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2016 JUL 12 P 2:28

July 12, 2016

VIA HAND DELIVERY

Mr. David Catanach, Chair
Oil Conservation Commission
New Mexico Department of Energy
Minerals and Natural Resources
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

Case 15528

Re: Application of DCP Midstream, LP for Authorization to Inject Acid Gas into the Proposed Zia AGI #2D Well, Section 19, Township 19 South, Range 32 East, N.M.P.M., Lea County, New Mexico.

Dear Mr. Catanach:

Enclosed, please find an original and six copies of the above-referenced application filed on behalf of DCP Midstream, LP. In the past, the Division Director has directed that the Oil Conservation Commission hear applications for acid gas injection wells pursuant to 19.15.4.20.B NMAC. Accordingly, DCP respectively requests that this matter be set for hearing before the Commission on the August 25, 2016, hearing date. Your attention to this matter is greatly appreciated.

Sincerely,

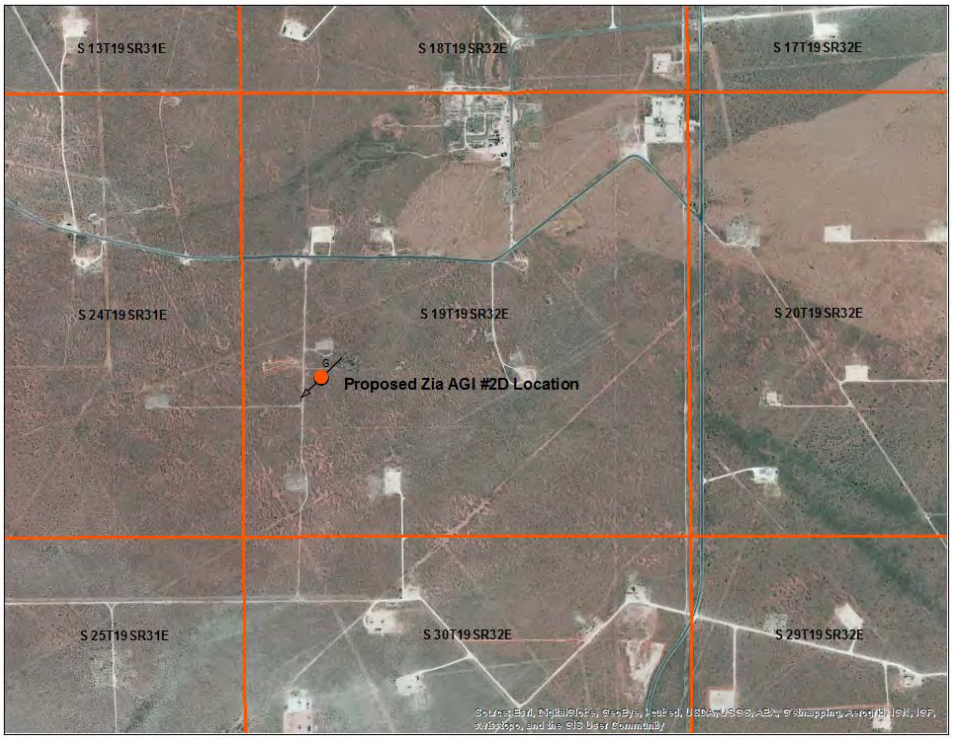
Adam G. Rankin
ATTORNEY FOR DCP MIDSTREAM, LP

cc: Phillip Goetze, w/o encls.
Oil Conservation Division, Engineering Bureau
Bill Brancard, w/o encls.
Oil Conservation Commission, General Counsel
Paul Tourangeau, Esq., w/o encls.
DCP Midstream, LP
Alberto Gutiérrez, w/o encls.
Geolex, Inc.

C-108 Application for Authority to Inject
DCP Midstream LP

Zia AGI #2D

1900'FSL & 950' FWL
Section 19, T19S, R32E
Lea County, New Mexico



July 12, 2016

Prepared For:

DCP Midstream LP
370 17th Street, Suite 2500
Denver, Colorado 80202

Prepared By:

Geolex, Inc.
500 Marquette Avenue, NW, #1350
Albuquerque, New Mexico 87102
(505)-842-8000

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? _____Yes ___X___No

II. OPERATOR: **DCP Midstream, LP**.
ADDRESS: **370 17th St, Suite 2500, Denver CO 80208-5406**
CONTACT PARTY: **Alberto A. Gutierrez, R.G.- GEOLEX, INC.** 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: _____ _____

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 and B.**

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.
SECTION 5; APPENDIX A.

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, 4 and 7**
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 3 and 4**
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**

*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. **SECTIONS 4 and 5 and APPENDIX A**

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**

*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.**

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. **APPENDIX B**

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 DCP Midstream LP

SIGNATURE: _____ DATE: 7/12/2016

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**

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.

AGI #2D Surface: **1900' FSL, 950' FWL Section 19, T19S, R32 E, - SECTIONS 1, 3 and 4. (Vertical Well)**

(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. FINAL AS-BUILTS 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 AND FIGURE 7 FOR PROPOSED WELL DESIGN**

(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- WELL NOT YET DRILLED**

(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 and B**

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; APPENDIX B WE WILL NOTIFY OPERATORS AND LEASEHOLD OWNERS AND SURFACE OWNERS WITHIN THE AREA OF REVIEW PURSUANT TO NMOCD REGULATIONS AND WE WILL SUBMIT AFFIDAVITS OF PUBLICATION OF NOTICE AND CERTIFIED MAIL RETURN RECEIPTS AT HEARING.**

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 B FOR DRAFT OF PUBLIC NOTICE – AFFIDAVIT OF PUBLICATION OF NOTICE FROM NEWSPAPER WILL BE SUBMITTED AT HEARING.**

(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.

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1.0 EXECUTIVE SUMMARY

On behalf of DCP Midstream LP (DCP), Geolex®, Inc. (Geolex) has prepared and is hereby submitting a complete C-108 application for approval to drill, complete and operate an acid gas injection well (Zia AGI #2D) at the DCP Zia Gas Plant in Section 19, T19S, R32E approximately 35 miles west of Hobbs in Lea County, New Mexico (Figure 1). Currently, DCP is authorized to inject a total of up to 15 million standard cubic feet per day (MMSCFD) of treated acid gas (TAG) in either or both of the currently-approved Zia AGI wells (ZIA AGI #1 and #2) under NMOCC Order R-13808. This submission is a separate application for a new well in the deeper Devonian/Wristen/Fusselman Formations with a requested maximum injection rate of 15 MMSCFD. After discussions with NMOCD, DCP is electing to file this separate application that would result in a separate NMOCC order without affecting the existing and approved Order R-13808. Should this new well be approved, DCP requests that the total maximum amount of TAG permitted to be injected from the Zia Plant, regardless of the approved well and injection reservoir, not exceed a total of 15 MMSCFD, and that DCP may allocate the total maximum TAG volume in various ways among the approved wells in both injection zones under an order approving this application and Order R-13808. It should be noted that if this proposed well is successful, it may obviate the need to complete the currently-approved (but not yet drilled) Zia AGI #2 in the Brushy Canyon/Cherry Canyon interval (approved under NMOCC Order R-13808). Accordingly, DCP needs to retain the authority it currently has under Order R-13808 to inject into the Zia AGI #1 and #2 wells.

The Zia AGI #2D will be drilled as a vertical well with the surface location at approximately 1,900 feet from the south line (FSL) and 950 feet from the west line (FWL) of Section 19 (Figure 2). The proposed injection zones will be in the Devonian and Upper Silurian Wristen and Fusselman Formations, at depths of approximately 13,755 to 14,750 feet. Analysis of the reservoir characteristics of these units confirms that they act as excellent closed-system reservoirs that will accommodate the future needs of DCP for disposal of acid gas and sequestration of CO_2 from the Zia Plant.

DCP needs to safely inject up to a maximum of 15 MMSCFD of treated acid gas (TAG) for at least 30 years. Under normal operations it is anticipated that the TAG will be injected primarily into the new Zia AGI #2D, with the existing Zia AGI #1 being used and maintained as a backup well to be used when ZIA #2D is shut down for maintenance. Geologic studies conducted for the selection of this location demonstrate that the proposed injection zone is readily capable of accepting and containing the proposed acid gas and CO_2 injection volumes within NMOCD's recommended maximum injection pressures.

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 included:

- Identification and characterization of all hydrocarbon-producing zones of wells that surround and are present on the proposed plant site.
- The depths of perforated pay intervals in those wells relative to the depth of the target injection zones (Devonian, Wristen and Fusselman).
- The past and current uses of the proposed injection interval.
- Total feet of net porosity in the proposed Devonian, Wristen and Fusselman injection intervals.
- The stratigraphic and structural setting of the targeted injection zone relative to any nearby active or plugged wells, and other wells penetrating the interval.
- The identification of and sample notification letter that will be sent to all surface owners within a one-mile radius of the proposed injection wells.

- The identification of all wells within a two-mile radius and of all operators, lessees and surface owners within a one-mile area of review of the proposed injection well.
- Identification and characterization of all active and plugged wells within the one-mile area of review 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 and predicted composition 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 depth 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.
- A Rule 11 Plan has been approved for the facility. Once approval has been granted for the ZIA AGI #2D, the Rule 11 Plan will be amended to reflect the changes in operations. Since we are requesting no change in the amount or concentrations of H_2S in the TAG stream, no change is required in the approved Rule 11 H_2S Contingency Plan. However, if the well is successfully completed in the Devonian, Wristen and Fusselman interval, the Rule 11 plan will be amended to reflect this change. The revised Rule 11 Plan will be submitted to NMOCD for the file prior to commencement of TAG injection into the Zia AGI #2D well. No changes are planned to the volumes and H_2S concentrations of the TAG, and only the bottom hole location, total depth and well design have been changed (a draft of the amended Plan is attached).

Based upon this detailed evaluation, as summarized in this application, DCP has determined that the proposed AGI well is a safe and environmentally-sound project for the disposal of acid gas. Furthermore, the project provides additional environmental benefit by permanently sequestering a significant volume of CO_2 which would otherwise be released to the atmosphere if H_2S was flared or if a sulfur reduction unit (SRU) was operated at the Plant.

Our research has identified porous and permeable carbonate units within this proposed injection zone including the Devonian, Wristen and Fusselman formations, located approximately 13,800 to 14,500 feet below the plant. These formations are sufficiently isolated from active pay zones above by hundreds of feet of tight, Mississippian limestones and shales, including the immediately overlying Woodford Shale.

At the anticipated reservoir conditions of 185° F and 6,000 psi, each MMSCFD of TAG will occupy a volume of 2,259 cubic feet (402 barrels). At the anticipated maximum operational capacity of 15 MMSCFD, the compressed TAG will occupy 33,892 cubic feet (6,036 barrels) per day. After 30 years of operation, the TAG will occupy an area of approximately 156 acres in the proposed injection zone, or a radius of approximately 1,473 feet (0.28 miles) from the Zia AGI #2D well.

Fifty-five recorded wells were identified in the one-mile radius of the proposed AGI location, of which only a single well penetrates the injection zone. This well (API 3002500900; Lusk Deep Unit 002) reached a total vertical depth of 13,974 feet at a location 0.88 miles northeast of the proposed Zia AGI #2D in 1961, and was plugged and abandoned in September 1971. Of the 55 wells in the one mile radius, 29 are active and 24 are plugged and abandoned, and two are permitted and are pending drilling. None of the wells within one mile of the proposed Zia AGI #2D pose any risk to act as potential conduits that would allow escape of injection fluids from the proposed injection zone.

There is no current production in the proposed injection zone in the one-mile area. The nearest other well penetrating the proposed injection zone is COG's Magnum Pronto 32 State SWD 001 (API 3002541354)

located approximately 2.25 miles southeast of the Zia AGI #2D location. This well is permitted and used by COG for disposal of produced waters generated by their production.

A search of wells within two miles of the proposed Zia AGI #2D reveals a total of 192 recorded wells (78 plugged and abandoned or temporarily abandoned, 101 active, 2 temporarily abandoned), and 11 approved applications awaiting drilling. With the exception of the Lusk Deep Unit 002 noted above, none of these wells penetrate, or are permitted to penetrate, the proposed injection zone (see Appendix A).

Within the one-half mile radius of interest, there are 20 wells, of which 12 are active and 7 are plugged and abandoned. None of these wells penetrate the injection zone. Data on plugged wells and active well information is included in Appendix A.

Active leases in the one-mile area are operated by Chisos, Ltd., Cimarex Energy, COG Operating, DCP, Devon Energy, Lynx Petroleum Consultants, OXY USA, Remnant Oil Operating, Shackelford Oil Company, Tom R. Cone, and Yates Petroleum. All oil and gas mineral rights in this area are owned by the United States (managed by the Bureau of Land Management). Surface owners within a one-mile radius include the United States (managed by the BLM) and DCP. All surface and mineral owners, operators, and leasehold owners within a one-mile radius of the proposed injection well will be notified and provided with a copy of this application at least 20 days prior to the NMOCC hearing pursuant to the requirements of NMOCC. Details on all operators, lessees, and surface and mineral owners are included in Appendix B.

There is no permanent body of surface water within several miles of the plant. A search of the New Mexico State Engineer's files shows three exploratory water wells within one mile of the proposed AGI. Data from these wells show that groundwater occurs at a depth of approximately 100-350 feet, and is hosted by alluvium and the Santa Rosa Formation. Groundwater from the Rustler formation (1,245 to 1,600 footdepth) has total dissolved solids generally exceeding 9,000 mg/L in many parts of southeastern New Mexico (Lambert, 1992).

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 and NMOCC 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)

In addition, this application includes the following supporting information:

- **Appendix A:** Spreadsheets showing all active, temporarily abandoned, abandoned and plugged oil and gas wells included within a two-mile radius and the one-mile area of review, and associated plugging reports for wells which penetrate the proposed injection zone.
- **Appendix B:** Maps and spreadsheets showing operators, lessees, and surface owners in the one-mile radius area of review; an example of the notification letter that will be sent out to them at least 20 days prior to the NMOCC hearing; and a draft public notice.
- **Appendix C:** Approved Rule 11 H_2S Contingency Plan (as amended to reflect the proposed Zia AGI #2D well)

We would like to have this application scheduled for hearing in August 2016.

3.0 PROPOSED CONSTRUCTION AND OPERATION OF DCP ZIA AGI #2D

The Zia AGI #2D will be drilled at 1,900 feet from the south line (FSL) and 950 feet from the west line (FWL) of Section 19 T19S, R32E. The location is plotted on a topographic map in Figure 3.

TAG from the plant's sweeteners will be routed to a central compressor facility, located east of the well head. Compressed TAG will then be routed to the wells via high-pressure rated lines. Figure 4 is a schematic of the proposed new AGI facilities. Figure 5 summarizes the well design elements that will be used in the proposed well. Design details are provided in Section 3.3 below.

3.1 CALCULATED MAXIMUM INJECTION PRESSURE

The well will be designed and constructed such that it will serve as the injection conduit for a mixed stream of treated acid gas. While the plant is currently producing TAG with concentrations of approximately 98.9% CO_2, 0.2% H_2S and 0.9 % C1-C6 hydrocarbons and inert gases, it is anticipated that higher concentrations of H_2S will be encountered in the future. Based on this, the TAG stream used for the following calculations will be approximately:

- 90% CO_2
- 10% H_2S
- Trace Components of $C_1 – C_6$ and Nitrogen

The maximum total volume of TAG to be injected daily will be approximately 15 MMSCFD, although this volume will not be reached for a number of years based on market conditions. Pressure reduction valves and controls will be incorporated to assure that maximum surface injection pressure allowed by NMOCD will not be exceeded.

The specific gravity of TAG is dependent on the temperature and pressure conditions and the composition of the fluid mixture. It is most accurately calculated using a modification of the Peng-Robinson (PR) equation of state (EOS) model (Boyle and Carroll, 2002). We have calculated the specific gravity of the supercritical TAG phase for the proposed Zia injection stream using the AQUAlibrium 3.1 software which employs the modified PR EOS model (Table 1).

We have modeled the proposed maximum daily injection 15 MMSCF TAG composed of 90 mol % CO_2 and 10 mol % H_2S. Specific gravities of TAG were determined for the conditions at the well head (pressure = 1,200 psi, temperature = 100°F) and the bottom of the well (pressure = 6,000 psi, temperature = 185°F). The specific gravity of TAG at equilibrium with the reservoir (pressure = 6,000 psi, temperature = 185°F) was also determined to evaluate the area expected to be affected by injection in the reservoir (see Table 1 and Section 4.4).

The calculated maximum allowable injection pressure (MAOP) would be approximately 5,028 psi (depending on specific gravity of final TAG stream). We have used the following method approved by NMOCD to calculate the proposed MAOP. The final maximum permitted surface injection pressure should be based on the final specific gravity of the injection stream according to the following formula:

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

and $PG = 0.2 + 0.433\ (1.04 - SG_{tag})$ where:

SG_{tag} = average specific gravity of treated acid gas in the tubing (SG_{tag} at top = 0.472 and SG_{tag} at bottom hole = 0.849; see Table 1)

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

$SG_{tag} = 0.6605$ (Average of 0.472 and 0.849)

$D_{top} = 13{,}800$ ft

Therefore:

$PG = 0.2 + 0.433\ (1.04 - 0.6605) = 0.3643$ psi/ft

$IP_{max} = PG\ (D_{top}) = 0.3643 * 13{,}800 = 5{,}028$ psi

For this reason DCP Midstream requests approval for a MAOP of 5,028 psig at the surface for Zia AGI #2D.

3.2 INJECTION VOLUME CALCULATIONS

Using the safety factor of 100%, the maximum requested injection rate of 15 MMSCFD was increased to 30 MMSCFD. Table 1 summarizes the reservoir injection pressure and volume calculations for DCP Zia AGI #2D. These calculations indicate that, with a 100% safety factor, the area of injection from the well will not exceed 0.28 miles from the injection point.

Although the open-hole interval of the well will span 995 feet (13,755 feet to 14,750 feet) our analyses of available logs indicates that approximately 600 feet of reservoir will have 7% or greater porosity. Therefore that thickness was used as a conservative value for calculating plume areas.

Figure 6a shows the locations and calculated areas occupied by the TAG injected from the well at the anticipated average injection volume of 15 MMSCFD after 30 years. In addition to the predicted 30-year extent of TAG in the reservoir, Figure 6a also shows the extent of a 100% volume safety factor (equivalent to 30 MMSCFD for 30 years).

Below is a tabulation of calculated areas and radii of injected TAG after 30 years of operation for various injection rates:

Injection Rate (MMSCFD)	**Radius of AGI Plume after 30 Years (Feet)**	**Radius of AGI Plume after 30 Years (Miles)**	**Area Occupied (Acres)**
15	1,473	0.28	156
30	2,083	0.39	313

As discussed in more detail in Section 4.3 below, Figure 15 describes a porosity "fairway" identified in the proposed injection zone using Devon Energy-owned 3D seismic data which Geolex and DCP were allowed to view and analyze. This fairway is defined by a porosity of 7% or higher, and will likely define the geometry of the injection plume. Figure 6b shows the calculated areas of injection for 15 and 30 MMSCFD after 30 years of operation (156 and 313 acres) superimposed in the outline of the fairway. This figure shows that even at the 100% safety factor of 30 MMSCFD, all of the TAG will be safely contained within the fairway.

Table 1 – Reservoir Injection Pressure and Volume Calculations

PROPOSED INJECTION STREAM CHARACTERISTICS

TAG Gas vol MMSCFD	H_2S conc. mol %	CO_2 conc. mol %	H_2S inject rate lb/day	CO_2 inject rate lb/day	TAG inject rate lb/day
15	10	90	142384	1654780	1797164

CONDITIONS AT WELL HEAD

Well Head Conditions		TAG							
Temp F	Pressure psi	Gas vol MMSCFD	Comp CO_2:H_2S	Inject Rate lb/day	Density[1] kg/m^3	SG[2]	density lb/gal	volume ft^3	volume bbl
100	1200	15	90:10	1797164	472.00	0.472	3.94	60962	10858

CONDITIONS AT BOTTOM OF WELL

Injection Zone Conditions					TAG				
Temp F	Pressure[3] psi	$Depth_{top}$ ft	$Depth_{bottom}$ ft	Thickness[4] ft	Density[1] kg/m^3	SG[2]	density lb/gal	volume ft^3	volume bbl
185	6000	13800	14400	600	849.00	0.849	7.09	33892	6036

CONDITIONS IN RESERVOIR AT EQUILIBRIUM

Injection Reservoir Conditions					TAG				
Temp[5] F	Pressure[3] psi	Ave. Porosity[6] %	Swr	Porosity ft	Density[1] kg/m^3	SG[2]	density lb/gal	volume ft^3	volume bbl
185	6000	11.5	0.21	54.51	849.00	0.849	7.09	33892	6036

CONSTANTS

	SCF/mol	
Molar volume at STD	0.7915	
	g/mol	lb/mol
Molar weight of H_2S	34.0809	0.0751
Molar weight of CO_2	44.0096	0.0970
Molar weight of H_2O	18.015	0.0397

CALCULATION OF MAXIMUM INJECTION PRESSURE LIMITATION

SG_{TAG}	0.6605
$PG = 0.2 + 0.433\ (1.04 \cdot SG_{TAG})$	0.364 psi/ft
$IP_{max} = PG * Depth$	5028 psi

Where: SG_{TAG} is specific gravity of TAG; PG is calculated pressure gradient; and IP_{max} is calculated maximum injection pressure.

CALCULATION OF 30 YEAR AREA OF INJECTION

Cubic Feet/day (5.6146 ft^3/bbl)	33892 ft^3/day	
Cubic Feet/30 years	371,367,202 ft^3/30 years	12378906.75
Area = V/Net Porosity (ft)	6812827 ft^2/30 years	
Area = V/Net Porosity (ft) (43560 ft^2/acre	156.4 acres/30 years	
Radius =	1473 ft	
Radius =	0.28 miles	

[1] Density calculated using AQUAlibrium software

[2] Specific gravity calculated assuming a constant density for water

[3] PP is extrapolated using successful Drill Stem Tests at nearby wells

[4] Thickness is the average total thickness of coarse sand units in the reservoir zone

[5] Reservoir temp. is extrapolated from bottomhole temp. measured at nearby wells

[6] Porosity is estimated using geophysical logs from nearby wells

3.3 WELL DESIGN

The AGI facilities and wells are integrated components of the Zia Gas Plant design. The schematic of the AGI facilities and tie-in to the Zia Gas Plant are shown in Figures 4 and 5, and the preliminary well design for the new injection well is shown on Figure 7. The tubing and cement details of the well design may be modified after review with BLM. Since the subsurface mineral rights are owned by the United States, all well designs and drilling operations and testing will be conducted in accordance with the regulations and guidance provided by the governing agency, the BLM.

The well will have four strings 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 (Figure 7). In addition, the annular space between the production tubing and the well bore will be filled with an inert fluid (corrosion-inhibited 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. The final well design will be approved by BLM as the well will be a BLM-led well.

The well will be advanced vertically to its anticipated total depth of approximately 14,750 feet. The injection zone (13,755 to 14,750 feet) will be completed as an open hole interval.

Design and material considerations include: Placement of Subsurface Safety Valve (SSSV) and the packer; triple casing through freshwater resources (Ogallala and Santa Rosa Formations – groundwater, Rustler – saline groundwater); characterization of the zone of injection; and a total depth (TD) ensuring identification of the reservoir. All casing strings will be cemented to the surface and the cement jobs will be verified by pressure testing. Radial 360^{o} cement bond logs will be conducted for all casing strings as well.

A suitable drilling rig will be chosen for the job that will include an appropriate blowout preventer and choke manifold for any unforeseen pressures encountered. Visual inspections of cement returns to the surface will be noted in both the conductor and surface pipe casing jobs. Casing and cement integrity will be demonstrated by pressure-testing and 360-degree cement bond logging after each cement job.

The four casing strings shown in Figure 7 are summarized below:

1. Surface casing to the Magenta Dolomite Member of the Rustler Formation, approximately 800 feet depth, to protect fresh water in the Ogallala and Santa Rosa Formations. The borehole for the surface casing will be drilled with a 26-inch bit to a depth of approximately 800 feet (above the uppermost salt beds), and 20-inch, 94 ppf, J-55, BTC casing will be installed and cemented to the surface.
2. The first intermediate casing will isolate the Salado salt beds. The borehole will be drilled with a 17 ½-inch bit to a depth of approximately 2,600 feet (below the lowermost salt beds), and 13 $^{3}/_{8}$-inch, 61.0 ppf, J-55, BTC casing will be installed and cemented to the surface.
3. The second intermediate casing will be set to approximately 4,500 feet, to protect the Capitan aquifer. The second intermediate hole will be drilled with a 12 ¼-inch bit to a depth of approximately 4,500 feet. Then a 9 $^{5}/_{8}$-inch, 40.0 ppf, J55, BTC surface casing string will be run and cemented to surface. To further protect the Capitan Aquifer, Diverter Valves or packer stage tools will be placed at approximately 100 feet above the reef and at approximately 50 feet below the 13 $^{3}/_{8}$-inch shoe.
4. The production casing will be constructed and installed in 4 segments:
   A. The first segment will comprise approximately 5,000 feet of 7-inch, 29.0 ppf, HCP-110 LTC casing grade, to approximately 500 feet below the intermediate casing.
   B. The second segment (5,000 to 6,350 feet) will include a 1,350-foot section of 7-inch 29.0 ppf 28CR110 Corrosive Resistant Alloy (CRA) material. This segment is designed to protect the casing from potential corrosion from the acid gasses injected into this interval from the existing AGI #1.
   C. The third segment will include approximately 7,105 feet of 7-inch 29.0 ppf, HCP-110 LTC casing extending from 6,350 to approximately 13,455 feet.
   D. The final fourth segment will run for 300 feet from approximately 13,455 to 13,775 and will be constructed of 29.0 ppf 28CR110 Corrosive Resistant Alloy (CRA) material. This segment is to receive and protect the packer to be located above the open-hole injection zone (13,775 to 14,750 feet) that will be drilled with a 6.125" bit.

The proposed open hole logging suite for the TD run consists of a Dual Induction, Density-Neutron-Gamma Ray Porosity and Fracture Matrix Identification (FMI) log in the Bell Canyon and the Cherry

Canyon. Sidewall cores will be collected from the tight caprock above the Devonian and in the Devonian and upper Silurian Wristen and Fusselman target reservoir units. Representative core samples will be analyzed in the laboratory to determine caprock and reservoir permeabilities and porosity.

After the logs have been evaluated, the production casing string will be extending to approximately 13,800 TVD, using 4 segments described above. The cementing of the long string will be accomplished in two stages, one from 13,750 to 6,350 feet, and the second from 6,350 feet to the surface.

