GW – 010

PERMITS, RENEWALS, & MODS Application

2007

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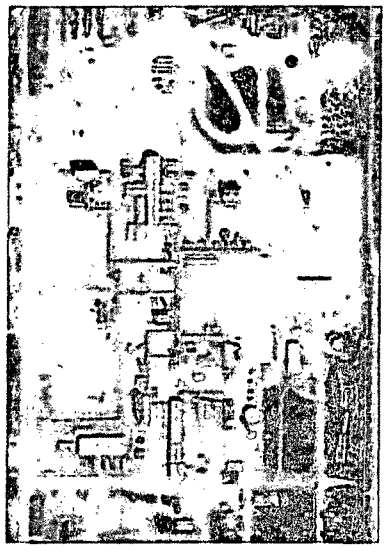
Southern Union Gas Services

Amendment to August 17, 2007 Application for Renewal of New Mexico Oil Conservation Division Discharge Plan GW-010 Jal # 3 Gas Plant

(Section 33, Township 24 S, Range 37 E)



December 17, 2007

Prepared For:

New Mexico Oil Conservation Division
1200 South Saint Francis Drive
Santa Fe, New Mexico 87505

On Behalf of:

Southern Union Gas Services, Ltd.
301 Commerce Street, Suite 700
Fort Worth, Texas 76102
Telephone: (817)-302-9400

Prepared By:

Geolex, Inc.
500 Marquette Avenue, NE, Suite 1350
Albuquerque, New Mexico 87102
Telephone: (505) 842-8000

GEOLEX
INCORPORATED

LIST OF REVISIONS FOR DISCHARGE PLAN
Jal # 3

Revision #	Revision	Date
0	Original Issue – Rewrite of Entire Plan	9/10/93
1	Revised Paragraph 14, page 4 of Appendix H – Drain Line Testing Procedure	10/22/93
2	Revisions for Renewal Application	06/29/98
3	Revised for Renewal Application	04/05/04
4	Revised Renewal Application – Revised to incorporate S-Plant and changes to drain system	08/17/07
5	Amended Renewal Application – Revised to include proposed replacement of existing permitted Class II injection well to proposed combined acid gas and Class II injection well	12/18/07

Please note that all sections from the pending August 17, 2007 renewal application that have been modified or added to address the proposed changes due to the replacement of the existing NMOCD approved Class II wastewater injection well with a combined acid gas/Class II wastewater injection well are highlighted in yellow in the Table of Contents. Only these sections are included in this amendment.

Southern Union Gas Services Ltd.

Jal # 3 Plant – Natural Gas Processing

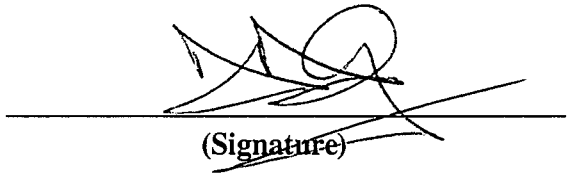
Discharge Plan GW-010

Natural Gas Processing Operation

The purpose of the Jal # 3 Plant facility is natural gas processing. The main processes that occur at the plant are compression, sweetening and dehydration, cryogenic extraction of ethane and heavier hydrocarbons, sulfur recovery and steam generation.

Affirmation

I hereby certify that I am familiar with the information contained in and submitted with this amendment to the 8/17/07 application and that such information is true, accurate and complete to the best of my knowledge and belief.



(Signature)

12/18/07

(Date)

Alberto A. Gutierrez

(Name)

Consultant to SUGS

(Title)

TABLE OF CONTENTS

LIST OF FIGURES

PLATE

LIST OF TABLES

APPENDICES

8.0 WASTE DISPOSAL

8.1 EXISTING ON-SITE EFFLUENT DISPOSAL FACILITIES

All wastewater is routed through the classifier to remove suspended solids and oil. The classified water is currently then filtered and pumped into the disposal well (Woolworth Estate - SWD No. 1 E located in Unit E of Sec. 33, T-24-S, R-37-E (Appendix B). This well is to be replaced by a new combined acid gas and classified water injection well which is the subject of a C-108 application submitted to NMOCD in December 2007. The plant wastewater system currently injects approximately 1320 bbl/day of classified wastewater (1,662,000 gals/mo). The proposed injection well will inject acid gas taken from a slipstream to the SRU combined with the wastewater which is currently being injected into the Woolworth Estate – SWD No. 1. The new proposed Jal#3AGI#1 will be located approximately 200' east of the current well on the Jal #3 Plant, and a new pipe will be run from the location of the existing well (which is scheduled to be plugged before the new one is put into operation) to carry the wastewater to the wellhead inlet for mixing with the treated acid gas stream. Figures 2a, 2b, 3 and 5 from the C-108 application (attached to this amendment as Appendix I) show the modifications to the existing wastewater flow system, schematic of the wastewater/acid gas injection system, the process flow diagram for the wastewater/acid gas injection system and the schematic of the proposed acid gas well, respectively. Like the current well, the combined wastewater/acid gas stream will be injected into the San Andres Formation at a depth of approximately 4,750-5,200 feet. The existing well was completed in compliance with NMOCD administrative order No. SWD-231 dated November 6, 1980. The location of the existing well is shown in the August 17, 2007 DP application (aerial photograph Figure 2 and Figure(s) 3 and 4 show the wastewater flow schematics). A detailed description of the proposed injection well operation, the geology of the injection zone and the demonstration of no hydraulic connection with any fresh water sources in the area is included in the C-108 application which is attached herein as Appendix I. In addition, the draft revised Rule 118 plan is included as appendix E to the C-108 application.

APPENDIX H

Notice of Application by Southern Union Gas Services for Approval of a Discharge Plan for Natural Gas Processing Plant: Southern Union Gas Services, whose offices are located at 301Commerce St. Suite 700, Fort Worth, Texas (76102) seeks approval from the New Mexico Oil Conservation for renewal of a Discharge Plan for the Jal #3 Natural Gas Processing Plant, located in the West Half of the West Half of Section 33, Township 24 South, Range 37 East in Lea County, New Mexico ($32^0$10'27" North, 103^0 10'27" West). This location is at an elevation of approximately 3260 feet, approximately 3.5 miles north of Jal, New Mexico. This natural gas plant is designed to have no intentional liquid discharges and disposes of wastewater and acid gas in a permitted injection well. The shallowest groundwater potentially impacted by this facility is at a depth of approximately 90 feet and has a total dissolved solids content of approximately 2,200 milligrams per liter. Additional information, comments or statements should be addressed Mr. Alberto A. Gutierrez, R.G. of Geolex, Inc., 500 Marquette NW, Suite 1350, Albuquerque, NM 87102, Tel. (505-842-8000).

PROPOSED POSTINGS, NOTIFICATIONS, AND PUBLICATION

Following NMOCD review and acceptance, we propose to post this notice using a 2'x3' sign, in English and Spanish, at the gate of the above-named facility and to post the 2nd sign outside the SUGS office in Jal.

Identified owners of all properties within a 1/3-mile distance from the boundary of the property where the discharge site is located will be provided with copies of this notice by mail. If there are no properties other than properties owned by SUGS within a 1/3-mile distance from the boundary of property where the discharge site is located, notice will be provided to owners of record of the next nearest adjacent properties not owned by the discharger.

Any owners of the lands upon which the proposed discharge site is located not owned by SUGS will be notified by certified, receipt-requested mailing.

The notice will also be advertised, in English and Spanish, in a 3" by 4" display advertisement in the local newspaper, the Hobbs News-Sun.

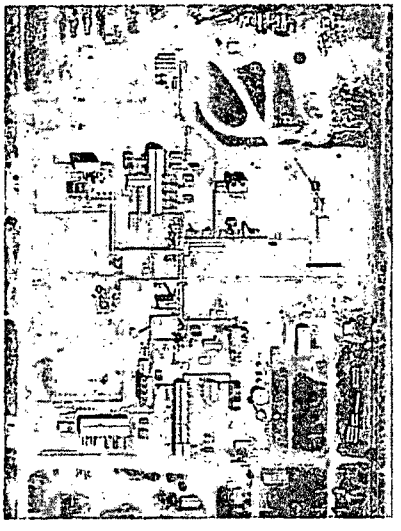
APPENDIX I

JAL #3 AGI #1 C-108 APPLICATION FILED 12/2007

Southern Union Gas Services

C-108 Application For Approval to Drill and Operate a New Well For The Combined Injection of Acid Gas and Plant Wastewater SUGS Jal #3 Natural Gas Processing Plant

(Unit E Section 33, Township 24 S, Range 37 E)



December 18, 2007

Prepared For:

Southern Union Gas Services, Ltd.
301 Commerce Street, Suite 700
Fort Worth, Texas 76102
Telephone: (817)-302-9400

Submitted To:

New Mexico Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, NM 87505

Prepared By:

Geolex, Inc.
500 Marquette Avenue, NE, Suite 1350
Albuquerque, New Mexico 87102
Telephone: (505) 842-8000

GEOLEX® INCORPORATED

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL
RESOURCES DEPARTMENT

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

FORM C-108
Revised June 10, 2003

APPLICATION FOR AUTHORIZATION TO INJECT

I. PURPOSE: _____Secondary Recovery _____Pressure Maintenance __X__Disposal _____Storage
Application qualifies for administrative approval? __X__Yes _____No

II. OPERATOR: ***Southern Union Gas Services, Ltd.***
ADDRESS: **301 Commerce Street; Suite 700; Ft. Worth, TX 76102**
CONTACT PARTY: **Alberto A. Gutierrez, R.G.** PHONE: **(505)-842-8000**

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. **A CROSS REFERENCE TO THE APPLICABLE SECTIONS OR APPENDICES IN THE ATTACHED C108 APPLICATION FOR EACH ROMAN NUMERAL BELOW IS SPECIFIED BY SECTION AND/OR APPENDIX NUMBERS.**

IV. Is this an expansion of an existing project? _____Yes __X__No
If yes, give the Division order number authorizing the project: **N/A**

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. **SECTIONS. 5 AND 6; APPENDICES A, B, C AND D.**

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.
SECTIONS 4 AND 5; APPENDICES A, B, C AND D.

VII. Attach data on the proposed operation, including:

1. Proposed average and maximum daily rate and volume of fluids to be injected; **SECTIONS 1, 2, AND 3**
2. Whether the system is open or closed; **SECTIONS 1, 2, AND 4**
3. Proposed average and maximum injection pressure; **SECTIONS 1 AND 3**
4. Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and, **SECTIONS 1, 3, 4, AND 5; APPENDIX A**
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.). **SECTIONS 3 AND 4; APPENDIX A**

*VIII. Attach appropriate geologic data on the injection zone including appropriate lithologic detail, geologic 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 sources known to be immediately underlying the injection interval. **SECTION 4**

IX. Describe the proposed stimulation program, if any. **N/A**

*X. Attach appropriate logging and test data on the well. (If well logs have been filed with the Division, they need not be resubmitted). **WELL IS NOT YET DRILLED; SECTION 4 AND APPENDIX A (FOR EXISTING WELL)**

*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. **SECTION 4 AND JAL #3 DISCHARGE PLAN GW-010**

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 sources of drinking water. **SECTION 7**

XIII. Applicants must complete the "Proof of Notice" section on the reverse side of this form. **APPENDICES C AND D**

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: Alberto A. Gutierrez, C.P.G. TITLE: President, Geolex, Inc.®; Consultant to SUGS

SIGNATURE:  DATE: 12/18/07

E-MAIL ADDRESS: aag@geolex.com

* If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be resubmitted. Please show the date and circumstances of the earlier submittal: **SEE ATTACHED APPLICATION AND PREVIOUSLY SUBMITTED RENEWAL OF NMOCD DISCHARGE PLAN GW-010**

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

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. **SECTIONS 1, 3 AND 4; APPENDIX A**

(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. **SEE SECTION 3 FOR PROPOSED WELL DESIGN AND APPENDIX A FOR DESIGN OF EXISTING WELL. FINAL DESIGN WILL BE SUBMITTED WHEN PROPOSED WELL IS DRILLED AND COMPLETED.**

(3) A description of the tubing to be used including its size, lining material, and setting depth. **SECTION 3**

(4) The name, model, and setting depth of the packer used or a description of any other seal system or assembly used. **SECTION 3**

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. **SECTIONS 1 AND 4**

(2) The injection interval and whether it is perforated or open-hole. **SECTION 3**

(3) State if the well was drilled for injection or, if not, the original purpose of the well. **N/A**

(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. **N/A**

(5) Give the depth to and the name of the next higher and next lower oil or gas zone in the area of the well, if any. **SECTIONS 4 AND 5; APPENDICES A, B AND C**

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. **SECTION 5; APPENDICES C AND D**

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: **SEE APPENDIX C FOR FORM OF PUBLIC NOTICE – ACTUAL NOTICE WILL BE PUBLISHED WHEN HEARING DATE IS SET**

(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, 1220 South St. Francis Dr., Santa Fe, New Mexico 87505, 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.

SEE SECTION 3 AND FIGURE 5 FOR PROPOSED WELL DESIGN SCHEMATIC; AND APPENDIX A FOR EXISTING WELL INFORMATION

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF APPENDICES

1.0 EXECUTIVE SUMMARY

On behalf of Southern Union Gas Services Ltd. (SUGS), Geolex, Inc.® (Geolex) has prepared and is hereby submitting a complete C-108 application for approval to drill, complete and operate a combined acid gas and plant wastewater injection well at the SUGS Jal #3 Natural Gas Processing Plant (Plant), which is located on approximately 70 acres in the SW4NW4 and NW4SW4 of Section 33, Township 24 South, Range 37 East, Lea County, New Mexico (Figure 1). This proposed combined acid gas and plant wastewater injection well (Jal#3AGI) will replace the currently operating, permitted plant wastewater disposal well (Woolworth Estate WD #1E/API#30-025-27081).

The Jal#3AGI is anticipated to have a total depth of approximately 5200' at the base of the San Andres Formation. The proposed injection zone will be within the San Andres Formation for all or part of its thickness of approximately 850' in this location (4350'-5200'). The San Andres Formation in this area is a closed system separated from the overlying Grayburg Formation by low porosity carbonates and shales in the Grayburg-San Andres transition zone located at a depth of approximately 4300' in the proposed location. Geologic studies conducted for the selection this location combined with a 27-year history of operating a permitted Class II wastewater injection well at this location demonstrate that the proposed injection zone is readily capable accepting and containing the proposed combined acid gas and wastewater injection volumes well within NMOCD's recommended maximum injection pressures.

Initially the proposed total volume of injected fluid (acid gas and plant wastewater) will be approximately 2318 bbl/day with the possibility of injecting a maximum of up to approximately 7929 bbl/day at a maximum surface pressure of 986 pounds per square inch (psi). The characteristics of the plant wastewater will not change from the currently permitted stream which consists strictly of Class II wastewater from the plant operations. The acid gas which will be combined with the wastewater is a by-product of the treatment of natural gas that flows through the Plant for sweetening and dehydration.

In preparing this C-108 application Geolex conducted a detailed examination of all of the elements required to be evaluated in order to prepare, and obtain approval for, this application for injection. The elements of this evaluation include:

- Identification and characterization of all hydrocarbon-producing zones of wells that surround and are present on the Plant site
- The depths of perforated pay intervals in those wells relative to the depth of the target injection zone (San Andres Formation)
- The past and current use of the San Andres as a water injection zone
- Total feet of net porosity in the San Andres
- The stratigraphic and structural setting of the San Andres relative to any nearby active San Andres wells
- The identification and notification of all surface owners within a 1 mile radius of the proposed injection well
- The identification and notification of all wells within a 2-mile radius and of all operators within a 1 mile radius of the proposed injection well
- Identification and characterization of all plugged wells within a 1 mile radius of the proposed injection well
- The details of the proposed injection operation including general well design and average and maximum daily rates of injection and injection pressures
- Sources of injection fluid and compatibility with the formation fluid of the injection zone

- Location and identification of any fresh water bearing zones in the area, the depths and quality of available groundwater in the vicinity of the proposed well including a determination that there are no structures which could possibly communicate the disposal zone with any known sources of drinking water
- The preliminary revision of the existing Rule 118 plan for the facility to accommodate the proposed changes in operation and the new AGI facility (to be submitted in final form before commencing injection of acid gas)

Based upon this detailed evaluation, as summarized in this application, SUGS has determined that the proposed injection well is a safe and environmentally-sound project for the continued disposal of Class II plant wastewater in combination with the proposed volumes of acid gas from the Plant.

Furthermore, the project provides additional environmental benefit by permanently sequestering a significant volume of CO_2 which would otherwise continue to be released to the atmosphere through the operation of the existing sulfur reduction unit (SRU) at the Plant. Analysis of the reservoir characteristics of the San Andres in this area, and the experience gained from 27 years of operation of the existing plant wastewater injection well, confirms that it is an excellent closed-system reservoir in this area that should easily accommodate the future needs of SUGS for disposal of acid gas and wastewater from the Plant. The estimated total net porosity (over 6%) of the San Andres Formation in the area of the Plant disposal well exceeds 350 feet. This fact is confirmed by the ease with which the well has taken nearly 27 years of wastewater injection from the Plant. The San Andres Formation in the area is bounded vertically by tight carbonates, sandstones and shales of the Grayburg-San Andres transition, which serve to isolate the formation as a closed system from the overlying production in the Yates/Queen interval and the underlying potential production in the Blinebry zone, which only occurs outside the area of review to the east.

There are no wells within several miles of the Plant site that produce hydrocarbons from the San Andres or from the immediately overlying Grayburg or underlying Glorieta Formations. Therefore, the proposed AGI completed into the San Andres would not impact any offset operator's production. The only San Andres well within a one-mile radius of the proposed location is the SUGS Jal #3 Plant's own injection well. All other production or injection wells located within the area of review are associated with waterflood activity in the Yates-Seven Rivers-Queen producing zones well above the San Andres, and are perforated in those formations. The status of all the wells in the area of review that have been plugged has been confirmed and all the data on those wells is included as a part of this C-108 application.

All surface owners and operators within a one-mile radius of the proposed injection well have been provided notice pursuant to the requirements of NMOCD and the confirmation of those notices are included as part of this application.

2.0 INTRODUCTION AND ORGANIZATION OF THIS C-108 APPLICATION

The completed NMOCD Form C-108 is included before the Table of Contents of this document and references appropriate sections where data required to be submitted are included herein.

This application organizes and details all of the information required by NMOCD to evaluate and approve the submitted Form C-108 – Application for Authorization to Inject. This information is presented in the following categories:

- A detailed description of the location, construction and operation of the proposed injection well (Section 3.0)
- A summary of the regional and local geology, the hydrogeology, and the location of drinking water wells within the area of review (Section 4.0)
- The identification, location, status, production zones, and other relevant information on oil and gas wells within the area of review (Section 5.0)
- The identification and required notification for operators and surface land owners that are located within the area of review (Section 6.0)
- An affirmative statement, based on the analysis of geological conditions at the site, that there is no hydraulic connection between the proposed injection zone and any known sources of drinking water (Section 7.0), and

In addition, this application includes the following supporting information:

- Appendix A: Maps and spreadsheets showing all oil and gas wells included within the one-mile radius area of review of the proposed injection well These spreadsheets show the locations, producing status, and producing formations of all wells included in the one-mile area of review. Data on existing SUGS injection well..
- Appendix B: Maps and spreadsheets showing all plugged oil and gas wells included within the one mile area of review and associated plugging diagrams.
- Appendix C: Maps and spreadsheets showing operators in the one-mile radius area of review including copies of notification letters and registered mail receipts
- Appendix D: Maps and spreadsheets showing land ownership in the one-mile radius area of review including copies of notification letters and registered mail receipts
- Appendix E: Draft Revised Rule 118 Plan for Jal #3 and AGI

It is anticipated that this application shall be the subject of a NMOCD hearing in early February 2008.

3.0 PROPOSED CONSTRUCTION AND OPERATION OF JAL#3 AGI WELL

The proposed injection well will be drilled approximately 200 feet east of the existing disposal well (Woolworth Estate WD #1; see Figure 1). The new well (Jal #3 AGI #1) will be positioned such that it is sufficiently far from the existing well so as not to encounter that well in the new borehole or to in any way impede the successful plugging and abandonment of the current disposal well. Figure 2a is a general plot plan of the northern portion of the Jal #3 Plant that shows the proposed location of the new well and compression facilities relative to existing features at the site including the existing disposal well. Figure 2b is a schematic process and piping diagram that shows the AGI/wastewater injection system components from tie-ins to current Jal #3 Plant facilities. The proposed location for the Jal #3 AGI #1 is 1570 feet FNL and 1050 feet FWL of Section 33, T24S, R37E.

SUGS will apply for an operator number and file the required plugging bond for the proposed Jal #3 AGI #1 upon approval of this C-108 prior to commencement of drilling.

The new well will be designed and constructed such that it will serve as the injection conduit for a mixed stream of treated acid gas in addition to the Class II plant wastewater which is currently being injected into the San Andres Formation via the Woolworth Estate WD#1. The treated acid gas stream (TAG) will be approximately of the following composition:

- 78% CO_2
- 20% H_2S
- 2% C_1-C_7

The wastewater to be injected with the treated acid gas consists of the exempt plant wastewater stream that has been characterized in the facility's NMOCD discharge plan (GW-010) and which is currently approved for injection into the San Andres via the existing disposal well. Chemical and physical parameters of the currently injected wastewater are summarized in the discharge plan and in the information on the current injection well included in Appendix A.

The initial plan for the injection of acid gas is to inject approximately 1.5MMCF/D (578 bbl/d at operating injection pressure) and to ultimately scale up to inject 5MMCF/D (1929 bbl/d at operating injection pressure) when the additional capacity is required based on sulfur recovery unit (SRU) operating constraints.

Figure 3 is a process flow diagram for the injection process of both treated acid gas (TAG) and wastewater at a 1.5 MMCF/D rate. The figure shows that the total volume of fluid to be injected under this scenario is 2318 bbl/d (578bbl/d TAG and 1740 bbl/d wastewater). Figure 4 is a process flow diagram for the injection process of both treated acid gas (TAG) and wastewater at a 5 MMCF/D rate. The figure shows that the total volume of fluid to be injected under this scenario is 7929 bbl/d (1929 bbl/d TAG and 6000 bbl/d wastewater). Pressure reduction valves will be incorporated to assure that maximum surface injection pressure allowed by NMOCD will not be exceeded.

The calculated maximum allowable injection pressure would be approximately 986 psi (depending on specific gravity of final TAG/H_2O stream). It is likely that the average injection pressure will be significantly less based on the demonstrated performance of the existing well. The injection pressure for the existing Woolworth Estate WD#1 well has been running between 480-550psi; however, the well has a

NMOCD-permitted maximum injection pressure of 940 psi (see information on current well in Appendix A).

We have used the following method approved by NMOCD to calculate the preliminary proposed maximum injection pressure. The final maximum permitted surface injection pressure should be based on the final specific gravity of the injection fluid according to the following formula:

$IP_{max} = PG(D_{top})$ where: IP_{max}= maximum surface injection pressure (psi)
PG = pressure gradient of mixed injection fluid (psi/ft)
D_{top} = depth at top of perforated interval of injection zone (ft)

and $PG = 0.2 + 0.433\ (1.04 - SG_{bif})$ where: SG_{bif} = specific gravity of blended injection fluid

and $$SG_{bif} = \frac{[(SG_{ww})(WW_{vol})] + [(SG_{tag})(TAG_{vol})]}{WW_{vol} + TAG_{vol}}$$

where: SG_{ww} = specific gravity of wastewater
SG_{tag} = specific gravity of treated acid gas
WW_{vol} = volume of wastewater in mix
TAG_{vol} = volume of treated acid gas in mix

For the maximum requested injection volume, case it is assumed that:

$SG_{ww} = 1.04$
$SG_{tag} = 0.80$
$WW_{vol} = 6000$
$TAG_{vol} = 1929$
$D_{top} = 4375$

Therefore:

$$SG_{bif} = \frac{[(SG_{ww})(WW_{vol})] + [(SG_{tag})(TAG_{vol})]}{WW_{vol} + TAG_{vol}} = \frac{6240 + 1543}{7929} = 0.9816$$

$$PG = 0.2 + 0.433\ (1.04 - SG_{bif}) = 0.2 + 0.433\ (1.04 - 0.9816) = 0.22529$$

$$IP_{max} = PG(D_{top}) = .22529(4375) = 985.6$$

Based on the performance of the existing injection well, it is anticipated that the average injection pressure would not exceed 900-950 psi. Based on the above calculations, SUGS is requesting approval of a maximum injection pressure to be 986 psi at the surface.

Due to the corrosive nature of the injected fluid, the line that will convey the combined TAG/water stream to the well from the compression facilities will be a 3" stainless steel line (304 or 316). The final design for the compression facilities and associated piping and layout of H_2S alarms and other safety equipment

will be submitted for NMOCD review prior to commencement of injection operations. The schematic of the new AGI facilities and the tie-in to existing Jal #3 Plant are shown in Figures 2a and 2b and the preliminary well design for the injection well is shown on Figure 5. The well will have each string of the telescoping casing cemented to the surface and will include a subsurface safety valve on the production tubing to assure that fluid cannot flow back out of the well in the event of a failure of the injection equipment. In addition, the annular space between the production tubing and the well bore will be filled with an inert fluid such as diesel fuel as a further safety measure which is consistent with injection well designs which have been previously approved by NMOCD for acid gas injection.

It is anticipated that the existing disposal well will be used for the continued injection of plant wastewater while the new well is being drilled. After the new well is drilled and tested to assure that it will be able to accept the volume of injection fluid (without using acid gas), it will be completed with the approved injection equipment for the new combined stream of acid gas and plant wastewater. The new well will then be used only for injection of the plant wastewater while the acid gas compression facilities are constructed. At that time the existing plant wastewater disposal well (Woolworth Estate WD #1) will be plugged and abandoned prior to when injection of acid gas commences in combination with plant wastewater in the new well.

The draft revised Rule 118 plan, which is included as Appendix E to this application, will be finalized when the compression facility design and well connection design is complete and will be submitted for NMOCD review and approval prior to commencement of mixed TAG/wastewater injection into the Jal #3 AGI #1.

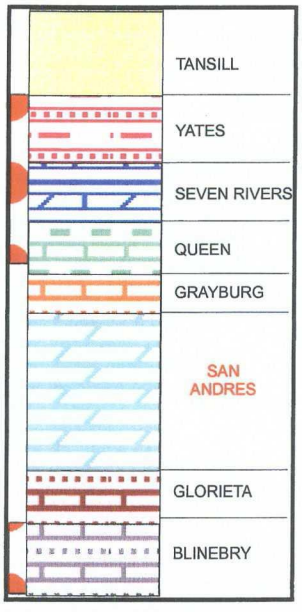
4.0 REGIONAL AND LOCAL GEOLOGY AND HYDROGEOLOGY

4.1 GENERAL GEOLOGIC SETTING

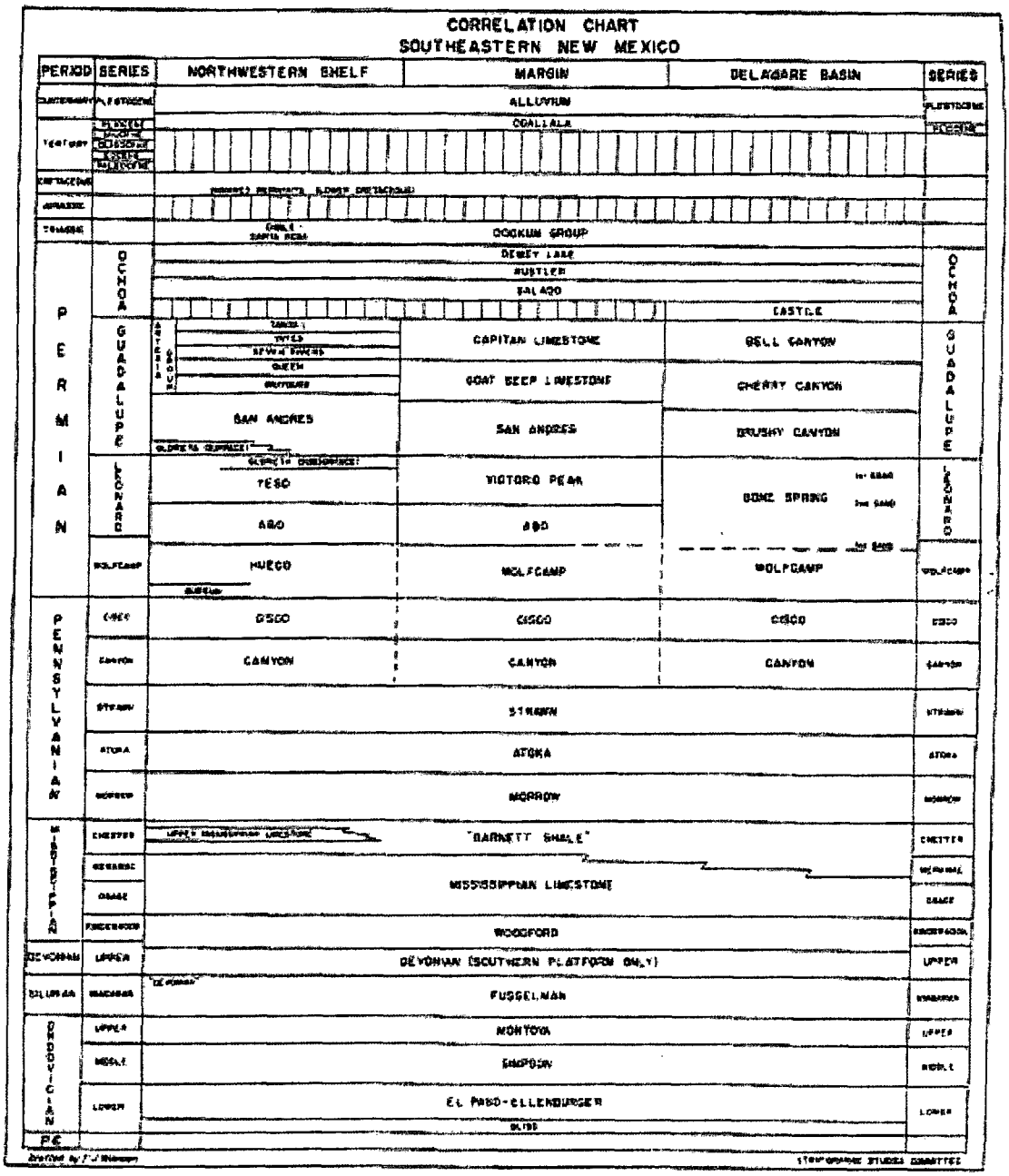
The SUGS Jal #3 Plant (the Plant) is located in the western half of Section 33, T 24 S, R 37 E, in Lea County, New Mexico, approximately 3.5 miles north of Jal (Figure 1). The Plant is located within a physiographic area which has been referred to as the Eunice Plain by various authors including Nicholson & Clebsch (1961). This area is almost entirely covered at the surface by Holocene reddish brown dune sand underlain by a hard caliche surface or calcareous silts which may be found in buried valleys or internally drained Quaternary playas. These dune sands are largely stabilized with shin oak, mesquite and some bur-grass. There are no surface bodies of water or groundwater discharge sites within one mile of the Plant and where drainages exist in interdunal areas, they are ephemeral, discontinuous, dry washes. These Quaternary and Holocene deposits are underlain by the discontinuous Ogallala Formation and the underlying Triassic redbeds of the Dockum Group. The Triassic units are in turn underlain by the Rustler Formation and followed by the Ochoa series of evaporites including the Castile and the Salado Formations. Beneath these formations is the Permian sequence of the Central Basin Platform described generally below.

4.2 PERMIAN BEDROCK GEOLOGY

The figure shown below is a generalized stratigraphic column showing the Permian Formations that underlie the Plant site. The Plant is located on the west side of the Central Basin Platform province of the Permian Basin, where Permian rocks generally dip to the west as they transition from a sequence of shelf and shelf-edge carbonates and sandstones to basinal-equivalent shale, sandstones, and limestones to the west. The perforation symbols on the left of this column show the formations that have produced oil and gas in the general vicinity of the Plant, and include the Yates, Seven Rivers, Queen Formations which overlie the San Andres injection target. The Blinebry Formation which underlies the San Andres and Glorieta Formations has only been productive along a north south line located approximately two miles east of the proposed location of Jal#3 AGI and well outside the one-mile radius area of review (see Appendices A and B for additional information on oil and gas wells within the area of review, and unitization maps for the area are included in Appendix C).



The Yates through Queen interval lies at depths ranging between 3,000 and 3,750 feet beneath the Plant surface. The San Andres is approximately 850 feet thick under the Plant, at depths between 4,350 and approximately 5,200 feet. The Blinebry, which does not produce within the area of review but rather approximately 2 miles east of the Plant site, is found at over 5,400 feet below the surface and the tight Glorieta Formation is between the base of the San Andres and the top of the Blinebry. The remainder of the Permian and older section below the Blinebry consists of rocks ranging in age to Ordovician deposited above Precambrian basement. A generalized stratigraphic section of the area taken from "The oil and gas fields of Southeastern New Mexico, 1960 Supplement" (Roswell Geological Society, 1960) is included below.



4.3 LITHOLOGIC AND RESERVOIR CHARACTERISTICS OF SAN ANDRES FORMATION

The San Andres Formation in the area of the Plant is composed largely of dolomites and shaly dolomites deposited in deeper water adjacent to basinal-transitional depositional environments. Porosity in these rocks is developed throughout the entire formation, where penetrated, but appears to be greater in the thicker-bedded portion of the upper half to two-thirds of the formation. Because of its high porosity and permeability, the San Andres has been used as a salt water disposal zone in a few wells in the area, and also as a source of water for secondary recovery operations in the nearby Yates-Queen fields. Formation fluids in the San Andres have total dissolved solids as high as 160,000 mg/l (Nicholson and Clebsch, 1961, Table 9, pp. 97-98). Only one well within the area of review in the vicinity of the Plant remains active in the San Andres; the Plant's own Class II disposal well (Woolworth Estate WD #1: API 3002527081)). This well will be plugged and abandoned when it is replaced by the proposed Jal #3 AGI as described above in section 3.

Figure 6 is a map of net porosity greater or equal to 6% in the San Andres Formation, based on the limited number of wells that penetrated at least $^2/_3$ of the way through the unit. This map was generated from modern porosity logs (either density/neutron, sidewall neutron porosity, or sonic). Porosity generally increases to the west. The Woolworth Estate WD #1 well (existing Jal#3 wastewater disposal well) has over 330 feet of porosity (estimated at 355 feet because that well does not go all the way through the San Andres), and has been used as a wastewater disposal well for the Plant since it was drilled in 1980. The black arrow on Figure 6 points to the only water supply well that is still active in the San Andres, as determined from the records available from the New Mexico Oil Commission - this well is clearly outside the area of review of the proposed injection well and far from any area that might be affected by the proposed injection.

Figures 7 and 8 are representative structural cross-sections that illustrate the pay and injection zones typical of the area (red bars). The cross-sections are referenced on the location map (Figure 9). The yellow shading denotes porosity in the San Andres. The porous San Andres is separated from the Yates-Queen interval by tight carbonates, sandstones, and shale in the Grayburg and uppermost San Andres. The tight carbonates provide a barrier between the active hydrocarbon reservoirs above, and the wet San Andres dolomites below. Similarly, the underlying tight Glorieta Formation separates the San Andres from the lower, productive Blinebry. Therefore the San Andres is a closed system ideally suited for an injection zone.

Figure 10 is a structure map drawn on the top of the Grayburg, which is the nearest horizon above the San Andres that has enough wells that penetrated its top to construct a reliable structure map (the preceding cross-sections show that the tops of the San Andres and Grayburg generally track each other structurally). This map shows that the Jal #3 Plant site lies above a structurally low trough (outlined by a yellow dashed line), which is deepest under the area of the existing Class II disposal well (Woolworth WD #1E). This structural trough is nearly 500 acres in area. Class II wastewater currently injected into this well is most likely accumulated in the area of this trough as would the proposed combined wastewater and acid gas injection fluids. When combined with net porosity in excess of 6% over 350 feet in the San Andres, this structural trough will provide all the needed capacity for combined wastewater and AGI from the proposed Jal #3 AGI. Figure 11 shows the anticipated maximum extent of 30 years of injection through the proposed Jal#3 AGI #1 based on a conservative 350 feet of San Andres Formation with greater than 6% net porosity. The figure includes the anticipated maximum extent and of both the initial scenario of total blended TAG/Wastewater fluid injection of 2318 bbl/d and the maximum scenario of total blended TAG/Wastewater fluid injection of 7929 bbl/d.

4.4 GROUNDWATER HYDROLOGY IN THE VICINITY OF THE PROPOSED INJECTION WELL

The Ogallala aquifer is the principal source of potable water in the area. The depth to groundwater is approximately 90 feet below ground surface. The background total dissolved solids (TDS) concentration for groundwater in the area is approximately 2,200 mg/l. See also Figure 12 for the location of the single water well within the area of review. Table 1 below summarizes all available information on other water wells located near the area of review shown on Figure 12 including the wells which the Jal #3 Plant uses for potable and fire water supply. The plant receives its water from water wells located in Section(s) 5 and 7, Township 25S, Range 38E (Hubb 1 through 5) and Section(s) 25 and 36, Township 24S, Range 37E (Cooper 1through 8). Other water wells are located in the vicinity of Crawford Ranch in Section 31, Township 24S, Range 37E. For more information, see Section 11.2 of the Application for Renewal of New Mexico Oil Conservation Division – Jal #3 Discharge Plan (GW-010) dated August 17, 2007. The Ogallala groundwater in the area of the Jal #3 plant ranges from 600 to 2,000 mg/l (Nicholson and Clebsch, 1961, Table 8, pp. 94-95).

The Ogallala aquifer slopes to the southeast with a gradient of approximately 10-12 feet per mile and imparts an easterly or southeasterly movement to the groundwater. References: Cronin, 1969; EI Paso Natural Gas Company, Discharge Plan, March 1981; Jal # 3 Approved Discharge Plan GW-010; Nicholson and Clebsch, 1961, Geology and Ground-water Conditions in Southern Lea County, NM; GW Report 6, NM Bureau of Mines and Mineral Resources, Socorro, NM. Based on the analysis of groundwater in the vicinity the certification that there is no evidence of potential communication between the proposed injection zone and any drinking water aquifer is included in Section 7.0 of this application.

Table 1: Wells From New Mexico State Engineers' Files Near The Area of Review of Proposed AGII

DB File Nbr	Use	Owner	Tws	Rng	Sec	q	q	q	Easting	Northing	Drill Date	Completion Date	Well Depth	Water Depth
CP 00304	DOM	J.J. SMITH	24S	37E	27	1	4		674118	3563008	N/A	N/A	N/A	N/A
CP 00309	NON	J.J. SMITH	24S	37E	27	1	3	2	673815	3563100	N/A	N/A	N/A	N/A
CP 00310	NON	J.J. SMITH	24S	37E	27	1	1	1	673608	3563502	N/A	N/A	N/A	N/A
CP 00311	NON	J.J. SMITH	24S	37E	34	3	4	2	674260	3560694	N/A	N/A	N/A	N/A
CP 00312	NON	J.J. SMITH	24S	37E	34	4	1	1	674455	3561103	N/A	N/A	N/A	N/A
CP 00501	SAN	AMERADA HESS CORPORATION	24S	37E	28	4	1	4	673019	3562484	3/13/1972	3/14/1972	110	70
CP 00299	DOM	J.J. SMITH	25S	37E	3	2	4	2	675081	3559901	N/A	N/A	N/A	N/A
CP 00549	N/A	N/A	24S	37E	31	3	3	4	669102	3560195	N/A	N/A	N/A	N/A
CP 00846	N/A	N/A	25S	37E	6	2	4		670203	3559513	N/A	N/A	N/A	N/A
CP 00300	STK	J.J. SMITH	25S	37E	3	4	2	1	674889	3559499	N/A	N/A	N/A	N/A
CP 00507	SAN	UNION TEX PETE CO.	25S	37E	5	4	2		671769	3559347	7/26/1973	8/16/1973	N/A	N/A

5.0 OIL AND GAS WELLS IN THE JAL #3 AGI #1 AREA OF REVIEW AND VICINITY

5.1 ACTIVE OIL AND GAS WELLS

Appendix A contains a complete list based on NMOCD records of all active and temporarily abandoned oil and gas wells within two miles (Figure A-1, Table A-1) and the one-mile radius (area of review) of the proposed AGI/wastewater disposal well. Information on the wells in the area of review includes their total depth, production or injection interval and current status. Figure A-2 and Table A-2 in Appendix A shows the location of all the active and temporarily abandoned wells within the area of review. This figure shows that only the existing SUGS SWD penetrates the San Andres section within the area of review. All available information on the existing SUGS injection well (Woolworth Estate WD#1), including pressure monitoring data, is included in Appendix A.

An earlier well (Langlie Mattix Woolworth Unit #009, API# 3002525373) in Section 28 was originally drilled to 4700 feet in the San Andres in 1976 as a water supply well. This well was plugged back to 4000 feet (above the Grayburg and San Andres) in April 1985, and recompleted as an oil production well in the Langlie Mattix pool. The well is currently an active producer.

The majority of the wells in this area are drilled to produce oil from the Yates-Queen interval. Deeper production from the Blinebry is only found well outside the area of review in an old and well-defined field (Justis Blinebry Field) located 2-3 miles east of the proposed Jal #3 AGI #1. The San Andres, which is a prolific producing zone higher up on the Central Basin Platform, is uniformly wet in the Plant area, and has been used for injection Class II wastewater from the Jal #3 Plant since 1980 and in other some other locations outside the area of review for the disposal of produced water from other zones. The Grayburg is tight and non-productive in this area and provides an excellent seal for the proposed injection in the San Andres Formation. Similarly, the tight Glorieta Formation below the San Andres isolates the proposed injection zone from lower formations.

5.2 PLUGGED OIL AND GAS WELLS

Appendix B contains a complete list based on NMOCD records of all plugged and abandoned and temporarily abandoned oil and gas wells within the one-mile radius (area of review) of the proposed AGI/wastewater disposal well (Table B-1) and includes plugging diagrams for each well. Appendix B also contains a CD with the complete NMOCD file on every plugged or temporarily-abandoned well within the area of review. Figure B-1 in Appendix B shows the location of all plugged and abandoned and temporarily abandoned wells within the area of review. Examination of all the available data shows that none of these wells ever reached the San Andres or even the Grayburg. These data show that there is no evidence of improperly plugged or abandoned wells within the area of review which might cause communication between the proposed injection zone in the San Andres and any other unit.

6.0 IDENTIFICATION AND REQUIRED NOTIFICATION OF OPERATORS AND SURFACE OWNERS WITHIN AREA OF REVIEW

Appendix C includes the data on the leases, units, and operators in the area of review. Figures C-1 to C-4, taken from NMOCD internet files, show the unitized leases in the area surrounding the location of the proposed SUGS AGI well. The circles shown in these figures correspond to the 2-mile circle depicted in Figure A-1.

Production in the area of review is controlled by 12 operators as currently listed by the NMOCD internet database (see Table A-2). These operators' addresses are listed in Table C-2.

Since all leases and production in the area of interest is controlled by the listed lease operators, all of these entities have been noticed, along with the land owners, according to the requirements of Section XIV of the C-108. The proposed public notice for publication and copies of actual individual notices for operators within area of review are included in Appendix C.

Appendix D includes a map (Figure D-1) showing the locations of surface land ownership in the area of review, and Table D-1 summarizes the landowners of record in the area of review, as available from the Lea County land records. Copies of actual individual notices to surface owners within the area of review are also included in Appendix D.

7.0 AFFIRMATIVE STATEMENT OF LACK OF HYDRAULIC CONNECTION BETWEEN PROPOSED INJECTION ZONE AND KNOWN SOURCES OF DRINKING WATER

As part of the work performed to support this application, a detailed investigation of the structure, stratigraphy and hydrogeology of the area surrounding the proposed Jal#3 AGI #1 injection well has been performed. This investigation included the analysis of available geologic data and hydrogeologic data from wells and literature identified in Sections 3, 4 and 5 above including related appendices. Based on this investigation and analysis of these data, it is clear that there are no open fractures, faults or other structures which could potentially result in the communication of the proposed injection zone with any known sources of drinking water in the vicinity as described above in Sections 4 and 5 of this application.

FIGURES

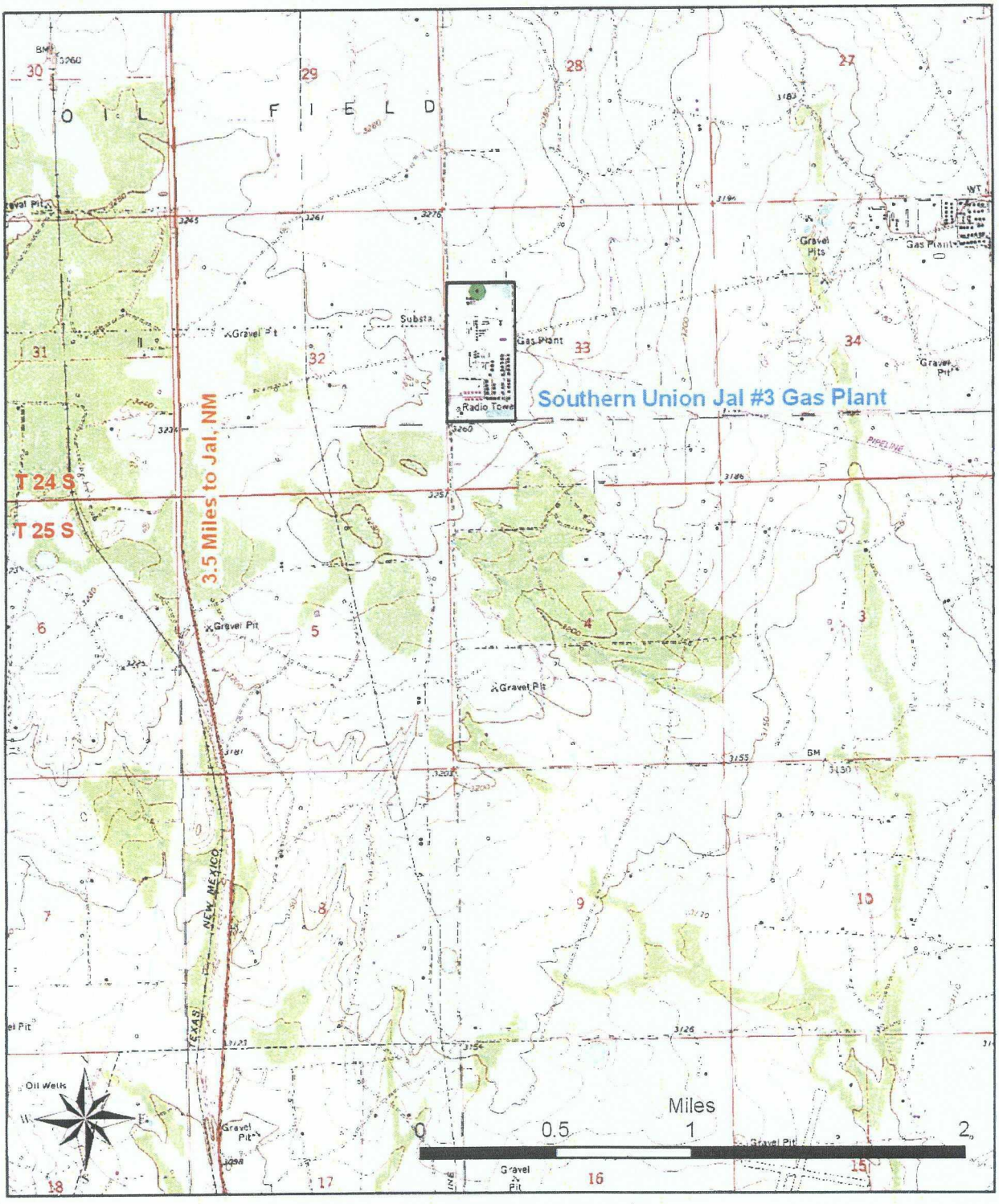
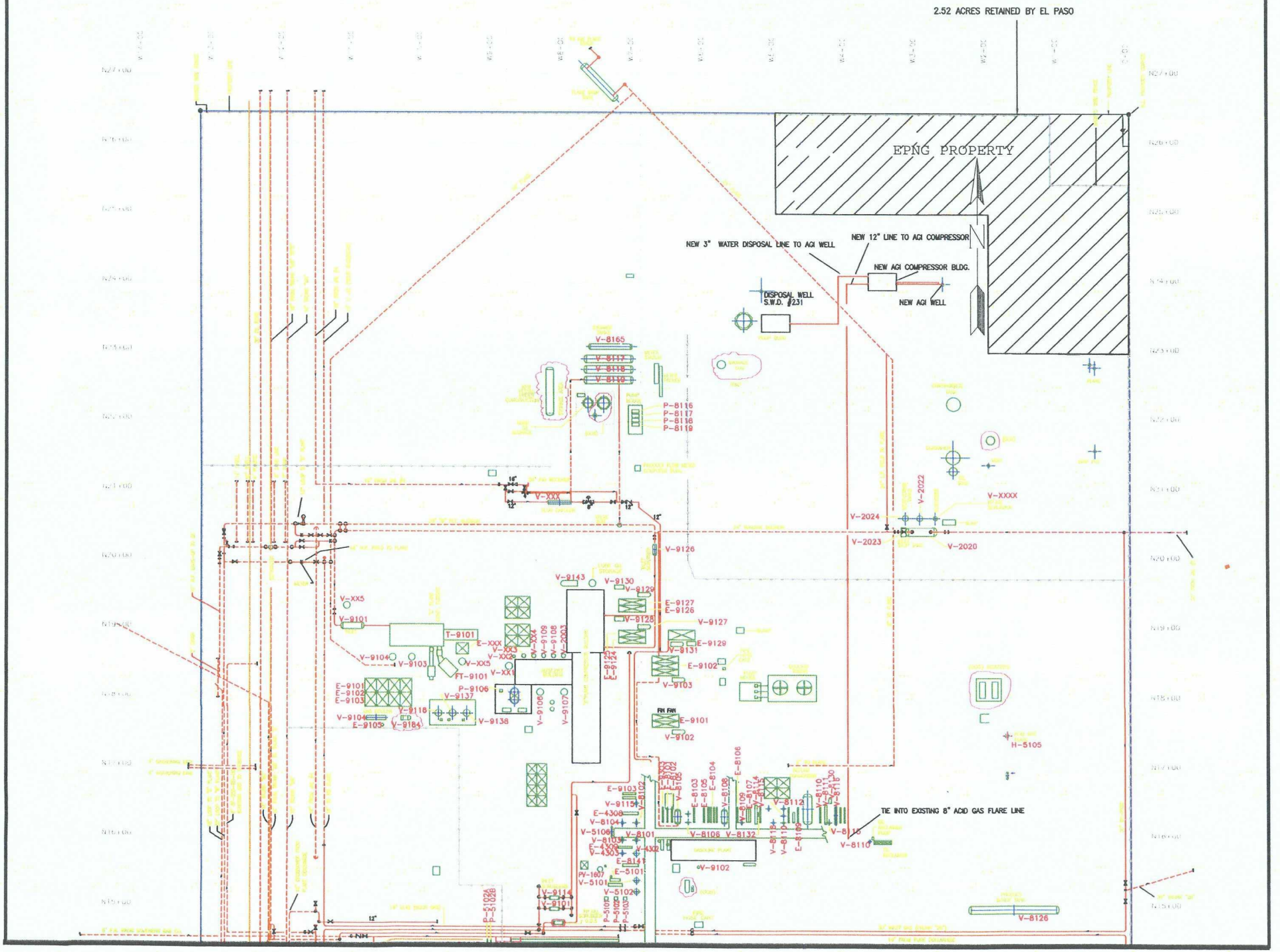


Figure 1:
Location of Southern Union Gas Services' Jal #3 Gas Plant

FIGURE 2a NORTH PORTION OF JAL #3 GAS PLANT SHOWING LOCATION AND TIE-IN OF PROPOSED AGI WELL AND COMPRESSION FACILITIES TO EXISTING PLANT



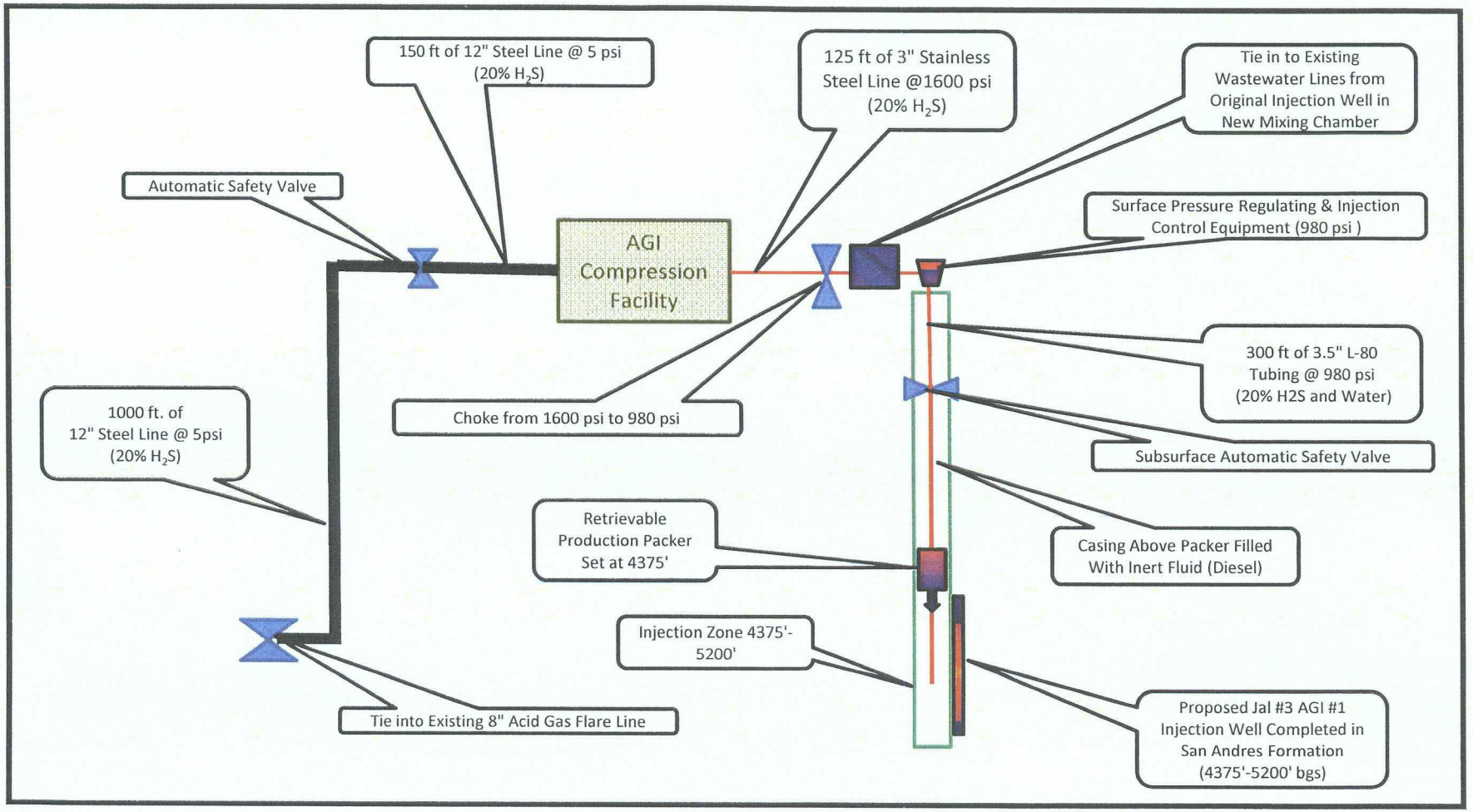
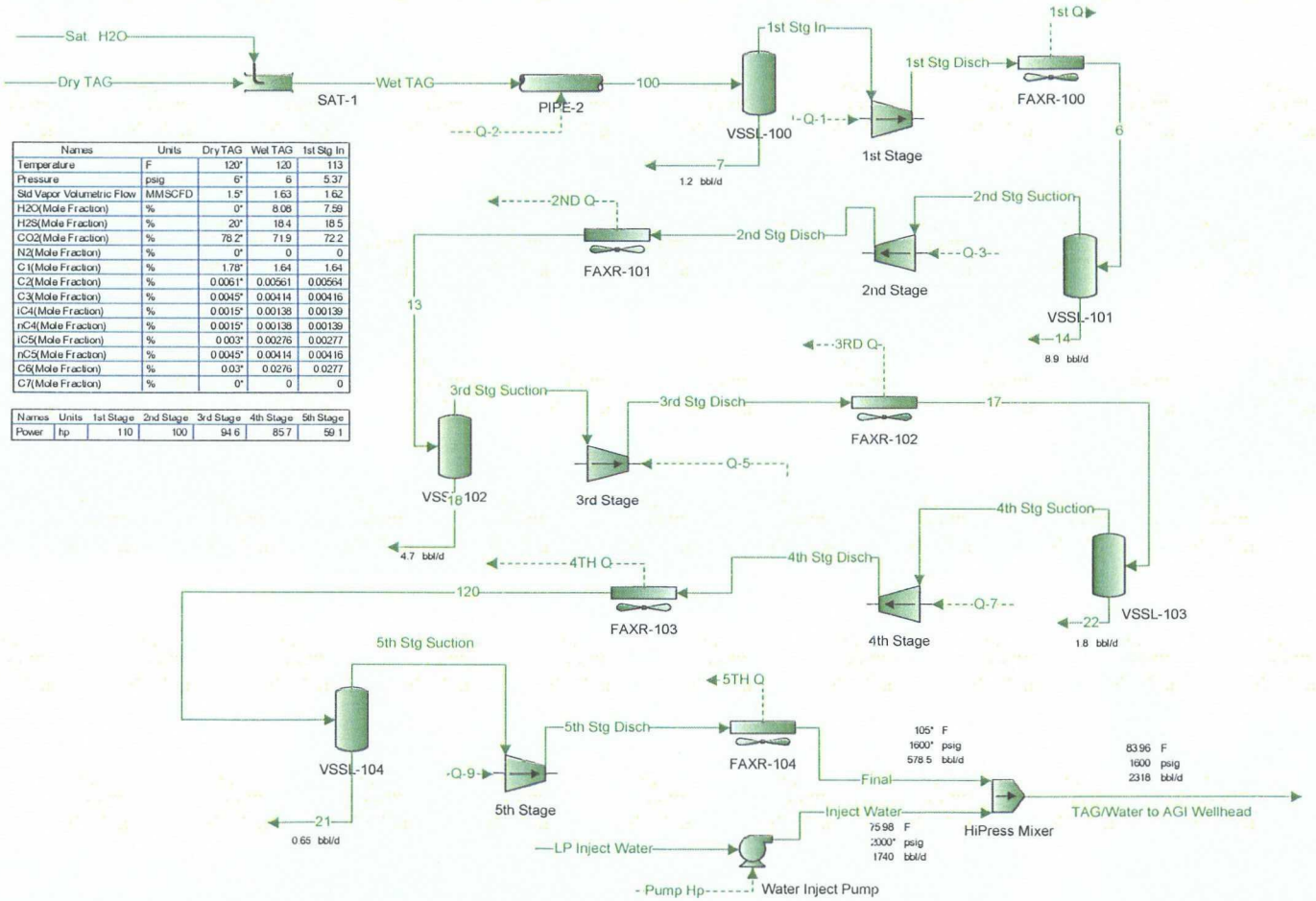


Figure 2b Schematic of SUGS Jal #3 Gas Plant Acid Gas Injection System Components

Figure 3
Southern Union Gas Services
Jal 3 Gas Plant
1.5 MMCFD Acid Gas Injection Compressor Process Flow Diagram

Names	Units	100	1st Stg Disch	2nd Stg Suction	2nd Stg Disch	3rd Stg Suction	3rd Stg Disch	4th Stg Suction	4th Stg Disch	5th Stg Suction	5th Stg Disch	Final
Pressure	psig	5.37	37#	34	109#	106	292#	287	738#	733	1.61e+003	1.6e+003*
Temperature	F	113	285	120	285	120	285	120	285	120	259	105*
Std Vapor Volumetric Flow	MMSCFD	1.63	1.62	1.56	1.56	1.52	1.52	1.51	1.51	1.51	1.51	1.51
Compressibility		0.988	0.993	0.985	0.983	0.962	0.959	0.903	0.901	0.738	0.772	0.273
Vapor Volumetric Flow	ft^3/h	5.84e+004	2.81e+004	2.21e+004	1.1e+004	8.38e+003	4.18e+003	3.09e+003	1.58e+003	1.01e+003	606	169
Mass Flow	lb/h	7.06e+003	7.06e+003	6.93e+003	6.93e+003	6.87e+003	6.87e+003	6.84e+003	6.84e+003	6.83e+003	6.83e+003	6.83e+003

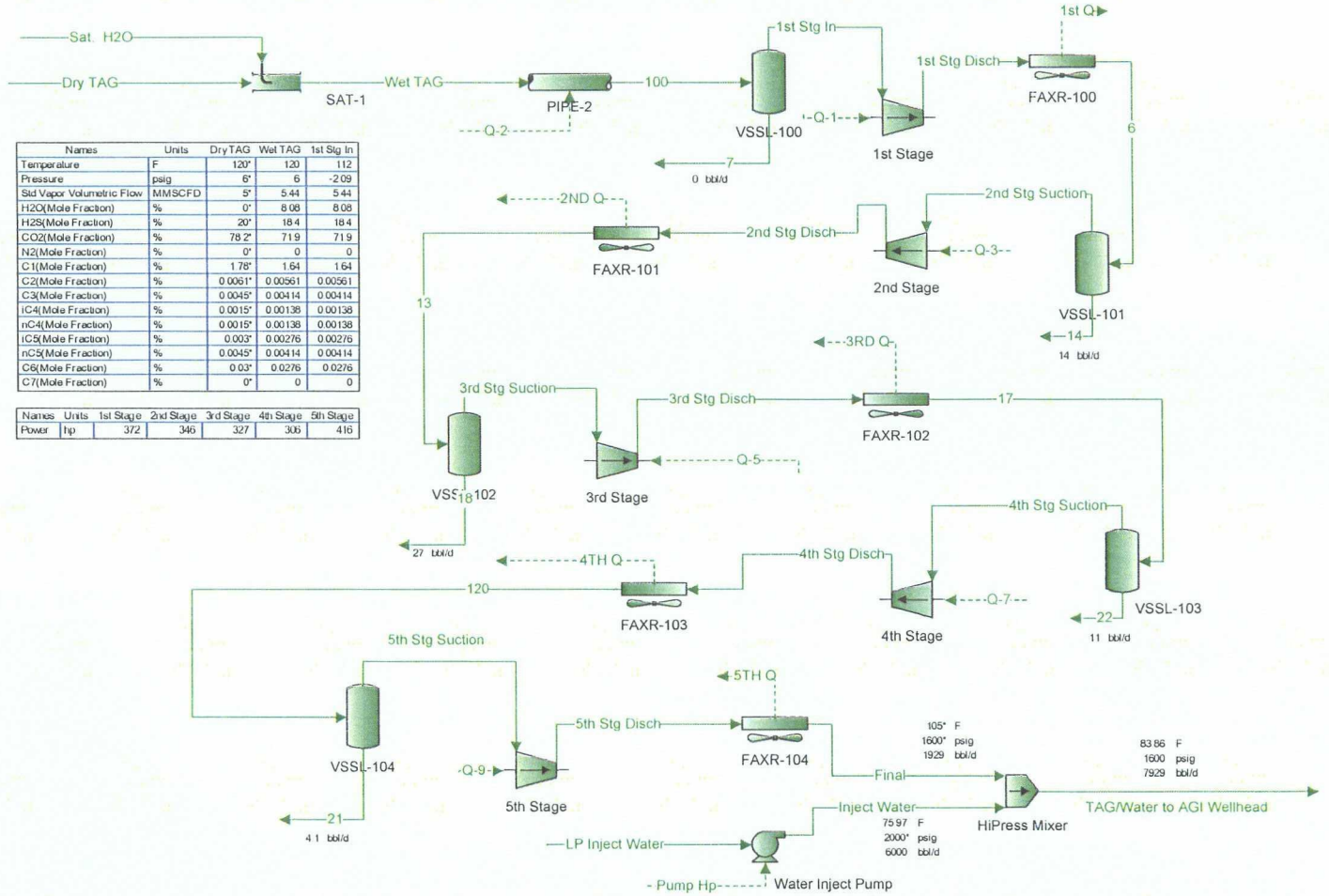


Names	Units	Dry TAG	Wet TAG	1st Stg In
Temperature	F	120*	120	113
Pressure	psig	6*	6	5.37
Std Vapor Volumetric Flow	MMSCFD	1.5*	1.63	1.62
H2O(Mole Fraction)	%	0*	8.08	7.59
H2S(Mole Fraction)	%	20*	18.4	18.5
CO2(Mole Fraction)	%	78.2*	71.9	72.2
N2(Mole Fraction)	%	0*	0	0
C1(Mole Fraction)	%	1.78*	1.64	1.64
C2(Mole Fraction)	%	0.0061*	0.00561	0.00564
C3(Mole Fraction)	%	0.0045*	0.00414	0.00416
iC4(Mole Fraction)	%	0.0015*	0.00138	0.00139
nC4(Mole Fraction)	%	0.0015*	0.00138	0.00139
iC5(Mole Fraction)	%	0.003*	0.00276	0.00277
nC5(Mole Fraction)	%	0.0045*	0.00414	0.00416
C6(Mole Fraction)	%	0.03*	0.0276	0.0277
C7(Mole Fraction)	%	0*	0	0

Names	Units	1st Stage	2nd Stage	3rd Stage	4th Stage	5th Stage
Power	hp	110	100	94.6	85.7	59.1

Figure 4
Southern Union Gas Services
Jal 3 Gas Plant
5 MMCFD Acid Gas Injection Compressor Process Flow Diagram

Names	Units	100	1st Stg Disch	2nd Stg Suction	2nd Stg Disch	3rd Stg Suction	3rd Stg Disch	4th Stg Suction	4th Stg Disch	5th Stg Suction	5th Stg Disch	Final
Pressure	psig	-2.09	17.2#	14.2	57.7#	54.7	162#	157	420#	415	1.61e+003	1.6e+003*
Temperature	F	112	285	120	285	120	285	120	285	120	371	105*
Std Vapor Volumetric Flow	MMSCFD	5.44	5.44	5.33	5.33	5.13	5.13	5.05	5.05	5.02	5.02	5.02
Compressibility		0.995	0.996	0.991	0.99	0.978	0.976	0.946	0.942	0.859	0.882	0.272
Vapor Volumetric Flow	ft^3/h	3.27e+005	1.56e+005	1.31e+005	6.51e+004	5.04e+004	2.5e+004	1.91e+004	9.61e+003	6.86e+003	2.67e+003	562
Mass Flow	lb/h	2.36e+004	2.36e+004	2.34e+004	2.34e+004	2.3e+004	2.3e+004	2.28e+004	2.28e+004	2.28e+004	2.28e+004	2.28e+004



Names	Units	Dry TAG	Wet TAG	1st Stg In
Temperature	F	120*	120	112
Pressure	psig	6*	6	-2.09
Std Vapor Volumetric Flow	MMSCFD	5*	5.44	5.44
H2O(Mole Fraction)	%	0*	8.08	8.08
H2S(Mole Fraction)	%	20*	18.4	18.4
CO2(Mole Fraction)	%	78.2*	71.9	71.9
N2(Mole Fraction)	%	0*	0	0
C1(Mole Fraction)	%	1.78*	1.64	1.64
C2(Mole Fraction)	%	0.0061*	0.00561	0.00561
C3(Mole Fraction)	%	0.0045*	0.00414	0.00414
iC4(Mole Fraction)	%	0.0015*	0.00138	0.00138
nC4(Mole Fraction)	%	0.0015*	0.00138	0.00138
iC5(Mole Fraction)	%	0.003*	0.00276	0.00276
nC5(Mole Fraction)	%	0.0045*	0.00414	0.00414
C6(Mole Fraction)	%	0.03*	0.0276	0.0276
C7(Mole Fraction)	%	0*	0	0

Names	Units	1st Stage	2nd Stage	3rd Stage	4th Stage	5th Stage
Power	hp	372	346	327	306	416

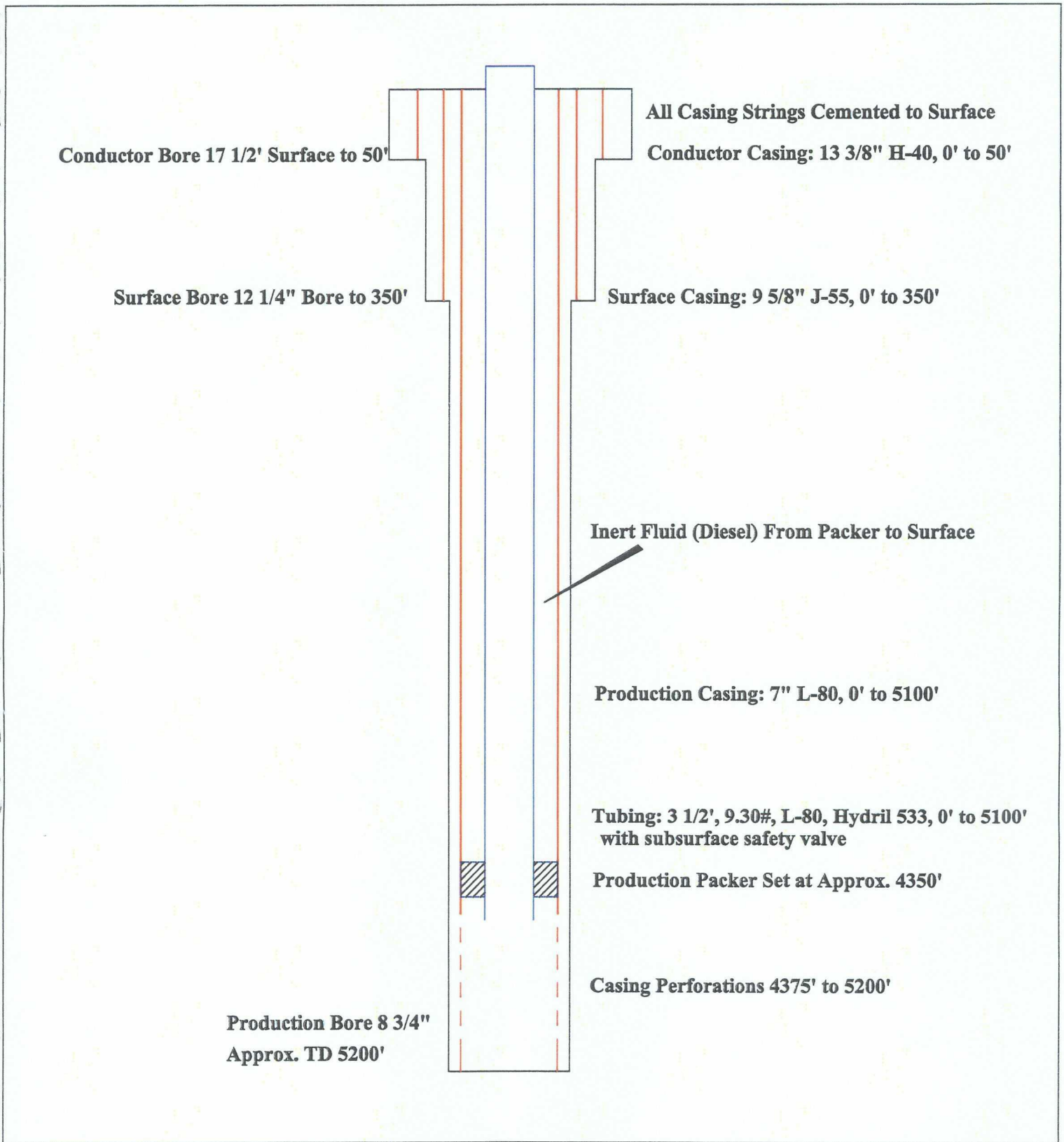
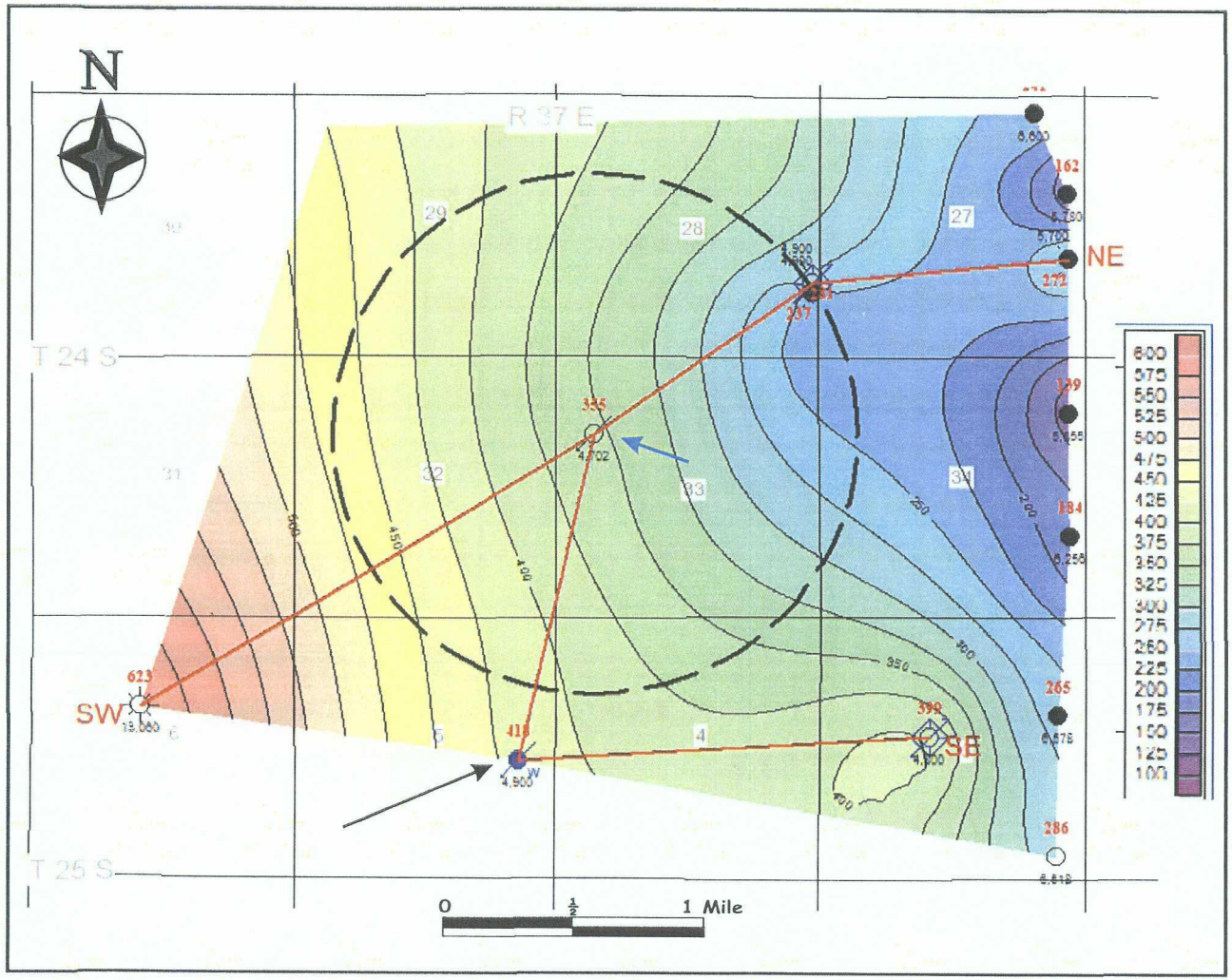


Figure 5:
Jal #3 AGI #1 Design



THE BLUE ARROW POINTS TO THE SUBJECT WATER INJECTION WELL ON THE PLANT SITE; THE BLACK ARROW POINTS TO THE ONLY OTHER NEARBY, ACTIVE SAN ANDRES INJECTION WELL.

NET POROSITY IS ESTIMATED IN THE NORTHWEST CORNER OF THE STUDY AREA BECAUSE OF THE ABSENCE OF ANY WELLS THERE THAT PENETRATED THE SAN SAN ANDRES. WARMER COLORS DENOTE AREAS OF HIGHER NET POROSITY.

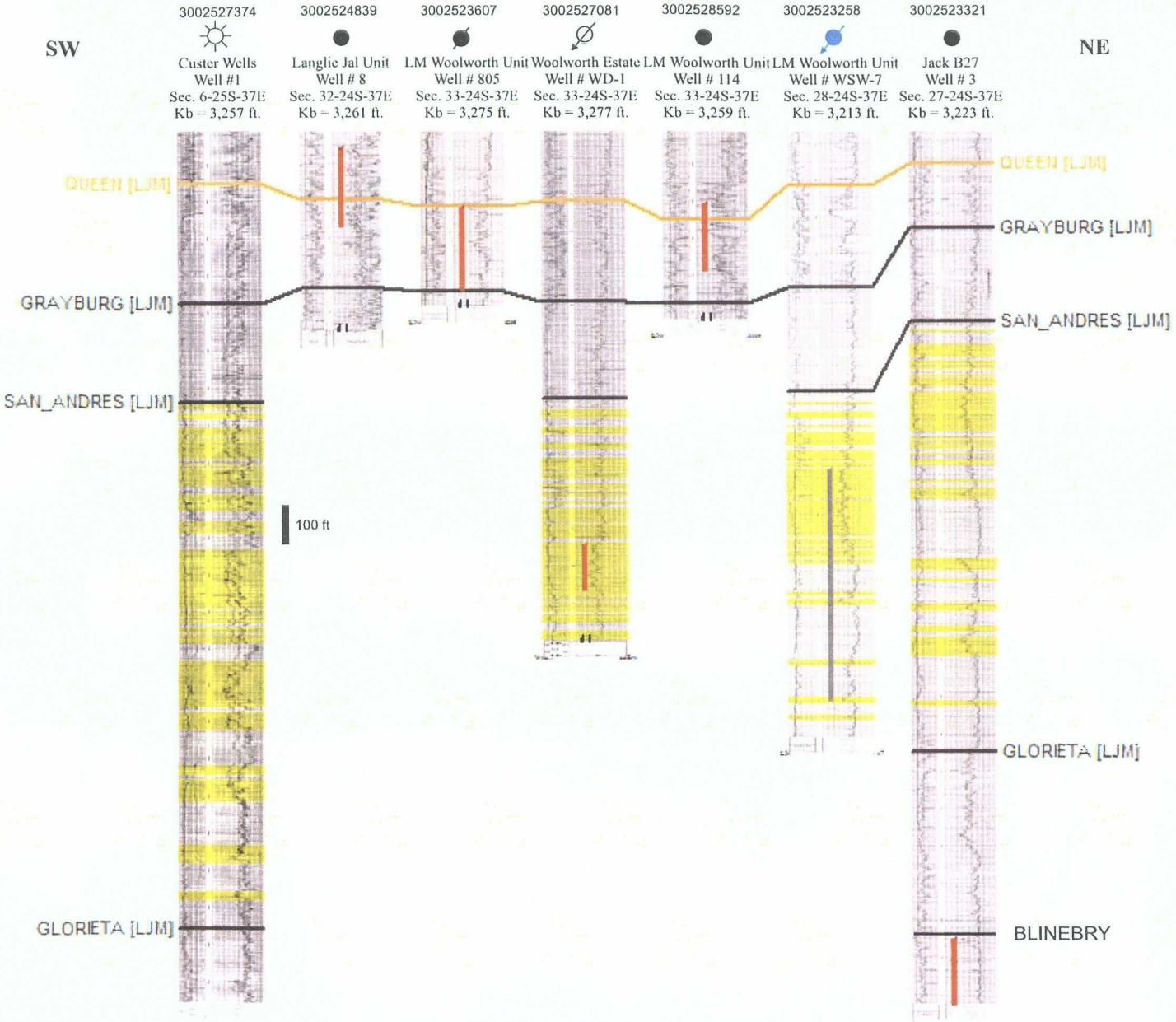
FIGURE 6

Geolex, Inc®

SUGS JAL #3 PLANT
Lea County, New Mexico

San Andres Net Porosity
>6%

CLIENT: Southern Union Gas Services DATE: 081907



San Andres porosity >6% shown in yellow

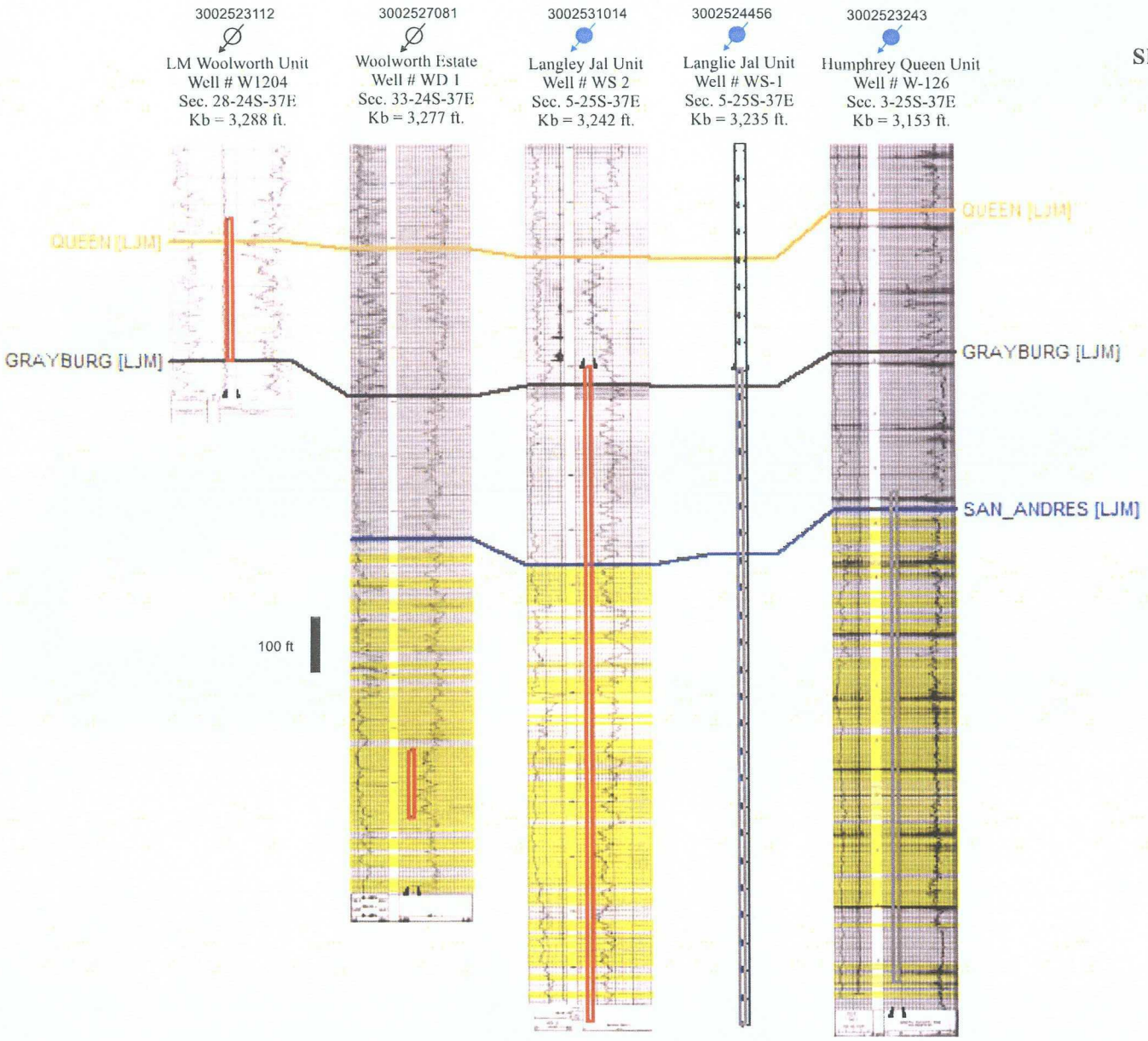
FIGURE 7

Geolex, Inc®

SUGS JAL #3 PLANT
Lea County, New Mexico

TYPE STRUCTURE
SECTION 1

CLIENT: Southern Union Gas Services DATE: 081407



San Andres porosity >6%
shown in yellow

FIGURE 8

Geolex, Inc®

SUGS JAL #3 PLANT
Lea County, New Mexico

TYPE STRUCTURE
SECTION 2

CLIENT: Southern Union Gas Services DATE: 081407

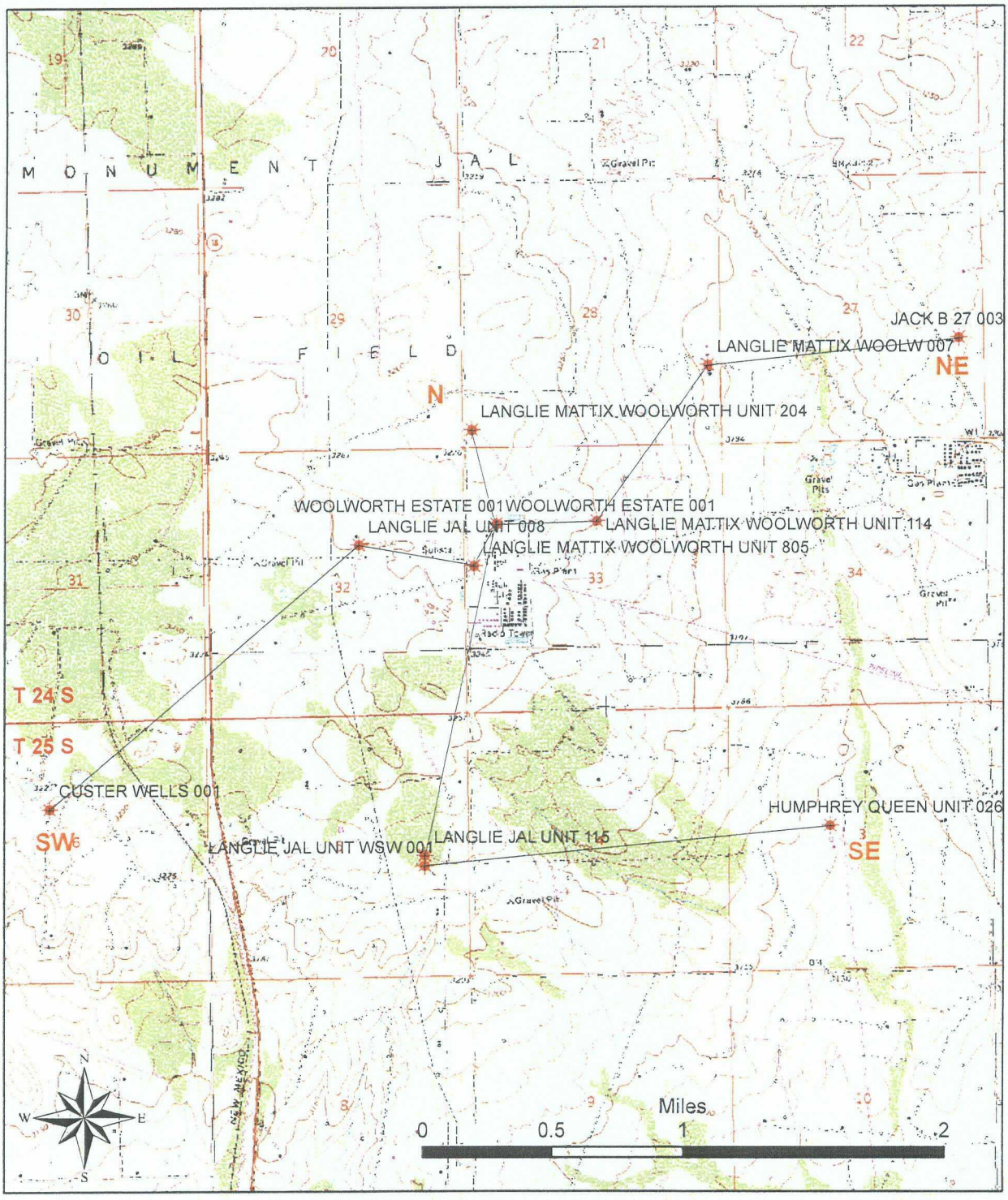
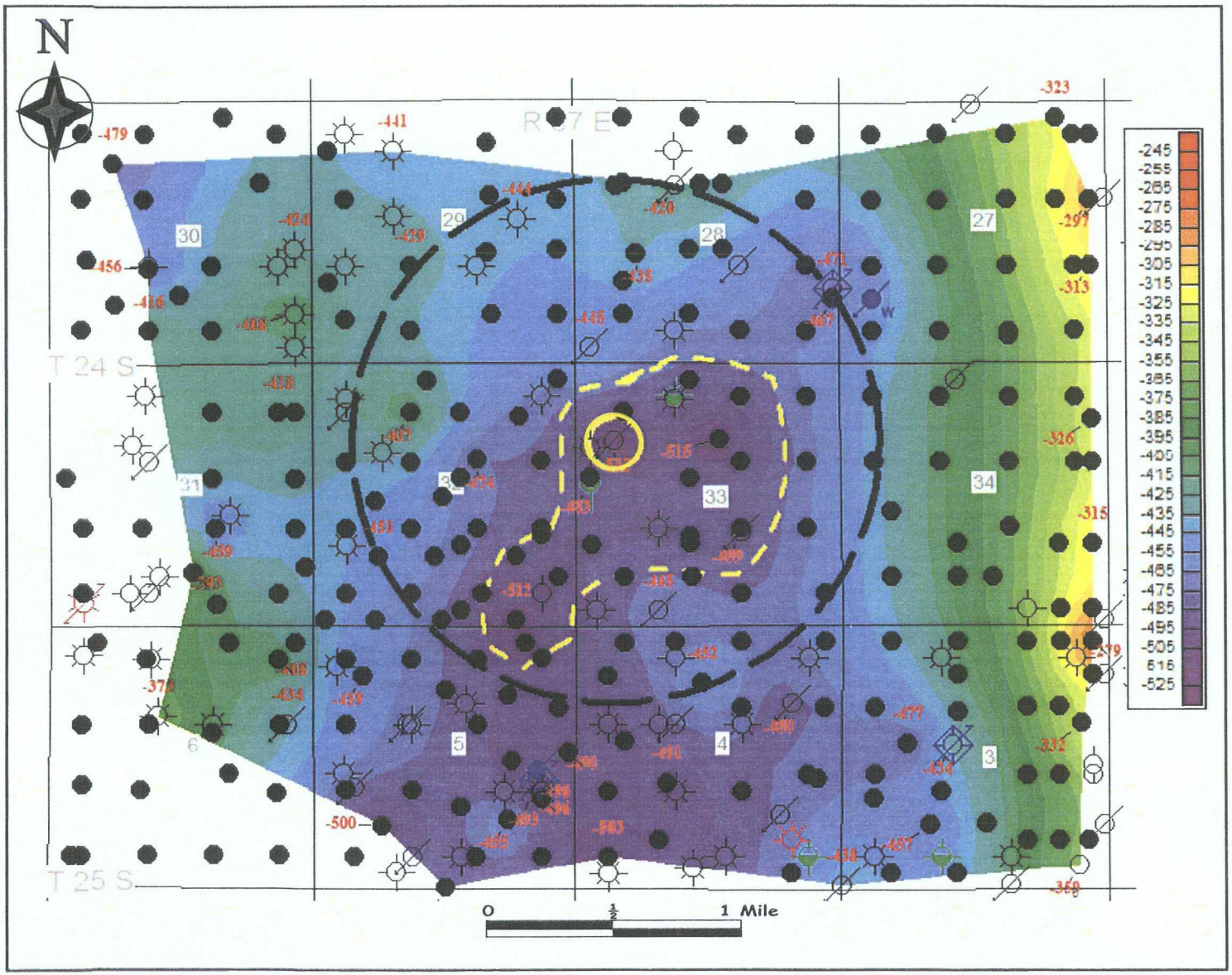


Figure 9:
Location of Cross-Sections Shown in Figures 7 and 8

✸ Wells Used in Cross-Sections



Cooler (blues) colors are lower; location of subject WIW indicated by yellow circle. The dashed yellow line outlines the deepest part of the structural trough under the plant site.

