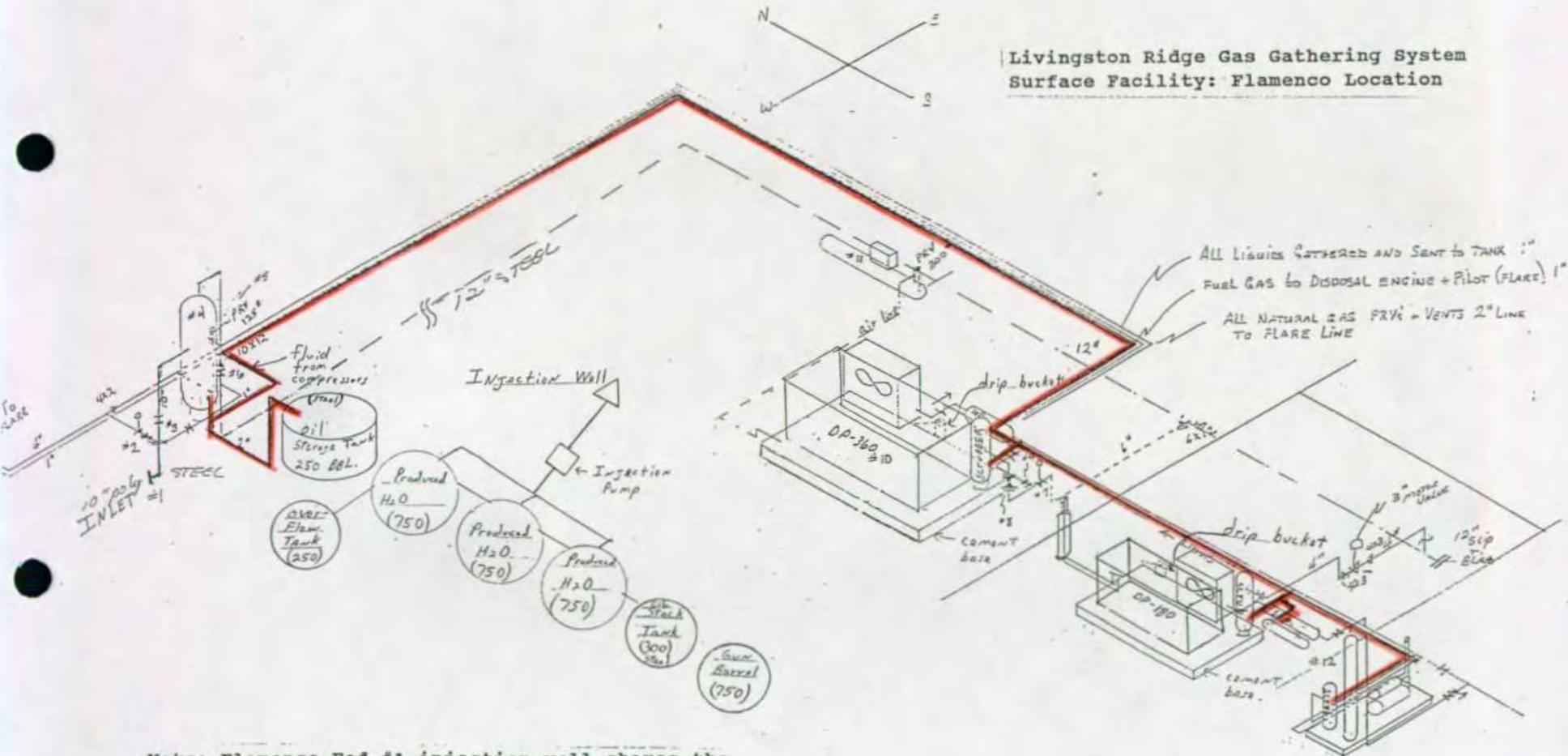
Section IV

Facility Diagrams

A. Current Facility Diagram

B. Proposed Expansion Diagram

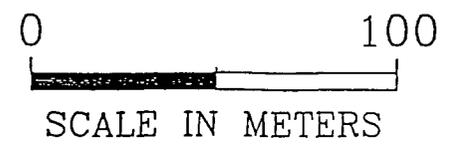
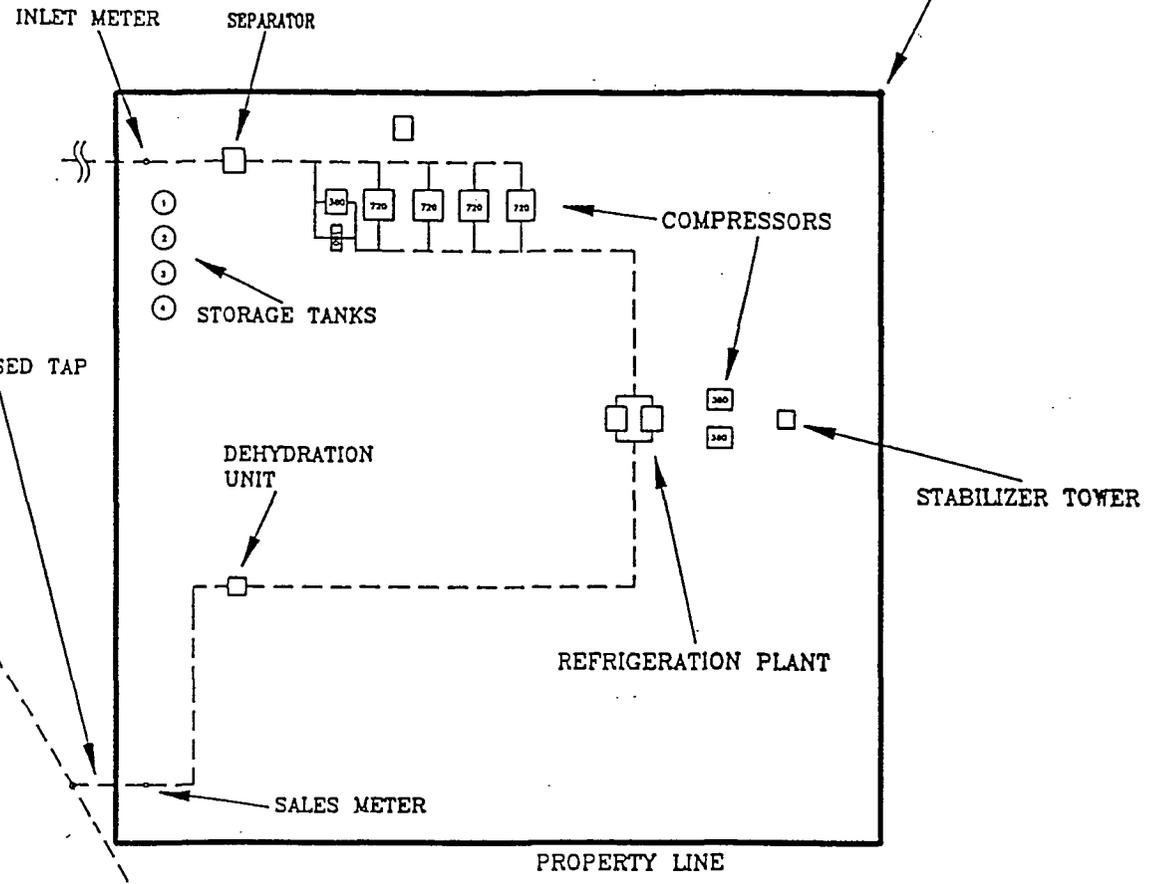
Livingston Ridge Gas Gathering System
 Surface Facility: Flamenco Location



Note: Flamenco Fed.#1 injection well shares the site with Livingston Ridge compressor facility.