Once the cement has set up, the tubing adaptor for the wellhead will be welded on the wellhead and the rig will be released. A casing integrity test (pressure test) will be performed to test the casing just prior to releasing the rig. After a successful test and the drilling rig released, a work-over rig will be mobilized to location and a cement bond log will be run to ascertain the quality of the cement bond of the production casing. It is important that a good bond be established around the injection interval as well as below the CRA joint to minimize any chances that acid gases mixed with formation water do not travel up the outside of the casing and negatively impact the integrity of the casing job.

Once the integrity of the cement job has been determined a temporary string of removable packer and tubing will be run, and injection tests (step tests) will be performed to determine the final injection pressures and volumes. Once the reservoirs have been tested, the final tubing string including a permanent corrosion-resistant packer, approximately 13,400 feet of 3 ½-inch 9.3 ppf, L80 VAM top premium thread tubing The 300 feet of tubing (13,400-13,700 feet) immediately above the packer will be constructed of corrosion-resistant material.

Permanent, continuous-recording sensors will be incorporated into the packer assembly and appropriate connections will be run through the annulus and out of the well head. These sensors will provide real-time temperature and pressure in the reservoir. Data will be transmitted to the plant's control room for observation, analysis and recording. Section 3.4 below addresses how that data will be used and supplemented in the event of downhole sensor failure.

The SSSV will be run into the well at a depth of approximately 250 feet. A ¼-inch Inconel line will connect the SSSV to a hydraulic panel at the surface.

The National Association of Corrosion Engineers (NACE) issues guidelines for metals exposed to various corrosive gases like the ones in this well. For a H_2S/CO_2 stream of acid gas that is de-watered at the surface through successive stages of compression, downhole components such as the SSSV and packer need to be constructed of Inconel 925. The CRA joints will be constructed of a similar alloy from a manufacturer such as Sumitomo. A product like SM2550 (with 50% nickel content) will likely be used. The gates, bonnets and valve stems within the Christmas tree will be nickel coated as well.

The rest of the Christmas tree will be made of standard carbon steel components and outfitted with annular pressure gauges that report operating pressure conditions in real time to a gas control center located remotely from the wellhead. In the case of abnormal pressures or any other situation requiring immediate action, the acid gas injection process can be stopped at the compressor and the wellhead shut-in using a hydraulically operated wing valve on the Christmas tree. The SSSV provides a redundant safety feature to shut in the well in case the wing valve does not close properly. After the AGI 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 acid gas stream.

3.4 RESERVOIR TESTING AND PRESSURE MONITORING

The Zia AGI #2D will be equipped with bottom hole pressure and temperature monitoring equipment as is currently installed in Zia AGI #1. This equipment is designed to provide real-time monitoring of reservoir conditions as it is installed immediately above the packer. While this equipment is useful in gathering data that will ultimately be used to evaluate reservoir and well performance, it is only a portion of the overall data collection and analysis program to evaluate the reservoir over time and to compare the predicted reservoir performance discussed above in Section 3.2 with actual performance at any future reporting period. The current approved NMOCC order requires a report which evaluates predicted vs. observed reservoir performance after 10 years of operation.

The collection and analysis of injection and annular pressure data has a two-fold purpose. The primary purpose being to provide an early warning of any mechanical well issues which may arise and the second purpose is to provide data for reservoir performance evaluation. While the initial purpose of monitoring the mechanical integrity of the well only requires the surface injection pressure, temperature, rate and annular pressure monitoring, the bottom hole data provides the ability to analyze the performance of the reservoir. Surface pressure/temperature/annular pressure monitoring equipment has extremely high reliability. In contrast, our initial experience with bottom hole pressure/temperature monitoring equipment has shown that this equipment is more complex and suffers from periodic data collection and transmission issues. While DCP continues to make a constant effort to improve performance and reliability, we have developed a process to assure necessary data are collected in the event of bottom hole sensor failures. The simultaneous collection of the surface and bottom hole data allows us develop empirical relationships with actual observed data that, in conjunction with the use of established models (such as Aqualibrium^{TM} or equivalent) will allow us to fill in gaps when bottom hole data loss occurs due to sensor or data transmission failures. This approach will allow us to provide NMOCD with reliable monitoring data and interpretations and provides the basis for the reservoir evaluation which will be performed periodically during the lifetime of the well.

Below is a summary of the overall data collection and analysis program proposed for this well and reservoir.

1. Obtain initial bottom hole pressure and temperature after drilling (during logging).
2. Perform detailed SRT and 10 day falloff test to provide baseline reservoir data prior to injection.
3. Monitor surface parameters (injection pressure, temperature and rate, and annular pressure) to provide early warning system for any potential mechanical issues in the well.
4. Monitor bottom hole pressure/temperature with a device to provide real time reservoir condition data for analysis of reservoir performance.
5. Use bottom hole reservoir and surface pressure/temperature data to develop well-specific empirical relationship between observed surface and bottom hole data.
6. Use TAG/wellbore models to predict bottom hole P/T conditions based on surface data and test with empirical relationships observed in #5 above to calibrate models.
7. Use surface data along with tools in #5 and #6 above to fill in missing bottom hole data when data drops or sensor failure occurs.
8. In the event of an extended period of bottom-hole pressure/temperature sensor failure, perform periodic bottom hole pressure monitoring using slickline pressure bombs only if data from such temporary device is necessary to fill in data for relevant analyses. After approximately 10 years of operation, perform another detailed SRT and falloff test to compare with baseline prior to injection.
9. Use all data collected along with test results from #2 and #9 above to produce the required analysis of reservoir performance and comparison with predicted reservoir performance discussed above in Section 3.2. This would be the basis of the NMOCC required 10 year evaluation of actual reservoir performance vs predicted performance.

4.0 REGIONAL AND LOCAL GEOLOGY AND HYDROGEOLOGY

4.1 GENERAL GEOLOGIC SETTING/SURFICIAL GEOLOGY

The Zia Gas Plant is located in Section 19, T 19 S, R 32 E, in Lea County, New Mexico, about 35 miles west of Hobbs (Figure 1). The plant location is within a portion of the Pecos River basin referred to as the Querecho Plains reach (Nicholson & Clebsch, 1961). This area is relatively flat and largely covered by sand dunes underlain by a hard caliche surface. The dune sands are locally stabilized with shin oak, mesquite and some burr-grass. There are no natural 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. The proposed plant site is underlain by Quaternary alluvium overlying the Triassic redbeds of the Santa Rosa Formation (Dockum Group), both of which are local sources of groundwater. The thick sequences of Permian through Ordovician rocks that underlie these deposits are described generally below.

4.2 BEDROCK GEOLOGY

The plant and the proposed well are located at the northern margin of the Delaware Basin, a sub-basin of the larger, encompassing Permian Basin (Figures 8), which covers a large area of southeastern New Mexico and west Texas. The Permian Basin lies within the area of the larger, ancestral (pre-Mississippian) Tabosa Basin, which covered an area that included the entire present-day Permian Basin area and beyond. The Tabosa Basin was a shallow sub-tropical basin throughout the period between the Ordovician and early Mississippian (Osagean). The Permian Basin as we know it today began to take form during the Middle to Late Mississippian, with various segments (Delaware and Midland Basins, Central Basin Platform, North Platforms) arising from the ancestral Tabosa Basin. The Delaware Basin was subsequently deepened by periodic deformation during the Hercynian orogeny of the Pennsylvanian through Early Permian. Following the orogeny, the Delaware Basin was structurally stable and gradually was filled by large quantities of clastic sediments while carbonates were deposited on the surrounding shelves, and was further deepened by basin subsidence.

Figure 9 is a generalized stratigraphic column showing the formations that underlie the proposed well site. The entire lower Paleozoic interval (Ellenburger through Devonian) was periodically subjected to subaerial exposure and prolonged periods of karsting, most especially in the Fusselman and Devonian. The result of this exposure was development of systems of karst-related secondary porosity, which included solution-enlargement of fractures and vugs, and development of small cavities and caves. Particularly in the Fusselman, solution features from temporally-distinct karst events became interconnected with each successive episode, so there could be some degree of vertical continuity in parts of the Fusselman section that could lead to enhanced vertical and horizontal permeability.

In this immediate area of the Permian Basin, major tectonic activity was primarily confined to the lower Paleozoic section, where seismic data shows major faulting and ancillary fracturing affected rocks only as high up as the lower Woodford Shale (Figures 9 and 10). Faulting higher in the section that is related to the Hercynian orogeny is more prevalent closer to the Central Basin Platform margins and the northern margins of the Northwest Shelf.

The sub-Woodford Paleozoic rocks extend down to the Ordovician Ellenburger Formation, which sit on the basement over a veneer of Early Ordovician sandstones and granite wash. The Ellenburger is comprised of dolomites and limestones, and is up to several hundred feet thick. It is overlain by about

400 feet of Ordovician Simpson sandstones and tight limestones, in turn overlain by about 400 feet of Montoya cherty carbonates.

The Silurian Fusselman and Wristen, and Devonian Thirty-one Formations overlie the Montoya, and are comprised of interbedded dolomites and dolomitic limestones that are capped by the Woodford Shale. The Woodford shale is overlain by several hundred feet of Osagean limestone, which is overlain by several hundred feet of shales and basinal limestones of the Upper Mississippian Chester Formation. The Pennsylvanian Morrow, Atoka, Strawn, and a starved section of Cisco-Canyon complete the pre-Permian section. Within this entire sequence, the Morrow is a major gas producing zone, with smaller contributions from the Atoka and Strawn. The proposed Silurian-Devonian injection zone does not produce economic hydrocarbons for more than 15 miles away from the well site.

The Permian rocks found in the Delaware Basin are divided into four series, the Ochoa (most recent), Guadalupe, Leonard, and Wolfcamp (oldest) (Figure 9). Numerous oil and gas pools have been identified in these rocks. In the area of the proposed Zia AGI #2D well, the rocks consist predominately of clastic rocks – primarily sands, and shales with lesser carbonates. Producing reservoirs are concentrated in the high porosity sands. Local oil production is largely restricted to the Delaware Sands pool (overlying the injection zone in the Zia AGI #1), and gas production is dispersed through the deeper Bone Springs (the "Avalon") and Wolfcamp (Figure 8).

There have been no commercially significant deposits of oil or gas found in the Devonian or Silurian rocks (the proposed injection zone), in the vicinity of the well. Adjacent wells have shown that these formations are "wet," and there is no current or foreseeable production at these depths within the one-mile radius (Figure 12) of review. In fact, these zones are routinely approved as produced-water disposal zones in this area.

4.3 LITHOLOGIC AND RESERVOIR CHARACTERISTICS OF THE SILURO-DEVONIAN FORMATIONS

The proposed injection interval includes the Devonian Thirty-one, and Silurian Wristen and Fusselman Formations, collectively referred to as the Siluro-Devonian. Based on the geologic analyses of the subsurface at the Zia Gas Plant, we recommend acid gas injection and CO_2 sequestration in the Siluro-Devonian Formations. The proposed injection interval includes a number of intervals of dolomites and dolomitic limestones with moderate to high primary porosity, and secondary, solution-enlarged porosity that is related to karst events that periodically occurred throughout the section, most notably in the Fusselman Formation. These karst events produced solution cavities and enlarged fractures throughout the section, which can be substantial enough to provide additional permeability that is not readily apparent on well logs. The porous zones are separated by tight limestones and dolomites.

The Siluro-Devonian interval has excellent cap rocks above, below and between the individual porous carbonate units. There are no producing zones within or below the Siluro-Devonian in the area of the proposed well, and the injection interval is separated from the nearest producing zone (Morrow) by 20 feet of Woodford shale, 550 feet of tight Osagean limestones, and nearly 350 feet of tight Chesterian shales and deep water limestones (Figure 10). It lies a minimum of 1,200 feet above the Precambrian basement. Faults that have been identified in the area only penetrate to the lower part of the Woodford Shale, and would not serve as potential vertical conduits because of the thick, tight cap rock above, and tight rocks below. The high net porosity of the proposed injection zone indicates that the injected H_2S and CO_2 will be easily contained close to the injection well.

Figure 13 shows the lines of the cross sections included as Figures 10 and 14, which present cross-sections showing the proposed injection zones and the continuous, thick cap rocks that overlie the Siluro-Devonian section. These logs clearly show that the cap rocks are continuous across the area, and that any migration of fluids along faults would be confined to the sub-Woodford proposed injection zone.

The available geophysical logs were examined for all wells penetrating beneath the Woodford Shale within a three-mile radius of the proposed DCP Zia AGI #2D well. Existing well control to these depths is limited to three wells (Figure 13), two of which are salt water disposal wells that inject into the open-hole interval from the base of the Woodford through the Fusselman or upper Montoya Formations. The third and closest deep penetration is the Lusk Deep Unit #2, a plugged Morrow producer that is approximately 4,800 feet northeast of the proposed injection well.

Working with Devon Energy, who owns a proprietary 3D seismic volume that covers the area around the proposed location, Geolex was able to observe deep structures and produce a generalized subsea structure map drawn on top of the Devonian (base of Woodford) that was based on synthetic seismograms generated from the sonic logs and well tops of the Lusk Deep #2 and the Magnum Pronto SWD #31-1 (two miles southeast of the location) wells.

These seismic and log analyses were used to define a porosity "fairway" (encompassing at least 400 acres) shown in Figure 15. This interpretation is supported by cross-sections of the overlying stratigraphy that reveal relatively horizontal contacts between the units (Figure 10). Only one fault was observed in the area, which penetrates only up to the base of the Woodford Shale. This fault runs northwest to southeast through the Zia plant site. Local heterogeneities in permeability and porosity affect fluid migration and the overall three-dimensional shape of the injected gas plume.

Geolex's geological analyses confirm that the Siluro-Devonian interval is the most promising deep injection zone (beneath existing production) in the vicinity of the DCP Zia Plant. This preliminary analysis is confirmed by Geolex's detailed geological analysis, including the analysis of the geophysical logs collected from nearby wells. The zone has the requisite high porosity and permeability and is bounded by tight limestones and shales above and below. These are ideal H_2S and CO_2 sequestration conditions.

The porosity of the units in the area was evaluated using amplitude attribute analysis of the Devon 3D seismic volume, and geophysical logs collected from 3 nearby wells penetrating the sub-Woodford section. Amplitude anomalies indicative of porosity formation in the Siluro-Devonian section were identified on the 3D volume and the extent of observed anomalies were mapped (Figure 15). The major amplitude anomaly was found in the upper Fusselman, and covers an area of 400 to 600 acres under and in the vicinity of the proposed location; another anomaly, identified in the lower Devonian, is at least 80 acres in size and extends below the proposed location (Figure 15). Geolex had a restricted view of the Devon seismic volume, but the Fusselman anomaly extends further to the west and could be as large as 600 acres, and the Devonian anomaly at least 30% larger than what we were able to see.

Full modern logging suites through the entire Siluro-Devonian section were available from the BOPCO Hackberry 34 SWDW #1 (Sec. 34-19S-31E) and Concho Oil & Gas Magnum Pronto SWD #32 #1 (Sec. 32-19S-32E) wells, and a sonic and old induction electric log through the upper Fusselman available in the El Paso Natural Gas Lusk Deep #2 (Sec. 18-19S-32E). Primary porosity was counted from the neutron/density cross-plot log in the Hackberry and Magnum Pronto wells, but it was not possible to count secondary porosity from solution-enlarged fractures and vugs/cavities in any of the wells. The microlog resistivity logs in the two disposal wells, which inject salt water into the Siluro-Devonian interval, show a number of solution-enlarged and primary fractures (Figures 16 and 17) throughout the Siluro-Devonian section that could have porosities in excess of 15%. Primary porosity ranges up to 10%

in each well. The sonic log from the Lusk Deep Unit #2 shows porosities up to 14% or more, in the Devonian and the Fusselman, which reflects some of the secondary porosity in that wellbore . The two disposal wells show more primary and widespread fractured/solution-enlarged porosity in the Fusselman than in the Wristen and Devonian, and less tight rock intervening between porous zones.
The Lusk Deep Unit #2 shows about the same amount of porosity in the Devonian-Wristen and upper Fusselman (the lower Fusselman was not logged in this well) than in the other two wells. The upper Devonian in the Lusk Deep and Magnum Pronto wells appears generally to be tight, but is more heavily fractured in the Hackberry SWD well. Primary porosity in the two disposal wells average from 4-5%, without taking into consideration the porosity "plumbing" or interconnection of the primary porosity with the fracture and solution-enlarged porosity. The COG Magnum Pronto well is currently injecting up to 2.5 bbls/minute at an injection pressure of less than 300 psi, showing that the formation is very permeable and capable of accepting higher volumes of fluid. This suggests that secondary porosity plays a key role in transmissivity.

Based upon primary porosity in the three key offset wells, the presence of fractures and other secondary porosity, and experience working with the Siluro-Devonian in this region, Geolex estimates that, between the lower Devonian to the base of the Fusselman (approximately 600 feet), the average effective porosity is approximately 11.5%, weighing in the higher porosities expected from secondary porosity; taken over the average thickness of the interval within ½ mile of the proposed DCP Zia AGI #2D of 600 feet and irreducible water (S_{wir}) of 0.21 (see Table 1). This results in an effective porosity of approximately 54.5 feet after considering S_{wir}.

The overlying Chester, Osage and Woodford Formations provide over 1,000 feet of shale and intervening tight limestones, providing an effective seal on the top of the injection zone. The proposed injection interval is located more than 1,000 feet below the Morrow Formation, which is the deepest potential pay zone in the area. There are no pay zones below the injection zone in the area (see Figures 9 and 10).

4.4 INJECTIVITY OF THE SILURO-DEVONIAN INTERVAL

No direct measurements have been made of the injection zone porosity or permeability. However, satisfactory injectivity of the injection zone can be inferred from the porosity logs described above and the seismic anomalies. The zone will be logged and cored in the AGI well to obtain site-specific porosity and permeability data.

A maximum allowable surface injection pressure was calculated for the proposed AGI well following the NMOCD approved formula: $IP_{max} = PG (D_{top})$, where IP_{max} is the maximum allowed surface injection pressure (psi), PG is the pressure gradient of the injected fluid (psi/ft), and D_{top} is the depth to the top of the perforated zone (ft). Using the proposed depth to the top of the injection zone in the proposed AGI well (13,800 ft) and TAG as the injection fluid, the maximum allowable injection pressure would be approximately 5,028 psi (Section 3.1).

The reservoir pressure and temperature have been estimated by plotting data from nearby wells. A plot of bottom hole pressures (Figure 18) reveals a consistent trend with depth, indicating that the reservoir temperature in the proposed well would be approximately 185 °F. A plot of reservoir pressures using successful Drill Stem Tests (DSTs) show some scatter, but indicates that the reservoir pressure in the proposed well would be about 6,000 psi.

4.5 FORMATION FLUID CHEMISTRY

A review of formation waters from the U.S. Geological Survey National Produced Waters Geochemical Database v2.1 (10/16/2014) identified 10 wells with analyses from drill stem test fluids collected from the Devonian, Silurian-Devonian or Fusselman Formations, in wells within approximately 12 miles of the proposed Zia AGI #2D (Townships 18 to 20 South and Ranges 30 to 33 East).

These analyses showed Total Dissolved Solids ranging from 20,669 to 40,731 milligrams per liter (mg/l) with an average of 28,942 mg/l. The primary anion is chloride, and the concentrations range from 11,176 to 23,530 mg/l with an average of 16,170 mg/l.

An attempt will be made to sample formation fluids during drilling or completion of the well to provide more site-specific fluid properties.

4.6 GROUNDWATER HYDROLOGY IN THE VICINITY OF THE PROPOSED INJECTION WELL

Based on the New Mexico Water Rights Database from the New Mexico Office of the State Engineer, there are four freshwater wells located within a one-mile radius of the DCP Zia AGI #2D well; the closest water well is located 0.6 miles away (Figure 19; Table 2). All wells within the one-mile radius are shallow, collecting water from about 250 to 350 feet depth, in the Triassic redbeds. These wells were drilled for exploratory purposes by Phillips Petroleum in 1982, and do not produce any consumed water. The shallow freshwater aquifer is protected by the surface and intermediate casings in the proposed DCP Zia AGI #2D well, which extend to 850 feet, 2,500 and 4,500 feet, respectively.

The area surrounding the proposed injection wells is arid and there are no bodies of surface water within a five mile radius.

Table 2: Water Wells Identified by the New Mexico State Engineer's Files within One Mile of the Proposed Zia AGI #2D Well

POD Number	Owner	Use	UTME	UTMN	Distance (m)	Depth Well (ft)	Depth Water (ft)
CP 00642 EXPL	PHILLIPS PETROLEUM COMPANY	Exploration	611025	3611657	973	250	N/A
CP 00640 EXPL	PHILLIPS PETROLEUM COMPANY	Exploration	612621	3613280	1342	260	102
CP 00639 EXPL	PHILLIPS PETROLEUM COMPANY	Exploration	613029	3612880	1540	350	345
CP 00563 EXPL	PHILLIPS PETROLEUM COMPANY	Exploration	612118	3613376	1064	N/A	N/A

Our analysis confirms that the proposed well poses no risk of contaminating groundwater in the area. There are no potential conduits that would allow migration of injected fluids to fresh-water zones.

5.0 OIL AND GAS WELLS IN THE DCP ZIA AGI AREA OF REVIEW AND VICINITY

Within a two-mile radius of the proposed Zia AGI #2D location, NMOCD records identify a total of 192 wells (80 plugged and abandoned or temporarily plugged and 101 active). There are also 11 well applications approved and awaiting drilling (including the permitted Zia AGI #2). Except for the Lusk Deep Unit well noted below, there are no known wells (current or proposed) that penetrate the proposed injection zone (see Appendix A).

Fifty-five wells were identified in the one-mile radius of the proposed AGI location, of which 29 are active, 24 are plugged, and 2 are pending. There is no current production in the proposed injection zone in this area. The single well penetrating the injection zone (API 3002500900; Lusk Deep Unit 002) reached a total vertical depth of 13,974 feet at a location 0.88 miles northeast of the proposed Zia AGI #2D in 1961, and was plugged and abandoned in September 1971. Well data and a plugging diagram are included in Appendix A. All of the wells identified are listed in Table A-1 in Appendix A, which includes the locations, depths, status, operators and distances of the wells from the AGI well locations. Figure 20 identifies the single well penetrating the proposed injection zone, and Table 3 identifies the wells within one-half mile of the proposed AGI well. The locations of all wells within the one-half mile radius are shown in Figure 20.

Within the one-half mile radius of interest, there are only 20 wells, of which 12 are active and 7 are plugged and abandoned, and one permitted undrilled well in the Siluro-Devonian (Zia AGI #2). A complete list of oil and gas wells within the 0.5, 1.0 and 2.0 mile radii is included in Appendix A. A review of the plugging and completion reports indicates that none of the wells within 0.5 miles penetrate the injection zone (see plugged and active well information included in Appendix A).

One well within the one-mile radius penetrates the injection zone. The well data and plugging records for this well are included in Appendix A.

Figure 21 shows the locations of the 20 wells within the area of interest, and Table 3 below summarizes the relevant information for those wells.

TABLE 3: Wells Located Within One Half Mile of the Proposed Zia AGI #2D

API #	OPERATOR	PLUG DATE	SPUD DATE	TVD	STATUS	To AGI #2D (mi)
3002542207	DCP MIDSTREAM, LP				Permitted, not drilled	0.0
3002542208	DCP MIDSTREAM, LP		12/23/2014	6192	Active	0.04
3002500911	SIMMS & REESE OIL CO	12/30/1959	12/7/1959	2640	Plugged	0.09
3002500904	CARPER DRILLING CO	3/1/1943	12/19/1942	2862	Plugged	0.17
3002520247	EL PASO NATURAL GAS	10/25/1971	12/10/1963	11432	Plugged	0.24
3002535291	COG OPERATING LLC		4/24/2001	12718	Active	0.26
3001505790	PLAINS PROD CO	8/18/1947	1/20/1946	2876	Plugged	0.28
3002500902	REMNANT OIL PROPERTIES, LLC		10/12/1942	2634	Active	0.29
3002500909	TOM R CONE		8/31/1958	2490	Active	0.29
3001542914	COG OPERATING LLC		2/2/2015	9210	Active	0.31
3002542750	COG OPERATING LLC	9/25/2015	9/1/2015	4370	Plugged	0.32
3002542858	COG OPERATING LLC		10/22/2015	9241	Active	0.32
3002534573	COG OPERATING LLC		12/17/1999	12540	Active	0.34
3002520876	TOM R CONE		11/6/1964	11223	Active	0.35
3002500910	TOM R CONE		8/3/1961	2500	Active	0.36
3002500907	KELLY G STOUT	3/24/1958	10/1/1957	2552	Plugged	0.37
3001510382	PHILLIPS PETROLEUM CO	10/17/1994	4/26/1964	11540	Plugged	0.40
3002520122	COG OPERATING LLC		4/16/1963	12554	Active	0.42
3001505785	REMNANT OIL PROPERTIES, LLC		10/8/1941	2470	Active	0.43
3002500906	TOM R CONE		1/2/1957	2715	Active	0.50

Wells within the 30-Year Calculated Injection Area Using 100% Safety Factor

For the purposes of this evaluation, the calculated areas of injection influence (0.28 mile radius) are based on the highly conservative injection rate of two times the base design rate over 30 years. No wells penetrate the injection zone within this area (see Figures 20 and 21).

6.0 IDENTIFICATION AND REQUIRED NOTIFICATION OF OPERATORS, SUBSURFACE LESSEES, AND SURFACE OWNERS WITHIN THE AREA OF REVIEW

Geolex contracted with J Bar Cane, Inc. in Stanley, New Mexico to research land records in Lea and Eddy Counties to obtain a listing of all operators, oil, gas and mineral lessees, and surface owners within a one-mile radius of the proposed AGI well. Appendix B includes the results from that search.

Table B-1 provides the surface and mineral owners in the one-mile area of review. Table B-2 is the list of operators and Table B-3 is a list of mineral leasehold owners. These Tables comprise the universe of persons that must be notified 20 days prior to the NMOCC hearing.

Table B-4 is a full summary of the land status by Tract. Figure B-1 includes maps showing surface and mineral ownership by tract in the area of review. The original land status reports from J Bar Cane, Inc. are also included in Appendix B.

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 DCP AGI #2D well has been performed. The 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 fluids between the proposed injection zone with any known sources of drinking water or oil or gas production in the vicinity as described above in Sections 4 and 5 of this application.

8.0 REFERENCES

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Silver, B.A., Todd, R.G., 1969. Permian cyclic strata, northern Midland and Delaware Basins, west Texas and southeastern New Mexico, *The American Association of Petroleum Geologists Bulletin* 53: 2223-2251.