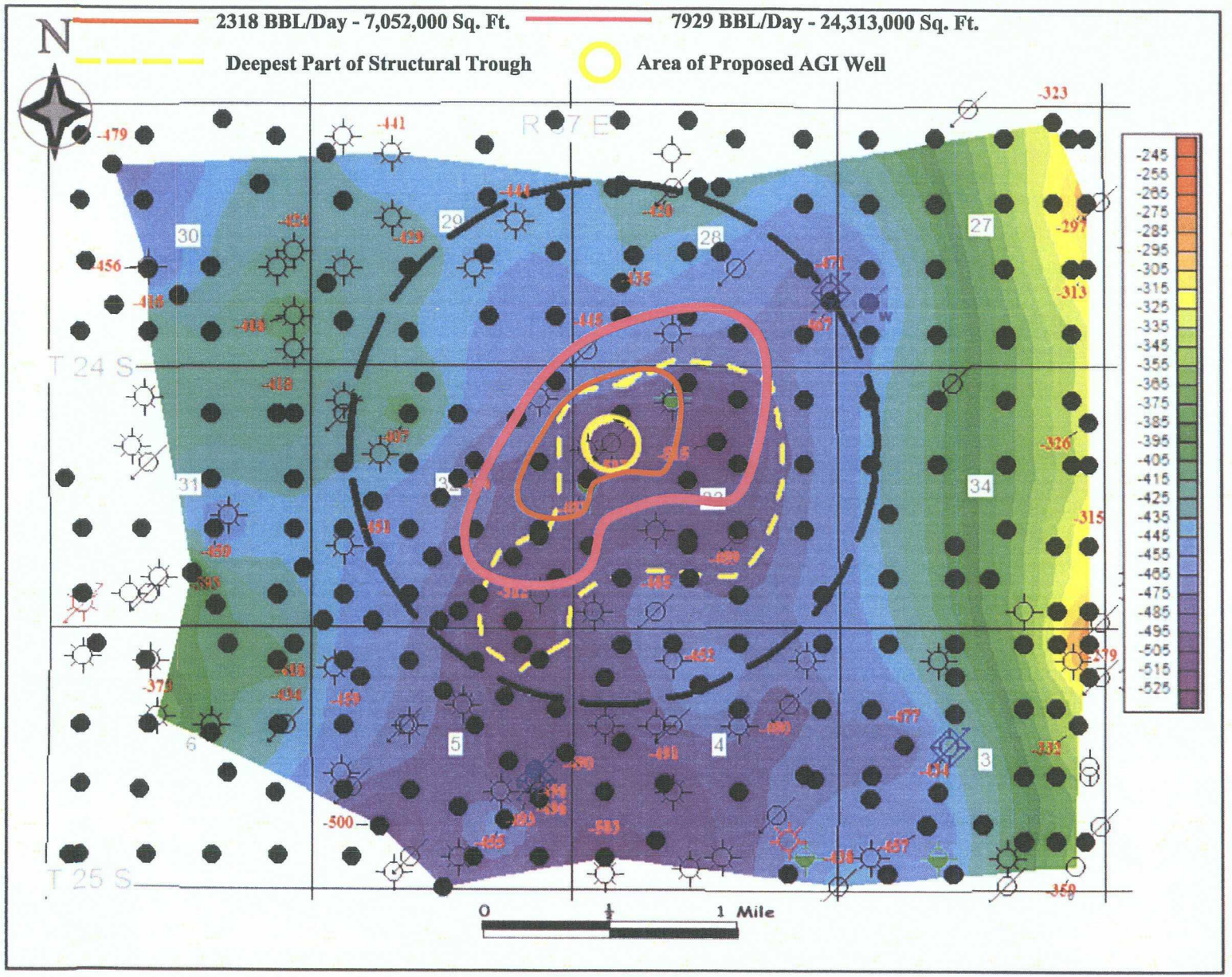
FIGURE 10

Geolex, Inc®

SUGS JAL#3 PLANT
Lea County, New Mexico

STRUCTURE, TOP OF GRAYBURG
C. I. = 10 Feet

CLIENT: Southern Union Gas Services DATE: R 081907



Cooler (blues) colors are lower; location of subject WIW indicated by yellow circle. The dashed yellow line outlines the deepest part of the structural trough under the plant site.

FIGURE 11

Geolex, Inc®

SUGS JAL#3 PLANT
Lea County, New Mexico

MAXIMUM EXTENT OF INJECTED FLUID
FOR 2318 and 7929 bbl/d AFTER 30 YEARS

CLIENT: Southern Union Gas Services DATE: 12/11/2007

GEOLEX®
INCORPORATED

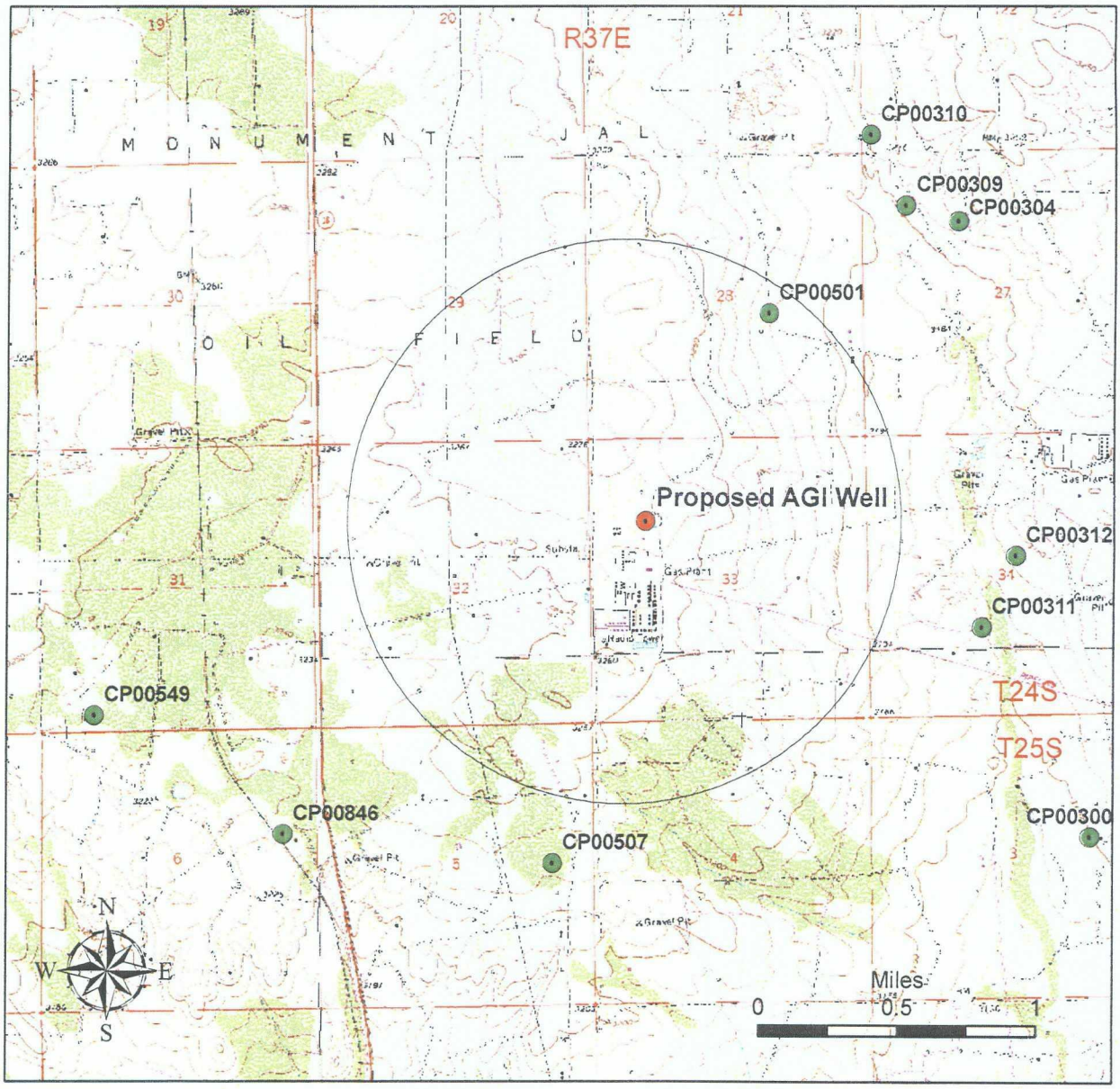


Figure 12:
Locations of Water Wells Adjacent to Southern Union Gas Services Jal #3 Plant

- Water Wells Listed in NM State Engineers' Files
- Proposed AGI Well

APPENDIX A

ACTIVE OIL & GAS WELL DATA
AND
DATA ON EXISTING SUGS INJECTION WELL

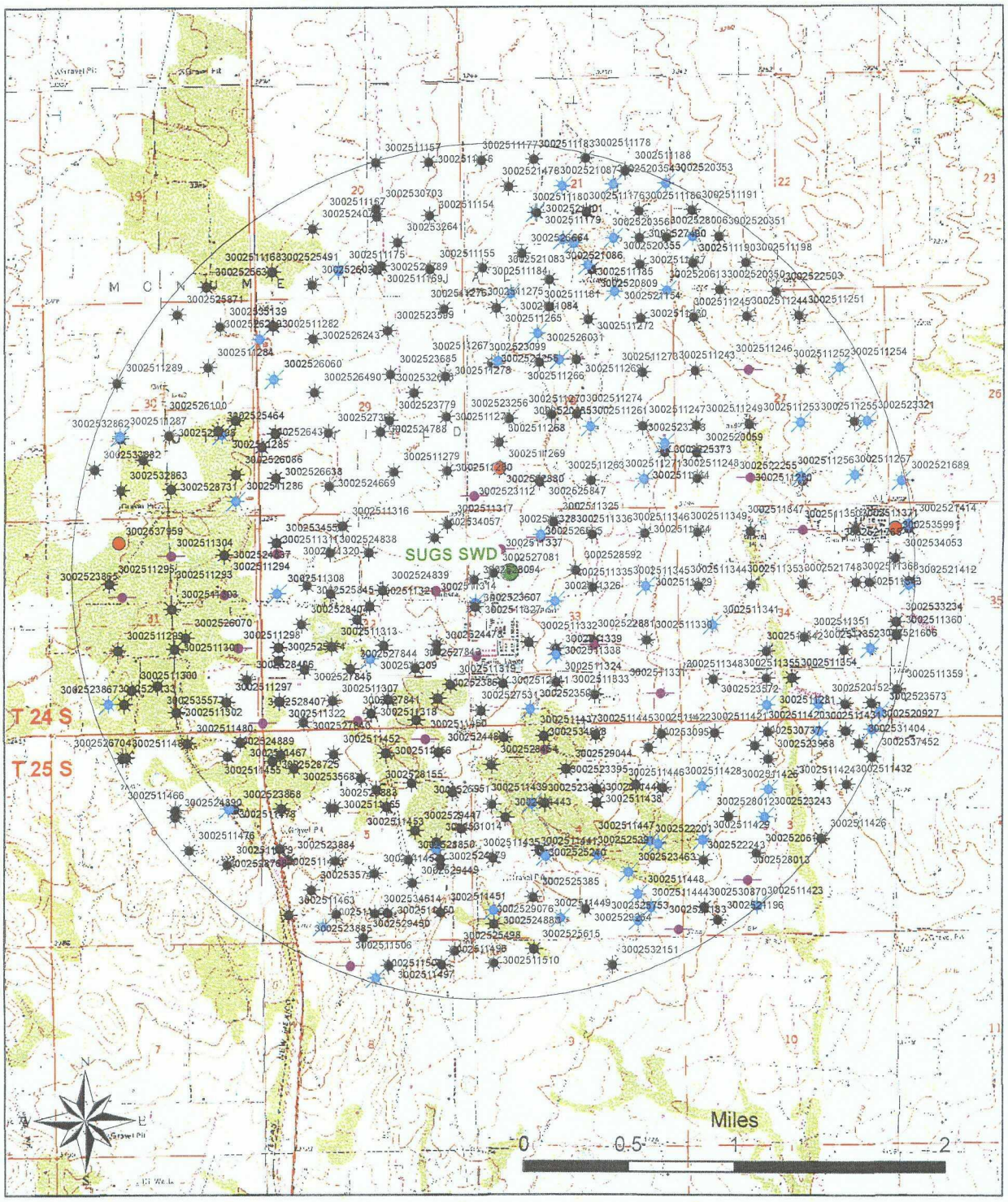


Figure A-1:
Locations of Wells Within Two Miles of SUGS SWD Well

Active
TA
Existing SUGS SWD
Plugged
Not Drilled

Table A-1: Identification of Wells Within Two Miles of Proposed SUGS AGI Well												
API #	Well Name	Status	Unit	Twp.	Rng.	Sect.	ftg_ns	ns_cd	ftg_ew	ew_cd	Operator	Well Type
3002511154	LANGLIE JACK UNIT 012	Active	I	24.0S	37E	20	1980	S	660	E	MCDONNOLD OPERATING INC	Injection
3002511155	LANGLIE JACK UNIT 015	Active	P	24.0S	37E	20	660	S	660	E	MCDONNOLD OPERATING INC	Oil
3002511156	LANGLIE JACK UNIT 009	Active	H	24.0S	37E	20	1980	N	660	E	MCDONNOLD OPERATING INC	Oil
3002511157	LANGLIE JACK UNIT 008	Active	G	24.0S	37E	20	1980	N	1980	E	MCDONNOLD OPERATING INC	Oil
3002511167	LANGLIE JACK UNIT 013	Active	J	24.0S	37E	20	1980	S	1980	E	MCDONNOLD OPERATING INC	Oil
3002511168	KING HARRISON C 003	Active	L	24.0S	37E	20	660	S	660	W	PRIMAL ENERGY CORPORATION	Gas
3002511169	LANGLIE JACK UNIT 014	Active	O	24.0S	37E	20	660	S	1980	E	MCDONNOLD OPERATING INC	Injection
3002511175	CALLEY A 001	Plugged	N	24.0S	37E	20	660	S	2310	W	WISER OIL CO (THE)	Gas
3002511176	LANGLIE JACK UNIT 011	Active	L	24.0S	37E	21	1980	S	660	E	MCDONNOLD OPERATING INC	Oil
3002511177	LANGLIE JACK UNIT 010	Active	E	24.0S	37E	21	1980	N	660	W	MCDONNOLD OPERATING INC	Injection
3002511178	J F BLACK 001	Active	G	24.0S	37E	21	1980	N	1980	E	PRONGHORN MANAGEMENT CORP	Oil
3002511179	J F BLACK 002	Plugged	K	24.0S	37E	21	1980	S	1980	W	TEXACO EXPLORATION	Gas
3002511180	BLACK 001	Active	J	24.0S	37E	21	1980	S	1980	E	BETWELL OIL & GAS CO	Injection
3002511181	BLACK 003	Active	N	24.0S	37E	21	330	S	2310	W	BETWELL OIL & GAS CO	Oil
3002511183	J F BLACK 004	Active	F	24.0S	37E	21	1980	N	1980	W	PRONGHORN MANAGEMENT CORP	Oil
3002511184	LANGLIE JACK UNIT 016	Active	M	24.0S	37E	21	660	S	660	W	MCDONNOLD OPERATING INC	Injection
3002511185	SHELL BLACK 002	Plugged	O	24.0S	37E	21	660	S	1980	E	MACK ENERGY CORP	Gas
3002511186	KNIGHT 001	Active	I	24.0S	37E	21	1980	S	660	E	WHITING OIL AND GAS CORPORATION	Oil
3002511187	KNIGHT 003	Active	P	24.0S	37E	21	660	S	660	E	WHITING OIL AND GAS CORPORATION	Oil
3002511188	JAMISON 001	Active	H	24.0S	37E	21	2310	N	990	E	WHITING OIL AND GAS CORPORATION	Oil
3002511190	KNIGHT 004	Active	M	24.0S	37E	22	660	S	660	W	WHITING OIL AND GAS CORPORATION	Oil
3002511191	KNIGHT 002	Active	L	24.0S	37E	22	1980	S	660	W	WHITING OIL AND GAS CORPORATION	Oil
3002511198	CORTLAND MYERS UNIT 004	Active	N	24.0S	37E	22	660	S	1980	W	WHITING OIL AND GAS CORPORATION	Oil
3002511243	LANGLIE MATTIX WOOLWORTH UNIT 502	Active	E	24.0S	37E	27	1980	N	660	W	BETWELL OIL & GAS CO	Oil
3002511244	LANGLIE MATTIX WOOLWORTH UNIT 503	Active	C	24.0S	37E	27	660	N	1980	W	BETWELL OIL & GAS CO	Oil
3002511245	LANGLIE MATTIX WOOLWORTH UNIT 501	Active	D	24.0S	37E	27	660	N	660	W	BETWELL OIL & GAS CO	Oil
3002511246	LANGLIE MATTIX WOOLWORTH UNIT 504	TA	F	24.0S	37E	27	1980	N	1980	W	BETWELL OIL & GAS CO	Injection
3002511247	LANGLIE MATTIX WOOLWORTH UNIT 601	Active	L	24.0S	37E	27	1980	S	660	W	BETWELL OIL & GAS CO	Injection
3002511248	LANGLIE MATTIX WOOLWORTH UNIT 602	Active	M	24.0S	37E	27	660	S	660	W	BETWELL OIL & GAS CO	Oil
3002511249	LANGLIE MATTIX WOOLWORTH UNIT 603	Active	K	24.0S	37E	27	1980	S	1980	W	BETWELL OIL & GAS CO	Oil
3002511250	LANGLIE MATTIX WOOLWORTH UNIT 604	TA	N	24.0S	37E	27	660	S	1980	W	BETWELL OIL & GAS CO	Injection
3002511251	LANGLIE MATTIX WOOLWORTH UNIT 701	Active	B	24.0S	37E	27	660	N	1980	E	BETWELL OIL & GAS CO	Oil
3002511252	LANGLIE MATTIX WOOLWORTH UNIT 702	Active	G	24.0S	37E	27	1980	N	1980	E	BETWELL OIL & GAS CO	Oil
3002511253	LANGLIE MATTIX WOOLWORTH UNIT 703	Plugged	J	24.0S	37E	27	1980	S	1980	E	BETWELL OIL & GAS CO	Injection
3002511254	JACK B 27 004	Plugged	H	24.0S	37E	27	1980	N	990	E	CONTINENTAL OIL CO	Oil
3002511255	LANGLIE MATTIX WOOLWORTH UNIT 705	Active	I	24.0S	37E	27	1980	S	660	E	BETWELL OIL & GAS CO	Oil
3002511256	JACK B 27 006	Plugged	O	24.0S	37E	27	660	S	1980	E	CONTINENTAL OIL CO	Oil
3002511257	LANGLIE MATTIX WOOLWORTH UNIT 707	Plugged	P	24.0S	37E	27	660	S	660	E	BETWELL OIL & GAS CO	Injection
3002511260	LANGLIE MATTIX WOOLWORTH UNIT 401	Active	A	24.0S	37E	28	660	N	660	E	BETWELL OIL & GAS CO	Oil
3002511261	LANGLIE MATTIX WOOLWORTH UNIT 304	Active	I	24.0S	37E	28	1980	S	660	E	BETWELL OIL & GAS CO	Oil
3002511262	LANGLIE MATTIX WOOLWORTH UNIT 305	Active	G	24.0S	37E	28	1650	N	2310	E	BETWELL OIL & GAS CO	Oil
3002511263	LANGLIE MATTIX WOOLWORTH UNIT 306	Active	O	24.0S	37E	28	660	S	1980	E	BETWELL OIL & GAS CO	Oil
3002511264	LANGLIE MATTIX WOOLWORTH UNIT 307	Active	P	24.0S	37E	28	660	S	660	E	BETWELL OIL & GAS CO	Injection
3002511265	LANGLIE MATTIX WOOLWORTH UNIT 102	Active	D	24.0S	37E	28	330	N	990	W	BETWELL OIL & GAS CO	Oil
3002511266	LANGLIE MATTIX WOOLW 103	Plugged	F	24.0S	37E	28	1650	N	2510	W	AMERADA HESS CORP	Oil
3002511267	WOOLWORTH 004	Plugged	E	24.0S	37E	28	1650	N	990	W	BP AMERICA PRODUCTI	Gas
3002511268	LITIE WOO_WORTH 004	Active	L	24.0S	37E	28	1650	S	990	W	MCDONNOLD OPERATING INC	Gas
3002511269	LITIE WOO_WORTH 003	Active	M	24.0S	37E	28	990	S	990	W	MCDONNOLD OPERATING INC	Gas
3002511270	LANGLIE MATTIX WOOLWORTH UNIT 201	Active	K	24.0S	37E	28	2310	S	2310	W	BETWELL OIL & GAS CO	Oil
3002511271	LANGLIE MATTIX WOOLWORTH UNIT 202	Plugged	N	24.0S	37E	28	660	S	660	E	BETWELL OIL & GAS CO	Injection
3002511272	LANGLIE MATTIX WOOLWORTH UNIT 301	Active	B	24.0S	37E	28	660	N	1980	E	BETWELL OIL & GAS CO	Oil
3002511273	LANGLIE MATTIX WOOLWORTH UNIT 302	Active	H	24.0S	37E	28	1980	N	660	E	BETWELL OIL & GAS CO	Injection
3002511274	WOOLWORTH 003	Active	J	24.0S	37E	28	2310	S	2310	E	WESTBROOK OIL CORP	Gas
3002511275	LANGLIE MATTIX WOOLWORTH UNIT 101	Active	C	24.0S	37E	28	330	N	2310	W	BETWELL OIL & GAS CO	Oil
3002511276	LANGLIE JACK UNIT 017	Active	A	24.0S	37E	29	330	N	330	E	MCDONNOLD OPERATING INC	Injection
3002511277	JACK A 29 002	Active	I	24.0S	37E	29	2310	S	330	E	MCDONNOLD OPERATING INC	Injection
3002511278	JACK A 29 003	Active	H	24.0S	37E	29	1970	N	330	E	MCDONNOLD OPERATING INC	Oil
3002511279	JACK A 29 004	Active	O	24.0S	37E	29	990	S	1650	E	MCDONNOLD OPERATING INC	Injection
3002511280	JACK B 29 001	Active	P	24.0S	37E	29	990	S	330	E	MCDONNOLD OPERATING INC	Oil
3002511281	LANGLIE MATTIX WOOLWORTH UNIT 164	Active	P	24.0S	37E	34	330	S	990	E	BETWELL OIL & GAS CO	Oil

Table A-1: Identification of Wells Within Two Miles of Proposed SUGS AGI Well												
API #	Well Name	Status	Unit	Twp.	Rng.	Sect.	ftg_ns	ns_cd	ftg_ew	ew_cd	Operator	Well Type
3002511282	W H HARRISON A WN COM 002	Active	D	24.0S	37E	29	660	N	660	W	BP AMERICA PRODUCTION COMPANY	Gas
3002511283	WM H HARRISON D WN COM 001	Active	L	24.0S	37E	29	1980	S	660	W	BP AMERICA PRODUCTION COMPANY	Gas
3002511284	JACK B 30 001	Active	H	24.0S	37E	30	1650	N	990	E	PLANTATION OPERATING LLC	Oil
3002511285	C D WOOLWORTH 001	Plugged	I	24.0S	37E	30	1980	S	660	E	GULF OIL CORP	Gas
3002511286	C D WOOLWORTH 002	Plugged	P	24.0S	37E	30	330	S	330	E	GULF OIL CORP	Gas
3002511287	C D WOOLWORTH 003	Plugged	K	24.0S	37E	30	1980	S	1980	W	GULF OIL CORP	Gas
3002511289	COOPER JAL UNIT 232	Active	F	24.0S	37E	30	1980	N	1917	W	SDG RESOURCES, L.P.	Oil
3002511293	LANGLIE JAL UNIT 011	TA	H	24.0S	37E	31	1980	N	660	E	PHOENIX HYDROCARBONS OPERATING CORP	Injection
3002511294	MARTIN A 002	Active	A	24.0S	37E	31	990	N	660	E	LEWIS B BURLESON INC	Gas
3002511295	MARTIN B 001	Active	F	24.0S	37E	31	1650	N	1650	W	PLANTATION OPERATING LLC	Gas
3002511297	LANGLIE JAL UNIT 027	Active	P	24.0S	37E	31	660	S	660	E	PHOENIX HYDROCARBONS OPERATING CORP	Injection
3002511298	LANGLIE JAL UNIT 018	TA	I	24.0S	37E	31	1980	S	330	E	PHOENIX HYDROCARBONS OPERATING CORP	Injection
3002511299	LANGLIE JAL UNIT 016	Active	K	24.0S	37E	31	1980	S	1842	W	PHOENIX HYDROCARBONS OPERATING CORP	Oil
3002511300	J W SHERRELL 005	Active	N	24.0S	37E	31	990	S	2172	W	PLANTATION OPERATING LLC	Gas
3002511301	LANGLIE JAL UNIT 017	Active	J	24.0S	37E	31	1980	S	1930	E	PHOENIX HYDROCARBONS OPERATING CORP	Injection
3002511302	LANGLIE JAL UNIT 028	Active	O	24.0S	37E	31	440	S	1900	E	PHOENIX HYDROCARBONS OPERATING CORP	Oil
3002511303	LANGLIE JAL UNIT 012	Active	G	24.0S	37E	31	2310	N	1977	E	PHOENIX HYDROCARBONS OPERATING CORP	Oil
3002511304	LANGLIE JAL UNIT 001	TA	B	24.0S	37E	31	990	N	1977	E	PHOENIX HYDROCARBONS OPERATING CORP	Injection
3002511307	LANGLIE JAL UNIT 025	Active	N	24.0S	37E	32	660	S	1980	W	PHOENIX HYDROCARBONS OPERATING CORP	Injection
3002511308	LANGLIE JAL UNIT 010	Plugged	E	24.0S	37E	32	1980	N	660	W	PHOENIX HYDROCARBONS OPERATING CORP	Injection
3002511309	STATE B 32 001	Plugged	J	24.0S	37E	32	1650	S	2310	E	JOHN M KELLY	Oil
3002511310	LANGLIE JAL UNIT 009	Active	F	24.0S	37E	32	1980	N	1980	W	PHOENIX HYDROCARBONS OPERATING CORP	Injection
3002511311	LANGLIE JAL UNIT 003	TA	D	24.0S	37E	32	990	N	660	W	PHOENIX HYDROCARBONS OPERATING CORP	Injection
3002511312	HUMBLE L STATE 003	Active	I	24.0S	37E	32	3300	N	660	E	MIRAGE ENERGY INC	Gas
3002511313	LANGLIE JAL UNIT 020	Active	K	24.0S	37E	32	1980	S	1980	W	PHOENIX HYDROCARBONS OPERATING CORP	Injection
3002511314	LANGLIE JAL UNIT 007	TA	H	24.0S	37E	32	1980	N	660	E	PHOENIX HYDROCARBONS OPERATING CORP	Injection
3002511315	LANGLIE JAL UNIT 021	Active	J	24.0S	37E	32	1980	S	1980	E	PHOENIX HYDROCARBONS OPERATING CORP	Injection
3002511316	PENROC STATE 001	Active	C	24.0S	37E	32	330	N	2310	W	WESTBROOK OIL CORP	Oil
3002511317	LANGLIE JAL UNIT 006	Active	A	24.0S	37E	32	330	N	330	E	PHOENIX HYDROCARBONS OPERATING CORP	Oil
3002511318	JALMAT STATE GAS COM 003	Active	O	24.0S	37E	32	330	S	2310	E	BP AMERICA PRODUCTION COMPANY	Gas
3002511319	JALMAT STATE GAS COM 002	Active	P	24.0S	37E	32	990	S	330	E	BP AMERICA PRODUCTION COMPANY	Gas
3002511320	LANGLIE JAL UNIT 005	Active	B	24.0S	37E	32	990	N	2310	E	PHOENIX HYDROCARBONS OPERATING CORP	Injection
3002511321	JALMAT STATE GAS COM 001	Active	G	24.0S	37E	32	2310	N	2310	E	BP AMERICA PRODUCTION COMPANY	Gas
3002511322	LANGLIE JAL UNIT 026	Active	M	24.0S	37E	32	660	S	660	W	PHOENIX HYDROCARBONS OPERATING CORP	Injection
3002511323	LANGLIE JAL UNIT 019	Active	L	24.0S	37E	32	1980	S	660	W	PHOENIX HYDROCARBONS OPERATING CORP	Injection
3002511324	LANGLIE MATTIX WOOLWORTH UNIT 001	Active	N	24.0S	37E	33	990	S	2310	W	BETWELL OIL & GAS CO	Oil
3002511325	LANGLIE MATTIX WOOLWORTH UNIT 801	Active	C	24.0S	37E	33	330	N	2310	W	BETWELL OIL & GAS CO	Oil
3002511326	LANGLIE MATTIX WOOLWORTH UNIT 802	Plugged	F	24.0S	37E	33	2310	N	2310	W	BETWELL OIL & GAS CO	Injection
3002511327	NORTH SHORE WOOLWORTH 003	Plugged	E	24.0S	37E	33	2310	N	330	W	BURLINGTON RESOURCES OIL & GAS CO	Gas
3002511328	C D WOOLWORTH 001	Plugged	C	24.0S	37E	33	660	N	1980	W	PHILLIPS PETROLEUM CO	Oil
3002511329	LANGLIE MATTIX WOOLWORTH UNIT 111	Plugged	H	24.0S	37E	33	1980	N	660	E	BETWELL OIL & GAS CO	Injection
3002511330	LANGLIE MATTIX WOOLWORTH UNIT 112	Active	I	24.0S	37E	33	1980	S	660	E	BETWELL OIL & GAS CO	Oil
3002511331	LANGLIE MATTIX WOOLWORTH UNIT 113	TA	P	24.0S	37E	33	660	S	330	E	BETWELL OIL & GAS CO	Injection
3002511332	M C WOOLWORTH 004	Active	J	24.0S	37E	33	1980	S	1980	E	SOUTHWEST ROYALTIES INC	Gas
3002511333	LANGLIE MATTIX WOOLWORTH UNIT 115	Active	O	24.0S	37E	33	660	S	1980	E	BETWELL OIL & GAS CO	Oil
3002511334	LANGLIE MATTIX WOOLWORTH UNIT 116	Active	A	24.0S	37E	33	660	N	660	E	BETWELL OIL & GAS CO	Oil
3002511335	LANGLIE MATTIX WOOLWORTH UNIT 117	Active	G	24.0S	37E	33	1980	N	1980	E	BETWELL OIL & GAS CO	Oil
3002511336	LANGLIE MATTIX WOOLWORTH UNIT 118	Active	B	24.0S	37E	33	660	N	1980	E	BETWELL OIL & GAS CO	Injection
3002511337	LANGLIE MATTIX WOOLWORTH UNIT 804	TA	D	24.0S	37E	33	990	N	990	W	BETWELL OIL & GAS CO	Injection
3002511338	LANGLIE MATTIX WOOLWORTH UNIT 903	Active	K	24.0S	37E	33	1800	S	2310	W	BETWELL OIL & GAS CO	Oil
3002511339	WOOLWORTH 001	Plugged	K	24.0S	37E	33	1650	S	2310	W	LEWIS B BURLESON INC	Gas
3002511340	LANGLIE MATTIX WOOLWORTH UNIT 902	TA	L	24.0S	37E	33	1650	S	330	W	BETWELL OIL & GAS CO	Injection
3002511341	LANGLIE MATTIX WOOLWORTH UNIT 142	Zone Plugged	L	24.0S	37E	34	2310	S	990	W	BETWELL OIL & GAS CO	Injection
3002511342	LANGLIE MATTIX WOOLWORTH UNIT 141	Active	K	24.0S	37E	34	1650	S	2319	W	BETWELL OIL & GAS CO	Oil
3002511343	LANGLIE MATTIX WOOLWORTH UNIT 121	Active	H	24.0S	37E	34	1980	N	660	E	BETWELL OIL & GAS CO	Injection
3002511344	LANGLIE MATTIX WOOLWORTH UNIT 122	Active	F	24.0S	37E	34	1980	N	1980	W	BETWELL OIL & GAS CO	Injection
3002511345	LANGLIE MATTIX WOOLWORTH UNIT 123	Active	E	24.0S	37E	34	1980	N	660	W	BETWELL OIL & GAS CO	Oil
3002511346	LANGLIE MATTIX WOOLWORTH UNIT 124	Active	D	24.0S	37E	34	660	N	660	W	BETWELL OIL & GAS CO	Injection
3002511347	LANGLIE MATTIX WOOLWORTH UNIT 125	TA	B	24.0S	37E	34	660	N	1980	E	BETWELL OIL & GAS CO	Injection
3002511348	LANGLIE MATTIX WOOLWORTH UNIT 163	Active	M	24.0S	37E	34	990	S	990	W	BETWELL OIL & GAS CO	Oil

Table A-1: Identification of Wells Within Two Miles of Proposed SUGS AGI Well												
API #	Well Name	Status	Unit	Twp.	Rng.	Sect.	ftg_ns	ns_cd	ftg_ew	ew_cd	Operator	Well Type
3002511349	LANGLIE MATTIX WOOLWORTH UNIT 126	Active	C	24.0S	37E	34	660	N	1980	W	BETWELL OIL & GAS CO	Oil
3002511350	LANGLIE MATTIX WOOLWORTH UNIT 127	Active	A	24.0S	37E	34	660	N	660	E	BETWELL OIL & GAS CO	Oil
3002511351	LANGLIE MATTIX WOOLWORTH UNIT 151	Active	J	24.0S	37E	34	1980	S	1980	E	BETWELL OIL & GAS CO	Injection
3002511352	LANGLIE MATTIX WOOLWORTH UNIT 152	Active	I	24.0S	37E	34	1650	S	990	E	BETWELL OIL & GAS CO	Oil
3002511353	LANGLIE MATTIX WOOLWORTH UNIT 131	Active	G	24.0S	37E	34	1980	N	1980	E	BETWELL OIL & GAS CO	Oil
3002511354	LANGLIE MATTIX WOOLWORTH UNIT 161	Active	O	24.0S	37E	34	990	S	2310	E	BETWELL OIL & GAS CO	Oil
3002511355	LANGLIE MATTIX WOOLWORTH UNIT 162	Active	N	24.0S	37E	34	990	S	2310	W	BETWELL OIL & GAS CO	Oil
3002511359	GEORGE L ERWIN 001	Active	M	24.0S	37E	35	660	S	330	W	MCDONNOLD OPERATING INC	Oil
3002511360	GEORGE L ERWIN 002	Active	L	24.0S	37E	35	1980	S	330	W	MCDONNOLD OPERATING INC	Injection
3002511368	C C FRISTOE A FEDERAL NCT 1 001	Active	E	24.0S	37E	35	1980	N	660	W	CHEVRON U S A INC	Oil
3002511371	C C FRISTOE A FEDERAL NCT 1 006	Active	D	24.0S	37E	35	660	N	660	W	CHEVRON U S A INC	Injection
3002511420	HUMPHREY QUEEN UNIT 004	Plugged	B	25.0S	37E	3	330	N	1650	E	PRIZE OPERATING COMPANY	Injection
3002511421	HUMPHREY QUEEN UNIT 003	Active	C	25.0S	37E	3	330	N	2310	W	KELTON OPERATING CORP	Oil
3002511422	HUMPHREY QUEEN UNIT 002	Active	D	25.0S	37E	3	330	N	990	W	KELTON OPERATING CORP	Injection
3002511423	J B HUMPHREY 001	Plugged	N	25.0S	37E	3	660	S	1980	W	CULBERTSON,IRWIN &	Oil
3002511424	HUMPHREY QUEEN UNIT 010	Active	G	25.0S	37E	3	1650	N	1650	E	KELTON OPERATING CORP	Oil
3002511425	HUMPHREY QUEEN UNIT 009	Plugged	F	25.0S	37E	3	1750	N	2310	W	PRIZE OPERATING COMPANY	Injection
3002511426	HUMPHREY QUEEN UNIT 017	Active	J	25.0S	37E	3	2310	S	1650	E	KELTON OPERATING CORP	Injection
3002511428	*HUMPHREY QUEEN UNIT 008*	*Plugged*	*E*	*25.0S*	*37E*	*3*	*1650*	*N*	*660*	*W*	*MERIT ENERGY CO*	*Oil*
3002511429	LIBERTY 003	Plugged	L	25.0S	37E	3	2310	S	660	W	MOBIL PRODUCING TEX	Gas
3002511431	HUMPHREY QUEEN UNIT 005	Active	A	25.0S	37E	3	330	N	990	E	KELTON OPERATING CORP	Oil
3002511432	HUMPHREY QUEEN UNIT 011	Active	H	25.0S	37E	3	1650	N	990	E	KELTON OPERATING CORP	Oil
3002511435	LANGLIE JAL UNIT 061	Active	L	25.0S	37E	4	1980	S	660	W	PHOENIX HYDROCARBONS OPERATING CORP	Injection
3002511436	LANGLIE JAL UNIT 040	Active	C	25.0S	37E	4	330	N	1980	W	PHOENIX HYDROCARBONS OPERATING CORP	Oil
3002511437	LANGLIE JAL UNIT 041	Active	B	25.0S	37E	4	330	N	1980	E	PHOENIX HYDROCARBONS OPERATING CORP	Injection
3002511438	LANGLIE JAL UNIT 042	Active	G	25.0S	37E	4	1650	N	1980	E	PHOENIX HYDROCARBONS OPERATING CORP	Oil
3002511439	E J WELLS 012	Plugged	F	25.0S	37E	4	1980	N	1650	W	ANDERSON PRICHARD	Oil
3002511440	WELLS FEDERAL 002	Active	G	25.0S	37E	4	1980	N	1980	E	HERMAN L LOEB	Gas
3002511441	WELLS FEDERAL 003	Plugged	K	25.0S	37E	4	1980	S	1980	W	BURLINGTON RESOURCES OIL & GAS CO	Gas
3002511442	LANGLIE JAL UNIT 039	Active	D	25.0S	37E	4	330	N	990	W	PHOENIX HYDROCARBONS OPERATING CORP	Injection
3002511443	LANGLIE JAL UNIT 044	Active	E	25.0S	37E	4	2310	N	990	W	PHOENIX HYDROCARBONS OPERATING CORP	Injection
3002511444	GEORGE SMITH 001	Plugged	P	25.0S	37E	4	660	S	660	E	LEWIS B BURLESON IN	Oil
3002511445	HUMPHREY QUEEN UNIT 001	Active	A	25.0S	37E	4	330	N	330	E	KELTON OPERATING CORP	Oil
3002511446	HUMPHREY QUEEN UNIT 007	Active	H	25.0S	37E	4	1650	N	330	E	KELTON OPERATING CORP	Oil
3002511447	SMITH 003	Plugged	I	25.0S	37E	4	2310	S	660	E	MOBIL OIL CORP	Gas
3002511448	G A SMITH 004	Plugged	P	25.0S	37E	4	990	S	990	E	SAM WEINER ETAL	Oil
3002511449	WELLS FEDERAL 011	Plugged	N	25.0S	37E	4	430	S	2317	W	BURLINGTON RESOURCES OIL & GAS COMPANY LP	Gas
3002511450	LANGLIE JAL UNIT 064	Active	O	25.0S	37E	5	660	S	1980	E	PHOENIX HYDROCARBONS OPERATING CORP	Injection
3002511451	LANGLIE JAL UNIT 063	Active	P	25.0S	37E	5	660	S	660	E	PHOENIX HYDROCARBONS OPERATING CORP	Injection
3002511452	LANGLIE JAL UNIT 036	Active	C	25.0S	37E	5	660	N	1980	W	PHOENIX HYDROCARBONS OPERATING CORP	Injection
3002511453	LANGLIE JAL UNIT 046	Active	G	25.0S	37E	5	1980	N	1980	E	PHOENIX HYDROCARBONS OPERATING CORP	Injection
3002511454	LANGLIE JAL UNIT 059	Active	J	25.0S	37E	5	1650	S	2310	E	PHOENIX HYDROCARBONS OPERATING CORP	Injection
3002511455	LANGLIE JAL UNIT 035	Active	D	25.0S	37E	5	660	N	660	W	PHOENIX HYDROCARBONS OPERATING CORP	Injection
3002511456	LANGLIE JAL UNIT 037	Active	B	25.0S	37E	5	660	N	1980	E	PHOENIX HYDROCARBONS OPERATING CORP	Injection
3002511457	LANGLIE JAL UNIT 048	Active	E	25.0S	37E	5	1980	N	660	W	PHOENIX HYDROCARBONS OPERATING CORP	Oil
3002511458	E J WELLS 013	TA	L	25.0S	37E	5	1980	S	660	W	HERMAN L LOEB	Gas
3002511459	E J WELLS 014	Plugged	N	25.0S	37E	5	330	S	1650	W	ANDERSON PRICHARD	Oil
3002511460	WELLS B 5 001	TA	A	25.0S	37E	5	330	N	990	E	HERMAN L LOEB	Gas
3002511461	LANGLIE JAL UNIT 045	Active	H	25.0S	37E	5	1650	N	330	E	PHOENIX HYDROCARBONS OPERATING CORP	Injection
3002511462	*WELLS FEDERAL 001*	*Active*	*I*	*25.0S*	*37E*	*5*	*1980*	*S*	*660*	*E*	*HERMAN L LOEB*	*Gas*
3002511463	LANGLIE JAL UNIT 066	Active	M	25.0S	37E	5	660	S	810	W	PHOENIX HYDROCARBONS OPERATING CORP	Oil
3002511464	LANGLIE JAL UNIT 058	Active	K	25.0S	37E	5	1980	S	1980	W	PHOENIX HYDROCARBONS OPERATING CORP	Oil
3002511465	WELLS FEDERAL 004	Active	F	25.0S	37E	5	1980	N	1980	W	HERMAN L LOEB	Gas
3002511466	WN WELLS 001	Active	G	25.0S	37E	6	1980	N	1980	E	MCRAE & HENRY, LTD.	Gas
3002511467	WELLS B 6 001	Active	A	25.0S	37E	6	330	N	330	E	PLANTATION OPERATING LLC	Oil
3002511476	LANGLIE JAL UNIT 055	Active	J	25.0S	37E	6	2310	S	1650	E	PHOENIX HYDROCARBONS OPERATING CORP	Injection
3002511478	C D WOOLWORTH GROUP 3 002	Plugged	H	25.0S	37E	6	1963	N	643	E	PHILLIPS PETROLEUM CO	Gas
3002511479	LANGLIE JAL UNIT 056	Active	I	25.0S	37E	6	1930	S	710	E	PHOENIX HYDROCARBONS OPERATING CORP	Oil
3002511480	LANGLIE JAL UNIT 033	Active	B	25.0S	37E	6	330	N	1650	E	PHOENIX HYDROCARBONS OPERATING CORP	Injection
3002511481	LANGLIE JAL UNIT 032	Active	C	25.0S	37E	6	660	N	1920	W	PHOENIX HYDROCARBONS OPERATING CORP	Oil

Table A-1: Identification of Wells Within Two Miles of Proposed SUGS AGI Well												
API #	Well Name	Status	Unit	Twp.	Rng.	Sect.	ftg_ns	ns_cd	ftg_ew	ew_cd	Operator	Well Type
3002511496	LANGLIE JAL UNIT 074	Active	A	25.0S	37E	8	660	N	660	E	PHOENIX HYDROCARBONS OPERATING CORP	Oil
3002511497	LANGLIE JAL UNIT 073	Active	B	25.0S	37E	8	660	N	1980	E	PHOENIX HYDROCARBONS OPERATING CORP	Injection
3002511505	JAL D 003	Plugged	B	25.0S	37E	8	990	N	2310	E	EL PASO NATURAL GAS	Gas
3002511506	LANGLIE JAL UNIT 072	TA	C	25.0S	37E	8	660	N	2310	W	PHOENIX HYDROCARBONS OPERATING CORP	Injection
3002511510	LANGLIE JAL UNIT 075	Active	D	25.0S	37E	9	660	N	660	W	PHOENIX HYDROCARBONS OPERATING CORP	Injection
3002512541	LANGLIE MATTIX WOOLWORTH UNIT 002	Active	M	24.0S	37E	33	990	S	990	W	BETWELL OIL & GAS CO	Oil
3002520059	LANGLIE MATTIX WOOLWORTH UNIT 001	Active	M	24.0S	37E	27	1300	S	660	W	BETWELL OIL & GAS CO	Water Supply
3002520085	LANGLIE MATTIX WOOLWORTH UNIT 308	Zone Plugged	J	24.0S	37E	28	1980	S	1980	E	BETWELL OIL & GAS CO	Injection
3002520152	MOSLEY 001	Active	P	24.0S	37E	34	330	S	330	E	INFLOW PETROLEUM RESOURCES LP	Oil
3002520350	KNIGHT 011	Active	M	24.0S	37E	22	5	S	1315	W	WHITING OIL AND GAS CORPORATION	Injection
3002520351	KNIGHT 010	Active	M	24.0S	37E	22	1315	S	1315	W	WHITING OIL AND GAS CORPORATION	Injection
3002520353	KNIGHT 008	Plugged	L	24.0S	37E	22	2635	S	5	W	WHITING OIL AND GAS CORPORATION	Injection
3002520354	KNIGHT 007	Plugged	I	24.0S	37E	21	2635	S	1315	E	WHITING OIL AND GAS CORPORATION	Injection
3002520355	KNIGHT 006	Plugged	P	24.0S	37E	21	1315	S	1315	E	CELERO ENERGY, LP	Injection
3002520356	KNIGHT 005	Active	M	24.0S	37E	22	1315	S	5	W	WHITING OIL AND GAS CORPORATION	Injection
3002520520	MOSLEY 002	Plugged	O	24.0S	37E	34	330	S	1650	E	KINGREA & PENDLETON	Oil
3002520612	HUMPHREY QUEEN UNIT 016	Active	K	25.0S	37E	3	1980	S	1980	W	KELTON OPERATING CORP	Oil
3002520613	KNIGHT 013	Plugged	P	24.0S	37E	21	5	S	5	E	WHITING OIL AND GAS CORPORATION	Injection
3002520809	BLACK 002Y	Active	O	24.0S	37E	21	560	S	1880	E	BETWELL OIL & GAS CO	Oil
3002520927	C C FRISTOE A FEDERA 007	Plugged	A	25.0S	37E	3	330	N	330	E	TEXACO EXPLORATION	Oil
3002521083	BLACK WSW 001	Zone Plugged	O	24.0S	37E	21	1200	S	2320	E	BETWELL OIL & GAS CO	Water Supply
3002521084	BLACK 004	Plugged	N	24.0S	37E	21	5	S	1340	W	SHELL OIL CO	Injection
3002521086	BLACK 006	Plugged	O	24.0S	37E	21	1300	S	2660	W	SHELL OIL CO	Injection
3002521087	BLACK 007	Plugged	J	24.0S	37E	21	2620	S	2660	W	SHELL WESTERN E & P	Injection
3002521154	KNIGHT 012	Plugged	P	24.0S	37E	21	5	S	1315	E	WHITING OIL AND GAS CORPORATION	Injection
3002521196	HUMPHREY QUEEN UNIT 021	Active	M	25.0S	37E	3	330	S	990	W	KELTON OPERATING CORP	Oil
3002521401	J F BLACK 005	Active	K	24.0S	37E	21	1980	S	2030	W	PRONGHORN MANAGEMENT CORP	Oil
3002521412	C C FRISTOE A FEDERAL NCT 1 010	Plugged	E	24.0S	37E	35	2080	N	660	W	CHEVRON U S A INC	Oil
3002521414	C C FRISTOE A FEDERAL NCT 1 011	Plugged	D	24.0S	37E	35	560	N	660	W	TEXACO EXPLORATION & PRODUCTION INC	Oil
3002521478	J F BLACK 006	Active	F	24.0S	37E	21	2630	N	1340	W	PRONGHORN MANAGEMENT CORP	Injection
3002521606	R L MOSLEY 001	Plugged	I	24.0S	37E	34	1650	S	330	E	TENNECO OIL CO	Oil
3002521689	C C FRISTOE B FEDERAL NCT 1 002	Plugged	M	24.0S	37E	26	500	S	500	W	TEXACO EXPLORATION & PRODUCTION INC	Oil
3002521748	JOHN WILLIAMS 008	Active	H	24.0S	37E	34	1980	N	330	E	WESTBROOK OIL CORP	Oil
3002521765	JOHN WILLIAMS 009	Active	A	24.0S	37E	34	1120	N	330	E	WESTBROOK OIL CORP	Oil
3002522201	HUMPHREY QUEEN UNIT 014	Plugged	I	25.0S	37E	4	2230	S	467	E	PRIZE OPERATING COMPANY	Oil
3002522243	HUMPHREY QUEEN UNIT 015	Active	L	25.0S	37E	3	1830	S	660	W	KELTON OPERATING CORP	Injection
3002522255	LANGLIE MATTIX WOOLWORTH UNIT 709	Active	O	24.0S	37E	27	560	S	1980	E	BETWELL OIL & GAS CO	Oil
3002522503	LANGLIE MATTIX WOOLWORTH UNIT 505	Active	C	24.0S	37E	27	75	N	2540	E	BETWELL OIL & GAS CO	Injection
3002522880	LANGLIE MATTIX WOOLWORTH UNIT 203L	Unknown	L	24.0S	37E	28	999	S	999	W	BETWELL OIL & GAS CO	Oil
3002522881	LANGLIE MATTIX WOOLWORTH UNIT 119	TA	J	24.0S	37E	33	1880	S	1980	E	BETWELL OIL & GAS CO	Injection
3002523099	LANGLIE MATTIX WOOLWORTH UNIT 105	Active	F	24.0S	37E	28	1690	N	2020	W	BETWELL OIL & GAS CO	Injection
3002523112	LANGLIE MATTIX WOOLWORTH UNIT 204	TA	M	24.0S	37E	28	330	S	330	W	BETWELL OIL & GAS CO	Injection
3002523183	HUMPHREY QUEEN UNIT 020	TA	M	25.0S	37E	3	100	S	5	W	KELTON OPERATING CORP	Injection
3002523243	HUMPHREY QUEEN UNIT 026	Plugged	F	25.0S	37E	3	2420	N	2200	W	MOBIL PRODUCING TEX	Injection
3002523255	LANGLIE MATTIX WOOLWORTH UNIT 104	Active	E	24.0S	37E	28	1700	N	835	W	BETWELL OIL & GAS CO	Oil
3002523256	LANGLIE MATTIX WOOLWORTH UNIT 203	Active	L	24.0S	37E	28	2220	S	1250	W	BETWELL OIL & GAS CO	Oil
3002523258	LANGLIE MATTIX WOOLW 007	Plugged	I	24.0S	37E	28	1530	S	135	E	AMERADA HESS CORP	Water Supply
3002523321	JACK B 27 003	Plugged	I	24.0S	37E	27	1980	S	330	E	CONOCO INC	Oil
3002523395	HUMPHREY QUEEN UNIT 027	Active	H	25.0S	37E	4	1570	N	990	E	KELTON OPERATING CORP	Injection
3002523463	HUMPHREY QUEEN UNIT 013	Plugged	I	25.0S	37E	4	1540	S	1220	E	PRIZE OPERATING COMPANY	Oil
3002523572	LANGLIE MATTIX WOOLWORTH UNIT 165	Plugged	N	24.0S	37E	34	330	S	2310	W	BETWELL OIL & GAS CO	Injection
3002523573	LANGLIE MATTIX WOOLWORTH UNIT 166	Plugged	P	24.0S	37E	34	100	S	125	E	BETWELL OIL & GAS CO	Injection
3002523598	LANGLIE MATTIX WOOLWORTH UNIT 003	Zone Plugged	N	24.0S	37E	33	330	S	1650	W	BETWELL OIL & GAS CO	Injection
3002523599	JACK A 29 005	Active	B	24.0S	37E	29	825	N	1750	E	MCDONNOLD OPERATING INC	Oil
3002523607	LANGLIE MATTIX WOOLWORTH UNIT 805	Active	E	24.0S	37E	33	2400	N	330	W	BETWELL OIL & GAS CO	Oil
3002523685	JACK A 29 006	Active	G	24.0S	37E	29	1900	N	1700	E	MCDONNOLD OPERATING INC	Injection
3002523779	JACK A 29 007	Active	J	24.0S	37E	29	2250	S	1750	E	MCDONNOLD OPERATING INC	Oil
3002523865	LANGLIE JAL UNIT 013	TA	F	24.0S	37E	31	1980	N	1980	W	PHOENIX HYDROCARBONS OPERATING CORP	Injection
3002523866	LANGLIE JAL UNIT 023	Active	P	24.0S	37E	32	660	S	660	E	PHOENIX HYDROCARBONS OPERATING CORP	Injection
3002523867	LANGLIE JAL UNIT 029	Active	N	24.0S	37E	31	660	S	1980	W	PHOENIX HYDROCARBONS OPERATING CORP	Injection

Table A-1: Identification of Wells Within Two Miles of Proposed SUGS AGI Well												
API #	Well Name	Status	Unit	Twp.	Rng.	Sect.	ftg_ns	ns_cd	ftg_ew	ew_cd	Operator	Well Type
3002523868	LANGLIE JAL UNIT 049	Active	H	25.0S	37E	6	1980	N	510	E	PHOENIX HYDROCARBONS OPERATING CORP	Injection
3002523882	LANGLIE JAL UNIT 043	Active	F	25.0S	37E	4	1980	N	1980	W	PHOENIX HYDROCARBONS OPERATING CORP	Injection
3002523883	LANGLIE JAL UNIT 047	Active	F	25.0S	37E	5	1980	N	1885	W	PHOENIX HYDROCARBONS OPERATING CORP	Injection
3002523884	LANGLIE JAL UNIT 057	Active	L	25.0S	37E	5	2030	S	810	W	PHOENIX HYDROCARBONS OPERATING CORP	Injection
3002523885	LANGLIE JAL UNIT 065	Active	N	25.0S	37E	5	660	S	1980	W	PHOENIX HYDROCARBONS OPERATING CORP	Injection
3002523968	HUMPHREY QUEEN UNIT 029	Active	C	25.0S	37E	3	990	N	2310	W	KELTON OPERATING CORP	Oil
3002524071	KING HARRISON C 005	Active	K	24.0S	37E	20	1700	S	1680	W	PRIMAL ENERGY CORPORATION	Gas
3002524133	SHERRELL 001	Plugged	N	24.0S	37E	31	660	S	1590	W	C W TRAINER	Oil
3002524456	LANGLIE JAL UNIT WSW 001	Plugged	I	25.0S	37E	5	2200	S	750	E	UNION TEXAS PETROLE	Water Supply
3002524478	LANGLIE JAL UNIT 022	Active	I	24.0S	37E	32	1830	S	660	E	PHOENIX HYDROCARBONS OPERATING CORP	Injection
3002524479	LANGLIE JAL UNIT 024	Active	O	24.0S	37E	32	660	S	1880	E	PHOENIX HYDROCARBONS OPERATING CORP	Injection
3002524484	LANGLIE JAL UNIT 038	Active	A	25.0S	37E	5	660	N	660	E	PHOENIX HYDROCARBONS OPERATING CORP	Injection
3002524669	WM H HARRISON D WN COM 006	Active	N	24.0S	37E	29	660	S	1980	W	BP AMERICA PRODUCTION COMPANY	Gas
3002524788	JACK A 29 008	Active	J	24.0S	37E	29	1980	S	1980	E	MCDONNOLD OPERATING INC	Gas
3002524789	JACK A 2O 010	Active	O	24.0S	37E	20	760	S	1880	E	PLANTATION OPERATING LLC	Gas
3002524837	LANGLIE JAL UNIT 002	Active	D	24.0S	37E	31	990	N	660	E	PHOENIX HYDROCARBONS OPERATING CORP	Oil
3002524838	LANGLIE JAL UNIT 004	Active	C	24.0S	37E	32	990	N	1980	W	PHOENIX HYDROCARBONS OPERATING CORP	Oil
3002524839	LANGLIE JAL UNIT 008	Active	G	24.0S	37E	32	1930	N	1980	E	PHOENIX HYDROCARBONS OPERATING CORP	Injection
3002524879	LANGLIE JAL UNIT 060	Active	I	25.0S	37E	5	1830	S	660	E	PHOENIX HYDROCARBONS OPERATING CORP	Injection
3002524880	LANGLIE JAL UNIT 062	Plugged	M	25.0S	37E	4	660	S	660	W	PHOENIX HYDROCARBONS OPERATING CORP	Oil
3002524889	LANGLIE JAL UNIT 034	Active	A	25.0S	37E	6	660	N	660	E	PHOENIX HYDROCARBONS OPERATING CORP	Injection
3002524890	LANGLIE JAL UNIT 050	Active	G	25.0S	37E	6	2150	N	1980	E	PHOENIX HYDROCARBONS OPERATING CORP	Oil
3002525240	WELLS 012	Active	K	25.0S	37E	4	2130	S	1830	W	CIMAREX ENERGY CO OF COLORADO	Oil
3002525373	LANGLIE MATTIX WOOLWORTH UNIT 009	Active	I	24.0S	37E	28	1330	S	135	E	BETWELL OIL & GAS CO	Oil
3002525385	WELLS 013	Active	N	25.0S	37E	4	990	S	1650	W	CIMAREX ENERGY CO OF COLORADO	Oil
3002525391	WELLS B 001	Plugged	J	25.0S	37E	4	1980	S	1980	E	PACIFIC ENTERPRISES	Oil
3002525429	WOOLWORTH 002	Active	K	24.0S	37E	33	1980	S	1650	W	INFLOW PETROLEUM RESOURCES LP	Gas
3002525464	C D WOOLWORTH 004	Active	L	24.0S	37E	30	2080	S	760	E	POGO PRODUCING CO	Oil
3002525491	FLUOR HARRISON 001	Active	M	24.0S	37E	20	660	S	660	W	BRECK OPERATING CORP	Gas
3002525498	LANGLIE JAL FEDERAL 001	Active	A	25.0S	37E	8	330	N	330	E	HERMAN L LOEB	Gas
3002525615	STUART 9 001	Active	C	25.0S	37E	9	330	N	1650	W	RALPH C BRUTON	Oil
3002525630	ADELE SOWELL 001	Active	P	24.0S	37E	19	330	S	990	E	CIMAREX ENERGY CO OF COLORADO	Gas
3002525753	SMITH 002	Plugged	P	25.0S	37E	4	330	S	990	E	LEWIS B BURLESON INC	Gas
3002525845	STATE A 32 004	Active	F	24.0S	37E	32	1780	N	1400	W	HERMAN L LOEB	Gas
3002525847	LITIE WOOLWORTH 005	Active	N	24.0S	37E	28	660	S	1980	W	MCDONNOLD OPERATING INC	Gas
3002525871	JACK B 30 002	Active	B	24.0S	37E	30	330	N	1725	E	PLANTATION OPERATING LLC	Oil
3002525974	SKELLY M STATE 004	Active	L	24.0S	37E	32	1650	S	660	W	PLANTATION OPERATING LLC	Gas
3002526031	WOOLWORTH 005	Plugged	C	24.0S	37E	28	990	N	1980	W	BP AMERICA PRODUCTI	Oil
3002526036	HENRY HARRISON 001	Active	N	24.0S	37E	20	330	S	1650	W	WESTBROOK OIL CORP	Gas
3002526060	HARRISON 001	Plugged	E	24.0S	37E	29	1980	N	660	W	JOHN YURONKA	Gas
3002526070	J W SHERRELL 009	Active	J	24.0S	37E	31	2250	S	1650	E	PLANTATION OPERATING LLC	Gas
3002526086	GULF EDDIE CORRIGAN 001	Active	P	24.0S	37E	30	990	S	330	E	CIMAREX ENERGY CO OF COLORADO	Gas
3002526100	GULF EDDIE CORRIGAN 002	Active	I	24.0S	37E	30	2310	S	330	E	CIMAREX ENERGY CO OF COLORADO	Gas
3002526239	HARRISON 002	Plugged	D	24.0S	37E	29	990	N	330	W	JOHN YURONKA	Oil
3002526243	KIMMY K 001	Active	C	24.0S	37E	29	990	N	1650	W	FULFER OIL & CATTLE LLC	Gas
3002526437	KIMMY 003	Active	L	24.0S	37E	29	1650	S	330	W	FULFER OIL & CATTLE LLC	Oil
3002526490	KIMMY K 002	Active	F	24.0S	37E	29	2310	N	1650	W	FULFER OIL & CATTLE LLC	SWD
3002526638	KIMMY 004	Active	M	24.0S	37E	29	890	S	660	W	FULFER OIL & CATTLE LLC	Oil
3002526664	EL PASO SMITH 001	Active	N	24.0S	37E	21	990	S	1650	W	LANEXCO INC	Gas
3002526665	NORTHSHORE WOOLWORTH 005	TA	C	24.0S	37E	33	730	N	1980	W	CIMAREX ENERGY CO OF COLORADO	Gas
3002526704	J W SHERRELL 010	Active	C	25.0S	37E	6	660	N	2000	W	PLANTATION OPERATING LLC	Gas
3002526951	EL PASO WELLS FEDERAL 001	Active	E	25.0S	37E	4	1980	N	660	W	HERMAN L LOEB	Gas
3002527081	WOOLWORTH ESTATE 001	Active	E	24.0S	37E	33	1570	N	800	W	SID RICHARDSON CARBON & GASOLINE CO	SWD
3002527367	WM H HARRISON D WN COM 007	Active	K	24.0S	37E	29	1980	S	1980	W	BP AMERICA PRODUCTION COMPANY	Gas
3002527490	KNIGHT 014	Active	P	24.0S	37E	21	1315	S	660	E	WHITING OIL AND GAS CORPORATION	Oil
3002527531	HUSKY WOOLWORTH 001	Active	M	24.0S	37E	33	330	S	430	W	CIMAREX ENERGY CO OF COLORADO	Gas
3002527840	LANGLIE JAL UNIT 095	Active	M	24.0S	37E	32	140	S	1250	W	PHOENIX HYDROCARBONS OPERATING CORP	Oil
3002527841	LANGLIE JAL UNIT 096	TA	N	24.0S	37E	32	140	S	2600	W	PHOENIX HYDROCARBONS OPERATING CORP	Oil
3002527842	LANGLIE JAL UNIT 097	Active	P	24.0S	37E	32	140	S	1200	E	PHOENIX HYDROCARBONS OPERATING CORP	Oil
3002527843	LANGLIE JAL UNIT 098	Active	I	24.0S	37E	32	1422	S	1200	E	PHOENIX HYDROCARBONS OPERATING CORP	Oil

Table A-1: Identification of Wells Within Two Miles of Proposed SUGS AGI Well

API #	Well Name	Status	Unit	Twp.	Rng.	Sect.	ftg_ns	ns_cd	ftg_ew	ew_cd	Operator	Well Type
3002527844	LANGLIE JAL UNIT 099	Active	K	24.0S	37E	32	1424	S	2450	W	PHOENIX HYDROCARBONS OPERATING CORP	Oil
3002527845	LANGLIE JAL UNIT 100	Active	L	24.0S	37E	32	1426	S	1300	W	PHOENIX HYDROCARBONS OPERATING CORP	Oil
3002528006	KNIGHT 017	Plugged	M	24.0S	37E	22	1315	S	660	W	WHITING OIL AND GAS CORPORATION	Oil
3002528012	HUMPHREY QUEEN UNIT 030	Active	E	25.0S	37E	3	2388	N	1300	W	KELTON OPERATING CORP	Oil
3002528013	HUMPHREY QUEEN UNIT 031	TA	N	25.0S	37E	3	1300	S	1750	W	KELTON OPERATING CORP	Injection
3002528094	STATE 28 006	Active	E	24.0S	37E	33	1720	N	310	W	CIMAREX ENERGY CO OF COLORADO	Gas
3002528155	WELLS B 5 002	Active	G	25.0S	37E	5	1552	N	2230	E	HERMAN L LOEB	Gas
3002528404	LANGLIE JAL UNIT 101	Active	L	24.0S	37E	32	2540	S	1250	W	PHOENIX HYDROCARBONS OPERATING CORP	Oil
3002528405	LANGLIE JAL UNIT 102	Active	K	24.0S	37E	32	2630	S	2630	W	PHOENIX HYDROCARBONS OPERATING CORP	Oil
3002528406	LANGLIE JAL UNIT 103	Active	P	24.0S	37E	31	1200	S	131	E	PHOENIX HYDROCARBONS OPERATING CORP	Oil
3002528407	LANGLIE JAL UNIT 104	TA	M	24.0S	37E	32	140	S	247	W	PHOENIX HYDROCARBONS OPERATING CORP	Oil
3002528454	LANGLIE JAL UNIT 105	Active	D	25.0S	37E	4	1000	N	660	W	PHOENIX HYDROCARBONS OPERATING CORP	Oil
3002528592	LANGLIE MATTIX WOOLWORTH UNIT 114	Active	G	24.0S	37E	33	1539	N	2407	E	BETWELL OIL & GAS CO	Oil
3002528725	WELLS FEDERAL 015	Active	D	25.0S	37E	5	810	N	460	W	HERMAN L LOEB	Gas
3002528731	C D WOOLWORTH 006	Active	O	24.0S	37E	30	660	S	1960	E	POGO PRODUCING CO	Oil
3002528768	E J WELLS 016	Active	L	25.0S	37E	5	2310	S	610	W	HERMAN L LOEB	Gas
3002528798	C D WOOLWORTH 007	Active	J	24.0S	37E	30	1980	S	1980	E	POGO PRODUCING CO	Oil
3002528850	WELLS FEDERAL 017	Active	J	25.0S	37E	5	1980	S	1450	E	HERMAN L LOEB	Gas
3002528963	LANGLIE JAL UNIT 106	Active	A	24.0S	37E	32	1075	N	1100	E	PHOENIX HYDROCARBONS OPERATING CORP	Oil
3002529044	LANGLIE JAL UNIT 107	Active	C	25.0S	37E	4	1142	N	2518	W	PHOENIX HYDROCARBONS OPERATING CORP	Oil
3002529076	WELLS FEDERAL 018	Active	M	25.0S	37E	4	330	S	660	W	HERMAN L LOEB	Gas
3002529264	WELLS FEDERAL 019	Active	O	25.0S	37E	4	660	S	2310	E	HERMAN L LOEB	Gas
3002529447	LANGLIE JAL UNIT 108	Active	I	25.0S	37E	5	2575	N	1275	E	PHOENIX HYDROCARBONS OPERATING CORP	Oil
3002529448	LANGLIE JAL UNIT 109	Active	I	25.0S	37E	5	2555	N	120	E	PHOENIX HYDROCARBONS OPERATING CORP	Oil
3002529449	LANGLIE JAL UNIT 110	Active	J	25.0S	37E	5	1400	S	1360	E	PHOENIX HYDROCARBONS OPERATING CORP	Oil
3002529450	LANGLIE JAL UNIT 111	Active	O	25.0S	37E	5	50	S	2600	E	PHOENIX HYDROCARBONS OPERATING CORP	Oil
3002530703	JACK A 20 011	Active	J	24.0S	37E	20	2180	S	1980	E	PLANTATION OPERATING LLC	Gas
3002530737	RED CLOUD 001	Active	C	25.0S	37E	3	660	N	1980	W	WESTBROOK OIL CORP	Gas
3002530870	RED CLOUD 002	Active	M	25.0S	37E	3	660	S	660	W	MCDONNOLD OPERATING INC	Gas
3002530871	LANGLIE JAL UNIT 113	Active	G	25.0S	37E	5	1400	N	1350	E	PHOENIX HYDROCARBONS OPERATING CORP	Oil
3002530883	LANGLIE JAL UNIT 114	Active	B	25.0S	37E	5	1270	N	2600	E	PHOENIX HYDROCARBONS OPERATING CORP	Oil
3002530957	RED CLOUD 004	Active	A	25.0S	37E	4	660	N	660	E	MCDONNOLD OPERATING INC	Gas
3002531014	LANGLIE JAL UNIT 115	Active	I	25.0S	37E	5	2400	S	750	E	PHOENIX HYDROCARBONS OPERATING CORP	Water Supply
3002531404	WHITE CLOUD 001	Active	A	25.0S	37E	3	660	N	660	E	WESTBROOK OIL CORP	Oil
3002532151	PRICHARD B 001	Active	B	25.0S	37E	9	760	N	1650	E	GUADALUPE OPERATING CO. LLP	Gas
3002532641	LANGLIE JACK UNIT 019	Active	J	24.0S	37E	20	1330	S	1460	E	MCDONNOLD OPERATING INC	Oil
3002532643	JACK A 29 009	Active	H	24.0S	37E	29	2364	N	1126	E	MCDONNOLD OPERATING INC	Gas
3002532862	C D WOOLWORTH 008	Active	K	24.0S	37E	30	1930	S	1980	W	POGO PRODUCING CO	Oil
3002532863	C D WOOLWORTH 009	Active	N	24.0S	37E	30	660	S	1980	W	POGO PRODUCING CO	Oil
3002533234	G L ERWIN A FEDERAL 008	Active	L	24.0S	37E	35	2310	S	330	W	CHEVRON U S A INC	Oil
3002533881	C D WOOLWORTH 010	Active	J	24.0S	37E	30	1400	S	2630	E	POGO PRODUCING CO	Oil
3002533882	C D WOOLWORTH 011	Active	N	24.0S	37E	30	1185	S	1330	W	POGO PRODUCING CO	Oil
3002534053	C C FRISTOE A FEDERAL NCT 1 013	Active	E	24.0S	37E	35	1400	N	330	W	CHEVRON U S A INC	Oil
3002534057	ENCO STATE 001	Active	A	24.0S	37E	32	660	N	660	E	LEWIS B BURLESON INC	Oil
3002534555	STATE A 32 005	Active	D	24.0S	37E	32	710	N	660	W	HERMAN L LOEB	Gas
3002534614	WELLS FEDERAL 021	Active	O	25.0S	37E	5	660	S	2310	E	HERMAN L LOEB	Gas
3002534618	EL PASO WELLS FEDERAL 002	TA	C	25.0S	37E	4	660	N	1980	W	HERMAN L LOEB	Gas
3002535139	JACK B 30 003	Active	A	24.0S	37E	30	660	N	660	E	PLANTATION OPERATING LLC	Oil
3002535577	LANGLIE JAL UNIT 120	Active	O	24.0S	37E	31	1100	S	2365	E	PHOENIX HYDROCARBONS OPERATING CORP	Oil
3002535681	LANGLIE JAL UNIT 126	Active	D	25.0S	37E	5	990	N	990	W	PHOENIX HYDROCARBONS OPERATING CORP	Oil
3002535749	LANGLIE JAL UNIT 127	Active	N	25.0S	37E	5	1270	S	1370	W	PHOENIX HYDROCARBONS OPERATING CORP	Oil
3002535991	C C FRISTOE A FEDERAL NCT 1 014	Unknown	D	24.0S	37E	35	660	N	330	W	CHEVRON U S A INC	Oil
3002537452	TRANTULA 3 FEDERAL 001	Active	A	25.0S	37E	3	990	N	330	E	RANGE OPERATING NEW MEXICO INC	Oil
3002537959	MARTIN B 003	Unknown	C	24.0S	37E	31	660	N	1917	W	PLANTATION OPERATING LLC	Gas

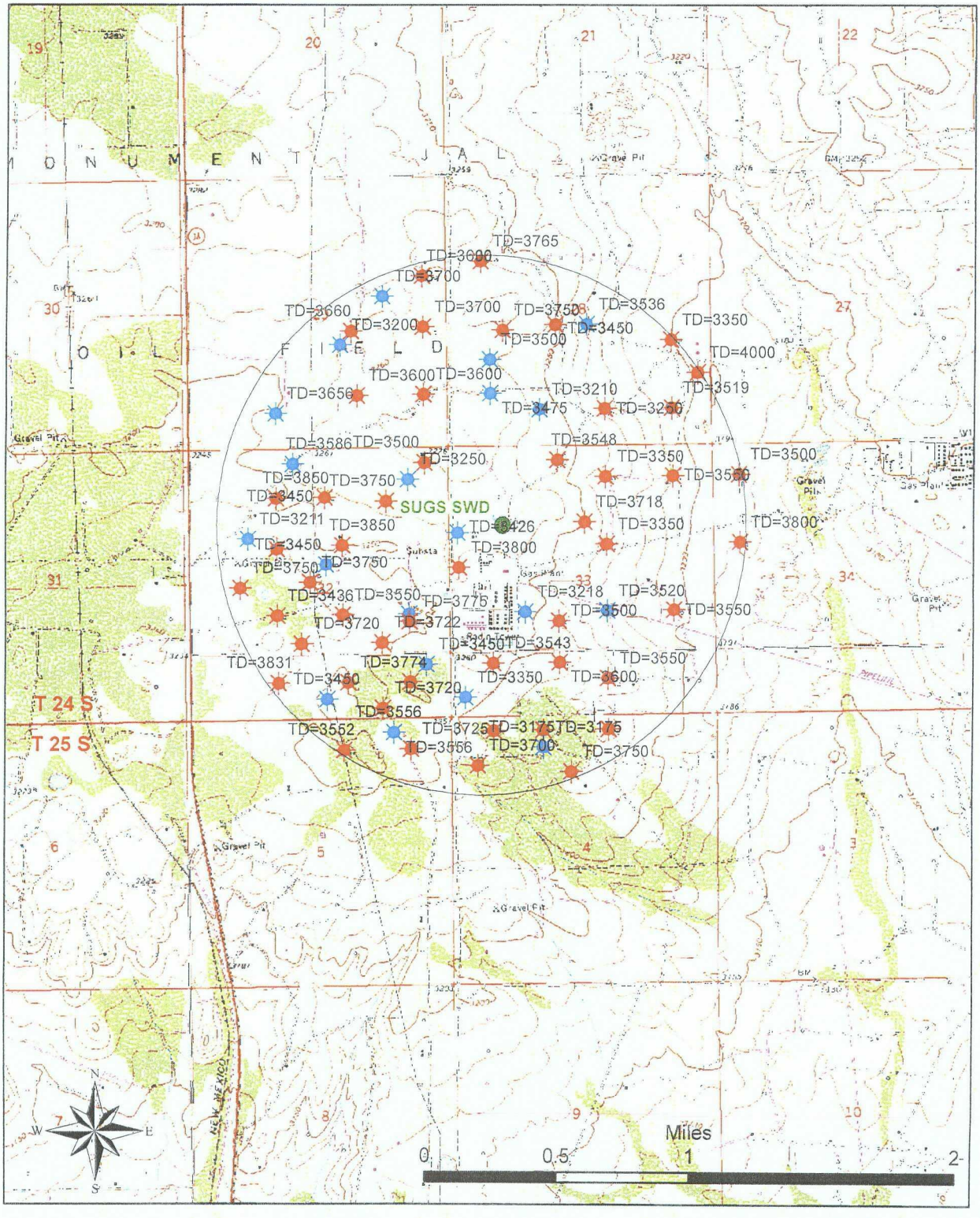


Figure A-2:
Locations of Active Wells Within One Mile Radius of Southern Union Gas Services' SWD Well

Existing SUGS SWD

JALMAT LANGLIE MATTIX

Table A-2: ACTIVE WELLS WITHIN ONE MILE OF SUGS PROPOSED AGI WELL									
API #	WELL NAME	TWN	SEC	RNG	UNIT	OPERATOR	Well Type	Total Depth	PRODUCING POOL
3002511261	LANGLIE MATTIX WOOLWORTH UNIT 304	24.0S	28	37E	I	BETWELL OIL & GAS CO	Oil	3350	LANGLIE MATTIX;7 RVRS-Q-GRAYBURG
3002511263	LANGLIE MATTIX WOOLWORTH UNIT 306	24.0S	28	37E	O	BETWELL OIL & GAS CO	Oil	3250	LANGLIE MATTIX;7 RVRS-Q-GRAYBURG
3002511264	LANGLIE MATTIX WOOLWORTH UNIT 307	24.0S	28	37E	P	BETWELL OIL & GAS CO	Inject.	3519	LANGLIE MATTIX;7 RVRS-Q-GRAYBURG
3002511268	LITIE WOOLWORTH 004	24.0S	28	37E	L	MCDONNOLD OPERATING INC	Gas	3500	JALMAT;TAN-YATES-7 RVRS
3002511269	LITIE WOOLWORTH 003	24.0S	28	37E	M	MCDONNOLD OPERATING INC	Gas	3475	JALMAT;TAN-YATES-7 RVRS
3002511270	LANGLIE MATTIX WOOLWORTH UNIT 201	24.0S	28	37E	K	BETWELL OIL & GAS CO	Oil	3450	LANGLIE MATTIX;7 RVRS-Q-GRAYBURG
3002511274	WOOLWORTH 003	24.0S	28	37E	J	WESTBROOK OIL CORP	Gas	3536	JALMAT;TAN-YATES-7 RVRS
3002511277	JACK A 29 002	24.0S	29	37E	I	MCDONNOLD OPERATING INC	Inject.	3700	LANGLIE MATTIX;7 RVRS-Q-GRAYBURG
3002511278	JACK A 29 003	24.0S	29	37E	H	MCDONNOLD OPERATING INC	Oil	3600	LANGLIE MATTIX;7 RVRS-Q-GRAYBURG
3002511279	JACK A 29 004	24.0S	29	37E	O	MCDONNOLD OPERATING INC	Inject.	3600	LANGLIE MATTIX;7 RVRS-Q-GRAYBURG
3002511280	JACK B 29 001	24.0S	29	37E	P	MCDONNOLD OPERATING INC	Oil	3600	LANGLIE MATTIX;7 RVRS-Q-GRAYBURG
3002511307	LANGLIE JAL UNIT 025	24.0S	32	37E	N	PHOENIX HYDROCARBONS OPERATING CORP	Inject.	3831	LANGLIE MATTIX;7 RVRS-Q-GRAYBURG
3002511310	LANGLIE JAL UNIT 009	24.0S	32	37E	F	PHOENIX HYDROCARBONS OPERATING CORP	Inject.	2450	LANGLIE MATTIX;7 RVRS-Q-GRAYBURG
3002511312	HUMBLE L STATE 003	24.0S	32	37E	I	MIRAGE ENERGY INC	Gas	3500	JALMAT;TAN-YATES-7 RVRS
3002511313	LANGLIE JAL UNIT 020	24.0S	32	37E	K	PHOENIX HYDROCARBONS OPERATING CORP	Inject.	3436	LANGLIE MATTIX;7 RVRS-Q-GRAYBURG
3002511315	LANGLIE JAL UNIT 021	24.0S	32	37E	J	PHOENIX HYDROCARBONS OPERATING CORP	Inject.	3550	LANGLIE MATTIX;7 RVRS-Q-GRAYBURG
3002511316	PENROC STATE 001	24.0S	32	37E	C	WESTBROOK OIL CORP	Oil	3586	JALMAT;TAN-YATES-7 RVRS
3002511317	LANGLIE JAL UNIT 006	24.0S	32	37E	A	PHOENIX HYDROCARBONS OPERATING CORP	Oil	3500	LANGLIE MATTIX;7 RVRS-Q-GRAYBURG
3002511318	JALMAT STATE GAS COM 003	24.0S	32	37E	O	BP AMERICA PRODUCTION COMPANY	Gas	3450	JALMAT;TAN-YATES-7 RVRS
3002511319	JALMAT STATE GAS COM 002	24.0S	32	37E	P	BP AMERICA PRODUCTION COMPANY	Gas	3450	JALMAT;TAN-YATES-7 RVRS
3002511320	LANGLIE JAL UNIT 005	24.0S	32	37E	B	PHOENIX HYDROCARBONS OPERATING CORP	Inject.	3450	LANGLIE MATTIX;7 RVRS-Q-GRAYBURG
3002511321	JALMAT STATE GAS COM 001	24.0S	32	37E	G	BP AMERICA PRODUCTION COMPANY	Gas	3450	JALMAT;TAN-YATES-7 RVRS
3002511324	LANGLIE MATTIX WOOLWORTH UNIT 001	24.0S	33	37E	N	BETWELL OIL & GAS CO	Oil	3600	LANGLIE MATTIX;7 RVRS-Q-GRAYBURG
3002511325	LANGLIE MATTIX WOOLWORTH UNIT 801	24.0S	33	37E	C	BETWELL OIL & GAS CO	Oil	3548	LANGLIE MATTIX;7 RVRS-Q-GRAYBURG
3002511330	LANGLIE MATTIX WOOLWORTH UNIT 112	24.0S	33	37E	I	BETWELL OIL & GAS CO	Oil	3550	LANGLIE MATTIX;7 RVRS-Q-GRAYBURG
3002511332	M C WOOLWORTH 004	24.0S	33	37E	J	SOUTHWEST ROYALTIES INC	Gas	3520	JALMAT;TAN-YATES-7 RVRS
3002511333	LANGLIE MATTIX WOOLWORTH UNIT 115	24.0S	33	37E	O	BETWELL OIL & GAS CO	Oil	3550	LANGLIE MATTIX;7 RVRS-Q-GRAYBURG
3002511334	LANGLIE MATTIX WOOLWORTH UNIT 116	24.0S	33	37E	A	BETWELL OIL & GAS CO	Oil	3550	LANGLIE MATTIX;7 RVRS-Q-GRAYBURG
3002511335	LANGLIE MATTIX WOOLWORTH UNIT 117	24.0S	33	37E	G	BETWELL OIL & GAS CO	Oil	3350	LANGLIE MATTIX;7 RVRS-Q-GRAYBURG
3002511336	LANGLIE MATTIX WOOLWORTH UNIT 118	24.0S	33	37E	B	BETWELL OIL & GAS CO	Inject.	3350	LANGLIE MATTIX;7 RVRS-Q-GRAYBURG
3002511338	LANGLIE MATTIX WOOLWORTH UNIT 903	24.0S	33	37E	K	BETWELL OIL & GAS CO	Oil	3500	LANGLIE MATTIX;7 RVRS-Q-GRAYBURG
3002511345	LANGLIE MATTIX WOOLWORTH UNIT 123	24.0S	34	37E	E	BETWELL OIL & GAS CO	Oil	3800	LANGLIE MATTIX;7 RVRS-Q-GRAYBURG
3002511346	LANGLIE MATTIX WOOLWORTH UNIT 124	24.0S	34	37E	D	BETWELL OIL & GAS CO	Inject.	3500	LANGLIE MATTIX;7 RVRS-Q-GRAYBURG
3002511436	LANGLIE JAL UNIT 040	25.0S	4	37E	3	PHOENIX HYDROCARBONS OPERATING CORP	Oil	3552	LANGLIE MATTIX;7 RVRS-Q-GRAYBURG
3002511437	LANGLIE JAL UNIT 041	25.0S	4	37E	2	PHOENIX HYDROCARBONS OPERATING CORP	Inject.	3530	LANGLIE MATTIX;7 RVRS-Q-GRAYBURG
3002511442	LANGLIE JAL UNIT 039	25.0S	4	37E	4	PHOENIX HYDROCARBONS OPERATING CORP	Inject.	3543	LANGLIE MATTIX;7 RVRS-Q-GRAYBURG
3002511456	LANGLIE JAL UNIT 037	25.0S	5	37E	2	PHOENIX HYDROCARBONS OPERATING CORP	Inject.	3552	LANGLIE MATTIX;7 RVRS-Q-GRAYBURG
3002511460	WELLS B 5 001	25.0S	5	37E	1	HERMAN L LOEB	Gas	3556	JALMAT;TAN-YATES-7 RVRS
3002512541	LANGLIE MATTIX WOOLWORTH UNIT 002	24.0S	33	37E	M	BETWELL OIL & GAS CO	Oil	3543	LANGLIE MATTIX;7 RVRS-Q-GRAYBURG
3002523255	LANGLIE MATTIX WOOLWORTH UNIT 104	24.0S	28	37E	E	BETWELL OIL & GAS CO	Oil	3765	LANGLIE MATTIX;7 RVRS-Q-GRAYBURG
3002523256	LANGLIE MATTIX WOOLWORTH UNIT 203	24.0S	28	37E	L	BETWELL OIL & GAS CO	Oil	3750	LANGLIE MATTIX;7 RVRS-Q-GRAYBURG
3002523607	LANGLIE MATTIX WOOLWORTH UNIT 805	24.0S	33	37E	E	BETWELL OIL & GAS CO	Oil	3800	LANGLIE MATTIX;7 RVRS-Q-GRAYBURG
3002523779	JACK A 29 007	24.0S	29	37E	J	MCDONNOLD OPERATING INC	Oil	3660	LANGLIE MATTIX;7 RVRS-Q-GRAYBURG
3002523866	LANGLIE JAL UNIT 023	24.0S	32	37E	P	PHOENIX HYDROCARBONS OPERATING CORP	Inject.	3600	LANGLIE MATTIX;7 RVRS-Q-GRAYBURG
3002524478	LANGLIE JAL UNIT 022	24.0S	32	37E	I	PHOENIX HYDROCARBONS OPERATING CORP	Inject.	3775	LANGLIE MATTIX;7 RVRS-Q-GRAYBURG
3002524479	LANGLIE JAL UNIT 024	24.0S	32	37E	O	PHOENIX HYDROCARBONS OPERATING CORP	Inject.	3774	LANGLIE MATTIX;7 RVRS-Q-GRAYBURG
3002524484	LANGLIE JAL UNIT 038	25.0S	5	37E	1	PHOENIX HYDROCARBONS OPERATING CORP	Inject.	3725	LANGLIE MATTIX;7 RVRS-Q-GRAYBURG
3002524669	WM H HARRISON D WN COM 006	24.0S	29	37E	N	BP AMERICA PRODUCTION COMPANY	Gas	3656	JALMAT;TAN-YATES-7 RVRS
3002524788	JACK A 29 008	24.0S	29	37E	J	MCDONNOLD OPERATING INC	Gas	3200	JALMAT;TAN-YATES-7 RVRS
3002524838	LANGLIE JAL UNIT 004	24.0S	32	37E	C	PHOENIX HYDROCARBONS OPERATING CORP	Oil	3850	LANGLIE MATTIX;7 RVRS-Q-GRAYBURG

Table A-2: ACTIVE WELLS WITHIN ONE MILE OF SUGS PROPOSED AGI WELL									
3002524839	LANGLIE JAL UNIT 008	24.0S	32	37E	G	PHOENIX HYDROCARBONS OPERATING CORP	Inject.	3850	LANGLIE MATTIX;7 RVRS-Q-GRAYBURG
3002525373	LANGLIE MATTIX WOOLWORTH UNIT 009	24.0S	28	37E	I	BETWELL OIL & GAS CO	Oil	4000	LANGLIE MATTIX;7 RVRS-Q-GRAYBURG
3002525429	WOOLWORTH 002	24.0S	33	37E	K	INFLOW PETROLEUM RESOURCES LP	Gas	3218	JALMAT;TAN-YATES-7 RVRS
3002525845	STATE A 32 004	24.0S	32	37E	F	HERMAN L LOEB	Gas	3211	JALMAT;TAN-YATES-7 RVRS
3002525847	LITIE WOOLWORTH 005	24.0S	28	37E	N	MCDONNOLD OPERATING INC	Gas	3210	JALMAT;TAN-YATES-7 RVRS
3002527081	WOOLWORTH ESTATE 001	24.0S	33	37E	E	SOUTHERN UNION GAS SERVICES, LTD.	SWD	4702	DISPOSAL
3002527531	HUSKY WOOLWORTH 001	24.0S	33	37E	M	CIMAREX ENERGY CO OF COLORADO	Gas	3350	JALMAT;TAN-YATES-7 RVRS
3002527842	LANGLIE JAL UNIT 097	24.0S	32	37E	P	PHOENIX HYDROCARBONS OPERATING CORP	Oil	3720	LANGLIE MATTIX;7 RVRS-Q-GRAYBURG
3002527843	LANGLIE JAL UNIT 098	24.0S	32	37E	J	PHOENIX HYDROCARBONS OPERATING CORP	Oil	3722	LANGLIE MATTIX;7 RVRS-Q-GRAYBURG
3002527844	LANGLIE JAL UNIT 099	24.0S	32	37E	K	PHOENIX HYDROCARBONS OPERATING CORP	Oil	3720	LANGLIE MATTIX;7 RVRS-Q-GRAYBURG
3002528094	STATE 28 006	24.0S	33	37E	E	CIMAREX ENERGY CO OF COLORADO	Gas	3426	JALMAT;TAN-YATES-7 RVRS
3002528404	LANGLIE JAL UNIT 101	24.0S	32	37E	L	PHOENIX HYDROCARBONS OPERATING CORP	Oil	3750	LANGLIE MATTIX;7 RVRS-Q-GRAYBURG
3002528405	LANGLIE JAL UNIT 102	24.0S	32	37E	K	PHOENIX HYDROCARBONS OPERATING CORP	Oil	3750	LANGLIE MATTIX;7 RVRS-Q-GRAYBURG
3002528454	LANGLIE JAL UNIT 105	25.0S	4	37E	4	PHOENIX HYDROCARBONS OPERATING CORP	Oil	3700	LANGLIE MATTIX;7 RVRS-Q-GRAYBURG
3002528592	LANGLIE MATTIX WOOLWORTH UNIT 114	24.0S	33	37E	G	BETWELL OIL & GAS CO	Oil	3718	LANGLIE MATTIX;7 RVRS-Q-GRAYBURG
3002528963	LANGLIE JAL UNIT 106	24.0S	32	37E	A	PHOENIX HYDROCARBONS OPERATING CORP	Oil	3750	LANGLIE MATTIX;7 RVRS-Q-GRAYBURG
3002529044	LANGLIE JAL UNIT 107	25.0S	4	37E	3	PHOENIX HYDROCARBONS OPERATING CORP	Oil	3750	LANGLIE MATTIX;7 RVRS-Q-GRAYBURG
3002532643	JACK A 29 009	24.0S	29	37E	H	MCDONNOLD OPERATING INC	Gas	3700	JALMAT;TAN-YATES-7 RVRS
3002534057	ENCO STATE 001	24.0S	32	37E	A	LEWIS B BURLESON INC	Oil	3250	JALMAT;TAN-YATES-7 RVRS
3002534618	EL PASO WELLS FEDERAL 002	25.0S	4	37E	3	HERMAN L LOEB	Gas	3175	JALMAT;TAN-YATES-7 RVRS