Section IV-A
 Current Facility Diagram

REFERENCE UTM:
620.263E
3585.407N



TITLE: YATES PETROLEUM
LIVINGSTON RIDGE COMPRESSOR STATION

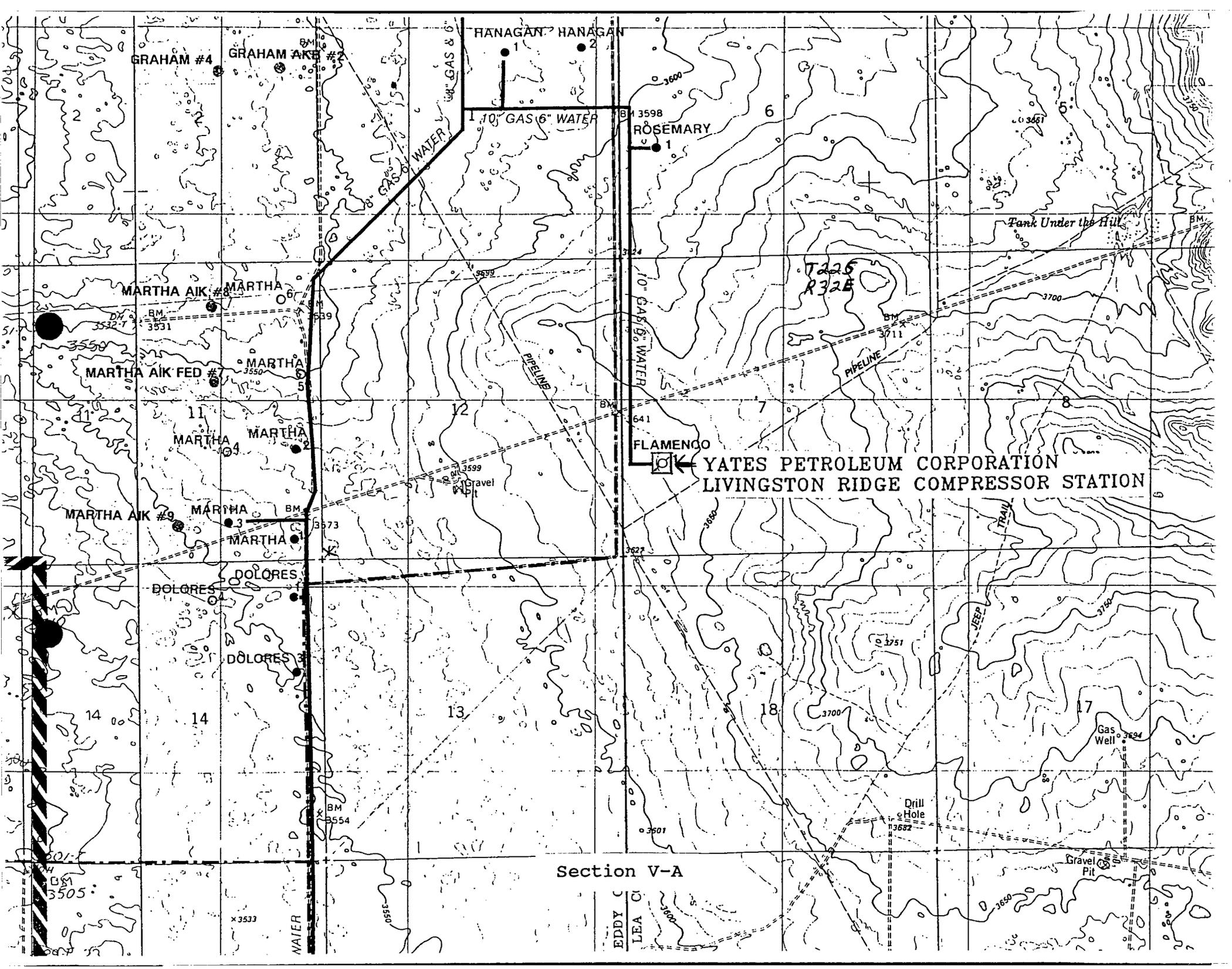
Section IV-B
PROPOSED
FACILITIES

Section V

Area Maps

A. Topographic Map

B. General Area



GRAHAM #4

GRAHAM AKE #2

HANAGAN #1 HANAGAN #2

ROSEMARY #1

MARTHA AIK #8

MARTHA #6

MARTHA AIK FED #7

MARTHA #5

MARTHA #4

MARTHA #4

MARTHA AIK #9

MARTHA #3

MARTHA #3

DOLORES #4

DOLORES #4

DOLORES #3

DOLORES #3

Section V-A

EDDY C
LEA C

T225
R32E

YATES PETROLEUM CORPORATION
LIVINGSTON RIDGE COMPRESSOR STATION

FLAMENCO

10" GAS 6" WATER

10" GAS 6" WATER

10" GAS 6" WATER

PIPELINE

PIPELINE

Tank Under the Hill

JEEP TRAIL

Drill Hole

Gas Well

Gravel Pit

NAIER

3505

X 3533

3600

3700

3751

3501

3641

3598

3599

3532-7

3531

3550

3673

3554

3550

3700

3750

3694

3750

3651

3711

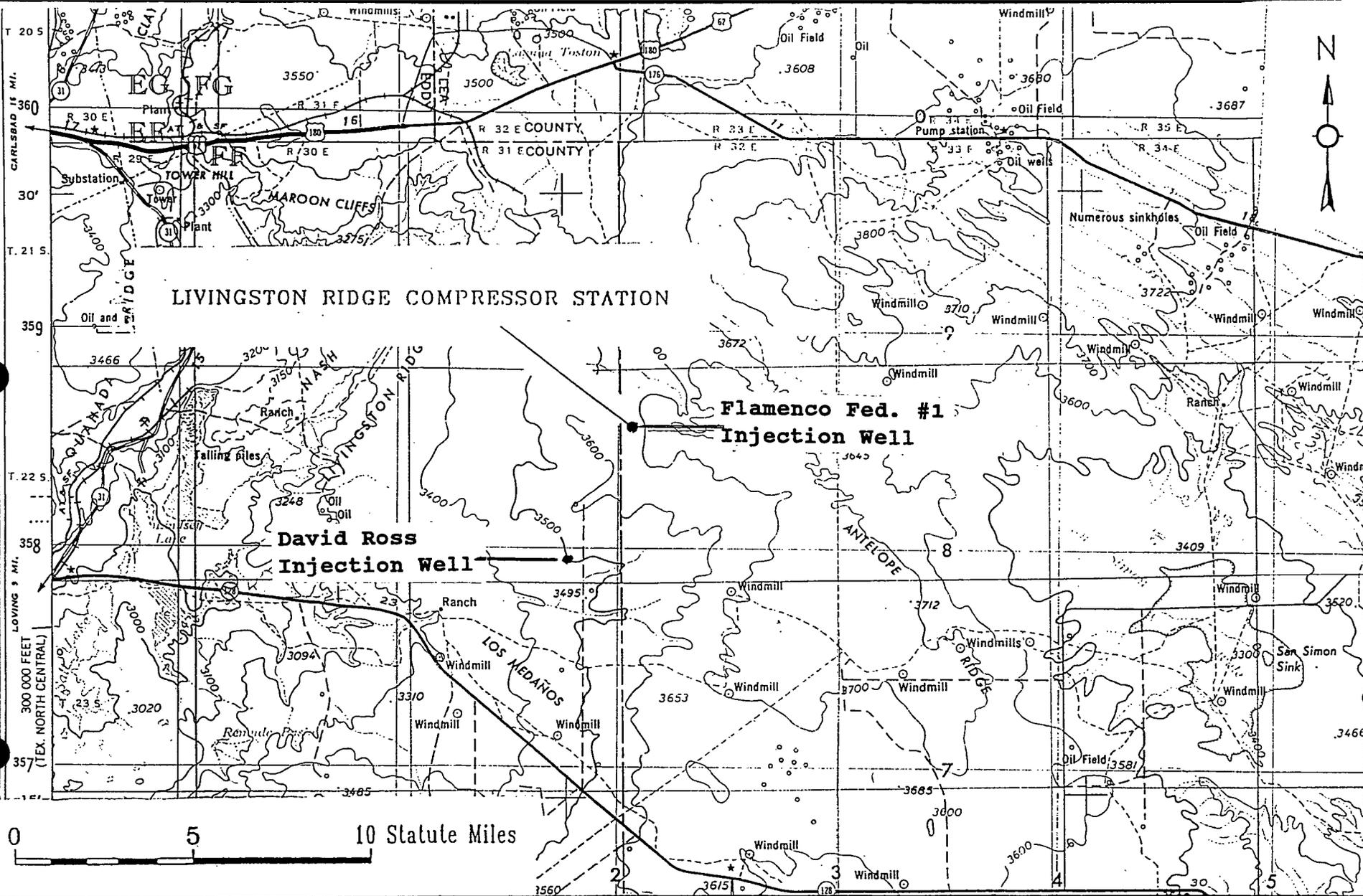
3711

3680

3751

3750

3650



TITLE: YATES PETROLEUM CORPORATION
 LIVINGSTON RIDGE COMPRESSOR STATION
 GENERAL VICINITY MAP

Section V-B
 General Area Map

VI Injection Well Permit

APPLICATION FOR AUTHORIZATION TO INJECT

- I. Purpose: Secondary Recovery Pressure Maintenance Disposal Storage
Application qualifies for administrative approval? yes no
- II. Operator: Yates Petroleum Corporation
Address: 105 S. 4th Street, Artesia, NM 88210
Contact party: Brian Collins Phone: (505) 748-1471
- III. Well data: Complete the data required on the reverse side of this form for each well proposed for injection. Additional sheets may be attached if necessary.
- IV. Is this an expansion of an existing project? yes no
If yes, give the Division order number authorizing the project _____
- V. Attach a map that identifies all wells and leases within two miles of any proposed injection well with a one-half mile radius circle drawn around each proposed injection well. This circle identifies the well's area of review.
- * VI. Attach a tabulation of data on all wells of public record within the area of review which penetrate the proposed injection zone. Such data shall include a description of each well's type, construction, date drilled, location, depth, record of completion, and a schematic of any plugged well illustrating all plugging detail.