Ward, R.F., Kendall, C.G.St.C., Harris, P.M., 1986. Upper Permian (Guadalupian) facies and their association with hydrocarbons – Permian Basin, west Texas and New Mexico. *The American Association of Petroleum Geologists Bulletin* 70: 239-262

Figures

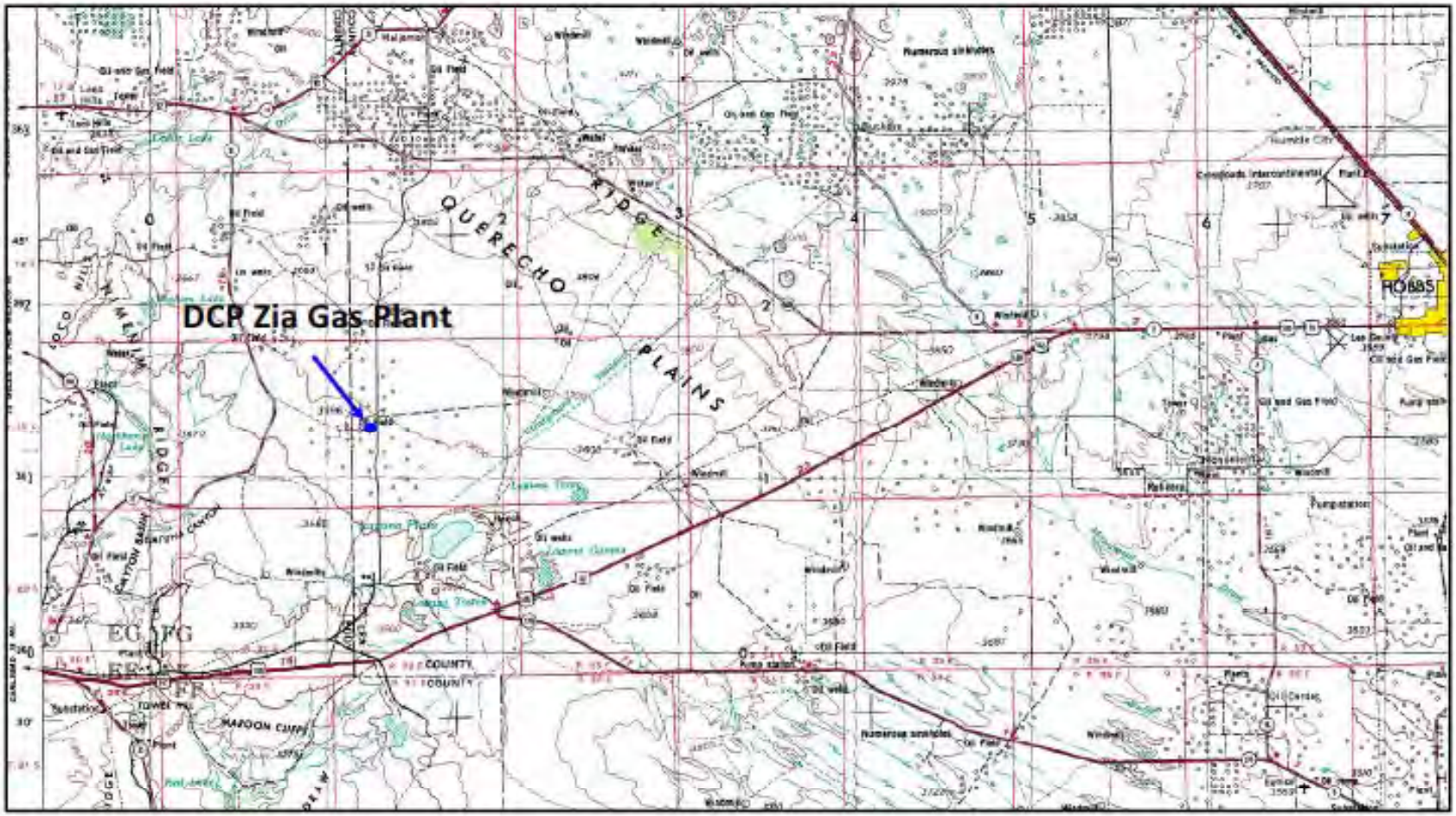


Figure 1: Location of the DCP Zia Gas Plant and Proposed AGI Well #2D
(USGS 1:250,000)

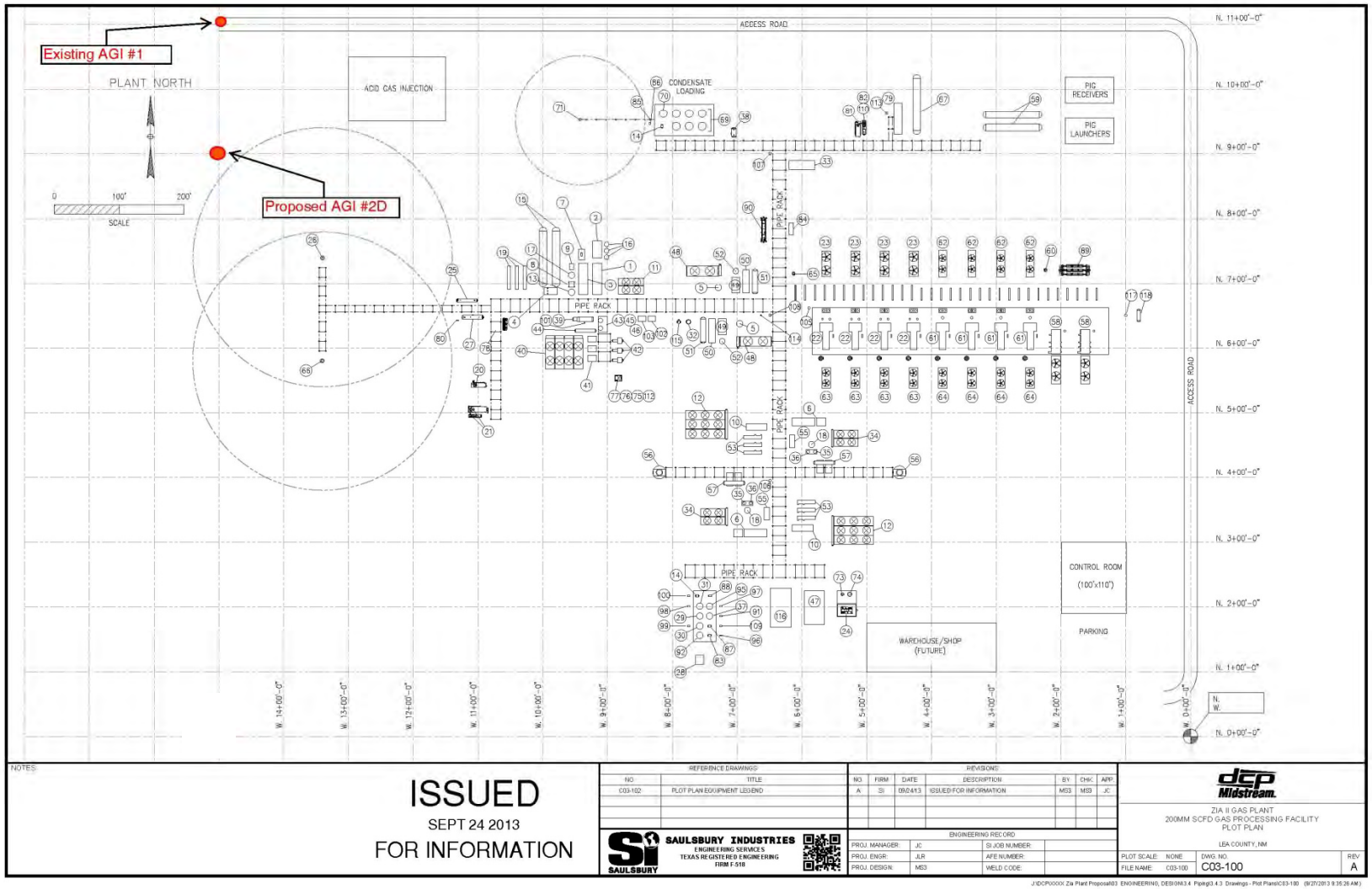


Figure 2: Proposed Location of Zia AGI #2D and Zia Gas Plant Layout

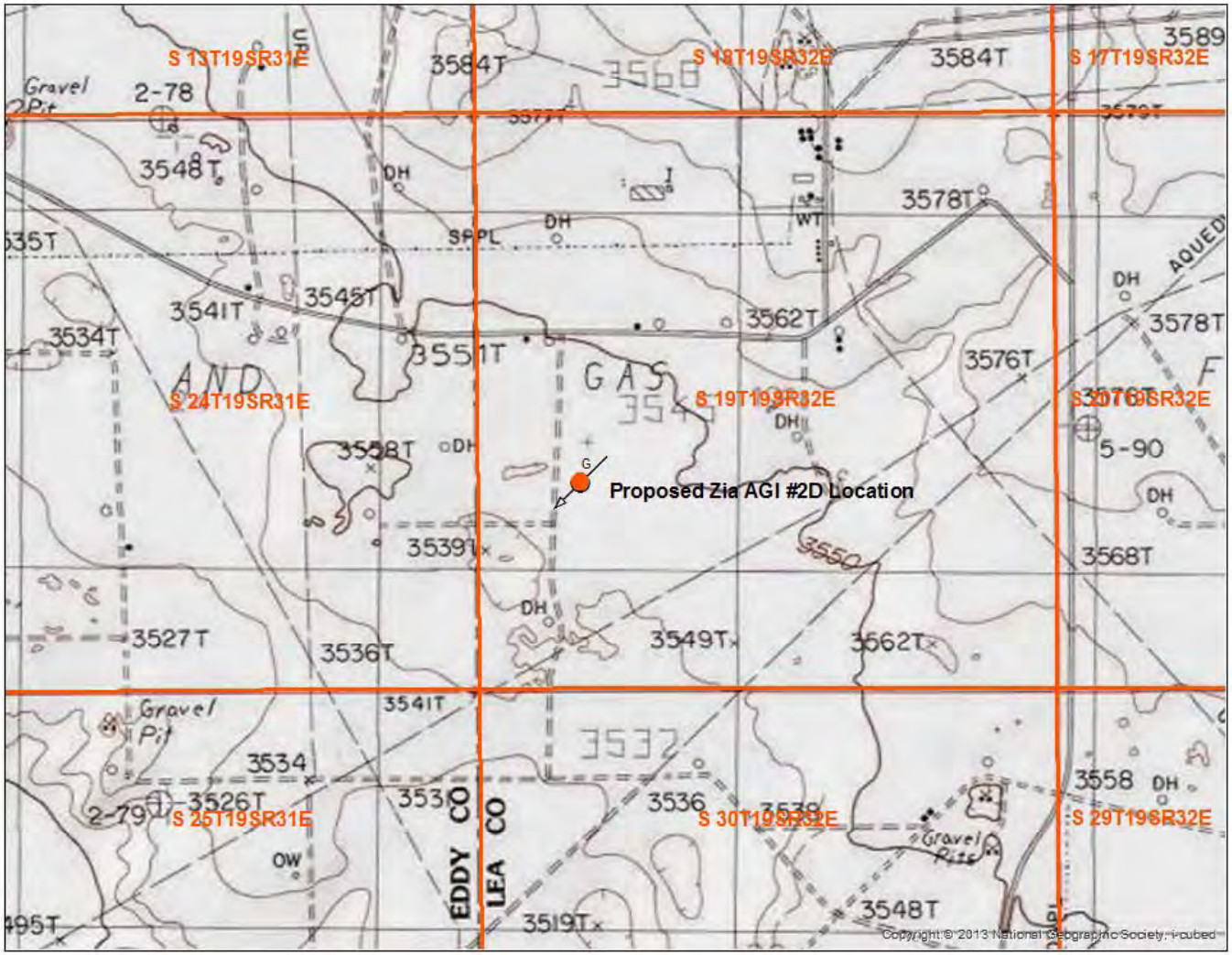


Figure 3: Topographic Map Showing Location of Proposed Zia AGI #2D

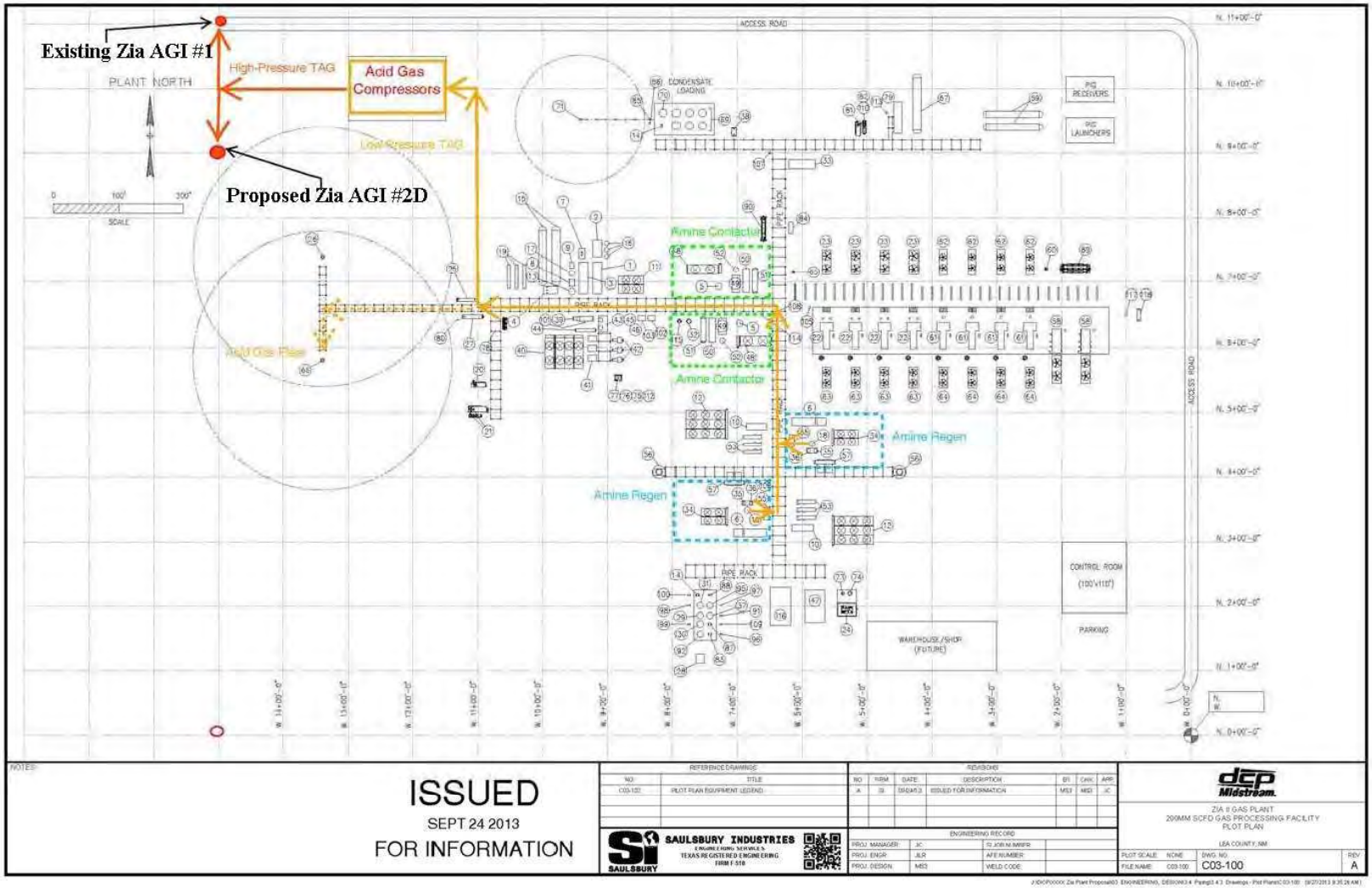


Figure 4: Schematic of Surface AGI Facilities

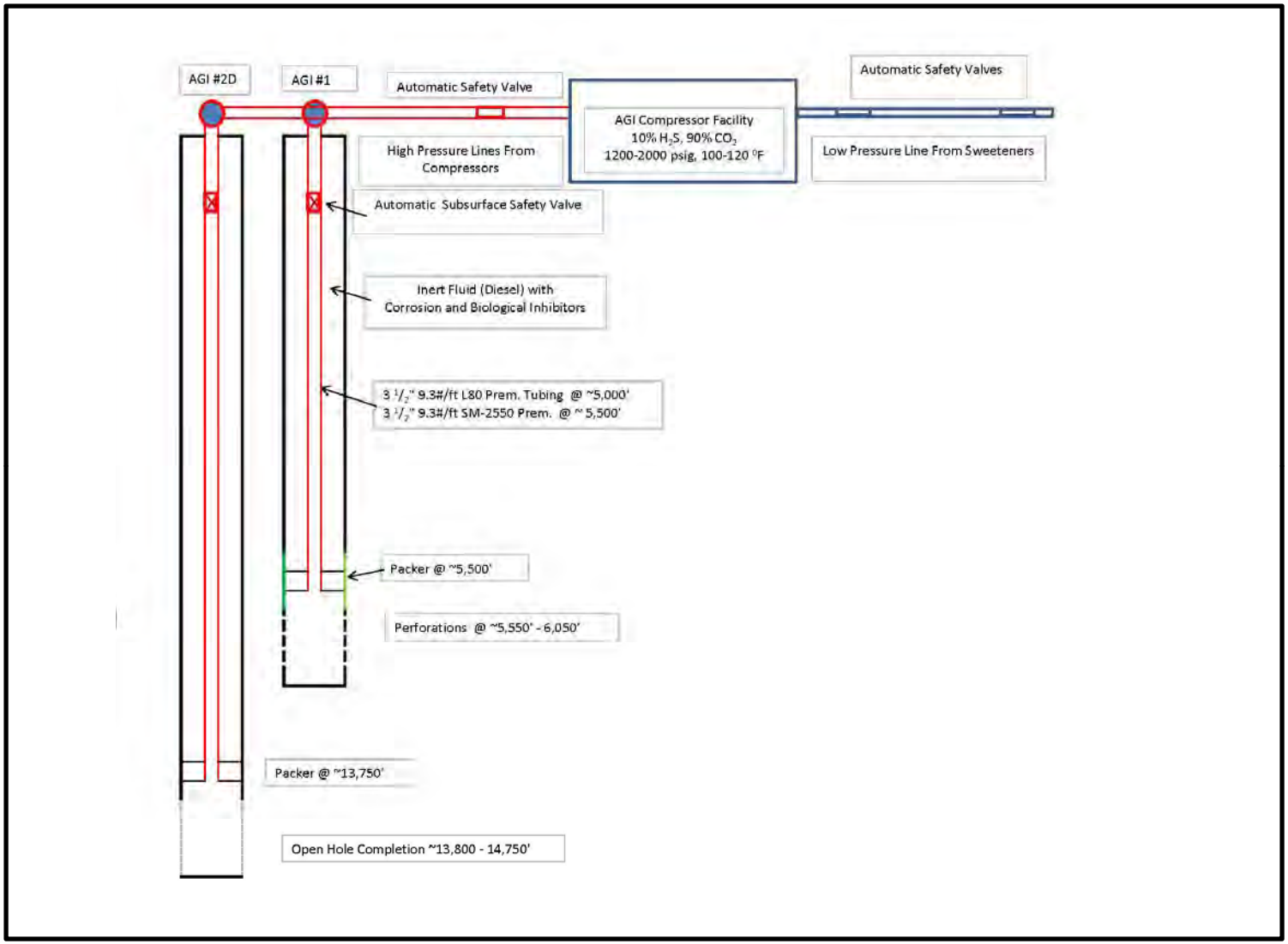


Figure 5: Generalized Zia AGI Facility Design

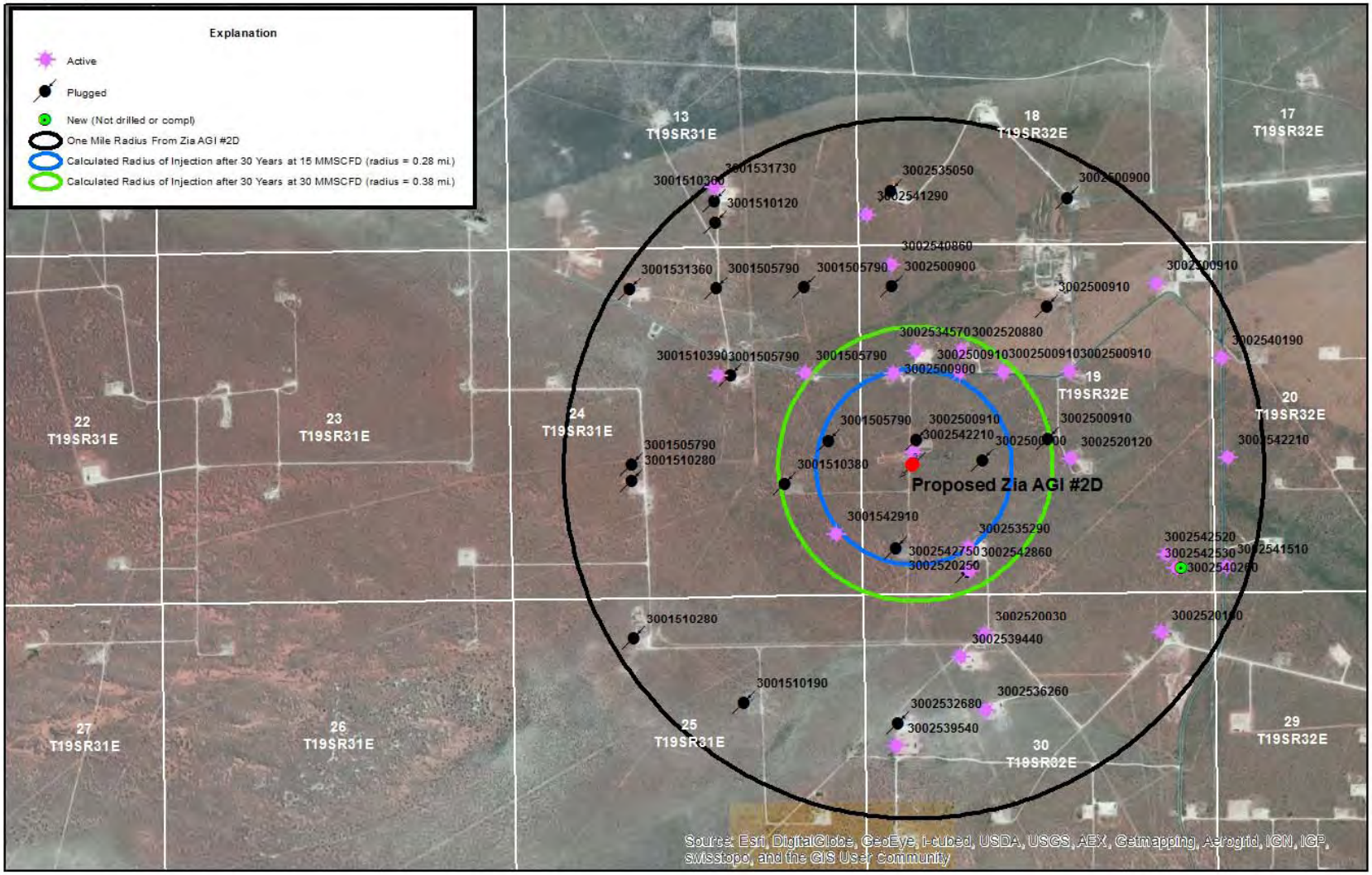


Figure 6a: Calculated Radii of Injection After 30 Years of Operation at Anticipated Maximum of 15 MMSCFD and with 100% Safety Factor at 30 MMSCFD

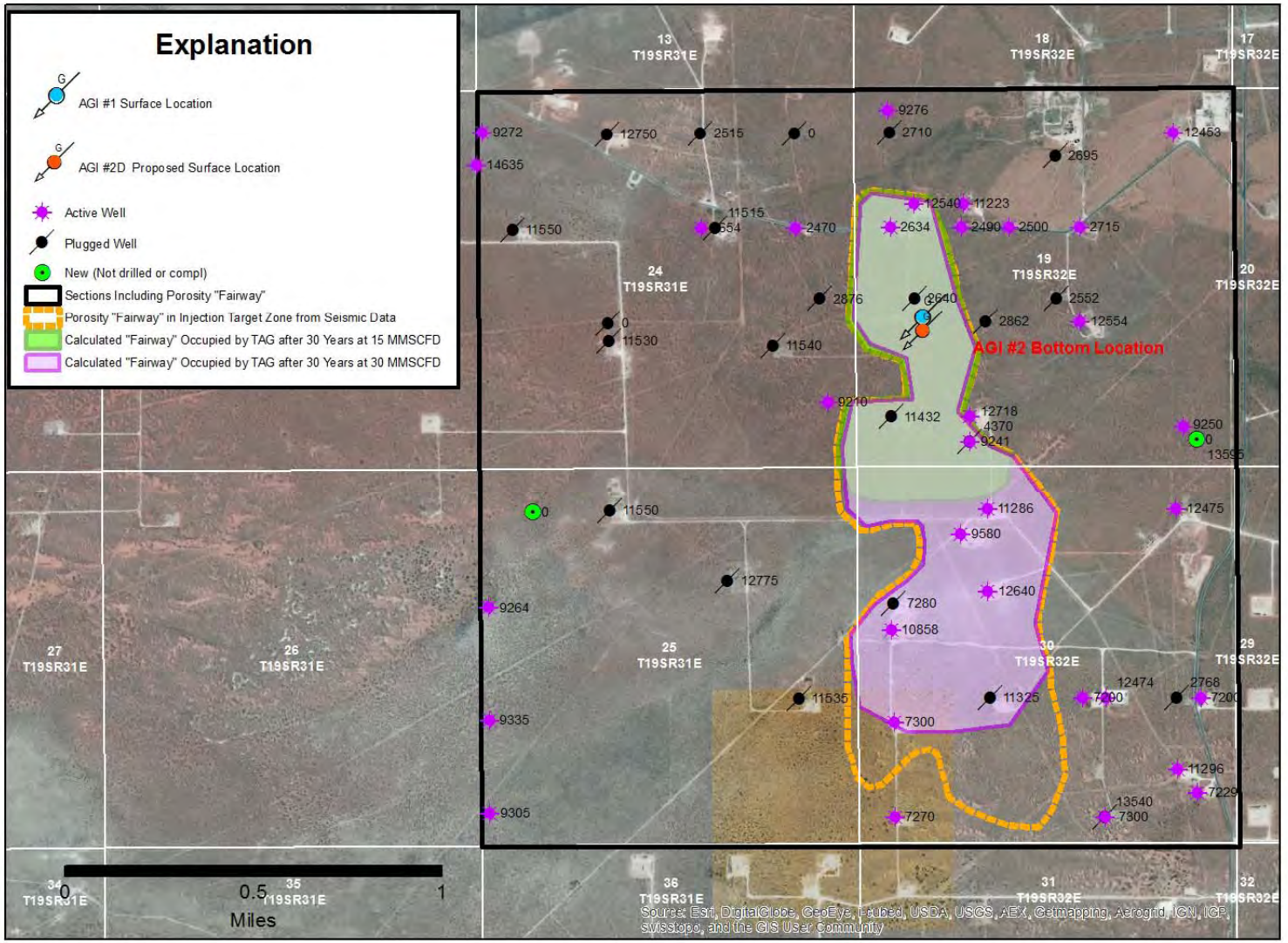


Figure 6b: Calculated Areas of Injection in the Porosity Fairway after 30 Years of Operation at Anticipated Maximum of 15 MMSCFD and with 100% Safety Factor at 30 MMSCFD