APPENDIX B

PERMANENTLY PLUGGED OR TEMPORARILY-ABANDONED OIL & GAS WELL DATA

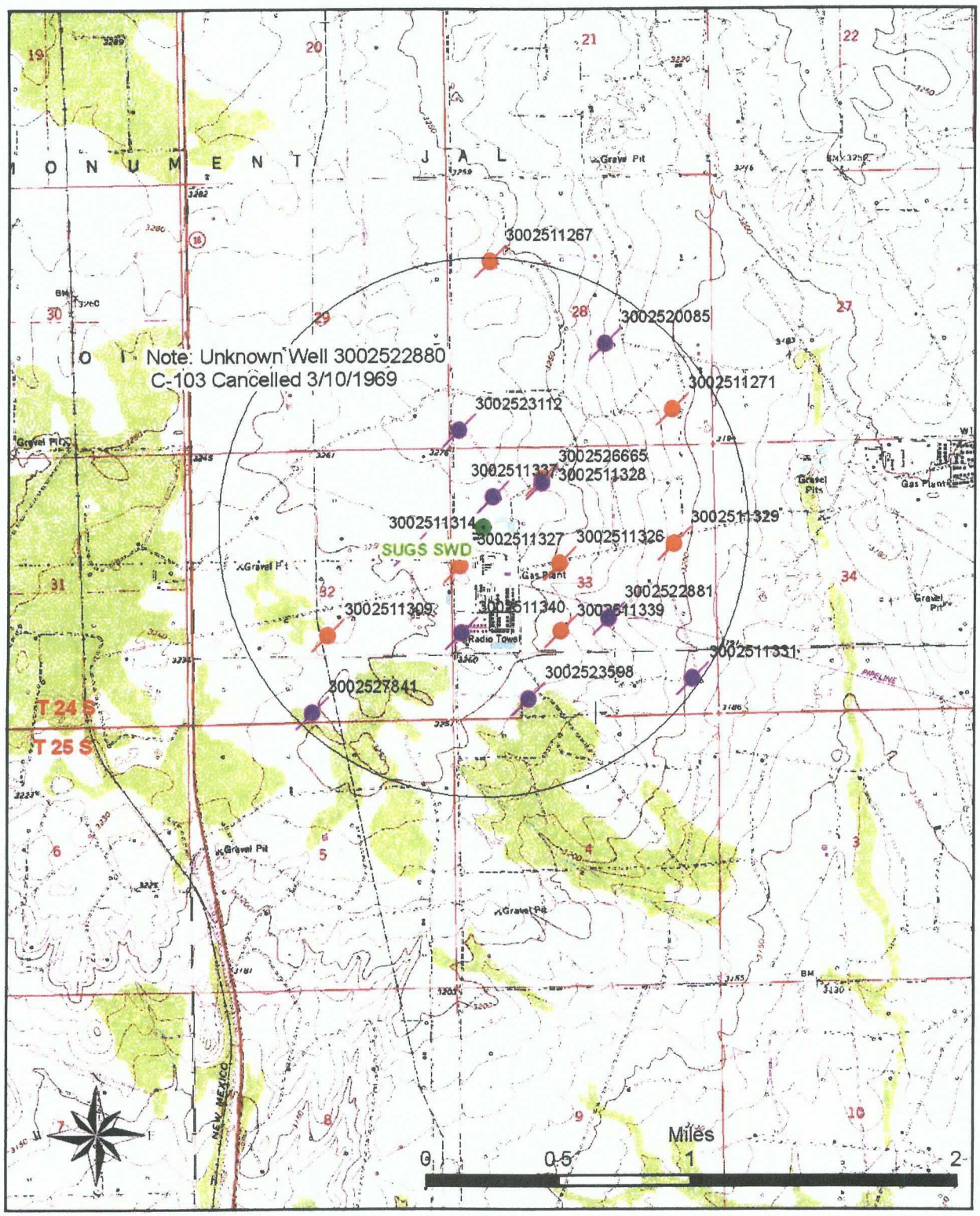


Figure B-1:
Locations of Temporarily Abandoned and Plugged & Abandoned Wells Within One Mile Radius of Southern Union Gas Services' SWD Well

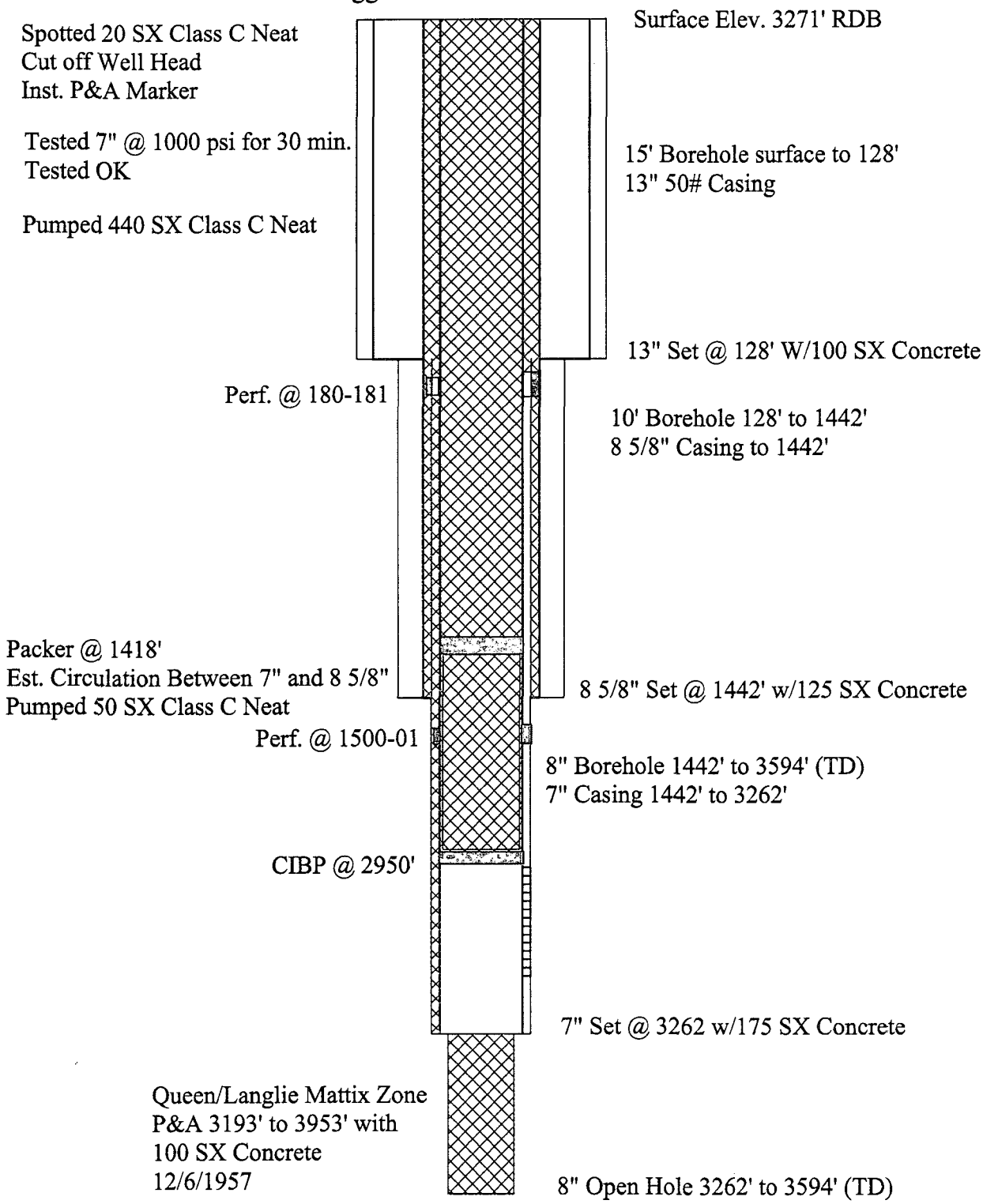
Existing SUGS SWD
TA
Plugged
Zone Plugged

Table B-1: Permanently Plugged or Temporarily Abandoned Wells Within One Mile (area of review) of Proposed SUGS AGI Well															
API #	Well Name	Status	Twshp.	Section	Range	Unit	ftg_ns	ns_cd	ftg_ew	ew_cd	Operator	Type	Total Depth	Pool (s)	
3002511267	WOOLWORTH 004	Plugged	24.0S	28	37E	E	1650	N	990	W	BP AMERICA PRODUCTI	Gas	3594	JALMAT;TAN-YATES-7 RVRS (GAS)	
3002511271	LANGLIE MATTIX WOOLWORTH UNIT 202	Plugged	24.0S	28	37E	N	660	S	660	E	BETWELL OIL & GAS CO	Injection	3536	LANGLIE MATTIX;7 RVRS-Q-GRAYBURG	
3002511309	STATE B 32 001	Plugged	24.0S	32	37E	J	1650	S	2310	E	JOHN M KELLY	Oil	3547	LANGLIE MATTIX	
3002511314	LANGLIE JAL UNIT 007	TA	24.0S	32	37E	H	1980	N	660	E	PHOENIX HYDROCARBONS OPERATING CORP	Injection	3624	LANGLIE MATTIX;7 RVRS-Q-GRAYBURG	
3002511326	LANGLIE MATTIX WOOLWORTH UNIT 802	Plugged	24.0S	33	37E	F	2310	N	2310	W	BETWELL OIL & GAS CO	Injection	3720	LANGLIE MATTIX;7 RVRS-Q-GRAYBURG	
3002511327	NORTH SHORE WOOLWORTH 003	Plugged	24.0S	33	37E	E	2310	N	330	W	BURLINGTON RESOURCES OIL & GAS CO	Gas	3575	JALMAT;TAN-YATES-7 RVRS (OIL)	
3002511328	C D WOOLWORTH 001	Plugged	24.0S	33	37E	C	660	N	1980	W	PHILLIPS PETROLEUM CO	Oil	4200	JALMAT;TAN-YATES-7 RVRS (OIL)	
3002511329	LANGLIE MATTIX WOOLWORTH UNIT 111	Plugged	24.0S	33	37E	H	1980	N	660	E	BETWELL OIL & GAS CO	Injection	3538	LANGLIE MATTIX;7 RVRS-Q-GRAYBURG	
3002511331	LANGLIE MATTIX WOOLWORTH UNIT 113	TA	24.0S	33	37E	P	660	S	330	E	BETWELL OIL & GAS CO	Injection	3565	LANGLIE MATTIX;7 RVRS-Q-GRAYBURG	
3002511337	LANGLIE MATTIX WOOLWORTH UNIT 804	TA	24.0S	33	37E	D	990	N	990	W	BETWELL OIL & GAS CO	Injection	3565	LANGLIE MATTIX;7 RVRS-Q-GRAYBURG	
3002511339	WOOLWORTH 001	Plugged	24.0S	33	37E	K	1650	S	2310	W	LEWIS B BURLESON INC	Gas	3550	JALMAT;TAN-YATES-7 RVRS (OIL)	
3002511340	LANGLIE MATTIX WOOLWORTH UNIT 902	TA	24.0S	33	37E	L	1650	S	330	W	BETWELL OIL & GAS CO	Injection	3784	LANGLIE MATTIX;7 RVRS-Q-GRAYBURG	
3002520085	LANGLIE MATTIX WOOLWORTH UNIT 203L	Plugged	24.0S	28	37E	J	1980	S	1980	E	BETWELL OIL & GAS CO	Injection	3683	LANGLIE MATTIX;7 RVRS-Q-GRAYBURG	
3002522880	LANGLIE MATTIX WOOLWORTH UNIT 309	Not Drilled	24.0S	28	37E	L	999	S	999	W	Pre-ONGARD	NA	NA	LANGLIE MATTIX;7 RVRS-Q-GRAYBURG	
3002522881	LANGLIE MATTIX WOOLWORTH UNIT 119	TA	24.0S	33	37E	J	1880	S	1980	E	BETWELL OIL & GAS CO	Injection	3708	LANGLIE MATTIX;7 RVRS-Q-GRAYBURG	
3002523112	LANGLIE MATTIX WOOLWORTH UNIT 204	TA	24.0S	28	37E	M	330	S	330	W	BETWELL OIL & GAS CO	Injection	3800	LANGLIE MATTIX;7 RVRS-Q-GRAYBURG	
3002523598	LANGLIE MATTIX WOOLWORTH UNIT 003	Plugged	24.0S	33	37E	N	330	S	1650	W	BETWELL OIL & GAS CO	Injection	3514	LANGLIE MATTIX;7 RVRS-Q-GRAYBURG	
3002526665	NORTHSHORE WOOLWORTH 005	TA	24.0S	33	37E	C	730	N	1980	W	CIMAREX ENERGY CO OF COLORADO	Gas	3600	JALMAT;TAN-YATES-7 RVRS (GAS)	
3002527841	LANGLIE JAL UNIT 096	TA	24.0S	32	37E	N	140	S	2600	W	PHOENIX HYDROCARBONS OPERATING CORP	Oil	3720	LANGLIE MATTIX;7 RVRS-Q-GRAYBURG	

NOTE: Complete copies of NMOCD (http://ocdimage.emnrd.state.nm.us/imaging/WellFileCriteria.aspx) files are included in the attached CD

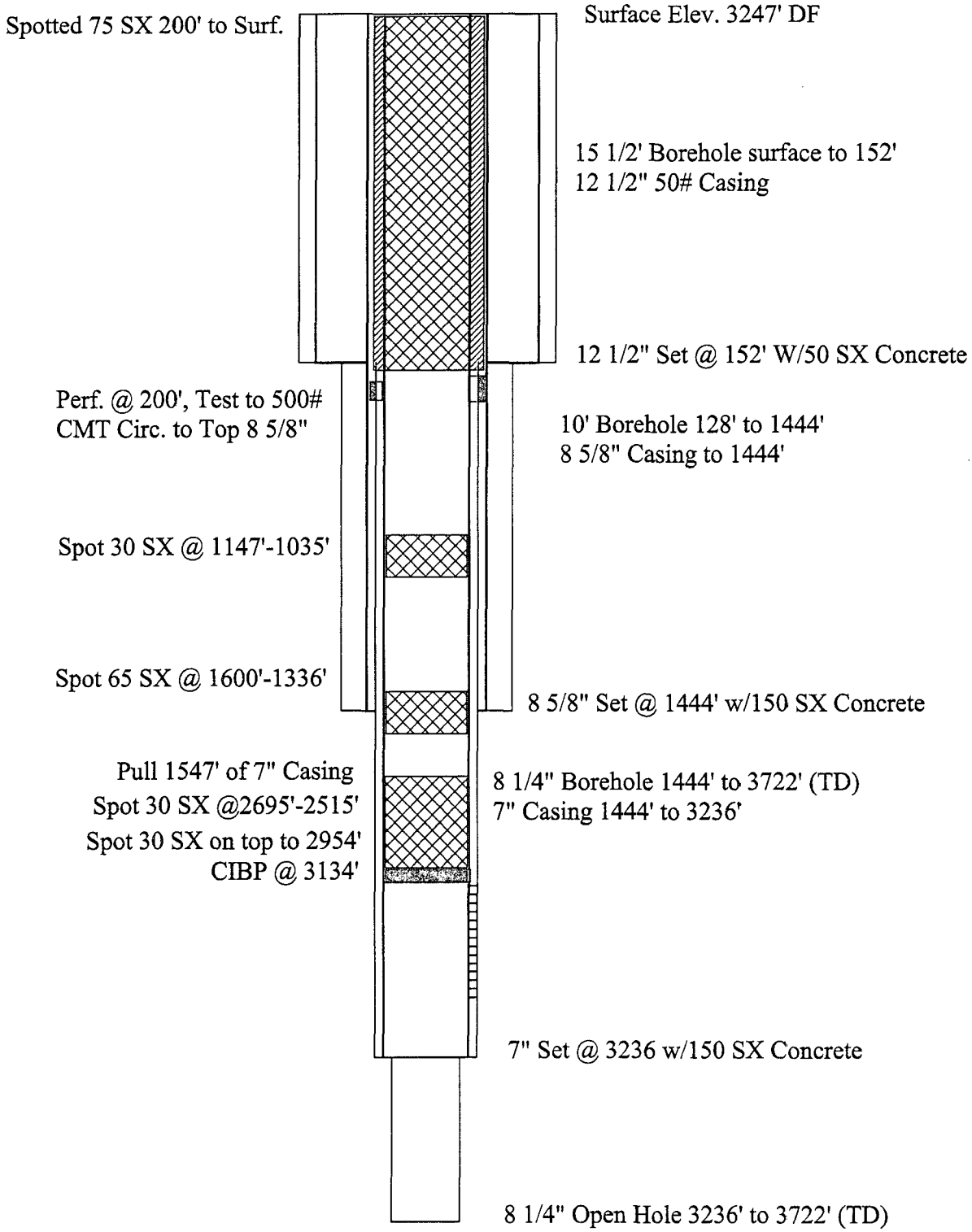
Well 3002522880 was permitted in November 1968 but its approval to drill was cancelled by NMOCD on March 10, 1969 for lack of progress. There are no NMOCD records that indicate that this well was ever drilled.

Woolworth 004
API 3002511267
As Plugged & Abandoned 1/16/1985



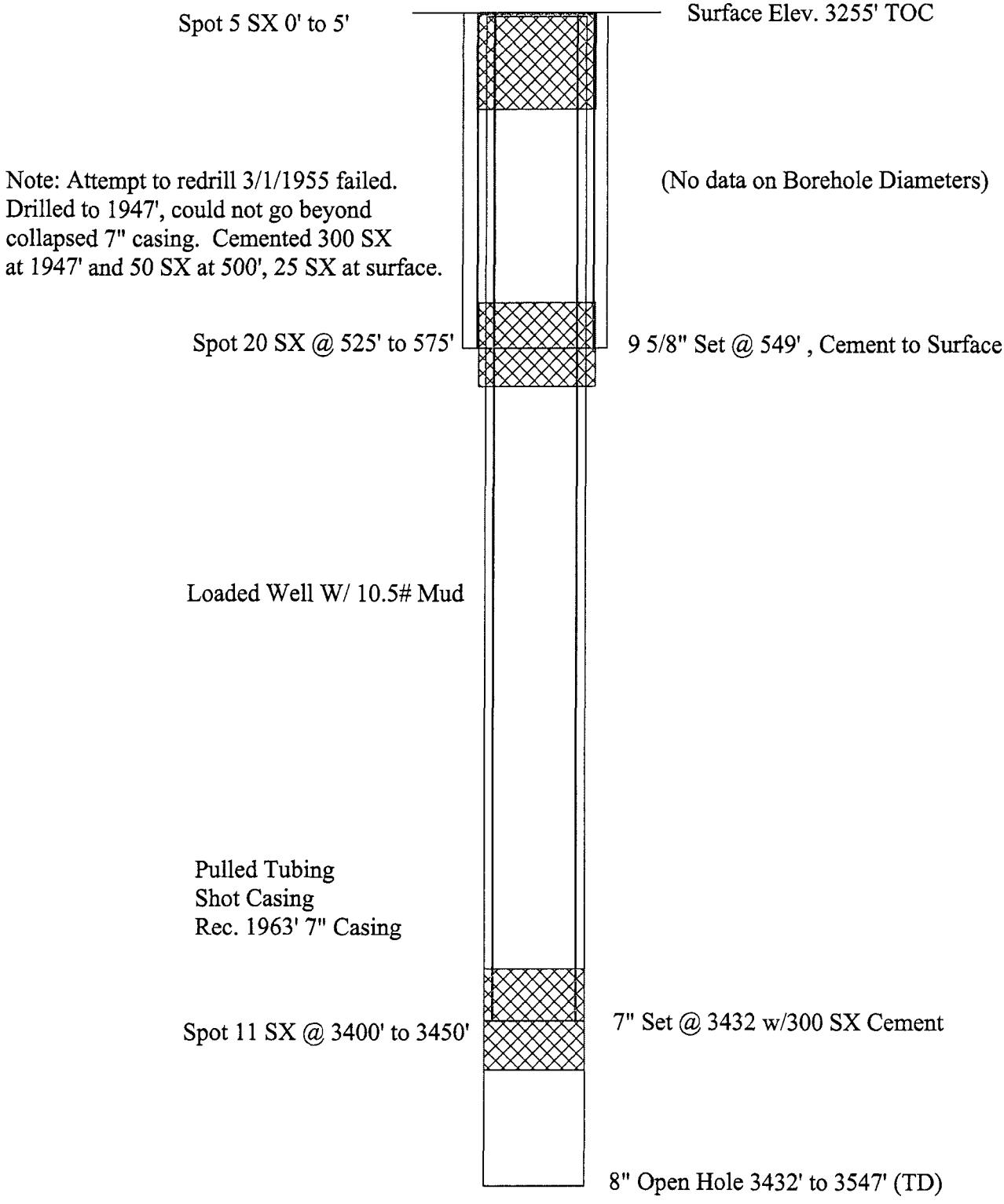
Plugging Diagram for Woolworth 004 - API # 3002511267
Unit E, 1650' FNL, 990 ' FWL, Sec. 28, T24S, R37E
Former Dual Completion in Jalmat (Gas) and Langlie Mattix (Oil)

Woolworth Unit 202
API 3002511271
As Plugged & Abandoned 1/19/05



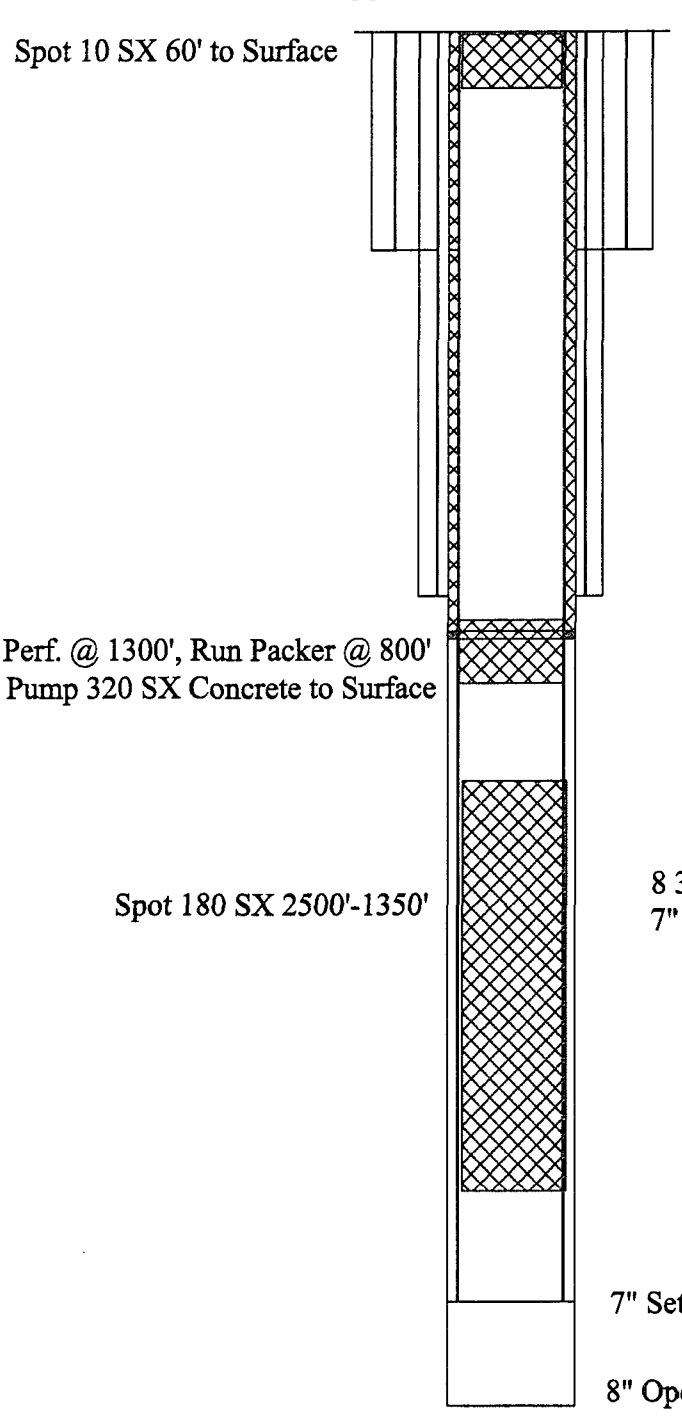
Plugging Diagram for Woolworth 202 - API # 3002511271
Unit N, 2310' FWL, 990 ' FSL, Sec. 28, T24S, R37E
Oil & Gas Langlie Mattix Nov. 1938-1967 (TA), Inj. Well 1968-1988 (TA)

State B-32
API 3002511309
As Plugged & Abandoned 9/29/1953



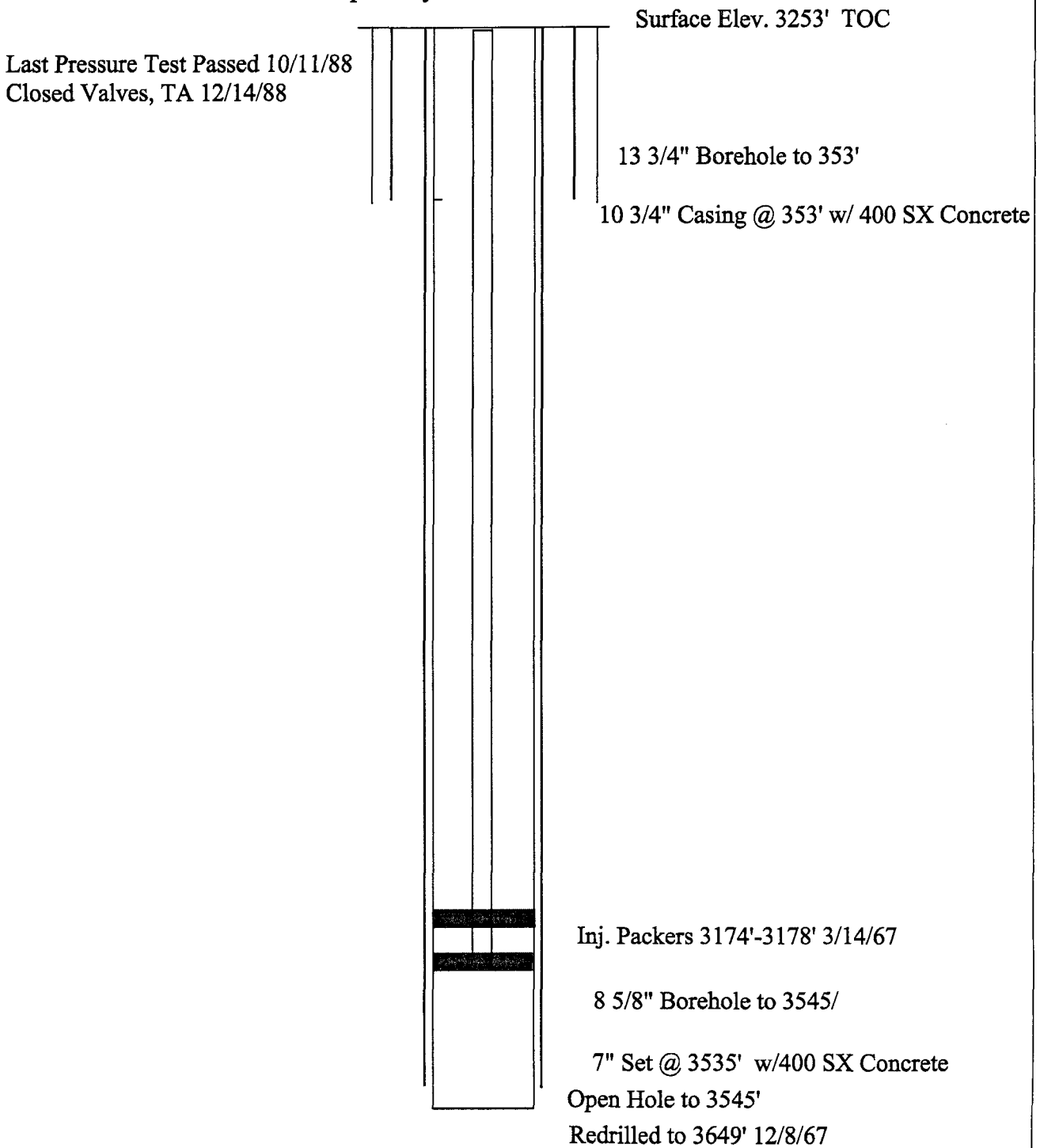
Plugging Diagram for State B-32 - API # 3002511309
Unit J, 1650' FSL, 2310 ' FWL, Sec. 28, T24S, R37E
Langlie Mattix Well Drilled 1939, P&A 1953, Unsuccessful Re-Entry 3/1955, Re-Plugged

Northshore Woolworth #3
API 3002511327
As Plugged & Abandoned 5/28/1992



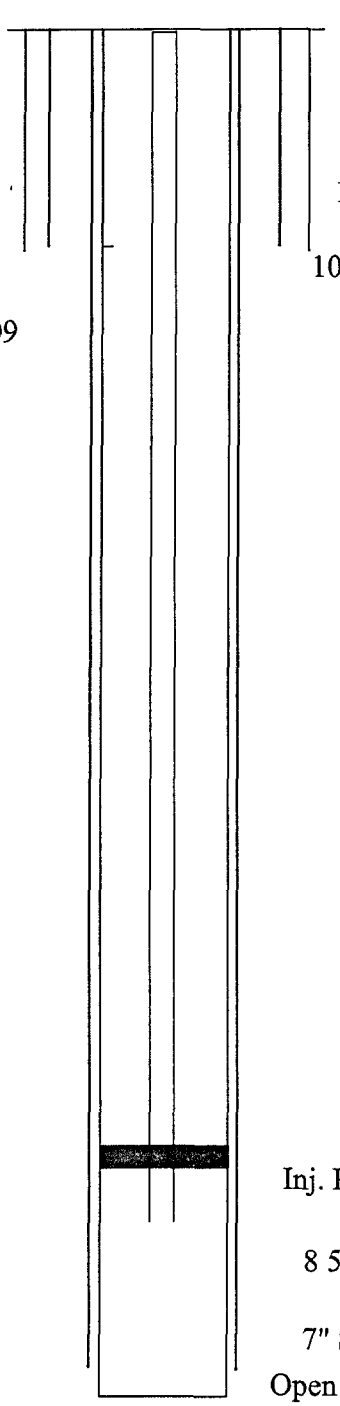
Plugging Diagram for Northshore Woolworth #3- API # 3002511327
Unit E, 2310' FNL, 330 ' FWL, Sec. 33, T24S, R37E
Jalmat-TYS Well Drilled 1941, T&A 1983, P&A May 1992

Langlie-Mattix Woolworth #111
API 3002511329
As Temporarily Abandoned 12/14/1988



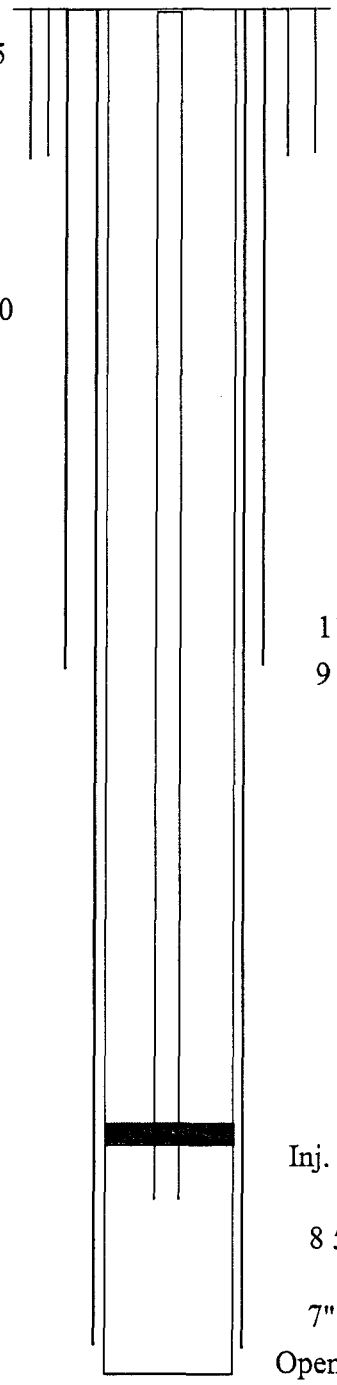
Plugging Diagram for Langlie-Mattix Woolworth #111- API # 3002511329
Unit H, 1980' FNL, 660 ' FEL, Sec. 33, T24S, R37E
Langlie-Mattix Well Drilled Feb. 1938, Gas Well, T&A 12/22/65, Inj. Well 3/15/67, TA 12/20/1988

Langlie-Mattix Woolworth #113
API 3002511331
As Temporarily Abandoned 12/19/2003



Plugging Diagram for Langlie-Mattix Woolworth #113- API # 3002511331
Unit P, 660' FSL, 330 ' FEL, Sec. 33, T24S, R37E
Langlie-Mattix Well Drilled Aug. 1938, Oil&Gas Well, Inj. Well 1972-2003, TA

Langlie-Mattix Woolworth #804
API 3002511337
As Temporarily Abandoned 12/23/1988



Surface Elev. 3275' GR

Last Pressure Test Passed 10/18/05

22" Borehole to 40'

20" Casing @ 40' w/ 10 SX

NOTE: TA approval expires 10/18/2010

11' Borehole to 1226'

9 5/8"" Casing @ 1226' w/ 250 SX Concrete

Inj. Packer 3277' 3/2/71

8 5/8" Borehole to 3565'

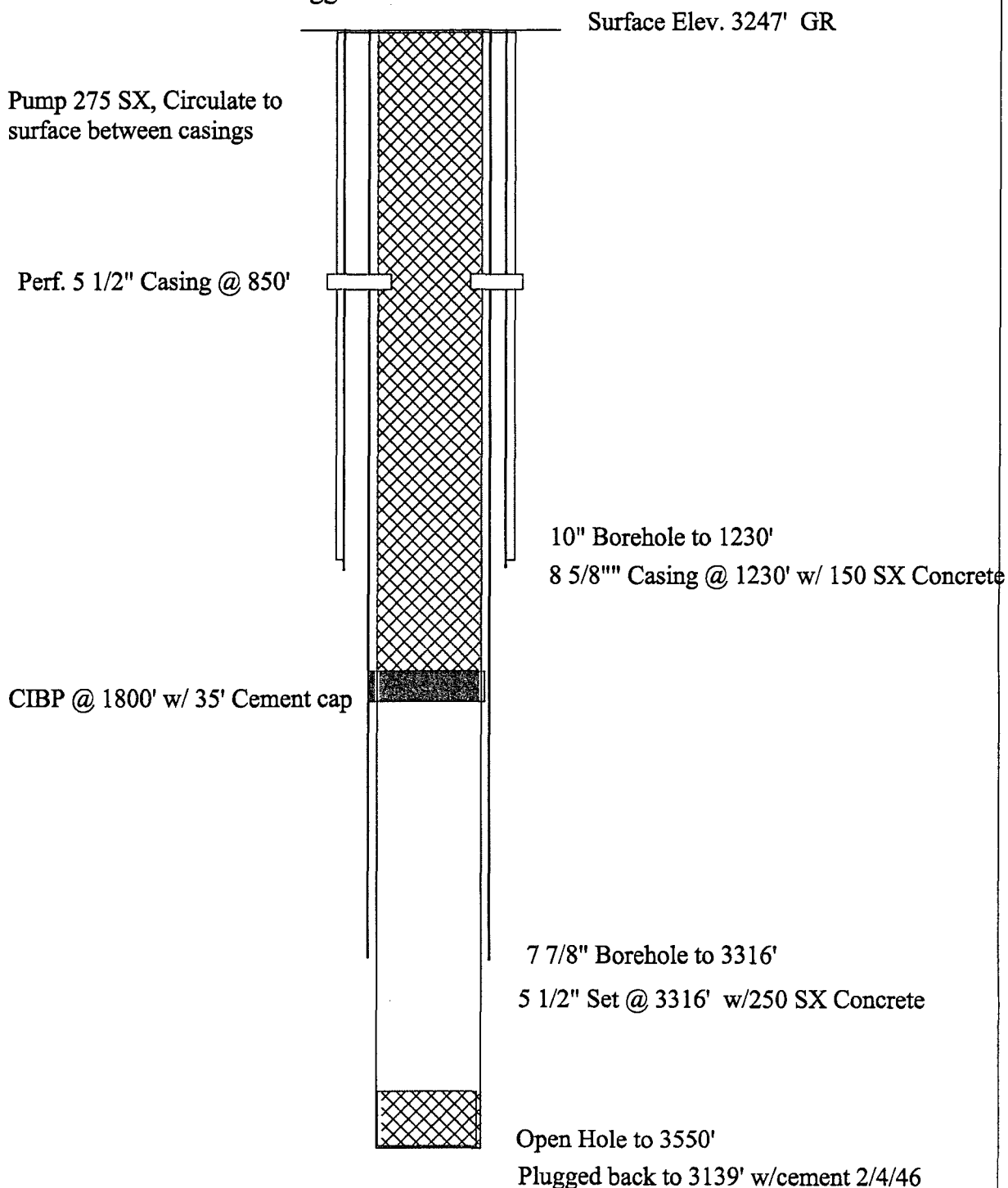
7" Set @ 3330' w/250 SX Concrete

Open Hole to 3565'

Redrilled 6 1/8" to 3821' 10/30/67

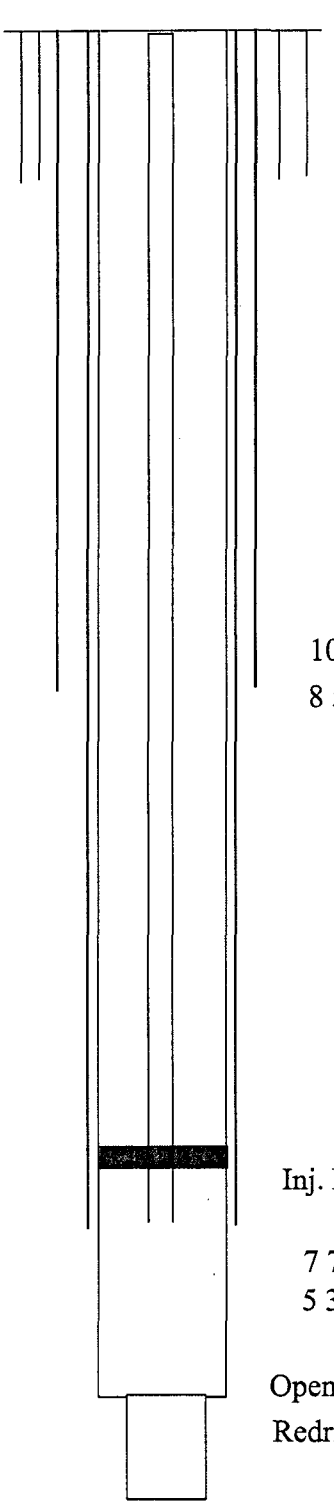
Plugging Diagram for Langlie-Mattix Woolworth #804- API # 3002511337
Unit D, 990' FNL, 990 ' FWL, Sec. 33, T24S, R37E
Langlie-Mattix Oil Well Drilled April. 1938, TA 10/61, Inj. 11/70, TA 12/23/88

Jalmat Woolworth #001
API 3002511339
As Plugged & Abandoned 3/31/83



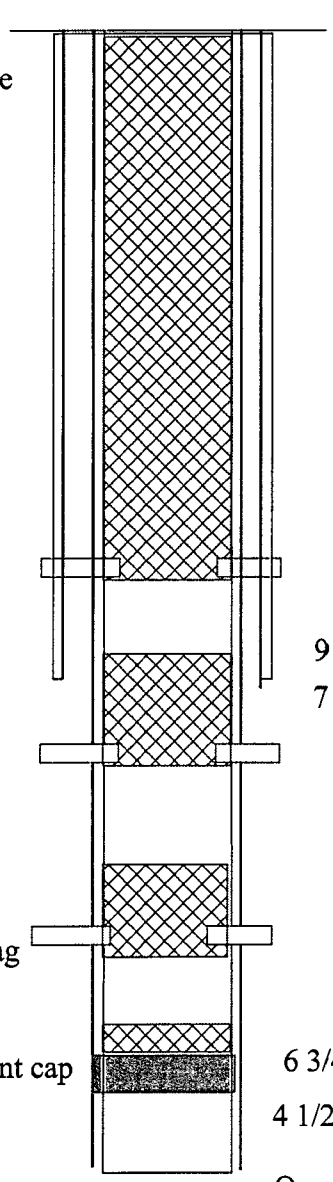
Plugging Diagram for Jalmat Woolworth #001- API # 3002511339
Unit K, 1650' FSL, 2310 ' FWL, Sec. 33, T24S, R37E
Jalmat Well Drilled Sept. 1938, TA 12/76, P&A 3/31/1983

Sam Weiner-Woolworth #902
API 3002511340
As Temporarily Abandoned 10/18/1988



Plugging Diagram for Langlie-Mattix SAm Weiner-Woolworth #902- API # 3002511340
Unit L, 1650' FSL, 330 ' FWL, Sec. 33, T24S, R37E
Langlie-Mattix Oil Well Drilled Jan. 1939, TA 10/62, Inj. 4/72, TA 10/11/1988

Langlie-Mattix Woolworth #308
API 3002520085
As Plugged & Abandoned 10/01/05



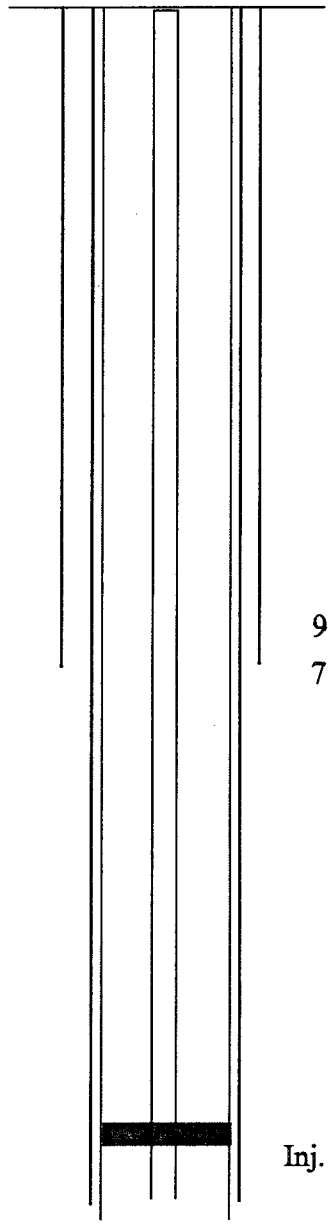
Plugging Diagram for Langlie-Mattix Woolworth #308- API # 3002520085
Unit J, 1980' FSL, 1980 ' FEL, Sec. 28, T24S, R37E
Langlie-Mattix Well Drilled Sept. 1963 as Inj. Well, TA 9/85, P&A 10/01/05

Langlie-Mattix-Woolworth #119
API 3002522881
As Temporarily Abandoned 12/14/1988

Surface Elev. 3229 DF

Last Pressure Test Passed 2/22/05

NOTE: TA approval expires 2/22/2010



9 7/8" Borehole to 752'
7 5/8"" Casing @ 747' w/ 400 SX Concrete

Inj. Packer 3430'

6 3/4" Borehole to 3708'
4 1/2" Set @ 3707' w/350 SX Concrete

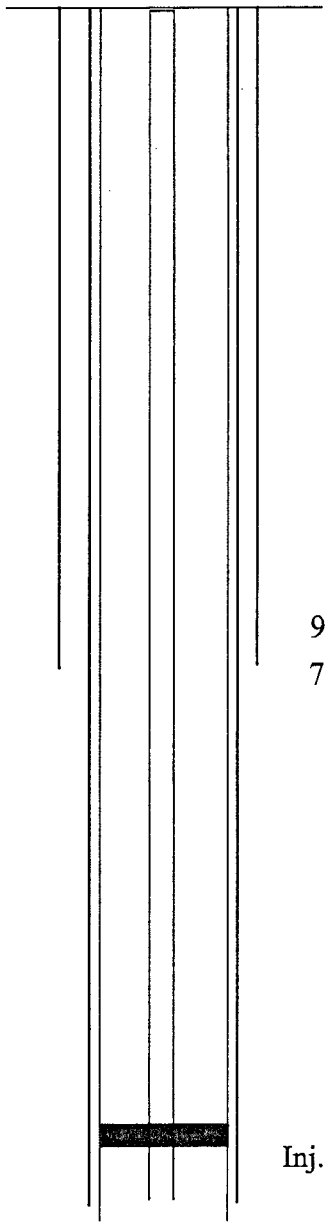
Plugging Diagram for Langlie-Mattix Woolworth #119- API # 3002522881
Unit J, 1880' FSL, 1980 ' FEL, Sec. 33, T24S, R37E
Langlie-Mattix Oil Well Drilled Mar. 1969, Inj. Well, TA 12/14/1988

Langlie-Mattix-Woolworth #204
API 3002523112
As Temporarily Abandoned 12/14/1988

Surface Elev. 3287 DF

Last Pressure Test Passed 2/22/05

NOTE: TA approval expires 2/22/2010



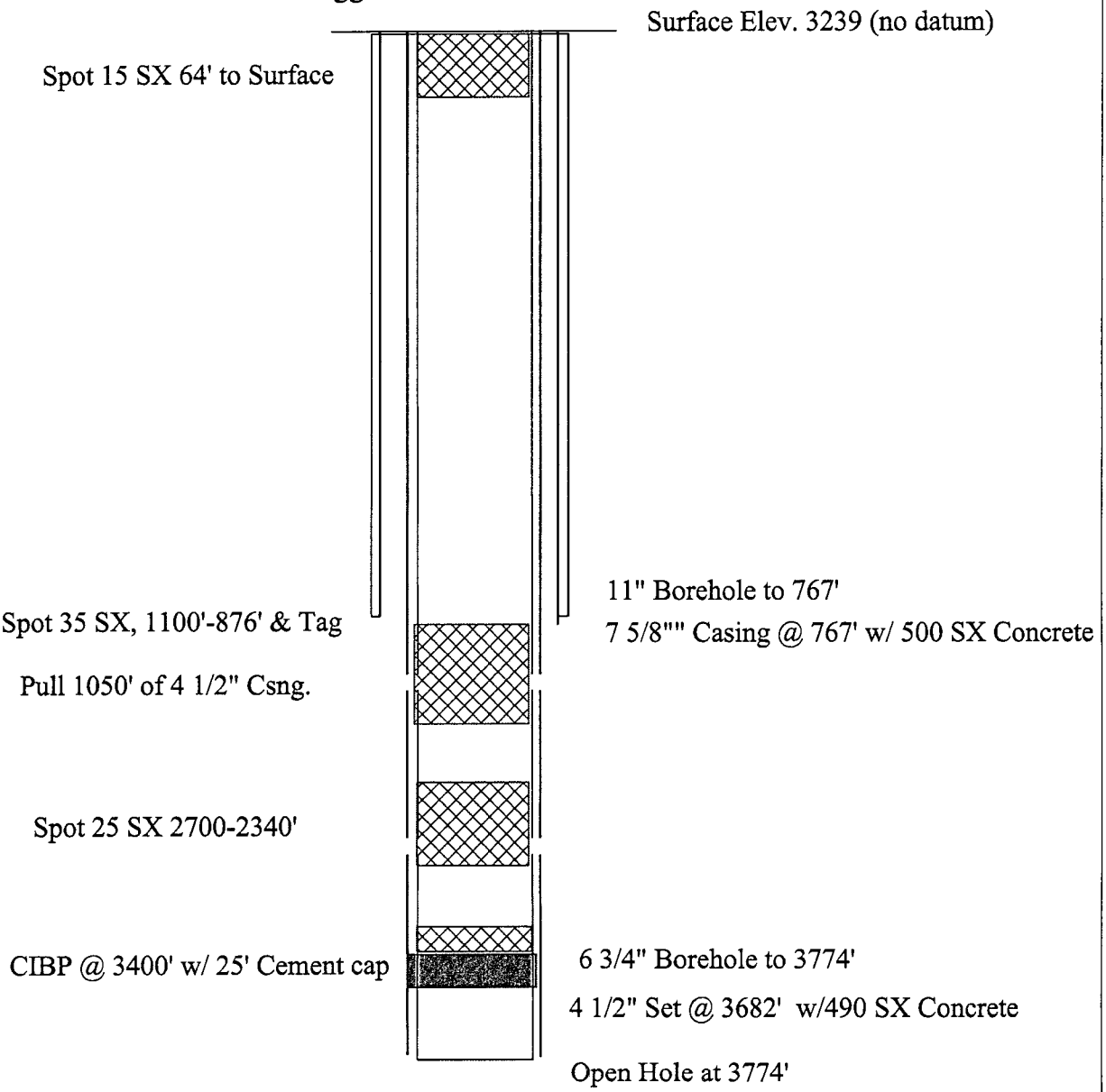
9 7/8" Borehole to 760'
7 5/8"" Casing @ 760' w/ 400 SX Concrete

Inj. Packer 3476'

6 3/4" Borehole to 3800'
4 1/2" Set @ 3800' w/300 SX Concrete

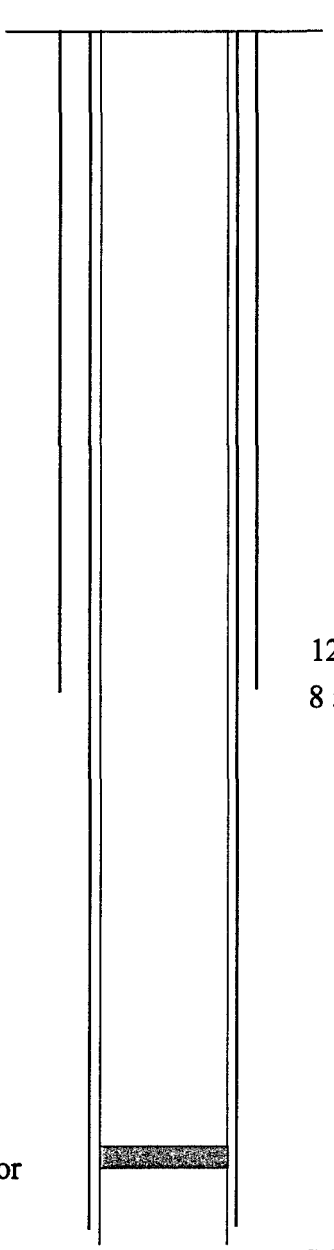
Plugging Diagram for Langlie-Mattix Woolworth #204- API # 3002532112
Unit M, 330' FWL, 330 ' FSL, Sec. 28, T24S, R37E
Langlie-Mattix Injection Well Drilled April 1969, TA 12/14/1988

Langlie-Mattix Woolworth #003
API 3002523598
As Plugged & Abandoned 01/17/05



Plugging Diagram for Langlie-Mattix Woolworth #003- API # 3002523598
Unit N, 1650' FWL, 330 ' FSL, Sec. 33, T24S, R37E
Langlie-Mattix Well Drilled Oct. 1970 as Inj. Well, TA 9/85, P&A 01/17/2005

Northshore Woolworth #005
API 3002526665
As Temporarily Abandoned 6/10/2005



Surface Elev. 3268 KB

Last Pressure Test Passed 5/18/05

NOTE: TA approval expires 5/18/2010

12 1/4" Borehole to 1203'

8 5/8"" Casing @ 1203' w/ 600 SX Concrete

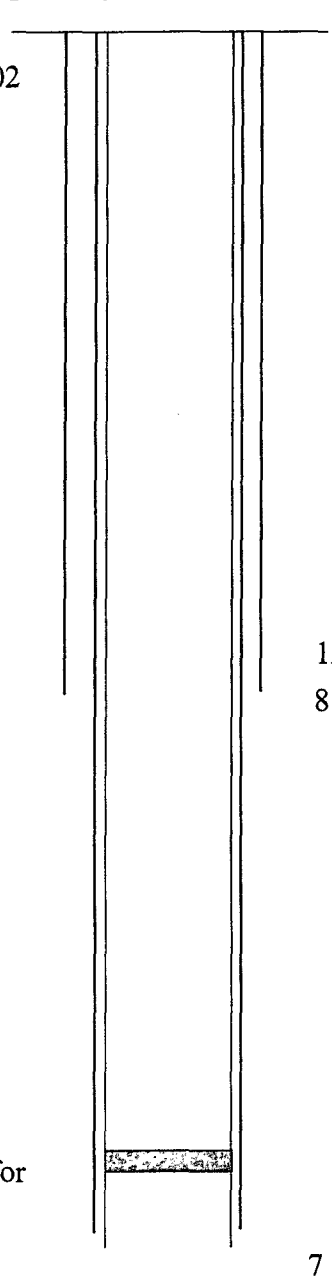
Set CIBP @ 2950', Tested 520# for 30 min., passed

7 7/8" Borehole to 3598'

51/2" Set @ 3800' w/192 SX Concrete

Northshore Woolworth #005- API # 3002526665
Unit C, 1980' FWL, 730 ' FNL, Sec. 33, T24S, R37E
Northshore Well Drilled March 1980, TA 6/10/2005

Langlie-Jal Unit #096
API 3002527841
As Temporarily Abandoned 6/10/2002



Langlie-Jal #096- API # 3002527841
Unit N, 140' FSL, 2600 ' FWL, Sec. 32, T24S, R37E
Langlie-Jal Well Drilled August 1982, TA 6/10/2002

APPENDIX C

OPERATORS AND LEASES
IN AREA OF REVIEW
AND
APPLICABLE NOTICES
(INCLUDING PROPOSED PUBLIC NOTICE)

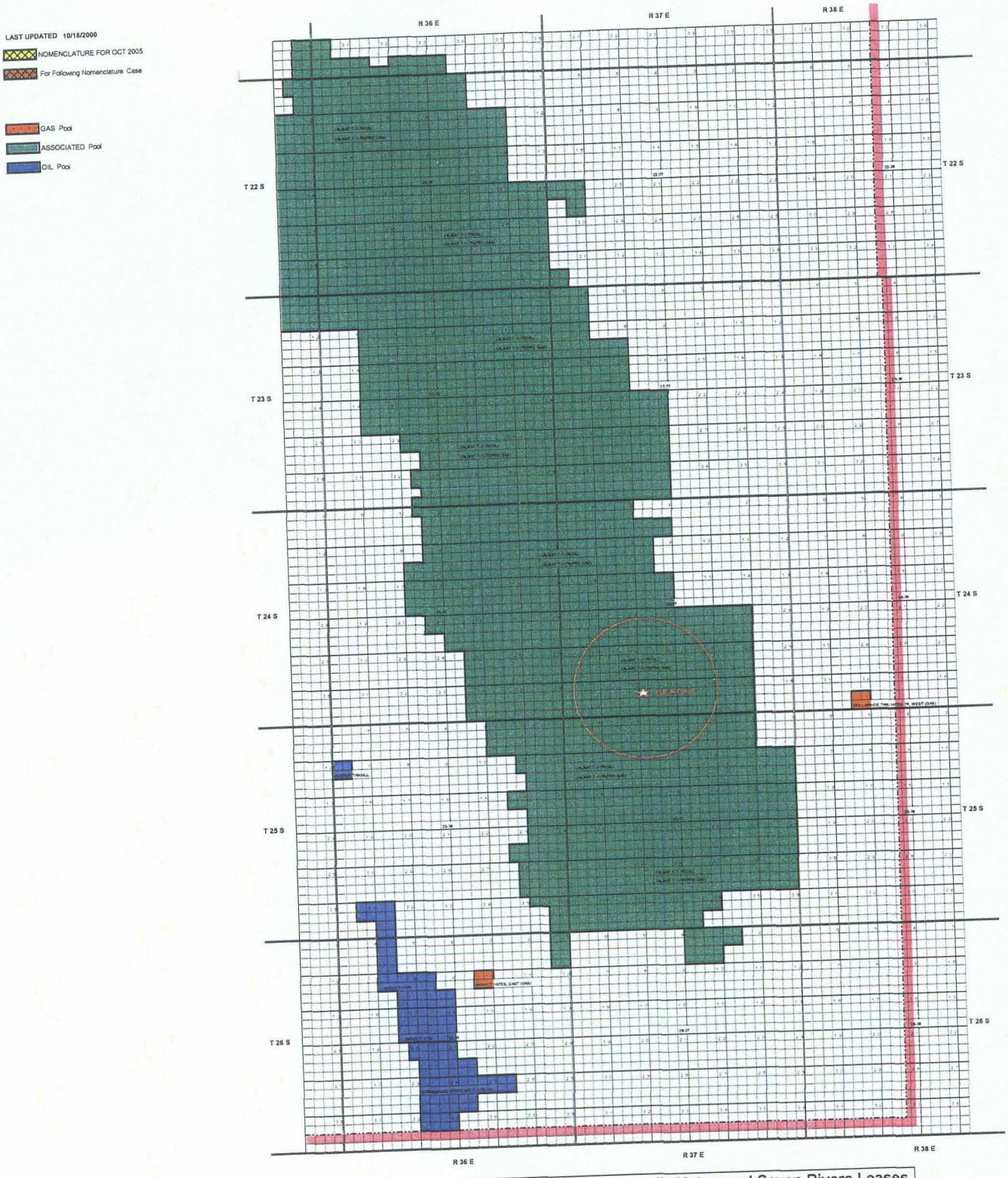


Figure C-1: Unitized Tansill, Yates, and Seven Rivers Leases

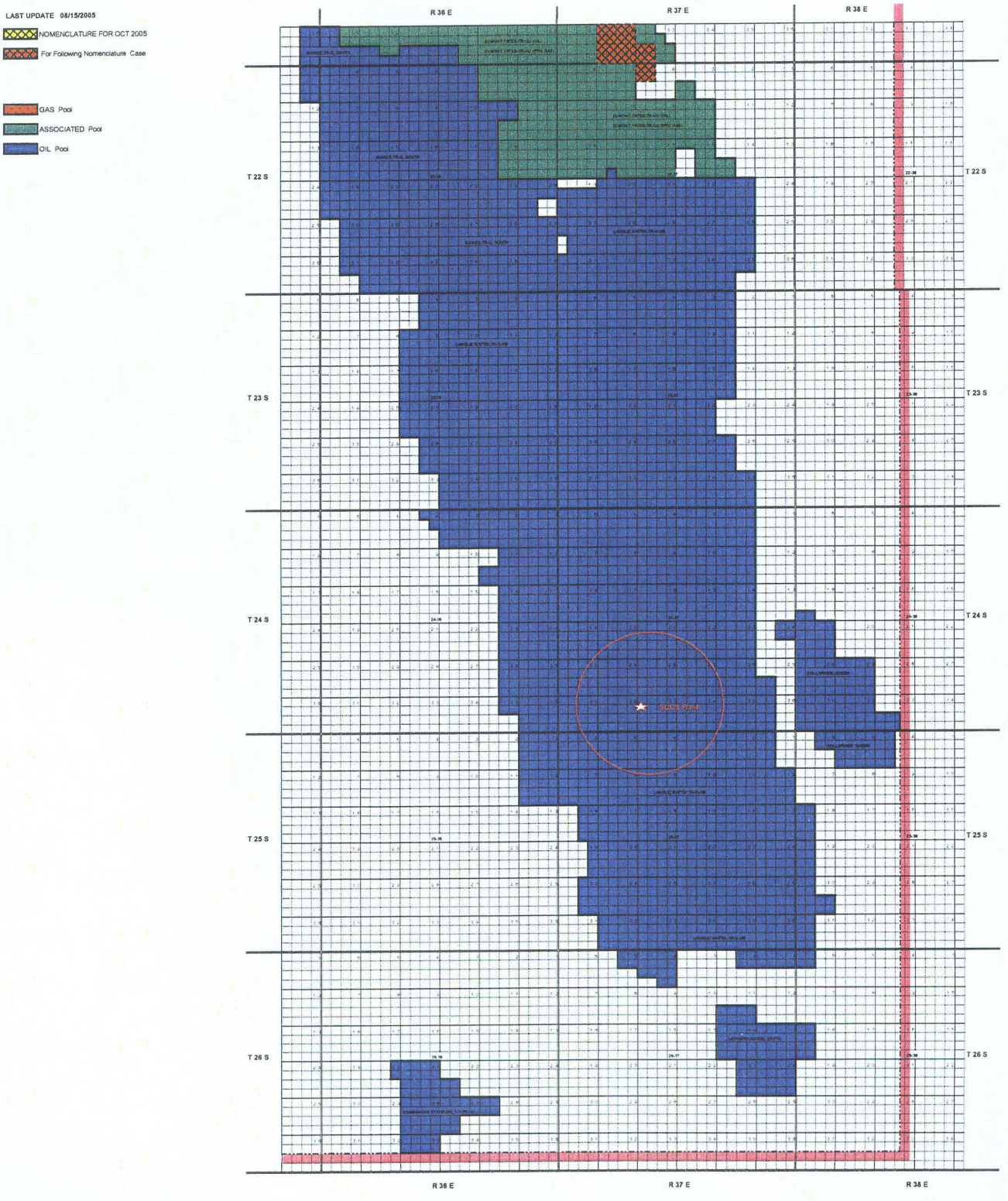


Figure C-2: Unitized Langlie-Mattix, Seven Rivers, Queen and Grayburg Leases

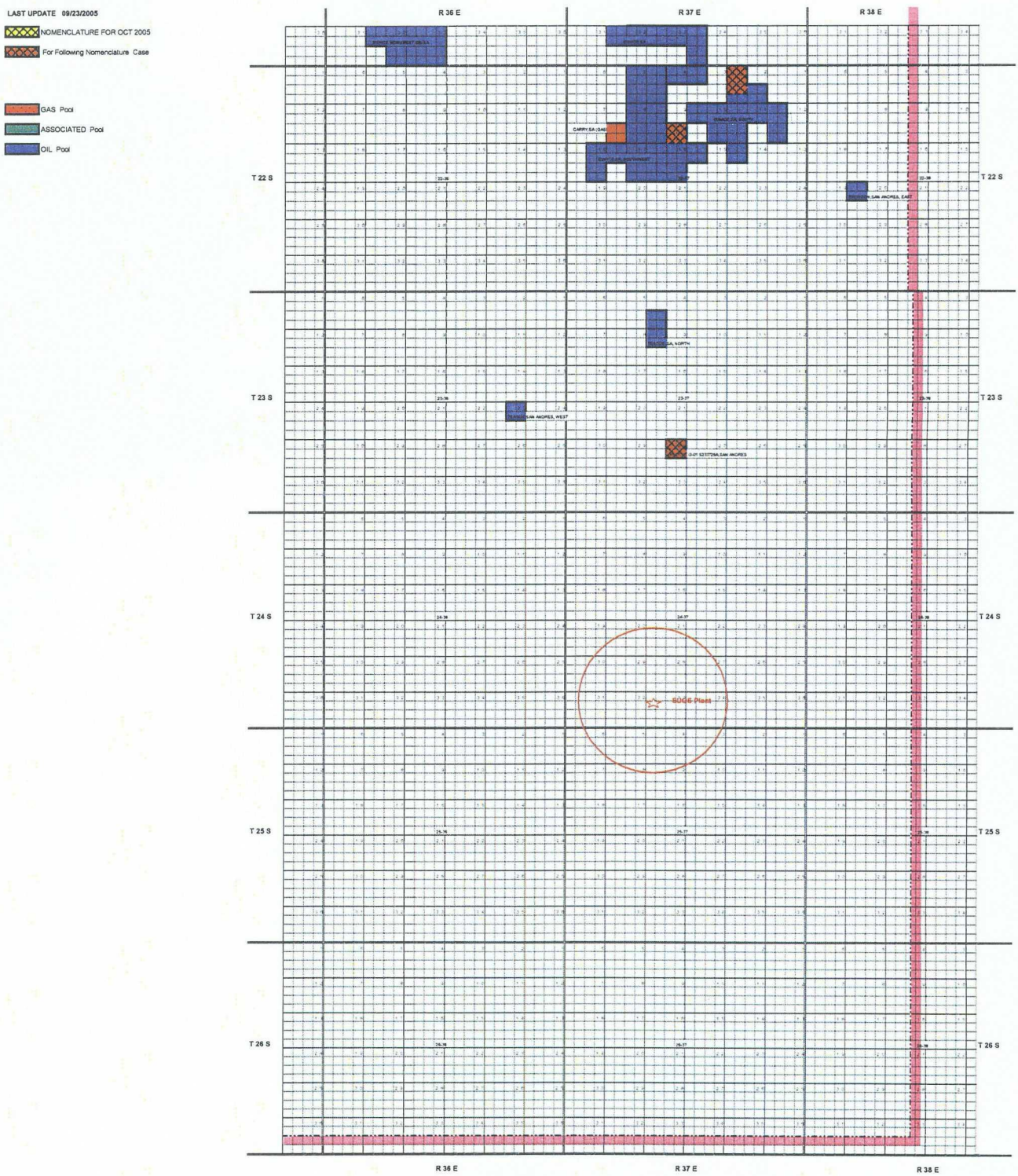


Figure C-3: Unit Status in San Andres Formation

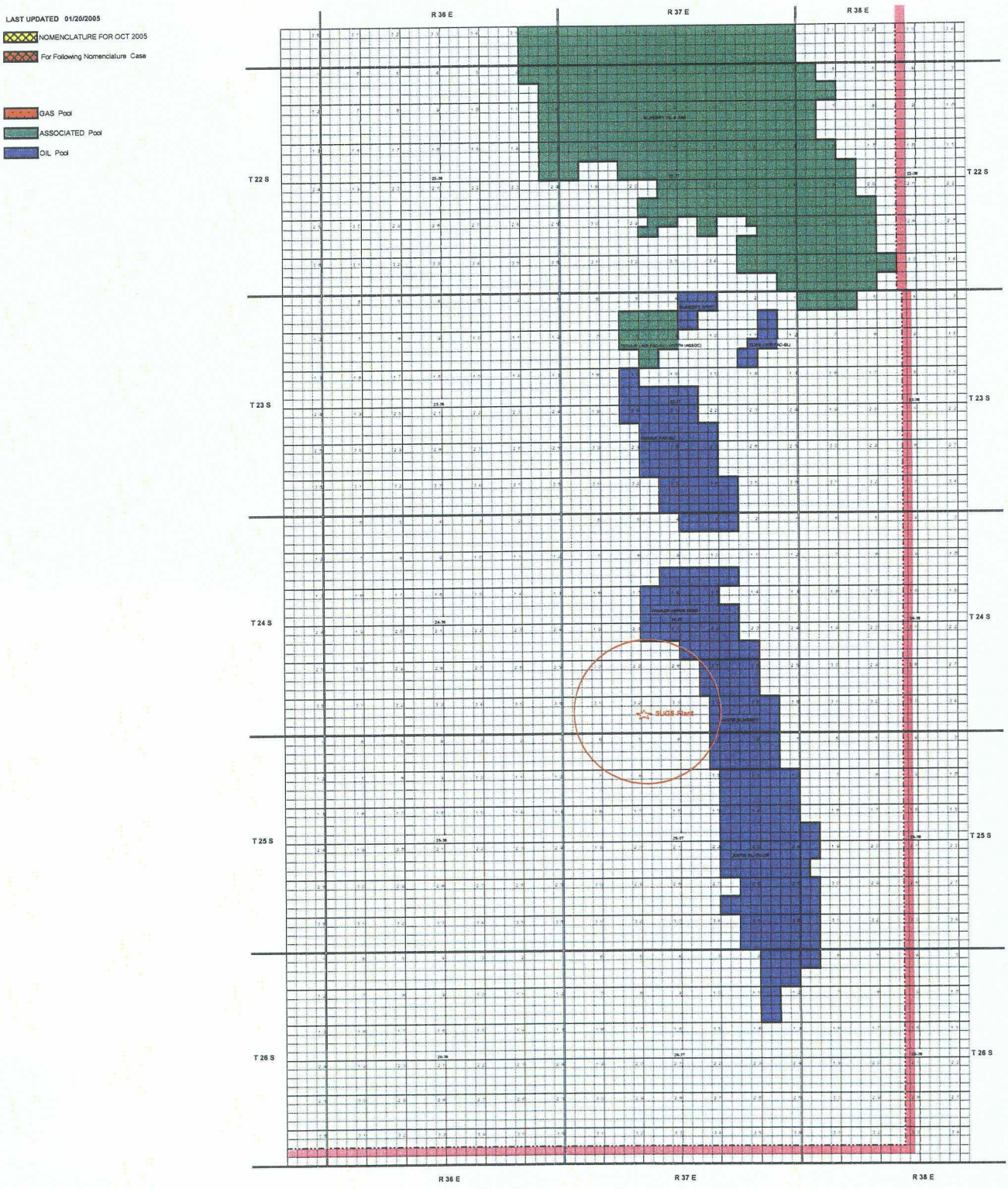


Figure C-4: Unitization in the Blinebry Formation

Table C-1: Operators and Land Status Within One Mile of Proposed SUGS AGI Well								
Township	Range	Section	Unit	Quarter	Status	Surface Owner	Mineral Owner	Operator(s)
24S	37E	27	K	NESW		Fee	Fee	Betwell (1 well, Active)
24S	37E	27	L	NWSW		Fee	Fee	Betwell (1 well, Active)
24S	37E	27	M	SWSW		Fee	Fee	Betwell (1 well, Active)
24S	37E	27	N	SESW		Fee	Fee	Betwell (1 well, TA)
24S	37E	28	E	SWNW		Fee	Fee	Betwell (1 well, Active); BP (1, P&A)
24S	37E	28	F	SENW		Fee	Fee	Betwell (1 well, Active); Amarada Hess (1, P&A)
24S	37E	28	G	SWNE		Fee	Fee	Betwell (1 well, Active)
24S	37E	28	H	SENE		Fee	Fee	Betwell (1 well, Active)
24S	37E	28	I	NESE		Fee	Fee	Betwell (2 wells, Active);
24S	37E	28	J	NWSE		Fee	Fee	Betwell (1, P&A); Westbrook (1, Active)
24S	37E	28	K	NESW		Fee	Fee	Betwell (1 well, Active)
24S	37E	28	L	NWSW		Fee	Fee	McDonnold (1 well, Active); Betwell (1 well, Active)
24S	37E	28	M	SWSW		Fee	Fee	McDonnold (1 well, Active); Betwell (1 well, TA)
24S	37E	28	N	SESW		Fee	Fee	McDonnold (1 well, Active); Betwell (1 well, P&A)
24S	37E	28	O	SWSE		Fee	Fee	Betwell (1 well, Active)
24S	37E	28	P	SESE		Fee	Fee	Betwell (1 well, Active)
24S	37E	29	G	SWNE		Fee	Federal	MCDONNOLD OPERATING INC
24S	37E	29	H	SENE		Fee	Federal	MCDONNOLD OPERATING INC
24S	37E	29	I	NESE		Fee	Federal	MCDONNOLD OPERATING INC
24S	37E	29	J	NWSE		Fee	Federal	MCDONNOLD OPERATING INC
24S	37E	29	K	NESW		Fee	Fee	BP (1 well, Active)
24S	37E	29	L	NWSW		Fee	Fee	BP (1 well, Active); Fulfer Oil & Cattle (1 well, Active)
24S	37E	29	N	SESW		Fee	Fee	BP (1 well, Active)
24S	37E	29	O	SWSE		Fee	Federal	MCDONNOLD OPERATING INC
24S	37E	29	P	SESE		Fee	Federal	MCDONNOLD OPERATING INC
24S	37E	32	A	NENE	Leased	State	State	Phoenix (2 wells, Active) Burleson (1 well, Active)
24S	37E	32	B	NWNE	Leased	State	State	Phoenix (1 well, Active)
24S	37E	32	C	NENW	Leased	State	State	Phoenix (1 well, Active); Westbrook (1 well, active)
24S	37E	32	D	NWNW	Leased	State	State	Phoenix (1 well, TA), Loeb (1 well, Active)
24S	37E	32	E	SWNW	Leased	State	State	Phoenix (1 well, P&A)
24S	37E	32	F	SENW	Leased	State	State	Phoenix (1 well, Active), Loeb (1 well, Active)
24S	37E	32	G	SWNE	Leased	State	State	BP (1 well, Active) Phoenix (1 well, Active)
24S	37E	32	H	SENE	Leased	State	State	Phoenix (1 well, TA)
24S	37E	32	I	NESE	Leased	State	State	Phoenix (2 wells, Active) Mirage (1 well, Active)
24S	37E	32	J	NWSE	Leased	State	State	Phoenix (1 well, Active); Kelly (1 well, P&A)
24S	37E	32	K	NESW	Leased	State	State	Phoenix (3 wells, Active)
24S	37E	32	L	NWSW	Leased	State	State	Phoenix (3 wells, Active); Plantation (1 well, active)
24S	37E	32	M	SWSW	Leased	State	State	Phoenix (2 wells, Active, 1 well TA)
24S	37E	32	N	SESW	Leased	State	State	Phoenix (1 well, Active, 1 well TA)

Table C-1: Operators and Land Status Within One Mile of Proposed SUGS AGI Well								
Township	Range	Section	Unit	Quarter	Status	Surface Owner	Mineral Owner	Operator(s)
24S	37E	32	O	SWSE	Leased	State	State	Phoenix (1 well, Active); BP (1 well, Active)
24S	37E	32	P	SESE	Leased	State	State	Phoenix (2 wells, Active); BP (1 well, Active)
24S	37E	33	A	NENE		Fee	Fee	Betwell (1 well, Active)
24S	37E	33	B	NWNE		Fee	Fee	Betwell (1 well, Active)
24S	37E	33	C	NENW		Fee	Fee	Betwell (1 well, Active); Phillips (1, P&A); Cimarex (1, TA)
24S	37E	33	D	NWNW		Fee	Fee	Betwell (1 well, Active)
24S	37E	33	E	SWNW		Fee	Fee	Betwell (1 well, Active); SUGS (1 SWD, Active), Cimarex (1, Active, Burlington (1, P&A)
24S	37E	33	F	SENW		Fee	Fee	Betwell (1 well, Active)
24S	37E	33	G	SWNE		Fee	Fee	Betwell (2 wells, Active)
24S	37E	33	H	SENE		Fee	Fee	Betwell (1 well, Active)
24S	37E	33	I	NESE		Fee	Fee	Betwell (1 well, Active)
24S	37E	33	J	NWSE		Fee	Fee	Betwell (1 well, TA); Southwest (1 well, Active)
24S	37E	33	K	NESW		Fee	Fee	Betwell (1 well, Active); Inflow (1 well, Active); Burleson (1 well, P&A)
24S	37E	33	L	NWSW		Fee	Fee	Betwell (1 well, TA)
24S	37E	33	M	SWSW		Fee	Fee	Betwell (1 well, Active); Cimarex (1, Active)
24S	37E	33	N	SESW		Fee	Fee	Betwell (2 wells, 1 Active. 1 P&A)
24S	37E	33	O	SWSE		Fee	Fee	Betwell (1 well, Active)
24S	37E	33	P	SESE		Fee	Fee	Betwell (1 well, TA)
24S	37E	34	C	NENW		Fee	Fee	Betwell (1 well, Active)
24S	37E	34	D	NWNW		Fee	Fee	Betwell (1 well, Active)
24S	37E	34	E	SWNW		Fee	Fee	Betwell (1 well, Active)
24S	37E	34	F	SENW		Fee	Fee	Betwell (1 well, Active)
24S	37E	34	K	NESW		Fee	Fee	Betwell (1 well, Active)
24S	37E	34	L	NWSW		Fee	Fee	Betwell (1 well, Active)
24S	37E	34	M	SWSW		Fee	Fee	Betwell (1 well, Active)
24S	37E	34	N	SESW		Fee	Fee	Betwell (2 wells, 1 Active. 1 P&A)
25S	37E	4	B	NWNE		Federal	Federal	PHOENIX HYDROCARBONS OPERATING CORP
25S	37E	4	C	NENW		Federal	Federal	PHOENIX HYDROCARBONS OPERATING CORP HERMAN L LOEB
25S	37E	4	D	NWNW		Federal	Federal	PHOENIX HYDROCARBONS OPERATING CORP
25S	37E	4	E	SWNW		Fee	Federal	PHOENIX HYDROCARBONS OPERATING CORP HERMAN L LOEB
25S	37E	4	F	SENW		Fee	Federal	PHOENIX HYDROCARBONS OPERATING CORP ANDERSON PRICHARD
25S	37E	4	G	SWNE		Fee	Federal	PHOENIX HYDROCARBONS OPERATING CORP HERMAN L LOEB
25S	37E	5	A	NENE		Federal	Federal	PHOENIX HYDROCARBONS OPERATING CORP HERMAN L LOEB
25S	37E	5	B	NWNE		Federal	Federal	PHOENIX HYDROCARBONS OPERATING CORP
25S	37E	5	C	NENW		Federal	Federal	PHOENIX HYDROCARBONS OPERATING CORP
25S	37E	5	D	NWNW		Federal	Federal	PHOENIX HYDROCARBONS OPERATING CORP HERMAN L LOEB
25S	37E	5	E	SWNW		Fee	Federal	PHOENIX HYDROCARBONS OPERATING CORP
25S	37E	5	F	SENW		Fee	Federal	PHOENIX HYDROCARBONS OPERATING CORP HERMAN L LOEB
25S	37E	5	G	SWNE		Fee	Federal	PHOENIX HYDROCARBONS OPERATING CORP HERMAN L LOEB
25S	37E	5	H	SENE		Fee	Federal	PHOENIX HYDROCARBONS OPERATING CORP

Table C-2: Operators Listed as Active in One-Mile Area of Review					
OPERATOR	Number of Wells	Address	City	State	Zip
PHOENIX HYDROCARBONS OPERATING CORP	26	P.O. Box 3638	Midland	TX	79702
BETWELL OIL & GAS CO	25	P.O. Box 2577	Hileah	FL	33012
MCDONNOLD OPERATING INC	10	505 N. Big Springs, Suite 204	Midland	TX	79701
BP AMERICA PRODUCTION COMPANY	4	P.O. Box 22048	Tulsa	OK	74121
CIMAREX ENERGY CO OF COLORADO	3	15 E. 5th St., Suite 1000	Tulsa	OK	74103
HERMAN L LOEB	3	RR#2, Country Club Rd.	Lawrenceville	IL	62439
WESTBROOK OIL CORP	2	P.O. Box 2264	Hobbs	NM	88241
MIRAGE ENERGY INC	1	P. O. Box 760	Eunice	NM	88231
SOUTHWEST ROYALTIES INC	1	6 Desta Dr., Suite 2100	Midland	TX	79705
LEWIS B BURLESON INC	1	P. O. Box 2479	Midland	TX	79702
INFLOW PETROLEUM RESOURCES LP	1	13760 Noel Rd., Suite 104	Dallas	TX	75420

PROPOSED PUBLIC NOTICE TO BE PUBLISHED IN THE HOBBS NEWS-SUN WHEN HEARING DATE IS SET

CASE _____:

Application of Southern Union Gas Services, Ltd. for approval of a combined wastewater and acid gas injection well, Lea County, New Mexico. Applicant seeks approval to utilize its proposed Jal #3 AGI Well No. 1, to be drilled 1570 feet from the North line and 1050 feet from the West line in Section 33, Township 24 South, Range 37 East, NMPM, to inject up to 7390 barrels of acid gas and produced water per day, at a maximum pressure of 986 psi, into the San Andres Formation, at an approximate depth of 4350 feet to 5200 feet. SUGS may be contacted through its representative, Mr. Alberto Gutierrez, 500 Marquette Ave NW, Suite 1350, Albuquerque, New Mexico 87102 or (505) 842-8000. Said well is located on the SUGS Jal #3 Gas Plant approximately 3 ½ miles north of Jal, New Mexico and will replace the existing permitted disposal well at the Plant.

7006 0810 0001 2811 7781

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Street, Apt. No.; or PO Box No.: PO Box 3638
City, State, ZIP+4: Midland TX 79702

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Certified Fee	$2.65	05
Return Receipt Fee (Endorsement Required)	$2.15	Postmark Here
Restricted Delivery Fee (Endorsement Required)	$0.00	
Total Postage & Fees	$ $11.80	12/18/2007

Sent To: Batwell Oil & Gas
Street, Apt. No.; or PO Box No.: PO Box 2577
City, State, ZIP+4: Hialeah FL 33012

PS Form 3800, June 2002 — See Reverse for Instructions

7006 0810 0001 2811 7811

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Restricted Delivery Fee (Endorsement Required)	$0.00	
Total Postage & Fees	$ $10.10	12/18/2007

Sent To: McDonnell Operating Inc.
Street, Apt. No.; or PO Box No.: 505 N. Big Springs #204
City, State, ZIP+4: Midland TX 79701

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Certified Fee	$2.65	05
Return Receipt Fee (Endorsement Required)	$2.15	Postmark Here
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Total Postage & Fees	$ $11.00	12/18/2007

Sent To: BP America
Street, Apt. No.; or PO Box No.: PO Box 22048
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Sent To: Cimarex Energy Co. of Colorado
Street, Apt. No.; or PO Box No.: 15 E. 15th St. #1000
City, State, ZIP+4: Tulsa OK 74103

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7006 0810 0001 2811 7842

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LAWRENCEVILLE IL 62439 OFFICIAL USE

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Restricted Delivery Fee (Endorsement Required)	$0.00	
Total Postage & Fees	$ $11.35	12/18/2007

Sent To: Herman L. Loeb
Street, Apt. No.; or PO Box No.: RR #2 Country Club Rd.
City, State, ZIP+4: Lawrenceville IL 62439

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Restricted Delivery Fee (Endorsement Required)	$0.00	
Total Postage & Fees	$ $9.70	12/18/2007

Sent To: Mirage Energy, Inc.
Street, Apt. No.; or PO Box No.: PO Box 760
City, State, ZIP+4: Eunice NM 88231

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Total Postage & Fees	$ $9.70	12/18/2007

Sent To: Westbrook Oil Corp.
Street, Apt. No.; or PO Box No.: PO Box 2264
City, State, ZIP+4: Hobbs NM 88241

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Total Postage & Fees	$ $10.10	12/18/2007

Sent To: Southwestern Royalties Inc.
Street, Apt. No.; or PO Box No.: 6 Desta Dr. #2100
City, State, ZIP+4: Midland TX 79705

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Total Postage & Fees	$ $10.10	12/18/2007

Sent To: Lewis Burleson, Inc.
Street, Apt. No.; or PO Box No.: PO Box 2479
City, State, ZIP+4: Midland TX 79702

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7006 0810 0001 2811 7897

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Restricted Delivery Fee (Endorsement Required)	$0.00	
Total Postage & Fees	$ $10.10	12/18/2007

Sent To: Inflow Petroleum Resources
Street, Apt. No.; or PO Box No.: 13760 Noel Rd #104
City, State, ZIP+4: Dallas TX 75420

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INCORPORATED

Alberto A. Gutiérrez, C.P.G.

December 18, 2007

Phoenix Hydrocarbons Operating Corp.
PO Box 3638
Midland TX 79702

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Re: **APPLICATION OF SOUTHERN UNION GAS SERVICES, LTD. FOR AUTHORIZATION TO INJECT, LEA COUNTY, NEW MEXICO**

Ladies and Gentlemen:

This letter is to advise you that Southern Union Gas Services, Ltd., (SUGS) has filed the enclosed application with the New Mexico Oil Conservation Division (NMOCD) seeking authorization to inject up to 7929 barrels per day of produced water and acid gas, from the Jal #3 Gas Plant, at a maximum pressure of 986 psi into the San Andres Formation between approximately 4350 and 5200 feet. SUGS' proposed Jal Plant AGI Well #1 will be drilled approximately 1570 feet from the North line and 1050 feet from the West line of Section 33, Township 24S, Range 37E, NMPM, Lea County, New Mexico, and will replace the existing Class II injection well currently permitted at the Plant.

The proposed well will be located within the Jal #3 Gas Plant, approximately 3½ miles north of Jal, New Mexico.

This application will be set for hearing before a Division Examiner at 8:15 a.m. on February 7, 2008 at the Oil Conservation Division's Santa Fe office located at 1220 South Saint Francis Drive, Santa Fe, New Mexico 87505. You are not required to attend this hearing, but as an owner of an interest that may be affected by this application, you may appear and present testimony. Failure to appear at that time and become a party of record will preclude you from challenging the matter at a later date.

Parties appearing in cases are required by Division Rule 1208.B to file a Pre-Hearing Statement with the Oil Conservation Division's Santa Fe office, four days in advance of a scheduled hearing, but at least on the Thursday preceding the hearing. This statement must include: the names of the parties and their attorneys; a concise statement of the case; the names of all witnesses the party will call to testify at the hearing; the approximate time the party will need to present its case; and identification of any procedural matters that are to be resolved prior to the hearing.

If you have questions concerning this application, you may contact Mr. Alberto Gutierrez at (505) 842-8000 or 500 Marquette Avenue NW, Suite 1350, Albuquerque, New Mexico, 87102.

Sincerely,
Geolex, Inc.

Alberto A. Gutiérrez, C.P.G.
Consultant to Southern Union Gas Services, Ltd.

AAG/lh

Enclosures

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Alberto A. Gutiérrez, C.P.G.

December 18, 2007

Betwell Oil & Gas Co.
PO Box 2577
Hialeah FL 33012

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

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Sincerely,
Geolex, Inc.

Alberto A. Gutiérrez, C.P.G.
Consultant to Southern Union Gas Services, Ltd.

AAG/lh

Enclosures

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phone: 505-842-8000
fax: 505-842-7380

500 Marquette Avenue NW, Suite 1350
Albuquerque, New Mexico 87102

email: aag@geolex.com
web: www.geolex.com

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Alberto A. Gutiérrez, C.P.G.

December 18, 2007

McDonnold Operating, Inc.
505 N. Big Springs #204
Midland TX 79701

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Re: **APPLICATION OF SOUTHERN UNION GAS SERVICES, LTD. FOR AUTHORIZATION TO INJECT, LEA COUNTY, NEW MEXICO**

Ladies and Gentlemen:

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Alberto A. Gutiérrez, C.P.G.
Consultant to Southern Union Gas Services, Ltd.

AAG/lh

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Alberto A. Gutiérrez, C.P.G.

December 18, 2007

BP America Production Co.
PO Box 22048
Tulsa OK 74121

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

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Geolex, Inc.

Alberto A. Gutiérrez, C.P.G.
Consultant to Southern Union Gas Services, Ltd.

AAG/lh

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phone: 505-842-8000
fax: 505-842-7380

500 Marquette Avenue NW, Suite 1350
Albuquerque, New Mexico 87102

email: aag@geolex.com
web: www.geolex.com

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Alberto A. Gutiérrez, C.P.G.

December 18, 2007

Cimarex Energy Co. of Colorado
15 E. 5th Street #1000
Tulsa OK 74103

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

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If you have questions concerning this application, you may contact Mr. Alberto Gutierrez at (505) 842-8000 or 500 Marquette Avenue NW, Suite 1350, Albuquerque, New Mexico, 87102.

Sincerely,
Geolex, Inc.

Alberto A. Gutiérrez, C.P.G.
Consultant to Southern Union Gas Services, Ltd.

AAG/lh

Enclosures

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INCORPORATED

Alberto A. Gutiérrez, C.P.G.

December 18, 2007

Herman L. Loeb
RR#2, Country Club Rd.
Lawrenceville IL 62439

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Re: **APPLICATION OF SOUTHERN UNION GAS SERVICES, LTD. FOR AUTHORIZATION TO INJECT, LEA COUNTY, NEW MEXICO**

Ladies and Gentlemen:

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Sincerely,
Geolex, Inc.

Alberto A. Gutiérrez, C.P.G.
Consultant to Southern Union Gas Services, Ltd.

AAG/lh

Enclosures

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phone: 505-842-8000
fax: 505-842-7380

500 Marquette Avenue NW, Suite 1350
Albuquerque, New Mexico 87102

email: aag@geolex.com
web: www.geolex.com

GEOLEX®
INCORPORATED

Alberto A. Gutiérrez, C.P.G.

December 18, 2007

Westbrook Oil Corp.
PO Box 2264
Hobbs NM 88241

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Re: **APPLICATION OF SOUTHERN UNION GAS SERVICES, LTD. FOR AUTHORIZATION TO INJECT, LEA COUNTY, NEW MEXICO**

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Consultant to Southern Union Gas Services, Ltd.

AAG/lh

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phone: 505-842-8000
fax: 505-842-7380

500 Marquette Avenue NW, Suite 1350
Albuquerque, New Mexico 87102

email: aag@geolex.com
web: www.geolex.com

GEOLEX®
INCORPORATED

Alberto A. Gutiérrez, C.P.G.

December 18, 2007

Mirage Energy, Inc.
PO Box 760
Eunice NM 88231

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

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AAG/lh

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Alberto A. Gutiérrez, C.P.G.

December 18, 2007

Southwest Royalties, Inc.
6 Desta Drive #2100
Midland TX 79705

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

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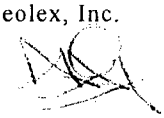
Geolex, Inc.



Alberto A. Gutiérrez, C.P.G.
Consultant to Southern Union Gas Services, Ltd.

AAG/lh

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phone: 505-842-8000
fax: 505-842-7380

500 Marquette Avenue NW, Suite 1350
Albuquerque, New Mexico 87102

email: aag@geolex.com
web: www.geolex.com

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Alberto A. Gutiérrez, C.P.G.

December 18, 2007

Lewis B. Burleson, Inc.
PO Box 2479
Midland TX 79702

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

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Consultant to Southern Union Gas Services, Ltd.

AAG/lh

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phone: 505-842-8000
fax: 505-842-7380

500 Marquette Avenue NW, Suite 1350
Albuquerque, New Mexico 87102

email: aag@geolex.com
web: www.geolex.com

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INCORPORATED

Alberto A. Gutiérrez, C.P.G.

December 18, 2007

Inflow Petroleum Resources, LP
13760 Noel Rd. #104
Dallas TX 75420

CERTIFIED MAIL
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Alberto A. Gutiérrez, C.P.G.
Consultant to Southern Union Gas Services, Ltd.