- VII. Attach data on the proposed operation, including:
1. Proposed average and maximum daily rate and volume of fluids to be injected;
 2. Whether the system is open or closed;
 3. Proposed average and maximum injection pressure;
 4. Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and
 5. If injection is for disposal purposes into a zone not productive of oil or gas at or within one mile of the proposed well, attach a chemical analysis of the disposal zone formation water (may be measured or inferred from existing literature, studies, nearby wells, etc.).
- *VIII. Attach appropriate geological data on the injection zone including appropriate lithologic detail, geological name, thickness, and depth. Give the geologic name, and depth to bottom of all underground sources of drinking water (aquifers containing waters with total dissolved solids concentrations of 10,000 mg/l or less) overlying the proposed injection zone as well as any such source known to be immediately underlying the injection interval.
- IX. Describe the proposed stimulation program, if any.
- * X. Attach appropriate logging and test data on the well. (If well logs have been filed with the Division they need not be resubmitted.)
- * XI. Attach a chemical analysis of fresh water from two or more fresh water wells (if available and producing) within one mile of any injection or disposal well showing location of wells and dates samples were taken.
- XII. Applicants for disposal wells must make an affirmative statement that they have examined available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground source of drinking water.
- XIII. Applicants must complete the "Proof of Notice" section on the reverse side of this form.
- XIV. Certification
- I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.
- Name: Brian Collins Title: Petroleum Engineer
Signature: Brian Collins Date: April 25, 1991
- * If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be duplicated and resubmitted. Please show the date and circumstance of the earlier submittal.