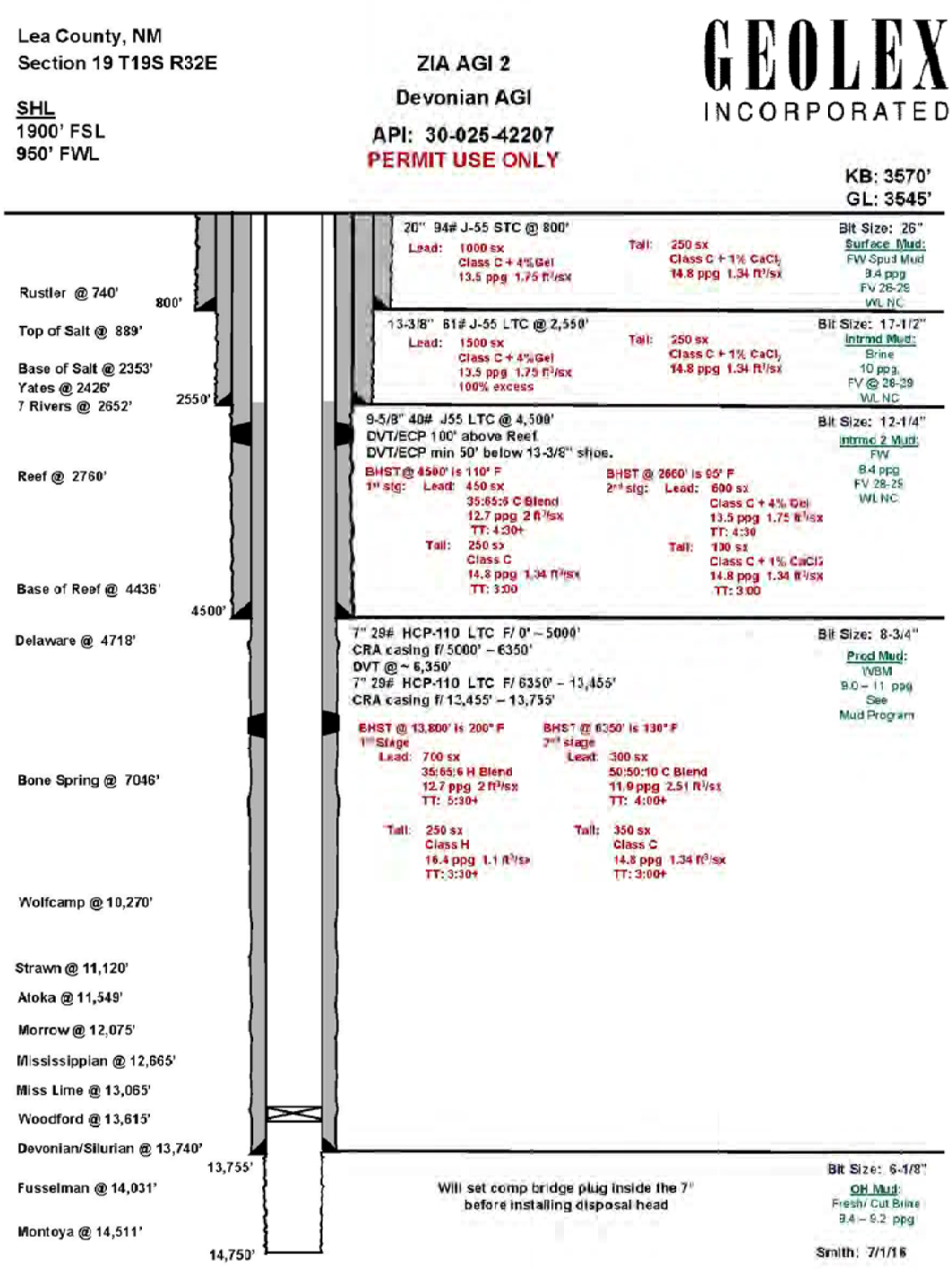


Figure 7: Schematic of Proposed Zia AGI #2D Well Design
(Casing and Cement Details May be Modified per BLM Review)

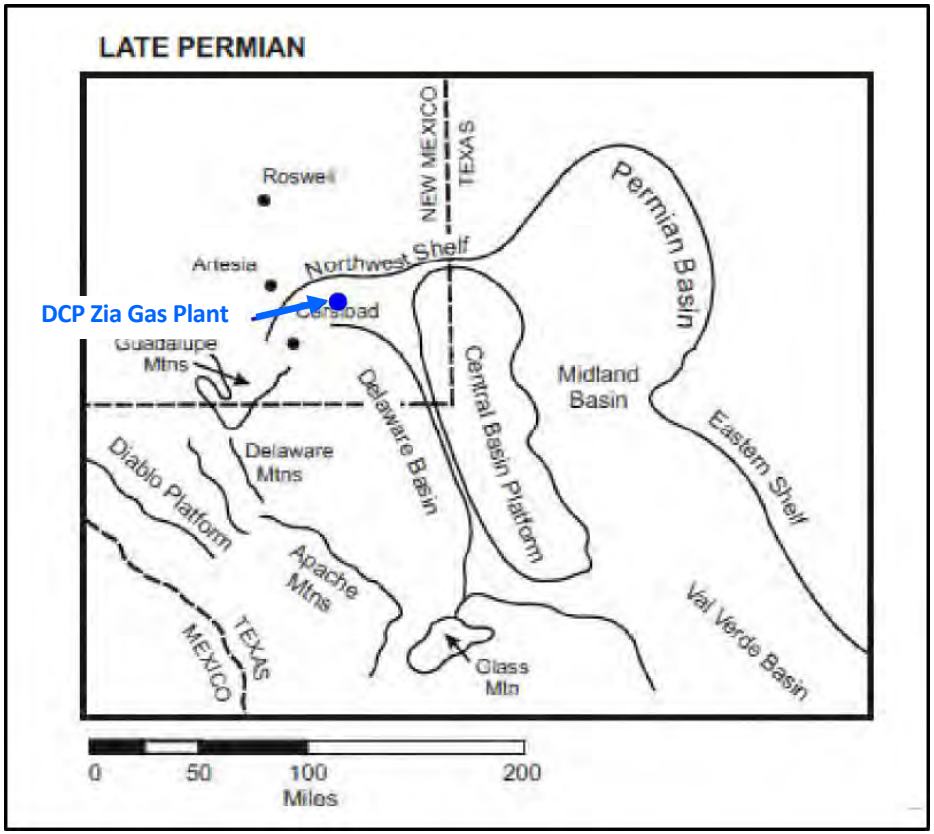


Figure 8: Structural Features of the Permian Basin During the Late Permian (Modified from Ward, et al (1968)).

Stratigraphy and generalized lithologies of the subsurface formations underlying the proposed AGI #2D location. Zones with active pay within the radii of investigation are shown by the red stars. The proposed injection interval shown by the blue bar includes the Devonian (Thirtyone Formation), and Silurian Wristen and Fusselman Formations, which contain intervals of karst-related solution-enlarged and fracture porosity in dolomites that alternate with tight, dolomitic limestones. These formations are sufficiently isolated from the active pay zones by hundreds of feet of tight, Mississippian (Chester through upper Woodford) limestones and shales. There are no active pay zones below the Siluro-Devonian.

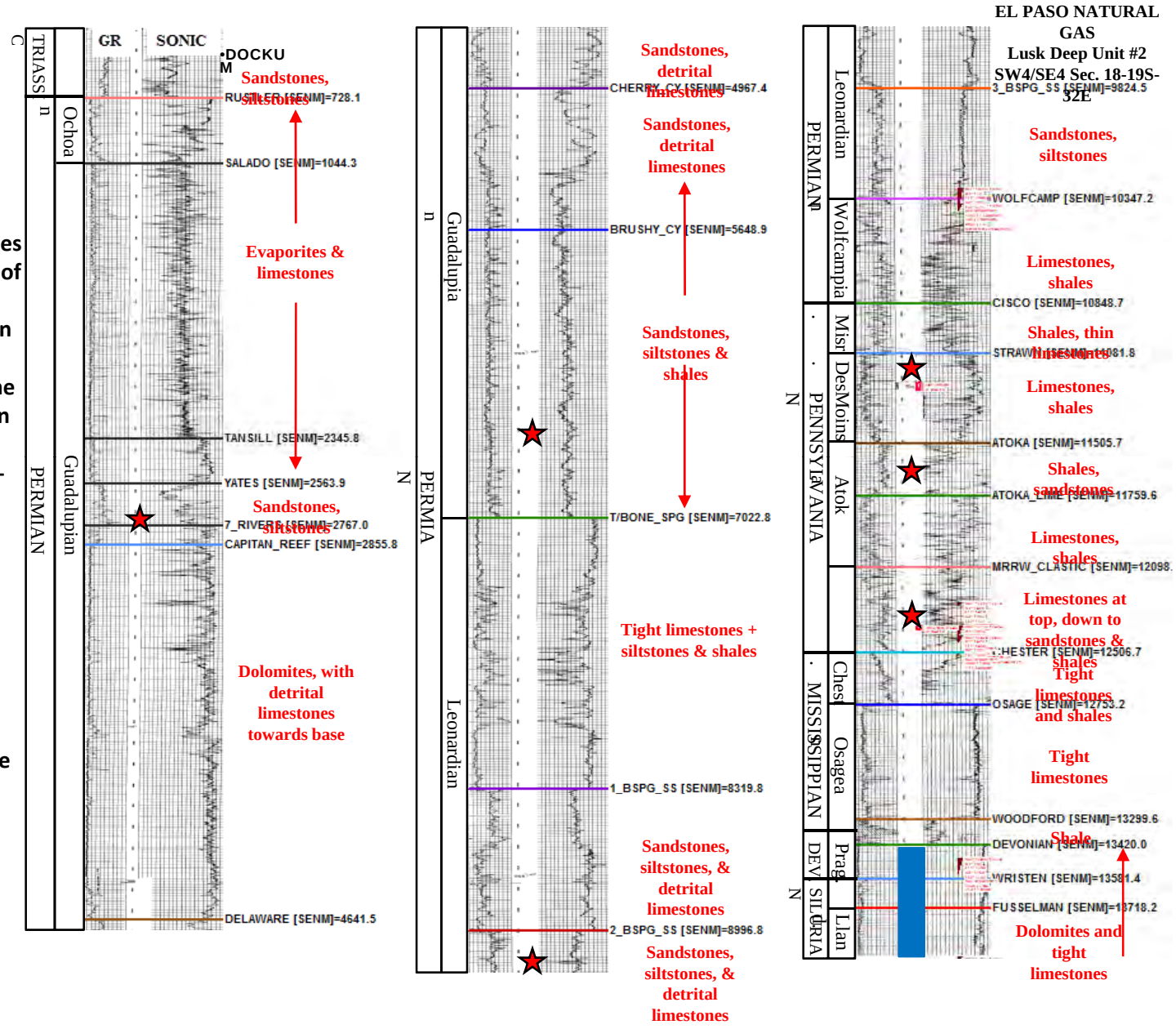
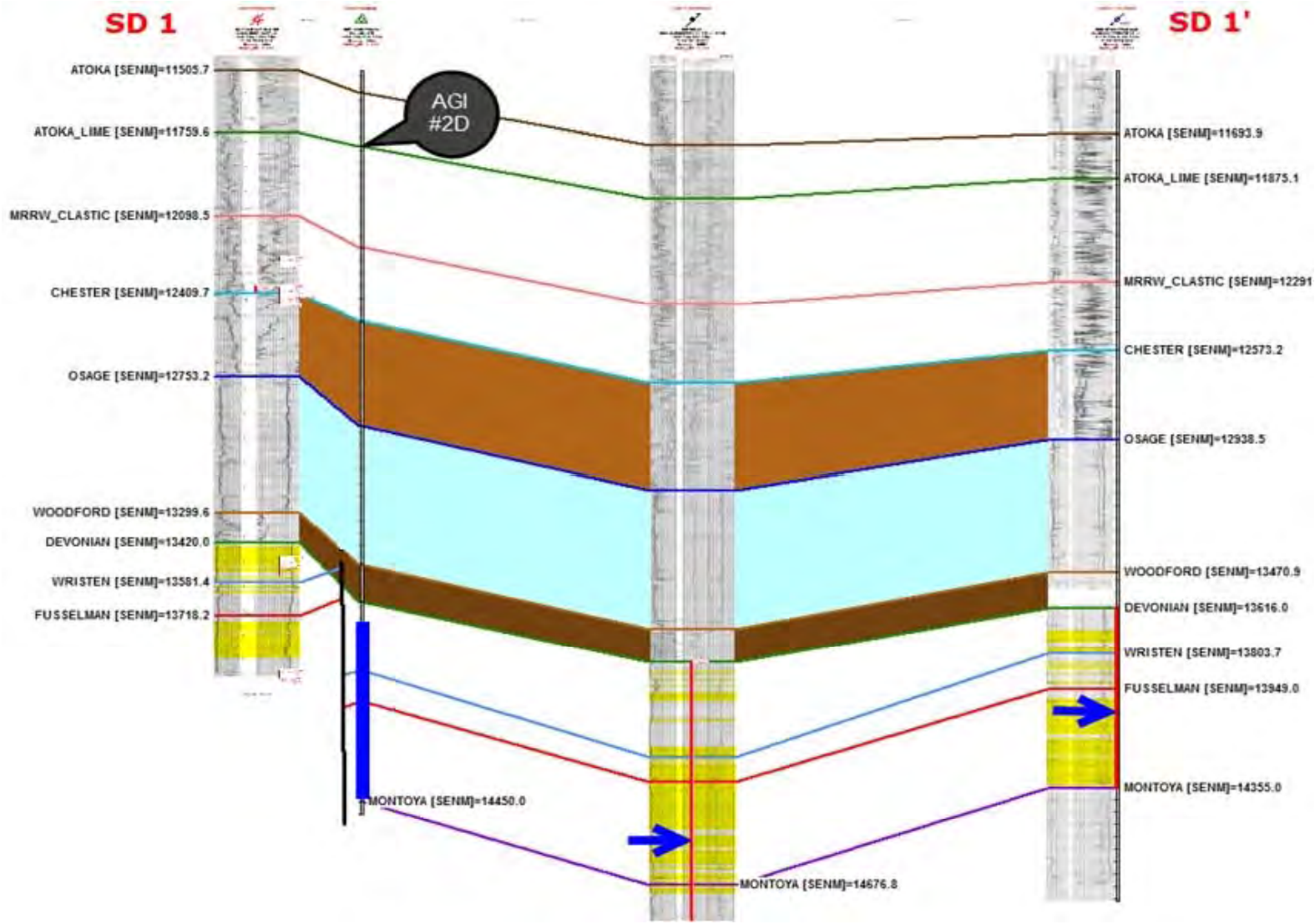


Figure 9: Stratigraphy and Pay Zones Above the Proposed Injection Zone



Yellow shading denotes porosity in the Siluro-Devonian section of 3% or greater. Porosity is present in thin to thickly-bedded sequences that are separated by tight carbonates. The proposed injection interval (blue bar) would be the same interval used for salt water disposal in other wells in the area (arrows). The Siluro-Devonian interval is approximately 1,000 feet below the closest producing formation (Morrow) in the area, and is separated from it vertically by tight Woodford and Chester shales (brown), and 550 feet of tight Osage limestones (light blue).

Figure 10: Cross-Section Through the Deeper Horizons Across the Zia Plant Site

Map showing the only wells that penetrated below the Woodford shale. Devon and Geolex generated a time structure map based on the time-depth curves generated for the Lusk Deep Unit #2 and Magnum Pronto 32 #1 wells. This mapping indicates the presence of a fault that cuts the sub-Woodford section and runs northwest-southeast under the plant site. The top of Devonian structure, simplified here, shows steep dips into the upthrown side of the fault from the east side, and on the downthrown side of the fault towards the southwest resulting from drag along the fault. The highest structural location is on the extreme northeastern side of the available 3D coverage Geolex examined, with a deeper structural trough on the downthrown side of the fault under the NW/4 of section 30, shown here by the closed, hachured contour. The throw on the fault varies from near zero to over 200 feet, and is a hinge fault with variable displacement along its strike. The fault only penetrates up through the base of the Woodford Shale.

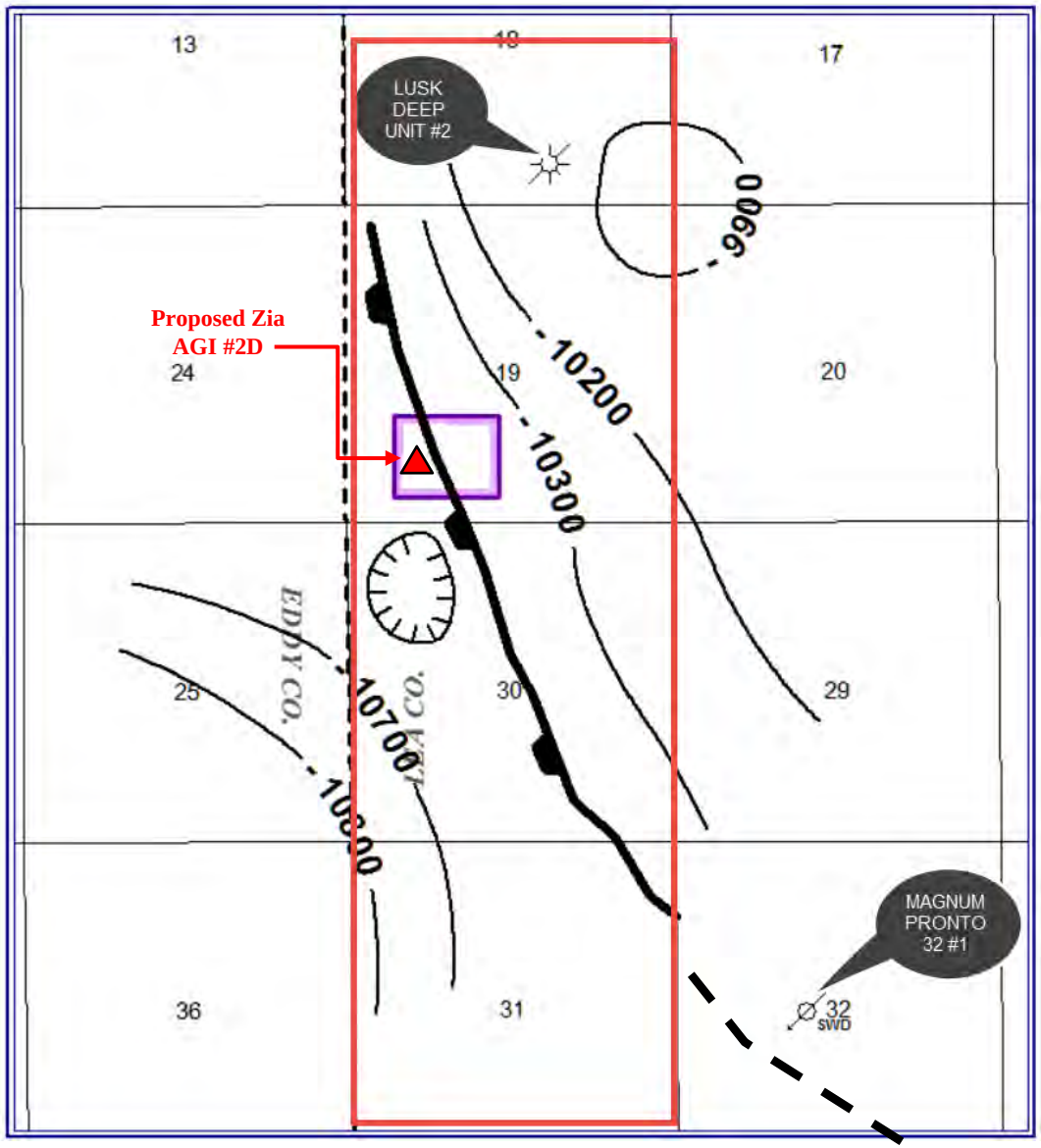


Figure 11: Structure, Top of Devonian, Based on Review of Devon Energy's Hackberry 3D Survey Within the Red Outlined Area

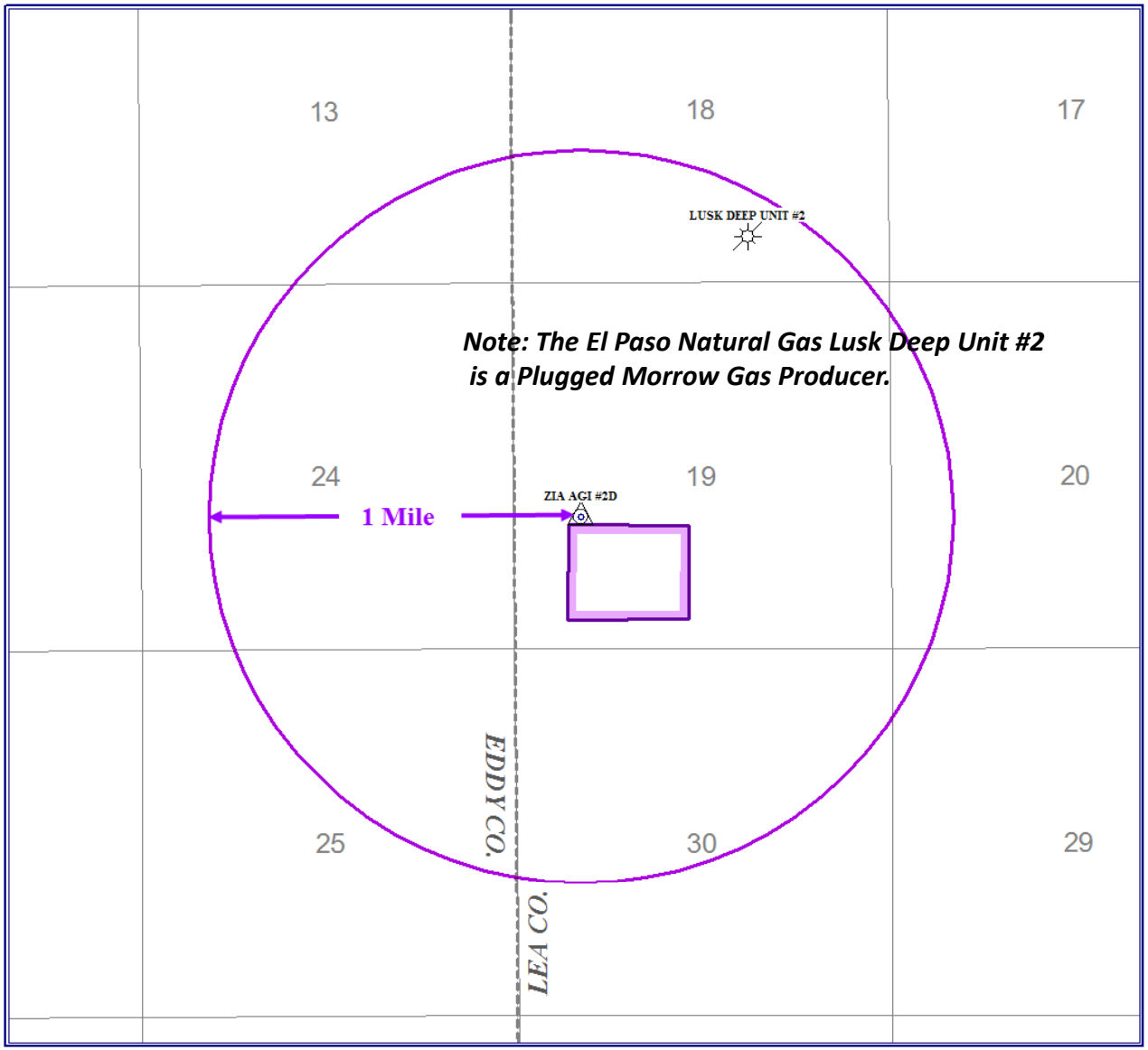
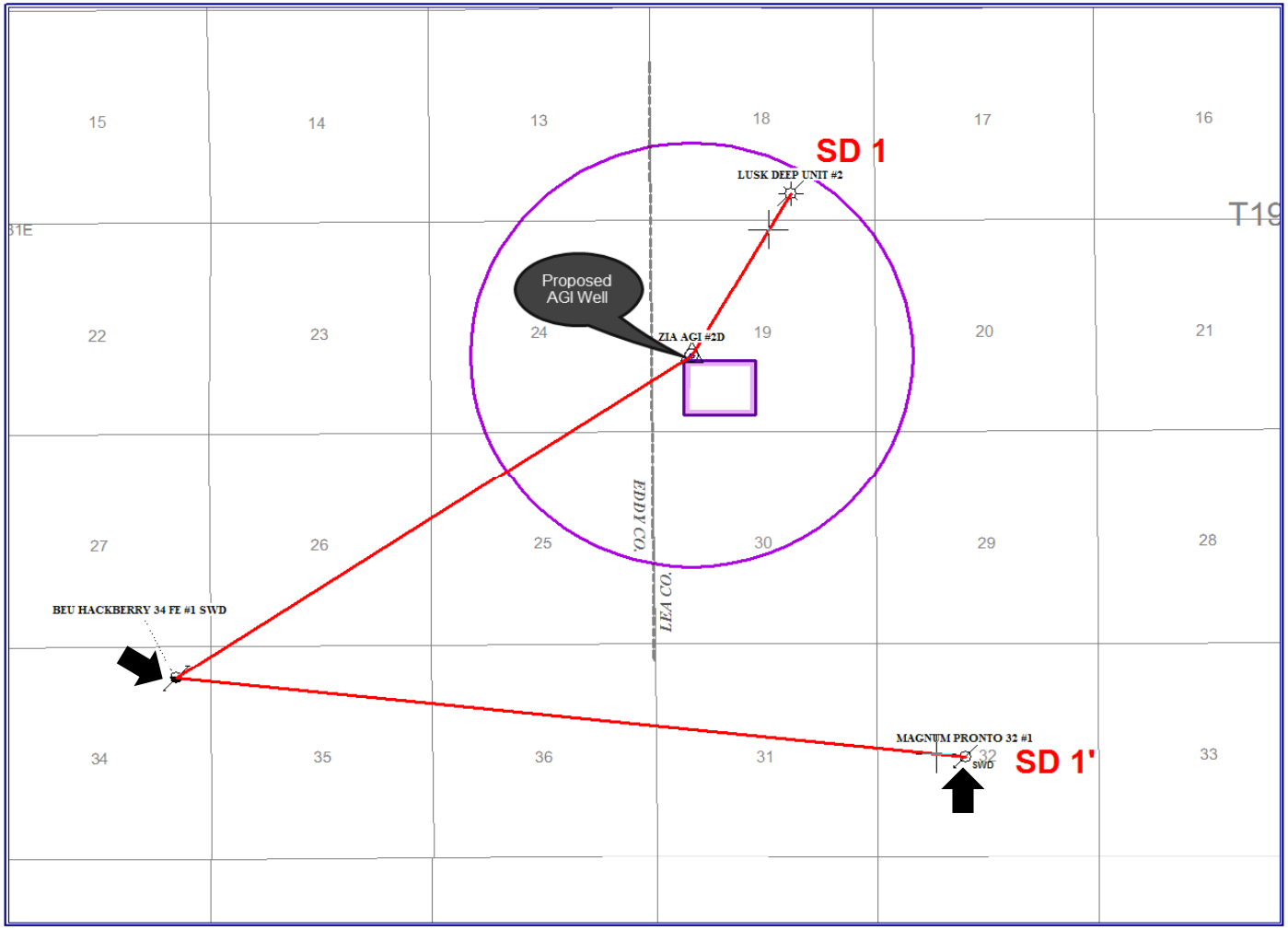
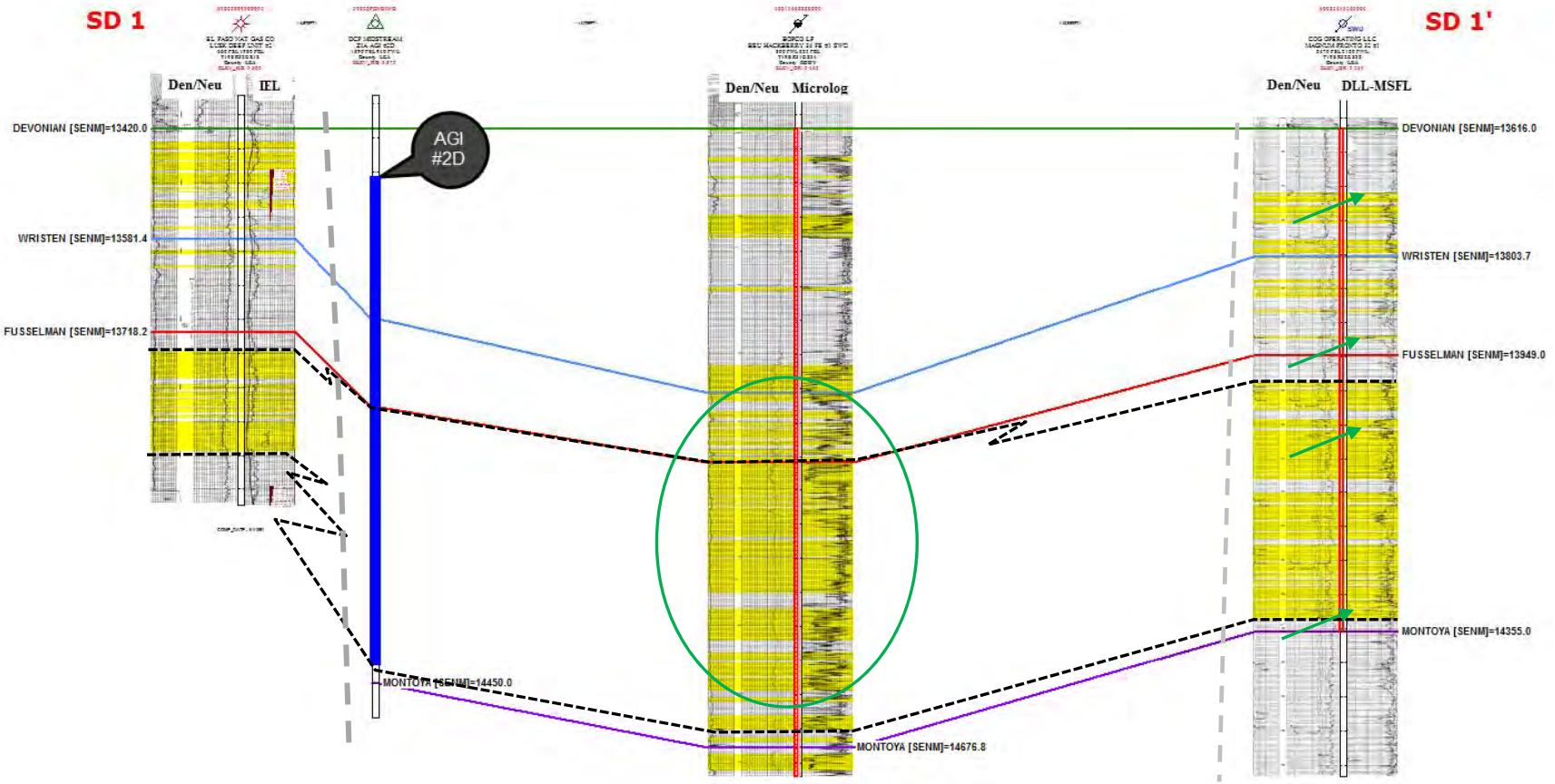