AAG/lh

Enclosures

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APPENDIX D

SURFACE OWNERS IN AREA OF REVIEW
AND
APPLICABLE NOTICES

TABLE D-1

SURFACE OWNERS WITHIN 1-MILE RADIUS OF JAL #3 PLANT

1. Rebecca Joan Doom
   Jerold W. Doom
   Daniel J. Doom
   47 Doom Lane
   Jal NM 88252-9711

2. Jal Public Library Trust
   PO Box 178
   Jal NM 88252

3. C.D. Woolworth Trust
   Jal Public Library Fund
   PO Box 178
   Jal NM 88252

4. Southwestern Public Service Company
   Property Tax Department
   PO Box 840
   Denver CO 80201-0840

5. Henry H. Harrison, Jr.
   Ronald M. Harrison
   1120 Wilma
   Tyler TX 75701

6. LeaPartners L.P. FinCo
   PO Box 4967
   Houston TX 77210-4967

7. New Mexico State Lands
   State of New Mexico
   PO Box 1148
   Santa Fe NM 87504-1148

8. El Paso Natural Gas Company
   Ad Valorem Tax Department
   PO Box 1087
   Colorado Springs CO 80944

NOTE: See map for location of surface owners

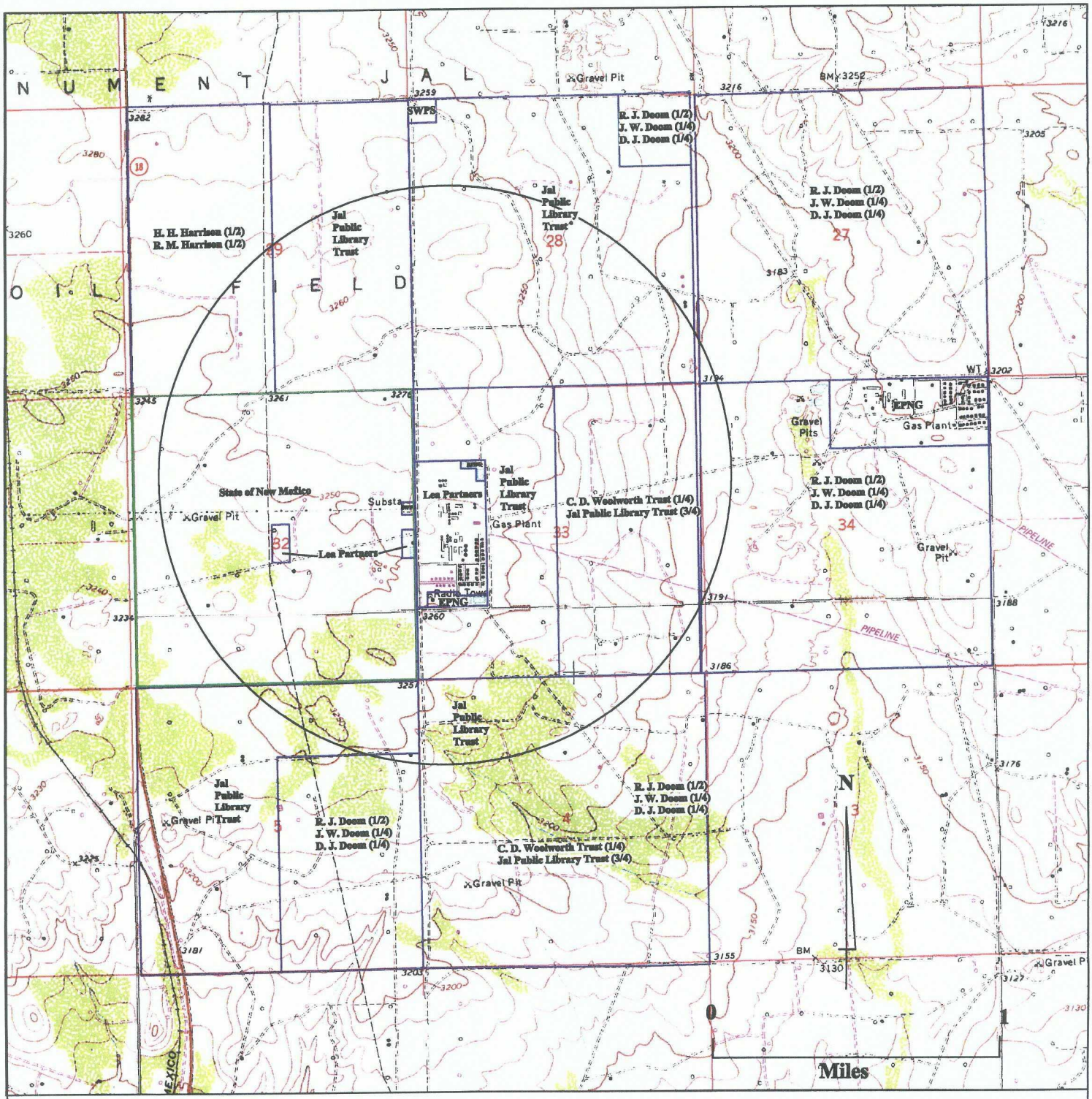

Figure D-1:
Approximate Locations of Surface Land Owners Within One Mile of Proposed SUGS AGI Well

7006 0810 0001 2811 7682

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JAL NM 88252 OFFICIAL USE

Postage	$ $4.90	0129
Certified Fee	$2.65	05
Return Receipt Fee (Endorsement Required)	$2.15	Postmark Here
Restricted Delivery Fee (Endorsement Required)	$0.00	
Total Postage & Fees	$ $9.70	12/18/2007

Sent To Doom
Street, Apt. No.; or PO Box No. 47 Doom Lane
City, State, ZIP+4 Jal NM 88252-9711

PS Form 3800, June 2002 See Reverse for Instructions

7006 0810 0001 2811 7729

U.S. Postal Service™
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Return Receipt Fee (Endorsement Required)	$2.15	Postmark Here
Restricted Delivery Fee (Endorsement Required)	$0.00	
Total Postage & Fees	$ $9.70	12/18/2007

Sent To C.D. Woolworth Trust
Street, Apt. No.; or PO Box No. Jal Public Library Fund PO Box 178
City, State, ZIP+4 Jal NM 88252

PS Form 3800, June 2002 See Reverse for Instructions

7006 0810 0001 2811 7712

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JAL NM 88252 OFFICIAL USE

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Certified Fee	$2.65	05
Return Receipt Fee (Endorsement Required)	$2.15	Postmark Here
Restricted Delivery Fee (Endorsement Required)	$0.00	
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Sent To Jal Public Library Trust
Street, Apt. No.; or PO Box No. PO Box 178
City, State, ZIP+4 Jal NM 88252

PS Form 3800, June 2002 See Reverse for Instructions

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TYLER TX 75701 OFFICIAL USE

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Return Receipt Fee (Endorsement Required)	$2.15	Postmark Here
Restricted Delivery Fee (Endorsement Required)	$0.00	
Total Postage & Fees	$ $11.00	12/18/2007

Sent To Harrison, Henry & Ronall
Street, Apt. No.; or PO Box No. 1120 Wilma
City, State, ZIP+4 Tyler TX 75701

PS Form 3800, June 2002 See Reverse for Instructions

7006 0810 0001 2811 7736

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DENVER CO 80201 OFFICIAL USE

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Return Receipt Fee (Endorsement Required)	$2.15	Postmark Here
Restricted Delivery Fee (Endorsement Required)	$0.00	
Total Postage & Fees	$ $10.10	12/18/2007

Sent To SW Pub. Service Co, Property Tax Dept.
Street, Apt. No.; or PO Box No. PO Box 840
City, State, ZIP+4 Denver CO 80201-0840

PS Form 3800, June 2002 See Reverse for Instructions

7006 0810 0001 2811 7750

U.S. Postal Service™
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For delivery information visit our website at www.usps.com

HOUSTON TX 77210 OFFICIAL USE

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Certified Fee	$2.65	05
Return Receipt Fee (Endorsement Required)	$2.15	Postmark Here
Restricted Delivery Fee (Endorsement Required)	$0.00	
Total Postage & Fees	$ $11.00	12/18/2007

Sent To Les Partners LP Fin Co
Street, Apt. No.; or PO Box No. PO Box 4967
City, State, ZIP+4 Houston TX 77210-4967

PS Form 3800, June 2002 See Reverse for Instructions

7006 0810 0001 2811 7774

U.S. Postal Service
CERTIFIED MAIL RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)

For delivery information visit our website at www.usps.com

COLORADO SPRINGS CO 80944

Postage	$ $4.90	0129
Certified Fee	$2.65	05
Return Receipt Fee (Endorsement Required)	$2.15	Postmark Here
Restricted Delivery Fee (Endorsement Required)	$0.00	
Total Postage & Fees	$ $9.70	12/18/2007

Sent To: El Paso Natural Gas Co
Street, Apt. No.; or PO Box No.: Ad Valorem Tax Dept. PO Box 1087
City, State, ZIP+4: Colorado Springs CO 80944

PS Form 3800, June 2002 — See Reverse for Instructions

7006 0810 0001 2811 7767

U.S. Postal Service
CERTIFIED MAIL RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)

For delivery information visit our website at www.usps.com

SANTA FE NM 87504

Postage	$ $4.60	0129
Certified Fee	$2.65	05
Return Receipt Fee (Endorsement Required)	$2.15	Postmark Here
Restricted Delivery Fee (Endorsement Required)	$0.00	
Total Postage & Fees	$ $9.40	12/18/2007

Sent To: NM State Lands; State of NM
Street, Apt. No.; or PO Box No.: PO Box 1148
City, State, ZIP+4: Santa Fe NM 87504-1148

PS Form 3800, June 2002 — See Reverse for Instructions

GEOLEX®
INCORPORATED

Alberto A. Gutiérrez, C.P.G.

December 18, 2007

Rebecca Joan Doom
Jerold W. Doom
Daniel J. Doom
47 Doom Lane
Jal NM 88252-9711

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Consultant to Southern Union Gas Services, Ltd.

AAG/lh

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phone: 505-842-8000
fax: 505-842-7380

500 Marquette Avenue NW, Suite 1350
Albuquerque, New Mexico 87102

email: aag@geolex.com
web: www.geolex.com

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Alberto A. Gutiérrez, C.P.G.

December 18, 2007

Jal Public Library Trust
PO Box 178
Jal NM 88252

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If you have questions concerning this application, you may contact Mr. Alberto Gutierrez at (505) 842-8000 or 500 Marquette Avenue NW, Suite 1350, Albuquerque, New Mexico, 87102.

Sincerely,
Geolex, Inc.

Alberto A. Gutiérrez, C.P.G.
Consultant to Southern Union Gas Services, Ltd.

AAG/lh

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Alberto A. Gutiérrez, C.P.G.

December 18, 2007

C.D. Woolworth Trust
Jal Public Library Fund.
PO Box 178
Jal NM 88252

CERTIFIED MAIL
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December 18, 2007

Southwestern Public Service Co.
Property Tax Dept.
PO Box 840
Denver CO 80201-0840

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December 18, 2007

Henry H. Harrison, Jr.
Ronald M. Harrison
1120 Wilma
Tyler TX 75701

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Alberto A. Gutiérrez, C.P.G.

December 18, 2007

LeaPartners L.P. FinCo
PO Box 4967
Houston TX 77210-4967

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phone: 505-842-8000
fax: 505-842-7380

500 Marquette Avenue NW, Suite 1350
Albuquerque, New Mexico 87102

email: aag@geolex.com
web: www.geolex.com

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Alberto A. Gutiérrez, C.P.G.

December 18, 2007

New Mexico State Lands
State of New Mexico
PO Box 1148
Santa Fe NM 87504-1148

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Alberto A. Gutiérrez, C.P.G.

December 18, 2007

El Paso Natural Gas Company
Ad Valorem Tax Department
PO Box 1087
Colorado Springs CO 80944

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APPENDIX E

DRAFT REVISED RULE 118 PLAN FOR JAL #3 AND AGI

Southern Union
Gas Services

DRAFT

H_2S Contingency Plan

Acid Gas Injection Facility
Jal #3 Gas Plant

Jal, New Mexico

December 2007

SOUTHERN UNION GAS SERVICES, LTD.
DRAFT H_2S Contingency Plan
JAL #3 PLANT AGI WELL

TABLE OF CONTENTS

Southern Union Gas Services

Southern Union Gas Services, Ltd.
Acid Gas Injection Facility
Jal #3 Gas Plant
Hydrogen Sulfide (H_2S) Contingency Plan
DRAFT PLAN

I. INTRODUCTION

Southern Union Gas Services, Ltd. (SUGS) conducts its business responsibly by providing employees and any other person working or visiting, a safe work place. The Jal #3 Gas Plant Hydrogen Sulfide Contingency Plan for acid gas injection (AGI) was developed to satisfy the Oil Conservation Division Rule 118; and paragraph 7.6 of the guidelines published by the API in its publication entitled "Recommended Practices for Oil and Gas Producing and Gas Processing Plant Operations Involving Hydrogen Sulfide," RP-55. ? OK WP Copy

This plan provides guidelines to assist in responding to and managing an emergency in the event of an H_2S release from a pipeline or facility. The goals of this plan are to provide tools to enable an efficient, coordinated and effective response to emergencies. This plan contains written guidelines to evaluate and respond to an incident, and to prevent or minimize personal injury or loss, to avoid environmental hazards, and to reduce damage to property.

II. DEFINITIONS USED IN THIS PLAN

ANSI	The acronym "ANSI" means the American National Standards Institute.
API	The acronym "API" means the American Petroleum Institute.
Area of Exposure (AOE)	The phrase "area of exposure" means the area within a circle constructed with a point of escape at its center and the radius of exposure as its radius.
ASTM	The acronym "ASTM" means the American Society for Testing and Materials.
Dispersion Technique	A "dispersion technique" is a mathematical representation of the physical and chemical transportation characteristics, dilution characteristics and transformation characteristics of hydrogen sulfide gas in the atmosphere.
Division	The "division" return to the N.M. Oil Conservation Division.
Escape Rate	The "escape rate" is the maximum volume (Q) that is used to designate the possible rate of escape of a gaseous mixture containing hydrogen sulfide, as set forth herein. (a) For existing gas facilities or operations, the escape rate shall be calculated using the maximum daily rate of the gaseous mixture produced or handled or the best estimate thereof. For an existing gas well, the escape rate shall be calculated using the current daily absolute open flow rate against atmospheric pressure or the best estimate of that rate. (b) For new gas operations or facilities, the escape rate shall be calculated as the maximum anticipated flow rate through the system. For a new gas well, the escape rate shall be calculated using the maximum open flow rate of offset wells in the pool or reservoir, or the pool or reservoir average of maximum open flow rates. (c) For facilities or operations not mentioned, the escape rate shall be calculated using the actual flow of the gaseous mixture through the system or the best estimate thereof.
GPA	The acronym "GPA" means the Gas Processors Association.
LEPC	The acronym "LEPC" means the Local Emergency Planning Committee established pursuant to the Emergency Planning and Community Right-to-Know Act, 42 U.S.C. Section 11001.
NACE	The acronym "NACE" means the National Association of Corrosion Engineers.
PPM	The acronym "ppm" means "parts per million" by volume.
PHV	Potentially Hazardous Volume means the volume of hydrogen sulfide gas of such concentration that: (a) the 100-ppm radius of exposure includes any public area; (b) the 500-ppm radius of exposure includes any public road; or (c) the 100-ppm radius of exposure exceeds 3,000 feet.
Public Area	A "public area" is any building or structure that is not associated with the well, facility or operation for which the radius of exposure is being calculated and that is used as a dwelling, office, place of business, church, school, hospital, or government building, or any portion of a park, city, town, village or designated school bus stop or other similar area where members of the public may reasonably be expected to be present.
Public Road	A "public road" is any federal, state, municipal or county road or highway.

Radius of Exposure (ROE)

The radius of exposure is that radius constructed with the point of escape as its starting point and its length calculated using the following Pasquill-Gifford derived equation, or by such other method as may be approved by the division:

(a) For determining the 100-ppm radius of exposure: $X= [(1.589)(\text{hydrogen sulfide concentration})(Q)]^{(0.6258)}$, where "X" is the radius of exposure in feet, the "hydrogen sulfide concentration" is the decimal equivalent of the mole or volume fraction of hydrogen sulfide in the gaseous mixture, and "Q" is the escape rate expressed in cubic feet per day (corrected for standard conditions of 14.73 psia and 60 degrees F).

(b) For determining the 500-ppm radius of exposure: $X=[(0.4546)(\text{hydrogen sulfide concentration})(Q)]^{(0.6258)}$, where "X" is the radius of exposure in feet, the "hydrogen sulfide concentration" is the decimal equivalent of the mole or volume fraction of hydrogen sulfide in the gaseous mixture, and "Q" is the escape rate expressed in cubic feet per day (corrected for standard conditions of 14.73 psia and 60 degrees F).

Regulatory Threshold

(1) Determination of Hydrogen Sulfide Concentration.

(a) Each person, operator or facility shall determine the hydrogen sulfide concentration in the gaseous mixture within each of its wells, facilities or operations either by testing (using a sample from each well, facility or operation), testing a representative sample, or using process knowledge in lieu of testing. If a representative sample or process knowledge is used, the concentration derived from the representative sample or process knowledge must be reasonably representative of the hydrogen sulfide concentration within the well, facility or operation.

(b) The tests used to make the determination referred to in the previous subparagraph shall be conducted in accordance with applicable ASTM or GPA standards or by another method approved by the division.

(c) If a test was conducted prior to the effective date of this section that otherwise meets the requirements of the previous subparagraphs, new testing shall not be required.

(d) If any change or alteration may materially increase the concentration of hydrogen sulfide in a well, facility or operation, a new determination shall be required in accordance with this section.

(2) Concentrations Determined to be Below 100 ppm. If the concentration of hydrogen sulfide in a given well, facility or operation is less than 100 ppm, no further actions shall be required pursuant to this section.

(3) Concentrations Determined to be Above 100 ppm.

(a) If the concentration of hydrogen sulfide in a given well, facility or operation is determined to be 100 ppm or greater, then the person, operator or facility must calculate the radius of exposure and comply with applicable requirements of this section.

(b) If calculation of the radius of exposure reveals that a potentially hazardous volume is present, the results of the determination of the hydrogen sulfide concentration and the calculation of the radius of exposure shall be provided to the division. For a well, facility or operation existing on the effective date of this section, the determination, calculation and submission required herein shall be accomplished within 180 days of the effective date of this section; for any well, facility or operation that commences operations after the effective date of this section, the determination, calculation and submission required herein shall be accomplished before operations begin.

(4) Recalculation. The person, operator or facility shall calculate the radius of exposure if the hydrogen sulfide concentration in a well, facility or operation increases to 100 ppm or greater. The person, operator or facility shall also recalculate the radius of exposure if the actual volume fraction of hydrogen sulfide increases by a factor of twenty-five percent in a well, facility or operation that previously had a hydrogen sulfide concentration of 100 ppm or greater. If calculation or recalculation of the radius of exposure reveals that a potentially hazardous volume is present, the results shall be provided to the division within sixty (60) days.

III. CHARACTERISTICS OF HYDROGEN SULFIDE (H_2S) AND SULFUR DIOXIDE (SO_2)

Hazards of Hydrogen Sulfide

At normal atmospheric conditions, hydrogen sulfide (H_2S) is a colorless gas. It is commonly referred to by other names such as Rotten Egg Gas, Acid Gas, Sour Gas, Sewer Gas, Poison Gas and Sulfur Gas. It has a characteristic "rotten egg" smell at low concentrations. At higher concentrations, it has a sweet odor. At still higher concentrations, an odor cannot be detected at all due to olfactory nerve anesthesia. Odor must *not* be used as means of determining the concentration of H_2S gas! Hydrogen sulfide can form explosive mixtures at concentrations between 4.3% and 46%, by volume. Its auto-ignition temperature is 500 degrees F (260 degrees C). When burning, its flame is practically invisible. It is denser than air (1.19 times heavier than air) and may accumulate in low places. Hydrogen sulfide gas tends to interact with high carbon steel, causing embitterment and fine fractures in metal components and piping.

H_2S acts as a chemical asphyxiate, preventing the body from utilizing oxygen in the tissue. Breathing may stop after a few seconds of exposure to H_2S gas in concentrations of 600-700 ppm. This produces symptoms such as panting, pallor, cramps, dilation of eye pupils and loss of speech. This is generally followed by immediate loss of consciousness. Death may occur quickly from respiratory paralysis and cardiac arrest. The table below illustrates the physical effects of hydrogen sulfide on a healthy adult.

Table 1 Effect of exposure to Hydrogen Sulfide Gas on a Healthy Adult

Concentration			Physical Effects
percent (%)	ppm	grains per ft^3	
0.001	10	0.65	Obvious and unpleasant odor. Safe for 8 hours exposure.
0.01	100	6.48	Kills smell in 3 to 15 minutes; may sting eyes and throat.
0.02	200	12.96	Kills smell shortly; stings eyes and throat.
0.05	500	32.96	Dizziness; breathing ceases in a few minutes; artificial respiration / oxygen must be given promptly.
0.07	**700**	45.36	**Unconscious quickly; death will result if not rescued promptly.**
0.10	**1000**	64.80	**Unconscious at once; followed by death within minutes.**

Properties of H_2S

COLOR	Colorless.
ODOR	Very offensive, commonly referred to as the odor of rotten eggs.
VAPOR DENSITY	1.189 (Air=1.0) H_2S is heavier than air.
BOILING POINT	-76 degrees F (-24 degrees C).
EXPLOSIVE LIMITS	4.3 to 46% by volume in air.
IGNITION TEMPERATURE	500 degrees F (260 degrees C).
WATER SOLUBLE	Yes (4 volumes gas in 1 volume water at 32 degrees F (0 degrees C).
FLAMMABILITY CORROSIVE	Forms explosive mixtures with air or oxygen.

Toxicity Table – H_2S

1 ppm = .0001% (1/10,000 of 1%)	Can smell (rotten egg odor).
10 ppm = .001% (1/1000 OF 1%)	Allowable for 8 hours exposure. (PEL & TLV)
100 ppm = .01% (1/100 of 1%)	Kills smell in 3-15 minutes. May burn eyes and throat. Considered to be IDLH atmosphere (Immediately Dangerous to Life and Health).
200 ppm = .03% (2/100 of 1%)	Kills smell rapidly. Burns eyes and throat.
500 ppm = .05% (5/100 of 1%)	Loses sense of reasoning and balance. Respiratory disturbances in 2-15 minutes. Needs prompt artificial resuscitation.
700 ppm = .07% (7/100 of 1%)	Will become unconscious quickly. Breathing will stop and death will result if not rescued promptly. Immediate artificial resuscitation is required.
1000 ppm = .1% (1/10 OF 1%)	Unconscious at once. PERMANENT BRAIN DAMAGE MAY RESULT UNLESS RESCUED PROMPTLY.
	ppm=parts of gas per million parts of air by volume. 1% = 10,000 ppm.

Properties of Sulfur Dioxide SO_2

Sulfur Dioxide - SO_2	Physical and Chemical Properties
Chemical Formula	SO_2
Molecular Weight	64
Boiling Point	14 degrees Fahrenheit
Non-Combustible	Produced by burning of H_2S Gas
Vapor Pressure	>1 atm @ 68 degrees Fahrenheit
Melting Point	-104 degrees Fahrenheit
Specific Gravity	Heavier than air, 2.26 degrees gravity
Colorless gas	SO_2 is colorless gas, very irritating to the eyes and lungs
Odor	Pungent odor and can cause injury or death to persons exposed to it
Reactions	Reacts with water or steam to produce toxic and corrosive gases
Hazards of Sulfur Dioxide	
Toxicity	The physiological effects on humans when inhalation of SO_2 occurs, varies at different levels of concentration and may be as follows
Concentrations SO_2	Physiological Effects SO_2
0.3-1 ppm	Detection level – pungent odor
2 ppm	Threshold Limit Value (TLV) Time Weighted Average (TWA)
5 ppm	15 minute Short Term Exposure Limit (STEL) permitted by OSHA
6 – 12 ppm	Irritation of the throat and nose
20 ppm	Eye irritation
100 ppm	Immediately Dangerous to Life or Health (IDLH) set by NIOSH

IV. EMERGENCY RESPONSE POLICY AND AUTHORITY

It is the policy of SUGS to take the necessary actions required to safeguard SUGS personnel and the public from emergency incidents. Such emergency incidents may include fires, hazardous materials releases, and incidents resulting from natural hazards such as tornadoes.

In the event of an emergency incident, SUGS personnel will take prompt action within their immediate work area to ensure that all appropriate SUGS personnel, corporate personnel, and the public are alerted or notified that an emergency incident exists.

Whenever possible, SUGS personnel will take immediate action to limit the effects of the emergency. Four objectives will be considered when developing an appropriate emergency response. These objectives are:

- Life safety.
- Environmental protection.
- Protection of company and public property.
- Preventing interruption of business and public services such as highway access, water, and utilities.

While all four of the above objectives are important, life safety will always remain the first and highest priority.

All SUGS personnel have the responsibility, if necessary, to immediately alert other SUGS personnel that an emergency condition exists and to take appropriate action to protect life, property, and the environment. All emergency response actions by SUGS personnel are voluntary. Emergency response actions taken by individuals should be within the limitations of their training, experience, and physical abilities. At no time will Jal #3 Gas Plant personnel assume an unreasonable risk during an emergency response. An unreasonable risk exists when:

- The task exceeds the physical abilities of the individual.
- The individual is not properly trained to complete the task.
- The individual does not have adequate experience to complete the task.

V. RESPONSE PROCEDURES FOR UNINTENTIONAL (ACCIDENTAL) RELEASES

If an H_2S leak is detected as a result of an accidental release, the following emergency plan of action should be put into effect to adequately ensure the safety of SUGS employees, contractors and the public. These response sequences should be altered to fit the prevailing situation and event/site-specific requirements.

1. Upon detecting a leak, immediately move away from the source and attempt to get out of the affected area by moving upwind, or cross wind if travel upwind is not possible.
2. Alert other personnel in the area. Assist personnel in distress if this can be done without endangering yourself. Proceed to the designated emergency assembly area.
3. If injury or death has occurred, immediately call emergency services (911).
4. If possible, take immediate measures to control present or potential discharge and to eliminate possible ignition sources.
5. Notify the supervisory foreman. Upon arriving at the scene, the supervisor should formally assume the role of the Incident Commander (IC). Until relieved by the supervisor, the senior employee having initially discovered the leak should fill the role of IC.
6. The IC will assess the situation and direct further actions to be taken. If assistance is required from law enforcement, safety or medical agencies, consult the emergency services telephone listing under Section XIII. The Division Operations Vice-President or his designee should also be notified.
7. If the IC deems it necessary, ensure that steps are taken to stop traffic through the area, most importantly, highway traffic. Roadblocks must be set up at the 10-ppm H_2S boundary. The H_2S boundary shall be delineated by using a calibrated H_2S monitor. Call emergency services (911) for assistance in quarantining the area, if needed. Refer to maps in Section XVII for highway and pipeline locations.
8. Initiate evacuation of employees or any nearby residents, if deemed necessary. Coordinate with emergency services.
9. Personnel equipped with self-contained breathing apparatus (SCBA) and portable H_2S monitoring equipment will determine the cause and extent of the leak. Personnel should enter the area from upwind of the site. If a reading of 10 ppm or higher of H_2S is obtained, then backup personnel equipped with SCBA will also be required.
10. No one will be intentionally exposed to H_2S concentrations in excess of 10 ppm without proper Personal Protection Equipment (PPE), IC authorization and backup personnel.
11. If possible, de-energize all sources of ignition, using lockout/tagout procedures.
12. If possible, perform shutdown on appropriate equipment and systems.

13. Trained personnel will continuously monitor H_2S concentrations, wind direction and area of exposure and will advise public safety and emergency personnel on current conditions.

14. Protective measures shall be maintained until the threat of injury from H_2S poisoning has been eliminated. The area must be checked with monitoring equipment and cleared below 10 ppm before allowing entry without proper PPE.

15. Notify the Division Health & Safety Manager. See Section XIII Assistance will be provided to ensure all proper notifications and reporting requirements are made to local, state and federal agencies.

16. As soon as possible, **but no more than one hour after plan activation,** notify the New Mexico Oil Conservation Division – Lea County (See Section XIII). At a minimum, the following information will be needed:

- The company name.
- Facility name.
- Your name and telephone number for them to contact you.
- The location and source of the discharge.
- A description of the area affected by the discharge, the probable concentration of H_2S in the region and the wind direction/velocity.
- If necessary, request additional assistance from the agency.

VI. EMERGENCY INCIDENT MANAGEMENT

Emergency incident management will follow the Incident Command System (ICS) as described by the Federal Emergency Management Act (FEMA). The intent of using ICS for all emergency incidents provides automatic continuity with outside agencies and assists in establishing a "unified command" of the incident. SUGS provides instruction and training on the ICS, which is beyond the scope of this contingency plan. However a brief overview of the system is provided below.

The Incident Command System (ICS) utilizes a flexible, modular approach to organizing resources to effectively respond to emergency events. FEMA suggests that the basic Incident Command System has five functional areas:

- Command;
- Operations;
- Planning;
- Logistics; and,
- Finance.

However, for incidents such as those described in this plan, it seems more likely that the basic Incident Command System would be comprised of: 1) Command; 2) Operations Chief; and, 3) Safety Officer. Larger incidents may require additional positions such as Public Information Officer, Logistics Chief, Planning Chief, Finance Chief, Staging Manager, Medical Group Supervisor and Environmental Group Supervisor. The exact number and combination of positions will vary depending upon the type, size and duration of the incident.

In every incident, command must first be established. The first person to discover the problem is, by default, the Incident Commander (IC) until this responsibility is transferred to someone else. This responsibility should be formally transferred to the Facility/Field Supervisor as soon as practical. Who is acting as the IC should be clear and apparent at all times.

The Incident Commander (IC) is responsible for the overall management of the incident. Where the IC does not delegate or assign a position, the IC retains that responsibility. The IC should be careful to have no more than 5 to 8 people reporting directly to him. The IC establishes the strategy and goals for the incident and is ultimately responsible for the safety and success of the response activities.

An Operations Chief (OPS) is responsible for implementing the strategy to accomplish the goals defined by the IC. OPS directs all tactical operations, oversees response personnel and may assist the IC in the development of the action plan.

The Safety Officer is assigned by and reports directly to the IC. This position is responsible for identifying hazardous or unsafe situations, and developing measures necessary to assure the safety of response personnel and any victims of the incident. He/she should ensure that any personnel responding to the incident are using the proper PPE and have adequate training. The Safety Officer has the authority and responsibility to terminate or suspend operations that is believed to be unsafe or will place people in imminent danger.

VII. PERSONNEL VEHICLES AND EQUIPMENT

Plant personnel are equipped with personal H_2S monitors and portable gas detection devices.

The plant has a fully equipped mobile breathing air system with work units. Also, there are self contained breathing apparatus (SCBA's) located strategically throughout the facility.

An Emergency Response Kit and Road Block Kits are located at the egress stations for easy access if the facility is evacuated.

Personnel have cellular phones for communication, as well as two-way radios for inter-company communication.

All SUGS personnel are equipped with personal H_2S monitors and portable gas detection devices are available.

Communications to SUGS field personnel is via mobile cellular telephones or two-way radios.

Each SUGS field truck is also equipped with a fire extinguisher in order to enable assistance as needed.

Company vehicles are equipped with two-way radios, roadblock kits and mobile phones.

VIII. EVACUATION PROCEDURE

Evacuation may become necessary to protect personnel and the public from hazards associated with an incident. Orderly evacuation is essential to protect the general public as well as SUGS personnel and property.

SUGS personnel have reviewed the affected area for this plan and have determined the safe evacuation routes and assembly areas to reduce confusion if evacuation becomes necessary. The SUGS Facility Operator may assign employees to direct evacuation and account for personnel during emergencies. (See Section XIV for evacuation routes).

Designated Assembly Areas shall be at a safe distance from the incident in an appropriate direction (upwind, upstream, and upgrade). If the Assembly Areas do not provide adequate shelter, transportation to a central shelter should be arranged after all personnel are accounted for. As the incident progresses, the IC must continuously evaluate the adequacy of the assembly area and necessity of the shelter.

SUGS personnel evacuating their work areas should evacuate the facility and initiate the plant ESD system, and proceed to the Designated Assembly Area. Facility personnel will account for all personnel, ensure the evacuated area is secured and report the status of the evacuation to the IC. Evacuated personnel shall remain at the assembly area or shelter until directed otherwise by the IC.

- Local law enforcement and/or emergency management authority must be notified in conjunction with any community evacuation or public protective measures initiated.
- Emergency Response Plan initiated.
- Assess the scene; protect yourself.
- Summon EMS to the scene; provide information on the nature and number of injuries.
- If trained, provide First Aid/CPR as necessary, until EMS arrives at the scene; injured personnel should not be moved unless the situation is life threatening.
- Evacuate unnecessary personnel from the area.
- Establish a secure perimeter around the area to prevent unauthorized entry.
- Initiate the site security plan.
- Notify Facility Supervisor and make appropriate notifications to local Fire and EMS.
- Make other internal management contact as appropriate.

In case of a fatality:

- Do not move the victim.
- Do not release name of victim(s).
- Contact local law enforcement.
- Contact local medical examiner.
- Preserve the accident site.
- Restrict all unauthorized communications concerning the incident.

Make appropriate government agency notification and conduct post-incident activities.

IX. COORDINATION WITH STATE EMERGENCY PLANS

The Hydrogen Sulfide Contingency Plan as described will be coordinated with the New Mexico Oil Conservation Division (NMOCD) and with the New Mexico State Police consistent with the New Mexico Hazardous Materials Emergency Response Plan (HMER). A copy of this plan will be submitted to the New Mexico State Police and Local Emergency Planning Committee for Lea County.

LEPC
505-396-8521

NEW MEXICO STATE POLICE
505-392-5588

LEA COUNTY SHERIFF'S OFFICE
505-396-3611

STATE EMERGENCY RESPONSE COMMISSION
(SERC)
(505) 393-6161

NEW MEXICO OFFICE OF EMERGENCY MANAGEMENT
(505) 476-9600

X. NOTIFICATION OF THE OIL CONSERVATION DIVISION

The person, operator or facility shall notify the New Mexico Oil Conservation Division (NMOCD) upon a release of hydrogen sulfide requiring activation of the Hydrogen Sulfide Contingency Plan as soon as possible, but no more than one hour after plan activation, recognizing that a prompt response should supercede notification. The person, operator or facility shall submit a full report of the incident to the NMOCD on Form C-141 no later than fifteen (15) days following the release.

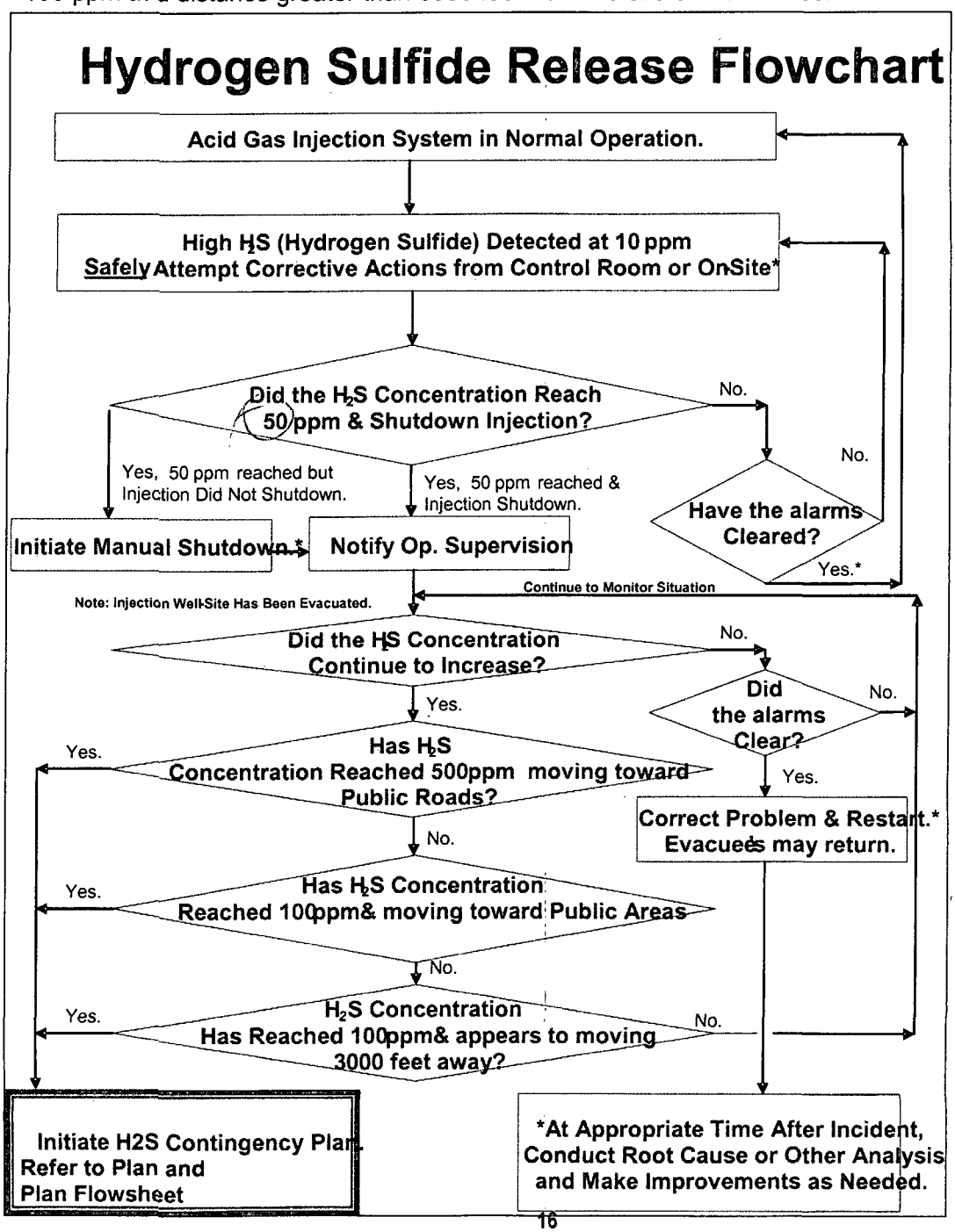
OIL CONSERVATION DIVISION
LEA COUNTY

505-393-6161

XI. PLAN ACTIVATION

The Hydrogen Sulfide Contingency Plan shall be activated when the Incident Commander (IC) believes that a release creates a concentration of hydrogen sulfide that exceeds or is likely to exceed the following activation levels:

- 100 ppm in any defined public area;
- 500 ppm at any public road; or
- 100 ppm at a distance greater than 3000 feet from the site of the release.



XII. TRAINING AND DRILLS

Training for all affected SUGS personnel will be conducted prior to completion of the project and introduction of product. Training will then be given as needed for any personnel who may later be affected by this project.

This training will include:

- Training on the responsibilities and duties of essential SUGS personnel.
- On-site or classroom tabletop drills which simulate a release or other situation affecting the facility.
- Annual H_2S Hazard Training.

Initial training is to take place upon employment with the company and refresher training is to be conducted annually – or sooner if there is a change in the plan or the need for training is determined.

All training will be documented and training records will be maintained on file at the Monahans EHS office.

All drills will be evaluated and documented including any recommendations resulting from findings. Recommendations will be assigned to SUGS personnel for completion by an established date. Upon completion, the action plan will be documented and records will be filed at the Jal #3 Gas Plant.

Only trained and certified personnel from responding agencies will participate in any rescue exercise.

The Hydrogen Sulfide Contingency Plan will also provide for training of noted residents in this plan as appropriate on the proper protective measures to be taken in the event of a release, and shall provide for briefing of public officials on issues such as evacuation or shelter-in-place plans. Literature will be passed out to the noted residents with emergency numbers to be utilized in the event of an incident associated with this facility or any SUGS equipment and/or piping.

XIII. EMERGENCY SUGS CONTACT PHONE NUMBERS

Use the following phone number in the event of a catastrophic release and/or emergency situation at the Jal #3 Acid Gas Injection facility.

Telephone Numbers of SUGS Personnel

24 HOUR TELEPHONE NUMBER 800-435-1679

Then Call:

JAL #3 PLANT		(505) 395-2068	
NAME	TITLE	HOME	CELLULAR
Dwight Bennett	Plant Manager	(505) 395-2471	(505) 390-6033
I. A. Olivas	Operations Supervisor	(505) 395-2445	(505) 390-6034
Bobby Tuck	Technical Supervisor	(432) 586-6144	(505) 631-7741
Clarence Rasco	Maintenance Foreman	(432) 523-7116	(505) 390-6032

FORT WORTH		(817) 302-9400		
NAME	TITLE	OFFICE	HOME	CELLULAR
BruceWilliams	VP Gas Operations	(817) 302-9421	(817) 441-9613	(817) 946-0761
Bob Milam	VP Engineering	(817) 302-9408		(432) 661-5958
Herb Harless	Dir. EH&S	(817) 302-9425	(817) 885-8779	(817) 692-9374
Robert Gawlik	Mgr. EH&S	(817) 302-9426	(817) 448-9880	(817) 692-9366

West Texas Area Safety				
NAME	TITLE	OFFICE	HOME	CELLULAR
John Crossman	Regulatory Comp.	(432) 943-1115	(432) 943-7482	(432) 940-5074
Rose Slade	EHS Coordinator	(432) 943-1116	(432) 943-7714	(432) 940-5147
Tony Savoie	Envir. Supervisor	(505) 395-2116	(505) 395-3336	(505) 631-9376
Jim Payne	EHS Coordinator	(432) 943-1155	(432) 586-3501	(432) 940-5123
Mike Magee	PSM Coordinator	(432) 943-1160		(432) 208-0753

WEST TEXAS AREA OFFICE - MIDLAND		(432) 570-6031		
NAME	TITLE	OFFICE	HOME	CELLULAR
Curtis Clark	Mgr Engineering	(432) 571-4926	(432) 520-5333	(432) 553-8129
Ross Boyd	Asset Op. Engr.	(432) 571-4927	(432) 687-5717	(432) 553-7280
Bill Webb	Mgr. Plant Op.	(432) 571-4939	(432) 684-4430	(432) 770-4204
Mary Valencia	Environmental Sup	(432-571-4925	(432) 687-1464	(432) 940-1939

Remember – Our FOUR Objectives in an Emergency Are:

1. Life Safety.
2. Environmental Protection.
3. Protection of Company and Public Property.
4. Preventing interruption of business and public services such as Highway Access, Water & Utilities.

Life Safety Will Always Remain the First and Highest Priority!

In case of an emergency at the Jal #3 Gas Plant requiring assistance for fire, ambulance, medical authorities or HazMat issues – immediately call:

911

Responder Emergency Numbers:

Facility		Jal, New Mexico
Fire Department		911 or 505-395-2221
Medical Facility		505-395-2221
State Police		505-392-5588
Sheriff Department		505-395-2121
LEPC		505-396-8521

Telephone Numbers of Public Agencies

Oil Conservation Division – Lea County	505-393-6161
State Emergency Response Commission (SERC)	505-393-6161
New Mexico Office of Emergency Management	505-476-9600
Bureau of Land Management - Hobbs	505-392-8736

Telephone Numbers of Emergency Resources

Organization	Phone Number
Spill – Cleanup Contractors	
Contact Tony Savoie – SUGS	505-631-9376
Ocotillo Environmental – Hobbs NM	505-393-6371
Ecological Environmental – Midland TX	800-375-0100
GET #'S FROM JAL 3 DP	
Heavy Equipment Contractors	
Merryman Construction – Jal NM	505-395-2592
B&H Construction – Eunice NM	505-394-2588
Transportation Services	
FULCO – Jal NM	505-395-2650
Riverside Transportation – Jal NM	505-395-3504
Other	

XIV. DETAIL INFORMATION - POTENTIALLY HAZARDOUS AREAS

Jal #3 Gas Plant and Jal #3 AGI #1

DRIVING DIRECTIONS:
From Hobbs: Take Highway 18 South towards Jal 35 miles to Sid Richardson Road, turn east and go 1 mile to entrance to Jal #3 plant
Location: Section 33 T 24 S, R 37 E, Lea County, NM
Latitude: 32.1738 N
Longitude: 103.1740 W

EVACUATION ROUTE:

At all times note the wind direction before evacuating procedures begin. The primary evacuation assembly area will be the south west entrance to the plant off of Sid Richardson Road.

Evacuation for all persons inside of the AGI Facility fences would be west to the west side dirt road and then south to the plant entrance (wind conditions permitting) group assembly area #1 to account for all employees including any visitors. Visitor sign in sheet shall be used to account for all visitors.

ROAD BLOCKS:

In emergencies involving a large acid gas pipeline leak near the Jal #3 Gas Plant, US Highway 18 will be blocked at approximately one mile north and south of the plant.

COMMAND POST:

The Command Post will be established at one of the roadblock locations. The site will be dependent of the wind direction.

The Incident Commander, after arriving at the scene, has the authority to assess the situation and determine the severity level of the incident. The Incident Commander may determine that the Contingency Plan as written cannot be activated effectively. The Emergency Response Plan may then be activated depending on the Incident Commander's evaluation of the situation.

PUBLIC RECEPTORS LOCATED INSIDE RADIUS OF EXPOSURE (ROE):

There are no public receptors located within either the 500ppm or the 100ppm radii of exposure. The radii as calculated in Attachment 2 and shown in Attachments 4a and 4b are contained within the plant or adjacent unoccupied land.

XV. SUGS PUBLIC AWARENESS PROGRAM

SUGS participates in an extensive annual Public Awareness Program and Damage Prevention Program.

SUGS installs pipeline markers and signs at all facilities and road crossings to identify our underground pipelines and maintains these markers on an annual schedule.

XVI. EMERGENCY SHUTDOWN EQUIPMENT

SUGS has an installed automatic and manually activated emergency shutdown system (ESD) at the Acid Gas Injection Facility at the Jal #3 Gas Plant. The plant operator and/or Incident Commander (IC) may use these systems to shutdown and isolate the equipment in the facility. This is a fail safe system that will shut valves and equipment if any portion of the system fails. The Acid Gas Injection system will be normally controlled from the Jal #3 Plant Control Room and shutdown of equipment and ESD valves at the well-site may be accomplished from this system as well as at the well-site.

When activated the ESD shuts an automatic valve on the inlet acid gas feed stream, shuts an automatic valve on the compressed acid gas to the acid gas injection well, and sends a signal to the wellhead panel to shut down automatic valves on the wellhead. The major equipment is shutdown. The specific major equipment items at injection well site that are shutdown in an ESD include the acid gas compressors and associated coolers and pumps. The fuel gas, which is used for flare fuel and purge gas is left on-line; however an automatic valve is provided in this line at the well-site that can be actuated separately in the control system to close this valve.

In the wellhead control panel there is a separate shutdown for the subsurface safety valve (SSSV). The SSSV can be closed if required. The SSSV will close automatically upon detection of high pressure in the wellhead piping. The SSSV will shut if there is a fault in the wellhead control panel.

In addition to these systems the well-site facility contains portable fire extinguishers that may be used in an emergency. The well-site facility also has air packs used for escape or rescue located throughout the facility at key locations. The facility also has a breathing air system at the compressor units consisting of air bottles, tubing, and a manifold to connect 5 minute air packs. These are primarily used when performing maintenance work on the compressor units; however, they can also be used during an emergency if required. Refer to the "Emergency Equipment Location Plan" (See Attachment #5) for the location of this equipment.

SUGS has also installed hydrogen sulfide detectors throughout the Well-Site Facility in key locations to detect possible leaks. Upon detection of hydrogen sulfide at 10 ppm levels at any detector a visible beacon is activated at that detector and an alarm is sounded. Upon detection of hydrogen sulfide at 50 ppm levels at any detector, an evacuation alarm is sounded throughout the Facility. All personnel proceed immediately to a designated area near the Facility office outside the fence (or alternate area south of the plant depending on wind direction and their location in the well-site facility).

In addition to sounding evacuation alarm sirens, at concentrations of 50 ppm in the acid gas compressor area the acid gas compressor is shutdown and isolation valves upstream and downstream of the unit are closed, including the wellhead automatic wing valve. Refer to the "Plant H2S Alarm System Location Plan" for the locations of the hydrogen sulfide detectors.

For emergency equipment and shutdown descriptions within the existing Jal #3 Plant refer to the separate contingency plan for the plant. There will be additional hydrogen sulfide detectors installed at the plant site around the new acid gas compressor and near the new ESD valves.

Note that the Acid Gas Flare will flare large volumes at the Well-Site only under extreme emergencies in the event the compressor is over-pressured and a Process Safety Valve (PSV) relieves to the acid gas flare. During other shutdowns of the well-site compression or the injection well the acid gas will be flared at the Jal #3 Plant.

Emergency Equipment on site at the Acid Gas Injection Facility

Quantity	Description
9	Ansul 30# Fire Extinguishers
6	5# ABC Fire Extinguishers
5	Wind Socks
1	150# Fire Extinguisher – Wheeled Units
22	Fixed Ambient H_2S Monitors
10	SCBA – 30-Minute Breathing Air Packs
4	First Aid Kits
2	Fire Blankets (wool)
2	Eye Wash Stations
1	Emergency Showers
2	PPE Boxes
	NOTE: This equipment is separate from the existing plant emergency equipment

XVII. ATTACHMENTS, MAPS AND DRAWINGS

LISTING OF ATTACHMENTS, MAP AND DRAWINGS

1. Worst Case Scenario
2. Calculated Radius of Exposure (ROE)
3. Site Plot Plan
4. Maps Showing Calculated Radii of Exposure
5. Draft Emergency Equipment Location Plan
6. Draft Plant H2S Alarm System Location Plan
7. Hazardous Material Incident Notification Information Checklist
8. Contingency Plan Simplified Flowchart

ATTACHMENT 1 Worst Case Scenario for Acid Gas Injection at the Jal #3 Gas Plant

The basis for worst case calculations is 20% hydrogen sulfide in the acid gas from the Jal #3 Gas Plant, which is at typical maximum concentration observed at the plant.

Note that essentially all of the hydrogen sulfide in the plant feed gas is separated from the processed gas and becomes the acid gas stream. Therefore, the worst case calculated radius of exposure will be the same for the Acid Gas Injection Facility and for the Jal #3 Gas Plant as a whole. Furthermore, the worst case scenario is being assumed in the standard calculations since it would be a rupture that results in release of all of the hydrogen sulfide from the acid gas. Calculations using the Pasquill-Gifford equations as described in OCD Rule 118 are presented on the following page (Attachment 2). Also included below is a diagrammatic representation of the AGI system (Figure 2b from C-108 Application).

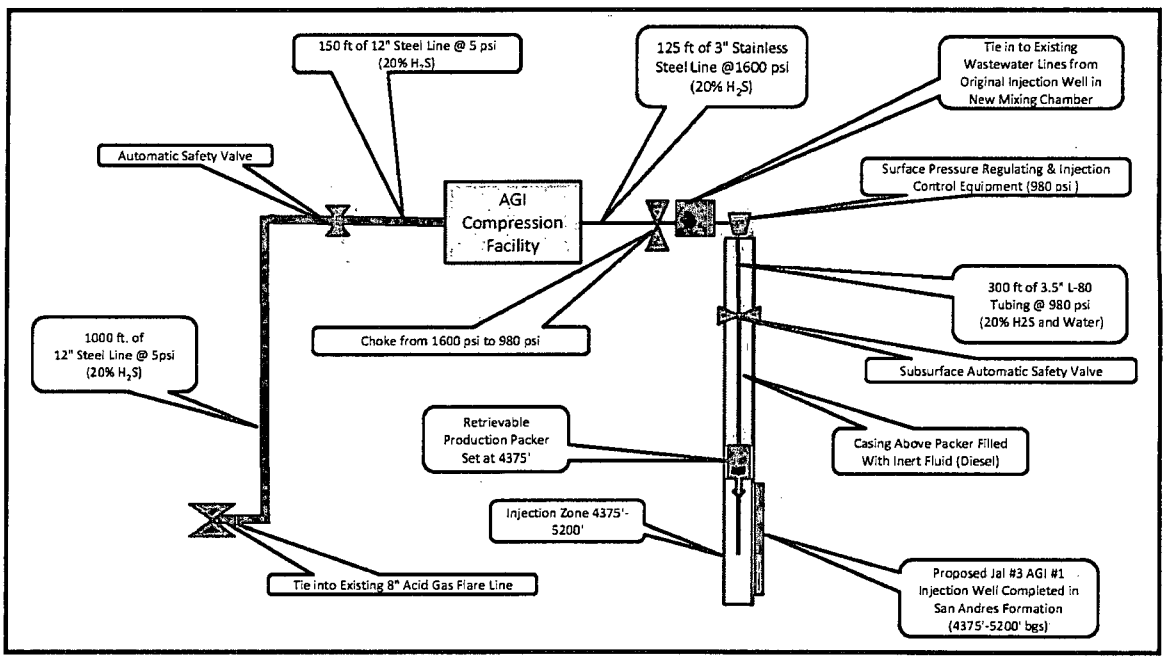


Figure 2b Schematic of SUGS Jal #3 Gas Plant Acid Gas Injection System Components

ATTACHMENT 2 STANDARD CALCULATIONS OF RADIUS OF EXPOSURE

Southern Union Gas Services, Jal #3 Plant H_2S Radius of Exposure Calculations

Calculate Volume of Release

Pipe Section	Length of Pipe ft	diameter of pipe ft	volume of pipe ft3	Pipe Section Pressure psi	Pipe Section Temperature F
1	1000	1	785.398163	5	83.86
2	150	1	117.809725	5	112.00
3a	125	0.25	6.13592315	1600	112.00
3b	300	0.29166667	20.0440156	980	112.00

Pipe length, diameter, pressure and temperature are actual values

Standarization *Per OCD, release parameters must be standardized to 60F and 14.7 psi*

Elevation	3260	3260	ft		
concentration	100	500	ppm		Concentrations of concern selected by OCD
corrected	124971.4	624856.9	$\mu g/m^3$	χ	Concentration corrected for Elevation, using NMED method
χ	0.124971389	0.62485695	g/m^3	χ	$1x10^6$ µg/g
Specific Volume	11.136	11.136	ft^3/lb		Specific Volume of H_2S

Pipe Section	P1 psi	P2 psi	V1 ft^3	T1 K	T2 K	Standardized Pipe Release Volume V2 ft^3	H2S Concentration %	H2S Release Volume ft^3	H2S Release Mass lb	Time of Release min	Release Concentration Q g/s
1	19.7	14.7	785.3981634	302.1	288.7	1005.81674	20%	201.1633476	18.06423739	10	13.65656347
2	19.7	14.7	117.8097245	255.5	288.7	178.380813	20%	35.67616268	3.203678402	10	2.421980872
3a	1614.7	14.7	6.135923152	255.5	288.7	761.504599	20%	152.3009197	13.67644753	10	10.33939434
3b	994.7	14.7	20.04401563	255.5	288.7	1532.41934	20%	306.4838677	27.52189904	10	20.80655567

Notes

1 Pipeline Volume calculated using ideal gas law, (P1V1)/T1 = (P2V2)/T2, where:
- P1 = Actual pressure + standard pressure (14.7 psi)
- P2 = Standard pressure (14.7 psi)
- V1 = Volume of the pipe section to be released
- V2 = Release volume at standard conditions - equation is solved for this
- T1 = Temperature of gas in pipeline (in Kelvin)
- T2 = Standard Temperature (60F, expressed in Kelvin = 288.7K)
- °C = (°F - 32) x 5/9
- K = C + 273.3

2 H2S Release volume is H2S Concentration * Standardized Pipe Release Volume
3 H2S Release Mass is H2S Release Volume * Specific Volume of H2S
4 Time of Release is 10 minutes, as a conservative estimate
5 Release Concentration, Q, is H2S Mass (lb) * 453 .6 g/lb / (10 min * 60 sec/min)

Distance Calculation *Calculated radius of impact is estimated from equations found in the Workbook of Atmospheric Dispersion Estimates (D. Bruce Turner).*

$\sigma_y \sigma_z = Q / \pi u \chi_{LOC}$ D. Bruce Turner, *Workbook of Atmospheric Dispersion Estimates*, Equation 2.6

u = Windspeed, conservative estimate
Q = Pollutant emission rate
χ_{LOC} = Level-of-Concern concentration
x = distance from source

Based on the above calculation, x is interpolated from Table 2.5 (assuming Stability Class F), for the resulting $\sigma_y \sigma_z$. Values for $\sigma_y \sigma_z$

Pipe Section	Exposure Concentration ppm	u m/s	Q g/s	χ_{LOC} g/m^3	$\sigma_y \sigma_z$ m^2	x km	**Radius of Exposure** x m	x ft
1	100	1	13.66	0.12	34.78	0.22	**222**	**677**
	500	1	13.66	0.62	6.96	0.084	**84**	**255**
2	100	1	2.42	0.12	6.17	0.078	**78**	**238**
	500	1	2.42	0.62	1.23	0.031	**31**	**94**
3	100	1	31.15	0.12	79.33	0.34	**343**	**1045**
	500	1	31.15	0.62	15.87	0.135	**135**	**410**

In case 3, the emission rate Q is comprised of emission rates from both pipe sections 3a and 3b added together

Linear Interpolation of Distance vs. Sigma y times Sigma Z

Distance x (km)	sigma y * sigma z	
0.13	14.90	
0.1346	**15.87**	
0.14	17.00	

ATTACHMENT 3 **Facility Plot Plan**

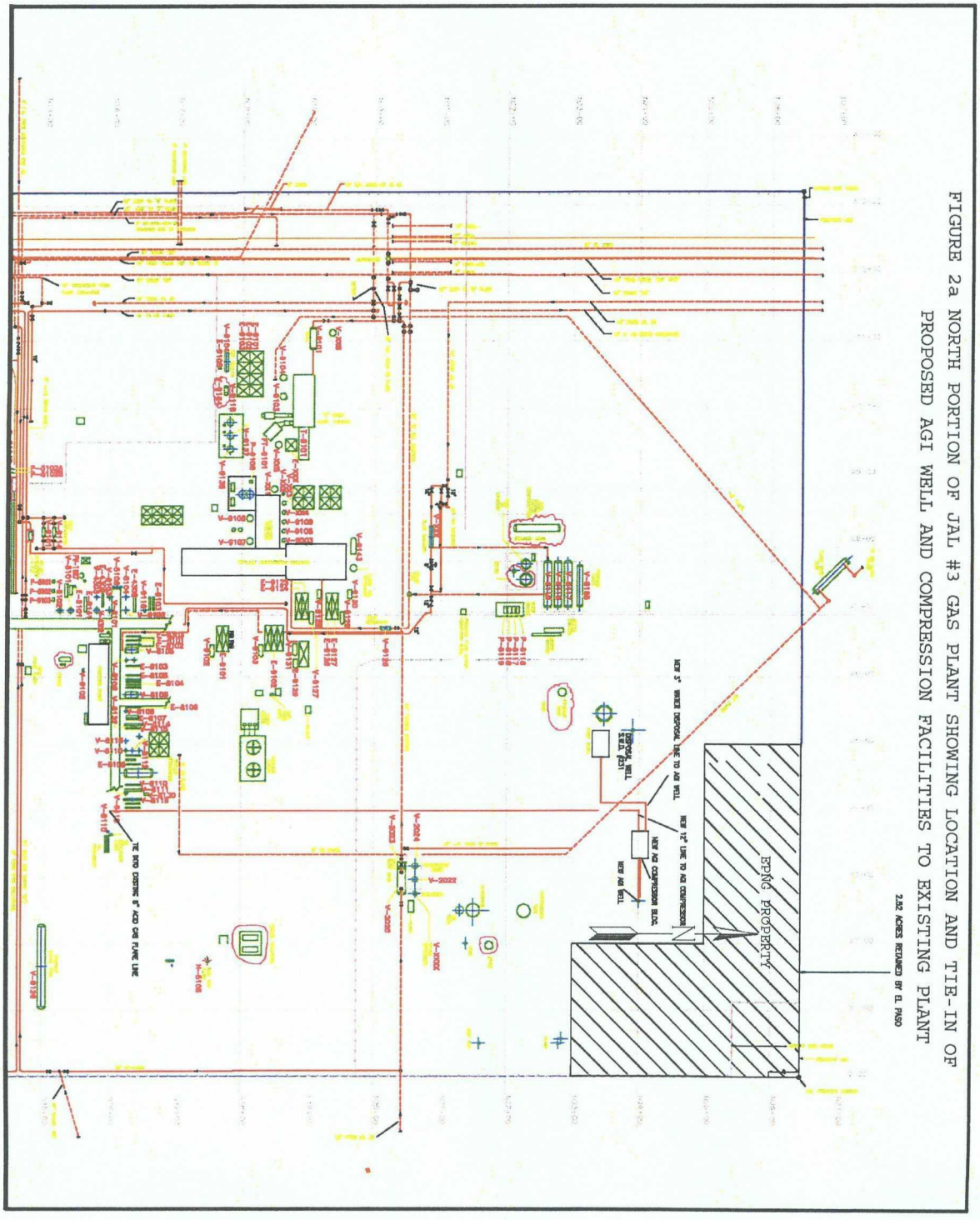


FIGURE 2a NORTH PORTION OF JAL #3 GAS PLANT SHOWING LOCATION AND TIE-IN OF PROPOSED AGI WELL AND COMPRESSION FACILITIES TO EXISTING PLANT

ATTACHMENTS 4a and 4b Maps Showing Calculated Radius of Exposure for 100 and 500 ppm H_2S
(Maps Prepared with calculated ROE from Pasquill-Gifford Equations as specified in OCD Rule 118 shown in Attachment 2)

Attachment 4A
Radii of Hydrogen Sulfide Exposure at 100 Parts Per Million

Segment 1: 1000' x 12" Steel Line at 5 psi From Flare Line to Auto Safety Valve

Segment 2: 150' x 12" Steel Line at 5 psi From Auto Safety Valve to Compressor

Segment 3: 125' x 3" Stainless Steel Line at 1600 psi from Compressor to Well Head and 300' of 3.5" L-80 Tubing at 980 psi in Well

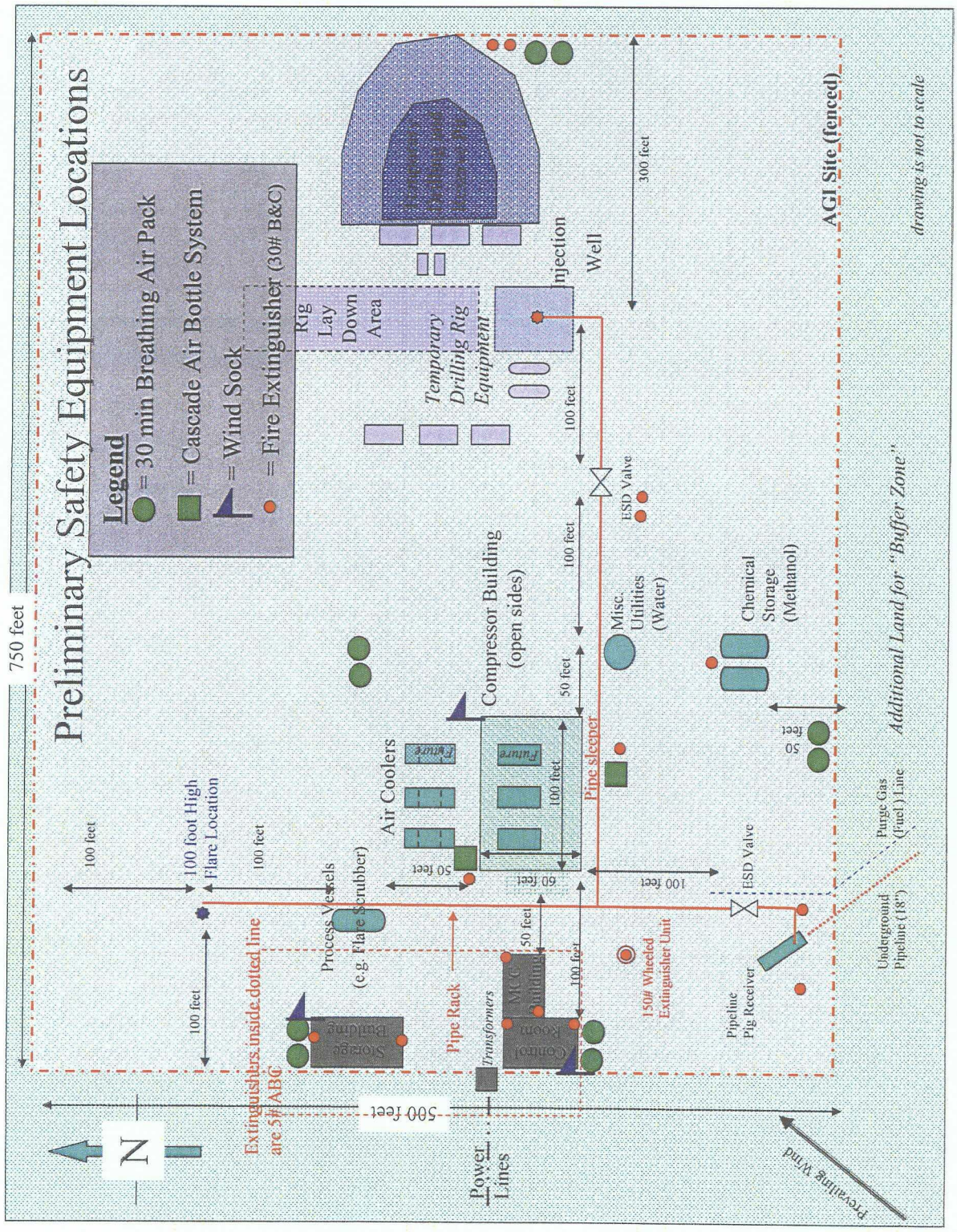
Attachment 4B
Radii of Hydrogen Sulfide Exposure at 500 Parts Per Million

Segment 1: 1000' x 12" Steel Line at 5 psi From Flare Line to Auto Safety Valve

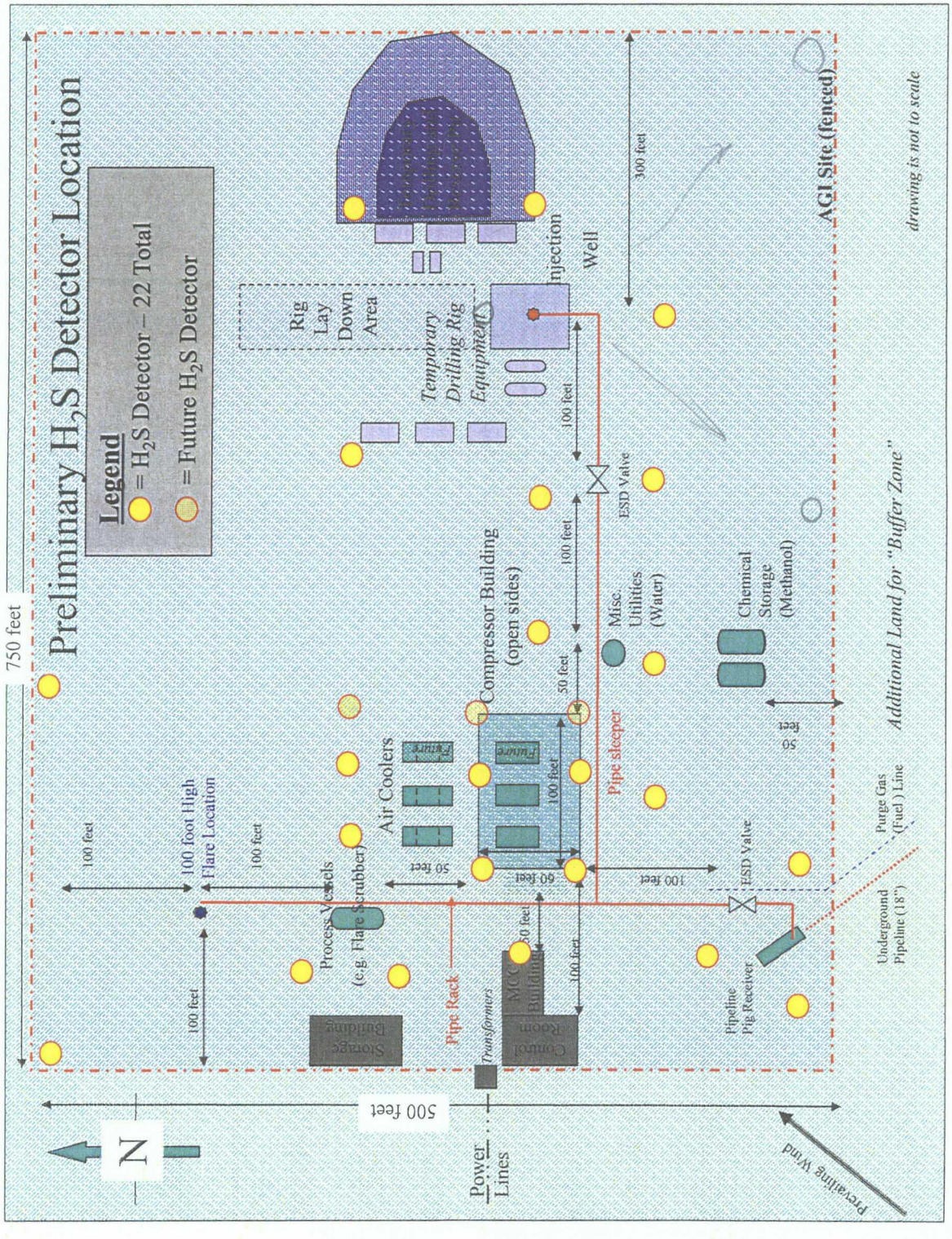
Segment 2: 150' x 12" Steel Line at 5 psi From Auto Safety Valve to Compressor

Segment 3: 125' x 3" Stainless Steel Line at 1600 psi from Compressor to Well Head and 300' of 3.5" L-80 Tubing at 980 psi in Well

ATTACHMENT 5 DRAFT Emergency Equipment Location Drawing



ATTACHMENT 6 DRAFT Plant H_2S Alarm System Location Plan Drawing



ATTACHMENT 7 Hazardous Materials Incident Notification Information Checklist

The following information should be given to dispatch. Dispatch should be instructed to give all information received to response agencies.

Notification	Time Dispatch Notified: DATE
Caller	Caller Name: _____ Caller Location: _____ Caller Phone Number: _____
Hazardous Materials Information	Incident location _____ (Address or Nearest Milepost or Exit) Time Incident Occurred _____ DATE Container Type _____ (Truck, train car, drum storage, Tank, pipeline, etc.) Substance _____ UN Identification Number _____ Other Identification _____ (Placards, shipping papers, etc.) Amount of material spilled/released _____ Current condition of material _____ (Flowing, on fire, vapors present, etc.)
Scene Description	Weather conditions _____ (i.e., sunny, overcast, wet, dry, etc.) Wind direction _____ Wind speed _____ Terrain _____ (i.e., valley, stream bed, depression, asphalt, etc.) Environmental Concerns _____ (Streams, sewers, etc.)
Affected Population	Number of people affected _____ Condition of people affected _____
Resources	Resources required _____ (EMS, HazMat Team, Fire Department, etc.)
Response	Response actions anticipated And/or in progress (i.e., rescue, fire suppression, containment, etc.)
Comments	_____ _____ _____ _____ _____

See V 9/17/19 does not correspond to this CP

Hydrogen Sulfide Contingency Plan Flowchart (see plan pages 8 and 9)

Senior Operations Staff Present Assumes Role of Incident Commander (IC) until Relieved by a Supervisory Foreman.

↓

Move away from source (upwind), Alert Personnel in Area, Evacuate Area. *Step 1 & 2.*

↓

If death or injury has occurred, immediately call 911. *Step 3.*

↓

If possible safely take measures to eliminate ignition sources. Notify Supervisory Foreman. If other assistance from emergency services is needed see telephone listing in Section XIII. IC Notifies Div. Ops. VP. *Step 4,5,&6.*

↓

If necessary set up roadblocks to stop traffic along highways. Personnel with a calibrated H_2S monitor will set & maintain roadblock at 10 ppm site. *Step 7.*

↓

If necessary initiate the notification and evacuation of nearby residents. *Step 8.*

↓

Personnel with SCBA & H2S Monitors will determine the cause of the leak. Enter from upwind side. If H2S greater than 10ppm have back-up. *Step 9.*

↓

If possible de-energize ignition sources (lockout/tag-out) and perform shutdown on appropriate equipment and system. *Steps 11 & 12.*

↓

Continue to Monitor H_2S Concentrations and advise emergency personnel. Maintain protective measures until concentration is less than 10ppm *Steps 13 & 14.*

↓

Once area is cleared (<10 ppm) remove roadblocks, notify evacuees, etc.

↓

Notify Div. H & S Manager for assistance in notifications to local, state, & federal agencies. Notify NMOCD – Lea County within 1 hour *Steps 15 & 16.*

Immed but not > 4 hrs
Report submitted C-141 15 days

DISTRIBUTION LIST

NEW MEXICO OIL & GAS CONSERVATION DIVISION	1 COPY
NEW MEXICO DEPARTMENT OF PUBLIC SAFETY (Hobbs or Jal Office) STATE POLICE	1 COPY
NEW MEXICO DEPARTMENT OF PUBLIC SAFETY STATE POLICE	1 COPY
JAL FIRE DEPARTMENT	1 COPY
MEDICAL FACILITY (Eunice)	1 COPY
MEDICAL FACILITY (JAL)	1 COPY
LEA COUNTY SHERIFF DEPARTMENT (Eunice)	1 COPY
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LOCAL EMERGENCY MANAGEMENT COMMISSIONER	1 COPY
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SUGS MIDLAND OFFICE	1 COPY
SUGS MONAHANS EHS OFFICE	1 COPY

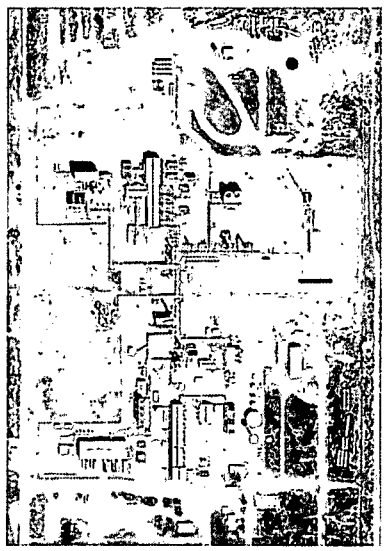
Information per RP-55

Southern Union Gas Services

Application for New Mexico Oil Conservation Division Discharge Plan

Jal # 3

(Section 33, Township 24 S, Range 37 E)



August 17, 2007

Prepared For:

New Mexico Oil Conservation Division
1200 South Saint Francis Drive
Santa Fe, New Mexico 87505

On Behalf of:

Southern Union Gas Services, Ltd.
301 Commerce Street, Suite 700
Fort Worth, Texas 76102
Telephone: (817)-302-9400

Prepared By:

Geolex, Inc.
500 Marquette Avenue, NE, Suite 1350
Albuquerque, New Mexico 87102
Telephone: (505) 842-8000

GEOLEX INCORPORATED

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

State of New Mexico
Energy Minerals and Natural Resources

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

Revised June 10, 2003

Submit Original
Plus 1 Copy
to Santa Fe
1 Copy to Appropriate
District Office

DISCHARGE PLAN APPLICATION FOR SERVICE COMPANIES,GAS PLANTS, REFINERIES, COMPRESSOR, GEOTHERMAL FACILITES AND CRUDE OIL PUMP STATIONS

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

☐ New ☒ Renewal ☐ Modification

1. Type: Natural Gas Processing
2. Operator: Southern Union Gas Services, Ltd.

   Address: 301 Commerce Street, Suite 700, Fort Worth, Texas 76102

   Contact Person: Dwight Bennett Phone: (505) 395-2068
3. Location: W/2 W/2 Section 33 Township 24S Range 37E
   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. CERTIFICATIONI hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.

Name: Mr. Bruce Williams Title: Vice President, Operations

Signature: Bruce M. Williams Date: August 23, 2007

E-mail Address: Bruce.Williams@SUG$.com

CP 817-302-9421

REVISIONS FOR DISCHARGE PLAN
Jal # 3

Revision #	Revision	Date
0	Original Issue – Rewrite of Entire Plan	9/10/93
1	Revised Paragraph 14, page 4 of Appendix H – Drain Line Testing Procedure	10/22/93
2	Revisions for Renewal Application	06/29/98
3	Revised for Renewal Application	04/05/04
4	Revised Renewal Application – Revised to incorporate S-Plant and changes to drain system	08/17/07

Southern Union Gas Services Ltd.

Jal # 3 Plant – Natural Gas Processing

Discharge Plan GW-010

Natural Gas Processing Operation

The purpose of the Jal # 3 Plant facility is natural gas processing. The main processes that occur at the plant are compression, sweetening and dehydration, cryogenic extraction of ethane and heavier hydrocarbons, sulfur recovery and steam generation.

Affirmation

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

Bruce M. Williams
(Signature)

August 23, 2007
(Date)

Bruce Williams
(Name)

Vice President, Operations
(Title)

TABLE OF CONTENTS

LIST OF FIGURES

PLATE

LIST OF TABLES

APPENDICES

1.0 TYPE OF OPERATION

The purpose of the Jal #3 Plant facility is natural gas processing. The main processes that occur at the plant are compression, sweetening and sulfur recovery, dehydration, cryogenic extraction of ethane and heavier hydrocarbons, and steam generation. A brief description of the main processes is provided below:

1.1 COMPRESSION

Plant compressors are used for inlet refrigeration and residue recompression. There are six new Superior units located in the "S" Plant and one large GE turbine in "C" Plant that are currently running. The "A" Plant has 5 GMV units, of which 2 are chillers. The "B" Plant has 3 KVS units and 2 MLV units. The plant currently has a combined capacity of 72,380 horsepower. However, many of these units are currently on stand by or are inoperable. Table 1 includes a list of all the compression activities at the plant and their current status.

1.2 SWEETENING

After compression of the inlet gas to approximately 600 psig, H2S and CO2 are removed by contacting the stream with an aqueous solution of diethanolamine (DEA) in two contactor vessels (V-50, V-4302). The rich amine is then stripped of the H2S and CO2 in two MEA stills (V-56, V4301). The lean amine is re-circulated back to the two contactors. Sweetened gas leaves the overhead of the amine contactor and goes to the glycol contactor. The H2S and CO2 exit the still overhead and go to the Sulfur Recovery Unit.

1.3 DEHYDRATION

Sweetened inlet gas enters two Glycol Contactors (V-5101, V-5102) for initial dehydration by contacting the stream with an aqueous solution of triethyleneglycol (TEG). The partially dehydrated gas leaves the overhead of the contactors and goes to the molecular sieve dehydration vessels (V205A, B, C, D) in the Cryogenic Plant for final dehydration. The rich TEG solution is regenerated in the Glycol reboiler (E-5101) and returned to the contactors. The molecular sieve is regenerated with hot inlet gas; the water-saturated regeneration gas is then cooled in the Regeneration Gas Cooler (E-209) and the water and gas are then separated in the Regeneration Gas Scrubber (V-206); removed water is sent to the closed drain system; recovered hydrocarbon liquid is sent to the Compressor Liquids Separator.

1.4 CRYOGENIC PLANT

The Cryogenic Plant extracts 80 to 85 percent ethane (C2) and heavier hydrocarbons from the dehydrated gas stream. Rich gas is cooled through a series of inlet heat exchangers and in the Chiller (E-202, C3 refrigeration system) to approximately -35°F at the Chiller Separator (V-201) where the majority of the butanes and heavier hydrocarbons are separated. Liquids from V-201 are fed to the bottom feed of the Demethanizer (V-203). Vapors from V-201 continue through another set of heat exchangers and are cooled to approximately -95°F at the Expander Separator (V-202). Liquids separated at V-202 are fed to the Demethanizer and the vapors go to the Turbo-Expander (EK-201). The cold vapors enter the Turbo-Expander at approximately 540 psig and go to the top of the Demethanizer at approximately 160 psig and -165°F. The Demethanizer strips the methane from the ethane and heavier hydrocarbons; the methane residue gas leaves the top of the Demethanizer at approximately -165°F and is used to cool the gas through the inlet exchangers. The residue gas is then recompressed, first by the compressor driven by the Turbo-Expander, EK-201, and finally by the Recompressors in the "A" Compressor Plant and leaves the plant in the residue gas pipeline. The ethane and heavier hydrocarbons leave the bottom of the

Demethanizer at approximately 35°F, are warmed to approximately 55°F by inlet gas in the Product/Inlet Exchanger (E-292) and are pumped into the liquid product pipeline at approximately 900 psig.

1.5 SULFUR RECOVERY

Hydrogen Sulfide and Carbon Dioxide from the Amine Unit flow to the Sulfur Recovery Unit (SRU). The unit uses a standard Claus, three-bed process to recover 95 percent of the sulfur in the inlet stream. The recovered elemental sulfur is sold and trucked from the plant. Sulfur Dioxide, a byproduct of the Clause process, is burned in the incinerator.

1.6 STEAM GENERATION

The "C" Compressor Plant is the primary source for steam generation. The process is capable of producing approximately 60,000 pounds per hour of steam. Boiler house # 3 also has one unit on stand by.

2.0 OPERATOR/LEGALLY RESPONSIBLE PARTY

2.1 OPERATOR/LEGALLY RESPONSIBLE PARTY
Mr. William Webb, SUGS Plant Operation Manager
Southern Union Gas Services, Ltd.
500 West Texas Avenue; Suite 920
Midland, Texas 79701
(432)-570-6031

2.2 LOCAL REPRESENTATIVE
Mr. Dwight Bennett, Plant Manager
Southern Union Gas Services, Ltd.
PO Box 1311
Jal, New Mexico 88252
(505)-395-2068

2.3 REGIONAL ENVIRONMENTAL MANAGER

Mr. Tony Savoie
Southern Union Gas Services, Ltd.
160 Commerce Street
Jal, New Mexico 88252
(505)-631-9376

3.0 LOCATION OF DISCHARGE/FACILITY

The Jal #3 Plant is located approximately 3.5 miles north of Jal, New Mexico, and 1 mile East of Hwy #18. The plant consists of 90 acres located in the W ½ of the W ½ of Section 33, T-24-S, R-37-E, N.M.P.M., Lea County, New Mexico (32° 10' 27" N, 103° 10' 27" W). Figure 1 provides a site location map of the facility

4.0 LANDOWNER

The land on which the SUGS Jal #3 Plant is located is owned by:

Lea Partners, Ltd.
201 Main Street, Suite 3000
Ft. Worth, Texas 76102

5.0 FACILITY DESCRIPTION

The property is long and rectangular and consists of approximately 90 acres of land. The facility is a natural gas treating and processing plant. Natural gas is treated in an amine sweetening unit to remove acid gas, consisting of approximately 70% CO2, and 18% H2S, with traces of other gases. The sweetened gas is then dehydrated in a glycol dehydrator and processed to separate residual gas, primarily methane, from liquids, including the higher carbon number hydrocarbons.

Acid gas removed from the natural gas stream is directed to a sulfur recovery unit (SRU) where the bulk of the H2S is converted to elemental sulfur, which is then disposed of. The CO2 and remaining H2S in the gas stream are vented to a thermal oxidizer, where the H2S is combusted to form SO2.

In addition, wastewater effluent consisting of cooling tower blowdown, saline water from plant processes including dehydration, and other exempt waste water streams are injected into a Class II underground disposal well by means of an electric compressor into a deep formation for permanent sequestration. The Woolworth Estate-SWD No. 1E is permitted by the Oil Conservation Division (OCD). The NMOCD records for this well are included in Appendix B. Figure 2 is an aerial photograph showing the entire plant and the location of the disposal well. A draft public notice for publication and proposed notice and signage is included as Appendix H.

6.0 SOURCES AND QUANTITIES OF MATERIAL USED AND STORED AT FACILITY

The SUGS Jal #3 Plant uses a variety of process chemicals and generates wastes as described in this section. The list of bulk storage containers and their contents are listed in Table 2.

6.1 PROCESS UNITS AND SOURCES OF MATERIALS AND WASTES

6.1.1 S-Plant

The S-Plant was built in 2005, after the most current revision of the discharge plan. The plant consists of six units. S1 and S2 are field units for inlet gas compression. S3 and S4 are re-compressors, and S5 and S5 Jr. are chiller units. The compressors are all manufactured by Superior. A list of the units and their corresponding horsepower is provides in Table 1.

6.1.2 Separators

Inlet, intermediate and discharge separators (scrubbers) separate gas, hydrocarbon liquid and water throughout the facility. Recovered hydrocarbon liquids average 485,000 gals/mo; produced water averages 200,000 gals/mo.

6.1.3 Boilers

The "C" Compressor Plant generates steam from the waste heat in the turbine exhaust gases. The waste heat is the primary source for steam. Two of the waste heat boilers have been removed from service and one is currently on stand by. The boiler water consumed averages about 900,000 gallons per month. The boiler drums and evaporator vessels produce high solids concentration blow down water. The blow down water usage is not metered. A list of the Boiler water treatment chemicals are listed in Appendix F.

6.1.4 Engine Cooling Water

Cooling water is used for engine jacket water and oil cooling in the "S", "A", and "B" Plant Compressors and in the Auxilliary Building. The water is cooled in the coils of atmospheric (Fin-fans) type coolers. The systems are closed loop, and evaporation accounts for almost all of the water losses. The turbine-driven compressors, "C" Compressor Plant and "A" compressor Plant Boosters, use a closed loop system with Ambritrol (Jet Cool) as a coolant; the systems are drained only in unusual circumstances. Cooling water additives are listed in Appendix A.

6.1.5 Cooling Towers

Two cooling towers, "A" and "B" Plant, are used to provide gas and other process cooling in the facility. The cooling tower water usage averages about 2.5 million gallons per month. "A" Plant blow down averages 1,500,000 gals/mo and "B" Plant blow down averages 1,000,000 gals/month. Cooling tower water-treating chemicals are listed in Appendix A.

6.1.6 Waste Lubricants, Motor Oils and Used Oil Filters

Generation of used lubricants and motor oils averages about 1000 gallons per month. The waste oil is picked up on a routine basis by Fulco Oil Services or US Filter and is either recycled or disposed of properly in accordance with applicable regulations.

Oil filters are replaced at the time of periodic maintenance. The number of used oil filters generated has been greatly reduced and is limited to the S-Plant Engines and the GE turbine. The units are routinely serviced using approximately 18 filters over a two year duration. The used filters are allowed to drain for 48 hours on a skid-mounted drain system. Oil from the filter drainage system is transferred into the oil storage tank. Once the filters are drained, they are transferred into 55 gallon open head drums and removed from the plant by an approved recycler such as US Filter (see Appendix D).

6.1.7 Waste and Slop Oil

Heavy hydrocarbons are recovered in the plant scrubbers and inlet separators. The recovered heavy hydrocarbons (black gasoline) average approximately 900,000 gallons per month.

6.1.8 Other Used Filters

In addition to used oil filters, used Amine bag filters, used condensate filters and used charcoal filters are generated as waste. The filters are replaced on an as need basis when the different pressures show restriction. The filters are allowed to drain for 48 hours on a skid-mounted drain system. Oil from the filter drainage system is transferred into a used oil storage tank. Once the filters are drained, they are transferred into 55 gallon open head drums and removed from the plant by an approved recycler such as US Filter (see Appendix D).

Filter socks are used upstream of the boilers to remove iron. The filters are drained in a basin to remove water, dried and removed by Waste Management of Hobbs for disposal as a non-hazardous solid waste.

6.1.9 Solids and Sludge

Solids and sludge build up slowly in the inlet separators and the classifier Tank. The quantity is very small and is not measured. Removal is performed as needed with vacuum trucks when necessary and disposed of by an approved disposal contractor listed in Appendix D.

6.1.10 Cleaning Operations with Solvents, Degreasers and Soaps

Parts cleaning and degreasing generate approximately 100 gallons per month of waste solvent (Varsol). Many of the operations also use a non solvent type soap that is environmentally friendly such as "Cougar Clean". The types of solvents/degreasers used are listed in Appendix A.

6.1.11 Water Treating

Water-treating filter backwashing and regeneration of Zeolite Treater beds requires approximately 10,000 gallons per month. The Water-treating chemicals are listed in Appendix F.

6.1.12 Floor and Equipment Washdown

Equipment is washed approximately once per year, using an estimated 10,000 gallons of raw water. The water, which is collected in the open drain system, may contain hydrocarbons from lubrication oil and natural gas condensate and biodegradable degreasers. Heat exchanger bundles are periodically cleaned with raw water, which is collected in the open drain system.

6.1.13 Sanitary Facilities

Sewage from the rest rooms, kitchen facilities, plant office, recreation hall, washhouse and instrument technicians' house is discharged to a separate septic tank and leach field located on the southwest portion of the property. The volume is small, proportional to the small number of employees, and is not measured.

6.2 QUALITY CHARACTERISTICS OF GENERAL EFFLUENT WASTE STREAM

All of the exempt and non-exempt wastewater flows into the plant drain system, which ends at the Classifier Tank. The wastewater is filtered and pumped into the Class II disposal well. The non-exempt waste streams from cleaning operations with solvents/degreasers are collected in the floor containment sumps and equipment drain collection sump. Samples were collected from the three drain collection sumps and submitted for waste characterization. The laboratory analyses for these samples are provided in Appendix E.

7.0 TRANSFER AND STORAGE OF PROCESS FLUIDS AND EFFLUENTS

7.1 SUMMARY OF ON-SITE COLLECTION AND STORAGE SYSTEMS

All drains in the facility, unless indicated otherwise below, flow the Classifier Tank (20-foot diameter, steel below grade). The two compartment tank, classifies incoming liquids by gravity separation. Oil rises to the surface, solids settle to the bottom and water passes through an opening in the lower section of the partition. The lighter liquids (oil and hydrocarbons) are decanted by overflowing into a below-grade Waste Oil Storage Tank. Periodically the hydrocarbons are removed by vacuum truck and sold. Classified wastewater is then pumped through a filter into a 1,500-barrel surge tank and then pumped into the disposal well. Appendix C, Plate 1, and Figures 3 and 4 contain flow schematics and plan drawings of the classifier area and drain system contain flow schematics and plan drawings of the classifier area and drain system as well as detailed instructions on testing the integrity of the drain system and tanks.

All vessels and separators are aboveground unless otherwise indicated. The below-grade tanks are protected from corrosion by a 4-coat epoxy paint system on all exterior surfaces; the classifier tank is coated internally with the same material. All below-grade piping is either plastic, coated and wrapped steel, or vitrified clay pipe. Equipment and piping are included in the plant cathodic protection system.

An epoxy-coated, 45-foot diameter by 16-foot deep, open-top steel tank with a working capacity of approximately 95,000 gallons is used as a contingency reservoir. The tank has a 1.7-day retention capacity in the event of equipment failure, well problems or other system-disabling occurrences. Wastewater is pumped back into the classifier when normal operation is resumed.

Both the classifier and the contingency tank are scheduled to be replaced in 2007 with new tanks with secondary containment structures.