III. WELL DATA

A. The following well data must be submitted for each injection well covered by this application. The data must be both in tabular and schematic form and shall include:

- (1) Lease name; Well No.; location by Section, Township, and Range; and footage location within the section.
- (2) Each casing string used with its size, setting depth, sacks of cement used, hole size, top of cement, and how such top was determined.
- (3) A description of the tubing to be used including its size, lining material, and setting depth.
- (4) The name, model, and setting depth of the packer used or a description of any other seal system or assembly used.

Division District offices have supplies of Well Data Sheets which may be used or which may be used as models for this purpose. Applicants for several identical wells may submit a "typical data sheet" rather than submitting the data for each well.

B. The following must be submitted for each injection well covered by this application. All items must be addressed for the initial well. Responses for additional wells need be shown only when different. Information shown on schematics need not be repeated.

- (1) The name of the injection formation and, if applicable, the field or pool name.
- (2) The injection interval and whether it is perforated or open-hole.
- (3) State if the well was drilled for injection or, if not, the original purpose of the well.
- (4) Give the depths of any other perforated intervals and detail on the sacks of cement or bridge plugs used to seal off such perforations.
- (5) Give the depth to and name of the next higher and next lower oil or gas zone in the area of the well, if any.

XIV. PROOF OF NOTICE

All applicants must furnish proof that a copy of the application has been furnished; by certified or registered mail, to the owner of the surface of the land on which the well is to be located and to each leasehold operator within one-half mile of the well location.

Where an application is subject to administrative approval, a proof of publication must be submitted. Such proof shall consist of a copy of the legal advertisement which was published in the county in which the well is located. The contents of such advertisement must include:

- (1) The name, address, phone number, and contact party for the applicant;
- (2) the intended purpose of the injection well; with the exact location of single wells or the section, township, and range location of multiple wells;
- (3) the formation name and depth with expected maximum injection rates and pressures; and
- (4) a notation that interested parties must file objections or requests for hearing with the Oil Conservation Division, P. O. Box 2088, Santa Fe, New Mexico 87501 within 15 days.

NO ACTION WILL BE TAKEN ON THE APPLICATION UNTIL PROPER PROOF OF NOTICE HAS BEEN SUBMITTED.

NOTICE: Surface owners or offset operators must file any objections or requests for hearing of administrative applications within 15 days from the date this application was mailed to them.

C-108
Application For Authorization To Inject
Yates Petroleum Corporation
Flamenco Fed #1
L 7-22S-32E
Lea County, New Mexico

I. The purpose of completing this well is to make a disposal well for produced Delaware Sand water into the Delaware Sand formation.

Yates Petroleum plans to convert this well to a water disposal well into the Delaware Sand.

II. Operator: Yates Petroleum Corporation
105 South Fourth Street
Artesia, NM 88210
Brian Collins (505) 748-1471

III. Well Data: See Attachment A

IV. This is not an expansion of an existing project.

V. See attached map, Attachment B

VI. No wells within the area of review penetrate the proposed injection zone.

VII. 1. Proposed average daily injection volume approximately 5000 BWPD.
Maximum daily injection volume approximately 15000 BWPD.