Figure 12: Single Well Penetrating Injection Zone Within One Mile of the Proposed Zia AGI #2D



Other wells that penetrate through the proposed injection zone are found outside the 1-mile radius of investigation. Two of the wells on the cross-section are being used as salt water disposal wells (arrows), injecting into the Siluro-Devonian interval. Both injection wells have modern log suites with which to evaluate formation porosity.

Figure 13: Location of Deep Cross-Section SD 1- SD 1’



Yellow shading shows porosity of 3% or greater through the proposed injection interval. The primary injection zone is expected to be the Fusselman (dashed outline), but additional injection capacity could come from other porosity development in the Devonian and Wristen. The proposed AGI #2D will be on the downthrown side of the seismically-defined fault (dashed gray traces), where both the Devonian and Fusselman may be more porous that in the Lusk Deep Unit #2 (far left). The Magnum Pronto 32 #1 (far right) appears to be on the upthrown side of the same fault that trends towards that well. Both water disposal wells shown on this section were completed open-hole across the entire Siluro-Devonian interval, and both are injecting at volumes and pressures that suggest high permeability across the interval. Very thick-bedded and untested porosity is present in the Lusk Deep #2 (far left) in the upper Fusselman, with sonic porosities in that well up to 14% in both the Fusselman and the Devonian. The presence of fractures and solution-enlarged vugs and cavities is indicated on the micrologs of each of the other two disposal wells (green outline and arrows), more prevalent in the Hackberry 34 SWDW #1 (center).

Figure 14. Stratigraphic Section, Hung at the Top of the Devonian, Showing Detail Through the Proposed Injection Interval (blue bar) in the Zia AGI #2D

Based on amplitude character analysis, which included generation of amplitude slice maps across several flattened volumes just below the tops of the Fusselman and Devonian, Geolex identified a possible porosity anomaly in the upper Fusselman (yellow shading) that encompasses at least 400 acres.

We were not able to map the western extent of this anomaly (arrows) because of viewing restrictions on the data, but it extends to at least another 125-150 acres to the west. The thickness of the upper Fusselman amplitude anomaly, calculated using standard interval velocities for the Fusselman, is in the range of 80-120 feet, representing only the thickest porosity unit that can be mapped by amplitude attributes, and does not include more moderately-bedded and fractured porosity below.

In addition, a smaller area of porosity development in the overlying lower Devonian, up to 40 feet thick, is indicated in the area circled in dashed black, and could likewise extend further to the west.

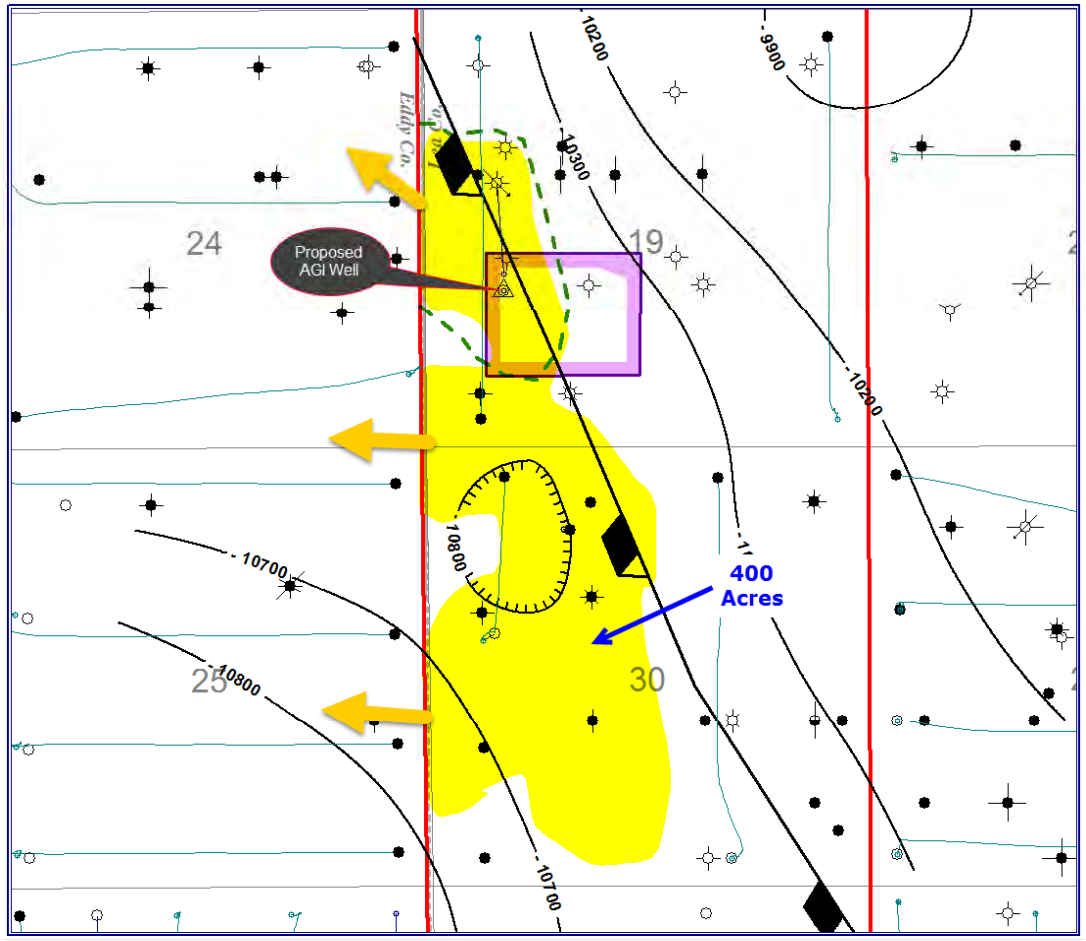


Figure 15: Fusselman/Devonian Porosity Fairway Limits Based on 3D Seismic Amplitude Attribute Analysis

Yellow shading denotes primary porosity of 3% or greater, based on the density-neutron crossplot log. Blue shading shows intervals of fracture and/or solution-enlarged karst-related porosity, which does not always measure on the density-neutron log but is indicated by deflections of the microlog to the left (the larger the fracture or karst cave/solution enlarged vugs, the more deflection to the left). The brown shading shows tight carbonates with no log-indicated porosity or permeability. This well is downthrown relative to the Lusk Deep #2, and downdip of the proposed AGI #2D well. Secondary porosity is pervasive throughout the entire section from the lower Devonian through the Fusselman, which adds significantly to the porosity budget in this, and by correlation, the AGI #2D well.

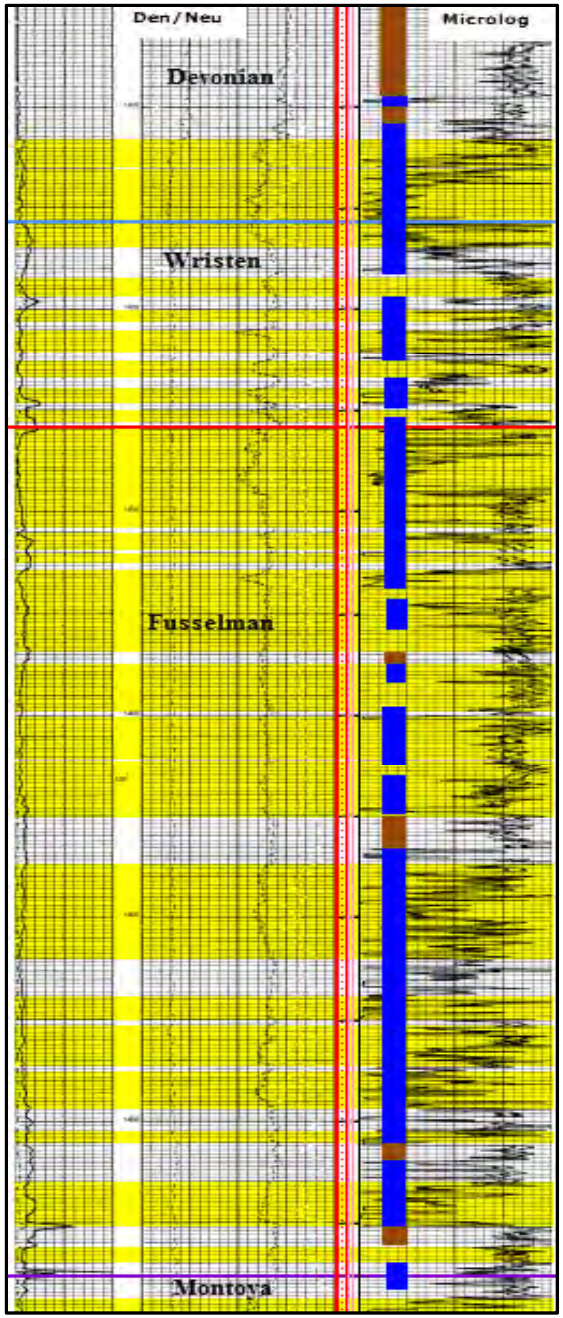
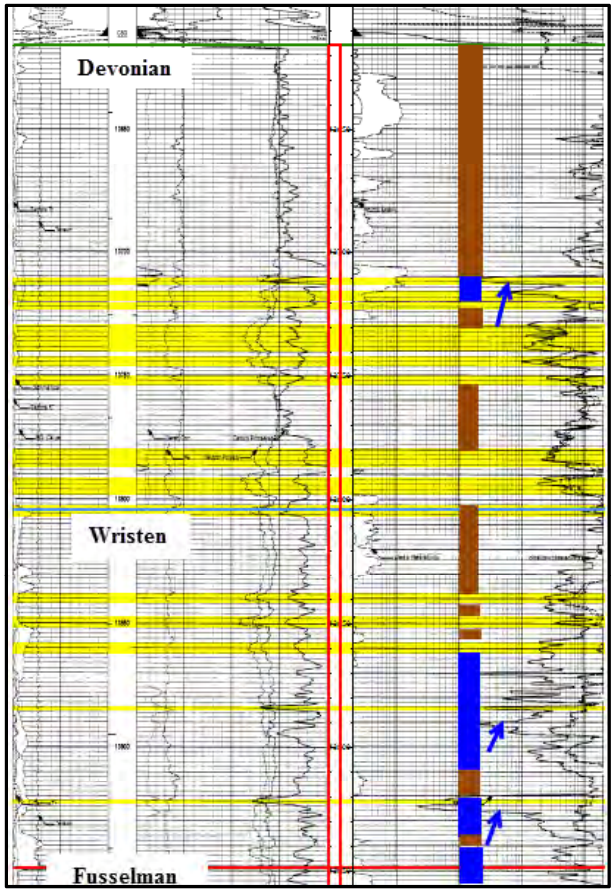
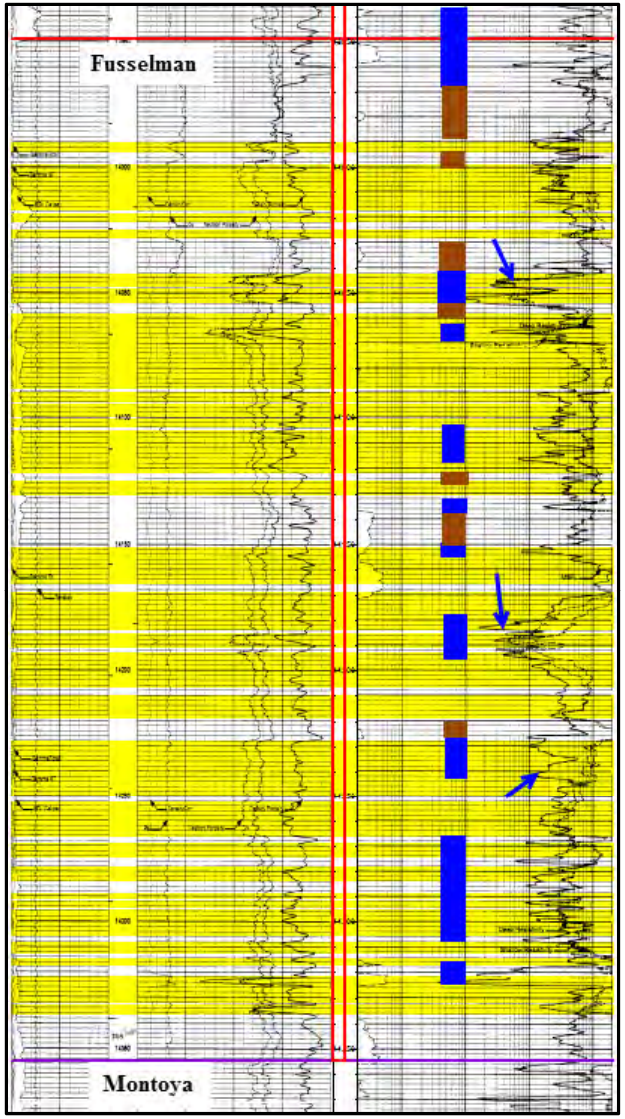


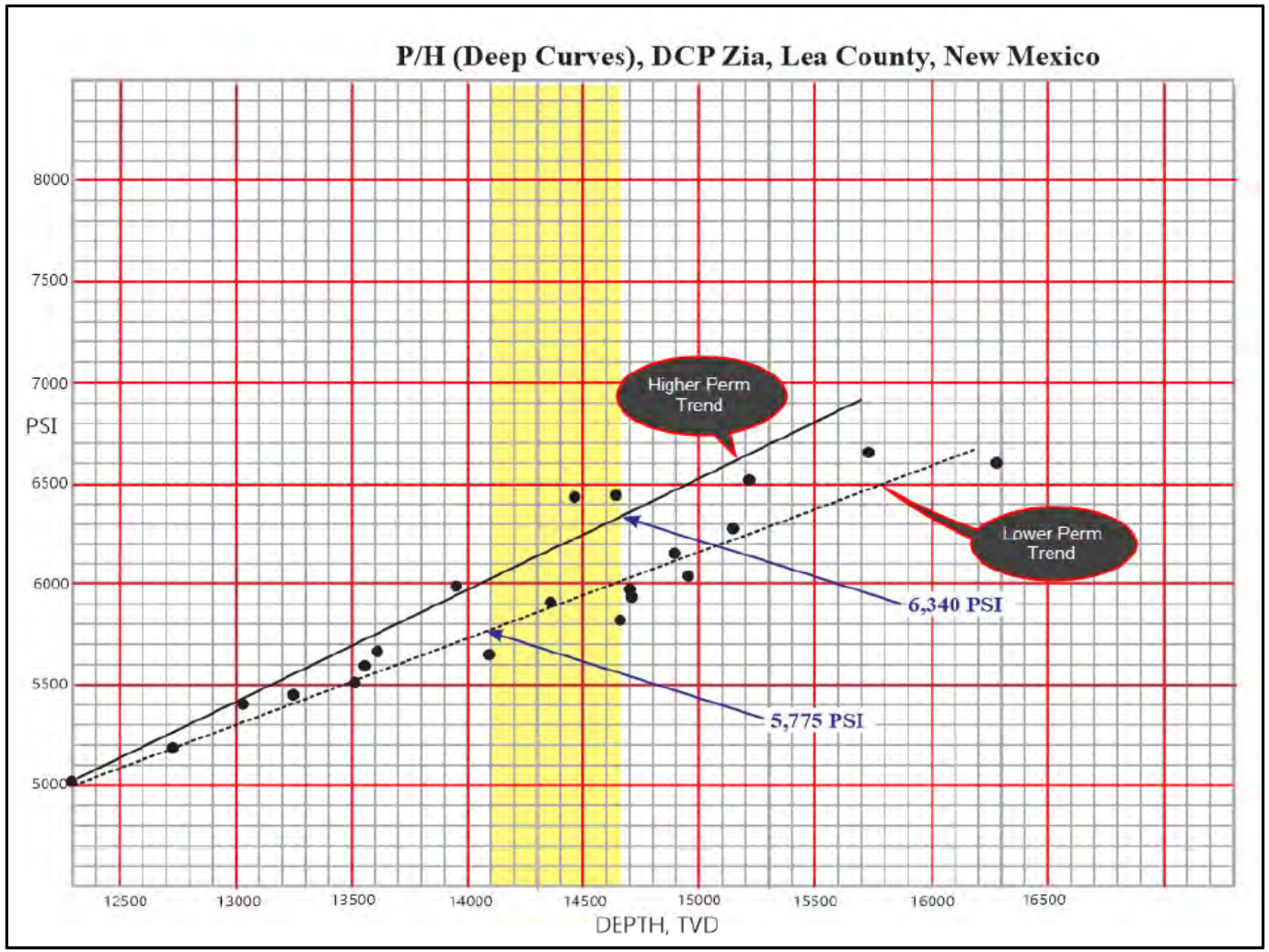
Figure 16: Log Composite Section of the BOPCO Hackberry 34 SWDW #1 Through the Siluro-Devonian Injection Interval





Yellow shading denotes primary porosity of 3% or greater, based on the density-neutron crossplot log. Blue shading shows intervals of fracture and/or solution-enlarged karst porosity, which does not always measure on the density-neutron log but is indicated by deflections of the microlog (blue arrows) to the left (the larger the fracture or solution enlarged cavity, the more deflection to the left). The brown shading shows tight carbonates with no log-indicated porosity or permeability. This well, on the upthrown side of the fault, is not as intensely fractured and solution modified as the previous well, but still maintains high injectivity and high indicated permeability.

Figure 17: Log Composite Section of the Concho Oil & Gas Magnum Pronto SWD #32-1 Through the Siluro-Devonian Injection Interval



Data were collected from drillstem tests (DSTs) that showed better permeability and fluid recoveries, from wells out as far as 14 miles from the plant site. The majority of bottom hole (shut-in) pressure points were acquired from DSTs in wells within a 5-mile radius of the plant site. The scatter in the data points is due to differences in permeability in the different test intervals. The yellow shading brackets the depth range of the expected injection interval in AGI #2D, and shows bottom hole pressures averaging between 5,775 and 6,340 psi. For the purposes of reservoir volume calculations, an average bottom hole pressure of 6,000 psi for the Siluro-Devonian interval was assumed.

Figure 18: Pressure-depth Relationships Based On Drillstem Tests

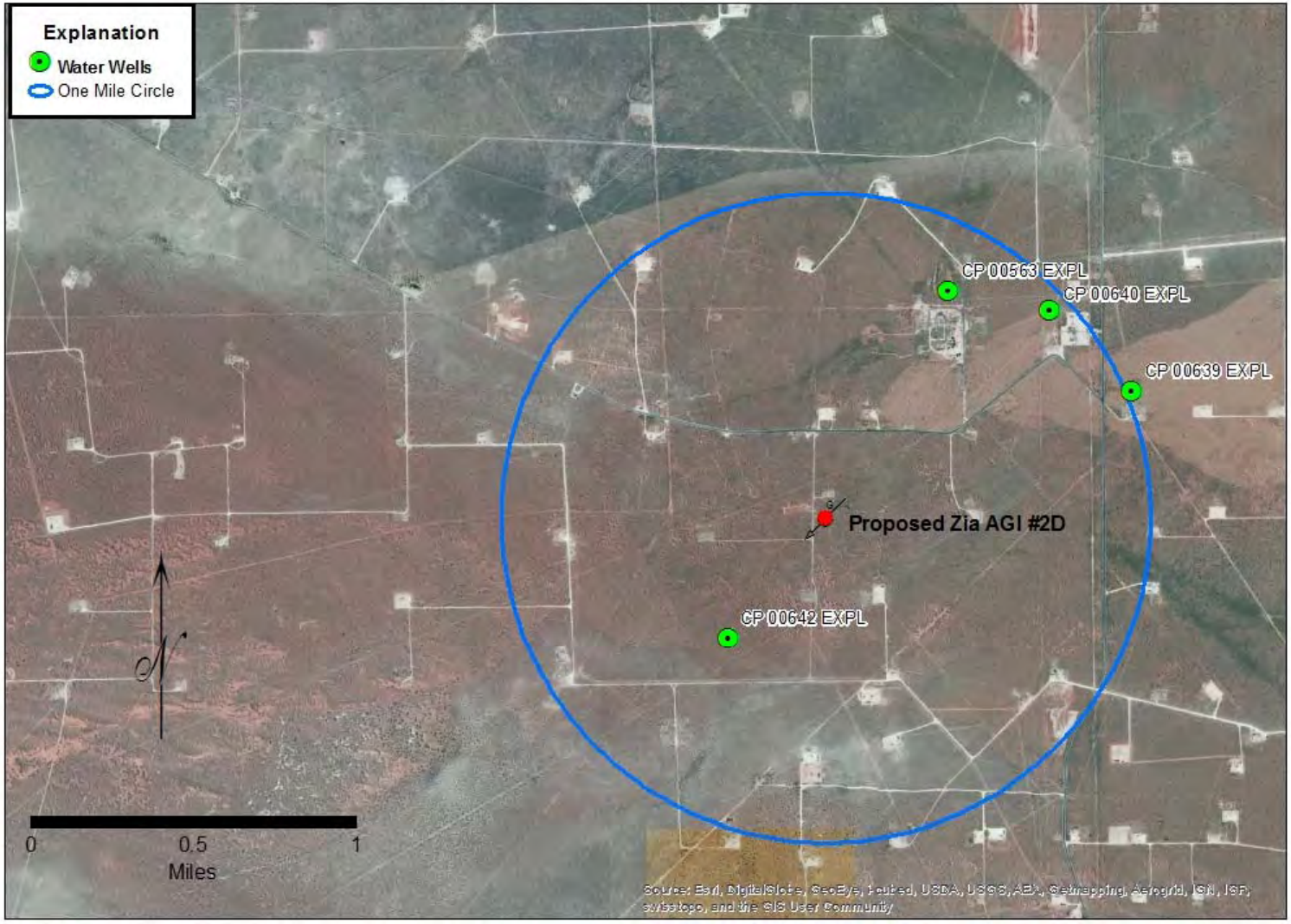


Figure 19: Water Wells Within One Mile of Proposed Zia AGI #2D

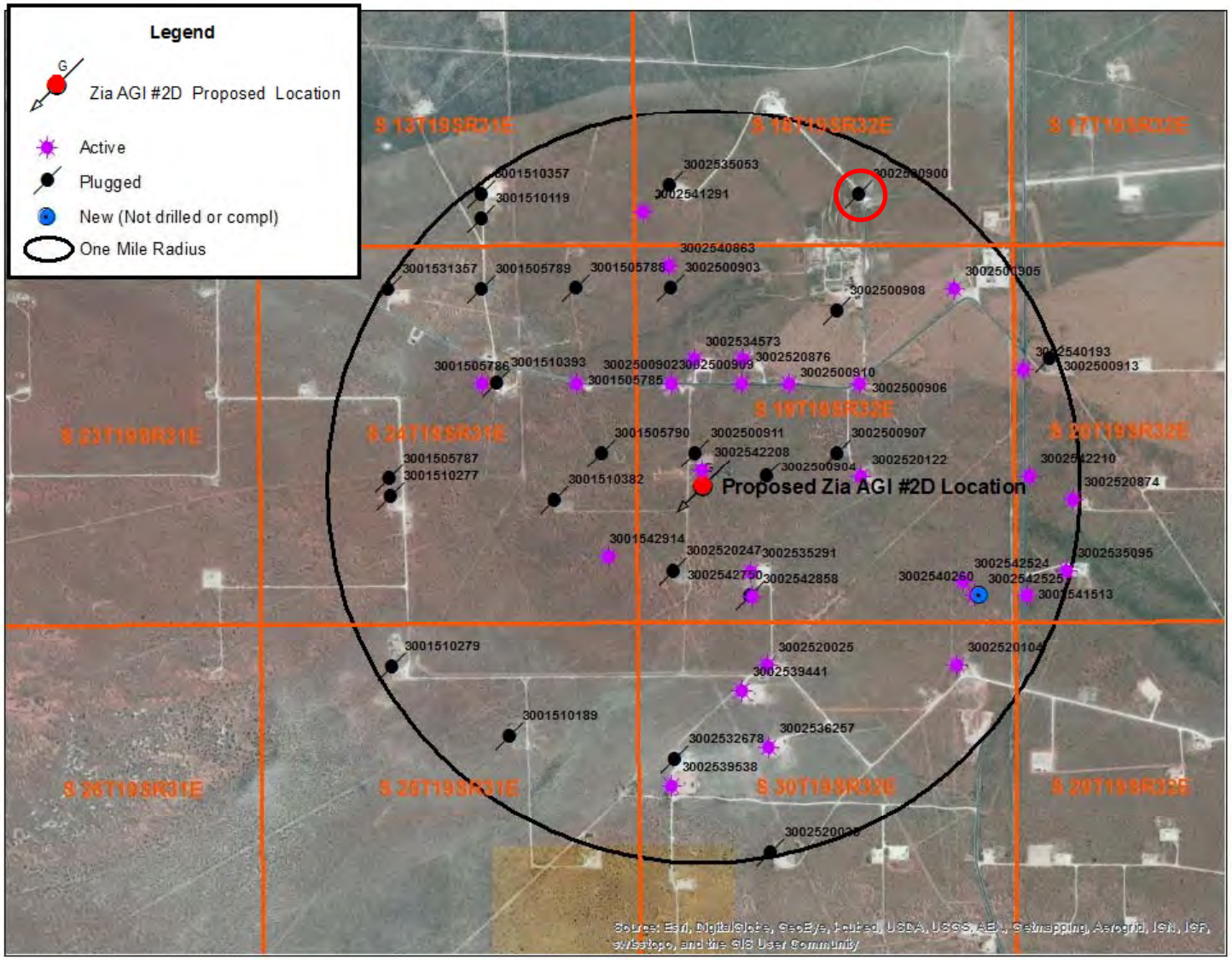


Figure 20: Oil and Gas Wells Within One Mile of Proposed Zia AGI #2D

(Red Circle Identifies Lusk Deep Unit 002)