7.2 DESCRIPTION OF PROCESS FLUIDS BY UNIT

7.2.1 S-Plant

The S-Plant, which houses the major compression facilities and engines for the Jal #3 Plant, has an open floor drain system around the periphery of the building that flows into a sump located just north of the building (see Plate 1 and Appendix C). This sump is connected to the plant's open drain system, which ultimately flows to the classifier. The waste stream generated in the S-Plant is a non-exempt waste stream from wash down within the S-Plant. This waste stream has been characterized as a non-hazardous waste stream that flows to the classifier and is ultimately disposed of in the plant's disposal well. The results of the waste characterization of this stream are included in Appendix E.

7.2.2 Separators

Compression Liquids from the Second and Third Stage Discharge Separators in the "B", "C", and the "S" Compressor Plants, the Second Stage in the "A" Plant Amine Contactor Inlet Separator, the Inlet Separator (V-204) and also into 3-Phase Separator and Regeneration Gas Scrubber (V-206) in the Cryogenic Plant are sent to the Compression Liquids Separator. Water from the Compression Separator goes into the high-pressure drain system; recovered hydrocarbon liquids are sent to Product Storage

Tanks (V-8117, V-8118) and trucked off-site. Liquids from the remainder of the separators are dumped into the high and low pressure drain systems.

7.2.3 Boilers

Boiler blowdown water flows into the boiler blowdown scrubber and then into a buried blowdown tank. The water then flows in an open-drain system line to the classifier tank. Water from the evaporator flows directly to the blowdown tank.

7.2.4 Engine Cooling Water

The engine cooling water is primarily a closed loop system using a water and "Jet Cool" mixture. Normal engine maintenance requires periodic draining of the engine cooling water. The coolant is drained into a mobile holding tank. Upon completion of the maintenance, the coolant is then returned to the engine. If the coolant is not returned to the engine, it is poured into the open drain system.

7.2.5 Cooling Towers

Cooling tower blowdown water is discharged into a cooling tower blowdown system line and flows to the classifier tank. The Total amount of cooling tower water used averages 2.5 million gallons per month. The evap feed water used is approximately 1,000,000 gallons per month. The blowdown water discharged into the blowdown system line and into the classifier tank is estimated to be 500,000 gallons month.

7.2.6 Waste Lubricants, Motor Oils, and Used Oil Filters

Generation of used lubricants and motor oils averages about 1000 gallons per month. The waste oil is picked up on a routine basis by Fulco Oil Services or US Filter and recycled or properly disposed of. Oil filters are replaced at the time of periodic maintenance. The number of used oil filters generated has been greatly reduced and is limited primarily to the S-Plant Engines and the GE turbine. The units are routinely serviced using approximately 18 filters over a two year duration. The used filters are allowed to drain for 48 hours on a skid-mounted drain system. Oil from the filter drainage system is transferred into a used oil storage tank. Once the filters are drained, they are transferred into 55 gallon open head drums and removed from the plant by an approved recycler such as US Filter (see Appendix D).

7.2.7 Waste and Slop Oil

Used and slop oil flows through the high and low-pressure, closed drain system to the classifier tank.

7.2.8 Other Used Filters

In addition to used oil filters, used Amine bag filters, used condensate filters and used charcoal filters are generated as waste. The filters are replaced on an as need basis when the different pressures show restriction. The filters are allowed to drain for 48 hours on a skid-mounted drain system. Oil from the filter drainage system is transferred into a used oil storage tank. Once the filters are drained, they are transferred into 55 gallon open head drums and removed from the plant by an approved recycler such as US Filter (see Appendix D).

Filter socks are used upstream of the boilers to remove iron. The filters are drained in a basin to remove water, dried and removed by Waste Management of Hobbs for disposal as a non-hazardous solid waste.

7.2.9 Solids and Sludge

Solids and sludge are removed form tanks and vessels using a vacuum truck from an approved hauler such as Fulco Oil Service (See Appendix D). No solids or sludge are stored at the facility.

7.2.10 Cleaning Operations With Solvents, Degreasers and Soaps

The parts cleaning and degreasing operations, which are described in Section 6.1.10, generate a small amount of effluent periodically that flows into the plant open drain system.

7.2.11 Water treating

Filter backwash water is piped to a buried collection sump, then flows into the boiler blowdown system line and the classifier. The water is treated with a zeolite water softener. The system uses approximately 10,000 gallons of brine water per month.

7.2.12 Equipment Washdown, Floor and Equipment Drains

Wash-down water runoff flows to the floor drains and into the open drain system. Hydrocarbons and wastewater from heat exchanger bundles are contained in curbed areas that are connected to the open drain system. These heat exchanger bundles from the gas water coolers require periodic cleaning. A contract vendor such as Belarco typically performs the scheduled maintenance. The wash water is discharged into the open drain line system and sent to the classifier.

7.2.13 Sanitary Drains and Septic Tanks

Sewage from the rest rooms, kitchen facilities, plant office, recreation hall, washhouse and instrument technicians' house is discharged to a septic tank and leach field located on the southwest portion of the property. The volume is small, proportional to the employees, and is not measured.

7.3 DISCHARGE POTENTIAL OF TRANSFER AND STORAGE COLLECTION UNIT(S)

- All tanks and separators are aboveground, unless indicated otherwise in above Section 7.
- All machinery fluids are collected, transferred and transferred and processed as indicated in Section 7.

7.4 METHODS USED TO PREVENT UNINTENTIONAL AND INADVERTENT DISCHARGES FROM REACHING THE GROUND SURFACE AND POLLUTING

- All storage tanks within the plant, which contain fluids other than fresh water, have concrete containment and/or secondary containment walls around the tanks in accordance with SPCC and OCD requirements. A copy of the SPCC Plan is provided in Appendix F and provides details on the stored materials, their quantities, secondary containment and spill prevention and containment

procedures. This SPCC plan is currently being certified and a final copy will be maintained at the plant office and is available for NMOCD inspection

- The chemical and drum storage area is concrete paved with a curbed secondary containment. In addition, individual storage tanks located within the facility are stored with fiberglass drip/spill containment basins.

- All sumps and below-grade tanks are visually inspected and level tested on an annual basis.

- All tanks are on gravel pads with the exception of the classifier and contingency tanks. These two tanks are scheduled to be replaced by units with secondary containment in 2007 as described below.

The contingency tank was completely emptied approximately two years ago (2004) and inspected for leaks. The interior of the tank was sand blasted and sealed with a specialized Rhino coating system. Future plans for 2007 include draining the existing contingency tank, and constructing a new tank within the existing tank. This would provide a secondary containment, and means for performing inspection without draining the contingency tank.

The classifier tank is scheduled to be completely removed and closed pursuant to NMOCD Closure guidelines. The tank will be replaced with a tank with secondary containment and means of inspection and leak detection from the surface.

In addition, the oil sump and drain sump will also be replaced in 2007 with above-grade tanks with secondary containment.

7.5 METHODS TO ENSURE INTEGRITY OF UNDERGROUND DRAIN LINES

The plant drain system is shown on revised drawing No. 1J3-1-P69 included as Plate 1. Details of drain system and process tank testing procedures are contained in Appendix C.

The facility has a complex system of drain lines (both open drains and closed pressure drains), which have been modified over the life of the plant. Some lines or sections of lines have been abandoned or removed and other portions modified or replaced. The drain line schematic included in Appendix C is reviewed and updated as necessary, and at least on an annual basis, to assure that any changes in the drain system are recorded and the appropriate modifications made to the line testing procedures included herein as Appendix C. The drain line testing procedures allow the flexibility to test portions of smaller, low-volume sections of the drain piping without requiring a total plant shut down. As each section is tested, all smaller drains, which flow into the main header, will be subjected to the same test pressure. This assures that all underground piping is tested.

8.0 WASTE DISPOSAL

8.1 EXISTING ON-SITE EFFLUENT DISPOSAL FACILITIES

All wastewater is routed through the classifier to remove suspended solids and oil. The classified water is then filtered and pumped into the disposal well (Woolworth Estate - SWD No. 1 E located in Unit E of Sec. 33, T-24-S, R-37-E (Appendix B). The average injected rate into the well is 1,662,000 gals/mo. The wastewater is injected into the San Andres Formation at a depth of approximately 4,700 feet. The well was completed in compliance with NMOCD administrative order No. SWD-231 dated November 6, 1980. The location of the well is shown on the site aerial photograph Figure 2 and Figure(s) 3 and 4 show the wastewater flow schematics.

8.2 OFF SITE DISPOSAL OF OTHER LIQUID OR SLUDGE WASTES

All effluents with the exception of wastewater are trucked off-site and handled in accordance with OCD and NMED regulations. Recycling and disposal contractors will be approved by the NMED or OCD, as appropriate, for the hauling and final disposition of effluents. See Appendix D for a list of disposal contractors.

8.3 SOLID WASTE (GARBAGE, CONSTRUCTION DEBRIS)

Solid waste is picked up on a regular basis by Waste Management of Hobbs.

8.4 STAINED SOILS FROM MINOR PLANT SPILLS OR OVERFLOWS

Stained soils form minor spills are cleaned up and temporarily staged on a plastic lined pad located on the east side of the plant. The soils are then sampled and a waste characterization is performed to determine an acceptable means of disposal. The soils are then removed to an OCD approved off site land farm or other appropriate approved waste facility.

9.0 INSPECTION, MAINTENANCE AND REPORTING

9.1 INSPECTION PROCEDURES FOR COLLECTION, STORAGE AND DISPOSAL UNITS

Annually, all open-top sumps and below-grade tanks will be inspected for leaks pursuant to the procedures in Appendix C. The plant maintains inspection records and schedules and will notify OCD in the event of reportable leak.

9.2 PROCEDURES FOR CONTAINMENT OF PRECIPITATION AND RUNOFF

Areas where leaks or spills can occur are curbed to prevent precipitation from carrying contaminants out of the area. Curbing and well-drained areas prevent precipitation runoff from flowing into and overflowing the drain system.

10.0 SPILL/LEAK PREVENTION AND REPORTING (CONTINGENCY PLAN)

The plant is manned 24 hours a day; operators and maintenance personnel are trained to be aware of spills and leaks and to take immediate to prevent or mitigate pollution. Small spills will be adsorbed with soil and shoveled into drums. Large spills will be contained with temporary berms; free liquids will be removed with a vacuum truck and the contaminated soil shoveled into drums. Drums containing contaminated soil will be disposed off-site by an OCD-approved disposal contractor. Verbal and written notification of leaks and spills will be made to the OCD in accordance with OCD Rule 116.

In some instances, contaminated soils shall be temporarily placed on a plastic lining in an area for temporary holding while waste characterization is performed. An assessment will be made on the contaminants, and the soils shall be removed to an approved off site land farm or other appropriate approved waste facility.

In Addition, Jal # 3 Plant has a current SPCC Plan (Appendix F) which identifies stored materials, potential release scenarios, and clean up and response procedures. Copies of selected tables showing the quantities and locations of the stored materials from the SPCC Plan are provided in Table 2.

11.0 SITE CHARACTERISTICS

11.1 BODIES OF WATER NEAR JAL #3

There are no surface bodies of water or groundwater discharge sites within one mile of the facility. Watercourses in the area are generally ephemeral dry washes. See Figure 5 for drainage pathways in the vicinity of Jal # 3.

The plant receives its water from water wells located in Section(s) 5 and 7, Township 25S, Range 38E (Hubb 1 through 5) and Section(s) 25 and 36, Township 24S, Range 37E (Cooper 1through 8). Other water wells are located in the vicinity of Crawford Ranch in Section 31, Township 24S, Range 37E. Figure 6 provides the location of the water wells plotted on a topographic based map. Table 3 is a listing of nearby water wells and available data from the office of the State Engineer.

11.2 GROUNDWATER MOST LIKELY AFFECTED BY DISCHARGE

The Ogallala aquifer is the principal source of potable water in the area. The depth to groundwater is approximately 90 feet below ground surface. The background total dissolved solids (TDS) concentration for groundwater in the area is approximately 2,200 mg/l. See Figure 6 for the location of the wells provided on a topographic map.

11.3 FLOW DIRECTION OF GROUNDWATER MOST LIKELY AFFECTED BY DISCHARGE

The Ogallala aquifer slopes to the southeast with a gradient of approximately 10-12 feet per mile and imparts an easterly or southeasterly movement to the groundwater. References: Cronin, 1969; EI Paso Natural Gas Company, Discharge Plan, March 1981; Jal # 3 Approved Discharge Plan GW-010; Nicholson and Clebsch, 1961, Geology and Ground-water Conditions in Southern Lea County, NM; GW Report 6, NM Bureau of Mines and Mineral Resources, Socorro, NM.

11.4 GEOLOGIC DESCRIPTION OF SITE

The overall regional geology of the Jal #3 Plant area is shown on Figure 7. Jal #3 is located on the northwestern corner of the Central Basin Platform of the Permian Basin. In this geological setting, Permian strata lie upon a truncated lower Paleozoic surface. Truncation of the older beds by erosion occurred during the emergence of the Central Basin Platform as a structural entity. This emergence took place along a series of down-to-basin faults to all sides of the Platform. Beneath the study area, lower Permian Abo carbonates sit directly upon Devonian (Woodford) and older beds. The lower Paleozoic beds are at depths averaging about 7400-7600 feet and deeper below the surface in the vicinity of the plant. This portion of Lea County has had oil and gas production dating back to the 1930s, and has and is still producing from a variety of formations, including the Abo, Blinbery/Tubb/Drinkard, Glorieta, San Andres, Grayburg, Queen and Seven Rivers.

The San Andres in the study area is composed of over 1,100 feet of dolomitic carbonate that was deposited in shallow water environments. These carbonates are very porous in the study area, and porosity is primarily filled with formation water, which is why there has been so little production out of the formation. Porosity is present throughout the San Andres Formation, and is particularly persistent in the upper half, although the lower half of the formation is more porous just east of the plant. The

Woolworth Estate – SWD No. 1 E is used for disposal of produced water at Jal #3 as described in Section 8.1.

11.5 SOIL TYPES

Jal #3 is located on the Berino-Cacique loamy fine sands soil association the Pyote and Maljamar soils series, and the Tonuco loamy fine sand. Detailed soils information is included in Appendix G.

The Berino series consists of deep, well drained soils that formed in mixed alluvium, the surface of which has frequently been reworked by wind. Berino soils are on sandy plains; fan piedmonts, piedmont slopes and valley floors that have slopes of 0 to 7 percent. The mean precipitation is about 10 inches, and the mean annual temperature is about 61° F.

The Cacique series consists of moderately deep, well drained soils that formed in sandy alluvium. Cacique soils are on basin floors and have slopes of 0 to 5 percent. The mean annual precipitation is about 9 inches and the mean annual air temperature is about 60° F.

The Pyote series consists of very deep, well drained, moderately rapidly permeable soils formed in sandy and loamy sediments that have been modified by wind. These soils are on nearly level to gently undulating uplands. Slopes range from 0 to 5 percent.

The Tonuco series is shallow and very shallow, excessively drained formed from coarse textured alluvium derived from mixed sources. It is on broad plains and alluvial fans with slopes of 0 to 5 percent. Average annual precipitation is about 12 inches and average annual air temperature is about 63° F.

The Berino-Cacique association consists of approximately 50 percent Berino loamy fine sand and 40 perqent Cacique loamy fine sand. Cacique soils occur only in association with Berino soils. Both Berino and Cacique soils are moderately permeable and have a very slow runoff. The Berino soil has light sandy clay loam subsoil with caliche at depths ranging from 29 to 60 inches. Cacique loamy fine sand is a shallow soil with indurated caliche at 20 to 34 inches.

12.0 CLOSURE PLAN

Southern Union Gas Services is committed to the regulations outlined by NMOCD Rule 116 and WQCC Section 1203. A closure plan as described in WQCC Section 3107.A.11 "Monitoring, Reporting, and other Requirements." The "Closure Plan" shall include all of the information described in WQCC Section 3107.A.11 and can use OCD guidelines for accepted remediation techniques and unlined surface impoundment closure guidelines (Guidelines For The Preparation Of Discharge Plans).

SUGS shall notify the OCD thirty (30) days prior to its intent to cease accepting wastes and close the facility. The permittee shall then begin closure operations unless an extension of time is granted. The facility shall be closed utilizing the financial assurance pledged to this facility. At all times, the facility shall be maintained to protect public health and the environment.

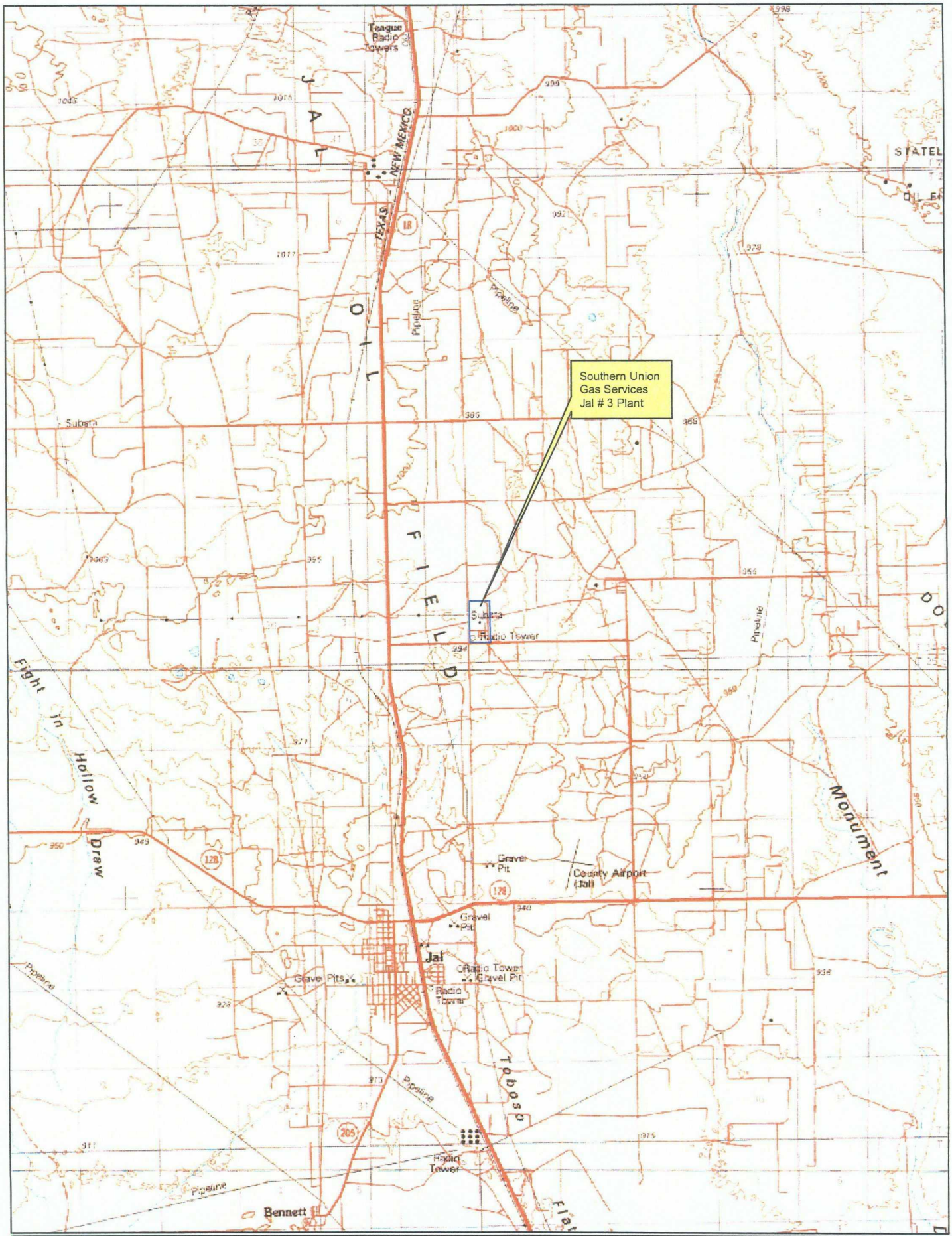
Consistent with Section 50 of 19.15.2 NMAC, any below-grade tank shall be properly closed within six months after cessation of use. The division for good cause shown may grant a six-month extension of time to accomplish closure. As tanks are scheduled to be closed or replaced, SUGS will submit a detailed closure plan to NMOCD prior to initiating closure.

Surface restoration will occur within one year of the completion of closure of any below grade tank and SUGS will contour the surface where the pit was located to prevent erosion and ponding of rainwater.

Upon the ultimate removal from service of the entire Jal #3 plant, the operation will be closed by generally following these steps:

- Disconnect and close all pipelines, gas, electrical & other utilities
- Dismantle and remove all equipment
- Develop and implement a closure plan consistent with NMOCD guidelines in effect at the time of closure
- Re-grade and re-vegetate site in accordance with applicable regulations

FIGURES



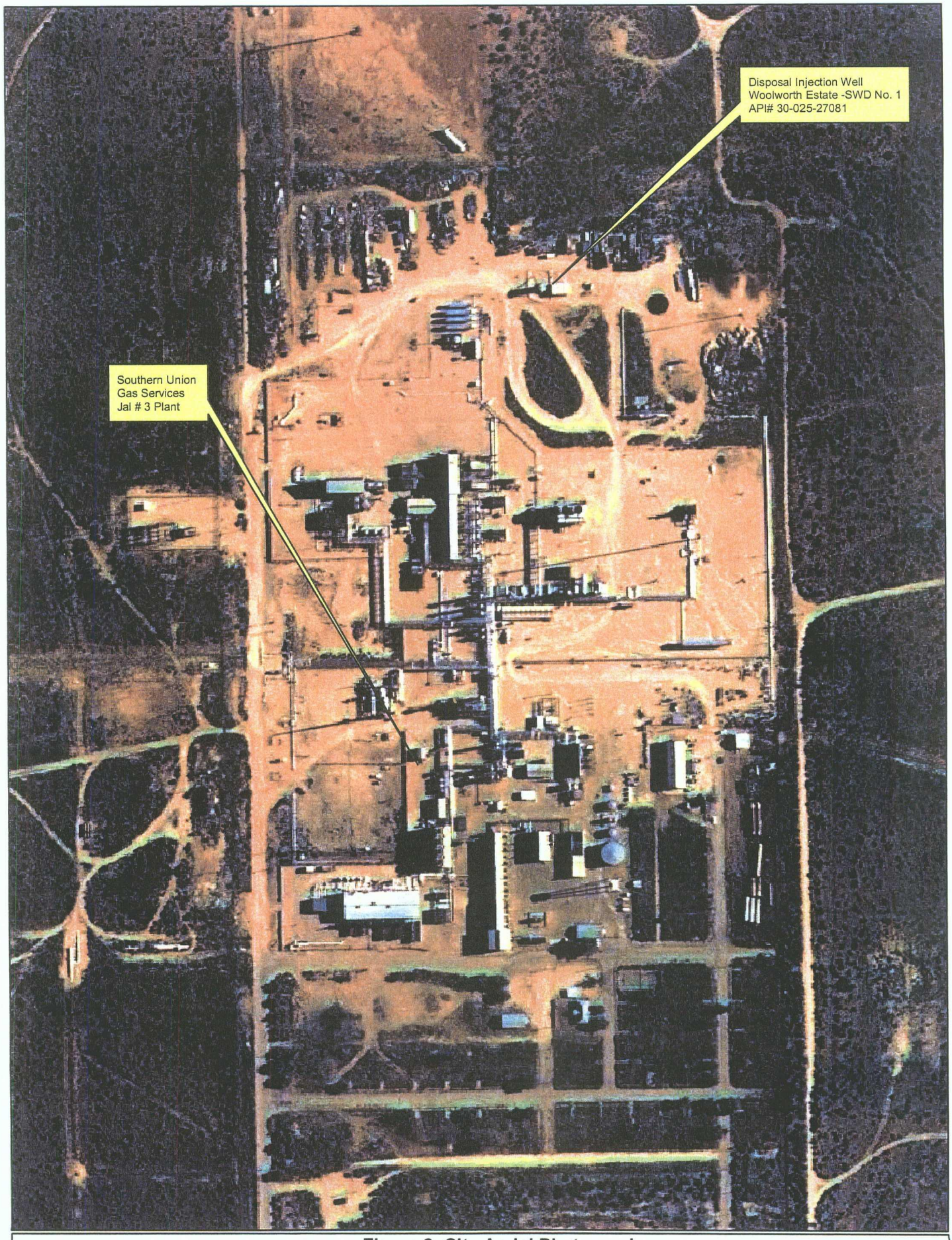
GEOLEX® INCORPORATED

Map name: JAL
Map reference code: 32103-A1-TM-100
Map scale: 1:100,000
Map type: Topographic (Meters)
Contour interval: 10 meters
Year created: 1978
Year revised: None

Figure 1: Location of Southern Union Gas Services Jal # 3 Plant

0 2.5 5 Miles

Southern Union Gas Services



GEOLEX® INCORPORATED

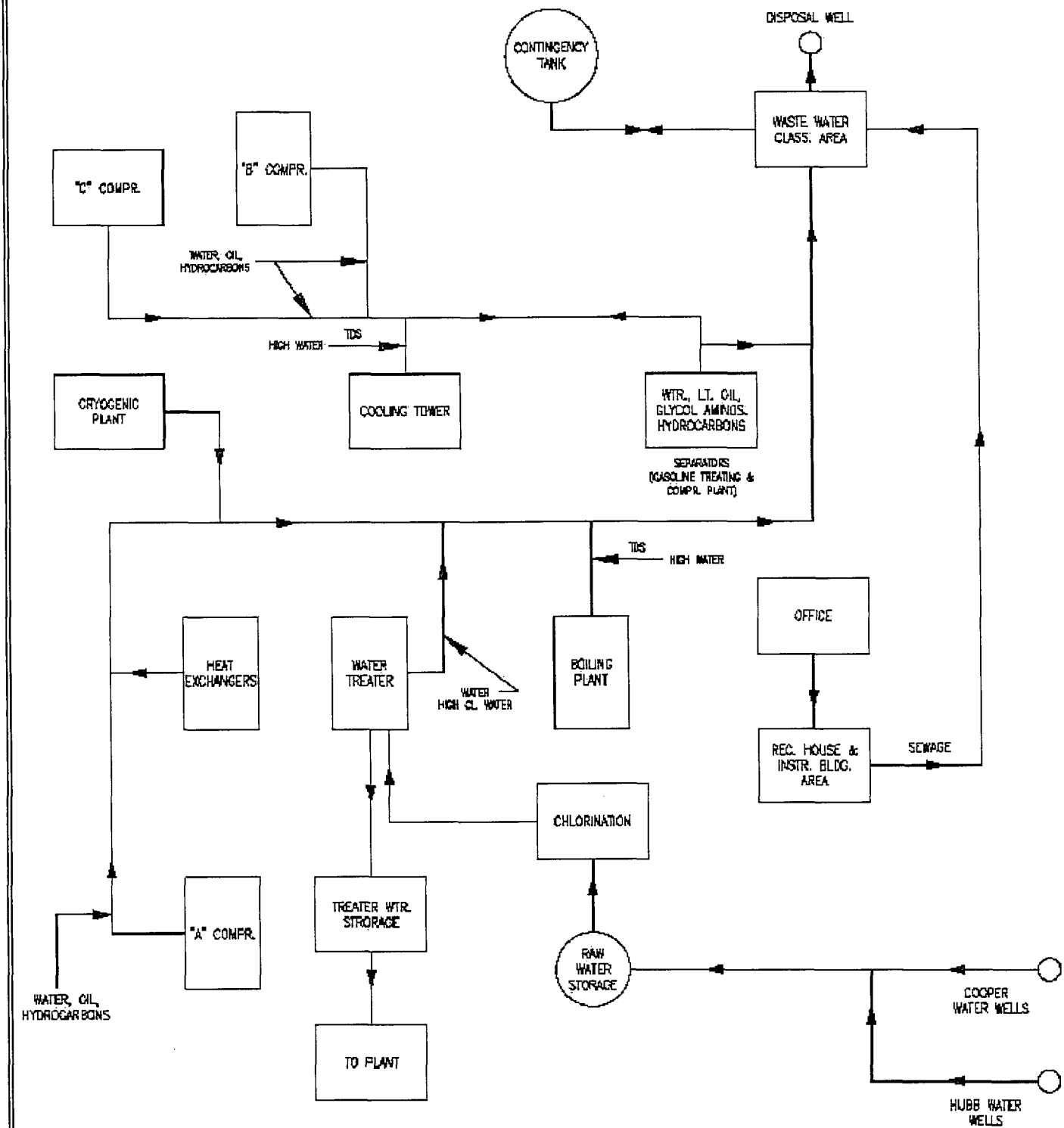
Map name: JAL NW
Map reference code: 32103-B2-TF-024
Map scale: 1:3,600
Map type: Aerial Photo
Contour interval: None
Year created: 2006

FIgure 2: Site Aerial Photograph
Southern Union Gas Services
Jal # 3 Plant

0 300 600 Feet

N W E S

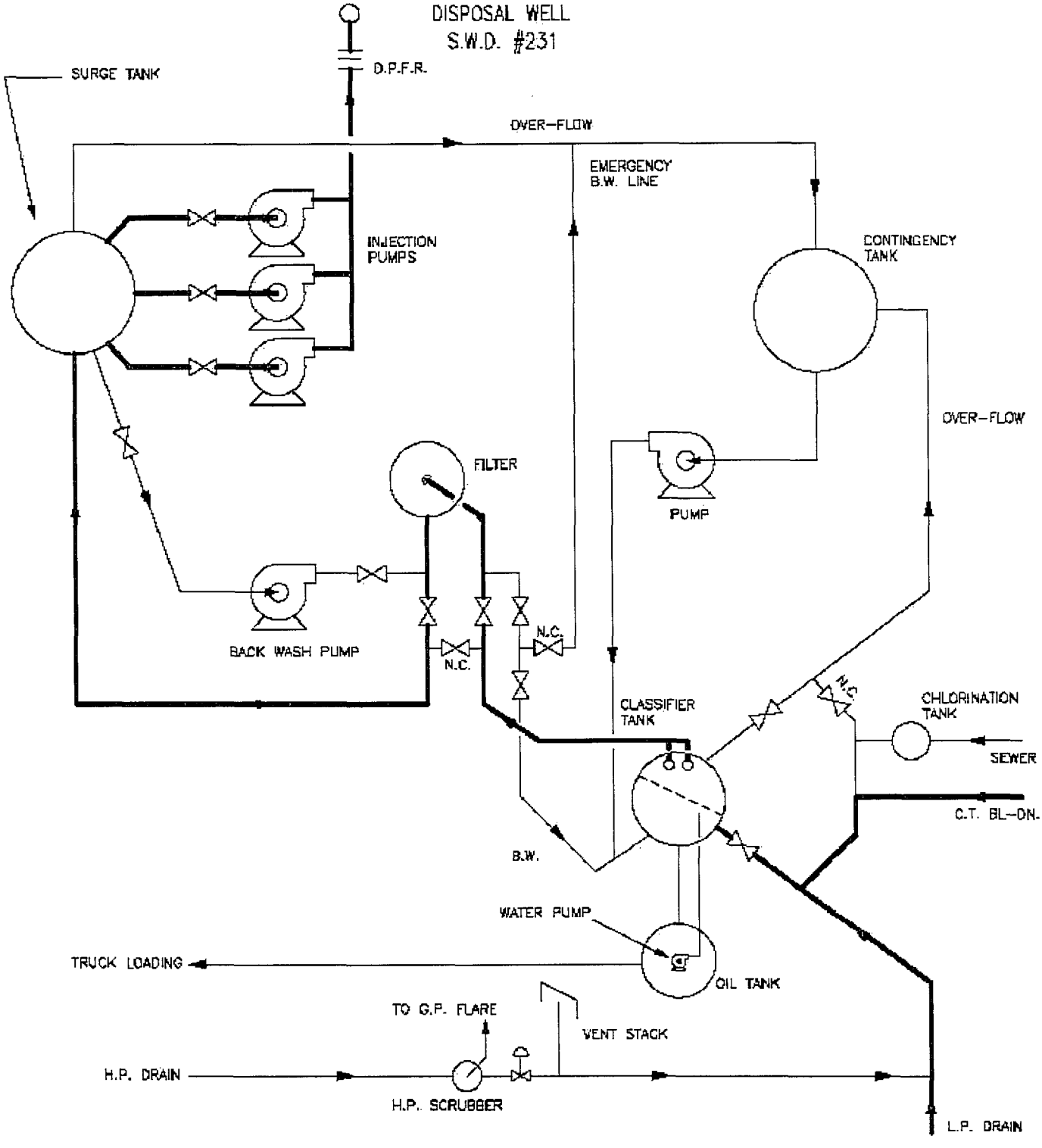
Southern Union Gas Services



GEOLEX® INCORPORATED

Figure 3: Water & Waste Water Flow Schematic
Southern Union Gas Services
Jal # 3 Plant

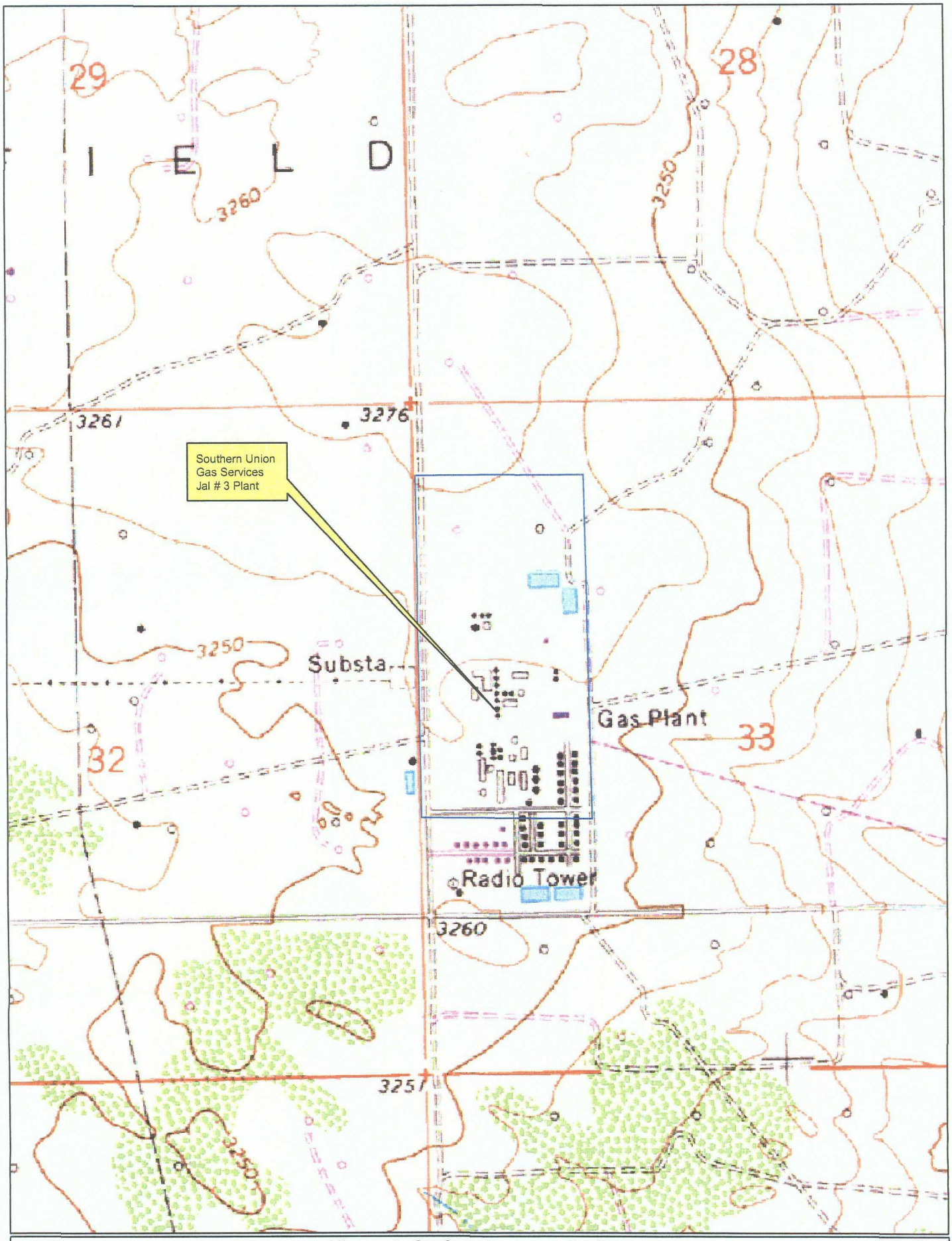
Southern Union Gas Services



GEOLEX INCORPORATED

Figure 4: Waste Water Classifier Area Flow Diagram
Southern Union Gas Services
Jal # 3 Plant

Southern Union Gas Services



GEOLEX INCORPORATED

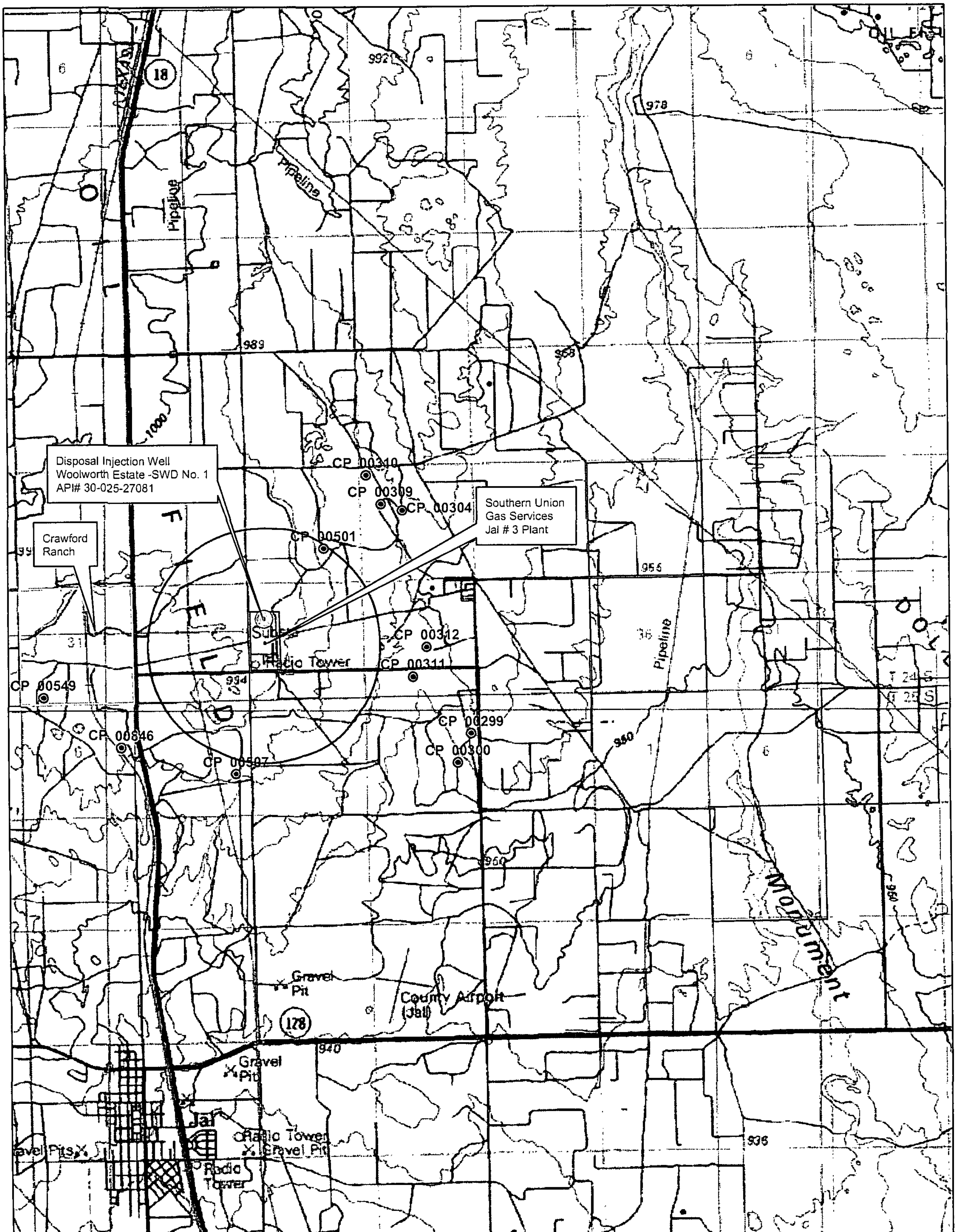
Map name: JAL NW
Map reference code: 32103-B2-TF-024
Map scale: 1:12,000
Map type: Topographic (Feet)
Contour interval: 10 feet
Year created: 1969
Year revised: 1979

Figure 5: Surface Drainage Pathways
Southern Union Gas Services
Jal # 3 Plant

0 1,000 2,000 Feet

N W E S

Southern Union Gas Services



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Woolworth Estate -SWD No. 1
Select_OSE_Wells-2003
1-Mile Radius
Crawford_Well
Water_Well_Sections
Property

Figure 6: Wells Adjacent to Southern Union Gas Services Jal # 3 Plant

1:70,000 — 0, 1, 2 Miles

Southern Union Gas Services

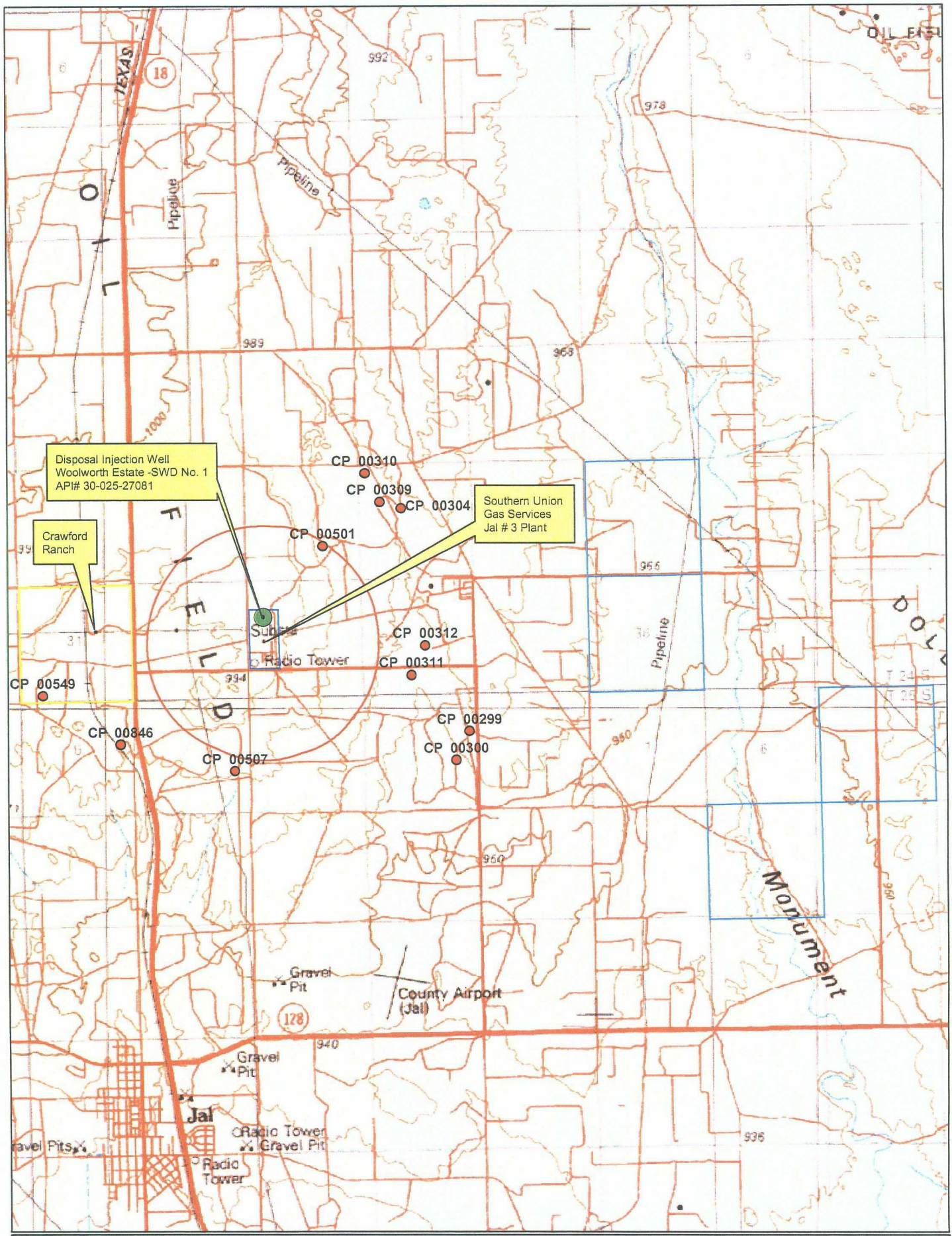
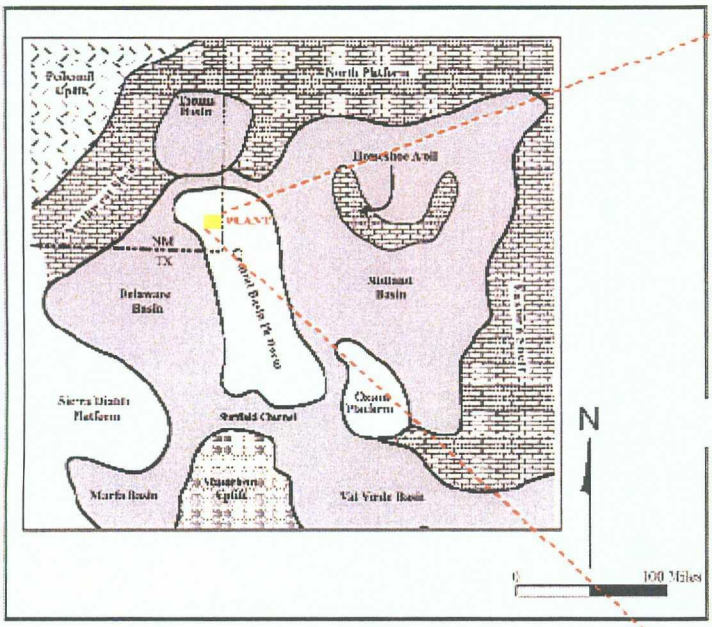


Figure 6: Wells Adjacent to Southern Union Gas Services Jal # 3 Plant



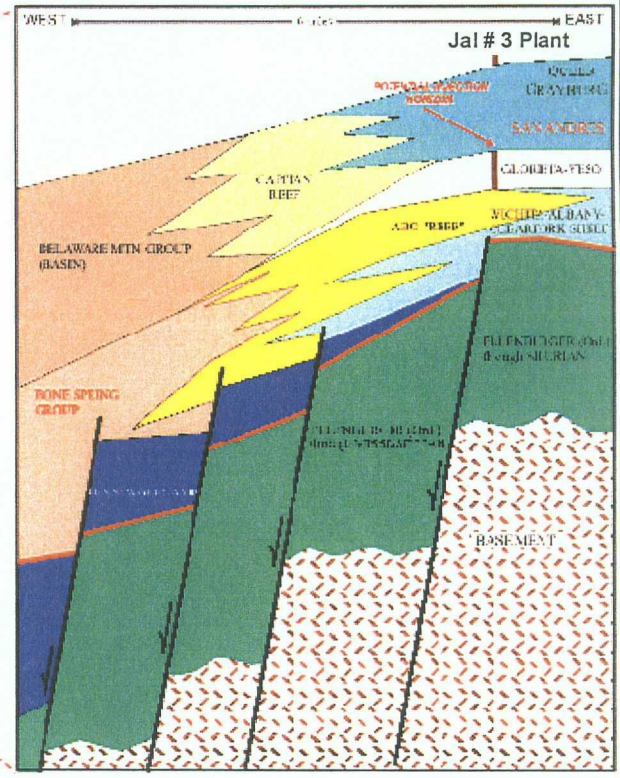


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Figure 7: Regional Setting of Southern Union Gas Services Jal # 3 Plant and General Stratigraphy of Northwest Side of Central Basin Platform

Southern Union Gas Services

TABLES

Table 1
JAL # 3 Engine/Compressor Horsepower

LOCATION	TYPE ENGINE	# OF CYL.	ENGINE HP	ENG. SERVICE	SERIAL NUMBER	CYL. DIA. 1ST STAGE	CYL. DIA. 2ND STAGE	CYL. DIA. 3RD STAGE	Status
S-1	Superior	16	3200	FIELD	333519	2-261/2"	2-17"	2-10"	Running
S-2	Superior	16	3200	FIELD	333529	2-261/2"	2-17"	2-10"	Running
S-3	Superior	16	3200	RESIDUE	334729	6-10"			Running
S-4	Superior	16	3200	RESIDUE	333489	6-10"			Running
S-5	Superior	12	2000	PROPANE	293259	3-26.5"	2-15.75"	1-12.5"	Running
J3A1	GMV	10	1020	PROPANE	42109	2-221/2	2-161/2		Standby March1,2005
J3A2	GMV	10	1020	PROPANE	42110	2-221/2	2-161/2		Standby March1,2005
J3A3	GMV	10	1020	RESIDUE	42107	4-91/4			Standby March1,2005
J3A4	GMV	10	1020	RESIDUE	42108	4-91/4			Standby March1,2005
J3A5	GMV	10	1020	RESIDUE	42106	4-91/4			Standby March1,2005
J3A6	KVS	6	1000	RESIDUE	26DT252	121/2	11.1		RETIRED March 1,2005
J3A7	KVS	6	1000	RESIDUE	26DT253	121/2	11.1		RETIRED March 1,2005
J3A8	KVS	6	1000	RESIDUE	26DT254	121/2	11.1		RETIRED March 1,2005
J3A9	V-250	8	2750	FIELD	47473	26	133/4		RETIRED Dec.30,2004
J3A10	#1 CENTAUR	TURBINE	3830	FIELD	3030006	C-505	CENTRIF.		RETIRED Dec.30,2004
J3A11	#2 CENTAUR	TURBINE	3330	FIELD	3030005	C-505	CENTRIF.		RETIRED Dec.30,2004
J3B1	KVS	12	2000	FIELD	412DT255	31.5	22.5	13	Standby March1,2005
J3B2	KVS	12	2000	FIELD	412DT256	31.5	22.5	13	Junk
J3B3	KVS	12	2000	FIELD	412DT257	31.5	22.5	13	Standby Dec.30,2004
J3B4	KVS	12	2000	FIELD	412DT258	31.5	22.5	13	Standby March1,2005
J3B5	MLV	10	4000	FIELD	G-2843	38.5	2-25	18	Standby Dec.30,2004
J3B6	MLV	10	4000	FIELD	G-2844	38.5	2-25	18	Standby Dec.30,2004
J3C1	GE TURBINE	TURBINE	22220	FIELD	214132	RES.-8	RCB-6	RCB-6	Running
J3 1AUX	JS	6	450	GEN.	4283	300KW			RETIRED Dec.30,2004
J3 2AUX	JS	6	450	GEN.	4284	300KW			RETIRED Dec.30,2004
J3 3AUX	JS	6	450	GEN.	4442	300KW			RETIRED Dec.30,2004
JAL #3 CURRENT IN-USE HORSEPOWER			37020						
JAL #3 STANDBY HORSEPOWER			19100						
JAL #3 RETIRED HORSEPOWER			16260						

TABLE 2

BULK STORAGE CONTAINER DATA

40 CFR 112.7(a)(3)(ii)

Container ID	Diameter (feet)	Circumference (feet)	Tank Height or Length (feet)	Calculated Volume (gallons)	Nominal Volume (gallons)	Tank Type	Floor Construction	Shell Construction
"A" Plant Lube Oil Tank – East	10	-	15	8,820	8,820 (210 bbl)	Vertical	Welded Steel	Welded Steel
"A" Plant Lube Oil Tank - West	10	-	15	8,820	8,820 (210 bbl)	Vertical	Welded Steel	Welded Steel
Gasoline Tank	4	-	6	564	500	Horizontal, Elevated	Welded Steel	Welded Steel
Varsol Tank - Warehouse	5	-	7.5	1,101	1,000	Horizontal, Elevated	Welded Steel	Welded Steel
Diesel Tank	2.66	-	7.5	311	300	Horizontal, Elevated	Welded Steel	Welded Steel
Lube Oil Tank at Gasoline Plant	2.5	-	10.5	385	375	Horizontal, Elevated	Welded Steel	Welded Steel
Pipeline Drip Tank No. 1	10	-	15	8,812	8,820 (210 bbl)	Vertical	Welded Steel	Welded Steel
Pipeline Drip Tank No. 2	10	-	15	8,812	8,820 (210 bbl)	Vertical	Welded Steel	Welded Steel

TABLE 2

BULK STORAGE CONTAINER DATA

40 CFR 112.7(a)(3)(ii)

Container ID	Diameter (feet)	Circumference (feet)	Tank Height or Length (feet)	Calculated Volume (gallons)	Nominal Volume (gallons)	Tank Type	Floor Construction	Shell Construction
"A" Compressor Building Sump	3	-	3	158	150	Sump	Concrete	Concrete
"A" Plant Lube Oil Tank	10	-	15	8,812	8,820 (210 bbl)	Vertical	Welded Steel	Welded Steel
"S" Plant Lube Oil Tank	10	-	15	8,812	8,820 (210 bbl)	Vertical	Welded Steel	Welded Steel
"S" Plant Used Oil Tank	2.5	-	10	367	350	Horizontal, Elevated	Welded Steel	Welded Steel
"S" Plant Oily Water Sump No. 1	4	-	5	470	450	Vaulted	Fiberglass	Fiberglass
"S" Plant Oily Water Sump No. 2	9.25	-				Partially Buried	Welded Steel	Welded Steel
Deepwell Feed Tank	8	-	27	6,015	6,000	Vertical	Fiberglass	Fiberglass
West Field Condensate Tank	6	-				Partially Buried	Welded Steel	Welded Steel

TABLE 2

BULK STORAGE CONTAINER DATA

40 CFR 112.7(a)(3)(ii)

Container ID	Diameter (feet)	Circumference (feet)	Tank Height or Length (feet)	Calculated Volume (gallons)	Nominal Volume (gallons)	Tank Type	Floor Construction	Shell Construction
Used Engine Oil Tank at "B" Compressor Building	4	-	12	1,128	1,000	Horizontal	Welded Steel	Welded Steel
Lube Oil Tank at "B" Compressor Building	5	-	5.83	856	850	Vertical	Welded Steel	Welded Steel
"C" Plant Oily Water Sump	8	-	12	4,512	4,500	Partially Buried	Welded Steel	Welded Steel
"B" Plant Lube Oil Tank	10	-	15	8,812	8,820 (210 bbl)	Vertical	Welded Steel	Welded Steel
"B" Plant Lube Oil Tank	10	-	15	8,812	8,820 (210 bbl)	Vertical	Welded Steel	Welded Steel
"B" Plant Worthington Lube Oil Tank	10	-	15	8,812	8,820 (210 bbl)	Vertical	Welded Steel	Welded Steel
B" Plant Varsol Tank	4	-	6	564	500	Horizontal, Elevated	Welded Steel	Welded Steel
"C" Plant Lube Oil Tank	10	-	15	8,812	8,820 (210 bbl)	Vertical	Welded Steel	Welded Steel

TABLE 2

BULK STORAGE CONTAINER DATA

40 CFR 112.7(a)(3)(ii)

Container ID	Diameter (feet)	Circumference (feet)	Tank Height or Length (feet)	Calculated Volume (gallons)	Nominal Volume (gallons)	Tank Type	Floor Construction	Shell Construction
Classifier	20	-	18	42,298	42,000 (1,000 bbls)	Partially Buried	Welded Steel	Welded Steel
Classifier Used Oil Tank	12	-	16	13,535	12,600 (300 bbls)	Partially Buried	Welded Steel	Welded Steel
Contingency Tank	45	-	16	190,343	190,000	Partially Buried	Welded Steel	Welded Steel
Primary Flash Tank	11	-	70	49,760	50,000	Horizontal	Welded Steel	Welded Steel
Condensate Tank (852)	11	-	70	49,760	50,000	Horizontal	Welded Steel	Welded Steel
Condensate Tank (851)	11	-	70	49,760	50,000	Horizontal	Welded Steel	Welded Steel
Condensate Tank (850)	11	-	70	49,760	50,000	Horizontal	Welded Steel	Welded Steel
Used Engine Oil Tank	10		15	8,812	8,820 (210 bbl.)	Vertical	Welded Steel	Welded Steel

TABLE 2

BULK STORAGE CONTAINER DATA

40 CFR 112.7(a)(3)(ii)

Container ID	Diameter (feet)	Circumference (feet)	Tank Height or Length (feet)	Calculated Volume (gallons)	Nominal Volume (gallons)	Tank Type	Floor Construction	Shell Construction
North Cooling Tower Sump	10 X 10 X 10			7,480	7,400	Partially Buried	Concrete	Concrete

Table 3
Office of State Engineers
Well Records

X_COORD	Y_COORD	EASTING	NORTHING	DB_FILE_NB	USE	DIVERSION	POD_REC_NB	WELL_NUMBE	TWS	RNG	SEC	Q	Q2	Q3	START_DATE	FINISH_DAT	DEPTH_WELL	DEPTH_WATE
675083	3559896	675130	3559695	CP 00299	DOM	0.00	107971	CP 00299 DCL	25S	37E	3	2	4	2			0	0
674891	3559494	674938	3559293	CP 00300	STK	0.00	108371	CP 00300 DCL	25S	37E	3	4	2	1			0	0
674122	3563001	674169	3562800	CP 00304	DOM	0.00	108015	CP 00304 DCL	24S	37E	27	1	4				0	0
673819	3563093	673866	3562892	CP 00309	NON	0.00	108040	CP 00309 DCL	24S	37E	27	1	3	2			0	0
673612	3563495	673659	3563294	CP 00310	NON	0.00	108279	CP 00310 DCL	24S	37E	27	1	1	1			0	0
674263	3560688	674310	3560487	CP 00311	NON	0.00	108071	CP 00311 DCL	24S	37E	34	3	4	2			0	0
674458	3561097	674505	3560896	CP 00312	NON	0.00	107998	CP 00312 DCL	24S	37E	34	4	1	1			0	0
673022	3562476	673069	3562275	CP 00501	SAN	3.00	108232	CP 00501	24S	37E	28	4	1	4	3/13/1972	3/14/1972	110	70
671771	3559339	671818	3559138	CP 00507	SAN	3.00	108147	CP 00507	25S	37E	5	4	2		7/26/1973	8/16/1973	0	0
669055	3560396	669102	3560195	CP 00549	DOM	0.00	108253	CP 00549 EXP	24S	37E	31	3	3	4			0	0
670156	3559714	670203	3559513	CP 00846	STK	0.00	108167	CP 00846	25S	37E	6	2	4			1/1/1930	600	0

APPENDIX A
List of Substances Used at Facility and Associated MSDS

PRODUCT COMMON NAME	CHEMICAL NAME (Trade Name or Synonyms)	CAS No.	MANUFACTURERS NAME & EMERGENCY PHONE #	VENDOR NAME, ADDRESS & PHONE #	MSDS DATED	HAZARD RATING				CHEMICAL LOCATION	MAX INVENTORY	DATE OF CHEMICAL USAGE	
						Health	Flammable		PPE			Start	Stop
MATERIAL SAFETY DATA SHEETS CAN BE FOUND IN MSDS BOOK ALPHABETICALLY UNDER THE PRODUDCT COMMON NAME!													
ACETONE	Dimethylketone	67-64-1	Mallinckrodt, Inc. 314-982-5000		Sep-85	1	3	0	G				
ACETYLENE	Ethyne	000 074 862	Big 3 Industries, Inc. 713-868-0202		Jul-83	3	4	4	1	WAREHOUSE OLD SHOP			
ACID	Acetic Acid	64-19-7	Del Mar Scientific, Ltd 972-661-5160	972-661-5160	Oct-85								
ACID	Acetic Acid Glacial	64-19-7	MALLINCKRODT 908-859-2151		May-96	2	2	1	C	LAB			
ACID	Citric Acid, Monohydrate	N/A	Mallinckrodt, Inc. 606-987-7000		May-72	1	0	2	J	LAB			
ACID	Humidifer Solution	64-19-7	Del Mar Scientific P.O. Box 486 Addison, TX 75001 972-661-5160	972-661-5160	Oct-85								
ACID	Hydrochloric Acid 37%	7647-01-0	Mallinckrodt, Inc 314-982-5000		Sep-86	3	0	0	B	LAB			
ACID	Sulfuric Acid Misty Liquidate	7664-93-9	Amrep, Inc 1-800-255-3924	Chem-Tel	rev #9	3	0	1	C,D	LAB			
ACID	Sulfuric Acid	7664-93-9	Koch Sulfur Products Co. P.O. Box 2256 Wichita, KS 67201 316-832-6777		Dec-93	3	0	2	C	LAB			
AIR	Breathing Air, Compressed Air	132259-10-0	Air Liquide America Corp. 1-800-424-9300	Air Liquide	Jan-97	0	0	0	B	HOSE CART SHED			
ALCOHOL	Isopropyl Alcohol	0067-63-0	Allied Corp.		Oct-82	1	3	0	C	WHSE / M.O.	1 PINT		
ALUMINA	Activated Alumina	1344-28-1	The Kemp Company 352-237-1220	Vopak 1-800-777-3342	Nov-96	1	0	1	F				
ALUMINA	Activated Alumina	1333-84-2	Alcoa World Alumina LLC 201 Isabella St. Pittsburgh, PA 15212-5858 703-527-3887	CHEMTREC 703-527-3887 800-424-9300	Sep-03	2	0		B				
ALUMINUM	Aluminum Alloys	N/A	Morris Steel & Aluminum Co.		Nov-85	0	0	0	A				
AMINE	Diethanolamine Low Freezing Grade PM-1713	N/A	The Dow Chemical Co Midland, MI 48674 989-636-4400	The Dow Chemical Co Midland, MI 989-636-4400	Dec-03	2	1	0	H				

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						Health	Flammable		PPE			Start	Stop
MATERIAL SAFETY DATA SHEETS CAN BE FOUND IN MSDS BOOK ALPHABETICALLY UNDER THE PRODUDCT COMMON NAME!													
AMINE	Diethanolamine 85% Low Freezing Grade		Univar USA Inc 1 800-424-9300 425-889-3400	Chemtrec 800-424-9300	Dec-03	2	1	1	B				
AMINE	DEA DIETHANOLAMINE	N/A	HUNTSMAN PETROCHEMICAL CORP BOX 27707 HOUSTON, TX 77227-7707 409-727-0831	CHEMTREC 800-424-9300 409-722-9673	JAN-02	2	3	0	D	N. OF T.P. PUMP ROOM	8820 gals		
AMINE	Steam Line Treatment BL-1558	N/A	ChemTreat, Inc. 4461 Cox Rd. Glen Allen, VA 23060 800-424-9300	ChemTreat, Inc. 4461 Cox Rd. Glen Allen, VA 23060 800-648--4579	Mar-06	2	2	0	X				
AMMONIUM HYDROXIDE	Aqua Ammonia Ammonia Water	1336-21-6	Mallinckrodt, Inc. 314-982-5000		Jul-85	3	1	0	C				
ANTIFOAM	Defoamer 1017-F	N/A	Coastal Chemical Co., Inc. 3520 Veterans Memorial Dr. Abbeville, LA 70501 337-893-3862	Chemtrec 800-424-9300	Sep-97	0	1	0	B				
ANTIFOAM	SP448 Antifoam	N/A	Nalco/Exxon Energy Chemicals, L.P. 1-800-462-5378	Vopak 1-800-777-3342	Feb-95	1	1	0	B		55 gals		
ANTIFREEZE	Ambitrol ® FL 50 Coolant	N/A	Dow Chemical 517-636-4400	Vopak 1-800-777-3342	Oct-95	1	0	0	B	A Pit 8820 gal B Pit 8820 gal	17640 gals		
ANTIFREEZE	JEFFCOOL E106N	N/A	Huntsman Petrochemical P.O. box 4980 The Woodlands, TX 77387-4980	CHEMTREC 800-424-9300 409-722-9673	Apr-05	2	0	0	0	NORTHWEST OF "A" PLANT	8820 gals		
BATTERY	Krylon Battery Protectant	N/A	Krylon Industrial 216-292-7400	ESSCO 1-800-441-0636	Feb-93	2	4	0	B	WAREHOUSE			
BATTERY	Lead Acid Battery	MS-L10	Alcad, Inc. 1-800-424-9300		Jan-95	3	1	2	D	IN VEHICLES			
BIOCIDE	CL-215	N/A	ChemTreat, Inc. 4461 Cox Rd. Glen Allen, VA 23060 800-424-9300	ChemTreat, Inc. 4461 Cox Rd. Glen Allen, VA 23060 800-648--4579	Jan-04	3	0	0	D	Pre-Coolers at G.E. Turbine "A" & "B" JW Plants			
BIOCIDE	CL-216	N/A	ChemTreat, Inc. 4461 Cox Rd. Glen Allen, VA 23060 800-424-9300	ChemTreat, Inc. 4461 Cox Rd. Glen Allen, VA 23060 800-648--4579	Jun-06	2	0	2	X	"A" COOLING TOWER			

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						Health	Flammable		PPE			Start	Stop
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BIOCIDE	Cooling Water Biocide CL-2150	N/A	ChemTreat, Inc. 4461 Cox Rd. Glen Allen, VA 23060 800-424-9300	ChemTreat, Inc. 4461 Cox Rd. Glen Allen, VA 23060 800-648--4579	Aug-05	3	0	0	D	"A" & "B" Cooling Tower			
BIOCIDE	Spectrus NX 1100	N/A	BetzDearborn 1-800-877-1940	BetzDearborn	Jun-05	0	1	0	D				
BIOCIDE	Spectrus NX 1104	N/A	BetzDearborn 1-800-877-1940	BetzDearborn	MAY-98	2	2	0	D				
BUTANE	Iso-Butane	75-28-5	Richardson Products Co. 1-800-424-9300	CHEMTREC 800-424-9300 409-722-9673	May-01	1	4	0	B				
BUTANE	Isobutane/Butane Mix Marathon C3-C4	68477-33-8	Marathon Oil Company 877-627-5463	Marathon Oil Co. 539 S. Main St Findley, OH 45840	Jan-04	1	4	0	B				
BUTANE	N-Butane ISO-Butane "D" Grade Butane	N/A	Conoco, Inc. 1-800-424-9300		Aug-00	1	4	0	B				
BUTANE	Normal Butane Butane Liquified Butane	106-97-8	Richardson Products Co. 1-800-424-9300	CHEMTREC 800-424-9300 409-722-9673	May-01	1	4	0	B				
CAUSTIC SODA BEADS	Caustic Soda	1310-73-2	Occidental Chemical Corp. 1-800-733-3665	Blaine Industrial Supply 1-800-999-9171	Jul-01	3	0	2	F	BOILER HOUSE	300 lbs		
CAUSTIC SODA BEADS	Caustic Soda	N/A	Van Waters & Rogers 1-800-424-9300	Vopak 1-800-777-3342	Mar-92	3	0	2	F	BOILER HOUSE	300 lbs		
CHLORINE	Liquid Chlorine	7782-50-5	OxyChem 716-278-7021		Jul-90	3	0	0	X	WATER TREATER COOLING TOWER			
CLEANER - *DISINFECTANT*	Absolute	N/A	Chemco Chemical Co. 1-800-752-7896		Jun-93	2	3	0	H	NO STOCK			
CLEANER - DISINFECTANT	Big D Liquid Deodorant, Lemon	N/A	Big D Industries, Inc. 1-800-535-5053 or 1-800-654-4752		Nov-90	1	2	0	B	NO STOCK			
CLEANER - DISINFECTANT	Big D Deodorizer, Spray	N/A	Big D Industries, Inc. 1-800-535-5053 or 1-800-654-4752		Aug-99	1	4	0		WHSE / M.O.	12 CANS		
CLEANER - DISINFECTANT	Blaine Hospital Concept Disinfectant	N/A	Hysan Coporation 1-800-752-7869	Blaine Industrial Supply 1-800-999-9171	Oct-91	0	0	0	B	NO STOCK			

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						Health	Flammable		PPE			Start	Stop
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CLEANER - DISINFECTANT	Blaine Orbit Germicidal SP	N/A	Blaine Industrial Supply	Blaine Industrial Supply 1-800-999-9171	Mar-95	1	1	0	B	WHSE / M.O.	12 CANS		
CLEANER - DISINFECTANT	Blaine Kwik Bowl/Tile/Porcelain Cleaner	N/A	Blaine Industrial Supply	Blaine Industrial Supply 1-800-999-9171	May-90	2	0	0	B	WHSE / M.O.	6 CANS		
CLEANER - DISINFECTANT	Blaine Total Bowl Porcelain Cleaner		Canberra Corp. 419-841-6616	Blaine Industrial Supply 1-800-999-9171	May-03	2	0	0	B				
CLEANER - DISINFECTANT	Bleach, Calusa Bleach Laundry 5%, Sodium Hypochlorite	N/A	Van Waters & Rogers 1-800-424-9300		Dec-89	1	0	0	B	WHSE / M.O.	2 GALLONS		
CLEANER - DISINFECTANT	Chem-Aqua Aerosol	N/A	Chemco Chemical Co. 1-800-752-7896	Chemco 1-800-752-7896	Sep-93	0	0	0	B	WHSE / M.O.	12 CANS		
CLEANER - DISINFECTANT	Dust-All	N/A	Chemco Chemical Co. 1-800-255-3924	Chemco 1-800-752-7896	Jan-94	1	2	0	B	WHSE / M.O.	6 CANS		
CLEANER - DISINFECTANT	Eye Glass Cleaner Aqua Sol 20/20	N/A	Certified Labs 1-214-438-1381	Certified Labs 1-214-438-1381	Dec-93	1	0	0	G	NO STOCK			
CLEANER - DISINFECTANT	Fast Flow - Quarts	N/A	Chemco Chemical Co. 404-422-2071	ESSCO 1-800-441-0636	Oct-93	3	0	2	D	WHSE / M.O.	6 QUARTS		
CLEANER - DISINFECTANT	Fast Orange Lotion Hand Cleaner	N/A	Permatex Industrial	ESSCO 1-800-441-0636	May-95	1	2	0	B	WAREHOUSE	1 GALLON		
CLEANER - DISINFECTANT	Fresh Bowl	N/A	Chemco Chemical Co.	Chemco 1-800-752-7896	Jul-93	1	0	1	B	WHSE / M.O.	6 QUARTS		
CLEANER - DISINFECTANT	Glass Cleaner	N/A	Sprayway, Inc. 1-800-228-5635 X009	Blaine Industrial Supply 1-800-999-9171	Jan-94	2	2	0	B	WHSE / M.O.	12 CANS		
CLEANER - DISINFECTANT	Hot Springs Cleaner	N/A	The Butcher Company		Jan-90	1	0	0	B	NO STOCK			
CLEANER - DISINFECTANT	Joe's Hand Cleaner	N/A	Kleen Products, Inc. 1-800-424-9300		Apr-88	0	0	0	A	NO STOCK			
CLEANER - DISINFECTANT	Lava Hand Soap	N/A	Procter & Gamble 513-983-1100	Blaine Industrial Supply 1-800-999-9171	Jun-90	0	0	0	A	WHSE / M.O.	24 BARS		
CLEANER - DISINFECTANT	Lysol Disinfectant Spray	N/A	Reckitt Benckiser, Inc 1655 Valley Rd. Wayne, NJ 07474 800-677-9218 Chem Tel Inc 800-255-3924		May-02	1	3	0	B				

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						Health	Flammable		PPE			Start	Stop
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CLEANER - DISINFECTANT	VERDE HAND / DISHWASHER DETERGENT		Carroll Company 1-800-535-5053	Carroll Company 2900 West Kinglsey Rd. Garland, TX 75041 *972-278-1304*	Jun-98	0	0	0	0				
CLEANER - DISINFECTANT	Orange Cleaner Concentrate	N/A	Lawson Products, Inc. 303-623-5716	ESSCO 1-800-441-0636	Aug-94	0	2	0	B	NO STOCK			
CLEANER - DISINFECTANT	Pine Odor Disinfectant	N/A	Carroll Company 1-214-278-1304	Blaine Industrial Supply 1-800-999-9171	Apr-01	1	1	0	B	WHSE / M.O.	2 GALLONS		
CLEANER - DISINFECTANT	Pine Sol (DC Pine)		Triple S Billerica, MA 01862 *888-779-1339* *800-* 323-2251	Triple S	Apr-02								
CLEANER - DISINFECTANT	Pretty Potty	N/A	Carroll Company 1-214-278-1304		Feb-91	1	0	1	B	NO STOCK			
CLEANER - DISINFECTANT	Pride with Pumice Hand Cleaner	N/A	Chemco 1-800-752-7896	Chemco 1-800-752-7896	Jul-92	1	0	0	A	NO STOCK			
CLEANER - DISINFECTANT	*Purafil*	N/A	Purafil, Inc. *770-662-8545*		Feb-98	0	0	0	B	NO STOCK			
CLEANER - DISINFECTANT	Quikleen II	N/A	Quest Chemical Corp. 713-896-8188		Aug-93	2	0	1	D	NO STOCK			
CLEANER - DISINFECTANT	Santec LCS 2002 Eye Glass Cleaner	N/A	Santec Specialties, Inc. 1-800-424-9300	*NO*	Jan-94	0	0	0	A	NO STOCK			
CLEANER - DISINFECTANT	Shiney Bright	N/A	Mantek 214-438-1381		Aug-93	0	0	0	X	NO STOCK			
CLEANER - DISINFECTANT	Sparkle	N/A	*Chemco Chemical Co.* 1-800-752-7896	Chemco 1-800-752-7896	Apr-93	0	2	0	A	NO STOCK			
CLEANER - DISINFECTANT	Sprayway Glass Cleaner	N/A	Sprayway, Inc. 1-800-228-5635 X009		Nov-05	1	1	0	A				
CLEANER - DISINFECTANT	Speedtrack Clean & Burnish	N/A	The Butcher Company		Apr-92	1	0	0	B	NO STOCK			
CLEANER - DISINFECTANT	Sure Step Sealer/Finish	111-77-3	Canberra Corp. 419-841-6616	Blaine Industrial Supply 1-800-999-9171	May-92	1	0	0	B	WAREHOUSE	2 GALLONS		
CLEANER - DISINFECTANT	Sure Strip Mop & Strip	N/A	Canberra Corp. 419-841-6616	Blaine Industrial Supply 1-800-999-9171	May-96	2	1	0	B	WAREHOUSE	2 GALLONS		
CLEANER - DISINFECTANT	Velva-Sheen Floor Wax	N/A	*Majestic Wax Company* 303-355-1606 Day 303-722-8081 Night	Blaine Industrial Supply 1-800-999-9171		0	2	1	B	WAREHOUSE ENGINE ROOMS	2 GALLONS		

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						Health	Flammable		PPE			Start	Stop
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CLEANER - DISINFECTANT	Zep Magnet Aerosol Dust Mop & Cloth Treatment	N/A	Zep Manufacturing Co. 1-800-424-9300	Zep Manufacturing Co. 1-800-424-9300	Jul-89	1	1	0	A	NO STOCK			
CLEANER - DISINFECTANT	Zep Meter Mist Green Apple Aerosol Deodorant	400 GAL	Zep Manufacturing Co. 1-800-424-9300	Zep Manufacturing Co. 1-800-424-9300	Sep-92	1	3	1	A	NO STOCK			
CLEANER - DISINFECTANT	Zep MVP Hand Cleaner	N/A	Zep Manufacturing Co. 1-800-424-9300	Zep Manufacturing Co. 1-800-424-9300	Apr-95	1	0	0	A	NO STOCK			
CO2	Carbon Dioxide	0124-38-9			Jul-79	0	0	0	A				
COMPRESSED GAS	Gas Mixture H2S									SULPHUR PLT	? CU FT		
COMPRESSED GAS	Gas Mixture SO2	N/A	Air Liquide America Corp. 713-868-0302	Air Liquide America Corp. 713-868-0302	Jul-85	3	0	0	B	SULPHUR PLT	One Cylinder		
COMPRESSED GAS	Gas Mixture	N/A	Industrial Scientific Corp. 1001 Oakdale Rd. Oakdale, PA 15071-1500 800-424-9300	Chemtrec 410-228-6400	Apr-04	Gas	0	0	C				
CORROSION CHEMICALS	*Continuum AFC-3109* Water-Based Corrosion Inhibitor/Deposit Control Agent	N/A	BetzDearborn 1-800-877-1940	BetzDearborn	Jan-97	1	1	0	B	"A" COOLING TOWER "B" COOLING TOWER	450 GALLONS 450 GALLONS		
CORROSION CHEMICALS	Compressor J.W. CL-2840	N/A	ChemTreat, Inc. 4461 Cox Rd. Glen Allen, VA 23060 800-424-9300	ChemTreat, Inc. 4461 Cox Rd. Glen Allen, VA 23060 800-648--4579	May-03	1	0	1	B	"A" & "B" JW Plants			
CORROSION CHEMICALS	Cooling Tower CL-4898	N/A	ChemTreat, Inc. 4461 Cox Rd. Glen Allen, VA 23060 800-424-9300	ChemTreat, Inc. 4461 Cox Rd. Glen Allen, VA 23060 800-648--4579	Mar-06	1	0	1	X	"A" & "B" Cooling Tower			
CORROSION CHEMICALS	BL-1772	7320-34-5	ChemTreat, Inc. 4461 Cox Rd. Glen Allen, VA 23060 800-424-9300	ChemTreat, Inc. 4461 Cox Rd. Glen Allen, VA 23060 800-648--4579	Nov-02	1	0	0	B	G.E. & Boilers			
CORROSION CHEMICALS	Corrshield NT4201 Water-Based Corrosion Inhibitor	N/A	BetzDearborn 1-800-877-1940	BetzDearborn	Jul-97	1	1	0	B	"A" PLANT "B" PLANT	250 GALLONS 250 GALLONS		

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						Health	Flammable		PPE			Start	Stop
MATERIAL SAFETY DATA SHEETS CAN BE FOUND IN MSDS BOOK ALPHABETICALLY UNDER THE PRODUDCT COMMON NAME!													
CORROSION CHEMICALS	Cortrol IS1050 Powered Oxygen Scavenger	N/A	BetzDearborn 1-800-877-1940	BetzDearborn	Feb-02	2	0	0	B	N.E. SIDE OF #3 BOILER	500 LB DRUM		
CORROSION CHEMICALS	ESCUDERO PC-396 CLEANER	N/A	ESCUDERO, INC 915-557-2271	ESCUDERO, INC PO BOX 51207 MIDLAND, TX 79710-1207 915-557-2271	SEP-85	2	2	0					
CORROSION CHEMICALS	ESCUDERO PI-500 CORROSION INHIBITOR	N/A	ESCUDERO, INC 915-557-2271	ESCUDERO, INC PO BOX 51207 MIDLAND, TX 79710-1207 915-557-2271	SEP-85	2	2	0	G				
CORROSION CHEMICALS	ESCUDERO PI-500B CORROSION INHIBITOR / BIO-STAT	N/A	ESCUDERO, INC 915-557-2271	ESCUDERO, INC PO BOX 51207 MIDLAND, TX 79710-1207 915-557-2271	SEP-85	2	2	0	G				
CORROSION CHEMICALS	ESCUDERO PPP-3000 3 PHASE CORROSION INHIBITOR	N/A	ESCUDERO, INC 915-557-2271	ESCUDERO, INC PO BOX 51207 MIDLAND, TX 79710-1207 915-557-2271	SEP-85	2	3	0	G				
CORROSION CHEMICALS	Inhibitor AZ8104 Water-Based Corrosion Inhibitor	N/A	BetzDearborn 1-800-877-1940	BetzDearborn	May-04	2	1	0	D	"A" COOLING TOWER "B" COOLING TOWER	55 GAL. DRUM 55 GAL. DRUM		
CORROSION CHEMICALS	Max-Amine 70B Amine Solvent Antifoam	N/A	BetzDearborn 1-800-877-1940	BetzDearborn	Nov-95	2	1	0	B	TREATING PLT	400 GALS.		
CORROSION CHEMICALS	Max-Amine 82B LPG Emulsion Breaker	N/A	BetzDearborn 1-800-877-1940	BetzDearborn	Jun-98	2	2	0	B	CLASSIFIERS	5 GALLONS		
CORROSION CHEMICALS	Max-Amine GT741C Corrosion Inhibitor	N/A	BetzDearborn 1-800-877-1940	BetzDearborn	Apr-98	2	1	0	D	TREATING PLT	400 GALS.		
CORROSION CHEMICALS	Optisperse ADJ1030 Antifoam Agent	N/A	BetzDearborn 1-800-877-1940	BetzDearborn	Nov-99	2	1	0	B	BARREL RACK W OF WHSE	5 GALLONS		
CORROSION CHEMICALS	Optisperse APO 200 Water-Based Internal Boiler Treatment	N/A	BetzDearborn 1-800-877-1940	BetzDearborn	Nov-05	2	1	0	B	N SIDE OF #3 BOILER	500 GALS.		
CORROSION CHEMICALS	PHILMPLUS 5K7	N/A	GE BETZ, INC 800-877-1940	GE BETZ 4636 SOMERTON ROAD TREVOSE, PA 19053	AUG-01	2	2	0	B				

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						Health	Flammable		PPE			Start	Stop
MATERIAL SAFETY DATA SHEETS CAN BE FOUND IN MSDS BOOK ALPHABETICALLY UNDER THE PRODUDCT COMMON NAME!													
CORROSION CHEMICALS	Pipeline Cleaner Chemical PC-396-XL	N/A	Pipeline Chemical P.O. Box 1554 Midland, TX 79702 800-255-3924	Pipeline Chemical P.O. Box 1554 Midland, TX 79702 432-634-7010	Sep-85	3	1	0	X				
CORROSION CHEMICALS	Scale Inhibitor CL-4354	N/A	ChemTreat, Inc. 4461 Cox Rd. Glen Allen, VA 23060 800-424-9300	ChemTreat, Inc. 4461 Cox Rd. Glen Allen, VA 23060 800-648--4579	Oct-03	3	0	0	B				
CORROSION CHEMICALS	Steamate NF4630 Water Based Condensate Corrrision Inhibitor	N/A	GE BETZ, INC 800-877-1940	GE BETZ 4636 SOMERTON ROAD TREVOSE, PA 19053	OCT-05	3	1	0	B				
CORROSION CHEMICALS	Steamate NF770 Condensate Return Line Treatment	N/A	BetzDearborn 1-800-877-1940	BetzDearborn	Jun-97	3	2	0	D	N SIDE OF #3 BOILER	55 GAL. DRUM		
CORROSION CHEMICALS	Steamate PAS4010 Water-Based Internal Boiler Treatment	N/A	BetzDearborn 1-800-877-1940	BetzDearborn	Feb-97	3	2	0	D	N SIDE OF #3 BOILER	250 GAL.		
CORROSION CHEMICALS	Tretolite R CG0020A	N/A	Petrolite Corp. 1-800-424-9300		May-96	3	3	0	H	WAREHOUSE			
CORROSION CHEMICALS	Zep Ironclad Aerosol Corrosion Inhibitor	N/A	Zep Manufacturing Co. 1-800-424-9300	Zep Manufacturing Co. 1-800-424-9300	Apr-95	2	3	0	B	WAREHOUSE	12 CANS		
DIESEL FUEL	Diesel Fuel	68476-34-6	Conoco Inc P.O. Box 2197 Houston, TX 77252 1-800-441-3637		Jan-94	1	2	0	B	TANK WEST OF WAREHOUSE	300 GAL.		
ENGINE MAINTENANCE REPAIR CHEMICAL	Belzona Ceramic R-Metal Solidifier	N/A	Belzona Americal Inc. 305-594-4994 (Day) or 305-274-6512 (Night)		Jun-91	3	1	1	G	WAREHOUSE	5 CANS		
ENGINE MAINTENANCE REPAIR CHEMICAL	Belzona Ceramic S-Metal Solidifier	N/A	Belzona Americal Inc. 305-594-4994 (Day) or 305-274-6512 (Night)		Feb-91	3	1	1	C	WAREHOUSE	5 CANS		
ENGINE MAINTENANCE REPAIR CHEMICAL	Belzona E-Metal Solidifier	N/A	Belzona Molecular Ltd. 305-594-4994		Oct-90	3	1	1	G	WAREHOUSE	5 CANS		
ENGINE MAINTENANCE REPAIR CHEMICAL	Belzona Super Metal Base	N/A	Belzona Americal Inc. 305-594-4994 (Day) or 305-274-6512 (Night)		Jun-91	3	1	1	G	WAREHOUSE	5 CANS		

PRODUCT COMMON NAME	CHEMICAL NAME (Trade Name or Synonyms)	CAS No.	MANUFACTURERS NAME & EMERGENCY PHONE #	VENDOR NAME, ADDRESS & PHONE #	MSDS DATED	HAZARD RATING				CHEMICAL LOCATION	MAX INVENTORY	DATE OF CHEMICAL USAGE	
						Health	Flammable		PPE			Start	Stop
MATERIAL SAFETY DATA SHEETS CAN BE FOUND IN MSDS BOOK ALPHABETICALLY UNDER THE PRODUDCT COMMON NAME!													
ENGINE MAINTENANCE REPAIR CHEMICAL	Belzona Super Metal Solidifier	N/A	Belzona Americal Inc. 305-594-4994 (Day) or 305-274-6512 (Night)		Jun-91		1	1	G	WAREHOUSE	5 CANS		
ENGINE MAINTENANCE REPAIR CHEMICAL	Lok-Cease Aerosol	N/A	Certified Labs 1-214-438-1381	ESSCO 1-800-441-0636	May-95		1	0	E	WAREHOUSE	12 CANS		
ENGINE MAINTENANCE REPAIR CHEMICAL	M/M Quick Cure	N/A	Certified Labs 1-214-438-1381		Jan-92		1	0	C	WAREHOUSE			
FILTERS	Anthracite Filter Media	N/A	Carbon Sales, Inc. 717-823-7664		Mar-84		0	0	E				
FIRE EXTINGUISHING AGENT	ABC Dry Chemical	12001-26-2	Buckeye Fire Equipment Co. 110 Kings Road King's Mountain, NC 28086 800-424-9300	Buckeye Fire Equipment Co. 110 Kings Road King's Mountain, NC 28086 704-739-7415	Jan-98		0	0	B				
FIRE EXTINGUISHING AGENT	Cartridge (fire extinguisher), Carbon Dioxide	124-38-9	GFEC, INC 1685 Shermer Rd. Northbrook, IL 60062 800-535-5053	GFEC, INC 1685 Shermer Rd. Northbrook, IL 60062 708-272-7500	May-95		0	0	0				
FIRE EXTINGUISHING AGENT	Halon 1211	N/A	Ansul Fire Protection 715-735-7411	Thompson Specialities 1-800-228-3891	Jun-86		0	0	G				
FIRE EXTINGUISHING AGENT	Halon 1301 Freon FE 1301	75-63-8	Ansul Fire Protection 715-735-7411	Thompson Specialities 1-800-228-3891	Jun-86		0	0	G				
FIRE EXTINGUISHING AGENT	Plus Fifty B Dry Chemical	N/A	Ansul Fire Protection 715-735-7411	Thompson Specialities 1-800-228-3891	Jun-86		0	0	E				
FIRE EXTINGUISHING AGENT	Purple-K Dry Chemical	N/A	Amerex Corporation 7595 Gadsden Highway P.O.Box 81 Trussville, AL 35173-0081 800-424-9300	Chemtrec 703-527-3887	09-03		0	0	E	WHSE-AP-BP-GP-TP-DCS			
FIRST AID	Burn Ointment Burn Compound	N/A	North Health Care 815-877-2531	Affirmed 888-609-2303 Permian Sales 800-633-7793	May-91		0	0	A	WHSE FIRST AID KITS	12 PKG		
FIRST AID	Burn Spray	N/A	North Health Care 815-877-2531	Affirmed 888-609-2303 Permian Sales 800-633-7793	Oct-91		3	0	A	NO STOCK			
FIRST AID	Eye Wash Buffered EyeLert	N/A	North Health Care 815-877-2531	Affirmed 888-609-2303 Permian Sales 800-633-7793	Sep-85		0	0	A	WHSE FIRST AID KITS	12 BOTTLES		

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						Health	Flammable		PPE			Start	Stop
MATERIAL SAFETY DATA SHEETS CAN BE FOUND IN MSDS BOOK ALPHABETICALLY UNDER THE PRODUDCT COMMON NAME!													
FIRST AID	Silica Gel	63231-67-4	Kemp Manufacturing Co. 1-800-424-9300		Jul-93		0	0	E	WHSE FIRST AID KITS			
FIRST AID	Water-Jel Burn Jel	N/A	Water Jel Technologies 201-507-8300	Affirmed 888-609-2303 Permian Sales 800-633-7793	May-92		0	0	A	WAREHOUSE	ASSRT. SIZES		
FREON 12	Dichlorodifluoromethane	N/A	Genium Publishing Corp.		Feb-86		0	0	B	IN REFRIG. A/C UNITS ONLY			
FREON 22	Chlorodifluoromethane	N/A	Genium Publishing Corp.		Feb-86		0	0	B	IN REFRIG. A/C UNITS ONLY			
GASKETS	Break-Away Brush Top Gasket Remover	N/A	Mantek 214-438-1381		Dec-90		1	0	B	NO STOCK			
GASKETS	Buna O-Ring Gasket Material	N/A	International Seal Co., Inc. 714-834-0602	Gasco 505-393-6171	Mar-90		1	0	A	WAREHOUSE	VARIOUS		
GASKETS	Copper	7440-50-8	Hussey Copper LTD 412-857-4200	Gasco 505-393-6171	Mar-85		0	0	A	WAREHOUSE	VARIOUS		
GASKETS	Copper-Coat Gasket Compound	N/A	K & W Products 213-693-8228	Gasco 505-393-6171	May-72		1	0	G	WAREHOUSE	6 cans		
GASKETS	CS-301		Armstrong World Ind., Inc.	Gasco 505-393-6171	Sep-85		1	0	A	WAREHOUSE	1 roll		
GASKETS	DK-153 Accoseal	N/A	Armstrong World Ind., Inc.	Gasco 505-393-6171	Oct-85		1	0	A	WAREHOUSE	1 roll		
GASKETS	Dura-Carb I Spiroflex Gaskets	N/A	Standco Industries, Inc. 713-224-6311	Gasco 505-393-6171	Nov-80		0	0	A	WAREHOUSE			
GASKETS	Form-A-Gasket #2	N/A	Permatex Industrial		May-95		2	0	B	WAREHOUSE	4 tubes		
GASKETS	Gore-Tex Joint Sealant	N/A	W. L. Gore & Associates, Inc. 301-392-3200	Engine & Industrial 505-393-9176	Jun-89		0	0	A	WAREHOUSE	350'		
GASKETS	Gore-Tex Valve Stem Packing	N/A	W. L. Gore & Associates, Inc. 301-392-3200	Engine & Industrial 505-393-9176	Mar-90		0	0	A	WAREHOUSE	100'		
GASKETS	Gore-Tex Gasket Tape	N/A	W. L. Gore & Associates, Inc. 301-392-3200	Engine & Industrial 505-393-9176	Jun-89		0	0	A	WAREHOUSE			
GASKETS	Gore-Tex Insertable Gasket	N/A	W. L. Gore & Associates, Inc. 301-392-3200	Engine & Industrial 505-393-9176	May-90		0	0	A	NO STOCK			
GASKETS	Gore-Tex Sheet Gasketing	N/A	W. L. Gore & Associates, Inc. 301-392-3200	Engine & Industrial 505-393-9176	Jan-91		0		A	NO STOCK			