2. This will be a closed system.

3. Proposed average injection pressure-unknown
Proposed maximum injection pressure--935 psi.

4. Sources of injected water would be produced water from the Delaware Sand. (Attachment C)

5. See Attachment C.

VIII. 1. The proposed injection interval is the portion of the Delaware Sand formation consisting of porous Sandstone from estimated depths: 4676'-4735'
4745'-4792'
4960'-4976'
5028'-5046'
5083'-5098'
5114'-5142'
5280'-5306'

Application for Authorization to Inject
Flamenco Fed #1

-2-

5574'-5612'
5648'-5670'
5738'-5754'
5776'-5814'

2. Possible Fresh water zones overlie the proposed injection formations at depths to approximately 850' feet. There are no fresh water zones underlying the formation.
- IX. The proposed disposal interval may be acidized with 7-1/2% HCL acid, or 12-3 HF acid.
- X. Logs were filed at your office when the well was drilled.
- XI. No windmills exist within a one mile radius of the subject location.
- XII. Yates Petroleum Corporation has examined geologic and engineering data and has found that there is no evidence of faulting in the proposed interval.
- XIII. Proof of Notice
- A. Certified letters sent to the surface owner and offset operators-attached. (Attachment D)
- B. Copy of legal advertisement attached.
(Attachment E)
- XIV. Certification is signed.