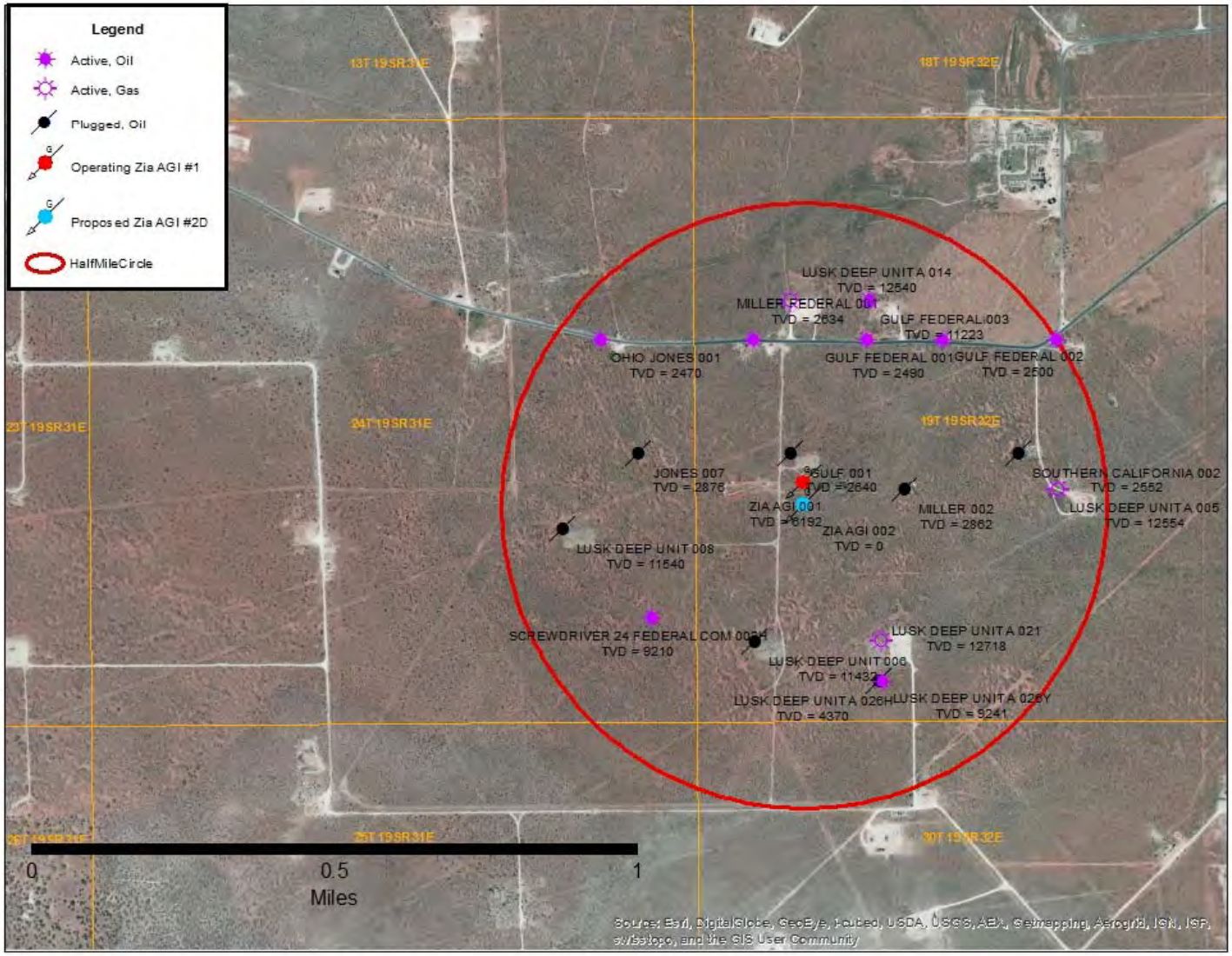


Figure 21: Oil and Gas Wells Within One Half Mile of Proposed Zia AGI #2D

APPENDIX A

Information on Oil and Gas Wells within Two Miles of Proposed Zia AGI #2D

Table A1: Identified Wells Within Two Miles of Proposed Zia AGI #2D
Figure A1: Wells Within Two Miles of Proposed Zia AGI #2D
Exhibit A1: Plugging Records and Drilling Logs, Lusk Deep Unit #2
Figure A2: Plugging Diagram for Lusk Deep Unit #2

Table A1: Identified Wells within Two Miles of Proposed Zia AGI #2D

Table A1: Identified Wells Within Two Miles of Proposed Zia AGI #2D

API	OPERATOR	PLUG_DATE	RANGE	SECTION	SPUD_DATE	TOWNSHIP	TVD_DEPTH	WELL_NAME	WELL_TYPE	COMPL_STATUS	COUNTY	LATITUDE	LONGITUDE	Distance from AGI #2 (mi)
3002542207	DCP MIDSTREAM, LP		32E	19		19.0S	0	ZIA AGI 002	I	New (Not drilled or compl)	Lea	32.643964	-103.811117	0.00
3002542208	DCP MIDSTREAM, LP		32E	19	12/23/2014	19.0S	6192	ZIA AGI 001	I	Active	Lea	32.644514	-103.811117	0.04
3002500911	SIMMS & REESE OIL CO	12/30/1959	32E	19	12/7/1959	19.0S	2640	GULF 001	O	Plugged	Lea	32.64509902	-103.810947	0.09
3002500904	CARPER DRILLING CO	3/1/1943	32E	19	12/19/1942	19.0S	2862	MILLER 002	O	Plugged	Lea	32.64418191	-103.8077117	0.17
3002520247	EL PASO NATURAL GAS	10/25/1971	32E	19	12/10/1963	19.0S	11432	LUSK DEEP UNIT 006	O	Plugged	Lea	32.640567	-103.8120069	0.24
3002535291	COG OPERATING LLC		32E	19	4/24/2001	19.0S	12718	LUSK DEEP UNIT A 021	G	Active	Lea	32.64055593	-103.8084486	0.26
3001505790	PLAINS PROD CO	8/18/1947	31E	24	1/20/1946	19.0S	2876	JONES 007	O	Plugged	Eddy	32.64510755	-103.815256	0.28
3002500902	REMNANT OIL PROPERTIES, LLC		32E	19	10/12/1942	19.0S	2634	MILLER FEDERAL 001	O	Active	Lea	32.64783008	-103.8120347	0.29
3002500909	TOM R CONE		32E	19	8/31/1958	19.0S	2490	GULF FEDERAL 001	O	Active	Lea	32.64781923	-103.8088029	0.29
3001542914	COG OPERATING LLC		31E	24	2/2/2015	19.0S	9210	SCREWDRIVER 24 FEDERAL COM 002H	O	Active	Eddy	32.64114974	-103.8149193	0.31
3002542750	COG OPERATING LLC	9/25/2015	32E	19	9/1/2015	19.0S	4370	LUSK DEEP UNIT A 026H	O	Plugged	Lea	32.63959695	-103.8084933	0.32
3002542858	COG OPERATING LLC		32E	19	10/22/2015	19.0S	9241	LUSK DEEP UNIT A 026Y	O	Active	Lea	32.63959719	-103.8083954	0.32
3002534573	COG OPERATING LLC		32E	19	12/17/1999	19.0S	12540	LUSK DEEP UNIT A 014	G	Active	Lea	32.64873355	-103.810961	0.34
3002520876	TOM R CONE		32E	19	11/6/1964	19.0S	11223	GULF FEDERAL 003	O	Active	Lea	32.648726	-103.808715	0.35
3002500910	TOM R CONE		32E	19	8/3/1961	19.0S	2500	GULF FEDERAL 002	O	Active	Lea	32.64781197	-103.8066484	0.36
3002500907	KELLY G STOUT	3/24/1958	32E	19	10/1/1957	19.0S	2552	SOUTHERN CALIFORNIA 002	O	Plugged	Lea	32.64507877	-103.8044838	0.37
3001510382	PHILLIPS PETROLEUM CO	10/17/1994	31E	24	4/26/1964	19.0S	11540	LUSK DEEP UNIT 008	O	Plugged	Eddy	32.64329061	-103.8174035	0.40
3002520122	COG OPERATING LLC		32E	19	4/16/1963	19.0S	12554	LUSK DEEP UNIT A 005	G	Active	Lea	32.64416813	-103.8034042	0.42
3001505785	REMNANT OIL PROPERTIES, LLC		31E	24	10/8/1941	19.0S	2470	OHIO JONES 001	O	Active	Eddy	32.64783473	-103.8163437	0.43
3002500906	TOM R CONE		32E	19	1/2/1957	19.0S	2715	SOUTHERN CALIFORNIA PET FEDERAL 001	O	Active	Lea	32.64780036	-103.8034133	0.50
3002520025	CHISOS, LTD		32E	30	2/2/1963	19.0S	11286	DELHI FEDERAL 001	O	Active	Lea	32.6369253	-103.8076849	0.51
3002500903	CARPER DRILLING CO	1/1/1900	32E	19	1/1/1900	19.0S	2710	MILLER 001	O	Plugged	Lea	32.65145839	-103.8120487	0.53
3002539441	COG OPERATING LLC		32E	30	9/15/2009	19.0S	9580	SL DEEP FEDERAL 003	O	Active	Lea	32.63596771	-103.8088936	0.55
3002500908	KELLY G STOUT	1/1/1900	32E	19	1/1/1900	19.0S	2695	SOUTHERN CALIFORNIA 003	O	Plugged	Lea	32.65052557	-103.8044972	0.58
3002540863	COG OPERATING LLC		32E	19	12/19/2012	19.0S	9276	LUSK DEEP UNIT A 024H	O	Active	Lea	32.65233971	-103.8121096	0.59
3001510393	FINA OIL & CHEMICAL	1/1/1900	31E	24	1/1/1900	19.0S	11515	JONES G FED COM 001	O	Plugged	Eddy	32.64783012	-103.8199998	0.61
3001505788	**PLAINS PROD CO**	**1/1/1901**	**31E**	**24**	**1/1/1900**	**19.0S**	**0**	**JONES 005**	**O**	**Plugged**	**Eddy**	**32.65146297**	**-103.8163576**	**0.62**
3001505786	REMNANT OIL PROPERTIES, LLC		31E	24	3/11/1942	19.0S	2654	OHIO JONES 002	O	Active	Eddy	32.64782928	-103.8206527	0.65
3002536257	COG OPERATING LLC		32E	30	4/29/2003	19.0S	12640	SL DEEP FEDERAL 002	G	Active	Lea	32.63379175	-103.8076729	0.71
3002532678	OXY USA INC	3/20/2012	32E	30	10/8/1994	19.0S	7280	GECKO FEDERAL 001	O	Plugged	Lea	32.63331037	-103.8119794	0.73
3002542524	COG OPERATING LLC		32E	19	1/1/2016	19.0S	9250	SL EAST 30 FEDERAL COM 002H	O	Active	Lea	32.64014303	-103.7987492	0.74
3002541291	COG OPERATING LLC		32E	18	10/23/2013	19.0S	9247	LUSK DEEP UNIT A 028H	O	Active	Lea	32.6544291	-103.8132834	0.75
3002540260	COG OPERATING LLC		32E	19	9/9/2011	19.0S	9217	LUSK DEEP UNIT A 023H	O	Active	Lea	32.63962198	-103.7982592	0.78
3001505789	MACK ENERGY CORP	1/1/1900	31E	24	1/1/1900	19.0S	2515	OHIO JONES FED 006	O	Plugged	Eddy	32.65145751	-103.8206666	0.79
3002542525	COG OPERATING LLC		32E	19		19.0S	0	LUSK DEEP UNIT A 034H	O	New (Not drilled or compl)	Lea	32.63962254	-103.7980307	0.79
3002539538	COG OPERATING LLC		32E	30	12/14/2009	19.0S	10858	SL DEEP FEDERAL 004H	O	Active	Lea	32.63233163	-103.812088	0.80
3002535053	COG OPERATING LLC	8/23/2014	32E	18	6/15/2000	19.0S	12780	LUSK DEEP UNIT A 016	S	Plugged	Lea	32.65543028	-103.8120636	0.80
3002520104	OXY USA INC		32E	30		19.0S	12475	ELLIOTT HALL A 001	O	Active	Lea	32.63689725	-103.7990797	0.83
3001510277	DOWDCO INC	1/27/2006	31E	24		19.0S	11530	JONES C FEDERAL 001	O	Plugged	Eddy	32.64350063	-103.8248911	0.83
3001505787	**PLAINS PROD CO**	**1/1/1901**	**31E**	**24**	**1/1/1900**	**19.0S**	**0**	**JONES 003**	**O**	**Plugged**	**Eddy**	**32.64418779**	**-103.8248936**	**0.83**
3001510189	FINA OIL & CHEMICAL	1/10/1994	31E	25		19.0S	12775	JONES FEDERAL 002	O	Plugged	Eddy	32.63421717	-103.8195223	0.84
3002500905	COG OPERATING LLC		32E	19	5/21/1975	19.0S	12453	LUSK DEEP UNIT A 001	G	Active	Lea	32.65141269	-103.7991132	0.85
3002542210	COG OPERATING LLC		32E	20	12/17/2014	19.0S	9295	LUSK DEEP UNIT A 032H	O	Active	Lea	32.64415901	-103.7957156	0.87
3002500900	EL PASO NATURAL GAS	9/4/1971	32E	18	10/16/1960	19.0S	13974	LUSK DEEP UNIT 002	O	Plugged	Lea	32.65505697	-103.8034324	0.88
3002540193	COG OPERATING LLC		32E	20	8/2/2011	19.0S	9320	LUSK DEEP UNIT A 025H	O	Active	Lea	32.64829167	-103.7959464	0.91
3002541513	COG OPERATING LLC		32E	20	12/27/2013	19.0S	9332	LUSK DEEP UNIT A 030H	O	Active	Lea	32.63962381	-103.7958436	0.91
3001510119	H N SWEENY	1/1/1900	31E	13	1/1/1900	19.0S	2650	MALONE FED 001	O	Plugged	Eddy	32.65417868	-103.8206781	0.92
3001510279	DOWDCO INC	2/26/2006	31E	25		19.0S	11550	JONES B FEDERAL 002	O	Plugged	Eddy	32.63693132	-103.8248677	0.96
3001510357	PHILLIPS PETROLEUM CO	8/19/1994	31E	13	2/16/1965	19.0S	11600	SIMON A 001	O	Plugged	Eddy	32.65508573	-103.8206816	0.97
3002500913	EL PASO NATURAL GAS	1/1/1900	32E	20	1/1/1900	19.0S	12621	LUSK DEEP UNIT 003	O	Plugged	Lea	32.64867884	-103.7947975	0.98
3001531357	DEVON ENERGY PRODUCTION COMPANY, LP	4/7/2014	31E	24	10/4/2000	19.0S	12750	RADAR 24 FEDERAL 001	O	Plugged	Eddy	32.65145212	-103.82492	0.98
3002520874	SHACKELFORD OIL CO		32E	20	2/11/1964	19.0S	11467	LUSK WEST DELAWARE UNIT 012	W	Active	Lea	32.64323155	-103.7937066	0.99
3002520035	OXY USA INC	3/15/2012	32E	30		19.0S	11325	ELLIOTT HALL B 002	O	Plugged	Lea	32.62966655	-103.8076015	0.99
3002535095	COG OPERATING LLC		32E	20	9/15/2000	19.0S	12750	LUSK DEEP UNIT A 017	G	Active	Lea	32.64051116	-103.7940263	0.99
3001531730	COG OPERATING LLC		31E	13	8/26/2001	19.0S	12725	MARGARET 13 FEDERAL COM 001	O	Active	Eddy	32.65563546	-103.8206837	1.00
3001510056	LYNX PETROLEUM CONSULTANTS INC	5/7/1997	31E	25	1/22/1964	19.0S	11535	JONES B FEDERAL 001	O	Plugged	Eddy	32.62967911	-103.8162737	1.03
3002524974	COG OPERATING LLC		32E	18		19.0S	12520	LUSK DEEP UNIT A 013	G	Active	Lea	32.65870052	-103.8077664	1.04
3002542209	COG OPERATING LLC		32E	18	10/30/2014	19.0S	9269	LUSK DEEP UNIT A 027H	O	Active	Lea	32.65868979	-103.8136472	1.04
3002531039	OXY USA INC		32E	30		19.0S	7300	FEDERAL 30 001	O	Active	Lea	32.62876958	-103.8119619	1.04
3002532448	COG OPERATING LLC		32E	30	7/12/1994	19.0S	7200	FEDERAL USA J 004	O	Active	Lea	32.62965519	-103.8033817	1.06
3002535088	COG OPERATING LLC		32E	30		19.0S	12474	SL DEEP FEDERAL COM 001	G	Active	Lea	32.62965188	-103.8023046	1.09
3002530500	FRED POOL DRLG INC	1/1/1900	32E	18	1/1/1900	19.0S	2820	LUSK FEDERAL 001	O	Plugged	Lea	32.65868527	-103.8034418	1.10
3001510278	DEVON ENERGY PRODUCTION COMPANY, LP	8/25/2014	31E	24		19.0S	11550	JONES D FEDERAL 001	O	Plugged	Eddy	32.64781843	-103.8292158	1.12
3002520156	EL PASO NATURAL GAS	1/1/1900	32E	29	1/1/1900	19.0S	11407	SOUTHERN CALIFORNIA 002	O	Plugged	Lea	32.635975	-103.7936935	1.13
3002539853	CIMAREX ENERGY CO. OF COLORADO		32E	29	10/19/2010	19.0S	9211	SOUTHERN CALIFORNIA 29 FEDERAL 016H	O	Active	Lea	32.63327432	-103.795788	1.13
3001536562	LYNX PETROLEUM CONSULTANTS INC		31E	25		19.0S	0	HOT LIPS 25 FEDERAL 001D	G	New (Not drilled or compl)	Eddy	32.6368649	-103.828388	1.14
3002534173	SHACKELFORD OIL CO		32E	20	11/10/1997	19.0S	6630	LUSK FEDERAL A 011	O	Plugged	Lea	32.64413051	-103.7904772	1.17
3002534032	SHACKELFORD OIL CO		32E	20	9/3/1997	19.0S	7165	LUSK WEST DELAWARE UNIT 006	O	Active	Lea	32.64867077	-103.791076	1.19
3002500927	PAUL E HASKINS	1/1/1900	32E	30	1/1/1900	19.0S	2768	SHELL FEDERAL 001	O	Plugged	Lea	32.62964186	-103.7990734	1.19
3002500901	P B ENGLISH	1/1/1900	32E	18	1/1/1900	19.0S	4016	MILLER 001	O	Plugged	Lea	32.65866928	-103.799132	1.22
3002532447	COG OPERATING LLC		32E	30	6/26/1994	19.0S	7200	FEDERAL USA J 003	O	Active	Lea	32.62963851	-103.7979963	1.22
3001540947	DEVON ENERGY PRODUCTION COMPANY, LP		31E	24	7/14/2013	19.0S	9278	MIMOSA 24 FEDERAL COM 002H	O	Active	Eddy	32.65027953	-103.8308764	1.26
3002534172	CIMAREX ENERGY CO. OF COLORADO	12/3/2011	32E	29	12/12/1997	19.0S	6635	LUSK WEST DELAWARE UNIT 903	I	Plugged	Lea	32.63596771	-103.7907887	1.28
3002531639	MARBOB ENERGY CORP	1/26/2005	32E	18	9/12/1992	19.0S	12650	CRAZY HORSE 18 FEDERAL 001	G	Plugged	Lea	32.66235004	-103.8120901	1.28
3001540626	DEVON ENERGY PRODUCTION COMPANY, LP		31E	24	12/25/2012	19.0S	9272	MIMOSA 24 FEDERAL COM 001H	O	Active	Eddy	32.65155382	-103.8305956	1.28