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						Health	Flammable		PPE			Start	Stop
MATERIAL SAFETY DATA SHEETS CAN BE FOUND IN MSDS BOOK ALPHABETICALLY UNDER THE PRODUDCT COMMON NAME!													
GASKETS	Green NON/ASB Gasket Material Donex Style Optite 560	N/A	Donit Industries 216-856-4635	Gasco 505-393-6171	Apr-89	0	1	0	A	WAREHOUSE	1 roll		
GASKETS	K1000 Gasket Material - Compressed Rubber Bonded Aramid Sheet Packing	N/A	Donex, Inc. 1-800-637-7733	Gasco 505-393-6171	May-72	0	1	0	A	WAREHOUSE	2' X 4"		
GASKETS	NABS Gasket Material Vellutherm 650	N/A	Vellumoid, Inc.	Gasco 505-393-6171	Jun-88	1	1	0	A	WAREHOUSE	1 roll		
GASKETS	Pink 825 Non/Asb Gasket Material 825" Compressed Graphite Sheet	N/A	Phelps Industrial Products 1-410-796-2222	Gasco 505-393-6171	Jan-94	1	1	0	A	WAREHOUSE	1 ROLL 4' X 6'		
GASKETS	Purple 925 Non/Asb Gasket Material 925" Compressed Graphite Sheet	N/A	Phelps Industrial Products 1-410-796-2222	Gasco 505-393-6171	Jan-94	0	1	0	A	NO STOCK			
GASKETS	Rectorseal #5 Pipe Thread Sealing Compound	N/A	The Rectorseal Corp. 1-800-424-9300	ESSCO 1-800-441-0636	Jan-91	2	1	0	B	WAREHOUSE	6 CANS		
GASKETS	Silicone - 732® Multi Purpose Sealant	N/A	Dow Corning Corp. 517-496-5900	ESSCO 1-800-441-0636		1	1	0	B	WAREHOUSE	12 TUBES		
GASKETS	Silicone - 736 Heat Resistant Sealant	N/A	Dow Corning Corp. 517-496-5900	ESSCO 1-800-441-0636		1	1	0	B	WAREHOUSE	12 TUBES		
GASKETS	Silite RTV Silicone	N/A	ITW Devcon 1-800-424-9300	ESSCO 1-800-441-0636	Jun-92	1	1	1	B	WAREHOUSE			
GASKETS	Slic-Tite Tape with Teflon	N/A	LA-CO Industries, Inc. 312-826-1700	ESSCO 1-800-441-0636	Apr-89	0	0	0	A	WAREHOUSE	12 ROLLS		
GASKETS	Viton O'Rings Vulcanized Fluoroelastomer	N/A	International Seal Co., Inc. 714-834-0602	Gasco 505-393-6171	May-78	0	1	0	A	WAREHOUSE	MADE UP VARIOUS		
GASKETS	Zep-Off Gasket Remover	N/A	Zep Manufacturing Co. 1-800-424-9300	Zep Manufacturing Co. 1-800-424-9300	May-97	2	0	0	X	NO STOCK			
GLYCOL	Ashland Permanent Antifreeze	N/A	Ashland Chemical Co. 606-324-1133	Ashland Chemical Co. 1-800-583-6265	May-89	0	0	0	C				
GLYCOL	Compressor Engine Coolant 50-50	107-21-1	Ashland Distribution Co. & Ashland Specialty Chemical Co. 1-800-274-5263	Ashland Chemical Co. 1-800-583-6265	May-04	1	0						
GLYCOL	Ethylene Glycol	107-21-1	Mallinckrodt Baker, Inc. 1-800-424-9300	Ashland Chemical Co. 1-800-583-6265	Dec-96	1	1	1	B				

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						Health	Flammable		PPE			Start	Stop
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GLYCOL (JEFFCOOL)	Ethylene Glycol	107-21-1	HUNTSMAN PETROCHEMICAL CORP BOX 4980 THE WOODLANDS, TX 77387 409-727-0831	CHEMTREC 800-424-9300 409-722-9673	Apr-05	2	0	0	A	"S" PLANT			
GLYCOL	Monoethanolamine 85%	141-43-5	Ashland Distribution Co. & Ashland Specialty Chemical Co. 1-800-274-5263	Vopak 800-777-3342 Ashland 800-583-6265	Oct-98					N. OF T.P. PUMP ROOM			
GLYCOL	Treithylene Glycol TEG	112-27-6	Ashland Chemical Co. 1-800-274-5263	Ashland Chemical Co. 1-800-583-6265	Mar-02	2	1	0	B	N. OF T.P. PUMP ROOM	2976 gals		
GREASE	Defender	N/A	Chemco Chemical Co.		Jan-93	0	1	0	B	NO STOCK			
GREASE	Lubriplate "100" Series Lubricating Grease	N/A	Fiske Brothers Refining Co. 419-691-2491		Nov-85	0	1	0	B	WAREHOUSE	12 TUBES		
GREASE	Lubriplate "930" Series Lubricating Grease	N/A	Fiske Brothers Refining Co. 419-691-2491		Nov-85	1	1	0	B	NO STOCK			
GREASE	Mobilth SHC100	N/A	Exxonmobil Oil Corp. 3225 Gallows Rd Fairfax, VA 22037 609-737-4411			0	1	0	0	WAREHOUSE	12 TUBES		
GREASE	Premalube	N/A	Certified Labs 1-214-438-1381	Certified Labs 1-214-438-1381	Sep-97	1	1	0	A	WAREHOUSE	12 STICKS		
GREASE	Timesaver Lapping Compounds	N/A	Timesaver Products Company		Apr-86	2	0	1	E	WAREHOUSE	4 CANS		
GREASE	Ultra Shield Silicone Grease & Sealing Compound	N/A	Hydrotex, Inc. 1-800-424-9300		Feb-95	0	1	0	B	WAREHOUSE	2 TUBES		
GREASE	Val-Tex Valve Flush	N/A	Val-Tex 10600 FALLSTONE RD HOUSTON, TX 770997 13-530-4848	Val-Tex 713-530-4848	Jan-02	0	0	0	A	WAREHOUSE	12 STICKS 5 GAL. BUCKET		
GROUT	CWC 604 Machine Bond Epoxy Resin Grout - Component A	N/A	The Carter-Waters Corp. 1-800-424-9300		Jun-92	1	0	1	G				
GROUT	CWC 604 Machine Bond Epoxy Resin Grout - Component B	N/A	The Carter-Waters Corp. 1-800-424-9300		Jun-92	2	1	1	H				

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						Health	Flammable		PPE			Start	Stop
MATERIAL SAFETY DATA SHEETS CAN BE FOUND IN MSDS BOOK ALPHABETICALLY UNDER THE PRODUDCT COMMON NAME!													
GROUT	CWC 604 Machine Bond Epoxy Resin Grout - Component C	N/A	The Carter-Waters Corp. 1-800-424-9300		Jun-92	1	0	0	G				
HELIUM	Helium	007-440-597	Big Three Industries, Inc. 713-868-0202	Burke Welding 915-943-4142	Apr-84	0	0	0	A				
HYDROGEN SULFIDE	H2S	7783-06-4			Feb-93	4	1	1	X				
INK	High Intensity Nylon Wick Ink Aqueous Ink	N/A	Graphic Controls 716-853-7500	The Foxboro Company 508-543-8750	Mar-88	1	0	0	B	MAIN OFFICE			
INSECTICIDE	Amdro Fire Ant Insecticide	67485-29-4	American Cyanamid Co.		Aug-83	1	0	0	E	WAREHOUSE	1 JUG		
INSECTICIDE	Begone	N/A	Arrow Magnolia International 404-351-4705		Nov-05	1	2	0	C	WAREHOUSE	12 CANS		
INSECTICIDE	North Insect Repellent	N/A	ARI 1-800-241-5064		Jun-90	1	0	0	A	NO STOCK			
INSECTICIDE	Sniper	N/A	Chemco Chemical Co. 1-800-752-7896	Chemco 1-800-752-7896	Jan-94	1	2	0	A	WAREHOUSE	12 CANS		
INSECTICIDE	Wasp Hornet Spray	N/A	North Health Care 815-877-2531	Chemco 1-800-752-7896	Nov-91	2	1	0	B	WAREHOUSE	12 CANS		
INSULATION	CAL-CIL Insulation	1344-95-2	Pabco Insualation 1-303-858-7554			1	0	0	E	OLD SHOP	3 BOXES		
INSULATION	Foamglas Insulation	N/A	Pittsburgh Corning Corp. 412-327-6100		Nov-91	0	0	0	X	OLD SHOP	1 ROLL		
INSULATION	KAO-WOOL Inswool Blanket	N/A	A.P. Green Industries, Inc.		Apr-90	1	0	0	E	OLD SHOP	1 ROLL		
INSULATION	Mineral Wool Insulation	N/A	Partek Insulations, Inc. 1-800-265-7514		Aug-89	1	0	0	X	OLD SHOP	1 ROLL		
INSULATION	Nokorode Low Temp Moisture & Vapor Barrier Bedding Compound	N/A	Lion Oil Company		Jan-74	1	0	0	B	OLD SHOP	1 CAN		
INSULATION	Trymer ® 9501 Rigid Foam Insulation	N/A	Dow Chemical 517-636-4400		Mar-92	1	0	0	B	NO STOCK			
LAB CHEMICALS	All Ricca Buffer Solutions	N/A	Ricca Chemical Co.	Thermal Scientific	Apr-95	0	0	0	A	Lab			
LAB CHEMICALS	Bioscan Free ATP Pen L6587 Field Test Reagent	N/A	BetzDearborn 1-800-877-1940	BetzDearborn	Jul-97	1	1	0	B	Lab			
LAB CHEMICALS	Bioscan Total ATP Sampling Pens L6586 Field Test Reagent	N/A	BetzDearborn 1-800-877-1940	BetzDearborn	Oct-98	1	0	0	B	Lab			

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						Health	Flammable		PPE			Start	Stop
MATERIAL SAFETY DATA SHEETS CAN BE FOUND IN MSDS BOOK ALPHABETICALLY UNDER THE PRODUDCT COMMON NAME!													
LAB CHEMICALS	Buffer Solution *PH 4.0* L1860 Field Test Reagent	N/A	G.E. BETZ 1 800-877-1940	GE BETZ 4636 SOMERTON RD TREVOS, PA 19053 215-355-3300	0CT-02	[illegible]	0	0	B	Lab	1 GAL		
LAB CHEMICALS	Buffer Solution L1861 Field Test Reagent	N/A	BetzDearborn 1-800-877-1940	BetzDearborn	Jan-00	[illegible]	1	0	B	Lab	1 GAL		
LAB CHEMICALS	Buffer Solution PH 10.0 L1862 Field Test Reagent	N/A	G.E. BETZ 1 800-877-1940	GE BETZ 4636 SOMERTON RD TREVOS, PA 19053 215-355-3300	Jan-00	[illegible]	1	0	B	Lab	1 GAL		
LAB CHEMICALS	CHLORINE CHEMETS 0.1-1.0 & 1-5PPM	67-64-1	GE BETZ 800-877-1940	GE BETZ 4636 SOMERTON RD TREVOS, PA 19053 215-355-3300	FEB-98	[illegible]	1	0	B				
LAB CHEMICALS	Conductivity STD L1918	N/A	Betz Industrial Div. 1-800-877-1940	BetzDearborn	May-98	[illegible]	0	0	B	Lab	1 GAL		
LAB CHEMICALS	Conductivity STD L1919	N/A	GE BETZ 800-877-1940	GE BETZ 4636 SOMERTON RD TREVOS, PA 19053 215-355-3300	Apr-02	[illegible]	0	0	B	Lab	1 GAL		
LAB CHEMICALS	Hardness Indicator *L290 Field Test Reagent*	N/A	BetzDearborn 1-800-877-1940	BetzDearborn	Apr-02	[illegible]	1	0	B	Lab	1 QUART		
LAB CHEMICALS	Lead Acetate	6080-56-4	Del Mar Scientific, Inc.		Feb-98	[illegible]	0	0	B	Lab	1 GAL		
LAB CHEMICALS	Methyl Purple Indicator L297 Field Test Reagent	N/A	BetzDearborn 1-800-877-1940	BetzDearborn	Aug-95	[illegible]	3	0		Lab	1 QUART		
LAB CHEMICALS	Microhardness Titrant L834 Field Test Reagent	N/A	BetzDearborn 1-800-877-1940	BetzDearborn	Jul-02	[illegible]	1	0	B	Lab	1000 ML		
LAB CHEMICALS	Muriatic Acid	N/A	Univar USA Inc 1 800-424-9300 425-889-3400	CHEMTREC 800-424-9300 409-722-9673	Jan-98	[illegible]	0	2		Lab			
LAB CHEMICALS	Potassium Iodide-Iodate L237 Field Test Reagent	N/A	BetzDearborn 1-800-877-1940	BetzDearborn	Jul-96	[illegible]	0	0	B	Lab	1000 ML		
LAB CHEMICALS	STARCH INDICATOR ACCULUTE	N/A	CHEMTREC 800-424-9300 ANACHEMIA 1-518-297-4444	ANACHEMIA CHEMICALS, INC 3 LINCOLN BLVD ROUSES POINT, NY 12979	OCT-98	[illegible]							

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						Health	Flammable		PPE			Start	Stop
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LAB CHEMICALS	Sulfite Indicator Plus L219 Field Test Reagent	N/A	BetzDearborn 1-800-877-1940	BetzDearborn	Apr-97	3	1	0		Lab	1000 ML		
LAB CHEMICALS	Sulfuric Acid Solution N/50 (0.02 N)	N/A	BetzDearborn 1-800-877-1940	BetzDearborn	Aug-95	3	1	0	0	Lab			
LAB CHEMICALS	Superox 712 Methyl Ethyl Ketone Peroxide	N/A	Reichhold Chemicals, Inc. 1-800-424-9300		May-94	3	2	3	D	Lab	1000 ML		
LAB CHEMICALS	Universal Hardness Buffer Solution L1566 Field Test Reagent	N/A	BetzDearborn 1-800-877-1940	GE BETZ 4636 SOMERTON RD TREVOS, PA 19053 215-355-3300	May-98	3	1	0		Lab	1000 ML		
LEAD	Lead (SOLDER)	7439-92-1	Vulcan Lead Products Co. 414-645-2040		Jan-92	2	0	0	B	WAREHOUSE	2 ROLLS		
LEAD	Lead Acetate Trihydrate	6080-56-4	Genium Publishing Corp.		Apr-86	2	0	0	B	NO STOCK			
LEAD	Lead Acetate Paper Tape - CHEMFILM	6080-56-4	Del Mar Scientific, Inc. P.O. Box 486 Addison, TX 75001 972-661-5160	Del Mar Scientific, Inc. P.O. Box 486 Addison, TX 75001 972-661-5160	Feb-98	2	0	0	0	WAREHOUSE			
LEAK DETECTOR	AR-GLO 4/OL		CHEMTREC 800-424-9300	M SHAH, SPECTRONICS CORP 956 BRUSH HOLLOW RD WESTBURY, NY 11590 800-274-8888	MAY-01								
LEAK DETECTOR	Snoop	7732-18-5	Nupro Company 1-800-424-9300	ESSCO 1-800-441-0636	Sep-91	2	0	0	B	WAREHOUSE	1 GALLON		
LUBRICANT	AR-GLO 4/OL		CHEMTREC 800-424-9300	M SHAH SPECTRONICS CORP 956 BRUSH HOLLOW RD WESTBURY, NY 11590 800-274-8888	MAY-01								
LUBRICANT	Dri-Gard Aerosol	N/A	Mantek 214-438-1381		Jul-93	3	1	0	E	WAREHOUSE	6 CANS		
LUBRICANT	Knock'er Loose Penetrating Oil (Aerosol)	N/A	K&W Products 8319 S. Allport Av. Santa Fe Springs, CA 90670 213-693-8228	ESSCO 1-800-441-0636	Nov-85	3	2	0	H	WAREHOUSE	12 CANS		

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MATERIAL SAFETY DATA SHEETS CAN BE FOUND IN MSDS BOOK ALPHABETICALLY UNDER THE PRODUDCT COMMON NAME!													
LUBRICANT	Kopr-Kote Tool Joint & Drill Collar Compound Anti-Seize Jacking Lubricant	N/A	Jet-Lube, Inc. 1-800-424-9300	ESSCO 1-800-441-0636	Aug-96	1	1	1	B	WAREHOUSE	6 CANS		
LUBRICANT	Krylon Belt Dressing	N/A	Krylon Industrial 216-292-7400	ESSCO 1-800-441-0636	Feb-93	1	1	0	B	WAREHOUSE	6 CANS		
LUBRICANT	Multi Purpose Precision Lub. - 226 Aersol	64742-47-8	CRC Industries, Inc Warminster, PA 18974 800-424-9300	CRC Industries, Inc 215-674-4300	Feb-04	2	1	0	B				
LUBRICANT	Sealweld Valve Cleaner Valve Lubricant	N/A	Sealweld Corporation 1-800-255-3924	Permian Valve 915-381-1313	Aug-94	1	1	0	B	WAREHOUSE	12 STICKS		
LUBRICANT	Tap Magic Aluminum Cutting Fuid	N/A	The Steco Corporation 501-375-5644	ESSCO 1-800-441-0636	May-86	2	1	1	B	WAREHOUSE	2 CANS		
LUBRICANT	Tap Magic Protap Cutting Fluid	N/A	The Steco Corporation 501-375-5644	ESSCO 1-800-441-0636	Jul-89	1	1	0	B	WAREHOUSE	2 CANS		
LUBRICANT	Val-Tex 80 & 80's	N/A	Val-Tex 281-530-4848	Val-Tex 713-530-4848	Jun-00	0	0	0	A	WAREHOUSE	24 STICKS		
LUBRICANT	WD-40 Aerosol Organic Mixture	N/A	WD-40 Company 1-800-424-9300	ESSCO 1-800-441-0636	Mar-90	2	1	0	B	WAREHOUSE	1 GALLON		
LUBRICANT	Zepreserve Aerosol Penetrant Spray	N/A	Zep Manufacturing Co. 1-800-424-9300		Aug-90	1	1	1	X	NO STOCK			
MERCURY	Mercury	7439976	Magnetrol International 708-969-4000		Oct-86	0	0	0	H	NO STOCK			
METAL	1/2" SUPPORT MATERIAL - CERAMIC MATERIAL	N/A	UOP LLC 847-391-2123 / 800-424-9300	UOP LLC 25 E. ALGONQUIN RD DES PLAINS, IL 60017-5017 1-847-391-3189	Jan-03	1	0	0		Cryo Plant			
METAL	1/4" SUPPORT MATERIAL - CERAMIC MATERIAL	N/A	UOP LLC 847-391-2123 / 800-424-9300	UOP LLC 25 E. ALGONQUIN RD DES PLAINS, IL 60017-5017 1-847-391-3189	Jan-03	1	0	0		Cryo Plant			
METAL	1/8" SUPPORT MATERIAL - CERAMIC MATERIAL	N/A	UOP LLC 847-391-2123 / 800-424-9300	UOP LLC 25 E. ALGONQUIN RD DES PLAINS, IL 60017-5017 1-847-391-3189	Jan-03	1	0	0		Cryo Plant			
METHANE	Methane	74-82-8	Liquid Air Corp. 1-800-424-9300			1	4	0	A	ENG. SHACK	3 CYLINDERS		

PRODUCT COMMON NAME	CHEMICAL NAME (Trade Name or Synonyms)	CAS No.	MANUFACTURERS NAME & EMERGENCY PHONE #	VENDOR NAME, ADDRESS & PHONE #	MSDS DATED	HAZARD RATING				CHEMICAL LOCATION	MAX INVENTORY	DATE OF CHEMICAL USAGE	
						Health	Flammable		PPE			Start	Stop
MATERIAL SAFETY DATA SHEETS CAN BE FOUND IN MSDS BOOK ALPHABETICALLY UNDER THE PRODUDCT COMMON NAME!													
METHANE - ETHANE	Methane - Ethane	N/A	Parker & Parsley Development Co. 915-563-8432		Jul-94		4	0	A	A PLT B PLT PROCESS			
METHANOL	Methyl Alcohol	67-56-1	Mallinckrodt, Inc. 314-982-5000	Eddins-Walcher LSI	May-86		3	0	C	*Cryo*, SRU, Plant Storage	1050 gals		
METHANOL	Methanol *Techni-Hib* 6313	000067-56-1	BJ Chemical Services 800 424-9300 505-393 7751	Chemtrec 800-424-9300	Jul-05		2	0	2 B				
NATURAL GAS	Field Sales Gas - Unprocessed	8006-14-2	Oryx Energy Co. 214-357-1082		Oct-91		4	0	B	A PLT B PLT			
NATURAL GAS	GPA Natural Gas Reference and Calibration Standard	N/A	Phillips 66 Co. 918-661-8118	Burke Welding 915-943-4142	Oct-93		4	0	A	ENG. SHACK	1 CYLINDER		
NATURAL GAS	GPA-NGL Blend #5	N/A	Phillips 66 Co. 918-661-8118		Sep-93		4	0	A	NO STOCK			
NATURAL GAS	Natural Gas Fuel Gas	N/A	Gruy Petroleum Management		Feb-98		4	0	B	A PLT B PLT PROCESS			
NATURAL GAS	Natural Gas - Dry	N/A	Marathon Oil Co. 1-800-424-9300		Jan-96		4	1	A	CRYO PLT A PLT			
NATURAL GAS	Natural Gas C1-C4 Marathon	8006-14-2	Marathon Oil Co. 1-800-424-9300 1 877-627-5463	Marathon Oil Co.	Feb-04		4	0	A				
NATURAL GAS	*Natural Gas Residue*	8006-14-2	Richardson Products Co. 1-800-424-9300		Feb-00		4	0	B	CRYO PLT A PLT			
NATURAL GAS	Natural Gas - Raw Liquid Mix	64747-48-6	Marathon Oil Co. 877-627-5463	Marathon Oil Co.	Feb-04		4	1	B				
NATURAL GAS	Sour Natural Gas Poison Gas Hydrogen Sulfide Gas Acid Gas	N/A	Gruy Petroleum Management	CHEMTREC 800-424-9300 817-390-8600	May-01		4	0	B	SULPHUR PLT B PLT A PLT			
NATURAL GAS	Sweet Natural Gas *Methane* Residue Gas	8006-14-2	Conoco, Inc. 1-800-424-9300 1 800-342-5119	CONOCO, INC P.O. BOX 2197 HOUSTON, TX 77525	SEP-00		4	0	B	T. P. A PLT CRYO PLT			
NATURAL GAS	Wellhead Natural Gas Sour Natural Gas Sour Gas Sour Raw Gas	8006-14-2	Conoco, Inc. 1-800-424-9300 1 800-342-5119	CONOCO, INC P.O. BOX 2197 HOUSTON, TX 77525	Sep-00		4	0	B	B PLT C PLT SOLAR #9			

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						Health	Flammable		PPE			Start	Stop
MATERIAL SAFETY DATA SHEETS CAN BE FOUND IN MSDS BOOK ALPHABETICALLY UNDER THE PRODUDCT COMMON NAME!													
NATURAL GAS - CONDENSATE	Natural Gas Condensate	68919-39-1	Richardson Products Co. 1-800-424-9300	CHEMTREC 800-424-9300 817-390-8600	May-01	3	4	0	X	PLANT SCRUBBERS			
NATURAL GAS - CONDENSATE	Natural Gasoline Condensate	64741-47-5	Conoco, Inc. 1-800-424-9300 1-800-342-5119	CONOCO, INC P.O. BOX 2197 HOUSTON, TX 77525	Oct-00	2	3	0	X	3-PHASE & PRODUCT STORAGE			
NATURAL GAS - CONDENSATE	Petroleum Distillate	8002-05-9	Richardson Products Co. 1-800-424-9300		Apr-94	3	4	0	X	PROCESS			
NATURAL GAS - ETHANE	Ethane	74-84-0	Conoco, Inc. 1-800-424-9300 1-800-342-5119	CONOCO, INC P.O. BOX 2197 HOUSTON, TX 77525	Aug-00	2	4	0	B	CRYO & PRODUCT P/L			
NATURAL GAS - ETHANE	Ethane 60005	74-84-0	Texaco Natural Gas Plants and Liquid Divison 1-800-782-7852	Texaco Natural Gas Plants	Oct-95	1	0	4		CRYO & PRODUCT P/L			
NATURAL GAS - ETHANE	Ethane Liquified Petroleum Gas (LPG)	74-84-0	Richardson Products Co. 1-800-424-9300	CHEMTREC 800-424-9300 817-390-8600	May-01	1	4	0	B	CRYO & PRODUCT P/L			
NATURAL GAS - ETHANE	Ethane/Propane/Butane PBC Mix/EPBC Mix	N/A	Conoco, Inc. 1-800-424-9300		Aug-00	2	4	0	B	CRYO & PRODUCT P/L			
NATURAL GAS - ETHANE	Ethane	74-84-0	Marathon Oil Company 877-627-5463	Marathon Oil Co.	Feb-04	1	4	0	A				
NATURAL GASOLINE	Natural Gasoline	68425-31-0	Richardson Products Co. 1-800-424-9300	CHEMTREC 800-424-9300 817-390-8600	May-01	2	3	0	B	SCRUBBERS			
NATURAL GASOLINE	Natural Gasoline C4-C8	8006-61-9	Marathon Oil Company 539 So. Main St. Findley, OH 45840 877-627-5463	Marathon Oil Co.	Jan-00	2	1	1	B				
NATURAL GASOLINE	Super Regular - Unleaded Gasoline	N/A	Shell 1-800-424-9300	KW Fuel	May-83	2	4	0	B	WAREHOUSE	570 gals		
NITROGEN	1,10-Phenanthroline in Ethanol Heterocyclic Nitrogen	N/A	E-C Apparatus Corp.	Burke Welding 915-943-4142	Sep-88	2	3	0	B	SULPHUR PLANT			
NITROGEN	Nitrogen	007 727 379	Big Three Industries, Inc. 713-868-0202		Apr-84	3	0	0	A	SULPHUR PLANT			
OFFICE SUPPLIES	Black Dry Ink Black Toner	N/A	Xerox Corp. 716-422-2177	Xerox 800-822-2200 I Got It 505-393-3676	Apr-93	0	0	0	A	WHSE / M.O.	2		

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						Health	Flammable		PPE			Start	Stop
MATERIAL SAFETY DATA SHEETS CAN BE FOUND IN MSDS BOOK ALPHABETICALLY UNDER THE PRODUDCT COMMON NAME!													
OFFICE SUPPLIES	Copy Cartridge	N/A	Xerox Corp. 716-422-2177	Xerox 1-800-822-2200	Jun-93		0	0	A	WHSE / M.O.	1		
OFFICE SUPPLIES	Magic Markers	N/A	Precision Dynamics Corp.	I Got It 505-393-6171	Jan-93		2	0	X	WHSE / M.O.	48		
OIL	Aviation Hydraulic Fluid A	N/A	Chevron 415-233-3737	Eddins-Walcher 505-393-2197	Dec-80		1	0	E	WAREHOUSE	110 gals		
OIL	Citgo Gas Engine Oils, SUS 450-2000 GE-S1A	N/A	Citgo Petroleum Corp. 1-800-424-9300		May-97		1	0	A	WAREHOUSE	DRUM CONTAIN.		
OIL	Clarified Slurry Oil	N/A	Exxonmobil Oil Corp. 3225 Gallows Rd Fairfax, VA 22037 609-737-4411		Aug-99			0	C				
OIL	Crude Oil	8002-05-9	Parker & Parsley Development Co. 915-563-8432		Jun-94		2	0	B				
OIL	Diesel Fuel Oil #2-D	068-476-346	General Electric Co.		Oct-81		2	0	B	WAREHOUSE	300 GALLONS		
OIL	Imperial Grade 30	N/A	Imperial Oil Co., Inc. 201-591-9400		Apr-89		0	0	B	WAREHOUSE			
OIL	Light Cycle Oil	64741-59-9	Phillips 66 Co. 918-661-8118		Aug-96		2	0		WAREHOUSE	12 CANS		
OIL	Marvel Mystery Oil	N/A	Marvel Oil Company, Inc. 914-937-4000	B-Line Filter 1-800-594-5606	May-69		0	0	B	B-Line Filter	55 gals		
OIL	Mobil Almo 527	N/A	Mobil Oil Corp. Health = 1-609-737-4411 Transport = 1-800-424-9300	Eddins-Walcher 505-393-2197	Dec-89		1	0	A	WAREHOUSE CONTAIN.	110 gals		
OIL	Mobil DTE Oil Heavy	N/A	Mobil Oil Corp. 1-800-424-9300	Eddins-Walcher 505-393-2197	Dec-92		1	0	A	WAREHOUSE CONTAIN.	110 gals		
OIL	Mobil DTE Oil Heavy Medium	N/A	Mobil Oil Corp. Health = 1-212-883-4411 Transport = 1-800-424-9300	Eddins-Walcher 505-393-2197	Jan-89		1	0	A	DISPOSAL WELL	55 gals		
OIL	Mobil Pegasus 390	N/A	Mobil Oil Corp. Health = 1-212-883-4411 Transport = 1-800-424-9300	NOT IN USE	Aug-83		1	0	B	NOT IN USE			
OIL	Mobil Pegasus 490	N/A	Mobil Oil Corp. Health = 1-212-883-4411 Transport = 1-800-424-9300	Eddins-Walcher 915-586-5803	Oct-82		1	0	B	A Plt 8820 gals B Plt (2) 8820 gals B Plant 8820 gals	35280 gals		

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						Health	Flammable		PPE			Start	Stop
MATERIAL SAFETY DATA SHEETS CAN BE FOUND IN MSDS BOOK ALPHABETICALLY UNDER THE PRODUDCT COMMON NAME!													
OIL	Mobil Pegasus 805	N/A	Exxonmobil Oil Corp. 1 800-424-9300 1-609-737-4411	Eddins-Walcher 915-586-5803	Oct-04		1	0	A	"S" PLANT			
OIL	Mobil Rarus 427	N/A	Mobil Oil Corp. 1-800-424-9300	Eddins-Walcher 505-393-2197	Dec-92		1	0	A	Air Comp.	55 gals		
OIL	Mobil Rarus 827	N/A	Mobil Oil Corp. 1-800-424-9300	Eddins-Walcher 505-393-2197	Oct-96		1	0	A	Air Comp.	55 gals		
OIL	Mobilgear 629	N/A	Mobil Oil Corp. 1-800-424-9300	Eddins-Walcher 505-393-2197	Nov-93		1	0	A	DISPOSAL WELL	220 gals		
OIL	Mysella LA 40	N/A	Equilon Enterprises, LLC 1-877-276-7283	Eddins-Walcher 505-393-2197	Jan-99		1	0	A				
OIL	Mysella Oil 40	N/A	SOPUS Products 877-504-9351 877-242-7400	Shell	Jul-03		1	0	A				
OIL	Palasyn 45 Oil	N/A	Sullivan / Palatek 800 424-9300	Chemtrec	Sep-99		1	0	0				
OIL	Pennzoil HD Motor Oil SAE 10W-40	N/A	Pennzoil Company 1-713-236-6070	Eddins-Walcher 505-393-2197			1	0	B	WAREHOUSE	12 CANS		
OIL	Red Oil - 827	N/A	Meriam Instrument 10920 Madison Av Cleveland, OH 44102 800-424-9300		Mar-02		2	1	A				
OIL	Ridgid Dark Thread Cutting Oil	N/A	Ridge Tool Company 216-323-5581	ESSCO 1-800-441-0636	Dec-91		1	0	B	WAREHOUSE	6 CANS		
OIL	Shell Tellus Oil 100	N/A	Shell Oil Company 1-800-424-9300	KW Fuel 505-393-5135	Nov-91		1	0	B	"B" PLANT WHSE BBL RACK	55 gals		
OIL	Shell Tellus Oil 32	N/A	Shell Oil Company 1-800-424-9300	KW Fuel 505-393-5135	Dec-94		1	0	B	NO STOCK			
OIL	Shell Tellus Oil 68 Lubricating Oil	N/A	Shell Oil Company 713-473-9461	KW Fuel 505-393-5135	Apr-79		1	0	B	WAREHOUSE "B" PLANT	55 gals		
OIL	Shell Turbo Oil 150	N/A	Shell Oil Company 1-800-424-9300	KW Fuel 505-393-5135	Oct-91		1	0	A	NO STOCK			
OIL	Shell Turbo Oil 220	N/A	Shell Oil Company 1-800-424-9300	KW Fuel 505-393-5135	Mar-87		1	0	B	NO STOCK			
OIL	Shell Turbo Oil 32	N/A	Shell Oil Company 1-800-424-9300	KW Fuel 505-393-5135	Dec-87		1	0	B	B PLANT	8820 gals		

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						Health	Flammable		PPE			Start	Stop
MATERIAL SAFETY DATA SHEETS CAN BE FOUND IN MSDS BOOK ALPHABETICALLY UNDER THE PRODUDCT COMMON NAME!													
OIL	Shell Turbo Oil 46 Lubricating Oil	N/A	Shell Oil Company 713-473-9461	KW Fuel 505-393-5135	Apr-79		1	0	B	CENTAURS	275 gals		
OIL	Thermalane 600	N/A	Coastal Chemical Co., Inc. 337-893-3862	Coastal Chemicals 800-424-9300 / 713-477-6675	Sep 03		1	0	B	SRU	55 gals		
OIL	Tractor Hydraulic Oil	N/A			May-86		1	0	B	WAREHOUSE	5 GALLONS		
OIL	Tribol Molub-Alloy 90/220 Gear Oil	N/A	Tribol Inc. 1-800-424-9300		Sep-90		1	0	B	DOCK "B" PLANT	3 DRUMS		
OIL	Turbo T Oil 32	N/A	Equilon Enterprises, LLC 1-877-276-7283		Jan-01		1	0	?				
OIL	Van Straaten 4163	64742-53-6	Van Straaten Chemical Co.		May-86		0	0	B				
OXYGEN	Oxygen	007 782 447	Big Three Industries, Inc. 713-868-0202	Burke Welding 915-943-4142	Jul-83		1	2	B				
OXYGEN	Liquid/Catalyzed 02 Scavenger	7757-83-7	ChemTreat, Inc. 4461 Cox Rd. Glen Allen, VA 23060 800-424-9300	ChemTreat, Inc. 4461 Cox Rd. Glen Allen, VA 23060 800-648--4579	Feb-03		0	0					
OXYGEN	OXYGEN SCAVENGER BL-1253	7757-83-7	ChemTreat, Inc. 4461 Cox Rd. Glen Allen, VA 23060 800-424-9300	ChemTreat, Inc. 4461 Cox Rd. Glen Allen, VA 23060 800-648--4579	Nov-05		0	0	X				
PAINT	Amercoat 5105 Oxide Red	N/A	Ameron International 800-424-9300	Chemtrec	Mar-02								
PAINT	Amercoat 5450 Custom Color	N/A	Ameron International 800-424-9300	Chemtrec	Sep-04								
PAINT	Amrecoat 5105 Pearl Gray	N/A	Ameron International 800-424-9300	Chemtrec	Feb-04								
PAINT	Amercoat 5450 White Enamel	N/A	Ameron International 800-424-9300	Chemtrec	Jul-04								
PAINT	#600 Pipe Primer	N/A	Polyguard Products, Inc. 1-800-424-9300	Geo. S. Thompson 915-337-7324	Feb-92		3	0	G	PAINT SHED	16 GALLONS		
PAINT	#600 Pipe Tape	N/A	Polyguard Products, Inc. 1-800-424-9300	Geo. S. Thompson 915-337-7324	Jan-93		1	0	B	PAINT SHED	12 ROLLS		
PAINT	#800 Pipe Primer	N/A	Polyguard Products, Inc. 1-800-424-9300	Geo. S. Thompson 915-337-7324	Nov-91		3	0	G	PAINT SHED	16 GALLONS		
PAINT	#800 Pipe Tape	N/A	Polyguard Products, Inc. 1-800-424-9300	Geo. S. Thompson 915-337-7324	Feb-92		1	0	B	PAINT SHED	12 ROLLS		

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						Health	Flammable		PPE			Start	Stop
MATERIAL SAFETY DATA SHEETS CAN BE FOUND IN MSDS BOOK ALPHABETICALLY UNDER THE PRODUDCT COMMON NAME!													
PAINT	Carbothane 139 Rustarmor 139	N/A	Carboline Company 1-800-424-9300	Geo. S. Thompson 915-337-7324	Mar-00	2	3	0	G	PAINT SHED	8 GALLONS		
PAINT	Krylon Spray Paint All Colors	N/A	Krylon Industrial 216-292-7400	ESSCO 1-800-441-0636	Dec-04	2	4	0	B	WAREHOUSE	60 CANS		
PAINT	Krylon Tough Coat Paint-Safety Orange	N/A	Krylon Industrial 216-292-7400	ESSCO 1-800-441-0636	Dec-04	2	4	0	B	WAREHOUSE			
PAINT	Paint Product	N/A	Valspar Corporation 1-800-424-9300		Jul-81	2	3	1	G	PAINT SHED			
PAINT	Paint Thinner	N/A	Mobil Chemical 1-800-424-9300	Geo. S. Thompson 915-337-7324	Feb-84	2	3	1	G	PAINT SHED	16 GALLONS		
PAINT	Paint Thinner 15	N/A	Ameron International 800-424-9300	Chemtrec	Mar-02	2	3	1					
PAINT	Spray Paint Spray Coating	N/A	Rust-Oleum Corp. 316-864-8200	Geo. S. Thompson 915-337-7324		2	3	0	G	PAINT SHED			
PAINT	Strypeeze Paint Remover	N/A	The Savogran Company of California		Sep-80	2	2	1	C	PAINT SHED			
PAINT	Sur-Prep Rust Converter	N/A	Coronado Paint Co., Inc. 904-428-6461		Apr-92	1	0	0	A	PAINT SHED			
PAINT	Toluene	0108-88-3			Apr-86	2	3	0	G	NOT IN USE			
PAINT	Val-Chem Epoxy Enamel Floor Paint	N/A	Valspar Product Data 1-800-228-5635	Geo. S. Thompson 915-337-7324	Nov-91	2	1	1	G	PAINT SHED	24 GALLONS		
PRODUCED WATER	Produced Water	MIXTURE		CHEMTREC 800-424-9300 817-390-8600	May-02	0	1	0	A				
PRODUCED WATER	Produced Water Sour Water	N/A	Parker & Parsley Development Co. 915-563-8432		Aug-94	1	0	0	B				
PROPANE	Propane - Refrigerant Grade	74-98-6	Devon Gas Services L.P. The Woodlands, TX 800-214-2154		Mar-02	1	4	0	B				
PROPANE	Propane	74-98-6	Conoco, Inc. 1-800-424-9300	Eddins-Walcher 505-393-2197	Jun-00	1	4	0	B	PROPANE STORAGE N OF PLANT	28803 gals		
PROPANE	Propane Without Odorant Liquified Petroleum Gas	74-98-6	Richardson Products Co. 1-800-424-9300		Apr-94	1	4	0	B	"B" PRODUCT SURGE TANK			

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						Health	Flammable		PPE			Start	Stop
MATERIAL SAFETY DATA SHEETS CAN BE FOUND IN MSDS BOOK ALPHABETICALLY UNDER THE PRODUDCT COMMON NAME!													
SEALANT	Aluminum Caulking Foster 95-44 Foster 95-44C Elastolar Sealant	N/A	H.B. Fuller Company 1-800-228-5635		Jun-91		3	0	B	SUPPLIED BY VENDOR WHEN IN USE			
SOAP	Angry Orange		American Cleaning Systems, Inc. P.O. Box 7252 Odessa, TX 79760 800-824-8891	America Cleaning Systems, Inc 432-381-3740	Jul-99		0	0	D				
SOAP	Soap	68603-25-8	ChemTreat, Inc. 4461 Cox Rd. Glen Allen, VA 23060 800-424-9300	ChemTreat, Inc. 4461 Cox Rd. Glen Allen, VA 23060 800-648--4579	Dec-05		0	0	X				
SOAP	*Cougar Super Blast*	7758-29-4	Cougar Cleaning Equipment 1-800-535-5053	Cougar Cleaning Equipment Box 13985 Odessa, TX 79768-3985 915-381-5450	Feb-98		0	0	0	WAREHOUSE	"A"-440 gal "B"- 440 gal		
SOAP	Powder Hand Soap Thervo	N/A	Blaine Chemical & Ind. Supply Company, Inc. 505-392-7146	Blaine Industrial Suppy 1-800-999-9171	Jun-90		0	0	A	WAREHOUSE	12 CANS		
SOAP	Spectrus BD 1501 Water-Based Deposit Control Agent	N/A	BetzDearborn 1-800-877-1940	Betz Dearborn	Jun-97		1	0	B				
SOAP	Sum-Clean	N/A	Summit Oil Company		Feb-96		0	0	B	NO STOCK			
SOAP	Super Blast	N/A	Cougar Cleaning Equipment 1-800-535-5053	Cougar Cleaning Equipment	Feb-98		0	0	C	Warehouse 110 gals A Pit (2) 220 gals B Pit (2) 220 gals	990 gals		
SOAP	Sur-Clean	N/A	Summit Industrial Products, Inc.		Aug-95		0	0	B	NO STOCK			
SODA ASH	Sodium Carbonate	N/A	Van Waters & Rogers 1-800-424-9300	Vopak	Jul-93		0	1	E				
SOLVENT	Chem Solve	N/A	Chemco Chemical Co. 1-800-752-7896	Chemco	Apr-94		1	1	B	NO STOCK			
SOLVENT	Cold Kill	N/A	Chemco Chemical Co. 1-800-535-5035	Chemco	Mar-93		0	0	B	NO STOCK			
SOLVENT	Essol D60 Solvent SC 140 Solvent Var-Sol	64742-47-8	Exxon Chemical Co. 1-800-424-9300		May-96		2	0	C				

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						Health	Flammable		PPE			Start	Stop
MATERIAL SAFETY DATA SHEETS CAN BE FOUND IN MSDS BOOK ALPHABETICALLY UNDER THE PRODUDCT COMMON NAME!													
SOLVENT	Pro Power Fin Fan Cleaner	N/A	Mantek 214-438-1381		Dec-94		2	0	X		35 gals		
SOLVENT	Varsol	8052-41-3	Exxon Chemical Co. 1-800-424-9300	Eddins-Walcher 505-393-2197	May-92		2	0	B	Treating Plt 1000 gals B Plt 500 gals	1500 gals		
STEEL	Stainless Steel	N/A	Morris Steel & Aluminum Co.		Nov-85		0	0	A				
STEEL	Steel	N/A	Bob Martin Company		Dec-85		0	0	A				
SULFUR	Molten Sulfur	N/A	*Sid Richardson Gasoline Co.* 1-800-424-9300		Feb-00		1	0	B				
SULFUR	Sulfur	7704-34-9			Feb-93		1	0	B				
SULFUR	Sulfur Dioxide	7446-09-5			Feb-93		1	0	B				
TAPE	Duct Tape	N/A		ESSCO 1-800-441-0636	Jan-95		0	0	A	WHSE / M.O.	6 ROLLS		
TAPE	*Packing Tape*	N/A		I Got It 505-393-6171			0	0	A	WHSE / M.O.	6 ROLLS		
WATER													
WEED KILLER	Clean Crop MSMA 6 Plus	N/A	Piatte Chemical Co.		Feb-90		3	0	X	WAREHOUSE	1 GALLON		
WELDING RODS	Airco Code Arc 7018 MR	N/A	The Lincoln Electric Company		Mar-90		0	0	X	WAREHOUSE	1 BOX		
WELDING RODS	Airco Easy Arc 6011C	N/A	The Lincoln Electric Company		May-91		0	0	X	WAREHOUSE	1 BOX		
WELDING RODS	Fleetweld 5P	N/A	The Lincoln Electric Company		May-90		0	0	X	WAREHOUSE	1 BOX		
WELDING RODS	Jetweld LH-70	N/A	The Lincoln Electric Company	Burke Welding 915-943-4142	Jun-90		0	0	X	WAREHOUSE	1 BOX		
ENTRIES IN RED ARE REVISIONS OR NEW ENTRIES													
ENTRIES HIGHLIGHTED IN BLUE HAVE BEEN REMOVED FROM THE MSDS BOOKS AND INDEX AND TO THE ARCHIVES													

APPENDIX B
NMOCD Data on Injection Well

Appropriate District Office

Energy, Minerals and Natural Resources Department

Revised 1-1-89

DISTRICT I
P.O. Box 1980, Hobbs, NM 88240

DISTRICT II
P.O. Drawer DD, Artesia, NM 88210

DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410

OIL CONSERVATION DIVISION
310 Old Santa Fe Trail, Room 206
Santa Fe, New Mexico 87503

WELL API NO. 30-025-27081

5. Indicate Type of Lease STATE [X] FEE [ ]

6. State Oil & Gas Lease No.

SUNDRY NOTICES AND REPORTS ON WELLS
(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)

7. Lease Name or Unit Agreement Name: WOOLWORTH ESTATE SWD

1. Type of Well: OIL WELL [ ] GAS WELL [ ] OTHER DISPOSAL WELL

2. Name of Operator: SID RICHARDSON

8. Well No. 1

3. Address of Operator

9. Pool name or Wildcat

4. Well Location
Unit Letter E : 1570 Feet From The NORTH Line and 800 Feet From The WEST Line

Section 33 Township 24-S Range 37-E NMPM LEA County

10. Elevation (Show whether DF, RKB, RT, GR, etc.)

11. Check Appropriate Box to Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:				SUBSEQUENT REPORT OF:			
PERFORM REMEDIAL WORK	[ ]	PLUG AND ABANDON	[ ]	REMEDIAL WORK	[ ]	ALTERING CASING	[ ]
TEMPORARILY ABANDON	[ ]	CHANGE PLANS	[ ]	COMMENCE DRILLING OPNS.	[ ]	PLUG AND ABANDONMENT	[ ]
PULL OR ALTER CASING	[ ]			CASING TEST AND CEMENT JOB	[ ]		
OTHER:	[ ]			OTHER: REPAIR, TEST, AND OPERATION			[XX]

12. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work) SEE RULE 1103.

REPAIRED WELL BY PULLING AND REPLACING BAD TUBING AND PACKER.
TESTED WELL AND PUT BACK IN SERVICE. SEE ATTACHED FOR DETAIL.

4306

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE Dan Maness TITLE PLANT MANAGER DATE 2/9/2001

TYPE OR PRINT NAME DAVID MANESS TELEPHONE NO. (505) 395-2068

(This space for State Use)

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY: Need chart for pressure test after workover

SUBSURFACE EQUIPMENT INSTALLATION REPORT

OPERATOR: BASS ENTERPRISES PRODUCTION COMPANY FIELD: LANGLIE MADDOX COUNTY: LEA, NEW MEXICO

LEASE: WOOLWORTH ESTATE WELL: 1-E SWD TOTAL DEPTH: PBTD-4657' (SOFT) DATE OF INSTALLATION: 02-06-01

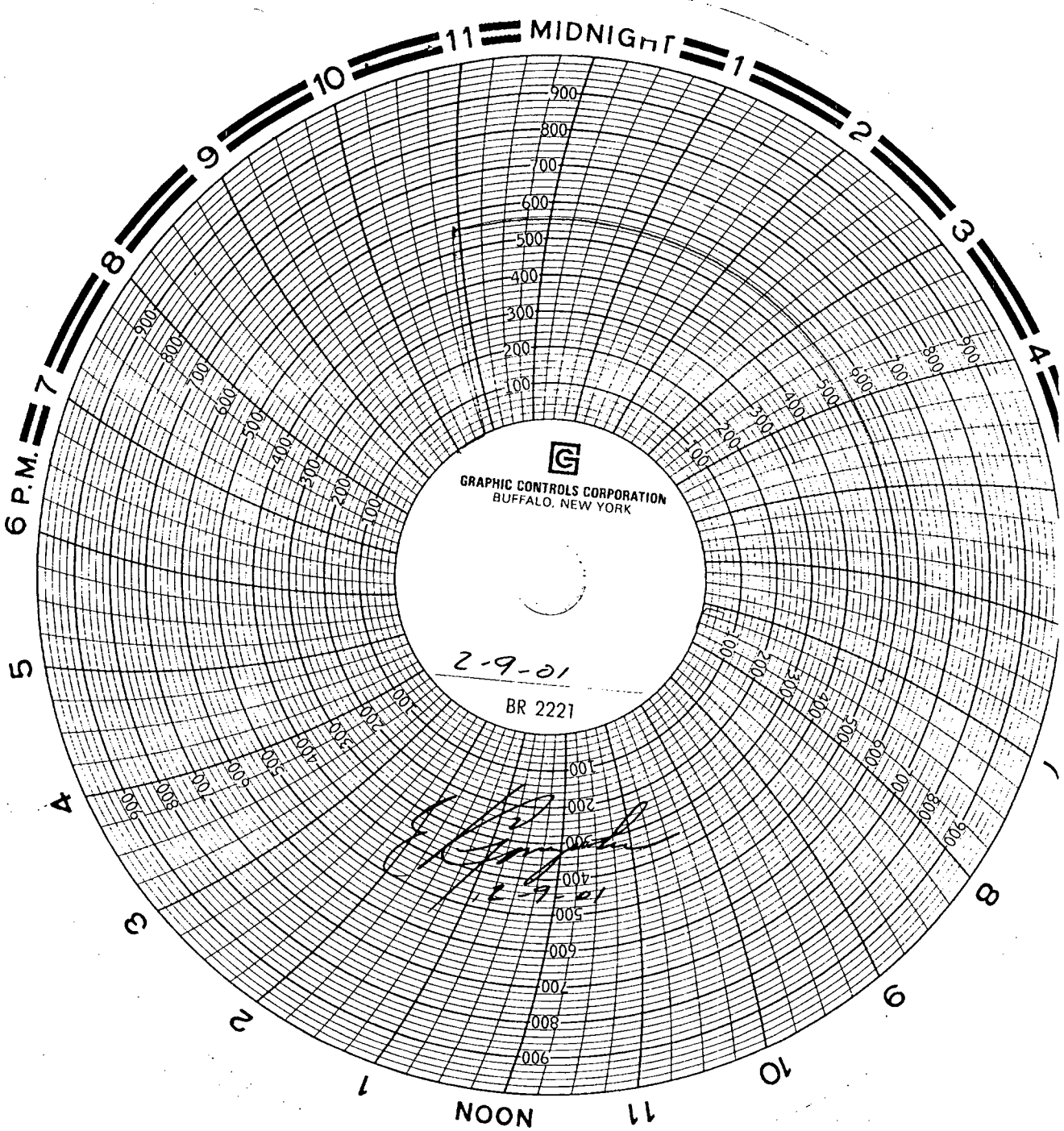
REASON FOR INSTALLATION: HOLE IN TBG

DEPTHS ARE SHOWN FROM: RKB - UNKNOWN PERFS: 4440'- 4562' (SAN ANDRES) 8 5/8" 8RD LARKIN

NO. OF JOINTS	DESCRIPTION	THDS OFF LENGTH	FROM	TO
	SERVICED BY KEY ENERGY (JAVIER). ND INJ EQUIP, RLSE PKR SET @ 4337'. INSTALL FLANGE			
	& BOP. POH W/138 JTS OF 2 7/8" 6.5#/FT J-55 8RD EUE SEAL-TITE TBG. FOUND 1" SPLIT			
	IN JT #10 FS. LD JT #135 & #117 FS DUE TO EXTERNAL CORROSION PITS. CHANGED OUT 70			
	SEAL-TITE COLLAR SEALS WHILE RBIH W/TBG & EXCHANGED PKR. REPLACED 3 BAD JTS W/2 NEW			
	JTS FROM JAL 3 STOCK. THIS WAS APPROVED BY WINK W/NMOCC. REMOVE BOP. RU KILL TRUCK			
	& PUMP 50 BBLS FW W/6 GALS OF PKR FLUID. SET PKR W/20000# TENSION. NU WELLHEAD.			
	RUN NMOCC H-5 TEST TO 300 PSI - HELD OK. RDMO PU. RETURN WELL TO DISPOSAL. TBG			
	STRING AS FOLLOWS;			
	RKB UNKNOWN			
	STRETCH TO SET PKR W/20000# TENSION	1.80	0.00	1.80
1	2 7/8" X 2" SEAL-TITE NIPPLE	.20	1.80	2.00
137	JTS 2 7/8" 6.5#/FT J-55 8RD EUE TBG W/SEAL-TITE LINER	4303.73	2.00	4305.73
1	2 7/8" X 6" SEAL-TITE NIPPLE	.60	4305.73	4306.33
1	4 ½" X 2 3/8" BAKER MODEL "AD-1" PKR W/2 7/8" BOX ON TOP W/IPC-EPC TO PE	2.62	4306.33	4308.95
	4 ½" 10.5#/FT CSG SET @ 4702'			

REMARKS:

REPORTED BY: JIM ROBINSON lac DATE: 02-06-01


MIDNIGHT
NOON
6 P.M.
GRAPHIC CONTROLS CORPORATION
BUFFALO, NEW YORK
2-9-01
BR 2221

Submit 3 Copies to Appropriate District Office

Energy, Minerals and Natural Resources Department

Form C-103
Revised 1-1-89

DISTRICT I
P.O. Box 1980, Hobbs, NM 88240

DISTRICT II
P.O. Drawer DD, Artesia, NM 88210

DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410

OIL CONSERVATION DIVISION
310 Old Santa Fe Trail, Room 206
Santa Fe, New Mexico 87503

WELL API NO.

5. Indicate Type of Lease STATE [X] FEE [ ]

6. State Oil & Gas Lease No.

SUNDRY NOTICES AND REPORTS ON WELLS
(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)

7. Lease Name or Unit Agreement Name
WOOLWORTH ESTATE

1. Type of Well:
OIL WELL [ ] GAS WELL [ ] OTHER DISPOSAL WELL

2. Name of Operator
SID RICHARDSON GASOLINE CO. 20787

8. Well No.
1-E

3. Address of Operator
PO BOX 1311 JAL, NEW MEXICO 88252

9. Pool name or Wildcat
~~LANGLIE MATTIX~~ Saw Rivers

4. Well Location
Unit Letter E : 1570 Feet From The North Line and 800 Feet From The WEST Line

Section 33 Township 24-5 Range 37-E NMPM LEA County

10. Elevation (Show whether DF, RKB, RT, GR, etc.)
3265.2 GL

11. Check Appropriate Box to Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
PERFORM REMEDIAL WORK [ ]	PLUG AND ABANDON [ ]	REMEDIAL WORK [ ]	ALTERING CASING [ ]
TEMPORARILY ABANDON [ ]	CHANGE PLANS [ ]	COMMENCE DRILLING OPNS. [ ]	PLUG AND ABANDONMENT [ ]
PULL OR ALTER CASING [ ]		CASING TEST AND CEMENT JOB [ ]	
OTHER: [ ]		OTHER: TEST AND OPERATION [X]	

12. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work) SEE RULE 1103.

TESTED THE DISPOSAL WELL ON 02/12/98 AT 480 PSI FOR A PERIOD OF 28 MINUTES. PLACED THE DISPOSAL WELL BACK IN SERVICE ON 02/12/98.

28094/21

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE Brian Murray TITLE OPERATIONS SUPERVISOR/CHEMIST DATE 02/12/98

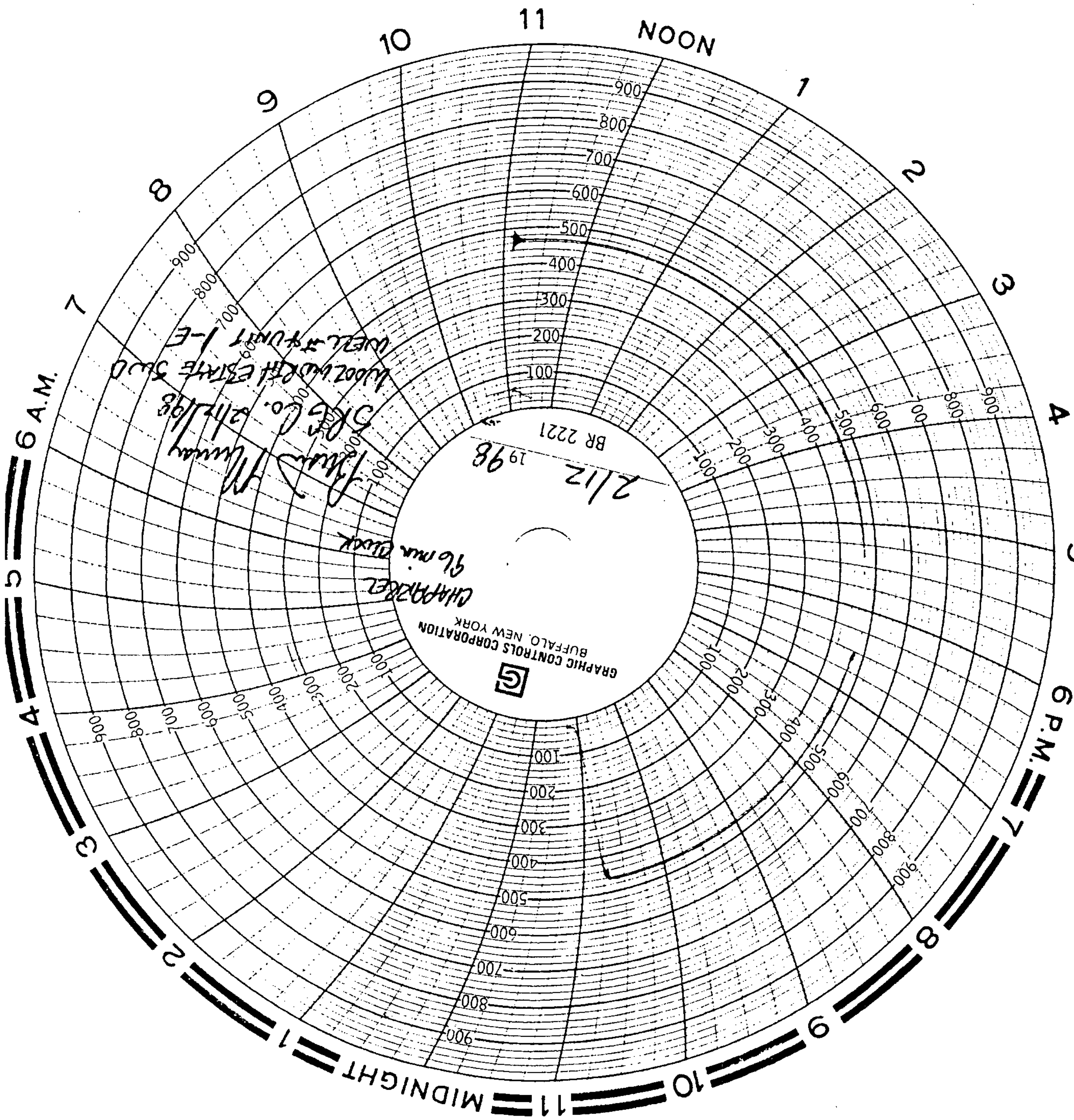
TYPE OR PRINT NAME BRIAN MURRAY TELEPHONE NO. (505) 395-2068

(This space for State Use)

ORIGINAL SIGNED BY CHRIS WILLIAMS
DISTRICT I SUPERVISOR

APPROVED BY _____ TITLE _____ DATE FEB 23 1998

CONDITIONS OF APPROVAL, IF ANY: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2/12 19 98
GRAPHIC CONTROLS CORPORATION
BUFFALO, NEW YORK

Submit 3 Copies to Appropriate District Office

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-103
Revised 1-1-89

DISTRICT I
P.O. Box 1980, Hobbs, NM 88240

DISTRICT II
P.O. Drawer DD, Artesia, NM 88210

DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410

OIL CONSERVATION DIVISION
310 Old Santa Fe Trail, Room 206
Santa Fe, New Mexico 87503

WELL API NO. 30-025-27081

5. Indicate Type of Lease STATE [XX] FEE [ ]

6. State Oil & Gas Lease No.

SUNDRY NOTICES AND REPORTS ON WELLS
(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)

7. Lease Name or Unit Agreement Name: Woolworth Estate SWD ~~I-E~~

1. Type of Well: OIL WELL [ ] GAS WELL [ ] OTHER Disposal Well

2. Name of Operator: Sid Richardson Gasoline Co.

8. Well No. 1-~~E~~

3. Address of Operator: PO Box 1311 Jal, New Mexico 88252

9. Pool name or Wildcat: Langlie Mattix

4. Well Location
Unit Letter E : 1570 Feet From The North Line and 800 Feet From The West Line

Section 33 Township 24-S Range 37-E NMPM Lea County

10. Elevation (Show whether DF, RKB, RT, GR, etc.) 3265.2' GL

11. Check Appropriate Box to Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:				SUBSEQUENT REPORT OF:			
PERFORM REMEDIAL WORK	[ ]	PLUG AND ABANDON	[ ]	REMEDIAL WORK	[ ]	ALTERING CASING	[ ]
TEMPORARILY ABANDON	[ ]	CHANGE PLANS	[ ]	COMMENCE DRILLING OPNS.	[ ]	PLUG AND ABANDONMENT	[ ]
PULL OR ALTER CASING	[ ]			CASING TEST AND CEMENT JOB	[ ]		
OTHER:	[ ]			OTHER: Repair, test, and operation	[X]		

12. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work) SEE RULE 1103.

Repaired well by pulling and replacing old tubing and packer with new tubing and packer. Tested the disposal well on 3/4/94 at 340 psi for a period of 19 minutes. Placed the disposal well back in service on 3/5/94.

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

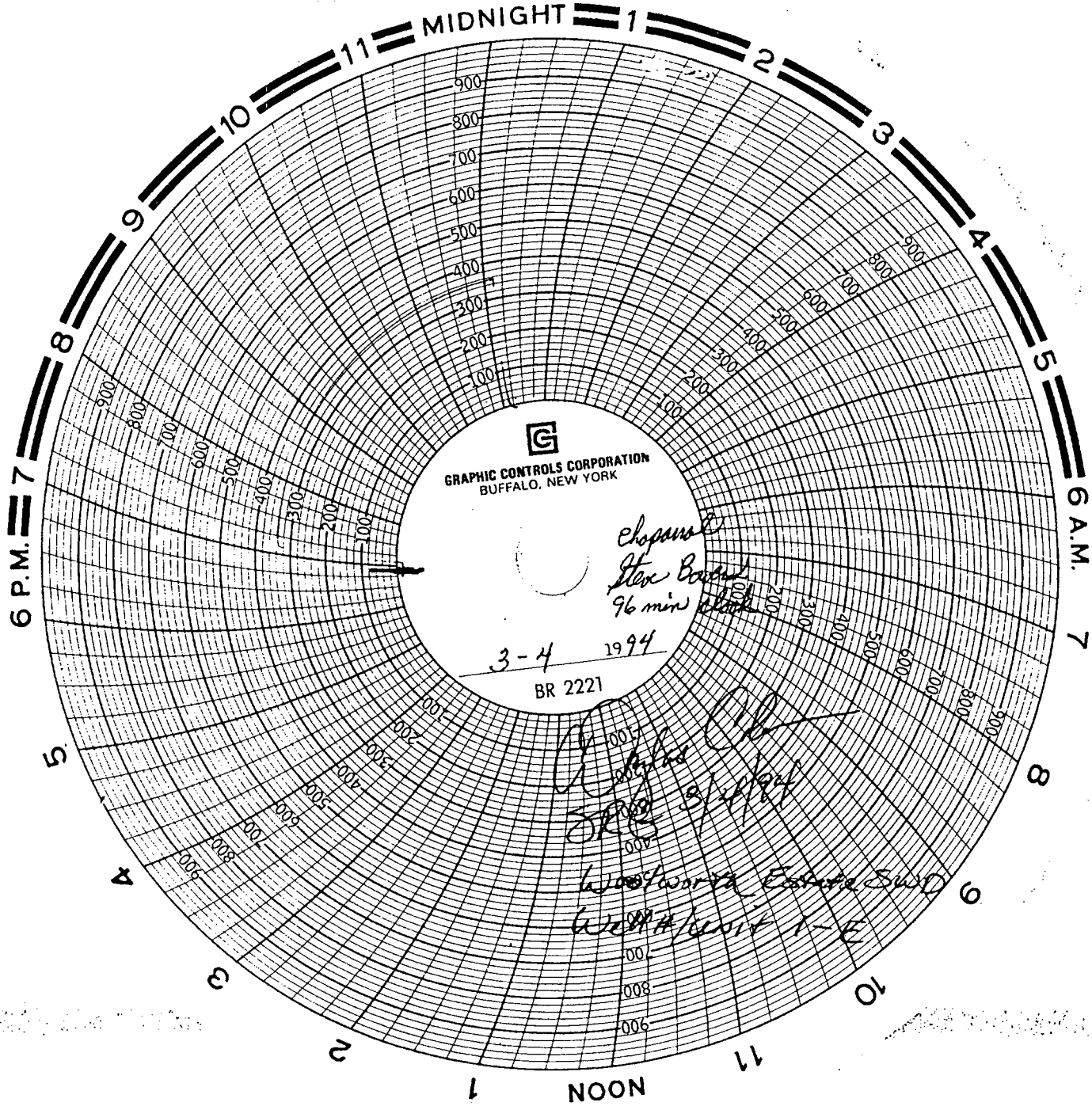
SIGNATURE W. Douglas Coleman TITLE Plant Engineer DATE 3/5/94

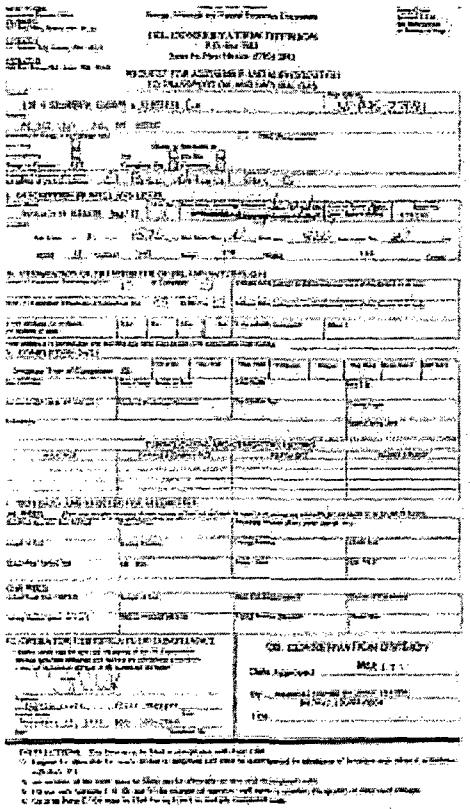
TYPE OR PRINT NAME Douglas Coleman TELEPHONE NO. (505) 395-2068

(This space for State Use)

APPROVED BY ORIGINAL SIGNED BY JERRY SEXTON DISTRICT I SUPERVISOR TITLE DATE MAR 15 1994

CONDITIONS OF APPROVAL, IF ANY:


MIDNIGHT
NOON
6 A.M.
6 P.M.
GRAPHIC CONTROLS CORPORATION
BUFFALO, NEW YORK
3-4 1994
BR 2221



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Form C-105
Revised 1-1-65

NEW MEXICO OIL CONSERVATION COMMISSION
WELL COMPLETION OR RECOMPLETION REPORT AND LOG

5a. Indicate Type of Lease: State ☐ Fee ☒

5. State Oil & Gas Lease No.:

1a. TYPE OF WELL
b. TYPE OF COMPLETION
OIL WELL ☐ GAS WELL ☐ DRY ☐ OTHER Salt Water Disposal
NEW WELL ☒ WORK OVER ☐ DEEPEN ☐ PLUG BACK ☐ DIFF. RESVR. ☐ OTHER

7. Unit Agreement Name:

8. Farm or Lease Name: Fasterwood Estate Salt Water Disposal

9. Well No.: 1

2. Name of Operator: El Paso Natural Gas Co.

10. Field and Pool, or Wildcat: Langlie Mattix

3. Address of Operator: Box 1492, El Paso, Texas 79978

4. Location of Well
UNIT LETTER E LOCATED 1570 FEET FROM THE North LINE AND 800 FEET FROM THE West LINE OF SEC. 33 TWP. 24-S RGE. 37-E NMPM

12. County: Lea

15. Date Spudded	16. Date T.D. Reached	17. Date Compl. (Ready to Prod.)	18. Elevations (DF, RKB, RT, GR, etc.)	19. Elev. Cashinghead
11-20-80	12-1-80		3265.2' GL.	

20. Total Depth	21. Plug Back T.D.	22. If Multiple Compl., How Many	23. Intervals Drilled By	Rotary Tools	Cable Tools
4702'			→	X	

24. Producing Interval(s), of this completion — Top, Bottom, Name
4440' To 4562' — San Andres

25. Was Directional Survey Made

26. Type Electric and Other Logs Run
Schlumberger — Neutron Porosity Log & CRC - Gamma Ray

27. Was Well Cored
No

28. CASING RECORD (Report all strings set in well)

CASING SIZE	WEIGHT LB./FT.	DEPTH SET	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
8 5/8"	24	408'	12 1/4"	325 sx - Circ.	
4 1/2"	10.5	4702'	7 7/8"	2-Stage - 1200 sx Circulated	

29. LINER RECORD

SIZE	TOP	BOTTOM	SACKS CEMENT	SCREEN

30. TUBING RECORD

SIZE	DEPTH SET	PACKER SET
2 7/8"	4385'	4385'

31. Perforation Record (Interval, size and number)
4440' - 4466'
4480' - 4496'
4508' - 4534'
4540 - 4562'
4 shots/foot

32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.

DEPTH INTERVAL	AMOUNT AND KIND MATERIAL USED

33. PRODUCTION

Date First Production	Production Method (Flowing, gas lift, pumping — Size and type pump)	Well Status (Prod. or Shut-in)

Date of Test	Hours Tested	Choke Size	Prod'n. For Test Period →	Oil — Bbl.	Gas — MCF	Water — Bbl.	Gas — Oil Ratio

Flow Tubing Press.	Casing Pressure	Calculated 24-Hour Rate →	Oil — Bbl.	Gas — MCF	Water — Bbl.	Oil Gravity — API (Corr.)

34. Disposition of Gas (Sold, used for fuel, vented, etc.)

Test Witnessed By

35. List of Attachments

36. I hereby certify that the information shown on both sides of this form is true and complete to the best of my knowledge and belief.

SIGNED J. B. Kelly TITLE Senior Engineer DATE 12-15-80

INSTRUCTIONS

This form is to be filed with the appropriate District Office of the Commission not later than 20 days after the completion of any newly-drilled or deepened well. It shall be accompanied by one copy of all electrical and radio-activity logs run on the well and a summary of all special tests conducted, including drill stem tests. All depths reported shall be measured depths. In the case of directionally drilled wells, true vertical depths shall also be reported. For multiple completions, Items 30 through 34 shall be reported for each zone. The form is to be filed in quintuplicate except on state land, where six copies are required. See Rule 1105.

INDICATE FORMATION TOPS IN CONFORMANCE WITH GEOGRAPHICAL SECTION OF STATE

Southeastern New Mexico				Northwestern New Mexico			
T. Anhy		T. Canyon		T. Ojo Alamo		T. Penn. "B"	
T. Salt		T. Strawn		T. Kirtland-Fruitland		T. Penn. "C"	
B. Salt		T. Atoka		T. Pictured Cliffs		T. Penn. "D"	
T. Yates		T. Miss		T. Cliff House		T. Leadville	
T. 7 Rivers		T. Devonian		T. Menefee		T. Madison	
T. Queen		T. Silurian		T. Point Lookout		T. Elbert	
T. Grayburg		T. Montoya		T. Mancos		T. McCracken	
T. San Andres	4550	T. Simpson		T. Gallup		T. Ignacio Qtzte	
T. Glorieta		T. McKee		Base Greenhorn		T. Granite	
T. Paddock		T. Ellenburger		T. Dakota		T.	
T. Blinebry		T. Gr. Wash		T. Morrison		T.	
T. Tubb		T. Granite		T. Todilto		T.	
T. Drinkard		T. Delaware Sand		T. Entrada		T.	
T. Abo		T. Bone Springs		T. Wingate		T.	
T. Wolfcamp		T.		T. Chinle		T.	
T. Penn.		T.		T. Permian		T.	
T Cisco (Bough C)		T.		T. Penn. "A"		T.	

FORMATION RECORD (Attach additional sheets if necessary)

From	To	Thickness in Feet	Formation	From	To	Thickness in Feet	Formation

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STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

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OIL CONSERVATION DIVISION

P. O. BOX 2088
SANTA FE, NEW MEXICO 87501

Form C-103
Revised 10-1-7

5a. Indicate Type of Lease: State ☐ Fee ☒
5. State Oil & Gas Lease No.

SUNDRY NOTICES AND REPORTS ON WELLS

(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT —" (FORM C-101) FOR SUCH PROPOSALS.)

1. OIL WELL ☐ GAS WELL ☐ OTHER- SALT WATER DISPOSAL
7. Unit Agreement Name
2. Name of Operator: EL PASO NATURAL GAS
8. Farm or Lease Name: Woolworth Estate SALT WATER DISPOSAL
3. Address of Operator: BOX 1492 EL PASO TX 79978
9. Well No.: 1
4. Location of Well: UNIT LETTER E, 1570 FEET FROM THE NORTH LINE AND 200 FEET FROM THE WEST LINE, SECTION 33 TOWNSHIP 24-S RANGE 37-E NMPM.
10. Field and Pool, or Wildcat: LANGLIE-MATTIX
15. Elevation (Show whether DF, RT, GR, etc.): 3265.2' G.L.
12. County: LEA

16. Check Appropriate Box To Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
PERFORM REMEDIAL WORK ☐	PLUG AND ABANDON ☐	REMEDIAL WORK ☐	ALTERING CASING ☐
TEMPORARILY ABANDON ☐		COMMENCE DRILLING OPNS. ☐	PLUG AND ABANDONMENT ☐
PULL OR ALTER CASING ☐	CHANGE PLANS ☐	CASING TEST AND CEMENT JOB ☒	
OTHER ☐		OTHER ☐	

17. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work) SEE RULE 1103.

(4 1/2 LONG STRING - 2 STAGE)

CEMENT FOR STAGE #1 200 SK'S H.L.C. 5# SALT 1/4# FLOCEL
200 SK'S CL. C - MENT

CEMENT FOR STAGE #2 800 SK'S H.L.C. 15# SALT - 1/4# FLOCELE

CIRC - APOX 90 SK'S ON 1ST STAGE

CIRC - APOX 80 SK'S ON 2ND STAGE

18. I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNED Tommy J. Landers TITLE Halliburton Cementer DATE 12-2-80

APPROVED BY Orig. Signed By Jerry Sexton Dist. I. Supv. TITLE _____ DATE JAN 15 1981

CONDITIONS OF APPROVAL, IF ANY:

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

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OIL CONSERVATION DIVISION

P. O. BOX 2088
SANTA FE, NEW MEXICO 87501

Form C-103
Revised 10-1-78

5a. Indicate Type of Lease: State ☐ Fee ☒

5. State Oil & Gas Lease No.

SUNDRY NOTICES AND REPORTS ON WELLS

(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT —" (FORM C-101) FOR SUCH PROPOSALS.)

1. OIL WELL ☐ GAS WELL ☐ OTHER- Salt Water Disposal

7. Unit Agreement Name

2. Name of Operator
El Paso Natural Gas Co.

8. Farm or Lease Name
Stoltz Estate
Salt Water Disposal

3. Address of Operator
Box 1492, El Paso, Texas 79978

9. Well No.
1

4. Location of Well
UNIT LETTER E, 1570 FEET FROM THE North LINE AND 800 FEET FROM THE West LINE, SECTION 33 TOWNSHIP 24-S RANGE 37-E NMPM.

10. Field and Pool, or Wildcat
Langlie-Mattix

15. Elevation (Show whether DF, RT, GR, etc.)
3265.2' G.L.

12. County
Lea

16. Check Appropriate Box To Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:				SUBSEQUENT REPORT OF:			
PERFORM REMEDIAL WORK	☐	PLUG AND ABANDON	☐	REMEDIAL WORK	☐	ALTERING CASING	☐
TEMPORARILY ABANDON	☐			COMMENCE DRILLING OPNS.	☐	PLUG AND ABANDONMENT	☐
PULL OR ALTER CASING	☐	CHANGE PLANS	☐	CASING TEST AND CEMENT JOB	☒		
OTHER	☐			OTHER	☐		

17. Describe Proposed or Completed Operations (*Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work*) SEE RULE 1103.

8 5/8" Surface Casing — 12¼" Hole - Depth 405'

Cement w/325 sx. — Circulated back approx. 50 sx.

18. I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNED [signature] TITLE Engr. - Senior Engineer DATE 11-21-80

APPROVED BY Orig. Signed by Jerry Sexton Dist. I Supv. TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

Wadsworth Estate SWD

WELL NAME & NUMBER Jal #3 Plant SWD Well #1

E-33-24-37

LOCATION Approx. 3 miles north & 1½ miles east of Jal, NM at Gas Plant location
(Give Unit, Section, Township and Range)

OPERATOR El Paso Natural Gas Co., P.O. Box 1492, El Paso, Texas 79978

DRILLING CONTRACTOR Kenai Drilling of Texas, Inc., P.O. Box 6725, Odessa, Texas 79762

The undersigned herby certifies that he is an authorized representative of the drilling contractor who drilled the above-described well and that he has conducted deviation tests and obtained the following results:

Degrees @ Depth	Degrees @ Depth	Degrees @ Depth	Degrees @ Depth
1/4 @ 408			
1/2 @ 893			
1 @ 1147			
1 @ 1363			
1 1/2 @ 1803			
1 3/4 @ 2300			
1 3/4 @ 2802			
1 3/4 @ 3300			
1 @ 3430			
3/4 @ 3888			
1 @ 4300			
3/4 @ 4702			

Drilling Contractor Kenai Drilling of Texas, Inc.

By [signature]

Robert A. Smith, Drilling Engineer

Subscribed and sworn to before me this 16th day of December, 1980

[signature]
Notary Public Barbara J. LaGrone

My Commission Expires 8-22-81

Ector County Texas

30-025-27081

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OPERATOR		

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-101
Revised 1-1-65

5A. Indicate Type of Lease: STATE ☐ FEE ☒

5. State Oil & Gas Lease No.

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. Type of Work
DRILL ☒ DEEPEN ☐ PLUG BACK ☐

b. Type of Well
OIL WELL ☐ GAS WELL ☐ OTHER Salt Water Disposal SINGLE ZONE ☒ MULTIPLE ZONE ☐

7. Unit Agreement Name

8. Farm or Lease Name
Woolworth Estate SWD

2. Name of Operator
El Paso Natural Gas Company

9. Well No.
1

3. Address of Operator
P. O. Box 1492, El Paso, Texas 79978

10. Field and Pool, or Wildcat
Langlie-Mattix

4. Location of Well
UNIT LETTER E LOCATED 1570 FEET FROM THE North LINE
AND 800 FEET FROM THE West LINE OF SEC. 33 TWP. 24-S RGE. 37-E NMPM

12. County
Lea

19. Proposed Depth	19A. Formation	20. Rotary or C.T.
4900'	San Andres	Rotary

21. Elevations (Show whether DF, RT, etc.)	21A. Kind & Status Plug. Bond	21B. Drilling Contractor	22. Approx. Date Work will start
3265.2' G.L.	Statewide	HELCO	11-1-80

23.

PROPOSED CASING AND CEMENT PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	SACKS OF CEMENT	EST. TOP
10-1/2	8-5/8	24.0	350'	Circulated	Surface
6-1/2	4-1/2	10.5	4900'	Circulated	Surface

Proposed Program

1. Rig-up & drill 10-1/2" hole to 350' - set 8-5/8" surface casing and circulate cement back to surface. Install blowout preventer.
2. Drill out from under surface casing with 6-1/2" bit to an estimated depth of 4900'.
3. Run Dual Induction Log & Compensated Nuetron - Density Log.
4. Run 4-1/2" production casing & circulate cement back to surface.
5. Run Gamma Ray-Nuetron Log & perforate porous zones.
6. Run 2-7/8" tubing with casing packer & rig down.
7. "Frac" formation and run injection pressure tests.
8. Pump inhibitor fluid in annulus between 2-5/8" & 4-1/2" casing.

APPROVAL VALID
FOR 90 DAYS UNLESS
DRILLING COMMENCED,
EXPIRES 2/5/81

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: IF PROPOSAL IS TO DEEPEN OR PLUG BACK, GIVE DATA ON PRESENT PRODUCTIVE ZONE AND PROPOSED NEW PRODUCTIVE ZONE. GIVE BLOWOUT PREVENTER PROGRAM, IF ANY.

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

Signed James B. Kelly Jr. Title Senior Engineer Date October 10, 1980

(This space for State Use)

APPROVED BY [signature] TITLE SUPERVISOR DISTRICT I DATE

CONDITIONS OF APPROVAL, IF ANY:

NEW MEXICO OIL CONSERVATION COMMISSION

WELL LOCATION AND ACREAGE DEDICATION PLAT

Form C-102
Supersedes C-128
Effective 1-1-65

All distances must be from the outer boundaries of the Section.

Operator	Lease	Well No.
El Paso Natural Gas Company	Jal #3 Water Disposal	1

Unit Letter	Section	Township	Range	County
E	33	24 South	37 East	Lea

Actual Footage Location of Well:
1570 feet from the North line and 800 feet from the West line

Ground Level Elev.	Producing Formation	Pool	Dedicated Acreage:
3265.2			Acres

1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.

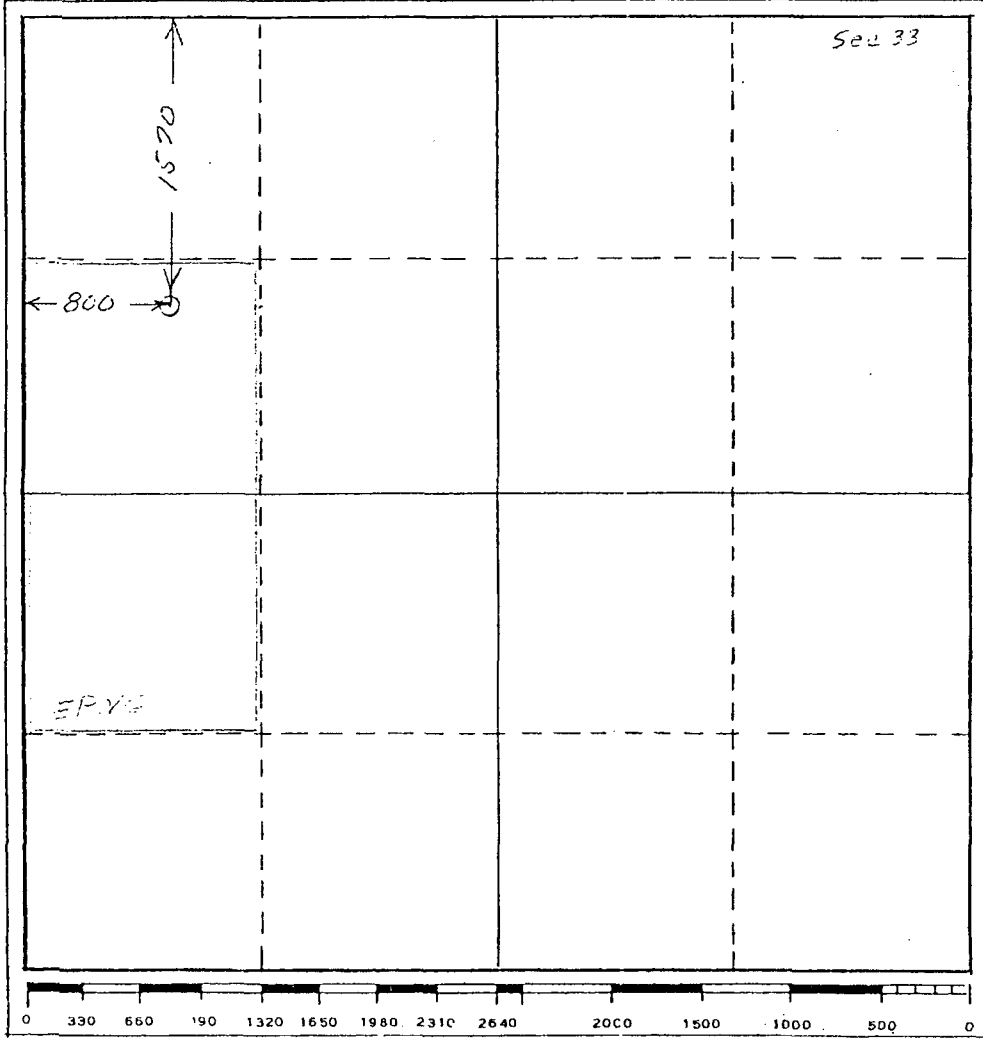
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).

3. If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force-pooling. etc?

☐ Yes ☐ No If answer is "yes," type of consolidation N/A

If answer is "no," list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.)

No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Commission.



CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.

James B Kelly
Name
Senior Engineer
Position
El Paso Natural Gas Co.
Company
October 10, 1980
Date

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief.

Date Surveyed
May 28, 1980
Registered Professional Engineer and/or Land Surveyor
Truman L. Parker
Certificate No.
2126

OIL CONSERVATION DIVISION
DISTRICT I

OIL CONSERVATION DIVISION
P. O. BOX 2088
SANTA FE, NEW MEXICO 87501

DATE 10/9/80

RE: Proposed MC _____
Proposed DHC _____
Proposed NSL _____
Proposed NSP _____
Proposed SWD X
Proposed WFX _____
Proposed PMX _____

Gentlemen:

I have examined the application for the:

El Paso Natural Gas Co. Woolworth Estate - SWD #1-E 33-24-37
Operator Lease and Well No. Unit, S - T - R

and my recommendations are as follows:

OK - DID NOT CHECK ON WELLS WITHIN 1/2 M.

Yours very truly,

/mc

Form C-108
Revised 3-1-68

NEW MEXICO OIL CONSERVATION COMMISSION

APPLICATION TO DISPOSE OF SALT WATER BY INJECTION INTO A POROUS FORMATION

PERATOR	ADDRESS
El Paso Natural Gas Company	P. O. Box 1492, El Paso, Texas 79978

EASE NAME	WELL NO.	FIELD	COUNTY
Woolworth Estate - SWD	1	Langlie Mattix	Lea

OCATION

UNIT LETTER E ; WELL IS LOCATED 1570 FEET FROM THE North LINE AND 800 FEET FROM THE

West LINE, SECTION 33 TOWNSHIP 24-S RANGE 37-E NMPM.

CASING AND TUBING DATA

NAME OF STRING	SIZE	SETTING DEPTH	SACKS CEMENT	TOP OF CEMENT	TOP DETERMINED BY
URFACE CASING	8-5/8"	350'	100 est.	Circulated	
NTERMEDIATE	None				
ONG STRING	4-1/2"	4900' Est.	600 Est.	Circulated	
UBING	2-7/8"		NAME, MODEL AND DEPTH OF TUBING PACKER: Baker @ 4700'		

AME OF PROPOSED INJECTION FORMATION	TOP OF FORMATION	BOTTOM OF FORMATION
San Andres	4300	5100

S INJECTION THROUGH TUBING, CASING, OR ANNULUS?	PERFORATIONS OR OPEN HOLE?	PROPOSED INTERVAL(S) OF INJECTION
Tubing	Perforations	4700' to 4800'

S THIS A NEW WELL DRILLED FOR ISPOSAL?	IF ANSWER IS NO, FOR WHAT PURPOSE WAS WELL ORIGINALLY DRILLED?	HAS WELL EVER BEEN PERFORATED IN ANY ZONE OTHER THAN THE PROPOSED INJECTION ZONE?
Yes		No

IST ALL SUCH PERFORATED INTERVALS AND SACKS OF CEMENT USED TO SEAL OFF OR SQUEEZE EACH

N/A

EPTH OF BOTTOM OF DEEPEST RESH WATER ZONE IN THIS AREA	DEPTH OF BOTTOM OF NEXT HIGHER OIL OR GAS ZONE IN THIS AREA	DEPTH OF TOP OF NEXT LOWER OIL OR GAS ZONE IN THIS AREA
200'	Queen	Glorieta

NTICIPATED DAILY JECTION VOLUME BBLS.) MINIMUM	MAXIMUM	OPEN OR CLOSED TYPE SYSTEM	IS INJECTION TO BE BY GRAVITY OR PRESSURE?	APPROX. PRESSURE (PSIG
0	750	Closed	Gravity	Hydrostatic

NSWER YES OR NO WHETHER THE FOLLOWING WATERS ARE MINERALIZED TO SUCH A DEGREE AS TO BE UNFIT FOR DOMESTIC, TOCK, IRRIGATION, OR OTHER GENERAL USE —	WATER TO BE DISPOSED OF	NATURAL WATER IN DISPOSAL ZONE	ARE WATER ANALYSES ATTACHED?
	Yes	Yes	Yes

AME AND ADDRESS OF SURFACE OWNER (OR LESSEE, IF STATE OR FEDERAL LAND)

El Paso Natural Gas Company, P. O. Box 1492, El Paso, Texas 79978

IST NAMES AND ADDRESSES OF ALL OPERATORS WITHIN ONE-HALF (½) MILE OF THIS INJECTION WELL

Union Texas Petroleum Corp., 1300 Wilco Bldg., Midland, Texas 79701

Amerada Hess Corp., Drawer "D", Monument, New Mexico, 88265

AVE COPIES OF THIS APPLICATION BEEN ENT TO EACH OF THE FOLLOWING?	SURFACE OWNER	EACH OPERATOR WITHIN ONE-HALF MILE OF THIS WELL	
	EPNG Co.	Yes	
RE THE FOLLOWING ITEMS ATTACHED TO HIS APPLICATION (SEE RULE 701-B)	PLAT OF AREA	ELECTRICAL LOG	DIAGRAMMATIC SKETCH OF WELL
	Yes	No	Yes

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

James A. Gray — Senior Engineer — October 10, 1980

(Signature) (Title) (Date)

NOTE: Should waivers from the surface owner and all operators within one-half mile of the proposed injection well not accompany this application, the New Mexico Oil Conservation Commission will hold the application for a period of 15 days from the date of receipt by the Commission's Santa Fe office. If at the end of the 15-day waiting period no protest has been received by the Santa Fe office, the application will be processed. If a protest is received, the application will be set for hearing, if the applicant so requests. SEE RULE 701.