Yates Petroleum Corporation
Flamenco Fed #1
L 7-22S-32E

Attachment A

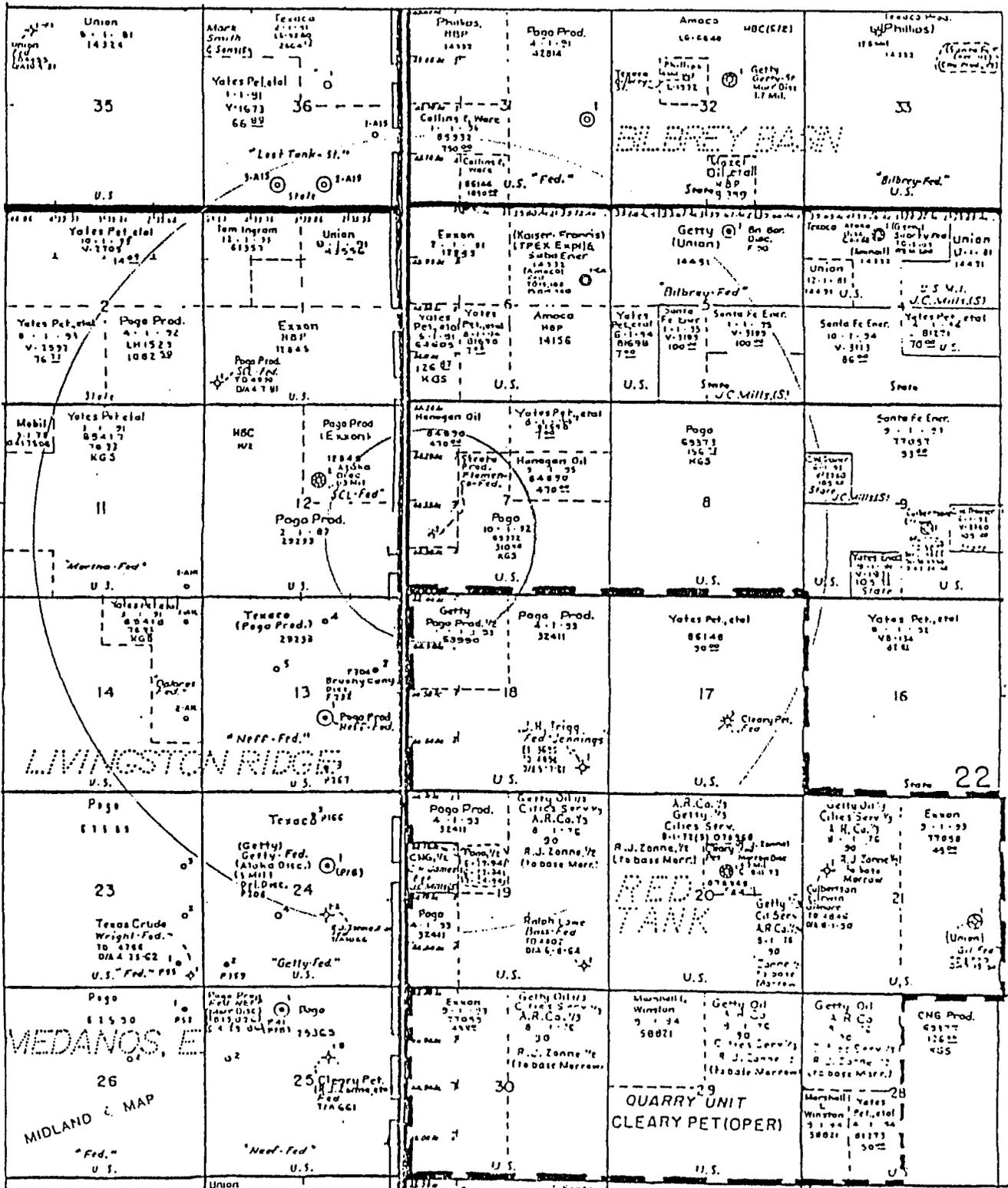
Page 1

III. Well Data

- A. 1. Lease Name/Location:
Flamenco Fed. #1
L 7-22S-32E
1650' FSL & 660' FWL
2. Casing Strings:
a. Present Well Condition
8-5/8" 36#, J55 @ 850' w/250 sx
(circ)
5-1/2" 15.5#, 17#, J55, N80 @ 8537' w/2850
sx
(TOC 800')
Present Status:
SI. Unsuccessful completion attempt in
Delaware 7085'-8455'.
3. Proposed well condition:
Casing same as above
3 1/2" 9.3 J55 or 2-7/8" 6.5 J55 plastic-
coated injection tubing @ 4600'
4. Propose to use Guiberson or Baker plastic-
coated or nickel-plated packer set at 4600'.
- B. 1. Injection Formation: Delaware Sand
2. Injection Interval will be through perfora-
tions from approximately 4676-5814'.
3. Well was originally drilled as an exploratory
Delaware Sand oil well. Well will be Delaware
Sand water disposal well (4676'-5814') when
work is completed.
4. Perforations: 8449'-8455' Delaware
8312'-8332' Delaware
CIBP + 30' cement 8290'
7184'-7194' Delaware
CIBP + 20' cement 7170'
7085'-7104' Delaware
5. Next higher (shallower) oil or gas zone within
2 miles--None

Next lower (deeper) oil or gas zone within 2
miles--Atoka

ATTACHMENT B
Lease Map Exhibit



Section VII

Terrain and Environment Description

**REPRESENTATIVE SAMPLE :
SURROUNDING TERRAIN
ENVIRONMENTAL SETTING**

Martha "AIK" Federal Well No. 1

Location

The proposed location will measure 400 X 400 ft (actual area surveyed 4.44 acres) on federal land and will be situated 330 ft from the south line and 430 ft from the east line.

Section 11, T22S, R31E, NMPM, Eddy County, NM

Thus it will be situated in the:

SE $\frac{1}{4}$ SE $\frac{1}{4}$, Section 11, T22S, R31E, NMPM, Eddy County, NM

The proposed location will be situated next to an existing lease road.

Map Reference: USGS THE DIVIDE QUADRANGLE, 7.5 Minute Series, 1984.

Level of Previous Impact

A lease road crosses the east side of the location.

Enviromental Setting