3001523781	LYNX PETROLEUM CONSULTANTS INC		31E	13	6/13/1981	19.0S	12697	HJ FEDERAL 001	O	Active	Eddy	32.65870991	-103.8238684	1.28
3002530944	YATES PETROLEUM CORPORATION		32E	30	7/16/1990	19.0S	7270	FLOOD AFN FEDERAL 001	O	Active	Lea	32.62514128	-103.811948	1.29
3002539888	CIMAREX ENERGY CO. OF COLORADO		32E	29	11/5/2010	19.0S	9294	SOUTHERN CALIFORNIA 29 FEDERAL 017	O	Active	Lea	32.62959977	-103.7959306	1.30
3001510397	LYNX PETROLEUM CONSULTANTS INC	3/10/2009	31E	13	12/13/1964	19.0S	11,472	SWEENY FEDERAL COM 001	O	Plugged	Eddy	32.65507531	-103.8289155	1.32
3002541390	COG OPERATING LLC		32E	18	12/4/2013	19.0S	9185	CRAZY HORSE FEDERAL COM 002H	O	Active	Lea	32.663	-103.812901	1.33
3001510238	DELHI TAYLOR OIL	2/4/1964	31E	23	7/30/1963	19.0S	2460	JONES FED 2 003	O	Plugged	Eddy	32.64417663	-103.8335116	1.34
3001540099	DEVON ENERGY PRODUCTION COMPANY, LP		31E	26	6/3/2012	19.0S	9266	SPICA 25 FEDERAL 001H	O	Active	Eddy	32.63764168	-103.8324394	1.34
3002520367	COG OPERATING LLC		32E	30		19.0S	11296	FEDERAL USA J 001	O	Active	Lea	32.62692065	-103.7990709	1.35
3002533461	SHACKELFORD OIL CO		32E	29	7/21/1996	19.0S	7210	SOUTHERN CALIFORNIA FEDERAL 912	O	Active	Lea	32.62962901	-103.7947651	1.35
3002535244	COG OPERATING LLC		32E	17	1/1/2001	19.0S	12754	LUSK DEEP UNIT A 019	S	Active	Lea	32.65502131	-103.7915807	1.35
3001540098	DEVON ENERGY PRODUCTION COMPANY, LP		31E	26	4/23/2012	19.0S	9156	REGULUS 26 FEDERAL 001H	O	Active	Eddy	32.63764222	-103.8326026	1.35
3001510394	DEVON ENERGY PRODUCTION COMPANY, LP		31E	23	9/4/1964	19.0S	9800	JONES FEDERAL B 003	O	TA	Eddy	32.6405484	-103.8334983	1.35
3001510395	TENNECO OIL CO	8/15/1972	31E	23	11/14/1964	19.0S	11513	JONES FED E 001	O	Plugged	Eddy	32.64781287	-103.8335248	1.36
3001540222	DEVON ENERGY PRODUCTION COMPANY, LP		31E	25	11/1/2012	19.0S	9264	SPICA 25 FEDERAL 002H	O	Active	Eddy	32.63324027	-103.8304107	1.37
3002521042	EL PASO NATURAL GAS	1/1/1900	32E	17	1/1/1900	19.0S	11470	LUSK DEEP UNIT 011	O	Plugged	Lea	32.65774718	-103.7937425	1.37
3002540154	COG OPERATING LLC		32E	30	6/29/2011	19.0S	13540	SL EAST 30 FEDERAL COM 001H	O	Active	Lea	32.62509867	-103.8024531	1.38
3002532449	TEXACO EXPLORATION & PRODUCTION INC	10/31/1995	32E	30		19.0S	7300	FEDERAL USA J 005	O	Plugged	Lea	32.62511656	-103.8023103	1.38
3002543070	CIMAREX ENERGY CO. OF COLORADO		32E	29		19.0S	0	SOUTHERN CALIFORNIA 29 FEDERAL 019H	O	New (Not drilled or compl)	Lea	32.62797803	-103.7960005	1.39
3002524869	SHACKELFORD OIL CO		32E	20	11/2/1974	19.0S	12759	LUSK FEDERAL A 012	O	Active	Lea	32.64863504	-103.7872798	1.40
3001531362	MARBOB ENERGY CORP	12/29/2000	31E	13	11/15/2000	19.0S	12722	TRAPPER 13 STATE COM 001	G	Plugged	Eddy	32.66234978	-103.8207095	1.40
3002508104	SHELL OIL CO	1/1/1900	32E	18	1/1/1900	19.0S	12505	MIDDELTON A FEDERAL 001	O	Plugged	Lea	32.66230915	-103.8002189	1.41
3001510584	FINA OIL & CHEMICAL	4/20/1994	31E	26		19.0S	11570	JONES FEDERAL 003	O	Plugged	Eddy	32.63692016	-103.8334843	1.42
3001542489	DEVON ENERGY PRODUCTION COMPANY, LP		31E	26	11/25/2014	19.0S	8348	REGULUS 26 FEDERAL 005H	O	Active	Eddy	32.63737102	-103.8337022	1.42
3002521488	SHACKELFORD OIL CO		32E	20	10/5/1962	19.0S	11550	LUSK FEDERAL A 010	O	Active	Lea	32.6441198	-103.7862217	1.42
3002532051	COG OPERATING LLC		32E	30		19.0S	7229	FEDERAL USA J 002	O	Active	Lea	32.62601078	-103.7981726	1.43
3001505784	THREE STATES NAT'L	4/8/1957	31E	23	3/8/1957	19.0S	2561	ANGEL WELCH 001	O	Plugged	Eddy	32.6514411	-103.833538	1.44
3001536750	COG OPERATING LLC		31E	36	6/9/2009	19.0S	8800	WILD CAP STATE 004H	O	Active	Eddy	32.62334788	-103.8155717	1.44
3001540219	DEVON ENERGY PRODUCTION COMPANY, LP		31E	26	9/27/2012	19.0S	9158	REGULUS 26 FEDERAL 002H	O	Active	Eddy	32.63401404	-103.832631	1.45
3002530328	SHACKELFORD OIL CO		32E	29	3/23/1988	19.0S	7204	SOUTHERN CALIFORNIA FEDERAL 007	O	Active	Lea	32.63261117	-103.7895455	1.45
3002530490	SHACKELFORD OIL CO		32E	20	11/2/1988	19.0S	7200	LUSK FEDERAL A 014	O	TA	Lea	32.63958444	-103.7862082	1.45
3002522280	KINCAID & WATSON DRILLING CO	1/1/1900	32E	29	1/1/1900	19.0S	2746	BOWMAN 001	O	Plugged	Lea	32.63233589	-103.7893821	1.47
3002520161	GEORGE A CHASE JR DBA G AND C SERVICE		32E	31	4/8/1963	19.0S	12976	POLEWSKI FEDERAL 001	O	Active	Lea	32.62242005	-103.8119379	1.48
3002530094	SHACKELFORD OIL CO		32E	29	3/23/1988	19.0S	7200	SOUTHERN CALIFORNIA FEDERAL 913	O	Active	Lea	32.6269078	-103.7947626	1.49
3001537265	COG OPERATING LLC		31E	36	6/10/2010	19.0S	10955	WILD CAP STATE 007H	O	Active	Eddy	32.62334417	-103.8196835	1.51
3001538148	COG OPERATING LLC		31E	36		19.0S	0	DIRTY DOZEN STATE COM 001A	O	New (Not drilled or compl)	Eddy	32.62232762	-103.8161291	1.52
3002530165	SHACKELFORD OIL CO		32E	29	1/17/1988	19.0S	6850	LUSK WEST DELAWARE UNIT 911	I	Active	Lea	32.63052202	-103.7898701	1.52
3001510136	MCFARLAND CORP	12/12/1963	31E	13	4/29/1963	19.0S	12693	MALONE FED A 001	O	Plugged	Eddy	32.66234454	-103.8249594	1.52
3002520359	TEXACO EXPLORATION & PRODUCTION INC	1/1/1900	32E	29	1/1/1900	19.0S	11420	SOUTHERN CALIFORNIA 003	O	Plugged	Lea	32.62961665	-103.7904568	1.53
3002535087	COG OPERATING LLC		32E	18	8/1/2000	19.0S	12640	CRAZY HORSE 18 FEDERAL 003	G	Active	Lea	32.66596439	-103.8081208	1.53
3002530329	SHACKELFORD OIL CO		32E	29	4/16/1988	19.0S	7200	LUSK WEST DELAWARE UNIT 902	O	Active	Lea	32.63595549	-103.7859331	1.54
3002535340	TRITEX RESOURCES, L.L.C.	5/22/2009	32E	31	9/11/2002	19.0S	7303	POLEWSKI FEDERAL 002	O	Plugged	Lea	32.62150545	-103.8086776	1.54
3001510495	PHILLIPS PETROLEUM CO & KERR-MCGEE	1/27/1983	31E	14	4/1/1965	19.0S	11575	SIMON FED A 002	O	Plugged	Eddy	32.65506933	-103.8335516	1.54
3002539634	CIMAREX ENERGY CO. OF COLORADO		32E	29	1/22/2010	19.0S	9321	SOUTHERN CALIFORNIA 29 FEDERAL 015H	O	Active	Lea	32.62518814	-103.7959255	1.54
3001540220	DEVON ENERGY PRODUCTION COMPANY, LP		31E	25	9/16/2012	19.0S	9335	SPICA 25 FEDERAL 003H	O	Active	Eddy	32.62891432	-103.8304057	1.55
3001531568	COG OPERATING LLC		31E	13	3/14/2001	19.0S	12875	TRAPPER 13 FEDERAL COM 002	G	Active	Eddy	32.6659826	-103.8170015	1.57
3002539485	COG OPERATING LLC		32E	17		19.0S	0	STEALTH FEDERAL COM 002	O	New (Not drilled or compl)	Lea	32.65413776	-103.7863504	1.58
3002530523	CIMAREX ENERGY CO. OF COLORADO	12/7/2010	32E	20	1/26/1990	19.0S	7220	LUSK WEST DELAWARE UNIT 002	O	Plugged	Lea	32.65232268	-103.7852808	1.59
3002541389	COG OPERATING LLC		32E	18	11/13/2013	19.0S	9220	CRAZY HORSE FEDERAL 001H	O	Active	Lea	32.66690839	-103.8136562	1.60
3002530164	CIMAREX ENERGY CO. OF COLORADO	12/20/2010	32E	29	12/8/1987	19.0S	6850	LUSK WEST DELAWARE UNIT 914	O	Plugged	Lea	32.62689847	-103.791502	1.61
3001537185	COG OPERATING LLC		31E	13	8/28/2009	19.0S	13680	LIBERATOR FEDERAL COM 001H	O	Active	Eddy	32.66690559	-103.8155172	1.61
3001537144	COG OPERATING LLC		31E	36	9/27/2009	19.0S	9280	WILD CAP STATE 005H	O	Active	Eddy	32.62334015	-103.8241467	1.62
3002534031	CIMAREX ENERGY CO. OF COLORADO	6/28/2011	32E	20	10/2/1997	19.0S	6600	LUSK WEST DELAWARE UNIT 016	O	Plugged	Lea	32.64139047	-103.7829818	1.62
3002520813	COG OPERATING LLC		32E	31	9/4/1987	19.0S	11385	FEDERAL USA I 001	O	Active	Lea	32.62238532	-103.7990742	1.62
3002541977	COG OPERATING LLC		32E	32	10/12/2014	19.0S	9397	MAGNUM PRONTO STATE 006H	O	Active	Lea	32.62363513	-103.7959236	1.63
3001540221	DEVON ENERGY PRODUCTION COMPANY, LP		31E	26	12/7/2012	19.0S	9202	REGULUS 26 FEDERAL 003H	O	Active	Eddy	32.62891605	-103.8326251	1.64
3002535750	APACHE CORP		32E	31	5/6/2002	19.0S	12550	TRES ELO FEDERAL COM 001	G	Active	Lea	32.62148161	-103.8001542	1.66
3002530771	ASPEN OIL INC	2/14/1994	32E	31		19.0S	7150	PRINCESS D 002	O	Plugged	Lea	32.61969136	-103.8086967	1.67
3002530524	CIMAREX ENERGY CO. OF COLORADO	6/17/2009	32E	20	3/17/1990	19.0S	7230	LUSK WEST DELAWARE UNIT 009	I	Plugged	Lea	32.64501603	-103.7819154	1.68
3002534132	CIMAREX ENERGY CO. OF COLORADO	4/27/2012	32E	29	11/27/1997	19.0S	6630	LUSK WEST DELAWARE UNIT 907	I	Plugged	Lea	32.6326275	-103.7851045	1.68
3001534038	COG OPERATING LLC		31E	14	6/30/2005	19.0S	12765	CHAPARRAL 14 FEDERAL COM 001	G	Active	Eddy	32.65869755	-103.8335652	1.68
3002500912	CULBERTSON,IRWIN &	1/1/1900	32E	20	1/1/1900	19.0S	2820	LYNCH 004	O	Plugged	Lea	32.64048067	-103.7819019	1.69
3001540105	DEVON ENERGY PRODUCTION COMPANY, LP		31E	25	8/10/2012	19.0S	9305	SPICA 25 FEDERAL 004H	O	Active	Eddy	32.62534104	-103.8304015	1.72
3002530093	CIMAREX ENERGY CO. OF COLORADO	3/22/2011	32E	29	12/5/1987	19.0S	7200	LUSK WEST DELAWARE UNIT 910	O	Plugged	Lea	32.62960429	-103.7861702	1.73
3002520563	MARBOB ENERGY CORP	8/8/2003	32E	32		19.0S	11495	NEW MEXICO CR STATE 001	O	Plugged	Lea	32.62237247	-103.7947666	1.74
3001534784	COG OPERATING LLC		31E	12	12/9/2006	19.0S	10875	MALIBU FEDERAL 001	O	Active	Eddy	32.66871426	-103.8164293	1.75
3001538149	COG OPERATING LLC		31E	36		19.0S	0	DIRTY DOZEN STATE COM 002H	O	New (Not drilled or compl)	Eddy	32.61880913	-103.816323	1.76
3002530494	CIMAREX ENERGY CO. OF COLORADO	3/16/2011	32E	20	11/21/1988	19.0S	7220	LUSK WEST DELAWARE UNIT 008	O	Plugged	Lea	32.64864576	-103.780849	1.77
3002542211	COG OPERATING LLC		32E	20	11/22/2014	19.0S	8544	LUSK DEEP UNIT A 035H	O	Active	Lea	32.64778306	-103.7804543	1.78
3002534131	SHACKELFORD OIL CO		32E	29	10/24/1997	19.0S	6927	LUSK WEST DELAWARE UNIT 901	I	Active	Lea	32.63775673	-103.7808156	1.79
3002500926	TEXACO EXPLORATION & PRODUCTION INC	1/1/1900	32E	29	1/1/1900	19.0S	2770	BOWMAN FEDERAL 001	O	Plugged	Lea	32.62507818	-103.7893756	1.79
3002530133	TEXACO EXPLORATION & PRODUCTION INC	1/1/1900	32E	32	1/1/1900	19.0S	6863	NEW MEXICO CR STATE 004	O	Plugged	Lea	32.62327017	-103.7914938	1.80
3001540041	DEVON ENERGY PRODUCTION COMPANY, LP		31E	26	4/13/2012	19.0S	9247	REGULUS 26 FEDERAL 004H	O	Active	Eddy	32.62534275	-103.8326209	1.81
3002520875	EL PASO NATURAL GAS	1/1/1900	32E	17	1/1/1900	19.0S	11510	LUSK DEEP UNIT 009	O	Plugged	Lea	32.66591922	-103.7937636	1.81
3002539484	COG OPERATING LLC		32E	17	12/18/2009	19.0S	8528	STEALTH FEDERAL COM 001H	O	Active	Lea	32.65413374	-103.7818448	1.82
3002541563	COG OPERATING LLC		32E	17	1/17/2014	19.0S	9244	LUSK DEEP UNIT A 029H	O	Active	Lea	32.66673844	-103.7948863	1.82
3002539889	CIMAREX ENERGY CO. OF COLORADO		32E	29	12/6/2010	19.0S	9316	SOUTHERN CALIFORNIA 29 FEDERAL 018H	O	Active	Lea	32.63557003	-103.7808348	1.83
3002500925	CIMAREX ENERGY CO. OF COLORADO	6/19/2011	32E	29	3/23/1962	19.0S	12833	LUSK WEST DELAWARE UNIT 908	O	Plugged	Lea	32.63322408	-103.7818755	1.83

3002530518	SHACKELFORD OIL CO		32E	20	11/15/1989	19.0S	7500	LUSK WEST DELAWARE UNIT 001	I	Active	Lea	32.65227679	-103.7808598	1.83
3002536157	COG OPERATING LLC		32E	32	3/19/2003	19.0S	12700	MAGNUM PRONTO STATE COM 001	O	Active	Lea	32.62146235	-103.7936928	1.83
3001535754	APACHE CORP		31E	12		19.0S	0	APACHE FEDERAL 003C	O	New (Not drilled or compl)	Eddy	32.66938203	-103.8196596	1.84
3002538736	COG OPERATING LLC		32E	32	4/10/2008	19.0S	9282	MAGNUM PRONTO STATE 003H	O	Active	Lea	32.62325158	-103.7905376	1.84
3002543124	COG OPERATING LLC		32E	20		19.0S	0	LUSK DEEP UNIT A 031H	O	New (Not drilled or compl)	Lea	32.65185113	-103.7804908	1.84
3001510114	H N SWEENY	8/15/1963	31E	14	6/30/1963	19.0S	625	ROSS 001	O	Plugged	Eddy	32.66233422	-103.8335788	1.85
3001505783	RAY WESTALL OPERATING, INC.		31E	23	7/25/1957	19.0S	12775	JONES FEDERAL 002	O	Active	Eddy	32.64780187	-103.8420902	1.86
3001523159	COG OPERATING LLC		31E	13	3/10/1980	19.0S	13060	TRAPPER 13 FEDERAL COM 003	G	Active	Eddy	32.66572008	-103.8292817	1.86
3002530694	SHACKELFORD OIL CO	10/8/2012	32E	21	7/15/2011	19.0S	7240	MOBIL FEDERAL 003	O	Plugged	Lea	32.64500802	-103.7786836	1.86
3002533548	SHACKELFORD OIL CO		32E	21	7/29/1996	19.0S	5070	MOBIL FEDERAL 007	O	Active	Lea	32.64528289	-103.7786845	1.86
3002530597	ENDURANCE RESOURCES LLC		32E	17	7/1/1999	19.0S	7205	PIPELINE FEDERAL 001	O	Active	Lea	32.65409092	-103.7808649	1.87
3001542412	COG OPERATING LLC		31E	12	6/29/2015	19.0S	9136	AIRBUS 12 FEDERAL 003H	O	Active	Eddy	32.66827766	-103.8250493	1.88
3002530439	CIMAREX ENERGY CO. OF COLORADO	12/13/2010	32E	21	6/14/1988	19.0S	6700	LUSK WEST DELAWARE UNIT 105	I	Plugged	Lea	32.6486433	-103.7786945	1.89
3002534283	CIMAREX ENERGY CO. OF COLORADO	5/16/2013	32E	29	2/16/1998	19.0S	6630	LUSK WEST DELAWARE UNIT 909	I	Plugged	Lea	32.62959455	-103.7827758	1.90
3001510045	LYNX PETROLEUM CONSULTANTS INC	6/27/1997	31E	23		19.0S	12853	JONES FEDERAL 001	S	Plugged	Eddy	32.64325734	-103.8431511	1.90
3002534269	CIMAREX ENERGY CO. OF COLORADO	9/1/2012	32E	29	5/15/1998	19.0S	6630	LUSK WEST DELAWARE UNIT 915Y	I	Plugged	Lea	32.62539941	-103.786383	1.90
3002534130	PIONEER NATURAL RESOURCES USA INC	1/13/1998	32E	29	12/31/1997	19.0S	4210	LUSK WEST DELAWARE UNIT 915	I	Plugged	Lea	32.62539894	-103.7862198	1.91
3001505781	DON ANGLE	6/25/1972	31E	23	1/15/1958	19.0S	2452	ANGLE FED 001	O	Plugged	Eddy	32.65143011	-103.8421032	1.91
3001535526	COG OPERATING LLC		31E	36	4/18/2007	19.0S	12950	WILD CAP STATE COM 002	O	Active	Eddy	32.61880398	-103.8250771	1.92
3002520877	CIMAREX ENERGY CO. OF COLORADO		32E	29	3/8/1964	19.0S	11449	SOUTHERN CALIFORNIA FEDERAL 004	O	Active	Lea	32.62868794	-103.7829356	1.92
3002542200	COG OPERATING LLC		32E	8	1/16/2015	19.0S	9234	KING AIR 8 FEDERAL COM 004H	O	Active	Lea	32.66787978	-103.7938367	1.92
3002520323	PAN AMERICAN PETROLEUM CORP	1/1/1900	32E	21	1/1/1900	19.0S	11517	PLAINS UNIT 004	O	Plugged	Lea	32.64396096	-103.7776033	1.92
3002500915	CULBERTSON & IRWIN	1/1/1900	32E	21	1/1/1900	19.0S	2820	LYNCH 002	O	Plugged	Lea	32.6440984	-103.7776037	1.92
3001510704	TENNECO OIL CO	1/2/1966	31E	23	2/2/1965	19.0S	11330	JONES FED COM 001	O	Plugged	Eddy	32.65142969	-103.8424297	1.93
3002530496	SHACKELFORD OIL CO		32E	21	9/23/1988	19.0S	6650	LUSK WEST DELAWARE UNIT 104	O	Active	Lea	32.65136451	-103.7787026	1.93
3002520518	CIMAREX ENERGY CO. OF COLORADO	9/21/2004	32E	21	1/4/1964	19.0S	11514	PLAINS UNIT FEDERAL 004Y	O	Plugged	Lea	32.64060755	-103.7775933	1.94
3002500914	SHACKELFORD OIL CO	12/12/1946	32E	21	10/4/1946	19.0S	2886	LYNCH 001	O	Plugged	Lea	32.64047012	-103.7775928	1.94
3002533317	SHACKELFORD OIL CO		32E	21	7/17/1996	19.0S	2798	MOBIL FEDERAL 006	O	Active	Lea	32.64025297	-103.7775922	1.94
3002520769	SHACKELFORD OIL CO		32E	21		19.0S	11690	PLAINS 006	O	Active	Lea	32.6477334	-103.7776145	1.94
3002540705	COG OPERATING LLC		32E	17	9/18/2012	19.0S	13670	LUSK DEEP UNIT A 022H	O	Active	Lea	32.6668283	-103.7912624	1.94
3002541476	COG OPERATING LLC		32E	17		19.0S	0	KING AIR 8 FEDERAL COM 003H	O	New (Not drilled or compl)	Lea	32.66661203	-103.7906418	1.95
3002539953	CIMAREX ENERGY CO. OF COLORADO		32E	32		19.0S	0	SOUTH LUSK 32 STATE COM 002	O	New (Not drilled or compl)	Lea	32.62325233	-103.7873146	1.96
3001536032	COG OPERATING LLC		31E	36	2/9/2008	19.0S	9354	WILD CAP STATE 003H	O	Active	Eddy	32.6160758	-103.8195489	1.98
3002500923	SHACKELFORD OIL CO	12/12/1946	32E	28	1/28/1942	19.0S	2811	BOWMAN FEDERAL 001	O	Plugged	Lea	32.63682541	-103.7776135	1.98
3002500917	KERSEY & COMPANY	1/1/1900	32E	21	1/1/1900	19.0S	2710	ATLANTIC 001	O	Plugged	Lea	32.64318877	-103.7765237	1.99
3002534217	CIMAREX ENERGY CO. OF COLORADO	2/28/2011	32E	29	1/30/1998	19.0S	6630	LUSK WEST DELAWARE UNIT 916	O	Plugged	Lea	32.62638042	-103.7834166	1.99
3001540714	BOPCO, L.P.		31E	35	1/26/2013	19.0S	9230	BIG EDDY UNIT 248H	O	Active	Eddy	32.62101119	-103.8315631	1.99
3002535296	COG OPERATING LLC	8/16/2015	32E	8	1/19/2001	19.0S	12710	WBP FEDERAL 001	O	Plugged	Lea	32.6695499	-103.7948492	2.00
3001540715	BOPCO, L.P.		31E	35	12/14/2012	19.0S	9220	BIG EDDY UNIT 249H	O	Active	Eddy	32.62090124	-103.8315635	2.00
3001533062	COG OPERATING LLC		31E	36	5/16/2006	19.0S	12941	WILD CAP STATE COM 001	O	Active	Eddy	32.61516131	-103.8162177	2.00

Note: No data is available in NMOCD files for Jones 003 (3001505787) and Jones 005 (3001505788)

Figure A1: Wells within Two Miles of Proposed Zia AGI #2D

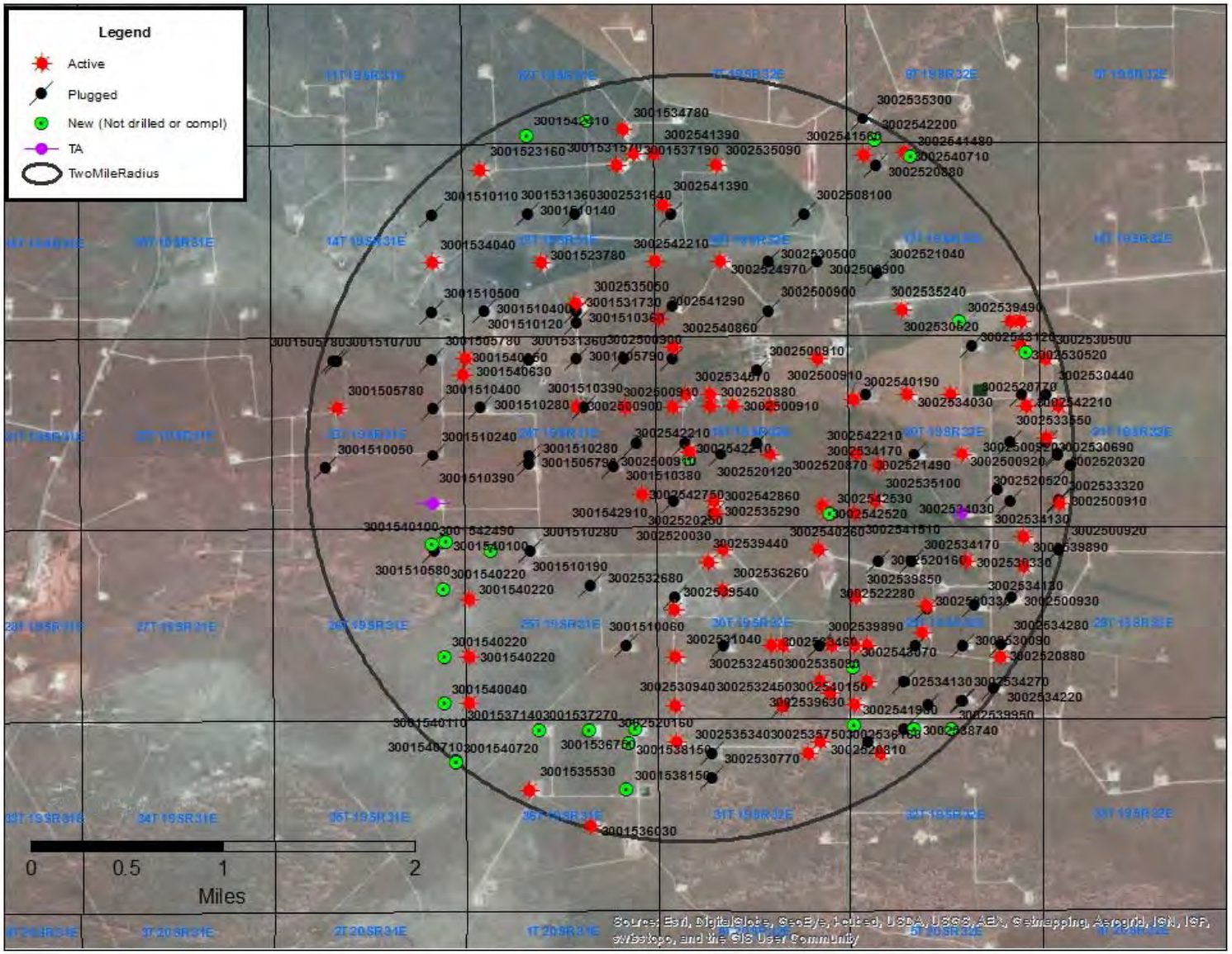


Figure A1: Wells Within Two Miles of Proposed Zia AGI #2D

Exhibit A1: Plugging Records and Drilling Logs, Lusk Deep Unit #2

Form 9-331
(May 1963)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN TRIPLICATE* (Other instructions on reverse side)

Form approved.
Budget Bureau No. 42-R1424.

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—" for such proposals.)

1. OIL WELL [X] GAS WELL [ ] OTHER

2. NAME OF OPERATOR: El Paso Products

3. ADDRESS OF OPERATOR: c/o Hobbs Pipe & Supply Co., Box 2010, Hobbs, N.M.

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.) At surface: 660' FSL & 1980' FEL

5. LEASE DESIGNATION AND SERIAL NO.: LC 064198A

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7. UNIT AGREEMENT NAME: Lusk Deep Unit

8. FARM OR LEASE NAME: Lusk Deep Unit

9. WELL NO.: 2

10. FIELD AND POOL, OR WILDCAT: Lusk Strawn Morrow

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: Sec.18,T19S,R32E

14. PERMIT NO.:

15. ELEVATIONS (Show whether DF, RT, GR, etc.): 3585'

12. COUNTY OR PARISH: Lea

13. STATE: N.M.

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

NOTICE OF INTENTION TO:				SUBSEQUENT REPORT OF:			
TEST WATER SHUT-OFF	[ ]	PULL OR ALTER CASING	[ ]	WATER SHUT-OFF	[ ]	REPAIRING WELL	[ ]
FRACTURE TREAT	[ ]	MULTIPLE COMPLETE	[ ]	FRACTURE TREATMENT	[ ]	ALTERING CASING	[ ]
SHOOT OR ACIDIZE	[ ]	ABANDON*	[ ]	SHOOTING OR ACIDIZING	[ ]	ABANDONMENT*	[X]
REPAIR WELL	[ ]	CHANGE PLANS	[ ]	(Other)			
(Other)				(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)			

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

1 - Spotted 30 sx cement plug @ 12,350'.
2 - Spotted 35 sx cement plug @ 11,200'.
3 - Spotted 35 sx cement plug @ 7,000' at Bone Springs.
4 - Spotted 50 sx cement plug @ base of 13 3/8" and 9 5/8" csg. stub at 4462'.
5 - Spotted 35 sx cement plug @ 2900'.
6 - Spotted 10 sx cement plug at surface with marker.
7 - Hole was loaded with mud-laden fluids.
8 - Well was plugged and abandoned on 9/4/71.