Allied Chemical

Union Texas Petroleum Corporation

1300 Wilco Building
Midland, Texas 79701

September 26, 1980

El Paso Natural Gas Company
P. O. Box 1492
El Paso, Texas 79978

Attention: Mr. James B. Kelly

Gentlemen:

Union Texas Petroleum Corporation has been advised by El Paso Natural Gas Company of their intentions to drill a salt water disposal well in Unit "E", Section 22, T-24-S, R-37-E, Lea County, New Mexico. As an offset operator, we hereby waive all objections regarding the drilling of this well and subsequent disposal into the San Andres formation; subject to the approval of the Oil Conservation Commission of the State of New Mexico.

Very truly yours,

UNION TEXAS PETROLEUM CORPORATION

Floyd S. Houdyshell

Floyd S. Houdyshell
Production Analyst

FSH:hb

El Paso NATURAL GAS COMPANY

P. O. BOX 1492
EL PASO, TEXAS 79978
PHONE: 915-543-2600

September 2, 1980

Mr. A. J. Troop
District Production Manager
Amerada Hess Corporation
Drawer "D"
Monument, New Mexico 88265

Dear Sir:

El Paso Natural Gas Company plans to drill a salt water disposal well in Unit E, Sec. 33, T-24-S, R-37-E, Lea County, New Mexico. You are the offset operator of El Paso's property. El Paso Natural Gas Company requests that you send us a waiver regarding this salt water disposal well subject to the approval of the Oil Conservation Commission of the State of New Mexico.

Enclosed is the proposed completion drawing with perforations in the most porous sections of the San Andres Formation.

If you have any objections or questions regarding the proposed salt water disposal well, please contact me. If you have no objections, we would appreciate receiving a waiver from you as quickly as possible.

Yours truly,

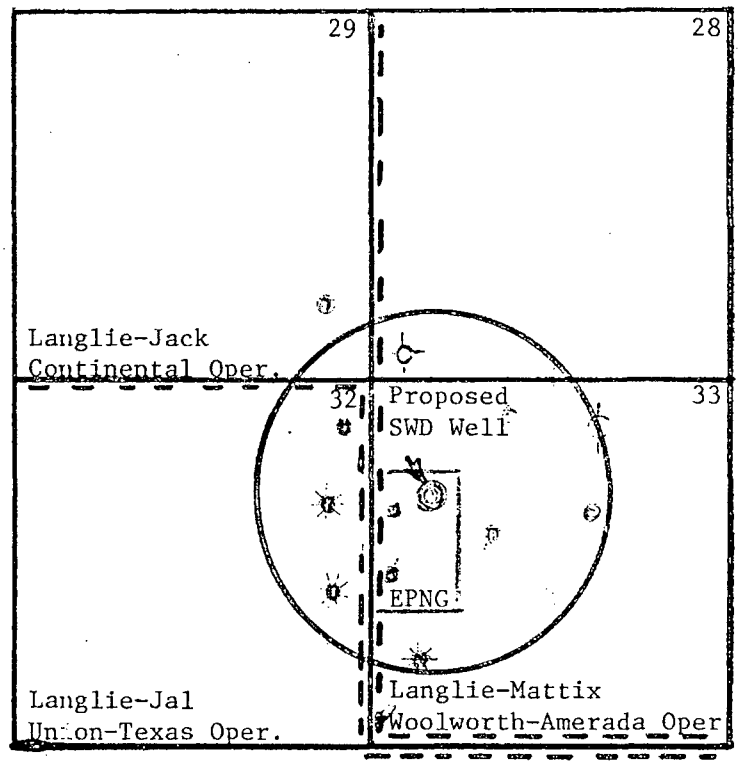
James B. Kelly
Senior Engineer
Water Resources &
Waste Disposal
Operations

No objections

By: Gilbert E. Miller

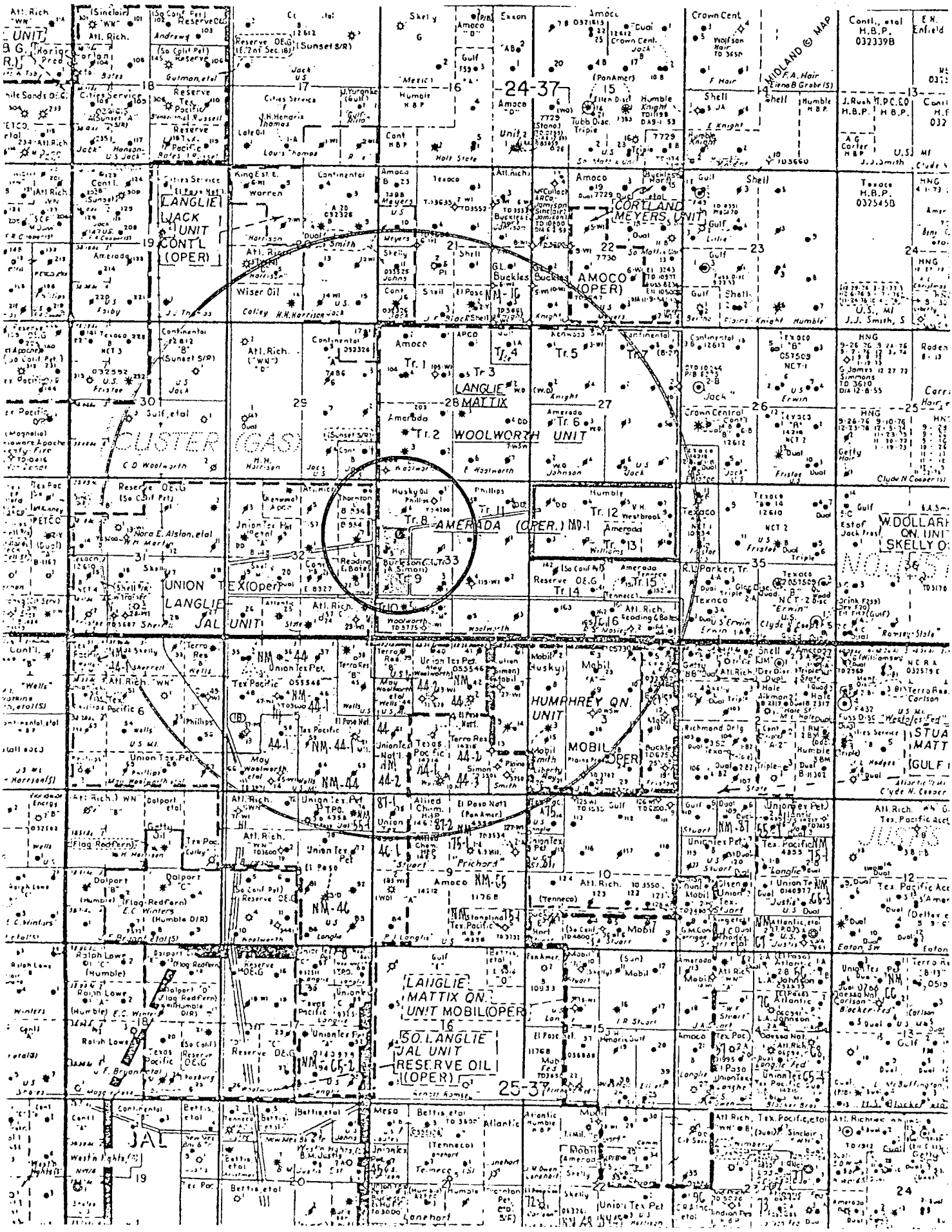
Date: 9-29-80

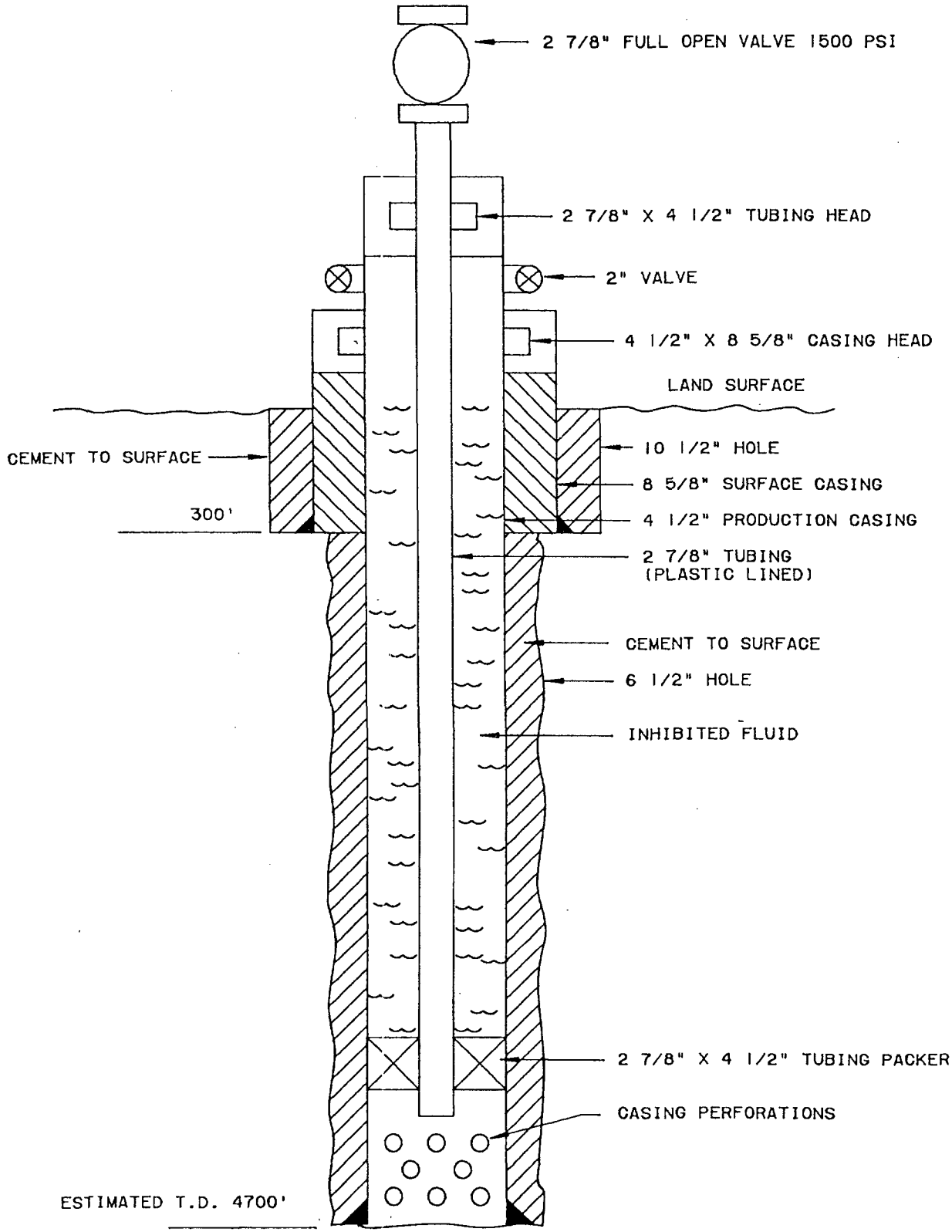
JBK:rh
Enclosure



Union Texas and Amerada are the operators within the ½ mile radius of the proposed EPNG-SWD well in T-24-S, R-37-E, Lea County, New Mexico.

Unit E, Section 33, Township 24 South, Range 37 East, Lea County, New Mexico





PRT.	SEP.	DATE	TO	W. O.
PRINT RECORD				

ENGINEERING RECORD	
DRAWN	JRM
DATE	7/28/80
CHECKED	
APPROVED	
APPROVED	
W. O.	S-6195

El Paso NATURAL GAS COMPANY

JAL NO.3 PLANT

SWD WELL NO.1 SEC.33,T-24-S,R-37-E

LEA COUNTY, NEW MEXICO

DWG. NO. 1J3-1-P1014 REV.

Petroleum Information

COUNTY LEA FIELD Langlie-Mattix STATE NM

OPR EL PASO NATURAL GAS CO. API 30-025-27081

NO WD-1 LEASE Woolworth Estate MAP

Sec 33, T24S, R37E CO-ORD

1570 FNL, 800 FWL of Sec 1-5-48 NM

13 mi SE/Eunice SPD 11-20-80 CMP 12-1-80

CSG

8 5/8-408-325 sx

4 1/2-4702-1200 sx

2 7/8-4385

WELL CLASS: INIT U FIN U LSE. CODE

FORMATION	DATUM	FORMATION	DATUM

TD 4702 (SADR) PBD

(San Andres) Perfs 4440-4562 Water Disposal Well

CONTR Helco OPRS ELEV 265 GL PD 4900 RT

F.R.10-13-80
(San Andres)
WATER DISPOSAL WELL

1-26-81 TD 4702; Complete
Perf (San Andres) 4440-56, 4480-96, 4508-34, 4540-62
No treatment reported
LOG TOP: San Andres 4050

1-31-81 COMPLETION ISSUED

1-5-48 NM
IC 30-025-70495-80

SUBJECT: SALT WATER DISPOSAL WELL ORDER NO. SWD-231

THE APPLICATION OF EL PASO NATURAL
GAS COMPANY FOR A SALT WATER DISPOSAL WELL

ADMINISTRATIVE ORDER
OF THE OIL CONSERVATION DIVISION

Under the provisions of Rule 701 (C), El Paso Natural Gas Company made application to the New Mexico Oil Conservation Division on October 10, 1980, for permission to complete for salt water disposal its Woolworth Estate - SWD No. 1E located in Unit E of Section 33, Township 24 South, Range 37 East, NMPM, Lea County, New Mexico.

The Division Director finds:

(1) That application has been duly filed under the provisions of Rule 701 (C) of the Division Rules and Regulations;

(2) That satisfactory information has been provided that all offset operators and surface owners have been duly notified; and

(3) That the applicant has presented satisfactory evidence that all requirements prescribed in Rule 701 (C) will be met.

(4) That no objections have been received within the waiting period prescribed by said rule.

IT IS THEREFORE ORDERED:

That the applicant herein, El Paso Natural Gas Company, is hereby authorized to complete its Woolworth Estate - SWD No. 1E located in Unit E of Section 33, Township 24 South, Range 37 East, NMPM, Lea County, New Mexico, in such a manner as to permit the injection of salt water for disposal purposes into the San Andres formation at approximately 4700 feet to approximately 4800 feet through 2 7/8" inch plastic lined tubing set in a packer located at approximately 4700 feet.

IT IS FURTHER ORDERED:

That the operator shall take all steps necessary to ensure that the injected water enters only the proposed injection interval and is not permitted to escape to other formations or onto the surface.

That the casing-tubing annulus shall be loaded with an inert fluid and equipped with a pressure gauge at the surface or left open to the atmosphere to facilitate detection of leakage in the casing, tubing, or packer.

That that injection pressure shall not exceed 940 pounds per square inch as measured at the surface.

That the operator shall notify the supervisor of the Division's Hobbs District Office before injection is commenced through said well;

order after notice and hearing, the Division may terminate the authority hereby granted in the interest of conservation. That applicant shall submit monthly reports of the disposal operations in accordance with Rule 704 and 1120 of the Division Rules and Regulations.

APPROVED at Santa Fe, New Mexico, on this 6th day of November, 1980.

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

JOE D. RAMEY
Division Director

SEAL

EL PASO NATURAL GAS COMPANY

WATER ANALYSIS

Report date 1-30-80

Sample Location Jal #3 Blow Down Pit Sample date

Sample source →						
CATIONS	Calcium (Ca)	as ppm $CaCO_3$	472			
	Magnesium (Mg)	as ppm $CaCO_3$	98			
	Sodium (Na)	as ppm $CaCO_3$	3974			
TOTAL CATIONS		as ppm $CaCO_3$	4544			
ANIONS	Bicarbonate (HCO_3)	as ppm $CaCO_3$	318			
	Carbonate (CO_3)	as ppm $CaCO_3$	180			
	Hydroxide (OH)	as ppm $CaCO_3$	0			
	Sulfate (SO_4)	as ppm $CaCO_3$	806			
	Chloride (Cl)	as ppm $CaCO_3$	3240			
TOTAL ANIONS		as ppm $CaCO_3$	4544			
TOTAL HARDNESS		as ppm $CaCO_3$	570			
ALKALINITY		as ppm $CaCO_3$				
	Phenolphthalein		90			
	Total		498			
IRON ppm Fe			1.02			
SILICA ppm Si			98			
TURBIDITY			54			
TOTAL DISSOLVED SOLIDS (Mmhos)			7500			
CAUSTICITY ppm (OH) as $CaCO_3$						
pH			8.5			
SULFITE (SO_3) ppm						
PHOSPHATES (PO_4) ppm						
	Poly					
	Ortho					
CHROMATE as ppm	Chromium		0			
Suspended Solids PPM			1012			
Zinc as PPM Zinc			2			

Tests by: Ellen Martin

Remarks: Hydrogen sulfide present. Unable to run dissolved oxygen.

cc: RTW
DT
WH
JK

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

BRUCE KING
GOVERNOR

LARRY KEHOE
SECRETARY

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87501
(505) 827-2434

El Paso Natural Gas
P. O. Box 1492
El Paso, Texas 79978

Re: Application for (SWD)(WFX)(PMX)
El Paso Natural Gas Co.
Woolworth Estate - SWD No. 1E
Sec. 33, T-24-S, R-37-E

Gentlemen:

We have reviewed the subject application dated October 10, 1980. We may not process the subject application until the required information checked below is submitted.

[ ] A well plat must be submitted showing the location of the proposed injection well(s) and the location of all other wells within a radius of two miles from said proposed injection well(s) and the formation from which said wells are producing or have produced. The plat shall indicate the leases, if any, within said two-mile radius.

Now we penetrate injection

[X] Applications must include a tabular summary of all wells within one-half mile of the injection well(s) and which penetrate the injection zone showing all casing strings, setting depths, sacks of cement used, cement tops, total depth, producing interval, well identification, and location. Applications for expansion of projects need not include the tabulation if the same is on file and no additional wells are included. (Memo No. 3-77)

[X] Application must include a schematic of all plugged and abandoned wells within the one-half mile radius and which have penetrated the injection zone showing all information required under the above plus the size and location of all plugs and the date of abandonment. Applications for expansion of projects need not include the schematics if the same is on file and no additional wells are included. (Memo No. 3-77)

None

[ ] The log of the proposed injection well(s) if same is available.

[ ] A diagrammatic sketch of the proposed injection well(s) showing all casing strings, including diameters and setting depths, quantities used and tops of cement, perforated or open hole intervals, tubing strings, including diameters and setting depths, and the type and location of packers, if any.

[ ] Other pertinent information including the name and depth of the zone or formation into which injection will be made, the kind of fluid to be injected, the anticipated volumes to be injected, and the source of said injection fluid.

[ ] Notice that all offset operators have been notified by certified mail.

[X] Other: See below.

If there are any questions on this matter, please do not hesitate to call upon me.

Sincerely,

Mike Holland

MIKE HOLLAND
Geologist

MH/dr

Due to the water study now being performed within the San Andres formation in this area, we must ask for a representative sample analysis of the formation water from within the zone in which injection will occur. We also ask that a water analysis of the water to be injected be submitted, with both analyses listing the total dissolved solids present.

APPENDIX C
Drain Systems and Tank System Testing Procedures & Results
(BOUND REPORT ATTACHED SEPARATELY)

APPENDIX D
List of Recycling and Disposal Contractors

HAULING AND DISPOSAL CONTRACTORS

Oil:	**Fulco Oil Services, LLC** **PO Box 578** **Jal NM 88252**
Filters:	**SIEMANS/US FILTERS** **312 Pronto** **Odessa, TX 79762**
Sulfur:	**Martin Gas Transport, Inc.** **PO Box 191** **Kilgore, TX 75663**
Solid Waste:	**Waste Management** **Hobbs, NM**

APPENDIX E
Waste Characterization of Non-Exempt Effluent Waste Streams

Hazardous Waste Determination

Date Sampled	4/12/2007
location	Jal #3 Engine Room "S" Floor Drain
Report #	7D13013
Matrix	Water
Destination: Clasifier Tank	
Volume transported: N/A	
Date:	

Toxicity	Analytical mg/kg	Reg limit (TCLP) mg/kg	Determination
Benzene	0.0214	0.5	Non-hazardous
Mercury	ND	0.2	Non-hazardous
Arsenic	0.0894	5.0	Non-hazardous
Barium	0.0145	100.0	Non-hazardous
Cadmium	0.0106	1.0	Non-hazardous
Chromium	0.806	5.0	Non-hazardous
Lead	0.0486	5.0	Non-hazardous
Selenium	0.0414	1.0	Non-hazardous
Silver	0.00676	5.0	Non-hazardous
Reactive			
Cyanide	ND	250.0	Non-hazardous
pH	9.53 pH units	<2 or >12.5 pH units	Non-hazardous
Sulfide	ND	500.0	Non-hazardous
Ignitability	>100 deg C	<60 deg C	Non-hazardous


CAUTION

Hazardous Waste Determination

Date Sampled	4/12/2007
location	Jal #3 Engine Room "S" Floor Drain
Report #	7D13013
Matrix	Oil
Destination: Re-cycled oil system	
Volume transported: N/A	
Date:	

Toxicity	Analytical mg/kg	Reg limit (TCLP) mg/kg	Determination
Benzene	J(0.000763)	0.5	Non-hazardous
Mercury	ND	0.2	Non-hazardous
Arsenic	J(0.00642)	5.0	Non-hazardous
Barium	0.0285	100.0	Non-hazardous
Cadmium	J(0.00304	1.0	Non-hazardous
Chromium	J(0.00617)	5.0	Non-hazardous
Lead	J(0.00277)	5.0	Non-hazardous
Selenium	ND	1.0	Non-hazardous
Silver	J(0.00395)	5.0	Non-hazardous
Reactive			
Cyanide	ND	250.0	Non-hazardous
pH	9.55 pH units	<2 or >12.5 pH units	Non-hazardous
Sulfide	ND	500.0	Non-hazardous
Ignitability	>100 deg C	<60 deg C	Non-hazardous

ENVIRONMENTAL LAB OF

12600 West I-20 East - Odessa, Texas 79765

A Xenco Laboratories Company

Analytical Report

Prepared for:

Tony Savoie

Southern Union Gas Services- Jal

P.O. Box 1226

Jal, NM 88252

Project: Jal #3 Plant

Project Number: None Given

Location: North of Jal

Lab Order Number: 7D13013

Report Date: 04/26/07

Southern Union Gas Services- Jal	Project: Jal #3 Plant	Fax: 505-395-2326
P.O. Box 1226	Project Number: None Given	
Jal NM, 88252	Project Manager: Tony Savoie	

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Engine Room S Floor Drain- Oil	7D13013-01	Oil	04/12/07 14:05	04-13-2007 11:42
Engine Room S Floor Drain- Water	7D13013-02	Water	04/12/07 14:05	04-13-2007 11:42

12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

Southern Union Gas Services- Jal	Project: Jal #3 Plant	Fax: 505-395-2326
P.O. Box 1226	Project Number: None Given	
Jal NM, 88252	Project Manager: Tony Savoie	

General Chemistry Parameters by EPA / Standard Methods

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Engine Room S Floor Drain- Oil (7D13013-01) Oil									
Ignitability by Flashpoint	[>100]		°C	1	ED71901	04/18/07	04/19/07	EPA 1010A / ASTM D93-80	
pH	**9.55**	0.10	pH Units	"	ED72003	04/18/07	04/18/07	EPA 9045B	
Engine Room S Floor Drain- Water (7D13013-02) Water									
Ignitability by Flashpoint	[> 100]		°C	1	ED71901	04/18/07	04/19/07	EPA 1010A / ASTM D93-80	
pH	**9.53**		pH Units	"	ED72004	04/18/07	04/18/07	EPA 150.1	

12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

Southern Union Gas Services- Jal	Project: Jal #3 Plant	Fax: 505-395-2326
P.O. Box 1226	Project Number: None Given	
Jal NM, 88252	Project Manager: Tony Savoie	

TCLP Metals 1311 by EPA / Standard Methods

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Extracted	Prepared	Analyzed	Method	Notes
Engine Room S Floor Drain- Oil (7D13013-01) Oil										
Mercury	**ND**	0.000250	mg/L	1	ED72515		04/25/07	04/25/07	EPA 7470A	
Chromium	**J [0.00617]**	0.00975	"	10	ED72510	tclp 4/17/07	04/23/07	04/25/07	EPA 6020A	J
Arsenic	**J [0.00642]**	0.0170	"	"	"	"	"	"	"	J
Selenium	**ND**	0.0300	"	"	"	"	"	"	"	
Silver	**J [0.00395]**	0.00405	"	"	"	"	"	"	"	J
Cadmium	**J [0.00304]**	0.00692	"	"	"	"	"	"	"	J
Barium	**0.0285**	0.00489	"	"	"	"	"	"	"	
Lead	**J [0.00277]**	0.00296	"	"	"	"	"	"	"	J
Engine Room S Floor Drain- Water (7D13013-02) Water										
Mercury	ND	0.000250	mg/L	1	ED72517		04/25/07	04/25/07	EPA 7470A	
Chromium	**0.806**	0.00975	"	10	ED72511	tclp 4/23/07	04/23/07	04/25/07	EPA 6020A	
Arsenic	**0.0894**	0.0170	"	"	"	"	"	"	"	
Selenium	**0.0414**	0.0300	"	"	"	"	"	"	"	
Silver	**0.00676**	0.00405	"	"	"	"	"	"	"	
Cadmium	**0.0106**	0.00692	"	"	"	"	"	"	"	
Barium	**0.0145**	0.00489	"	"	"	"	"	"	"	
Lead	**0.0486**	0.00296	"	"	"	"	"	"	"	

Southern Union Gas Services- Jal	Project: Jal #3 Plant	Fax: 505-395-2326
P.O. Box 1226	Project Number: None Given	
Jal NM, 88252	Project Manager: Tony Savoie	

TCLP Volatile Halocarbons by EPA Method 1311/8021B

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Extracted	Prepared	Analyzed	Method	Notes
Engine Room S Floor Drain- Oil (7D13013-01) Oil										
Benzene	**J [0.000763]**	0.00100	mg/L	1	ED72310	tclp 04/21/07	04/23/07	04/24/07	EPA 8021B	J
Toluene	**0.00108**	0.00100	"	"	"	"	"	"	"	
Ethylbenzene	ND	0.00100	"	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00100	"	"	"	"	"	"	"	
Xylene (o)	ND	0.00100	"	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*136 %*		*80-120*	"	"	"	"	"	*S-04*
Surrogate: 4-Bromofluorobenzene		*81.8 %*		*80-120*	"	"	"	"	"	
Engine Room S Floor Drain- Water (7D13013-02) Water										
Benzene	**0.0214**	0.00100	mg/L	1	ED72310	tclp 04/21/07	04/23/07	04/24/07	EPA 8021B	
Toluene	**0.0444**	0.00100	"	"	"	"	"	"	"	
Ethylbenzene	**0.0159**	0.00100	"	"	"	"	"	"	"	
Xylene (p/m)	**ND**	0.00100	"	"	"	"	"	"	"	
Xylene (o)	ND	0.00100	"	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*120 %*		*80-120*	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*81.4 %*		*80-120*	"	"	"	"	"	

Southern Union Gas Services- Jal	Project: Jal #3 Plant	Fax: 505-395-2326
P.O. Box 1226	Project Number: None Given	
Jal NM, 88252	Project Manager: Tony Savoie	

General Chemistry Parameters by EPA / Standard Methods - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch ED71901 - General Preparation (WetChem)										
LCS (ED71901-BS1)				Prepared & Analyzed: 04/19/07						
Ignitability by Flashpoint	29.0		°C	29.0		100	96-104			
Duplicate (ED71901-DUP1)		**Source: 7D13011-01**		Prepared & Analyzed: 04/19/07						
Ignitability by Flashpoint	[>100]		°C		0.00				20	
Batch ED72003 - Water Extraction										
Calibration Check (ED72003-CCV1)				Prepared & Analyzed: 04/18/07						
pH	7.07		pH Units	7.00		101	97.5-102.5			
Duplicate (ED72003-DUP1)		**Source: 7D16030-01**		Prepared & Analyzed: 04/18/07						
pH	7.67	0.10	pH Units		7.70			0.390	20	
Batch ED72004 - General Preparation (WetChem)										
Calibration Check (ED72004-CCV1)				Prepared & Analyzed: 04/18/07						
pH	7.07		pH Units	7.00		101	97.5-102.5			
Duplicate (ED72004-DUP1)		**Source: 7D13011-01**		Prepared & Analyzed: 04/18/07						
pH	9.28		pH Units		9.31			0.323	20	

Southern Union Gas Services- Jal	Project: Jal #3 Plant	Fax: 505-395-2326
P.O. Box 1226	Project Number: None Given	
Jal NM, 88252	Project Manager: Tony Savoie	

TCLP Metals 1311 by EPA / Standard Methods - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch ED72510 - EPA 1311/3005										
Blank (ED72510-BLK1)				Prepared: 04/23/07 Analyzed: 04/25/07						
Chromium	ND	0.000975	mg/L							
Arsenic	ND	0.00170	"							
Selenium	ND	0.00300	"							
Silver	ND	0.000405	"							
Cadmium	ND	0.000692	"							
Barium	ND	0.000489	"							
Lead	ND	0.000296	"							
LCS (ED72510-BS1)				Prepared: 04/23/07 Analyzed: 04/25/07						
Chromium	0.188	0.000975	mg/L	0.200		94.0	85-115			
Arsenic	0.797	0.00170	"	0.800		99.6	85-115			
Selenium	0.427	0.00300	"	0.400		107	85-115			
Silver	0.114	0.000405	"	0.100		114	85-115			
Cadmium	0.199	0.000692	"	0.200		99.5	85-115			
Barium	0.185	0.000489	"	0.200		92.5	85-115			
Lead	1.06	0.000296	"	1.10		96.4	85-115			
LCS Dup (ED72510-BSD1)				Prepared: 04/23/07 Analyzed: 04/25/07						
Chromium	0.186	0.000975	mg/L	0.200		93.0	85-115	1.07	20	
Arsenic	0.792	0.00170	"	0.800		99.0	85-115	0.629	20	
Selenium	0.426	0.00300	"	0.400		106	85-115	0.234	20	
Silver	0.115	0.000405	"	0.100		115	85-115	0.873	20	
Cadmium	0.199	0.000692	"	0.200		99.5	85-115	0.00	20	
Barium	0.189	0.000489	"	0.200		94.5	85-115	2.14	20	
Lead	1.06	0.000296	"	1.10		96.4	85-115	0.00	20	
Calibration Check (ED72510-CCV1)				Prepared: 04/23/07 Analyzed: 04/25/07						
Chromium	0.0538		mg/L	0.0500		108	90-110			
Arsenic	0.0550		"	0.0500		110	90-110			
Selenium	0.0550		"	0.0500		110	90-110			
Silver	0.0550		"	0.0500		110	90-110			
Cadmium	0.0514		"	0.0500		103	90-110			
Barium	0.0451		"	0.0500		90.2	90-110			
Lead	0.0504		"	0.0500		101	90-110			

Southern Union Gas Services- Jal	Project: Jal #3 Plant	Fax: 505-395-2326
P.O. Box 1226	Project Number: None Given	
Jal NM, 88252	Project Manager: Tony Savoie	

TCLP Metals 1311 by EPA / Standard Methods - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch ED72510 - EPA 1311/3005										
Matrix Spike (ED72510-MS1)	**Source: 7D13001-11**			Prepared: 04/23/07 Analyzed: 04/25/07						
Chromium	0.179	0.00975	mg/L	0.200	0.00584	86.6	75-125			
Arsenic	0.778	0.0170	"	0.800	0.0183	95.0	75-125			
Selenium	0.399	0.0300	"	0.400	0.0110	97.0	75-125			
Silver	0.143	0.00405	"	0.100	0.00285	140	75-125			MS-5
Cadmium	0.181	0.00692	"	0.200	0.00330	88.8	75-125			
Barium	0.806	0.00489	"	0.200	0.627	89.5	75-125			
Lead	0.951	0.00296	"	1.10	0.00271	86.2	75-125			
Matrix Spike Dup (ED72510-MSD1)	**Source: 7D13001-11**			Prepared: 04/23/07 Analyzed: 04/25/07						
Chromium	0.183	0.00975	mg/L	0.200	0.00584	88.6	75-125	2.21	20	
Arsenic	0.802	0.0170	"	0.800	0.0183	98.0	75-125	3.04	20	
Selenium	0.409	0.0300	"	0.400	0.0110	99.5	75-125	2.48	20	
Silver	0.146	0.00405	"	0.100	0.00285	143	75-125	2.08	20	MS-5
Cadmium	0.183	0.00692	"	0.200	0.00330	89.8	75-125	1.10	20	
Barium	0.809	0.00489	"	0.200	0.627	91.0	75-125	0.372	20	
Lead	0.974	0.00296	"	1.10	0.00271	88.3	75-125	2.39	20	
Batch ED72511 - EPA 1311/3005										
Blank (ED72511-BLK1)				Prepared: 04/23/07 Analyzed: 04/25/07						
Chromium	ND	0.000975	mg/L							
Arsenic	ND	0.00170	"							
Selenium	ND	0.00300	"							
Silver	ND	0.000405	"							
Cadmium	ND	0.000692	"							
Barium	ND	0.000489	"							
Lead	ND	0.000296	"							

Southern Union Gas Services- Jal	Project: Jal #3 Plant	Fax: 505-395-2326
P.O. Box 1226	Project Number: None Given	
Jal NM, 88252	Project Manager: Tony Savoie	

TCLP Metals 1311 by EPA / Standard Methods - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch ED72511 - EPA 1311/3005										
LCS (ED72511-BS1)				Prepared: 04/23/07 Analyzed: 04/25/07						
Chromium	0.188	0.000975	mg/L	0.200		94.0	85-115			
Arsenic	0.797	0.00170	"	0.800		99.6	85-115			
Selenium	0.427	0.00300	"	0.400		107	85-115			
Silver	0.114	0.000405	"	0.100		114	85-115			
Cadmium	0.199	0.000692	"	0.200		99.5	85-115			
Barium	0.184	0.000489	"	0.200		92.0	85-115			
Lead	1.06	0.000296	"	1.10		96.4	85-115			
LCS Dup (ED72511-BSD1)				Prepared: 04/23/07 Analyzed: 04/25/07						
Chromium	0.186	0.000975	mg/L	0.200		93.0	85-115	1.07	20	
Arsenic	0.792	0.00170	"	0.800		99.0	85-115	0.629	20	
Selenium	0.427	0.00300	"	0.400		107	85-115	0.00	20	
Silver	0.115	0.000405	"	0.100		115	85-115	0.873	20	
Cadmium	0.199	0.000692	"	0.200		99.5	85-115	0.00	20	
Barium	0.189	0.000489	"	0.200		94.5	85-115	2.68	20	
Lead	1.06	0.000296	"	1.10		96.4	85-115	0.00	20	
Calibration Check (ED72511-CCV1)				Prepared: 04/23/07 Analyzed: 04/25/07						
Chromium	0.0538		mg/L	0.0500		108	90-110			
Arsenic	0.0550		"	0.0500		110	90-110			
Selenium	0.0550		"	0.0500		110	90-110			
Silver	0.0550		"	0.0500		110	90-110			
Cadmium	0.0514		"	0.0500		103	90-110			
Barium	0.0451		"	0.0500		90.2	90-110			
Lead	0.0504		"	0.0500		101	90-110			
Matrix Spike (ED72511-MS1)	**Source: 7D19001-01**			Prepared: 04/23/07 Analyzed: 04/25/07						
Chromium	0.181	0.00975	mg/L	0.200	0.0110	85.0	75-125			
Arsenic	0.801	0.0170	"	0.800	0.0983	87.8	75-125			
Selenium	0.423	0.0300	"	0.400	0.0489	93.5	75-125			
Silver	0.0912	0.00405	"	0.100	0.0154	75.8	75-125			
Cadmium	0.182	0.00692	"	0.200	0.00276	89.6	75-125			
Barium	0.339	0.00489	"	0.200	0.176	81.5	75-125			
Lead	0.956	0.00296	"	1.10	0.00526	86.4	75-125			

Southern Union Gas Services- Jal	Project: Jal #3 Plant	Fax: 505-395-2326
P.O. Box 1226	Project Number: None Given	
Jal NM, 88252	Project Manager: Tony Savoie	

TCLP Metals 1311 by EPA / Standard Methods - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch ED72511 - EPA 1311/3005										
Matrix Spike Dup (ED72511-MSD1)	**Source: 7D19001-01**			Prepared: 04/23/07 Analyzed: 04/25/07						
Chromium	0.178	0.00975	mg/L	0.200	0.0110	83.5	75-125	1.67	20	
Arsenic	0.802	0.0170	"	0.800	0.0983	88.0	75-125	0.125	20	
Selenium	0.417	0.0300	"	0.400	0.0489	92.0	75-125	1.43	20	
Silver	0.0910	0.00405	"	0.100	0.0154	75.6	75-125	0.220	20	
Cadmium	0.182	0.00692	"	0.200	0.00276	89.6	75-125	0.00	20	
Barium	0.342	0.00489	"	0.200	0.176	83.0	75-125	0.881	20	
Lead	0.958	0.00296	"	1.10	0.00526	86.6	75-125	0.209	20	
Batch ED72515 - EPA 1311/7470A										
Blank (ED72515-BLK1)				Prepared & Analyzed: 04/25/07						
Mercury	ND	0.000250	mg/L							
LCS (ED72515-BS1)				Prepared & Analyzed: 04/25/07						
Mercury	0.00102	0.000250	mg/L	0.00100		102	85-115			
LCS Dup (ED72515-BSD1)				Prepared & Analyzed: 04/25/07						
Mercury	0.000990	0.000250	mg/L	0.00100		99.0	85-115	2.99	20	
Calibration Check (ED72515-CCV1)				Prepared & Analyzed: 04/25/07						
Mercury	0.000910		mg/L	0.00100		91.0	90-110			
Matrix Spike (ED72515-MS1)	**Source: 7D13001-11**			Prepared & Analyzed: 04/25/07						
Mercury	0.00113	0.000250	mg/L	0.00100	ND	113	75-125			
Batch ED72517 - EPA 1311/7470A										
Blank (ED72517-BLK1)				Prepared & Analyzed: 04/25/07						
Mercury	ND	0.000250	mg/L							

Southern Union Gas Services- Jal	Project: Jal #3 Plant	Fax: 505-395-2326
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Jal NM, 88252	Project Manager: Tony Savoie	

TCLP Metals 1311 by EPA / Standard Methods - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch ED72517 - EPA 1311/7470A										
LCS (ED72517-BS1)				Prepared & Analyzed: 04/25/07						
Mercury	0.00102	0.000250	mg/L	0.00100		102	85-115			
LCS Dup (ED72517-BSD1)				Prepared & Analyzed: 04/25/07						
Mercury	0.000990	0.000250	mg/L	0.00100		99.0	85-115	2.99	20	
Calibration Check (ED72517-CCV1)				Prepared & Analyzed: 04/25/07						
Mercury	0.000910		mg/L	0.00100		91.0	90-110			
Matrix Spike (ED72517-MS1)		**Source: 7D19001-01**		Prepared & Analyzed: 04/25/07						
Mercury	0.000350	0.000250	mg/L	0.00100	ND	35.0	75-125			QM-10

Southern Union Gas Services- Jal	Project: Jal #3 Plant	Fax: 505-395-2326
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Jal NM, 88252	Project Manager: Tony Savoie	

TCLP Volatile Halocarbons by EPA Method 1311/8021B - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch ED72310 - EPA GC 1311										
Blank (ED72310-BLK1)				Prepared: 04/23/07 Analyzed: 04/24/07						
Benzene	ND	0.00100	mg/L							
Toluene	ND	0.00100	"							
Ethylbenzene	ND	0.00100	"							
Xylene (p/m)	ND	0.00100	"							
Xylene (o)	ND	0.00100	"							
Surrogate: a,a,a-Trifluorotoluene	*53.3*		*ug/kg*	*50.0*		*107*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*48.3*		"	*50.0*		*96.6*	*80-120*			
LCS (ED72310-BS1)				Prepared: 04/23/07 Analyzed: 04/24/07						
Benzene	0.0559	0.00100	mg/L	0.0500		112	80-120			
Toluene	0.0565	0.00100	"	0.0500		113	80-120			
Ethylbenzene	0.0597	0.00100	"	0.0500		119	80-120			
Xylene (p/m)	0.108	0.00100	"	0.100		108	80-120			
Xylene (o)	0.0590	0.00100	"	0.0500		118	80-120			
Surrogate: a,a,a-Trifluorotoluene	*55.0*		*ug/kg*	*50.0*		*110*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*54.5*		"	*50.0*		*109*	*80-120*			
Calibration Check (ED72310-CCV1)				Prepared: 04/23/07 Analyzed: 04/24/07						
Benzene	59.3		ug/kg	50.0		119	80-120			
Toluene	59.1		"	50.0		118	80-120			
Ethylbenzene	56.5		"	50.0		113	80-120			
Xylene (p/m)	113		"	100		113	80-120			
Xylene (o)	59.4		"	50.0		119	80-120			
Surrogate: a,a,a-Trifluorotoluene	*55.6*		"	*50.0*		*111*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*58.6*		"	*50.0*		*117*	*80-120*			
Matrix Spike (ED72310-MS1)	**Source: 7D13011-01**			Prepared: 04/23/07 Analyzed: 04/24/07						
Benzene	0.0505	0.00100	mg/L	0.0500	0.00159	97.8	80-120			
Toluene	0.0533	0.00100	"	0.0500	0.00131	104	80-120			
Ethylbenzene	0.0561	0.00100	"	0.0500	0.000752	111	80-120			
Xylene (p/m)	0.107	0.00100	"	0.100	ND	107	80-120			
Xylene (o)	0.0564	0.00100	"	0.0500	ND	113	80-120			
Surrogate: a,a,a-Trifluorotoluene	*51.8*		*ug/kg*	*50.0*		*104*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*55.2*		"	*50.0*		*110*	*80-120*			

Southern Union Gas Services- Jal	Project: Jal #3 Plant	Fax: 505-395-2326
P.O. Box 1226	Project Number: None Given	
Jal NM, 88252	Project Manager: Tony Savoie	

TCLP Volatile Halocarbons by EPA Method 1311/8021B - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch ED72310 - EPA GC 1311										
Matrix Spike Dup (ED72310-MSD1)	**Source: 7D13011-01**			Prepared: 04/23/07 Analyzed: 04/24/07						
Benzene	0.0509	0.00100	mg/L	0.0500	0.00159	98.6	80-120	0.815	20	
Toluene	0.0563	0.00100	"	0.0500	0.00131	110	80-120	5.61	20	
Ethylbenzene	0.0583	0.00100	"	0.0500	0.000752	115	80-120	3.54	20	
Xylene (p/m)	0.111	0.00100	"	0.100	ND	111	80-120	3.67	20	
Xylene (o)	0.0590	0.00100	"	0.0500	ND	118	80-120	4.33	20	
Surrogate: a,a,a-Trifluorotoluene	*55.3*		*ug/kg*	*50.0*		*111*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*57.8*		*"*	*50.0*		*116*	*80-120*			

Southern Union Gas Services- Jal	Project: Jal #3 Plant	Fax: 505-395-2326
P.O. Box 1226	Project Number: None Given	
Jal NM, 88252	Project Manager: Tony Savoie	

Notes and Definitions

S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
QM-10	LCS/LCSD were analyzed in place of MS/MSD.
MS-5	Matrix spike and/or matrix spike duplicate outside 75-125% acceptance limits. Serial dilution (x5) outside 10% RPD limits. Post spike on serial dilution outside 75-125% recovery limits.
J	Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
LCS	Laboratory Control Spike
MS	Matrix Spike
Dup	Duplicate

Report Approved By: Brent Barron Date: 4/26/2007

Brent Barron, Laboratory Director/Corp. Technical Director
Celey D. Keene, Org. Tech Director
Raland K. Tuttle, Laboratory Consultant

James Mathis, QA/QC Officer
Jeanne Mc Murrey, Inorg. Tech Director

Analytical Report 280755

for

Southern Union Gas Services-Jal

Project Manager: Tony Savoie

Jal #3 Plant

20-APR-07

12600 West I-20 East Odessa, Texas 79765

NELAC certification numbers:
Houston, TX E87603 - Miami, FL E86678 - Tampa, FL E86675

Houston - Dallas - San Antonio - Austin - Tampa - Miami - Latin America

20-APR-07

Project Manager: **Tony Savoie**
Southern Union Gas Services-Jal
610 Commerce
Jal, NM 88252

Reference: XENCO Report No: **280755**
Jal #3 Plant
Project Address: North of Jal

Tony Savoie:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 280755. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. Estimation of data uncertainty for this report is found in the quality control section of this report unless otherwise noted. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 280755 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Brent Barron
Odessa Laboratory Director

Certificate of Analysis Summary 280755

Southern Union Gas Services-Jal, Jal, NM

Project Name: Jal #3 Plant

Project Id:
Contact: Tony Savoie
Project Location: North of Jal

Date Received in Lab: Fri Apr-13-07 01:08 pm
Report Date: 20-APR-07
Project Manager: Brent Barron, II

Analysis Requested							
	Lab Id:	280755-001		280755-002			
	Field Id:	Engine Room S Floor Drain		Engine Room S Floor Drain			
	Depth:						
	Matrix:	OIL		WATER			
	Sampled:	Apr-12-07 14:05		Apr-12-07 14:05			
Reactive Cyanide by EPA 9010	*Extracted:*						
	Analyzed:	Apr-16-07 14:00		Apr-16-07 14:05			
	Units/RL:	mg/L	RL	mg/L	RL		
Cyanide		ND	0.200	ND	0.200		
Reactive Sulfide by SW 9030B	*Extracted:*						
	Analyzed:	Apr-16-07 13:25		Apr-16-07 13:30			
	Units/RL:	mg/L	RL	mg/L	RL		
Sulfide		ND	5.00	ND	5.00		

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Brent Barron
Odessa Laboratory Director

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to effect the recovery of the spike concentration. This condition could also effect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the MQL and above the SQL.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

Blank Spike Recovery

Project Name: Jal #3 Plant

Work Order #: 280755 **Project ID:**

Lab Batch #: 695085 **Sample:** 695085-1-BKS **Matrix:** Water

Date Analyzed: 04/16/2007 **Date Prepared:** 04/16/2007 **Analyst:** MAB

Reporting Units: mg/L **Batch #:** 1

	BLANK /BLANK SPIKE RECOVERY STUDY					
Reactive Cyanide by EPA 9010 **Analytes**	**Blank Result [A]**	**Spike Added [B]**	**Blank Spike Result [C]**	**Blank Spike %R [D]**	**Control Limits %R**	**Flags**
Cyanide	ND	0.400	0.339	85	80-120	

Blank Spike Recovery [D] = 100*[C]/[B]
All results are based on MDL and validated for QC purposes.

BS / BSD Recoveries

Project Name: Jal #3 Plant

Work Order #: 280755 **Project ID:**

Analyst: MAB **Date Prepared:** 04/16/2007 **Date Analyzed:** 04/16/2007

Lab Batch ID: 695089 **Sample:** 695089-1-BKS **Batch #:** 1 **Matrix:** Water

Units: mg/L

Reactive Sulfide by SW 9030B Analytes	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY										
	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Sulfide	ND	791	736	93	791.0	696	88	6	60-120	20	

Relative Percent Difference RPD = 200*|(D-F)/(D+F)|
Blank Spike Recovery [D] = 100*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100*(F)/[E]
All results are based on MDL and Validated for QC Purposes

Sample Duplicate Recovery

Project Name: Jal #3 Plant

Work Order # 280755

Lab Batch #: 695085 **Project ID:**

Date Analyzed: 04/16/2007 **Date Prepared:** 04/16/2007 **Analyst:** MAB

QC- Sample ID: 280752-001 D **Batch #:** 1 **Matrix:** Water

Reporting Units: mg/L

Reactive Cyanide by EPA 9010	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Cyanide	ND	ND	NC	20	

Lab Batch #: 695089

Date Analyzed: 04/16/2007 **Date Prepared:** 04/16/2007 **Analyst:** MAB

QC- Sample ID: 280752-001 D **Batch #:** 1 **Matrix:** Water

Reporting Units: mg/L

Reactive Sulfide by SW 9030B	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Sulfide	ND	ND	NC	20	

Spike Relative Difference RPD 200 * | (B-A)/(B+A) |
All Results are based on MDL and validated for QC purposes.

Environmental Lab of Texas

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CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

12600 West I-20 East
Odessa, Texas 79765

Phone: 432-563-1800
Fax: 432-563-1713

Project Manager: Tony Savoie

Company Name: Southern Union Gas Services

Company Address: P.O. Box 1226

City/State/Zip: Jal, N.M. 88252

Telephone No: 505-631-9376 Fax No:

Sampler Signature: Tony Savoie e-mail:

Project Name: Jal # 3 Plant

Project #:

Project Loc: North of Jal

PO #:

Report Format: ☒ Standard ☐ TRRP ☐ NPDES

4 x 40 ml vials
2 x 500 poly

(lab use only)
ORDER #: 280755

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total # of Containers	Preservation & # of Containers: Ice	HNO3	HCl	H2SO4	NaOH	Na2S2O3	None	Other (Specify)	Matrix: DW=Drinking Water SL=Sludge GW=Groundwater S=Soil/Solid NP=Non-Potable Specify Other	Analyze For: TPH: 418.1	TPH: 8015M TX 1005 TX 1006	8015B	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, Alkalinity)	SAR / ESP / CEC	TCLP: Metals: As Ag Ba Cd Cr Pb Hg Se	TOTAL: Volatiles	Semivolatiles	BTEX 8021B/5030 or BTEX 8260	RCI	N.O.R.M.	RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT
01	Engine Room "S" Floor Drain			4/12/07	1405		6	✓								Oil & Water						✓				✓	✓			✓
02	" " "			"	"			✓								Water						✓				✓	✓			✓

Special Instructions:

Relinquished by:	Date	Time	Received by:	Date	Time
Tony Savoie	4/13/07	11:42			
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by ELOT: Carrie Kelly	4/13/07	11:42

Laboratory Comments:

Sample Containers Intact?	Y	N
VOCs Free of Headspace?	Y	N
Labels on container(s)	Y	N
Custody seals on container(s)	Y	N
Custody seals on cooler(s)	Y	N
Sample Hand Delivered by Sampler/Client Rep.?	Y	N

by Courier? UPS DHL FedEx Lone Star

Temperature Upon Receipt: 0.5 °C

Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

Client: SUGS

Date/ Time: 4/13/07

Lab ID #: 7D13013

Initials: CL

Sample Receipt Checklist

				Client Initials
#1	Temperature of container/ cooler?	Yes	No	0.5 °C	
#2	Shipping container in good condition?	~~Yes~~	No		
#3	Custody Seals intact on shipping container/ cooler?	Yes	No	Not Present	
#4	Custody Seals intact on sample bottles/ container?	Yes	No	Not Present	
#5	Chain of Custody present?	~~Yes~~	No		
#6	Sample instructions complete of Chain of Custody?	~~Yes~~	No		
#7	Chain of Custody signed when relinquished/ received?	~~Yes~~	No		
#8	Chain of Custody agrees with sample label(s)?	~~Yes~~	No	ID written on Cont./ Lid	
#9	Container label(s) legible and intact?	~~Yes~~	No	Not Applicable	
#10	Sample matrix/ properties agree with Chain of Custody?	~~Yes~~	No		
#11	Containers supplied by ELOT?	~~Yes~~	No		
#12	Samples in proper container/ bottle?	~~Yes~~	No	See Below	
#13	Samples properly preserved?	~~Yes~~	No	See Below	
#14	Sample bottles intact?	~~Yes~~	No		
#15	Preservations documented on Chain of Custody?	~~Yes~~	No		
#16	Containers documented on Chain of Custody?	~~Yes~~	No		
#17	Sufficient sample amount for indicated test(s)?	~~Yes~~	No	See Below	
#18	All samples received within sufficient hold time?	~~Yes~~	No	See Below	
#19	Subcontract of sample(s)?	Yes	No	Not Applicable	
#20	VOC samples have zero headspace?	~~Yes~~	No	Not Applicable	

Variance Documentation

Contact: _____ Contacted by: _____ Date/ Time: _____

Regarding: _____

Corrective Action Taken: _____

Check all that Apply:

- ☐ See attached e-mail/ fax
- ☐ Client understands and would like to proceed with analysis
- ☐ Cooling process had begun shortly after sampling event

Hazardous Waste Determination

Date Sampled	4/19/2004
location	Jal #3 Engine Sumps
Report #	4D19002
Matrix	Sludge
Destination: Disposal well at Jal #3 Plant	
Volume transported: N/A	
Date:	

Toxicity	Analytical mg/kg	Reg limit (TCLP) mg/kg	Determination
Benzene	ND	0.5	Non-hazardous
Mercury	ND	0.2	Non-hazardous
Arsenic	0.0347	5.0	Non-hazardous
Barium	0.0302	100.0	Non-hazardous
Cadmium	ND	1.0	Non-hazardous
Chromium	0.0409	5.0	Non-hazardous
Lead	0.0107	5.0	Non-hazardous
Selenium	0.0216	1.0	Non-hazardous
Silver	0.00600	5.0	Non-hazardous
Reactive			
Cyanide	ND	250.0	Non-hazardous
pH	4.61 pH units	<2 or >12.5 pH units	Non-hazardous
Sulfide	6.86	500.0	Non-hazardous
Ignitability	>100 deg C	<60 deg C	Non-hazardous

ENVIRONMENTAL LAB OF

12600 West I-20 East - Odessa, Texas 79765

Analytical Report

Prepared for:

Tony Savoie

Sid Richardson Energy Service Co.

P.O. Box 1226

Jal, NM 88252

Project: Jal #3 Plant

Project Number: None Given

Location: 3 mi North of Jal, NM

Lab Order Number: 4D19002

Report Date: 04/20/04

Sid Richardson Energy Service Co.	Project: Jal #3 Plant	Fax: 505-395-2326
P.O. Box 1226	Project Number: None Given	**Reported:**
NM, 88252	Project Manager: Tony Savoie	04/20/04 15:08

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Composite Engine Room Sumps (3)	4D19002-01	Sludge	04/19/04 08:30	04/19/04 11:20

12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

Sid Richardson Energy Service Co.	Project: Jal #3 Plant	Fax: 505-395-2326
P.O. Box 1226	Project Number: None Given	**Reported:**
NM, 88252	Project Manager: Tony Savoie	04/20/04 15:08

Organics by GC

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Composite Engine Room Sumps (3) (4D19002-01) Sludge									
Benzene	ND	0.0100	mg/L	10	ED42005	04/20/04	04/20/04	EPA 8021B	
Toluene	**J [0.00665]**	0.0100	"	"	"	"	"	"	J
Ethylbenzene	**0.0279**	0.0100	"	"	"	"	"	"	
Xylene (p/m)	**0.535**	0.0100	"	"	"	"	"	"	
Xylene (o)	**0.126**	0.0100	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*90.5 %*		*80-120*		"	"	"	
Surrogate: 4-Bromofluorobenzene		*81.1 %*		*80-120*		"	"	"	

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Sid Richardson Energy Service Co.	Project: Jal #3 Plant	Fax: 505-395-2326
O. Box 1226	Project Number: None Given	**Reported:**
NM, 88252	Project Manager: Tony Savoie	04/20/04 15:08

General Chemistry Parameters by EPA / Standard Methods

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Composite Engine Room Sumps (3) (4D19002-01) Sludge									
Reactive Cyanide	ND	0.0900	mg/kg	1	ED42002	04/19/04	04/19/04	SW846 9010B	
Ignitability by Flashpoint	>100		°C	"	ED41908	04/19/04	04/19/04	EPA 1010	
pH	**4.61**		pH Units	"	ED41911	04/19/04	04/19/04	EPA 9045B	
Reactive Sulfide	**6.86**	5.00	mg/kg	"	ED42003	04/19/04	04/19/04	SW846 9030B	

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Sid Richardson Energy Service Co.	Project: Jal #3 Plant	Fax: 505-395-2326
P.O. Box 1226	Project Number: None Given	**Reported:**
NM, 88252	Project Manager: Tony Savoie	04/20/04 15:08

TCLP Metals 1311 by EPA / Standard Methods

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Extracted	Prepared	Analyzed	Method	Notes
Composite Engine Room Sumps (3) (4D19002-01) Sludge										
Mercury	ND	0.000500	mg/L	1	ED42009	04/19/04 TCLP	04/20/04	04/20/04	EPA 7470A	
Arsenic	**0.0347**	0.00800	"	"	ED42008	"	04/20/04	04/20/04	EPA 6010B	
Barium	**0.0302**	0.00100	"	"	"	"	"	"	"	
Cadmium	ND	0.00100	"	"	"	"	"	"	"	
Chromium	**0.0409**	0.00500	"	"	"	"	"	"	"	
Lead	**J [0.0107]**	0.0110	"	"	"	"	"	"	"	J
Selenium	**0.0216**	0.00400	"	"	"	"	"	"	"	
Silver	**0.00600**	0.00500	"	"	"	"	"	"	"	

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Quality Assurance Review

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Sid Richardson Energy Service Co.	Project: Jal #3 Plant	Fax: 505-395-2326
P.O. Box 1226	Project Number: None Given	**Reported:**
Jal NM, 88252	Project Manager: Tony Savoie	04/20/04 15:08

Organics by GC - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch ED42005 - EPA 5030C (GC)										
Blank (ED42005-BLK1)				Prepared & Analyzed: 04/20/04						
Benzene	ND	0.0250	mg/L							
Toluene	ND	0.0250	"							
Ethylbenzene	ND	0.0250	"							
Xylene (p/m)	ND	0.0250	"							
Xylene (o)	ND	0.0250	"							
Surrogate: a,a,a-Trifluorotoluene	*92.0*		*ug/l*	*100*		*92.0*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*84.4*		*"*	*100*		*84.4*	*80-120*			
LCS (ED42005-BS1)				Prepared & Analyzed: 04/20/04						
Benzene	88.3		ug/l	100		88.3	80-120			
Toluene	84.3		"	100		84.3	80-120			
Ethylbenzene	80.1		"	100		80.1	80-120			
Xylene (p/m)	160		"	200		80.0	80-120			
Xylene (o)	81.2		"	100		81.2	80-120			
Surrogate: a,a,a-Trifluorotoluene	*89.1*		*"*	*100*		*89.1*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*89.0*		*"*	*100*		*89.0*	*80-120*			
Dup (ED42005-BSD1)				Prepared & Analyzed: 04/20/04						
Benzene	92.6		ug/l	100		92.6	80-120	4.75	20	
Toluene	88.1		"	100		88.1	80-120	4.41	20	
Ethylbenzene	83.6		"	100		83.6	80-120	4.28	20	
Xylene (p/m)	162		"	200		81.0	80-120	1.24	20	
Xylene (o)	81.6		"	100		81.6	80-120	0.491	20	
Surrogate: a,a,a-Trifluorotoluene	*93.7*		*"*	*100*		*93.7*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*92.6*		*"*	*100*		*92.6*	*80-120*			
Calibration Check (ED42005-CCV1)				Prepared & Analyzed: 04/20/04						
Benzene	85.4		ug/l	100		85.4	80-120			
Toluene	90.2		"	100		90.2	80-120			
Ethylbenzene	89.8		"	100		89.8	80-120			
Xylene (p/m)	176		"	200		88.0	80-120			
Xylene (o)	83.3		"	100		83.3	80-120			
Surrogate: a,a,a-Trifluorotoluene	*105*		*"*	*100*		*105*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*96.7*		*"*	*100*		*96.7*	*80-120*			

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The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory.. This analytical report must be reproduced in its entirety, with written approval of Environmental Lab of Texas.

Quality Assurance Review

12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

General Chemistry Parameters by EPA / Standard Methods - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch ED41908 - General Preparation (WetChem)										
Duplicate (ED41908-DUP1)		**Source: 4D19002-01**		Prepared & Analyzed: 04/19/04						
Ignitability by Flashpoint	>100		°C		0.00				20	
Batch ED41911 - General Preparation (WetChem)										
Calibration Check (ED41911-CCV1)				Prepared & Analyzed: 04/19/04						
pH	4.68		pH Units	4.00		117	80-120			
Duplicate (ED41911-DUP1)		**Source: 4D19002-01**		Prepared & Analyzed: 04/19/04						
pH	4.57		pH Units		4.61			0.871	20	
Batch ED42002 - 9010B SW846										
Blank (ED42002-BLK1)				Prepared & Analyzed: 04/19/04						
Reactive Cyanide	ND	0.0900	mg/kg							
LCS (ED42002-BS1)				Prepared & Analyzed: 04/19/04						
Reactive Cyanide	0.105	0.0900	mg/kg	0.100		105	50-150			
LCS Dup (ED42002-BSD1)				Prepared & Analyzed: 04/19/04						
Reactive Cyanide	0.111	0.0900	mg/kg	0.100		111	50-150	5.56	20	
Calibration Check (ED42002-CCV1)				Prepared & Analyzed: 04/19/04						
Reactive Cyanide	1.15		mg/kg	1.00		115	80-120			
Duplicate (ED42002-DUP1)		**Source: 4D19002-01**		Prepared & Analyzed: 04/19/04						
Reactive Cyanide	0.00	0.0900	mg/kg		0.00				20	

Sid Richardson Energy Service Co.	Project: Jal #3 Plant	Fax: 505-395-2326
P.O. Box 1226	Project Number: None Given	**Reported:**
NM, 88252	Project Manager: Tony Savoie	04/20/04 15:08

General Chemistry Parameters by EPA / Standard Methods - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch ED42003 - 9030B SW846										
Blank (ED42003-BLK1)				Prepared & Analyzed: 04/19/04						
Reactive Sulfide	ND	5.00	mg/kg							
LCS (ED42003-BS1)				Prepared & Analyzed: 04/19/04						
Reactive Sulfide	21.0		mg/kg	22.2		94.6	50-150			
LCS Dup (ED42003-BSD1)				Prepared & Analyzed: 04/19/04						
Reactive Sulfide	21.3		mg/kg	22.2		95.9	50-150	1.42	20	
Calibration Check (ED42003-CCV1)				Prepared & Analyzed: 04/19/04						
Reactive Sulfide	690		mg/kg	680		101	80-120			
Duplicate (ED42003-DUP1)		**Source: 4D19002-01**		Prepared & Analyzed: 04/19/04						
Reactive Sulfide	6.93	5.00	mg/kg		6.86			1.02	20	

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The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory.. This analytical report must be reproduced in its entirety, with written approval of Environmental Lab of Texas.

Quality Assurance Review

12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

TCLP Metals 1311 by EPA / Standard Methods - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch ED42008 - EPA 1311/3005										
Blank (ED42008-BLK1)				Prepared & Analyzed: 04/20/04						
Arsenic	ND	0.00800	mg/L							
Barium	ND	0.00100	"							
Cadmium	ND	0.00100	"							
Chromium	ND	0.00500	"							
Lead	ND	0.0110	"							
Selenium	ND	0.00400	"							
Silver	ND	0.00500	"							
LCS (ED42008-BS1)				Prepared & Analyzed: 04/20/04						
Arsenic	0.891	0.00800	mg/L	0.800		111	85-115			
Barium	0.218	0.00100	"	0.200		109	85-115			
Cadmium	0.218	0.00100	"	0.200		109	85-115			
Chromium	0.217	0.00500	"	0.200		108	85-115			
Lead	1.10	0.0110	"	1.10		100	85-115			
Selenium	0.431	0.00400	"	0.400		108	85-115			
Silver	0.100	0.00500	"	0.100		100	85-115			
LCS Dup (ED42008-BSD1)				Prepared & Analyzed: 04/20/04						
Arsenic	0.882	0.00800	mg/L	0.800		110	85-115	1.02	20	
Barium	0.217	0.00100	"	0.200		108	85-115	0.460	20	
Cadmium	0.216	0.00100	"	0.200		108	85-115	0.922	20	
Chromium	0.214	0.00500	"	0.200		107	85-115	1.39	20	
Lead	1.11	0.0110	"	1.10		101	85-115	0.905	20	
Selenium	0.406	0.00400	"	0.400		102	85-115	5.97	20	
Silver	0.103	0.00500	"	0.100		103	85-115	2.96	20	
Calibration Check (ED42008-CCV1)				Prepared & Analyzed: 04/20/04						
Arsenic	1.00		mg/L	1.00		100	90-110			
Barium	0.983		"	1.00		98.3	90-110			
Cadmium	0.975		"	1.00		97.5	90-110			
Chromium	0.976		"	1.00		97.6	90-110			
Lead	0.955		"	1.00		95.5	90-110			
Selenium	0.982		"	1.00		98.2	90-110			
Silver	0.456		"	0.500		91.2	90-110			

Sid Richardson Energy Service Co.	Project: Jal #3 Plant	Fax: 505-395-2326
P.O. Box 1226	Project Number: None Given	**Reported:**
NM, 88252	Project Manager: Tony Savoie	04/20/04 15:08

TCLP Metals 1311 by EPA / Standard Methods - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch ED42009 - EPA 1311/7470A										
Blank (ED42009-BLK1)				Prepared & Analyzed: 04/20/04						
Mercury	ND	0.000500	mg/L							
LCS (ED42009-BS1)				Prepared & Analyzed: 04/20/04						
Mercury	0.000920	0.000500	mg/L	0.00100		92.0	85-115			
LCS Dup (ED42009-BSD1)				Prepared & Analyzed: 04/20/04						
Mercury	0.000970	0.000500	mg/L	0.00100		97.0	85-115	5.29	20	
Calibration Check (ED42009-CCV1)				Prepared & Analyzed: 04/20/04						
Mercury	0.00103		mg/L	0.00100		103	90-110			

Environmental Lab of Texas

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory.. This analytical report must be reproduced in its entirety, with written approval of Environmental Lab of Texas.

Quality Assurance Review

12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

Notes and Definitions

J	Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

APPENDIX F
Jal # 3 SPCC Plan

SPILL PREVENTION, CONTROL, AND COUNTERMEASURE (SPCC) PLAN

PREPARED FOR:

Southern Union Gas Services

Jal No. 3 Plant

P.O. Box 1226

Jal, New Mexico 88252

(505) 395-2116

August 2007

NOTICE

The following Spill Prevention, Control, and Countermeasure Plan represents existing conditions at the subject facility at the time of the site visit on February 22, 2007. Minor changes to these conditions, which may or may not occur after the date of the site visit, will not be subsequently addressed unless such changes specifically affect storage, spill prevention, control, and/or spill countermeasures at the facility.

This facility is a part of a natural gas pipeline system subject to the authority and control of the United States Department of Transportation (DOT) as defined in the Memorandum of Understanding between the Secretary of Transportation and the Administrator of the EPA, dated November 24, 1971 (Appendix A of 40 CFR 112) and clarified in the policy memorandum between the two agencies in February 2000. To the extent that the operations at this facility are subject to the jurisdiction of the EPA, they are addressed in this plan.

PLAN AMENDMENT AND REVIEW (40 CFR 112.5)

This Plan shall be amended whenever there is a change in facility design, construction, operation or maintenance that materially affects the facility's potential for the discharge of oil into or upon a navigable water. A review and evaluation of this Plan shall be completed at least once every five years. As a result of this review and evaluation the reviewer will determine if the Plan must be amended. If amendment is required, the Plan shall be amended within six months of the review. The reviewer will sign the record on the following page.

RECORD OF PLAN REVIEWS & AMENDMENTS

"The review and evaluation of this SPCC Plan was completed by the undersigned on the date noted. Results of the review, including whether the Plan will be amended, is also noted."

Date of Review	Will Plan be Amended? If so, explain.	Title of Reviewer	Printed Name & Signature

CERTIFICATION STATEMENT (40 CFR 112.7)

The management of Southern Union Gas Services (Southern Union) is committed to the prevention of discharges of oil to navigable waters and the environment, and compliance with the regulatory standards for spill prevention, control, and countermeasures through regular review, updating, and implementation of this Spill Prevention, Control, and Countermeasure (SPCC) Plan for the Southern Union Gas Services Jal No. 3 Plant.

Signature: _____

Printed Name: _____

Title: _____

Company: Southern Union Gas Services

Date: _____

CERTIFICATION OF THE APPLICABILITY OF THE SUBSTANTIAL HARM CRITERIA

Facility Name: Southern Union Gas Services - Jal No. 3 Plant

Facility Address: 3.5 miles north of Jal, New Mexico off New Mexico Highway 18

1. Does the facility transfer oil over water to or from vessels and does the facility have a total oil storage capacity greater than or equal to 42,000 gallons? **Yes _ No X**

2. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and does the facility lack secondary containment that is sufficiently large to contain the capacity of the largest aboveground oil storage tank plus sufficient freeboard to allow for precipitation within any aboveground oil storage tank area? **Yes _ No X**

3. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and is the facility located at a distance (as calculated using the appropriate formula in Attachment C-III to Appendix C of 40 CFR 112 or a comparable formula) such that a discharge from the facility could cause injury to fish and wildlife and sensitive environments? For further description of fish and wildlife and sensitive environments, see Appendices I, II, and III to DOC/NOAA's "Guidance for Facility and Vessel Response Plans: Fish and Wildlife and Sensitive Environments" (see Appendix E to this part, section 10, for availability) and the applicable Area Contingency Plan. **Yes _ No X**

4. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and is the facility located at a distance (as calculated using the appropriate formula in Attachment C-III to Appendix C of 40 CFR 112 or a comparable formula) such that a discharge from the facility would shut down a public drinking water intake? **Yes _ No X**

5. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and has the facility experienced a reportable oil spill in an amount greater than or equal to 10,000 gallons within the last 5 years? **Yes _ No X**

Certification
I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document, and that based on my inquiry of those individuals responsible for obtaining this information, I believe that the submitted information is true, accurate, and complete.

Signature: _____

Printed Name: _____

Title: _____

Company: Southern Union Gas Services

Date: _____

PROFESSIONAL ENGINEER'S CERTIFICATION (40 CFR 112.3(d))

I hereby certify that I have visited and examined the facility and, being familiar with the provisions of 40 CFR 112, attest that this SPCC Plan has been prepared in accordance with good engineering practices, including consideration of applicable industry standards; that this Plan has been prepared in accordance with the requirements of 40 CFR 112 and that the Plan is adequate for the facility.

Signature: _____

Printed Name: Herbert A. Clark, Jr., P.E.

Title: Engineer

Company: Herbert A. Clark & Company

Date: _____

TABLE OF CONTENTS

1.0 INTRODUCTION

In December 1973, the United States Environmental Protection Agency (EPA) promulgated regulations that established procedures, methods, and equipment to prevent the discharge of oil from non-transportation related facilities into or upon the navigable waters of the United States. These regulations, which are codified in 40 CFR 112 and last revised in July 2002, were issued pursuant to Section 311(j)(1)(c)(1972) of the Federal Water Pollution Control Act (as amended by the Oil Pollution Act of 1990) and apply to facilities that store petroleum materials in excess of 1,320 gallons aboveground, and/or facilities that store greater than 42,000 gallons of petroleum materials underground. Since petroleum storage capacity at the Jal No. 3 Plant (facility) is greater than the volumes specified above, a Spill Prevention, Control, and Countermeasure (SPCC) Plan is required. See page v. for the Applicability of Substantial Harm Criteria.

Plan Revision (40 CFR 112.5)

This SPCC Plan must be amended before any change is made to the facility that affects the facility's potential for discharge of oil into the navigable waters of the United States. For example, the following (not an exclusive list) types of changes may warrant plan amendment:

- Commissioning / decommissioning of tanks
- Replacement, reconstruction and movement of tanks
- Construction and demolition that might alter the secondary containment
- Revision to standard operating and maintenance procedures
- In any event, this plan must be reviewed at least once every five years

2.0 FACILITY IDENTIFICATION

Facility Name:	Jal No. 3 Plant
Facility Owner:	Southern Union Gas Services
Location:	3.5 miles north of Jal, New Mexico off New Mexico Highway 18
Facility Size:	± 90 acres
Latitude & Longitude:	32° 10' 20" North & 103° 10' 25" West
Primary Emergency Coordinator:	Dwight Bennett Plant Manager (505) 395-2068 (office phone) (505) 390-6033 (cellular)
Secondary Emergency Coordinator:	Tony Savoie EH&S Compliance Coordinator (505) 395-2116 (office phone) (505) 631-9376 (cellular)
Navigable waterways that could be impacted:	Groundwater/Monument Draw

3.0 FACILITY DESCRIPTION (40 CFR 112.7(a)(3))

3.1 Summary Of Operations

3.1.1 Location and Size

The subject facility is located approximately 3.5 miles north of Jal, New Mexico off New Mexico Highway 18. The facility's latitude and longitude are 32° 10' 20" North and 103° 10' 25" West, respectively. Figure 1 shows the facility location. Figure 2 shows the facility site plan. The facility covers an area of approximately 90 acres.

3.1.2 Operations

The facility operates as a natural gas processing facility. The facility operates under Standard Industrial Classification (SIC) Code 1321 (natural gas liquids) and North American Industry Classification System (NAICS) Code 211112 (natural gas liquids extraction).

3.2 Surrounding Land Use

The predominant land use in the vicinity of the facility is oil and gas production and cattle ranching. (see Figure 1).

4.0 SPILL PREVENTION AND COUNTERMEASURES (40 CFR 112.7(a)(3))

4.1 Facility Oil Storage (40 CFR 112.7(a)(3)(i))

The facility stores gasoline, diesel fuel, lubricating oil, oily water, used oil, heating oil, petroleum naphtha, and pipeline condensate in aboveground tanks and containers within localized containment. A facility site plan, indicating the location of storage, loading and unloading areas and oil piping, is provided as Figure 2 in Appendix B. The type of oil and storage capacity of each container, as defined by 40 CFR 112.2, is detailed in Table 1 in Appendix A.

This facility also uses oil in equipment such as compressors, compressor engines and electrical equipment. However, the compression equipment using oil is under the jurisdiction of the United States Department of Transportation (DOT). To the extent that this facility uses oil in equipment not subject to DOT jurisdiction, it is discussed in this plan. Operating and electrical equipment are not considered to be bulk storage containers under 40 CFR 112.

4.2 Discharge Prevention Measures (40 CFR 112.7(a)(3)(ii) and (iii))

Preventive measures to minimize the potential for a spill resulting from storage or transfer operations at the facility are summarized in Sections 5, 9 and 10. Secondary Containment is described in Sections 5.2 and 9.2.

4.3 Countermeasures (40 CFR 112.7(a)(3)(iv))

Routine inspections, daily rounds by plant operators, and review of material inventory will be used to ascertain spills.

In the unlikely event of a spill, the facility will utilize and implement (as deemed necessary - dependent upon each specific spill) response procedures to immediately contain and control the spill. Detailed procedures for reporting spill events are provided in Appendix C. A plant representative will supervise all emergency response actions and will take appropriate action to contain, control, and clean up any spill that might occur. If a spill occurs, facility personnel are instructed to respond as follows:

- Protect yourself and use a safe approach during facility entry. Wear appropriate personal protective equipment.
- Identify hazards, including chemical characteristics, before entering the spill area.
- Secure the facility and keep unauthorized people away.
- Contain and clean up the spill.

- Immediately call the Plant Manager for further assistance, as needed.

4.4 Disposal Options (40 CFR 112.7(a)(3)(v))

The following options are available for disposal of recovered materials from oil spill events:

- Recovery of oil fraction of the spill for reuse or recycle
- Recovery of oil/water mixture for treatment at a publicly owned treatment works (POTW), subject to analytical testing and approval by treatment facility
- Recovery of contaminated soil and debris for landfill disposal, subject to analytical testing and approval
- In-situ bioremediation, subject to agency permitting and approval.

4.5 Contact List and Phone Numbers (40 CFR 112.7(a)(3)(vi))

A contact list and phone numbers for facility response coordinators, the National Response Center, clean-up contractors with which Southern Union has agreements, and federal, state and local agencies are located in Appendix C.

4.6 Discharge Reporting Procedures (40 CFR 112.7(a)(4))

Procedures for reporting discharges are located in Appendix C. The reporting form includes the information that must be transmitted at the time of a reportable spill event.

4.7 Emergency Procedures (40 CFR 112.7(a)(5))

Detailed emergency procedures and supporting materials are contained in Appendix C.

4.8 Equipment Failure Analysis (40 CFR 112.7(b))

Potential spills may be caused by valve failure, rupture or leakage, overflows, and spills during transfer operations. Because of the spill prevention measures described in Sections 5, 9 and 10, the probability of a spill or release of oil beyond the area of each loading point is low.

In the unlikely event of a release of oil from an aboveground tank or storage vessel during either dry weather or a storm event, the spill would be contained by containment systems or natural topography. Secondary containment systems were sized and designed to accommodate the volume of materials stored plus precipitation where applicable. The spill containment systems and natural drainage at the facility reduce the potential that an oil spill would leave the vicinity of the property line. The facility is continuously attended during truck loading operations, so it is unlikely that an equipment failure would result in the loss of the entire contents of the tank. The most likely equipment failure that would cause a catastrophic loss of oil is if the contents of a 5,000-gallon tank truck during loading and unloading were to leak. Such an event would remain in the vicinity of the loading point. If an oil release were to leave the vicinity of the property line, it would be more likely to reach groundwater before it would the nearest surface waters (Monument Draw).

4.9 General Facility Secondary Containment (40 CFR 112.7(c))

All equipment under the jurisdiction of EPA and the SPCC requirements is protected by localized secondary containment. Secondary containment is discussed in Sections 4.2, 5.2 and 9.2.

Loading and unloading of oil occurs at many areas of the site (detailed in Section 5.1 of this plan). Any releases from loading and unloading in one of these areas would remain in the vicinity of the loading point. Loading and unloading is discussed in more detail in Section 5.0.

4.10 Determination of Impracticability (40 CFR 112.7(d))

Structures and equipment described in this plan are sufficient to prevent oil from reaching navigable waters. Therefore, an oil spill contingency plan is not required.

4.11 Inspection and Recordkeeping (40 CFR 112.7(e))

An inspection checklist, provided in Appendix D, is used to document routine monthly inspections. These inspections are conducted on a frequency of at least once per calendar month and no more than 45 days shall elapse between routine monthly inspections. Any damage or other significant issues discovered during the inspection process is noted on the checklist. Completed checklists are kept on file at the facility, along with this SPCC Plan, for at least three years.

In addition to the documented inspections, frequent routine inspections are made by facility operating personnel. The scope of the inspections includes the following types of observations:

- **Tank Inspections** - Operating personnel will observe storage tank exteriors for signs of tank deterioration and observe for accumulation of oil inside containment areas. If necessary, repairs will be initiated immediately.

  In addition, aboveground storage tanks (including tank supports and foundations) are subject to periodic integrity testing, taking into account tank design and using such techniques as hydrostatic testing, visual inspections or a system of non-destructive shell thickness testing.

- **Secondary Containment Areas** - The secondary containment areas are inspected for signs of oil and failure. If signs of oil are detected, the source is investigated and cleanup is initiated. If signs of failure are detected, repair measures are initiated.

- **Drum Storage -** Drums are examined for signs of leaks and proper condition of the drum and bungs. If the drum appears to be corroded or leaking, the oil should be contained in the portable drum containment. Cleanup is initiated and the oil in the drum is transferred into another drum, if necessary.

- **Storage Tank Level Indicator Inspections –** The inspections include a visual check and testing of level indicators on oil storage tanks, where applicable. If signs of failure are detected, repair measures are initiated.

4.12 Personnel Training (40 CFR 112.7(f))

The Primary Emergency Coordinator listed in Section 2.0 of this plan is the person who is accountable for discharge prevention. The Primary Emergency Coordinator reports to facility management. Oil-handling personnel are trained on SPCC issues once each calendar year. New employees in positions with oil handling duties will be trained within the first twelve (12) months of employment. A training syllabus is located in Appendix E. It includes details of items the training should include. A summary of these items is listed in this section. The following issues and procedures are discussed during personnel training/briefing sessions:

- The requirements of this plan;
- Proper operation and maintenance of equipment to prevent oil discharges;
- Applicable pollution control laws, rules, and regulations (40 CFR 112);
- Proper handling of oils to prevent spills;
- Proper response to spills or releases, including personal protection, containment and cleanup procedures;
- Disposal methods for used oil and oil impacted materials;
- Reporting requirements for spills and releases; and
- Known spills or releases, tank or spill containment failures, or equipment malfunctions and precautionary methods that should be implemented to minimize the potential for their reoccurrence.

Training is documented on the form in Appendix E and will be maintained onsite.

4.13 Site Security (40 CFR 112.7(g))

The facility is available for operation continuously, 24 hours a day, 7 days a week except for periodic shutdowns for repairs and maintenance. The facility is continuously attended. A security fence encompasses the entire facility. Security lighting is provided throughout the facility. Lighting is controlled by voltaic cells from dusk to dawn in order to allow spills to be detected during nighttime hours and to prevent vandalism.

All master flow and drain valves from containers are locked to ensure they remain closed when in non-operating or standby status.

5.0 FACILITY TRUCK LOADING/UNLOADING OPERATIONS (40 CFR 112.7(h))

5.1 Loading/Unloading Procedures

Tank truck loading/unloading procedures meet the minimum requirements and regulations established by the United States Department of Transportation. All truck drivers are required to comply with DOT regulations in 49 CFR 177 and facility standard operating procedures. All drivers must be authorized by Southern Union personnel to load or unload. Prior to any loading/unloading, tank truck drivers are instructed as to the facility's safety requirements and spill prevention procedures, including a warning to avoid any aboveground piping they might encounter.

The facility has adequate all-weather roads allowing sufficient access for traffic flow. Southern Union personnel are present during loading/unloading operations to ensure that all procedures are followed and to respond to any oil spill. In addition, all valves and hoses are subject to regular examinations by personnel at which time the general condition of items, such as flange joints, expansion joints, valve glands and

bodies, catch pans, pipeline supports, locking valves, metal surfaces and hoses are assessed (i.e., inspected for deterioration, frays, leaks, breaks, etc.).

Loading and unloading of oil occurs at the Gasoline and Varsol Storage Area, the Diesel Tank, the Pipeline Drip Tanks Storage Area, the Classifier Used Oil Tank, the Condensate Storage Area, the Used Engine Oil Tank, the "C" Plant Oily Water Sump, the "B" Plant Lube Oil Storage Area, the "C" Plant and "B" Plant Worthington Lube Oil Storage Area, the "B" Plant Varsol Tank, the "A" Compressor Building Sump, the "A" Plant Lube Oil Tank, the "S" Plant Waste Oil Tank, the "S" Plant Vaulted Oily Water Tank, the "S" Plant Oily Water Sump, the "S" Plant Lube Oil Storage Area and the West Field Condensate Tanks.

In the unlikely event that an oil release from loading and unloading operations were to leave the property, it would most likely not reach surface waters due to the topography of the site and surrounding area. However, due to the depth of groundwater and the relatively permeable soils, it is possible that a release could reach a subsurface aquifer.

The history of the facility's loading/unloading operations supports the conclusion that the Jal No. 3 Plant has safe and effective operating procedures for all loading and unloading operations.

5.2 Secondary Containment for Vehicles Adequate

There is no secondary containment structure for vehicles at the facility. Loading and unloading operations are attended at all times. Due to the topography of the site and the distance to the property line, it is likely that any releases would be retained onsite. In the event of a release, loading or unloading would cease and action taken to prevent the release from leaving the site.

5.3 Warning or Barrier System for Vehicles

Prior to any tank truck loading/unloading, wheel chocks are used to prevent the truck from moving during loading and unloading operations. The lowermost drain and all outlets of such vehicles are closely examined for leakage and, if necessary, tightened, adjusted, or replaced to prevent leakage. Signs and/or barricades (e.g., orange cones) are posted at loading and unloading areas to prevent departure before disconnection of the hose/valve. In addition, Southern Union personnel and tank truck drivers are instructed to check delivered quantity and hose connections before the truck departs.

6.0 BRITTLE FRACTURE EVALUATION REQUIREMENTS (40 CFR 112.7(i))

There are no field-constructed aboveground bulk storage containers at this facility.

7.0 CONFORMANCE WITH STATE REQUIREMENTS (40 CFR 112.7(j))

The New Mexico Oil Conservation Division (OCD) has been delegated, by the New Mexico Water Quality Control Commission (WQCC), the responsibility for enforcing the provisions of the New Mexico Water Quality Act that apply to the oil field service industry. A facility is prohibited from causing or allowing a discharge so that it may move directly or indirectly into ground water without a discharge permit issued by the secretary of the New Mexico Energy, Minerals and Natural Resources (EMNRD) Department. Discharges do not have to be intentional in order to require a discharge plan.

Under 20.6.2.3105 NMAC, a discharge permit is not required if a discharge meets the numerical standards for constituents listed in 20.6.2.3103 NMAC, has a total nitrogen concentration of 10 milligrams per liter (mg/l) or less and does not contain any toxic pollutant. Oil, condensate and petroleum products are not listed.

A facility which does not anticipate discharging any of the referenced materials is not required to prepare a discharge plan. However, a facility is required to submit a discharge plan within 120 days of being notified by OCD that a plan is required. The Jal No. 3 Plant has prepared and submitted a separate discharge plan to OCD.

8.0 FACILITY DRAINAGE (40 CFR 112.8(b))

Site drainage is toward the southwestern property boundary where it flows to the west. The topography of the area is shown in Figure 1 and general drainage patterns on the site are shown in Figure 2.

There are no oil storage areas without secondary containment at the facility. Due to the relatively low rainfall in this area, ten percent of the volume of the largest tank is used to account for precipitation. The facility does not treat storm water.

9.0 BULK STORAGE TANKS/SECONDARY CONTAINMENT

9.1 Aboveground Storage (40 CFR 112.8(c)(1))

Gasoline, diesel fuel, lubricating oil, oily water, used oil, heating oil, petroleum naphtha, and pipeline condensate are stored in aboveground tanks at various locations at the facility, as described in the following paragraphs. The material and construction of tanks are compatible with the contents and conditions of storage such as temperature and pressure. Tanks are painted to protect against rust and corrosion.

9.2 Secondary Containment (40 CFR 112.8(c)(2))

9.2.1 Gasoline and Varsol Storage Area

One (1) elevated, horizontal steel 500-gallon gasoline tank and one (1) elevated, horizontal steel 1,000 gallon petroleum naphtha (Varsol) tank are located in this

area. Each tank has an external level gauge which is used to prevent overflow when filling the tank. Filling operations for all tanks in this area require two (2) people in direct visual or audible communication, one at the discharge point and one at the tank inlet. The tanks are stored in a concrete secondary containment structure that measures approximately 14.25 feet by 9 feet by 1.83 feet, providing a containment capacity of approximately 1,755 gallons. This capacity is sufficient to hold 110% of the contents of the largest tank. Therefore, secondary containment is adequate.

9.2.2 Diesel Tank and Drum Storage Area

One (1) horizontal, elevated steel diesel fuel tank and a variable number of 55-gallon drums are located in this area. The diesel tank has a capacity of approximately 300 gallons. Filling operations for the tank and containers in this area require two (2) people in direct visual or audible communication, one at the discharge point and one at the tank inlet. The tank and containers are stored in a concrete secondary containment structure that measures approximately 81.5 feet by 5 feet by 0.33 feet, providing a containment capacity of approximately 1,005 gallons. This capacity is sufficient to hold 110% of the contents of the Diesel Tank. Therefore, secondary containment is adequate.

9.2.3 Pipeline Drip Tanks Storage Area

Two (2) vertical steel 8,820-gallon (210-barrel) pipeline drip tanks are located in this area. Each tank has a high-level alarm to prevent overflows. The area has concrete secondary containment that measures approximately 39 feet by 34.25 feet by 2.5 feet, providing containment of approximately 23,709 gallons. Secondary containment of 9,702 gallons is required. This capacity is sufficient to hold 110% of the contents of the largest tank. Therefore, secondary containment is adequate.

9.2.4 Classifier and Classifier Used Oil Tank Storage Area

One (1) partially buried, welded steel 42,000-gallon (1,000-barrel) oily water and one (1) partially buried, welded steel 12,600-gallon (300 barrel) used oil tank are located in this area. Inventory control is used to prevent overflows. When full, these tanks overflow to the Contingency Tank. Secondary containment of at least 46,200 gallons is required for the Classifier and containment of 13,860 gallons is required

for the Classifier Used Oil Tank. This capacity is sufficient to hold 110% of the contents of the largest tank.

9.2.5 Contingency Tank

One (1) partially buried, welded steel 190,000-gallon oily water tank is located in this area. Inventory control is used to prevent overflows. When full, the tank automatically discharges to the onsite disposal well. Secondary containment of at least 209,000 gallons is required for this tank. This capacity is sufficient to hold 110% of the contents of the tank.

9.2.6 Primary Flash Tank and Condensate Storage Area

Four (4) horizontal steel 50,000-gallon condensate tanks and a propane tank are located in this area. Each tank has an electronic level indicator and a high-level alarm to prevent overflows. The tanks are operated in series, in which a tank overflows to the adjoining tank when it is filled. Secondary containment of at least 55,000 gallons is required for this area. This capacity is sufficient to hold 110% of the contents of the largest tank.

9.2.7 Used Engine Oil Tank Storage Area

One (1) vertical steel 8,820-gallon (210-barrel) used oil tank and a permanently closed tank are located in this area. This tank is manually filled from a trailer and then transported offsite by a tank truck. The tank has an external level gauge that is used to prevent overflow when filling the tank. Filling operations for this tank require two (2) people in direct visual or audible communication, one at the discharge point and one at the tank inlet. The area has concrete secondary containment that measures approximately 40 feet by 39 feet by 3 feet, providing containment of approximately 35,006 gallons. Secondary containment of 23,100 gallons is required. This capacity is sufficient to hold 110% of the contents of the largest tank. Therefore, secondary containment is adequate.

9.2.8 Lube Oil Tank at "B" Compressor Building and Used Engine Oil Tank at "B" Compressor Building

One (1) horizontal, elevated steel 1,000-gallon used engine oil tank and one vertical, steel 850-gallon lube oil tank are located in this area. These tanks are out-of-service, with no connected piping, and should be permanently closed.

9.2.9 "C" Plant Oily Water Sump

One (1) partially-buried, open-top steel 4,500-gallon oily water sump is located in this area. Inventory control is used to prevent overflows. Material from this sump is removed by truck to the Contingency Tank. Secondary containment of 4,950 gallons is required. This capacity is sufficient to hold 110% of the contents of the tank.