YATES' proposed location will be situated on a duned landform located due west of The Divide. Coppice dunes are characteristic of the area as a whole. Areal microrelief ranges between 0.60 and 3.0 m in height. Local soils, dominated by the sand separate, are made up of loose, non-calcareous, sandy loams and loamy sands. Deflation basins are lacking altogether. Lithic inclusions are absent. Pedons are assignable to the Typic Torripsamment subgroup. Depositionally, local soils are subject to limited aeolian activity. Water is scarce albeit seeps and springs occur to the west along the bas of Livingston Ridge. Elevation is 3566 ft. Slope is 0.75°. Aspect is multiple (360°).

The scrub/grassland formation is made up of mesquite, shinnery oak, sand sage, southwest rabbitbush, plains yucca, plains sunflower, many bristle pectis, sand palafoxia, umbrella wart, sandbur, mesa dropseed, sand dropseed, poverty threeawn and false buffalo grass.

Section VIII

Sample Analysis

HALLIBURTON DIVISION LABORATOR

HALLIBURTON SERVICES

ARTESIA DISTRICT

LABORATORY REPORT

No. W32-92

TO Mr. Ed Perry

Date February 12, 1992

Yates Petroleum Corporation

105 South Fourth Street

Artesia, NM 88210

This report is the property of Halliburton Services and neither it nor any part thereof, nor a copy thereof, is to be published or disclosed without first securing the express written approval of laboratory management. It may however, be used in the course of regular business operations by any person or concern and employees thereof receiving such report from Halliburton Services

Submitted by Date Rec. February 11, 1992

Well No. Flamenco #1 Depth Formation

Field County Source Compressor Water Tank

Resistivity 0.050 @ 70°

Specific Gravity 1.2086 @ 70°

pH 7.0

Calcium 25,218

Magnesium 8,732

Chlorides 192,000

Sulfates 200

Bicarbonates 92

Soluble Iron 100

KCL 1.5%

Remarks:

Respectfully submitted

Analyst: Eric Jacobson - Operations Engineer

HALLIBURTON SERVICES

NOTICE:

This report is for information only and the content is limited to the sample described. Halliburton makes no warranties, express or implied, as to the accuracy of the contents or results. Any user of this report agrees Halliburton shall not be liable for any loss or damage, regardless of cause, including any act or omission of Halliburton resulting from the use hereof

PETROLITE

WATER ANALYSIS REPORT

Company : YATES PETROLEUM
 Address : ARTESIA, NM
 Lease : FLAMENCO FEDERAL
 Well : 250 TANK
 Sample Pt. : TANK

Date : 02/12/92
 Date Sampled : 02/10/92
 Analysis No. : 001

ANALYSIS		mg/L		* meq/L
-----		----		-----
1. pH		6.5		
2. H2S		0		
3. Specific Gravity		1.205		
4. Total Dissolved Solids		297951.3		
5. Suspended Solids				
6. Dissolved Oxygen				
7. Dissolved CO2				
8. Oil In Water				
9. Phenolphthalein Alkalinity (CaCO3)				
10. Methyl Orange Alkalinity (CaCO3)				
11. Bicarbonate	HCO3	85.0	HCO3	1.4
12. Chloride	Cl	185949.0	Cl	5245.4
13. Sulfate	SO4	250.0	SO4	5.2
14. Calcium	Ca	30960.0	Ca	1544.9
15. Magnesium	Mg	5096.9	Mg	419.3
16. Sodium (calculated)	Na	75585.5	Na	3287.8
17. Iron	Fe	0.0		
18. Barium	Ba	25.0		
19. Strontium	Sr	0.0		
20. Total Hardness (CaCO3)		98300.0		

PROBABLE MINERAL COMPOSITION

*milli equivalents per Liter		Compound	Equiv wt	X meq/L	= mg/L
-----		-----			-----
1545	*Ca <----- *HCO3	Ca(HCO3)2	81.0	1.4	113
	/----->	CaSO4	68.1	5.2	354
419	*Mg -----> *SO4	CaCl2	55.5	1538.3	85361
	<-----/	Mg(HCO3)2	73.2		
3288	*Na -----> *Cl	MgSO4	60.2		
		MgCl2	47.6	419.3	19962
		NaHCO3	84.0		
		Na2SO4	71.0		
		NaCl	58.4	3287.8	192136

REMARKS:

----- L. MALLETT / MLAB / FILE

Petrolite Oilfield Chemicals Group

Respectfully submitted,
 LEE MALLETT



SCALE TENDENCY REPORT

Company : YATES PETROLEUM Date : 02/12/92
Address : ARTESIA, NM Date Sampled : 02/10/92
Lease : FLAMENCO FEDERAL Analysis No. : 001
Well : 250 TANK Analyst : LEE MALLETT
Sample Pt. : TANK

STABILITY INDEX CALCULATIONS
(Stiff-Davis Method)
CaCO3 Scaling Tendency

S.I. = 1.0 at 80 deg. F or 27 deg. C
S.I. = 1.0 at 100 deg. F or 38 deg. C
S.I. = 0.9 at 120 deg. F or 49 deg. C
S.I. = 0.9 at 140 deg. F or 60 deg. C
S.I. = 1.0 at 160 deg. F or 71 deg. C

CALCIUM SULFATE SCALING TENDENCY CALCULATIONS
(Skillman-McDonald-Stiff Method)
Calcium Sulfate

S = 417 at 80 deg. F or 27 deg C
S = 443 at 100 deg. F or 38 deg C
S = 454 at 120 deg. F or 49 deg C
S = 461 at 140 deg. F or 60 deg C
S = 453 at 160 deg. F or 71 deg C

Petrolite Oilfield Chemicals Group

Respectfully submitted,
LEE MALLETT



Materials, environmental and geotechnical engineering, nondestructive, metallurgical and analytical services
1703 West Industrial Avenue • P.O. Box 2150 • Midland, Texas 79702

Report of tests on Water
Client Yates Petroleum Corporation
Delivered by Federal Express

File No. 6967000
Report No. 76790
Report Date 2-18-92
Date Received 2-4-92

Identification Livingston Ridge Compressor Site

**REPORT OF
ORGANICS ANALYSIS**

Date of Analysis 2-6-92
Analyst L. Duty

Matrix Water
Method SW846 5030/8020A
MDL 0.004 mg/L

<u>Compound</u>	<u>mg/L</u>
Benzene	1.34
Toluene	* 0.1
Ethyl Benzene	* 0.1
Total Xylenes	0.25

* Denotes "less than"

Copies: Yates Petroleum Corporation
Attn: C. Morgan

 LXC
Reviewed by

SOUTHWESTERN LABORATORIES
 Albert B. Johnston