9.2.10 "B" Plant Lube Oil Storage Area

Two (2) vertical, steel 8,820-gallon (210-barrel) lubricating oil tanks are located in this area. Each tank has an external level gauge that is used to prevent overflow when filling the tank. Filling operations for these tanks require two (2) people in direct visual or audible communication, one at the discharge point and one at the tank inlet. The area has concrete secondary containment that measures approximately 38.5 feet by 36 feet by 2 feet, providing containment of approximately 19,559 gallons. Secondary containment of 9,702 gallons is required. This capacity is sufficient to hold 110% of the contents of the largest tank. Therefore, secondary containment is adequate.

9.2.11 "C" Plant Lube Oil and "B" Plant Worthington Lube Oil Storage Area

Two (2) vertical steel 8,820-gallon (210-barrel) lubricating oil tanks and a 8,820-gallon (210-barrel) coolant/antifreeze (Ambitrol) tank located in this area. Each tank has an external level gauge that is used to prevent overflow when filling the tank. Inventory control is used to prevent overflows. Filling operations for these tanks require two (2) people in direct visual or audible communication, one at the discharge point and one at the tank inlet. The area has concrete secondary containment that measures approximately 65 feet by 25 feet by 1.83 feet, providing containment of approximately 20,093 gallons. Secondary containment of 9,702

gallons is required. This capacity is sufficient to hold 110% of the contents of the largest tank. Therefore, secondary containment is adequate.

9.2.12 "B" Plant Varsol Tank Storage Area

One (1) horizontal, elevated steel 500-gallon petroleum naphtha (Varsol) tank is located in this area. The tank has a visual level gauge that is used to prevent overflow when filling the tank. Filling operations for the tank require two (2) people in direct visual or audible communication, one at the discharge point and one at the tank inlet. The tank has concrete secondary containment area, with an earthen floor. The containment area measures approximately 8 feet by 6 feet by 1.25 feet deep for a containment capacity of approximately 449 gallons. Secondary containment of 550 gallons is required. This capacity is sufficient to hold 110% of the contents of the largest tank.

9.2.13 "A" Compressor Building Sump

One (1) partially buried, concrete 200-gallon oily water sump is located in the basement of the "A" Compressor Building. When the tank fills, a pump automatically discharges the excess oily water to the Classifier. Any overflows from the sump would be contained in the concrete floor of the basement. Secondary containment of 200 gallons is required for the sump. This containment capacity is sufficient to hold the contents of the sump.

9.2.14 "A" Plant Lube Oil Tank Storage Area

One (1) vertical steel 8,820-gallon (210-barrel) lubricating oil tank and a 8,820-gallon (210-barrel) coolant/antifreeze (Ambitrol) tank located in this area. Each tank has an external level gauge that is used to prevent overflow when filling the tank. Inventory control is used to prevent overflows. Filling operations for these tanks require two (2) people in direct visual or audible communication, one at the discharge point and one at the tank inlet. The area has concrete secondary containment that measures approximately 37 feet by 33 feet by 2.25 feet, providing containment of approximately 19,227 gallons. Secondary containment of 9,702 gallons is required. This capacity is sufficient to hold 110% of the contents of the largest tank. Therefore, secondary containment is adequate.

9.2.15 "S" Plant Used Oil Tank Storage Area

One (1) horizontal, elevated steel 350-gallon used oil tank is located in this area. This tank is manually filled. The tank has a visual level gauge that is used to prevent overflow when filling the tank. Filling operations for the tank require two (2) people in direct visual or audible communication, one at the discharge point and one at the tank inlet. The tank has a fiberglass secondary containment measuring approximately 13 feet by 4 feet by 1.5 inches deep for a containment capacity of 583 gallons. Secondary containment of 385 gallons is required. The available containment capacity is sufficient to hold 110% of the contents of the largest tank. Therefore, secondary containment is adequate.

9.2.16 "S" Plant Vaulted Oily Water Tank

One (1) below ground, vaulted plastic 450-gallon oily water tank is located in this area. The liquid level in the tank can be seen from outside the tank and external markings on the tank indicate the amount of material in the tank. The tank has a covered fiberglass vault measuring approximately 6 feet in diameter by 6 feet in depth for a containment capacity of approximately 1,269 gallons. The capacity of the fiberglass vault is sufficient to hold 110 percent of the contents of the tank. The vault has a cover that is closed except when access to the vault is necessary. Inventory control is used to prevent overflowing the tank.

9.2.17 "S" Plant Oily Water Sump

One (1) partially buried steel 1,500-gallon oily water sump is located in this area. The top of the sump is covered with a steel-mesh grate. When the sump fills, a pump automatically discharges the excess oily water to the Classifier. Secondary containment of 1,650 gallons is required. The available containment capacity is sufficient to hold 110% of the contents of the largest tank.

9.2.18 Former "A" Plant Lube Oil Tank Storage Area

Two (2) vertical, steel 8,820-gallon (210-barrel) lubricating oil tanks are located in this area. These tanks are not in use and piping is no longer connected. Each tank has an electronic level indicator that is used to determine the liquid level in the tank. The area has concrete secondary containment that measures approximately 45 feet

by 29 feet by 2 feet, providing containment of approximately 19,522 gallons. Secondary containment of 9,702 gallons is required. This capacity is sufficient to hold 110% of the contents of the largest tank. Therefore, secondary containment is adequate.

9.2.19 Deepwell Feed Tank

One (1) vertical fiberglass 6,000-gallon oily water tank is located in this area. The tank has an electronic level indicator to prevent overflow when filling the tank. If the tank were to fill, any excess material would be pumped to the Contingency Tank. The tank has an earthen secondary containment area of irregular dimensions. Secondary containment of 6,600 gallons is required. This capacity is sufficient to hold 110% of the contents of the largest tank.

9.2.20 "S" Plant Lube Oil Tank Storage Area

One (1) horizontal, elevated steel 1,800-gallon lubricating oil tank is located in this area. The tank has a level gauge that is intended to prevent overflow when filling the tank. Filling operations for the tank require two (2) people in direct visual or audible communication, one at the discharge point and one at the tank inlet. The area has steel secondary containment that measures approximately 27.33 feet by 7.5 feet by 3.5 feet, providing containment of approximately 5,366 gallons. Secondary containment of 1,980 gallons is required. This capacity is sufficient to hold 110% of the contents of the largest tank. Therefore, secondary containment is adequate.

9.2.21 West Field Condensate Tanks

One (1) partially buried steel 8,820-gallon (210-barrel) oily water tank and one (1) partially buried fiberglass 8,820-gallon (210-barrel) oily water tank are located in this area. Inventory control is used to prevent overflows. The steel (north) tank overflows into the fiberglass (south) tank when full. Material can be removed from either tank by truck and taken off-site for sale or disposal. Secondary containment of 8,820 gallons is required for these tanks. This capacity is sufficient to hold the contents of one of the tanks.

9.2.22 Lube Oil Tank at Gasoline Plant

One (1) horizontal, elevated steel 375-gallon lubricating oil tank is located in this area. The tank is out-of-service and no piping is connected. The tank has concrete secondary containment area, with an earthen floor. The containment area measures approximately 17 feet by 6 feet by 0.625 feet deep for a containment capacity of approximately 476 gallons. Secondary containment of 413 gallons is required. This capacity is sufficient to hold 110% of the contents of the largest tank. Therefore, secondary containment is adequate.

9.2.23 North Cooling Tower Sump

One (1) partially buried, concrete 7,400-gallon oily water sump is located in this area. When the tank fills, a pump automatically discharges the excess oily water to the Classifier. Secondary containment of 8,140 gallons is required for the sump. This containment capacity is sufficient to hold the contents of the sump.

9.2.24 Secondary Containment Summary

Secondary containments for the all bulk storage containers are sufficient to prevent oil from reaching surface waters. All containments are sufficient to hold the entire contents of the tank plus sufficient freeboard to allow for precipitation when such containment is exposed to precipitation. See Table 2 in Appendix A.

9.3 Containment Area Inspection and Drainage of Rainwater (40 CFR 112.8(c)(3))

There are dike drains in the Gasoline and Varsol Storage Area, the Used Engine Oil Storage Area, the "B" Plant Lube Oil Storage Area, the "C" Plant Lube Oil and "B" Plant Worthington Lube Oil Storage Area, the "A" Plant Lube Oil Storage Area, the Former "A" Plant Lube Oil Storage Area, the "S" Plant Lube Oil Storage Area and the Used Engine Oil Tank Storage Area. All drainage valves will be maintained in the closed position. There are no dike drains in the other bulk oil storage areas. Any retained rainwater will be inspected to determine the presence of an oil sheen. If an oil sheen is noted, the water is pumped into an oily water tank or into drums for off-site disposal. If no sheen is observed, the water is discharged to the ground. The

drainage process will occur under responsible supervision. All drainage from containment areas will be in compliance with 40 CFR 112.8(c)(3). Drainage will be documented and maintained as part of record retention for a period of three years. Appendix D includes a form for documenting the condition of discharges from containment areas.

9.4 Completely Buried Tanks (40 CFR 112.8(c)(4))

There are no completely buried tanks at the facility.

9.5 Partially Buried Tanks (40 CFR 112.8(c)(5))

There are six (6) partially buried metallic tanks at this facility. The buried portion of a partially buried metallic tank must be protected from corrosion by coatings or cathodic protection compatible with local soil conditions.

9.6 Aboveground Tank Periodic Integrity Testing (40 CFR 112.8(c)(6))

Aboveground tanks that are in contact with the ground will be integrity tested on a regular schedule in accordance with industry standards and internal operating procedures. Integrity testing will also be conducted when material repairs are made. The nature of this testing will depend upon the repairs being made. Records of the inspections will be maintained on-site in the main office.

Visual integrity testing is considered appropriate for containers for which all sides are visible, such as portable and mobile tanks, portable drums, and tanks whose bottom is not in direct contact with the ground. Such containers are inspected monthly under the inspection procedures in Appendix D. The following tanks are elevated, allowing all sides of each tank to be visually inspected: the Gasoline Tank, the Varsol Tank at the Warehouse, the "B" Plant Varsol Tank, the Diesel Tank, the Primary Flash Tank, the Condensate Tanks (850-852), the Used Engine Oil Tank at the "B" Compressor Building, the "S" Plant Used Oil Tank, the "S" Plant Vaulted Oily Water Tank, the "S" Plant Lube Oil Tank and the Lube Oil Tank at the Gasoline Plant

No additional integrity testing is recommended for these or similar containers, unless external visual inspections indicate a change in the condition of these tanks.

EPA also considers visual inspections to be sufficient for shop-built tanks with a capacity less than 30,000 gallons and that are not in direct contact with the ground. The Used Engine Oil Tank, the "B" Plant Lube Oil Tanks, the "A" Plant Lube Oil Tanks and the "C" Plant Lube Oil Tank meet these requirements and, therefore, additional integrity testing is not required, unless external visual inspections indicate a change in the condition of these tanks.

9.7 Control of Leakage Through Internal Heating Coils (40 CFR 112.8(c)(7))

Internal heating coils are not used in tanks at this facility.

9.8 Tank Overfill Protection (40 CFR 112.8(c)(8))

Inventory control and continuous monitoring during transfers are used to prevent overflow. Filling of tanks without visual or audible level controls or automatic shutoff requires two (2) people in direct visual or audible communication, one at the discharge point and one at the tank inlet. Due to the safeguards noted and the fact that the filling and removal operations are continuously monitored, these procedures are sufficient to prevent overflow from the tanks.

9.9 Observation of Disposal Facilities For Effluent Discharge (40 CFR 112.8(c)(9))

There are no effluent discharge permits for this facility.

9.10 Visible Oil Leak Corrections (40 CFR 112.8(c)(10))

Visible oil leaks from seams, gaskets, piping, pumps, valves, rivets and bolts associated with the bulk storage containers are reported to maintenance personnel and promptly corrected. Additionally, oil accumulations in dikes are promptly removed.

9.11 Appropriate Position of Mobile or Portable Oil Storage Tanks (40 CFR 112.8(c)(11))

Locations where portable oil storage containers are stored are indicated on the site map.

10.0 FACILITY TRANSFER OPERATIONS

10.1 Buried Piping Installation Protection and Examination (40 CFR 112.8(d)(1))

Underground piping at this facility is protectively wrapped and coated. Additionally, the piping is cathodically protected or satisfies the corrosion protection standards of 40 CFR 280.

Underground piping that is installed or replaced will be provided with a protective wrapping and coating and will be cathodically protected or protected from corrosion under the corrosion protection standards of 40 CFR 280.

All exposed buried pipe is inspected for deterioration and corrective action is taken based upon the magnitude of the damage.

10.2 Not-In-Service and Standby Service Terminal Connections (40 CFR 112.8(d)(2))

When piping is not in service or is in standby service for an extended time, it is capped or blank-flanged at the terminal connection of the transfer point and marked as to its origin.

10.3 Pipe Supports Design (40 CFR 112.8(d)(3))

Pipe supports are designed to minimize abrasion and corrosion and allow for expansion and contraction.

10.4 Aboveground Valve and Pipeline Examination and Buried Pipe Leak Testing (40 CFR 112.8(d)(4))

The aboveground piping is inspected on a regular basis for evidence of leaks or damage. All buried oil piping installed since 2002 was tested for integrity and leaks when it was installed and will also be leak tested when it is modified, relocated or replaced. New buried piping will be tested for integrity and leaks when it is installed, modified, relocated or replaced.

10.5 Aboveground Piping Protection From Vehicular Traffic (40 CFR 112.8(d)(5))

Aboveground piping is not exposed to vehicular traffic

APPENDIX A

TABLES

TABLE 1

BULK STORAGE CONTAINER DATA

40 CFR 112.7(a)(3)(ii)

Container ID	Diameter (feet)	Circumference (feet)	Tank Height or Length (feet)	Calculated Volume (gallons)	Nominal Volume (gallons)	Tank Type	Floor Construction	Shell Construction
Gasoline Tank	4	-	6	564	500	Horizontal, Elevated	Welded Steel	Welded Steel
Varsol Tank – Warehouse	5	-	7.5	1,101	1,000	Horizontal, Elevated	Welded Steel	Welded Steel
Diesel Tank	2.66	-	7.5	311	300	Horizontal, Elevated	Welded Steel	Welded Steel
Pipeline Drip Tank No. 1	10	-	15	8,812	8,820 (210 bbl)	Vertical	Welded Steel	Welded Steel
Pipeline Drip Tank No. 2	10	-	15	8,812	8,820 (210 bbl)	Vertical	Welded Steel	Welded Steel
Classifier	20	-	18	42,298	42,000 (1,000 bbls)	Partially Buried	Welded Steel	Welded Steel
Used Oil Tank at Classifier	12	-	16	13,535	12,600 (300 bbls)	Partially Buried	Welded Steel	Welded Steel
Contingency Tank	45	-	16	190,343	190,000	Partially Buried	Welded Steel	Welded Steel

TABLE 2

BULK STORAGE CONTAINER DATA

40 CFR 112.7(a)(3)(ii)

Container ID	Diameter (feet)	Circumference (feet)	Tank Height or Length (feet)	Calculated Volume (gallons)	Nominal Volume (gallons)	Tank Type	Floor Construction	Shell Construction
Primary Flash Tank	11	-	70	49,760	50,000	Horizontal, Elevated	Welded Steel	Welded Steel
Condensate Tank (852)	11	-	70	49,760	50,000	Horizontal, Elevated	Welded Steel	Welded Steel
Condensate Tank (851)	11	-	70	49,760	50,000	Horizontal, Elevated	Welded Steel	Welded Steel
Condensate Tank (850)	11	-	70	49,760	50,000	Horizontal, Elevated	Welded Steel	Welded Steel
Used Engine Oil Tank	10		15	8,812	8,820 (210 bbl.)	Vertical	Welded Steel	Welded Steel
Used Engine Oil Tank at "B" Compressor Building	4	-	12	1,128	1,000	Horizontal, Elevated	Welded Steel	Welded Steel
Lube Oil Tank at "B" Compressor Building	5	-	5.83	856	850	Vertical	Welded Steel	Welded Steel
"C" Plant Oily Water Sump	8	-	12	4,512	4,500	Partially Buried	Welded Steel	Welded Steel

TABLE 3

BULK STORAGE CONTAINER DATA

40 CFR 112.7(a)(3)(ii)

Container ID	Diameter (feet)	Circumference (feet)	Tank Height or Length (feet)	Calculated Volume (gallons)	Nominal Volume (gallons)	Tank Type	Floor Construction	Shell Construction
"B" Plant Lube Oil Tank – South	10	-	15	8,812	8,820 (210 bbl)	Vertical	Welded Steel	Welded Steel
"B" Plant Lube Oil Tank – North	10	-	15	8,812	8,820 (210 bbl)	Vertical	Welded Steel	Welded Steel
B" Plant Varsol Tank	4	-	6	564	500	Horizontal, Elevated	Welded Steel	Welded Steel
"B" Plant Worthington Lube Oil Tank	10	-	15	8,812	8,820 (210 bbl)	Vertical	Welded Steel	Welded Steel
"A" Compressor Building Sump	3 X 3 X 3			202	200	Sump	Concrete	Concrete
"A" Plant Lube Oil Tank	10	-	15	8,812	8,820 (210 bbl)	Vertical	Welded Steel	Welded Steel
"S" Plant Used Oil Tank	2.5	-	10	367	350	Horizontal, Elevated	Welded Steel	Welded Steel
"S" Plant Vaulted Oily Water Tank	4	-	5	470	450	Vaulted, Elevated	Fiberglass	Fiberglass

TABLE 4

BULK STORAGE CONTAINER DATA

40 CFR 112.7(a)(3)(ii)

Container ID	Diameter (feet)	Circumference (feet)	Tank Height or Length (feet)	Calculated Volume (gallons)	Nominal Volume (gallons)	Tank Type	Floor Construction	Shell Construction
"S" Plant Oily Water Sump	9.25	-	3	1,508	1,500	Partially Buried	Welded Steel	Welded Steel
"A" Plant Lube Oil Tank – East	10	-	15	8,820	8,820 (210 bbl)	Vertical	Welded Steel	Welded Steel
"A" Plant Lube Oil Tank – West	10	-	15	8,820	8,820 (210 bbl)	Vertical	Welded Steel	Welded Steel
Deepwell Feed Tank	8	-	27	6,015	6,000	Vertical	Fiberglass	Fiberglass
"S" Plant Lube Oil Tank	4	-	20	1,880	1,800	Horizontal, Elevated	Welded Steel	Welded Steel
"C" Plant Lube Oil Tank	10	-	15	8,812	8,820 (210 bbl)	Vertical	Welded Steel	Welded Steel
West Field Condensate Tank - North	10	-	15	8,812	8,820 (210 bbl)	Partially Buried	Welded Steel	Welded Steel
West Field Condensate Tank -South	10	-	15	8,812	8,820 (210 bbl)	Partially Buried	Fiberglass	Fiberglass

TABLE 5

BULK STORAGE CONTAINER DATA

40 CFR 112.7(a)(3)(ii)

Container ID	Diameter (feet)	Circumference (feet)	Tank Height or Length (feet)	Calculated Volume (gallons)	Nominal Volume (gallons)	Tank Type	Floor Construction	Shell Construction
Lube Oil Tank at Gasoline Plant	2.5	-	10.5	385	375	Horizontal, Elevated	Welded Steel	Welded Steel
North Cooling Tower Sump	10 X 10 X 10			7,480	7,400	Partially Buried	Concrete	Concrete

TABLE 6

SECONDARY CONTAINMENT DATA

40 CFR 112.7(a)(3)(iii)

Containment Area	Length (feet)	Width (feet)	Depth (feet)	Effective Volume (gallons)	Capacity of Largest Tank (gallons)	Precipitation	Required Containment (gallons)	Adequate Containment (Yes/No)
Gasoline and Varsol Storage Area	14.25	9	1.83	1,755	1,000	100	1,100	Yes
Diesel Tank and Drum Storage Area	81.5	5	0.33	1,005	300	30	330	Yes
Pipeline Drip Tanks Storage Area	39	34.25	2.5	23,709	8,820	882	9,702	Yes
Classifier and Classifier Used Oil Tank Storage Area	No secondary containment							No
Contingency Tank	No secondary containment							No
Primary Flash Tank and Condensate Storage Area	No secondary containment							No
Used Engine Oil Tank Storage Area	40	39	3	35,006	21,000	2,100	23,100	Yes

TABLE 7

SECONDARY CONTAINMENT DATA

40 CFR 112.7(a)(3)(iii)

Containment Area	Length (feet)	Width (feet)	Depth (feet)	Effective Volume (gallons)	Capacity of Largest Tank (gallons)	Precipitation	Required Containment (gallons)	Adequate Containment (Yes/No)
Lube Oil Tank at "B" Compressor Building and Used Engine Oil Tank at "B" Compressor Building	No secondary containment				1,000	100	1,100	No
"C" Plant Oily Water Sump	No secondary containment				2,000	200	2,200	No
"B" Plant Lube Oil Storage Area	38.5	36	2	19,559	8,820	882	9,702	Yes
"B" Plant Varsol Tank Storage Area	8	6	1.25	449	500	50	550	No
"C" Plant Lube Oil and "B" Plant Worthington Lube Oil Storage Area	65	25	1.83	20,093	8,820	882	9,702	Yes
"A" Compressor Building Sump	No secondary containment							

TABLE 8

SECONDARY CONTAINMENT DATA

40 CFR 112.7(a)(3)(iii)

Containment Area	Length (feet)	Width (feet)	Depth (feet)	Effective Volume (gallons)	Capacity of Largest Tank (gallons)	Precipitation	Required Containment (gallons)	Adequate Containment (Yes/No)
"A" *Plant Lube* Oil Tank Storage Area	37	33	2.25	19,227	8,820	882	9,702	Yes
"S" Plant Used Oil Tank Storage Area	13	4	1.5	583	350	35	385	Yes
"S" Plant Vaulted Oily Water Tank	6	-	6	1,269	850	0	850	Yes
"S" Plant Oily Water Sump	No secondary containment							No
Former "A" Plant Lube Oil Storage Area	45	29	2	19,522	8,820	882	9,702	Yes
Deepwell Feed Tank Storage Area	Irregular secondary containment area							No
"S" Plant Lube Oil Tank Storage Area	27.33	7.5	3.5	5,366	1,800	180	1,980	Yes

TABLE 9

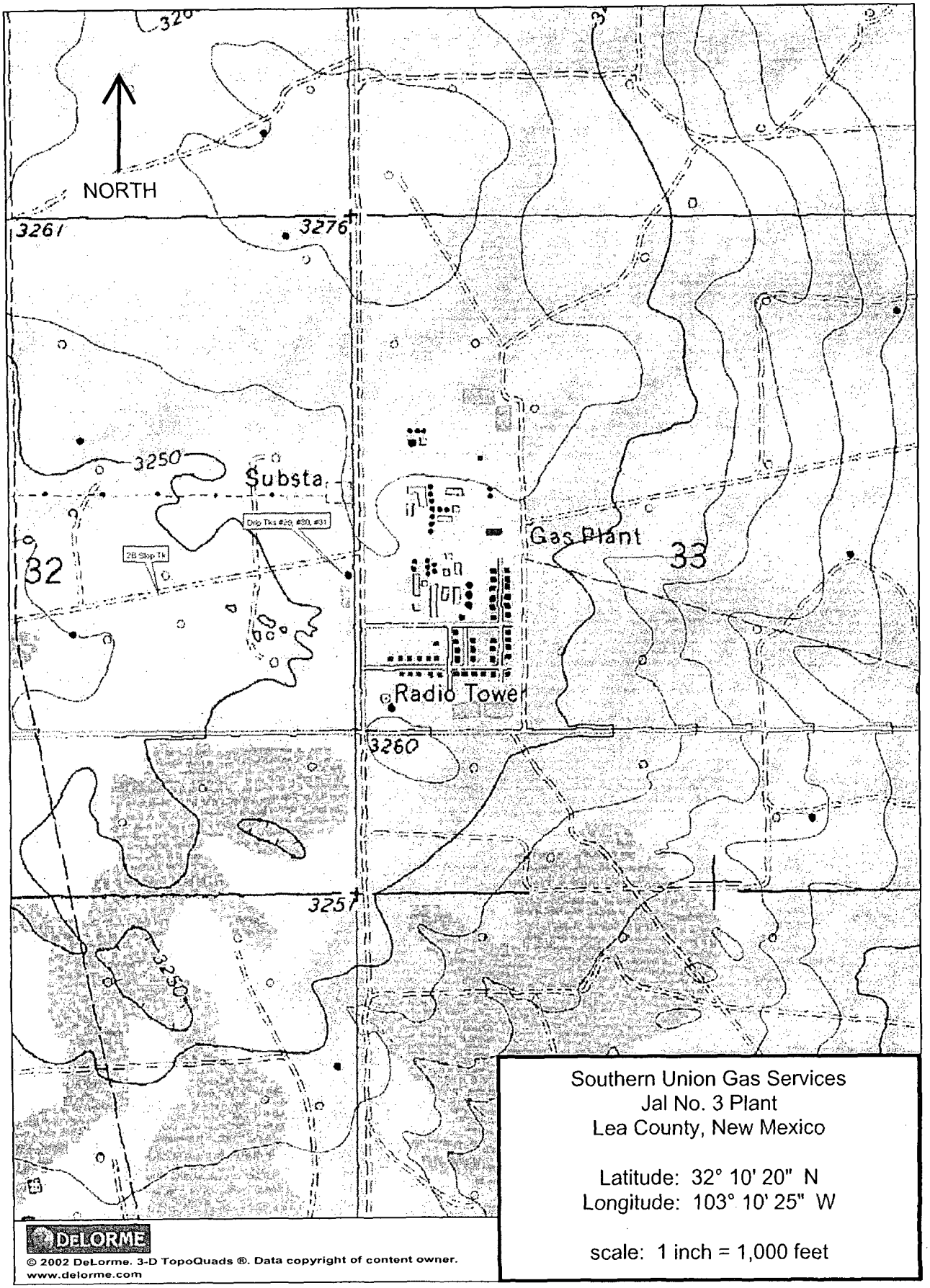
SECONDARY CONTAINMENT DATA

40 CFR 112.7(a)(3)(iii)

Containment Area	Length (feet)	Width (feet)	Depth (feet)	Effective Volume (gallons)	Capacity of Largest Tank (gallons)	Precipitation	Required Containment (gallons)	Adequate Containment (Yes/No)
West Field Condensate Tank	No secondary containment							No
Lube Oil Tank at the Gasoline Plant	17	6	0.625	476	375	38	413	Yes
North Cooling Tower Sump	No secondary containment							No

APPENDIX B

FIGURES

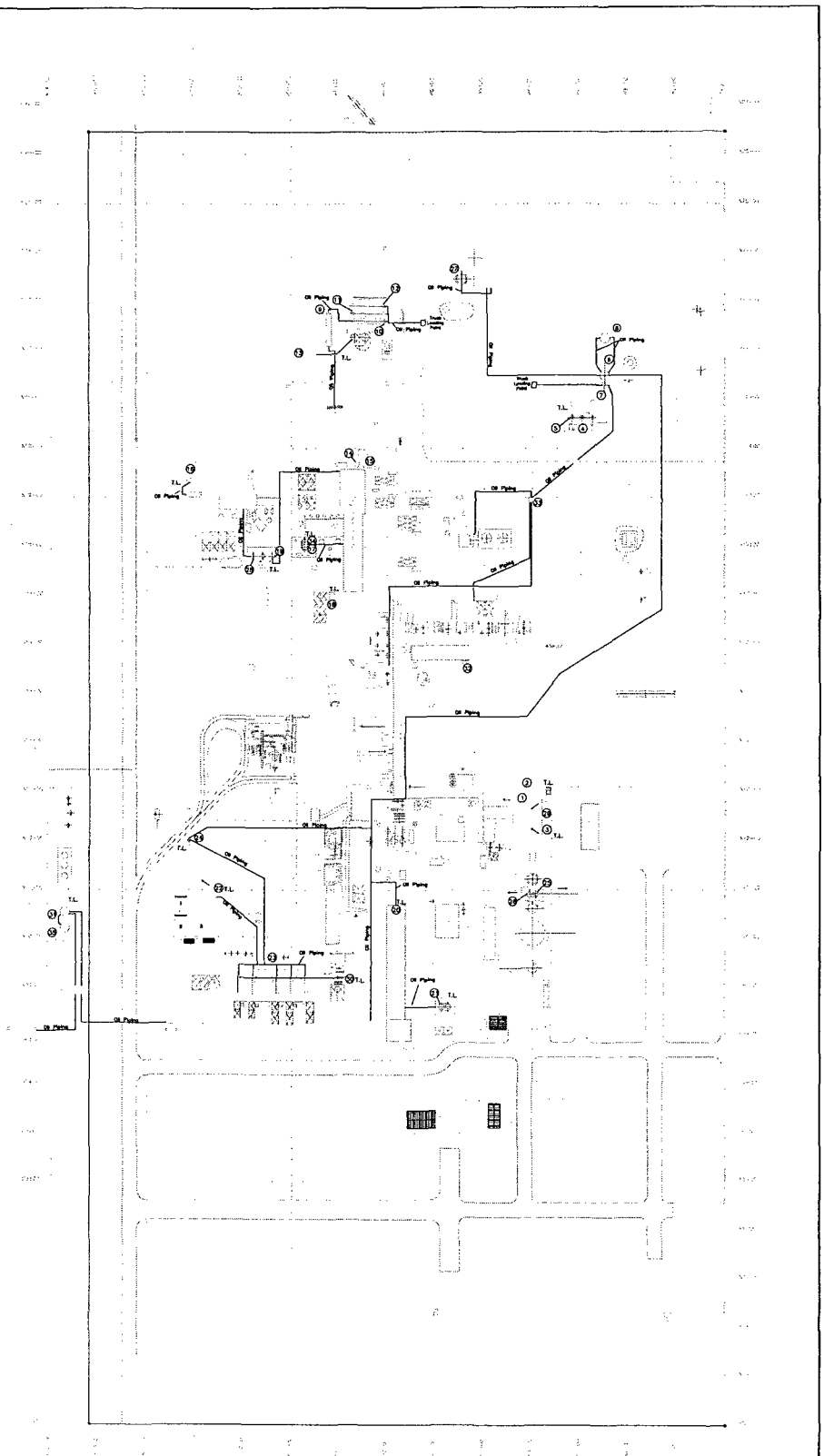


DELORME

Southern Union Gas Services
Jal No. 3 Plant
Lea County, New Mexico

Latitude: 32° 10' 20" N
Longitude: 103° 10' 25" W

scale: 1 inch = 1,000 feet



BULK STORAGE CONTAINER LOCATIONS

1. GASOLINE TANK
2. VARSOL TANK – WAREHOUSE
3. DIESEL TANK
4. PIPELINE DRIP TANK NO. 1
5. PIPELINE DRIP TANK NO. 2
6. CLASSIFIER
7. USED OIL TANK AT CLASSIFIER
8. CONTINGENCY TANK
9. PRIMARY FLASH TANK
10. CONDENSATE TANK (852)
11. CONDENSATE TANK (851)
12. CONDENSATE TANK (850)
13. USED ENGINE OIL TANK
14. USED ENGINE OIL TANK @ "B" COMPRESSOR BUILDING
15. LUBE OIL TANK @ "B" COMPRESSOR BUILDING
16. "C" PLANT OILY WATER SUMP
17. "B" PLANT LUBE OIL STORAGE – SOUTH
18. "B" PLANT VARSOL TANK
19. "B" PLANT WORTHINGTON LUBE OIL TANK
20. "A" COMPRESSOR BUILDING SUMP
21. "A" PLANT LUBE OIL TANK
22. "S" PLANT USED OIL TANK
23. "S" PLANT VAULTED OILY WATER TANK
24. "S" PLANT OILY WATER SUMP
25. "A" PLANT LUBE OIL TANK EAST
26. "A" PLANT LUBE OIL TANK WEST
27. DEEPWELL FEED TANK
28. "C" PLANT LUBE OIL TANK
29. DRUM STORAGE AREA
30. "S" PLANT LUBE OIL TANK
31. WEST FIELD CONDENSATE TANK – NORTH
32. LUBE OIL TANK AT GASOLINE PLANT
33. NORTH COOLING TOWER SUMP
34. "B" PLANT LUBE OIL TANK – NORTH
35. WEST FIELD CONDENSATE TANK – SOUTH

OIL PIPING ——
DRAINAGE DIRECTION ——→
T.L. = TRUCK LOADING POINT

NOTE: THERE IS VERY LITTLE ELEVATION CHANGE ACROSS THE FACILITY. DRAINAGE IS INDICATED WHERE IT IS OBVIOUS, BUT MOST OIL STORAGE TANKS AND CONTAINERS COULD FLOW IN ANY DIRECTION BUT WOULD REMAIN IN THE VICINITY OF THE VESSEL FROM WHICH IT IS RELEASED.

REVISIONS				
NO.	DESCRIPTION	DATE	BY	APP.
1	ADD COMP./COOLERS/SLUG CATCHER/MISC.	04/11/08	CTR	

CADD FILE: Z:\WTAOD\JAL\PLOT PLAN\JPP-1000

SOUTHERN UNION GAS SERVICES

SPILL PREVENTION, CONTROL, AND COUNTERMEASURE (SPCC) PLAN
SITE MAP

JAL NO. 3 PLANT — LEA CO., NEW MEXICO

DRAWN BY	DATE
CHECKED	
ENGINEER	
APPROVED	

SUGS

PROJ. NO.	SCALE	DWG. NO.	REV.
	GRID = 100'	JPP-1000	1

APPENDIX C

EMERGENCY PROCEDURES

Emergency Contact List

Name	Work	Cell
Dwight Bennett	(505) 395-2068	(505) 390-6033
Tony Savoie	(505) 395-2116	(505) 631-9376
Jal No. 3 Plant (24-hour number)	(505) 395-2068	
Merryman Construction Company	(505) 395-3110	

EPA defines a "reportable quantity" of spilled oil to be a discharge of oil to navigable waters or adjoining shorelines in sufficient quantity that violates applicable water quality standards, causes a film or "sheen" upon, or discoloration of, the surface of the water or adjoining shorelines or which causes a sludge or emulsion to be deposited beneath the surface of the water or upon adjoining shorelines.

A "sheen" refers to an iridescent appearance on the surface of water.

"Sludge" is an aggregate of oil or oil and other matter of any kind in any form other than dredged spoil having a combined specific gravity equivalent to or greater than water.

Whether a spill should be reported is not dependent upon the amount of oil spilled, but upon the presence of a visible sheen created by the spilled oil.

The New Mexico Oil Conservation Division (OCD) requires the reporting any release of oil in a quantity greater than 5 barrels (210 gallons). OCD must be notified of a minor release (between 5 barrels and 25 barrels) within 15 days using OCD Form C-141 (attached). This form is required to be submitted to the Hobbs District Office, as well as the Environmental Bureau in Santa Fe. A release of oil greater than 25 barrels (1,050 gallons) is considered to be a major release and must be verbally reported within 24 hours to the Hobbs District Office and the Environmental Bureau in Santa Fe. The verbal notification must provide the information on OCD Form C-141. A release of any volume that results in a fire, that will reach a water course, which may with reasonable probability endanger public health or result in substantial damage to property or the environment is also considered to be a major release.

REQUIRED NOTIFICATIONS IN THE EVENT OF AN OIL SPILL

National Response Center:	1-800-424-8802
New Mexico Oil Conservation Division:	505-393-6161(Hobbs District Office) 505-476-3440 (Environmental Bureau)
Facility Address:	Highway 18, Jal, New Mexico
Facility Latitude and Longitude:	32° 10' 20" North & 103° 10' 25" West
Directions to Facility:	3.5 miles north of Jal, New Mexico off N.M. Highway 18
Facility Telephone Number:	505-395-2068

Date of Discharge:	
Time of Discharge:	
Weather Conditions:	
Type of Material Discharged & Manufacturer (if known):	
Estimated Quantity Discharged:	
Source of the Discharge:	
Affected Media (soil, water):	
Cause of the Discharge:	
Damages or Injuries Caused by the Discharge:	
Actions Being Used to Stop, Remove and Mitigate the Effects of the Discharge:	
Evacuation Necessary?	Yes ___ No ___
Names of Individuals and/or Organizations Contacted, Including Time and Date of Report:	

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

State of New Mexico
Energy Minerals and Natural Resources

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

Form C-141
Revised October 10, 2003

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

Release Notification and Corrective Action

OPERATOR

☐ Initial Report ☐ Final Report

Name of Company	Contact
Address	Telephone No.
Facility Name	Facility Type

Surface Owner	Mineral Owner	Lease No.

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County

Latitude_____ **Longitude**_____

NATURE OF RELEASE

Type of Release	Volume of Release	Volume Recovered
Source of Release	Date and Hour of Occurrence	Date and Hour of Discovery
Was Immediate Notice Given? ☐ Yes ☐ No ☐ Not Required	If YES, To Whom?	
By Whom?	Date and Hour	
Was a Watercourse Reached? ☐ Yes ☐ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*

Describe Area Affected and Cleanup Action Taken.*

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

Signature:	OIL CONSERVATION DIVISION	
Printed Name:	Approved by District Supervisor:	
Title:	Approval Date:	Expiration Date:
E-mail Address:	Conditions of Approval:	Attached ☐
Date: Phone:		

* Attach Additional Sheets If Necessary

If the facility has an oil discharge of more than 1,000 gallons in a single discharge or two discharges of more than 42 gallons within a twelve-month period, the information on the following page is required to be submitted to the Regional Administrator, within 60 days, at the following address:

Regional Administrator
United States Environmental Protection Agency
Region 6
1445 Ross Avenue
Suite 1200
Dallas, Texas 75202-2733

with a copy to the Director of the OCD at the following address:

Director
New Mexico Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

DISCHARGE REPORT FORM TO EPA REGIONAL ADMINISTRATOR

Facility Name:	Southern Union Gas Services Jal No. 3 Plant
Name of the Person Submitting This Report:	
Location of the Facility:	3.5 miles north of Jal, New Mexico off N.M. Highway 18
Facility Latitude and Longitude:	32° 10' 20" North 103° 10' 25" West
Maximum storage or handling capacity of the facility:	577,165 gallons
Normal daily throughput:	

Corrective action and countermeasures taken, including a description of equipment repairs and replacements.

Description of the facility, including maps, flow diagrams and topographical maps, as necessary:

Cause of the discharge or discharges requiring submittal of this report:

Failure analysis of the system or subsystem in which the failure occurred:

Additional preventive measures taken or contemplated to minimize the possibility of recurrence:

APPENDIX D

INSPECTION RECORDS

Note: Maintain completed checklists in this appendix for three years after the inspection.

SPILL PREVENTION CONTROL AND COUNTERMEASURE (SPCC) PLAN

MONTHLY INSPECTION REPORT

Name of Inspector: _____ **Date of Inspection:** _____
(Maintain this report in the SPCC Plan for 3 years from this date)

Inspection Item (s):			**Repairs/Corrective Action Required:**
Gasoline Tank			
Leaking	yes ____	no ____	_____
Cracks	yes ____	no ____	_____
Damage	yes ____	no ____	_____
Deterioration	yes ____	no ____	_____
Varsol Tank - Warehouse			
Leaking	yes ____	no ____	_____
Cracks	yes ____	no ____	_____
Damage	yes ____	no ____	_____
Deterioration	yes ____	no ____	_____
Diesel Tank			
Leaking	yes ____	no ____	_____
Cracks	yes ____	no ____	_____
Damage	yes ____	no ____	_____
Deterioration	yes ____	no ____	_____
North Cooling Tower Sump			
Leaking	yes ____	no ____	_____
Cracks	yes ____	no ____	_____
Damage	yes ____	no ____	_____
Deterioration	yes ____	no ____	_____
Pipeline Drip Tank No. 1			
Leaking	yes ____	no ____	_____
Cracks	yes ____	no ____	_____
Damage	yes ____	no ____	_____
Deterioration	yes ____	no ____	_____
Pipeline Drip Tank No. 2			
Leaking	yes ____	no ____	_____
Cracks	yes ____	no ____	_____
Damage	yes ____	no ____	_____
Deterioration	yes ____	no ____	_____
Classifier			
Leaking	yes ____	no ____	_____
Cracks	yes ____	no ____	_____
Damage	yes ____	no ____	_____
Deterioration	yes ____	no ____	_____

SPILL PREVENTION CONTROL AND COUNTERMEASURE (SPCC) PLAN

MONTHLY INSPECTION REPORT

Name of Inspector: _____ **Date of Inspection:** _____
(Maintain this report in the SPCC Plan for 3 years from this date)

Inspection Item (s):			**Repairs/Corrective Action Required:**
Used Oil Tank at Classifier			
Leaking	yes ____	no ____	_____
Cracks	yes ____	no ____	_____
Damage	yes ____	no ____	_____
Deterioration	yes ____	no ____	_____
Contingency Tank			
Leaking	yes ____	no ____	_____
Cracks	yes ____	no ____	_____
Damage	yes ____	no ____	_____
Deterioration	yes ____	no ____	_____
Deepwell Storage Tank			
Leaking	yes ____	no ____	_____
Cracks	yes ____	no ____	_____
Damage	yes ____	no ____	_____
Deterioration	yes ____	no ____	_____
Primary Flash Tank			
Leaking	yes ____	no ____	_____
Cracks	yes ____	no ____	_____
Damage	yes ____	no ____	_____
Deterioration	yes ____	no ____	_____
Condensate Tank (852)			
Leaking	yes ____	no ____	_____
Cracks	yes ____	no ____	_____
Damage	yes ____	no ____	_____
Deterioration	yes ____	no ____	_____
Condensate Tank (851)			
Leaking	yes ____	no ____	_____
Cracks	yes ____	no ____	_____
Damage	yes ____	no ____	_____
Deterioration	yes ____	no ____	_____
Condensate Tank (850)			
Leaking	yes ____	no ____	_____
Cracks	yes ____	no ____	_____
Damage	yes ____	no ____	_____
Deterioration	yes ____	no ____	_____

SPILL PREVENTION CONTROL AND COUNTERMEASURE (SPCC) PLAN

MONTHLY INSPECTION REPORT

Name of Inspector: _____ **Date of Inspection:** _____
(Maintain this report in the SPCC Plan for 3 years from this date)

Inspection Item (s):			**Repairs/Corrective Action Required:**
Used Engine Oil Tank			
Leaking	yes ____	no ____	_____
Cracks	yes ____	no ____	_____
Damage	yes ____	no ____	_____
Deterioration	yes ____	no ____	_____
"C" Plant Oily Water Sump			
Leaking	yes ____	no ____	_____
Cracks	yes ____	no ____	_____
Damage	yes ____	no ____	_____
Deterioration	yes ____	no ____	_____
"B" Plant Lube Oil Tank – North			
Leaking	yes ____	no ____	_____
Cracks	yes ____	no ____	_____
Damage	yes ____	no ____	_____
Deterioration	yes ____	no ____	_____
B" Plant Lube Oil Tank – South			
Leaking	yes ____	no ____	_____
Cracks	yes ____	no ____	_____
Damage	yes ____	no ____	_____
Deterioration	yes ____	no ____	_____
"B" Plant Worthington Lube Oil Tank			
Leaking	yes ____	no ____	_____
Cracks	yes ____	no ____	_____
Damage	yes ____	no ____	_____
Deterioration	yes ____	no ____	_____
"C" Plant Lube Oil Tank			
Leaking	yes ____	no ____	_____
Cracks	yes ____	no ____	_____
Damage	yes ____	no ____	_____
Deterioration	yes ____	no ____	_____
"B" Plant Varsol Tank			
Leaking	yes ____	no ____	_____
Cracks	yes ____	no ____	_____
Damage	yes ____	no ____	_____
Deterioration	yes ____	no ____	_____

SPILL PREVENTION CONTROL AND COUNTERMEASURE (SPCC) PLAN

MONTHLY INSPECTION REPORT

Name of Inspector: _____ **Date of Inspection:** _____
(Maintain this report in the SPCC Plan for 3 years from this date)

Inspection Item (s):			**Repairs/Corrective Action Required:**
"S" Plant Oily Water Sump			
Leaking	yes ____	no ____	_____
Cracks	yes ____	no ____	_____
Damage	yes ____	no ____	_____
Deterioration	yes ____	no ____	_____
"S" Plant Used Oil Tank			
Leaking	yes ____	no ____	_____
Cracks	yes ____	no ____	_____
Damage	yes ____	no ____	_____
Deterioration	yes ____	no ____	_____
"S" Plant Vaulted Oily Water Tank			
Leaking	yes ____	no ____	_____
Cracks	yes ____	no ____	_____
Damage	yes ____	no ____	_____
Deterioration	yes ____	no ____	_____
"A" Compressor Building Sump			
Leaking	yes ____	no ____	_____
Cracks	yes ____	no ____	_____
Damage	yes ____	no ____	_____
Deterioration	yes ____	no ____	_____
"S" Plant Lube Oil Tank			
Leaking	yes ____	no ____	_____
Cracks	yes ____	no ____	_____
Damage	yes ____	no ____	_____
Deterioration	yes ____	no ____	_____
"A" Plant Lube Oil Tank			
Leaking	yes ____	no ____	_____
Cracks	yes ____	no ____	_____
Damage	yes ____	no ____	_____
Deterioration	yes ____	no ____	_____

SPILL PREVENTION CONTROL AND COUNTERMEASURE (SPCC) PLAN

MONTHLY INSPECTION REPORT

Name of Inspector: _____ **Date of Inspection:** _____
(Maintain this report in the SPCC Plan for 3 years from this date)

Inspection Item (s):			**Repairs/Corrective Action Required:**
"A" Plant Lube Oil Tank – East			
Leaking	yes ____	no ____	_____
Cracks	yes ____	no ____	_____
Damage	yes ____	no ____	_____
Deterioration	yes ____	no ____	_____
"A" Plant Lube Oil Tank – West			
Leaking	yes ____	no ____	_____
Cracks	yes ____	no ____	_____
Damage	yes ____	no ____	_____
Deterioration	yes ____	no ____	_____
Lube Oil Tank at Gasoline Plant			
Leaking	yes ____	no ____	_____
Cracks	yes ____	no ____	_____
Damage	yes ____	no ____	_____
Deterioration	yes ____	no ____	_____
Used Engine Oil Tank at "B" Compressor Building			
Leaking	yes ____	no ____	_____
Cracks	yes ____	no ____	_____
Damage	yes ____	no ____	_____
Deterioration	yes ____	no ____	_____
Lube Oil Tank at "B" Compressor Building			
Leaking	yes ____	no ____	_____
Cracks	yes ____	no ____	_____
Damage	yes ____	no ____	_____
Deterioration	yes ____	no ____	_____
West Field Condensate Tank - North			
Leaking	yes ____	no ____	_____
Cracks	yes ____	no ____	_____
Damage	yes ____	no ____	_____
Deterioration	yes ____	no ____	_____
West Field Condensate Tank – South			
Leaking	yes ____	no ____	_____
Cracks	yes ____	no ____	_____
Damage	yes ____	no ____	_____
Deterioration	yes ____	no ____	_____

SPILL PREVENTION CONTROL AND COUNTERMEASURE (SPCC) PLAN

MONTHLY INSPECTION REPORT

Name of Inspector: _____ **Date of Inspection:** _____
(Maintain this report in the SPCC Plan for 3 years from this date)

Inspection Item (s):			**Repairs/Corrective Action Required:**
Gasoline/Varsol Storage Area			
Leaking	yes ____	no ____	_____
Cracks	yes ____	no ____	_____
Damage	yes ____	no ____	_____
Deterioration	yes ____	no ____	_____
Water/Spilled Material Present	yes ____	no ____	_____
Foundation or Supports	yes ____	no ____	_____
Drain Valves Sealed/Plugged	yes ____	no ____	_____
Diesel Tank and Drum Storage Area			
Leaking	yes ____	no ____	_____
Cracks	yes ____	no ____	_____
Damage	yes ____	no ____	_____
Deterioration	yes ____	no ____	_____
Water/Spilled Material Present	yes ____	no ____	_____
Foundation or Supports	yes ____	no ____	_____
Drain Valves Sealed/Plugged	yes ____	no ____	_____
Pipeline Drip Tanks Storage Area			
Leaking	yes ____	no ____	_____
Cracks	yes ____	no ____	_____
Damage	yes ____	no ____	_____
Deterioration	yes ____	no ____	_____
Water/Spilled Material Present	yes ____	no ____	_____
Foundation or Supports	yes ____	no ____	_____
Drain Valves Sealed/Plugged	yes ____	no ____	_____
Deepwell Feed Tank Storage Area			
Leaking	yes ____	no ____	_____
Cracks	yes ____	no ____	_____
Damage	yes ____	no ____	_____
Deterioration	yes ____	no ____	_____
Water/Spilled Material Present	yes ____	no ____	_____
Foundation or Supports	yes ____	no ____	_____
Drain Valves Sealed/Plugged	yes ____	no ____	_____

SPILL PREVENTION CONTROL AND COUNTERMEASURE (SPCC) PLAN

MONTHLY INSPECTION REPORT

Name of Inspector: _____ **Date of Inspection:** _____
(Maintain this report in the SPCC Plan for 3 years from this date)

Inspection Item (s):			**Repairs/Corrective Action Required:**
Used Engine Oil Tank Storage Area			
Leaking	yes ____	no ____	_____
Cracks	yes ____	no ____	_____
Damage	yes ____	no ____	_____
Deterioration	yes ____	no ____	_____
Water/Spilled Material Present	yes ____	no ____	_____
Foundation or Supports	yes ____	no ____	_____
Drain Valves Sealed/Plugged	yes ____	no ____	_____
"B" Plant Lube Oil Tank Storage Area			
Leaking	yes ____	no ____	_____
Cracks	yes ____	no ____	_____
Damage	yes ____	no ____	_____
Deterioration	yes ____	no ____	_____
Water/Spilled Material Present	yes ____	no ____	_____
Foundation or Supports	yes ____	no ____	_____
Drain Valves Sealed/Plugged	yes ____	no ____	_____
"B" Plant Varsol Tank Storage Area			
Leaking	yes ____	no ____	_____
Cracks	yes ____	no ____	_____
Damage	yes ____	no ____	_____
Deterioration	yes ____	no ____	_____
Water/Spilled Material Present	yes ____	no ____	_____
Foundation or Supports	yes ____	no ____	_____
Drain Valves Sealed/Plugged	yes ____	no ____	_____
"C" Plant Lube Oil and "B" Plant Worthington Lube Oil Storage Area			
Leaking	yes ____	no ____	_____
Cracks	yes ____	no ____	_____
Damage	yes ____	no ____	_____
Deterioration	yes ____	no ____	_____
Water/Spilled Material Present	yes ____	no ____	_____
Foundation or Supports	yes ____	no ____	_____
Drain Valves Sealed/Plugged	yes ____	no ____	_____

SPILL PREVENTION CONTROL AND COUNTERMEASURE (SPCC) PLAN

MONTHLY INSPECTION REPORT

Name of Inspector: _____ **Date of Inspection:** _____
(Maintain this report in the SPCC Plan for 3 years from this date)

Inspection Item (s):			**Repairs/Corrective Action Required:**
"S" Plant Lube Oil Tank Storage Area			
Leaking	yes ____	no ____	_____
Cracks	yes ____	no ____	_____
Damage	yes ____	no ____	_____
Deterioration	yes ____	no ____	_____
Water/Spilled Material Present	yes ____	no ____	_____
Foundation or Supports	yes ____	no ____	_____
Drain Valves Sealed/Plugged	yes ____	no ____	_____
"S" Plant Used Oil Tank Storage Area			
Leaking	yes ____	no ____	_____
Cracks	yes ____	no ____	_____
Damage	yes ____	no ____	_____
Deterioration	yes ____	no ____	_____
Water/Spilled Material Present	yes ____	no ____	_____
Foundation or Supports	yes ____	no ____	_____
Drain Valves Sealed/Plugged	yes ____	no ____	_____
"A" Plant Lube Oil Tank Storage Area			
Leaking	yes ____	no ____	_____
Cracks	yes ____	no ____	_____
Damage	yes ____	no ____	_____
Deterioration	yes ____	no ____	_____
Water/Spilled Material Present	yes ____	no ____	_____
Foundation or Supports	yes ____	no ____	_____
Drain Valves Sealed/Plugged	yes ____	no ____	_____
Former "A" Plant Lube Oil Tank Storage Area			
Leaking	yes ____	no ____	_____
Cracks	yes ____	no ____	_____
Damage	yes ____	no ____	_____
Deterioration	yes ____	no ____	_____
Water/Spilled Material Present	yes ____	no ____	_____
Foundation or Supports	yes ____	no ____	_____
Drain Valves Sealed/Plugged	yes ____	no ____	_____

SPILL PREVENTION CONTROL AND COUNTERMEASURE (SPCC) PLAN

MONTHLY INSPECTION REPORT

Name of Inspector: _____ **Date of Inspection:** _____
(Maintain this report in the SPCC Plan for 3 years from this date)

Inspection Item (s):			**Repairs/Corrective Action Required:**
Lube Oil Tank at Gasoline Plant Storage Area			
Leaking	yes ____	no ____	_____
Cracks	yes ____	no ____	_____
Damage	yes ____	no ____	_____
Deterioration	yes ____	no ____	_____
Water/Spilled Material Present	yes ____	no ____	_____
Foundation or Supports	yes ____	no ____	_____
Drain Valves Sealed/Plugged	yes ____	no ____	_____
Storage Drums and Bungs			
Leaking	yes ____	no ____	_____
Cracks	yes ____	no ____	_____
Damage	yes ____	no ____	_____
Deterioration	yes ____	no ____	_____
Aboveground Piping, Hoses, Valves, Joints, Drip Pans, Pipe Supports Used in Transferring Oil			
Leaking	yes ____	no ____	_____
Cracks	yes ____	no ____	_____
Damage	yes ____	no ____	_____
Deterioration	yes ____	no ____	_____
Buried Lines with Exposed Areas	yes ____	no ____	_____
Condition of Tank Foundations or Supports:	yes ____	no ____	_____

SPILL PREVENTION CONTROL AND COUNTERMEASURE (SPCC) PLAN

CONTAINMENT AREA DISCHARGE INSPECTION RECORD

Containment Area	Discharge Date	Oil Present?	Drain Closed Before/After Discharge?	Inspector's Initials	Comments

APPENDIX E

SPCC TRAINING SYLLABUS & PERSONNEL TRAINING RECORD FORM

SPILL PREVENTION, CONTROL, AND COUNTERMEASURE (SPCC) PLAN

PERSONNEL TRAINING RECORD

Name of Instructor: _____ Date of Training: _____

Items Covered:

General facility operations

Regulations applicable to oil storage and oil spills

Requirements of SPCC Plan

Responsibilities of each employee in implementing the SPCC Plan

Spill reporting requirements

Emergency Procedures

Operation and maintenance of equipment to prevent discharges of oil

Known spill events

Known equipment failures

Equipment and components that have been known to malfunction

Recently developed precautionary measures

Attendees:

_____ _____

_____ _____

_____ _____

_____ _____

_____ _____

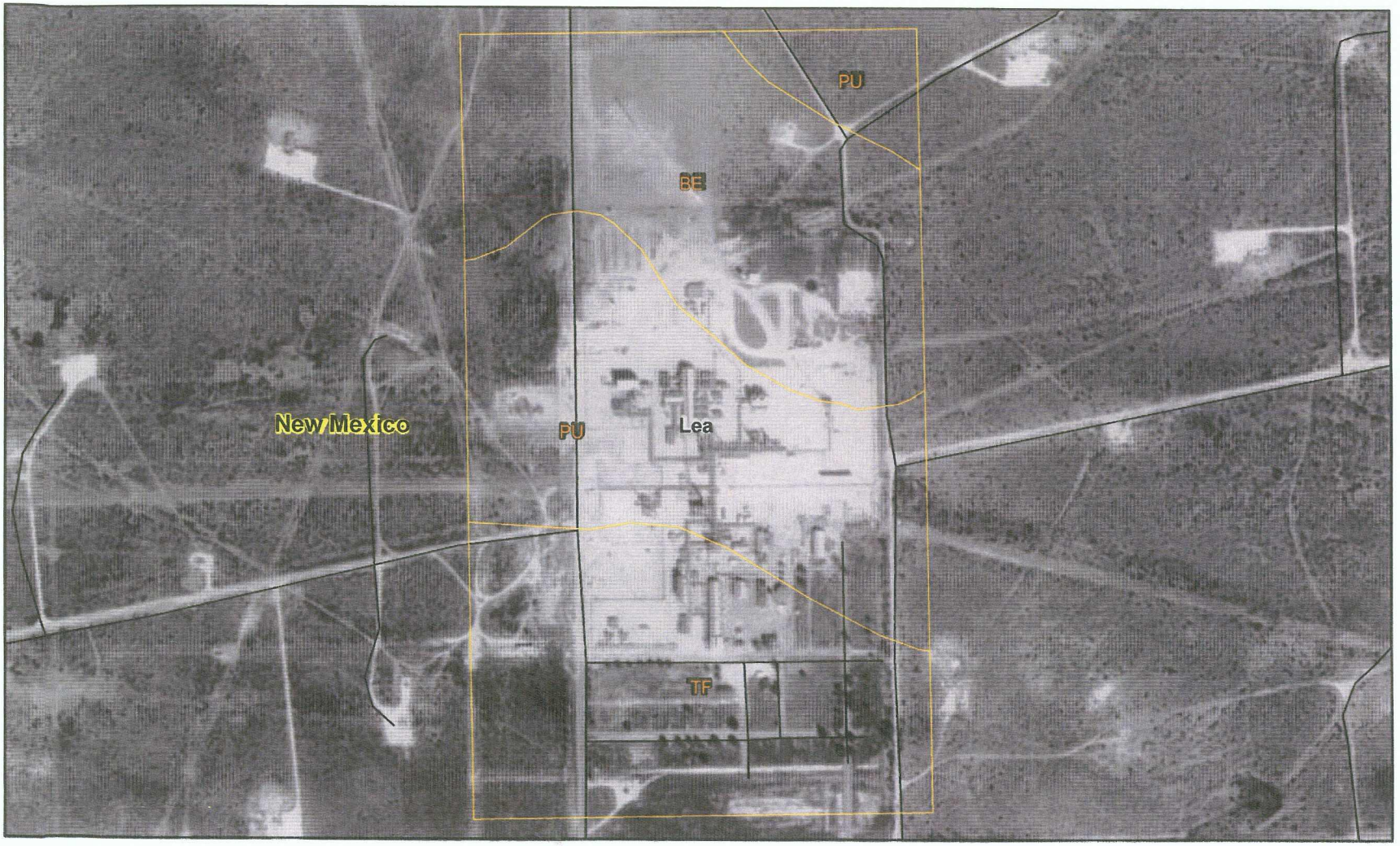
_____ _____

_____ _____

_____ _____

_____ _____

Jal #3



Meters
0 50 100 200

Feet
0 200 400 800 1,200 1,600

Jal

MAP LEGEND

- Soil Map Units
- Cities
- Detailed Counties
- Detailed States
- Interstate Highways
- Roads
- Rails
- Water
- Hydrography
- Oceans
- Escarpment, bedrock
- Escarpment, non-bedrock
- Gulley
- Levee
- Slope
- Blowout
- Borrow Pit
- Clay Spot
- Depression, closed
- Eroded Spot
- Gravel Pit
- Gravelly Spot
- Gulley
- Lava Flow
- Landfill
- Marsh or Swamp
- Miscellaneous Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Slide or Slip
- Sinkhole
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Perennial Water
- Wet Spot

MAP INFORMATION

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: http://websoilsurvey.nrcs.usda.gov

Coordinate System: UTM Zone 13

Soil Survey Area: Lea County, New Mexico
Spatial Version of Data: 2
Soil Map Compilation Scale: 1:20000

Map comprised of aerial images photographed on these dates:
11/1/1997

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend Summary

Lea County, New Mexico

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
BE	Berino-Cacique loamy fine sands association	45.1	31.6
PU	Pyote and maljamar fine sands	51.4	36.1
TF	Tonuco loamy fine sand	46.1	32.3

LOCATION BERINO NM+TX

Established Series
Rev: VGL/JBC/RJA/RLB
05/2006

BERINO SERIES

The Berino series consists of deep, well drained soils that formed in mixed alluvium, the surface of which has frequently been reworked by wind. Berino soils are on sandy plains; fan piedmonts, piedmont slopes and valley floors that have slopes of 0 to 7 percent. The mean precipitation is about 10 inches, and the mean annual temperature is about 61 degrees F.

TAXONOMIC CLASS: Fine-loamy, mixed, superactive, thermic Ustic Calciargids

TYPICAL PEDON: Berino loamy fine sand--rangeland. (Colors are for dry soil unless otherwise noted.)

A--0 to 4 inches; brown (7.5YR 5/4) loamy fine sand, brown (7.5YR 4/4) moist; moderate very fine granular structure; soft, very friable, very fine roots; neutral; clear smooth boundary. (3 to 14 inches thick)

Bt1--4 to 8 inches; reddish brown (5YR 5/4) fine sandy loam, reddish brown (5YR 4/4) moist; moderate very coarse prismatic structure parting to moderate coarse subangular blocky; hard, very friable, few very fine roots; faint reddish coatings on sand grains with some bridging of clay between the grains; slightly alkaline; clear smooth boundary. (3 to 8 inches thick)

Bt2--8 to 25 inches; reddish brown (5YR 5/4) sandy clay loam, reddish brown (5YR 4/4) moist; moderate very coarse prismatic structure parting to moderate coarse subangular blocky; very hard, friable; slightly sticky; many fine and very fine pores; many very fine roots; few distinct clay films on faces of peds and sand grains, and with many clay bridges between sand grains; slightly alkaline; clear smooth boundary. (12 to 20 inches thick)

Btk--25 to 35 inches; yellowish red (5YR 5/6) sandy clay loam, yellowish red (5YR 4/6) moist; moderate coarse subangular blocky structure; very hard, very friable, slightly sticky; many very fine pores; many very fine roots; few faint clay films of peds; sand grains, coated with clay, and many clay bridges between sand grains; slightly effervescent; carbonates segregated as few fine soft masses and as thin filaments or threads; moderately alkaline; gradual wavy boundary. (6 to 12 inches thick)

Bk--35 to 60 inches; pink (5YR 7/4) sandy clay loam, reddish brown (5YR 5/4) moist; very weak coarse subangular blocky structure; extremely hard, friable, slightly sticky; few very fine pores; few very fine roots in upper part; strongly effervescent with carbonates disseminated throughout and also segregated in medium and large soft masses, concretions and as filaments; below the upper 1 to 2 feet the carbonates decrease in amount with increasing depth; moderately alkaline.

TYPE LOCATION: Dona Ana County, New Mexico; west side of SE 1/4, SE 1/4 Sec. 16, T. 20 S., R. 2 E.

RANGE IN CHARACTERISTICS:

Soil Moisture: These soils are usually dry in the 7 to 20 inch control section more than three-fourths of the time the soil temperature exceeds 41 degrees F., but are moist intermittently during the 120 days following the summer solstice. Ustic aridic moisture regime.

Soil Temperature: 59 to 72 degrees F.

Depth to base of argillic horizon: ranges from 24 to 54 inches thick.

Reaction: Neutral to moderately alkaline.

Rock fragments: 0 to 5 percent throughout the control section.

A horizon
Hue: 5YR to 10YR
Value: 4 to 6 dry, 3 to 5 moist
Chroma: 3 to 6

Bt horizon
Hue: 2.5YR or 5YR
Value: 5 or 6 dry, 4 or 5 moist
Chroma: 3 to 6
Texture: sandy loam, loam, sandy clay loam or clay loam,
Clay content: averages more than 18 percent clay.
Calcium carbonate equivalent: slightly effervescent in some pedons.

Bk horizon
Hue: 5YR to 10YR
Value: 7 or 8 dry, 5 to 7 moist
Chroma: 3 to 5 dry, or moist
Texture: sandy loam or sandy clay loam.
Calcium carbonate equivalent: greater than 15 percent.

COMPETING SERIES: These are the Amarose (NM), Grizzle (AZ), Gulch (AZ), Headquarters (NM), McAllister (AZ), McNeal (AZ), Redona (NM), and Tinney (NM) series.
Amarose soils are dry in the moisture control section for more than 160 to 250 days in normal years and receive maxium precipitation during August through October which is indicative of the high plains.
Grizzle soils are moderately deep to a paralithic.
Gulch soil contain more than 15 percent rock fragment in the particle size control section.
Headquarters soils have argillic horizon thickness range from 10 to 15 inches thick.
McNeal soil calcic horizon is at 5 to 20 inches depth.
McAllister soil contain more than 15 percent rock fragment in the particle size control section.
Redona soils contain 5 to 15 percent rock fragment in the particle size control section and located in MLRA 77.
Tinney series have cambic horizon above the argillic horizon and
does not have 10YR hue in the A and Bk horizons. Tinney soils argillic horizon is below the cambic horizon at 10 inches and below.

GEOGRAPHIC SETTING:
The Berino soils are in nearly level to undulating sandy plains, fan terraces, piedmont slopes, and valley floors at elevations of 4,000 to 5,500 feet. The parent material is alluvium derived from mixed sources. Although the content of quartz and other forms of Si02 is relatively high, it constitutes less than 90 percent of the soil material. Berino landscapes are often irregular. Coppice mounds are common. In some pedons Berino soils are alongside duneland. The climate is arid continental. The mean annual temperature is 58 to 65 degrees F., and the mean annual precipitation is 7 to 13 inches with a marked summer maximum. The Thornthwaite P-E Index is about 13. The frost-free period is 180 to 220 days.

GEOGRAPHICALLY ASSOCIATED SOILS: These are the competing Bucklebar and Dona Ana soils and the Cacique, Kermit, Maljamar, Pajarito, Pintura and Turney soils. Cacique soils have petrocalcic horizons at depths of 20 to 40 inches. Maljamar soils have textures of loamy fine sand or coarser in the 20-to 40-inch zone. Turney, Pajarito, Pintura and Kermit soils lack argillic horizons.

DRAINAGE AND PERMEABILITY: Well drained; very slow runoff; moderate permeability.

USE AND VEGETATION:

Major use is grazing; vegetation density and forage production are low to moderate. Principal native vegetation is black grama, blue grama, sideoats grama, mesa dropseed, threeawn, buffalo grass, sand muhly, sand sage, yucca, snakeweed, and mesquite.

DISTRIBUTION AND EXTENT:
Throughout southern New Mexico and the Trans-Pecos are of southwest Texas. The series is extensive. MLRA 42.

MLRA OFFICE RESPONSIBLE: Phoenix, Arizona

SERIES ESTABLISHED:
Dona Ana County, New Mexico; Reconnaissance Survey of Lower Rio Grande Watershed, 1942.

REMARKS: Diagnostic horizons and features recognized in this pedon are:

Ochric epipedon: The zone from 0 to 4 inches. (A horizon)

Argillic horizon: The zone from 4 to 35 inches. (Bt and Btk horizon)

Calcic horizon: The zone from 35 to 60 inches. (Bk horizon)

ADDITIONAL DATA:
Lincoln Laboratory, 69L(253-264) National Soil Survey pedon number is S68NM-013-009, 67L(13198-13204), NSSL pedon number S60NM-013-013.

National Cooperative Soil Survey
U.S.A.

LOCATION CACIQUE NM+AZ

Established Series
Rev. LHG/RJA/PDC/WWJ
06/2006

CACIQUE SERIES

The Cacique series consists of moderately deep, well drained soils that formed in sandy alluvium. Cacique soils are on basin floors and have slopes of 0 to 5 percent. The mean annual precipitation is about 9 inches and the mean annual air temperature is about 60 degrees F.

TAXONOMIC CLASS: Fine-loamy, mixed, superactive, thermic Argic Petrocalcids

TYPICAL PEDON: Cacique sandy loam - rangeland. (Colors are for dry soil unless otherwise noted.)

A--0 to 2 inches; reddish brown (5YR 5/4) sandy loam, reddish brown (5YR 4/4) moist; generally massive with some weak medium platy structure in upper part; slightly hard, very friable; nonsticky and nonplastic; many very fine and fine irregular pores; slightly alkaline; abrupt smooth boundary. (1 to 5 inches thick)

Bt1--2 to 6 inches; reddish brown (5YR 5/4) sandy loam, reddish brown (5YR 4/4) moist; weak coarse prismatic structure parting to weak medium subangular blocky; hard, firm, nonsticky and nonplastic; few fine roots; few fine tubular pores; few insect burrows, 2 to 10 mm in diameter, some empty and some filled with fine earth; clay coatings on sand grains; generally noneffervescent with few discontinuous effervescent areas; slightly alkaline; clear smooth boundary. (3 to 10 inches thick)

Bt2--6 to 12 inches; reddish brown (5YR 5/4) sandy clay loam, reddish brown (5YR 4/4) moist; weak coarse prismatic structure parting to weak medium subangular blocky; firm, slightly sticky and slightly plastic; few fine roots; few fine tubular pores; few insect burrows, 2 to 10 mm in diameter, some empty and some filled with fine earth; sand grains have coatings of clay; generally noneffervescent with a few discontinuous areas that are effervescent; slightly alkaline; clear smooth boundary. (6 to 10 inches thick)

Btk1--12 to 19 inches; reddish brown (5YR 5/4) sandy clay loam, reddish brown (5YR 4/4) moist; moderate coarse prismatic structure parting to weak medium subangular blocky; hard, firm, slightly sticky and slightly plastic; few fine roots; few fine tubular pores, lined with calcium carbonate; common calcium carbonate filaments on faces of peds; insect burrows, 2 to 10 mm in diameter, a few partially empty but most filled with fine earth; clay coatings on sand grains; strongly effervescent; slightly alkaline; clear wavy boundary. (6 to 11 inches thick)

Btk2--19 to 25 inches; mixed reddish brown (5YR 5/4) and pinkish white (7.5YR 8/2) sandy clay loam, reddish brown (5YR 4/4) and pink (7.5YR 7/4) moist; weak coarse prismatic structure parting to weak medium subangular blocky; hard, firm, slightly sticky and slightly plastic; few fine roots; few fine tubular pores, some lined with calcium carbonate; common calcium carbonate nodules and filaments; sand grains in reddish brown parts coated with clay; strongly effervescent; moderately alkaline; abrupt smooth boundary. (4 to 8 inches thick)

Bkm1--25 to 34 inches; pink (7.5YR 8/4) and very pale brown (10YR 8/2) calcium carbonate-cemented material, pink (7.5YR 7/4) and very pale brown (10YR 8/3) moist; alternating subhorizons, 1 mm to 5 cm thick of laminar calcium carbonate and massively cemented, nonlaminar material; very weak, very coarse prisms, several feet in diameter; extremely hard; stains of reddish yellow (5YR 7/6) and reddish yellow (5YR 6/6) occur in upper part, primarily along cleavage planes but in places penetrating the cemented material; sand grains separated by calcium carbonate; strongly effervescent; moderately alkaline; clear wavy boundary. (0 to 35 inches thick)

Bkm2--34 to 57 inches; very pale brown (10YR 8/2) calcium carbonate-cemented material, very pale brown

(10YR 8/3) moist; weak very coarse prisms, several feet in diameter; extremely hard; sand grains separated by calcium carbonate; strongly effervescent; slightly alkaline; clear wavy boundary. (6 to 36 inches thick)

Bk1--57 to 76 inches; very pale brown (10YR 8/2) calcium carbonate nodules, very pale brown (10YR 8/3) moist; medium and very coarse subangular blocky structure; nodules are very and extremely hard, and are discontinuously cemented together into clusters; small amounts of internodular material is pink (7.5YR 8/4), light brown (7.5YR 6/4) moist; and is a sandy loam, single grained and loose; strongly effervescent; slightly alkaline; clear wavy boundary.

Bk2--76 to 102 inches; about 70 percent very pale brown (10YR 8/2) calcium carbonate nodules, very pale brown (10YR 8/3) moist; medium and very coarse subangular blocky structure; very and extremely hard; about 30 percent pink (7.5YR 8/4) sandy loam, light brown (7.5YR 6/4) moist; massive and soft; strongly effervescent; moderately alkaline; clear wavy boundary.

Bk3--102 to 118 inches; light brown (7.5YR 6/4) sandy loam, brown (7.5YR 5/4) moist; massive; soft, discontinuous carbonate coatings on sand grains; few calcium carbonate nodules, very pale brown (10YR 8/2), range from hard to extremely hard; strongly effervescent; moderately alkaline; clear wavy boundary.

C--118 to 130 inches; pale brown (10YR 6/3) sand, brown (10YR 4/3) moist; massive; soft; few slightly effervescent zones; slightly alkaline.

TYPE LOCATION:
Dona Ana County, New Mexico; south bank of trench, 1/10 mile east of northeast taxiway, Las Cruces Municipal Airport; NE 1/4 of section 23, T.23 S., R.1 W. 106 degrees, 54 minutes, 41 seconds west longitude; 32 degrees, 17 minutes, 45 seconds north latitude.

RANGE IN CHARACTERISTICS:

Soil Moisture: Intermittently moist in some part of the soil moisture control section during December through April and for more than 20 days cumulative during July through September. Driest during May and June. Typic aridic soil moisture regime.

Soil Temperature: 60 to 66 degrees F.

Depth to petrocalcic horizon: 20 to 40 inches

A horizon
Hue: 5YR, 7.5YR
Value: 4 through 6 dry, 3 through 5 moist
Chroma: 2 through 4, dry or moist
Texture: sandy loam, fine sandy loam, loamy sand

Bt horizon
Hue: 2.5YR, 5YR, 7.5YR
Value: 4 through 8 dry, 3 through 7 moist
Chroma: 2 through 6, dry or moist
Texture: sandy loam, sandy clay loam (18 to 35 percent clay)

Bkm horizon
Usually 2 to 3 feet thick but ranges from a few inches to about 6 feet. The Bkm horizon is penetrated by scattered pipes into which the Bt descends. Pipes which in cross section are cone shaped range from a few inches to 20 feet or more in diameter.

COMPETING SERIES: These are the Castaneda (AZ), Foxtrot (NM), and Winterton (CA) series. Castaneda and Winerton soils soils are in the Mohave

Desert (MLRA 30) receive mostly winter precipitation and are usually dry from April through November. Foxtrot soils have a calcic horizon above the petrocalcic horizon.

GEOGRAPHIC SETTING:
The Cacique soils formed in sandy sediments of level or nearly level basin floors that date from mid-Pleistocene time. Sediments underlying the Bk horizon are mainly sand with a few gravel or in places the Bk horizon is underlain by a paleosol. Elevation is 4,000 to 5,500 feet. The annual air temperature is 58 to 65 degrees F. The mean annual precipitation is 8 to 10 inches with a summer maximum. The frost- free period is 180 to 220 days.

GEOGRAPHICALLY ASSOCIATED SOILS: These are the Terino, Cruces, Berino, Dona Ana, Kermit, and Simona
soils. Berino, Dona Ana, and Kermit soils do not have a petrocalcic horizon. Simona soils do not have a Bt horizon. Cruces and Terino soils have a petrocalcic horizon at depths less than 20 inches.

DRAINAGE AND PERMEABILITY: Well-drained; medium runoff; moderate permeability.

USE AND VEGETATION:
Some areas are used for livestock grazing and wildlife habitat and others are idle. Vegetation is scattered snakeweed and mesquite in places with clumps of dropseed, tobosa, or black grama.

DISTRIBUTION AND EXTENT: Southern New Mexico. It is of moderate extent. MLRA is 40 and 42.

MLRA OFFICE RESPONSIBLE: Phoenix, Arizona

SERIES ESTABLISHED: Dona Ana County, New Mexico; 1973.

REMARKS: Diagnostic horizons and features recognized in this pedon are:

Ochric epipedon - The zone from 0 to 2 inches (A horizon)

Argillic horizon - The zone from 2 to 25 inches (Bt1, Bt2, Btk1, Btk2 horizons)

Petrocalcic horizon - The zone from 25 to 57 inches (Bkm1, Bkm2 horizons)

This series represents an identified soil within the Desert Soil-Geomorphology Project, Las Cruces, New Mexico. The project was a study of soils and geomorphology in an arid and semi-arid environment. The series is extensively referenced in many documents, publications and thesis. Revision outside the project area is discouraged in order to preserve the historical concept for research.

Classified according to Soil Taxonomy Second Edition, 1999

National Cooperative Soil Survey
U.S.A.

LOCATION PYOTE TX+N M

Established Series
Rev. ACT/RLB
02/2007

PYOTE SERIES

The Pyote series consists of very deep, well drained, moderately rapidly permeable soils formed in sandy and loamy sediments that have been modified by wind. These soils are on nearly level to gently undulating uplands. Slopes range from 0 to 5 percent.

TAXONOMIC CLASS: Loamy, siliceous, active, thermic Arenic Ustic Haplargids

TYPICAL PEDON:
Pyote fine sand - rangeland. (Colors are for dry conditions unless specified otherwise stated.)

A--0 to 4 inches, yellowish red (5YR 5/6) fine sand, dark reddish brown (5YR 3/4) moist; single grain; loose, very friable; common fine and medium and few coarse roots; neutral; gradual smooth boundary. (3 to 10 inches thick)

E1--4 to 21 inches, yellowish red (5YR 5/6) fine sand, yellowish red (5YR 4/6) moist; single grain; loose, very friable; common fine and medium and few coarse roots; neutral; clear smooth boundary. (12 to 24 inches thick)

E2--21 to 36 inches; yellowish red (5YR 5/6) fine sand, yellowish red (5YR 4/6) moist; single grain, loose, very friable; common fine and medium and few coarse roots; slightly alkaline; abrupt smooth boundary. (10 to 15 inches thick).

Bt1--36 to 44 inches; yellowish red (5YR 5/6) fine sandy loam, yellowish red (5YR 4/6) moist; weak coarse subangular blocky structure; hard, very friable; few fine and medium roots; common very fine and fine continuous tubular pores; faint clay films between sand grains; slightly alkaline; gradual smooth boundary. (6 to 20 inches thick)

Bt2--44 to 55 inches, yellowish red (5YR 5/8) fine sandy loam, yellowish red (5YR 4/6) moist; weak coarse subangular blocky structure parting to weak medium and coarse subangular blocky; hard, very friable; few fine and medium roots; common very fine and fine tubular pores; clay bridging between sand grains; faint clay films on surfaces of peds; few black (10YR 2/1) manganese stains on surfaces of peds; common fine and medium irregular masses of iron-manganese; slightly alkaline; slightly alkaline; clear wavy boundary. (8 to 20 inches thick).

Bt3--55 to 63 inches, yellowish red (5YR 5/8) fine sandy loam, reddish brown (5YR 4/3) moist; weak coarse subangular blocky structure; parting to weak medium and coarse subangular blocky; hard, very friable; few coarse roots; common fine continuous tubular pores; faint clay bridging between sand grains; slightly alkaline; abrupt smooth boundary. (0 to 16 inches thick)

BCt--63 to 74 inches, yellowish red (5YR 5/8) fine sandy loam, yellowish red (5YR 5/6) moist; weak coarse subangular blocky structure parting to medium subangular blocky; few medium and coarse roots; hard, very friable; few medium continuous tubular pores; faint clay bridging between sand grains; neutral; abrupt wavy boundary. (5 to 15 inches thick)

BCK--74 to 80 inches; white (10YR 8/1) gravelly fine sandy loam; light yellowish brown (10YR 6/4) moist; weak medium subangular blocky structure; hard, friable; 20 percent caliche pebbles from 1/4 inch to 2 inches across; violently effervescent; moderately alkaline.

TYPE LOCATION:
Winkler County, Texas; from the junction of Texas Highway 115 and Texas Highway 18 in Kermit: 1.25 miles north on Texas Highway 18; 0.45 mile west on oiled road; 0.5 mile north on caliche road; 45 feet east in range. (Latitude: 31 degrees, 52 minutes, 37 seconds North; Longitude: 103 degrees, 06 minutes, 35 seconds West.)

RANGE IN CHARACTERISTICS:

Soil moisture: Ustic aridic moisture regime.

Solum thickness: 60 to more than 80 inches.

A horizon
Hue: 5YR or 7.5YR
Value: 5 or 6
Chroma: 3 to 6
Texture: fine sand or loamy fine sand
Clay content: 1 to 12 percent
Thickness: 20 to 40 inches
Reaction: neutral to slightly alkaline.

Bt and BCt horizons
Hue: 2.5YR to 7.5YR
Value: 5 or 6
Chroma: 4 to 8
Texture: fine sandy loam
Clay content: 8 to 18 percent
Reaction: neutral to moderately alkaline

BCk horizon (where present)
Hue: 5YR to 10YR
Value: 5 to 8
Chroma: 1 to 8
Texture: loamy fine sand or fine sandy loam, or their gravelly counter parts
Coarse fragments: 0 to 35 percent by volume
Some pedons are leached of calcium carbonate below 80 inches
An indurated calcium carbonate layer occurs in some pedons at depths below 60 inches.

COMPETING SERIES: There are no competing series.

GEOGRAPHIC SETTING:
Pyote soils are on nearly level to undulating uplands. Slopes range from 0 to 5 percent. The soil formed in reddish sandy unconsolidated sediments of eolian or alluvial origin. The climate is arid to semiarid. Mean annual precipitation ranges from 10 to 15 inches and mean annual temperatures ranges from 57 to 66 degrees F. Frost-free days range from 210 to 240 and elevation ranges from 2,000 to 3,500 feet. Thornthwaite P-E indices are less than 24.

GEOGRAPHICALLY ASSOCIATED SOILS: These include the competing Elgee series and the Kermit, Mentone, Penwell, Sharvana and Wickett
series. Elgee soils are in similar positions. Kermit and Penwell soils do not have argillic horizons and are in similar positions. Sharvana soils have petrocalcic horizons within 20 inches and are in similar or slightly higher positions. Mentone soils do not have argillic horizons and are in playas in lower positions. Wickett soils have petrocalcic horizons between 20 and 40 inches and are in similar positions.

DRAINAGE AND PERMEABILITY:
Well drained. Runoff is negligible on slopes less than 3 percent, and very low on 3 to 5 percent slopes.

Permeability is moderately rapid.

USE AND VEGETATION:
Used for native rangeland. Dropseeds, perennial threeawns, hooded windmill, and black grama are the principal grasses. Sandsage, and mesquite trees are the woody plants.

DISTRIBUTION AND EXTENT:
The Trans-Pecos of Texas (MLRA 42) and southeastern New Mexico. The series is moderately extensive.

MLRA OFFICE RESPONSIBLE: Phoenix, Arizona

SERIES ESTABLISHED: Ward County, Texas; 1969.

REMARKS: Diagnostic horizons and features recognized in this pedon are:

Ochric epipedon - 0 to 36 inches. (A and E horizons)

Argillic horizon - 36 to 74 inches. (Bt and BCt horizons)

Calcic horizon - The zone from 74 to 80 inches (BCK horizon)

Classification change from loamy, siliceous, thermic Arenic Ustollic Haplargids to loamy, siliceous, thermic Arenic Ustalfic Haplargids based on NSSL data (S91TX-495-038) from the type location, and reference samples from Crane, Loving and Ward counties, Texas. The sand/clay ratio is >13 and organic carbon is less than 0.15.

National Cooperative Soil Survey
U.S.A.

LOCATION TONUCO NM

Established Series
Rev. JCC/VGL/LWH/WWJ
09/2002

TONUCO SERIES

The Tonuco series is shallow and very shallow, excessively drained formed from coarse textured alluvium derived from mixed sources. It is on broad plains and alluvial fans with slopes of 0 to 5 percent. Average annual precipitation is about 12 inches and average annual air temperature is about 63 degrees F.

TAXONOMIC CLASS: Sandy, mixed, thermic, shallow Typic Petrocalcids

TYPICAL PEDON: Tonuco loamy fine sand - rangeland. (Colors are for dry conditions unless otherwise noted.)

A--0 to 5 inches; brown (7.5YR 4/3) loamy fine sand, dark brown (7.5YR 3/3) moist; weak medium subangular blocky structure, with the upper 1 to 2 inches having weak platy structure; soft, very friable, nonsticky; common fine and medium interstitial pores; few fine and medium roots; few small hardened carbonate fragments scattered through the soil material; neutral; clear smooth boundary. (3 to 8 inches thick)

Bk--5 to 15 inches; reddish brown (5YR 5/4) loamy fine sand, reddish brown (5YR 4/4) moist; weak coarse subangular blocky structure becoming structureless in the lower part; slightly hard, very friable, nonsticky; common very fine and fine and few coarse pores; few fine and medium roots; few to common small hardened carbonate fragments scattered through the soil material; neutral abrupt smooth boundary. (3 to 12 inches thick)

Bkm-15 to 36 inches; white (7.5YR 8/1) to pink (7.5YR 8/4) occasionally fractured, layered, indurated caliche that is laminated in the upper part and with Bk like material in the fractures; there may be several laminar horizons with weakly to strongly cemented white (7.5YR 8/1) caliche between. (Several to many feet thick)

TYPE LOCATION:
Eddy County, New Mexico; 2800 feet south and 1550 feet east of the northwest corner of sec. 20, T. 18 S, R. 28 E. 104 degrees, 12 minutes, 00 seconds west longitude; 32 degrees, 43 minutes, 57 seconds north latitude.

RANGE IN CHARACTERISTICS:
Soil Moisture - the moisture control section is dry in all parts more than three fourths of the time the soil temperature exceeds 41 degrees F. The majority of the moisture is received during July, August and September with the soil being moist intermittently above the SMCS or in the upper part of the SMCS for very short periods of time.

Soil temperature - 62 to 65 degrees F.

Depth to Petrocalcic: 6 to 20 inches.

A horizon
Hue: 5YR or 7.5YR
Value: 4 through 6 dry, 3 through 5 moist.
Chroma: 3 through 5
Texture: loamy fine sand or loamy sand

Bk horizon
Hue: 5YR or 7.5YR
Value: 4 through 6 dry, 3 through 5 moist.
Chroma: 4 through 6
Texture: loamy sand or loamy fine sand

COMPETING SERIES: There are no competing series.

GEOGRAPHIC SETTING:
The Tonuco soils occur on gently undulating upland ridges, nearly level plains, alluvial fans, and valley sideslopes. The regolith consists of coarse textured sandy eolian alluvial material derived from variety of reddish crystalline and sedimentary rocks. This coarse textured material rests abruptly on laminated, fractured, strongly cemented to indurated caliche with the sandy material penetrating the fractures of the surface layers of the caliche. The petrocalcic horizon may pre-date the information of the present regolith. The slopes range from 0 to 5 percent and are often complex in character. The climate is warm arid, continental. At the type location the average annual precipitation is 10 to 13 inches with a marked summer maximum. The average annual temperature is 59 degrees to 64 degrees F., the average summer temperature is 80 degrees F., and the Thornthwaite P.E. Index is 13. Frost free period is 200 to 220 days.

GEOGRAPHICALLY ASSOCIATED SOILS: These include the Palomas, Simona, Sharvana, Maljamar, Berino and Cacique. The Palomas, Sharvana, Maljamar, Berino and Cacique soils all have B2t horizons.

DRAINAGE AND PERMEABILITY:
These soils are excessively drained; runoff is nearly non-existent, and permeability is very rapid to the petrocalcic horizon.

USE AND VEGETATION:
These soils are used exclusively for rangeland. The principal vegetation is black grama, sideoats grama, bush muhly, snakeweed, and mesquite. When overgrazed, the vegetation changes to dropseed, threeawn, sand muhly, broom snakeweed, mesquite, creosotebush, and catclaw.

DISTRIBUTION AND EXTENT:
Present known distribution is southern New Mexico where its extent is at least 150,000 acres.

MLRA OFFICE RESPONSIBLE: Phoenix, Arizona

SERIES ESTABLISHED: Eddy County, New Mexico, 1966.

REMARKS: Diagnostic horizons and features recognized in this pedon are:

Ochric epipedon - zone from 0 to 5 inches. (A horizon)

Petrocalcic horizon - zone from 15 to 36 inches. (Bkm horizon)

Classified according to Soil Taxonomy Second Edition, 1999

National Cooperative Soil Survey
U.S.A.

DRAFT PUBLIC NOTICE

Notice of Application by Southern Union Gas Services for Approval of a Discharge Plan for Natural Gas Processing Plant: Southern Union Gas Services seeks approval from the New Mexico Oil Conservation for the renewal of a Discharge Plan for the Jal #3 Natural Gas Processing Plant, located in the West Half of the West Half of Section 33, Township 24 South, Range 37 East in Lea County, New Mexico (32° 10' 27" N, 103° 10' 27" W). This location is at an elevation of 3260' ASL; approximately 4 miles northeast of Jal, New Mexico. This plant captures all liquid wastes in a plant drain system, which routes the discharges to a waste water treatment system for ultimate disposal in an onsite permitted Class II disposal well. Any wastes generated at the facility that are not permitted to be disposed of in the disposal well are collected and shipped offsite for recycling or disposal at permitted facilities. The shallowest groundwater in the area that could potentially be impacted by this facility is at a depth of approximately 90 to 100' and has a total dissolved solids content of approximately 2200 mg/l.

APPENDIX H
Draft Notice of Application, Locations and Newspaper for Publication

APPENDIX H

Notice of Application by Southern Union Gas Services for Approval of a Discharge Plan for Natural Gas Processing Plant: Southern Union Gas Services, whose offices are located at 301Commerce St. Suite 700, Fort Worth, Texas (76102) seeks approval from the New Mexico Oil Conservation for renewal of a Discharge Plan for the Jal #3 Natural Gas Processing Plant, located in the West Half of the West Half of Section 33, Township 24 South, Range 37 East in Lea County, New Mexico ($32^0$10'27" North, 103^0 10'27" West). This location is at an elevation of approximately 3260 feet, approximately 3.5 miles north of Jal, New Mexico. This natural gas plant is designed to have no intentional liquid discharges and disposes of wastewater in a permitted injection well. The shallowest groundwater potentially impacted by this facility is at a depth of approximately 90 feet and has a total dissolved solids content of approximately 2,200 milligrams per liter. Additional information, comments or statements should be addressed Mr. Alberto A. Gutierrez, R.G. of Geolex, Inc., 500 Marquette NW, Suite 1350, Albuquerque, NM 87102, Tel. (505-842-8000).

PROPOSED POSTINGS, NOTIFICATIONS, AND PUBLICATION

Following NMOCD review and acceptance, we propose to post this notice using a 2'x3' sign, in English and Spanish, at the gate of the above-named facility and to post the 2nd sign outside the SUGS office in Jal.

Identified owners of all properties within a 1/3-mile distance from the boundary of the property where the discharge site is located will be provided with copies of this notice by mail. If there are no properties other than properties owned by SUGS within a 1/3-mile distance from the boundary of property where the discharge site is located, notice will be provided to owners of record of the next nearest adjacent properties not owned by the discharger.

Any owners of the lands upon which the proposed discharge site is located not owned by SUGS will be notified by certified, receipt-requested mailing.

The notice will also be advertised, in English and Spanish, in a 3" by 4" display advertisement in the local newspaper, the Hobbs News-Sun.