18. I hereby certify that the foregoing is true and correct

SIGNED [signature] TITLE Agent DATE 9/9/71

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

*See Instructions on Reverse Side

J. L. [illegible]
ACTING DISTRICT ENGINEER

Budget Bureau No. 42-R355.4.
Approval expires 12-31-60.

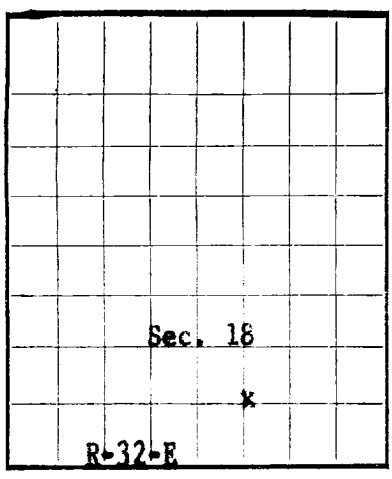
Form 9-330

U. S. LAND OFFICE New Mexico

SERIAL NUMBER LC 064198 A

LEASE OR PERMIT TO PROSPECT Lusk Deep Unit

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY



LOCATE WELL CORRECTLY

LOG OF OIL OR GAS WELL

Company El Paso Natural Gas Company Address 2005 Wilco Building, Midland, Texas

Lessor or Tract Lusk Deep Unit Field Lusk - Strawn (Lusk-Morrow Undesignated) State New Mexico

Well No. 2 Sec. 18 T. 19-S R. 32-E Meridian NMPM County Lea

Location 660' ft. (N.) of S. Line and 1980 ft. (E.) of E. Line of Sec. 18 Elevation 3585 GL
(Derrick floor relative to sea level)

The information given herewith is a complete and correct record of the well and all work done thereon so far as can be determined from all available records.

Signed L. C. Lockett

Date April 14, 1961 Title

The summary on this page is for the condition of the well at above date.

Commenced drilling October 16, 19 60 Finished drilling March 13, 19 61

OIL OR GAS SANDS OR ZONES

(Denote gas by G)

No. 1, from 11,220 to 11,250' No. 4, from to

No. 2, from 12,380 to 12,398' No. 5, from to

No. 3, from to No. 6, from to

IMPORTANT WATER SANDS

No. 1, from to No. 3, from to

No. 2, from to No. 4, from to

CASING RECORD

Size casing	Weight per foot	Threads per inch	Make	Amount	Kind of shoe	Cut and pulled from	Perforated From	Perforated To	Purpose
13 3/8	72#	8 round	new	4462'	Halliburton				Surface
9 5/8	53.5#; 47#; 43.5#	Buttress	"	11400'	"		11,220	11,250	Intermediate
5" liner	18#	8 round	"	13551' (bottom) 11299' (top)	"		12380	12,398	Production

MUDDING AND CEMENTING RECORD

Size casing	Where set	Number sacks of cement	Method used	Mud gravity	Amount of mud used
13 3/8	4462'	3400	pump & plug		
9 5/8	11400'	525	"		
5	13551' (bottom) 11299' (top)	717 cubic ft.	"		

FOLD | MARK

PLUGS AND ADAPTERS

Heaving plug—Material Length Depth set

Adapters—Material Size

SHOOTING RECORD

Size	Shell used	Explosive used	Quantity	Date	Depth shot	Depth cleaned out

TOOLS USED

Rotary tools were used from 0 feet to 13,577 feet, and from feet to feet

Cable tools were used from feet to feet, and from feet to feet

DATES

Dually Completed 3/31, 19 61 Put to producing (Strawn) 4/1, 19 61

The production for the first 24 hours was 640.6 barrels of fluid of which 100 % was oil; 0 % emulsion; % water; and % sediment. Gravity, °Bé.

If gas well, cu. ft. per 24 hours Gallons gasoline per 1,000 cu. ft. of gas

Rock pressure, lbs. per sq. in. 5799 (SHP - Strawn - datum point -7585)

EMPLOYEES

, Driller (Morrow zone shut-in awaiting gas line) Driller

, Driller Driller

FORMATION RECORD

FROM—	TO—	TOTAL FEET	FORMATION
0	733	733	redbed
733	1044	311	anhydrite, dolo
1044	2290	1246	salt
2290	2563	273	dolo, anhydrite
2563	2945	382	anhydrite, sand
2945	4515	1570	anhydrite, dolo
4515	6985	2470	dolo, sand, anhydrite
6985	10280	3295	lime, sand
10280	11070	790	lime, sand
11070	11505	435	lime
11505	12510	1005	shale, sand, lime
12510	12605	95	lime
12605	12755	150	shale
12755	13300	545	lime
13300	13414	114	shale
13414	13974	560	lime, dolo, chert

16—43094-4

FROM—	TO—	TOTAL FEET	FORMATION
			TOPS
			Anhydrite 733
			Salt 1044
			Tansill 2290
			Yates 2563
			Seven Rivers 2945
			Delaware Mountain 4515
			Bone Springs 6985
			Wolfcamp 10280
			Strawn 11070
			Atoka 11505
			Barnett 12605
			Mississippian 12755
			Woodford 13300
			Devonian 13414

16—43094-2 U. S. GOVERNMENT PRINTING OFFICE

HISTORY OF OIL OR GAS WELL

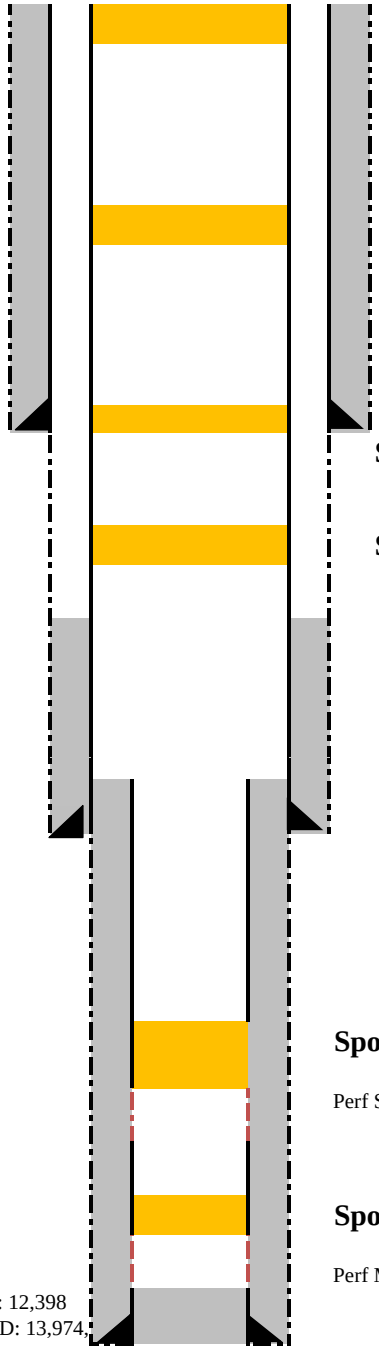
It is of the greatest importance to have a complete history of the well. Please state in detail the dates of redrilling, together with the reasons for the work and its results. If there were any changes made in the casing, state fully, and if any casing was "sidetracked" or left in the well, give its size and location. If the well has been dynamited, give date, size, position, and number of shots. If plugs or bridges were put in to test for water, state kind of material used, position, and results of pumping or bailing.

This well is a dual completion, but at the present time only the upper zone (Strawn) is being produced.
The lower zone (Morrow) will be shut-in until a gas pipeline is available to this area.
There are two strings of tubing in this well. The No. 1 string of 2 3/8" EUE is landed @ 12,416' with a packer set @ 12,280'. The No. 2 string of 2 3/8" EUE is landed @ 11,164' with a packer set @ 11,069'.

Figure A2: Plugging Diagram for Lusk Deep Unit #2

Figure A-2
Plugging Diagram for Lusk Deep Unit

Location: Lusk Deep Unit 02
STR Section 18, T19S-R32E
County, St.: LEA COUNTY, NEW MEXICO



Spotted w/10 Sx @ Surface

Spotted w/35 Sx @ 2,900'

SURFACE CASING
13 3/8", 72.00#/ft, at 4,462'
Cmt Circulated to Surface

Spotted w/50 Sx @ 4,462 (Base of Srf Csg)

Spotted w/35 Sx @ 7,000' (Bone Springs)

INTERMEDIATE CASING:
9 5/8", 53.5 #/ft, at 11,400
TOC 8,990'

LINER
5" from 11,299 - 13,551
Cmt to top liner

Spotted w/35 Sx @ 11,200'

Perf Strawn 11,220 - 11,250'

Spotted w/30 Sx @ 12,350'

Perf Morrow 12,380' - 12,398'

PB: 12,398
TVD: 13,974'

NOT TO SCALE

APPENDIX B

Land information on Tracts within one Mile of Proposed Zia AGI #2D

Table of Contents

1. **Figure B-1a,b Maps Showing Tract Locations, Surface and Mineral Owners**
2. **Table B-1 Surface and Mineral Owners**
3. **Table B-2 Operators**
4. **Table B-3 Mineral Leasehold Owners Requiring Notice**
5. **Table B-4 Summary Land Index**
6. **Land Status Reports by Tract (Basis for Table B-4)**
7. **Example of Notice letter Sent Prior to the NMOCC Hearing**

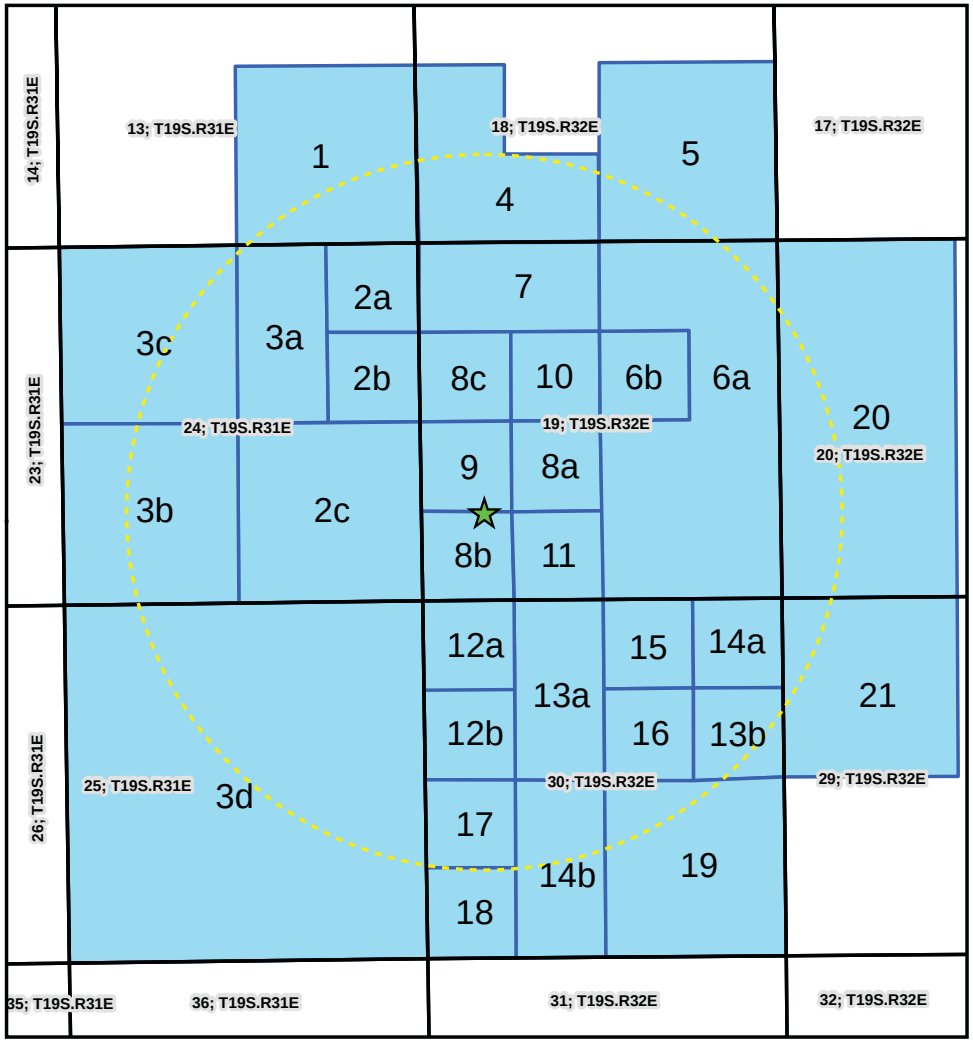


Figure B-1a: Mineral Ownership by Tract

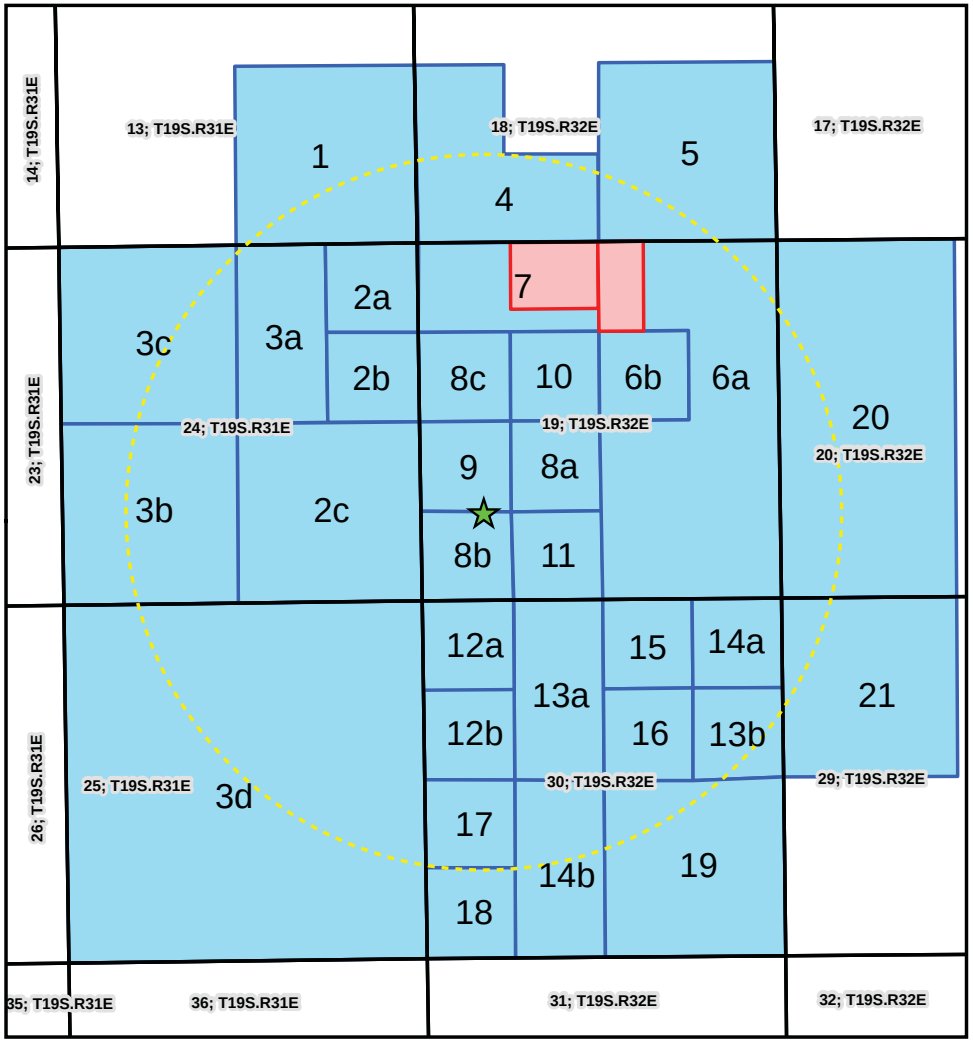


Figure B-1b: Surface Ownership by Tract

Explanation

- Zia AGI #2 Location
- 1 Mile Radius
- DCP
- USA BLM
- 8c Tract #

0 0.25 0.5 0.75 1 Miles

N

GEOLEX INCORPORATED

TABLE B-1
SURFACE AND MINERAL OWNERS

SURFACE OWNERS

1) United States of America
   Bureau of Land Management
   P.O. Box 27115
   Santa Fe, NM 87502-0115

2) DCP Midstream, L.P.
   370 17th Street, Ste. 2500
   Denver, CO 80202

MINERAL OWNERS

1) United States of America
   Bureau of Land Management
   P.O. Box 27115
   Santa Fe, NM 87502-0115

TABLE B-2
OPERATORS

1) Chisos, Ltd.
   670 Dona Ana Rd., SW
   Deming, NM 88030

2) Cimarex Energy Company of Colorado
   1700 Lincoln St., Ste. 3700
   Denver, CO 80203

3) COG Operating, LLC
   One Concho Center
   600 W. Illinois Ave.
   Midland, TX 79701

4) Concho Oil and Gas, LLC
   One Concho Center
   600 W. Illinois Ave.
   Midland, TX 79701

5) DCP Midstream, LP
   370 17th St., Ste. 2500
   Denver, CO 80202

6) Devon Energy Production, LP
   333 West Sheridan Ave.
   Oklahoma City, OK 73102

7) Lynx Petroleum Consultants, Inc.
   3325 N. Enterprise Dr.
   Hobbs, NM 88240

8) OXY, USA, Inc.
   P.O. Box 4294
   Houston, TX 77210

9) OXY Y-1
   P.O. Box 27570
   Houston, TX 77227

10) Remnant Oil Operating, LLC
    P.O. Box 509
    Perryton, TX 79070

11) Shackelford Oil Company
P.O. Box 10665
Midland, TX 79702

12) Tom R. Cone
1304 Broadway Pl.
Hobbs, NM 88240

13) Yates Petroleum Corporation
105 S. 4th Street
Artesia, NM 88210

TABLE B-3
MINERAL LEASEHOLD OWNERS REQUIRING NOTICE

1) Amity Oil Co., Inc.
   5924 Royal Lane, Ste. 153
   Dallas, TX 75230

2) Apache Corporation
   303 Veterans Airpark Lane, Ste. 3000
   Midland, TX 79705

3) Basin Petroleum Co.
   P.O. Box 4028
   Albuquerque, NM 87196

4) Big Three Energy Group
   1801 West 2nd St.
   Roswell, NM 88201

5) Black Shale Minerals LLC
   P.O. Box 2243
   Longview, TX 75606

6) Chase Oil Corporation
   P.O. Box 1767
   Artesia, NM 88211

7) Chisos, Ltd.
   670 Dona Ana Rd. SW
   Deming, NM 88030

8) Cimarex Energy Company
   1700 Lincoln St., Ste. 1800
   Denver, CO 80203

9) COG Operating LLC
   600 W. Illinois Ave., One Concho Center
   Midland, TX 79701

10) Concho Oil & Gas LLC
    600 W. Illinois Ave., One Concho Center
    Midland, TX 79701

11) ConocoPhillips Company
P.O. Box 7500
Bartlesville, OK 74005

12) Dan W. Irwin
118 N. Grant St.
Hinsdale, IL 60521

13) Devon Energy Corp.
20 N. Broadway Ave.
Oklahoma City, OK 73102

14) DNA Petroleum
P.O. Box 7118
Houston, TX 79702

15) Kathleen Irwin Schuster Trust
3213 Pepperwood La.
Fort Collins, CO 80525

16) Lynx Petroleum Consultants, Inc.
P.O. Box 1708
Hobbs, NM 88241

17) McVay Drilling Co.
P.O. Box 2450
Hobbs, NM 88241

18) Moutray Properties, LLC
P.O. Box 1598
Carlsbad, NM 88220

19) OXY Y-1
P.O. Box 27570
Houston, TX 77227

20) Prize Energy Resources, LP
20 E. 5th St., Ste. 1400
Tulsa, OK 74103

21) Shackelford Oil Co.
P.O. Box 10665
Midland, TX 79702

22) Sharbro Energy LLC
423 W. Main St.
Artesia, NM 88211

23) Tenison Oil Company
1925 Hospital Pl.
Abilene, TX 79606

24) Wallfam Limited
1811 Heritage Blvd., Ste. 200
Midland, TX 79707

25) WK Land Company
911 Kimbark St.
Longmont, CO 80501

26) Yates Industries, Inc.
P.O. Box 1091
Artesia, NM 88210

*For tracts held by production notices provided only to operator

TABLE B-4
SUMMARY LAND INDEX
(LAND STATUS REPORT BY TRACT)

Lease	Tract Ref.	Land	Min. Owner	T	R	S	Legal	Acres	Depths	Operator	Address	Well Name	API	Lessees	Address
NM-5470-C	1	BLM	U.S.A.	19S	31E	13	SE/4	160	**Surface to 11,097'**	Lynx Petroleum Consultants, Inc.	P.O. Box 1708, Hobbs, NM 88241	HJ Federal #1	#30-015-23781	COG Operating LLC Concho Oil & Gas LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701 600 W. Illinois Ave., One Concho Center, Midland, TX 79701
									From 11,097' to 11,504'	-	-	-	-	Basin Petroleum Co. Amity Oil Co., Inc. DNA Petroleum COG Operating LLC Concho Oil & Gas LLC	P.O. Box 4028, Albuquerque, NM 87196 5924 Royal Lane, Ste. 153, Dallas, TX 75230 P.O. Box 7118, Houston, TX 79702 600 W. Illinois Ave., One Concho Center, Midland, TX 79701 600 W. Illinois Ave., One Concho Center, Midland, TX 79701
									From 11,504' to 11,800'	-	-	-	-	COG Operating LLC Concho Oil & Gas LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701 600 W. Illinois Ave., One Concho Center, Midland, TX 79701
									From 11,800' to 12,040'	-	-	-	-	COG Operating LLC Concho Oil & Gas LLC Lynx Petroleum Consultants, Inc. ConocoPhillips Company	600 W. Illinois Ave., One Concho Center, Midland, TX 79701 600 W. Illinois Ave., One Concho Center, Midland, TX 79701 P.O. Box 1708, Hobbs, NM 88241 P.O. Box 7500, Bartlesville, OK 74005
									From 12,040' to 12,697'	-	-	-	-	Concho Oil & Gas LLC COG Operating LLC Lynx Petroleum Consultants, Inc.	600 W. Illinois Ave., One Concho Center, Midland, TX 79701 600 W. Illinois Ave., One Concho Center, Midland, TX 79701 P.O. Box 1708, Hobbs, NM 88241
									All depths below 12,697'	COG Operating LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701	Margaret 13 Federal Com #1	#30-015-31730	COG Operating LLC Concho Oil & Gas LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701 600 W. Illinois Ave., One Concho Center, Midland, TX 79701
NMLC-029358	2a	BLM	U.S.A.	19S	31E	24	NE/4NE/4	40	**Surface to 4,500'**	-	-	-	-	McVay Drilling Co. Moutray Properties, LLC Devon Energy Corp. Concho Oil & Gas LLC COG Operating LLC	P.O. Box 2450, Hobbs, NM 88241 P.O. Box 1598, Carlsbad, NM 88220 20 N. Broadway Ave., Oklahoma City, OK 73102 600 W. Illinois Ave., One Concho Center, Midland, TX 79701 600 W. Illinois Ave., One Concho Center, Midland, TX 79701
									All depths below 4,500'	Devon Energy Production Co., LP	333 West Sheridan, Oklahoma City, OK 73102	Mimosa 24 Fed Com #1H	#30-015-40626	Concho Oil & Gas LLC COG Operating LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701 600 W. Illinois Ave., One Concho Center, Midland, TX 79701
	2b	BLM	U.S.A.	19S	31E	24	SE/4/NE/4	40	**Surface to 2,700'**	Remnant Oil Operating LLC	P.O. Box 509, Perryton, TX 79070	Ohio Jones #1	#30-015-05785	Remnant Oil Operating LLC	P.O. Box 509, Perryton, TX 79070
									From 2,700' to 4,500'	-	-	-	-	McVay Drilling Co. Moutray Properties, LLC Devon Energy Corp. COG Operating LLC Concho Oil & Gas LLC	P.O. Box 2450, Hobbs, NM 88241 P.O. Box 1598, Carlsbad, NM 88220 20 N. Broadway Ave., Oklahoma City, OK 73102 600 W. Illinois Ave., One Concho Center, Midland, TX 79701 600 W. Illinois Ave., One Concho Center, Midland, TX 79701
									All depths below 4,500'	Devon Energy Production Co., LP	333 West Sheridan, Oklahoma City, OK 73102	Mimosa 24 Fed Com #2H	#30-015-40947	COG Operating LLC Concho Oil & Gas LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701 600 W. Illinois Ave., One Concho Center, Midland, TX 79701
	2c	BLM	U.S.A.	19S	31E	24	SE/4	160	**Surface to 4,500'**	-	-	-	-	McVay Drilling Co. Moutray Properties, LLC Devon Energy Corp. COG Operating LLC Concho Oil & Gas LLC	P.O. Box 2450, Hobbs, NM 88241 P.O. Box 1598, Carlsbad, NM 88220 20 N. Broadway Ave., Oklahoma City, OK 73102 600 W. Illinois Ave., One Concho Center, Midland, TX 79701 600 W. Illinois Ave., One Concho Center, Midland, TX 79701
									All Depths below 4,500'	COG Operating LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701	Screwdriver 24 Federal Com #1H Screwdriver 24 Federal Com #2H	#30-015-43788 #30-015-42914	COG Operating LLC Concho Oil & Gas LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701 600 W. Illinois Ave., One Concho Center, Midland, TX 79701
NM-0107697	3a	BLM	U.S.A.	19S	31E	24	W/2NE/4	80	**Surface to 2,700'**	Remnant Oil Operating LLC	P.O. Box 509, Perryton, TX 79070	Ohio Jones #2	#30-015-05786	Remnant Oil Operating LLC	P.O. Box 509, Perryton, TX 79070
									All depths below 2,700'	Devon Energy Production Co., LP	333 West Sheridan, Oklahoma City, OK 73102	Mimosa 24 Fed Com #1H Mimosa 24 Fed Com #2H	#30-015-40626 #30-015-40947	McVay Drilling Co. Moutray Properties, LLC Devon Energy Corp. COG Operating LLC Concho Oil & Gas LLC	P.O. Box 2450, Hobbs, NM 88241 P.O. Box 1598, Carlsbad, NM 88220 20 N. Broadway Ave., Oklahoma City, OK 73102 600 W. Illinois Ave., One Concho Center, Midland, TX 79701 600 W. Illinois Ave., One Concho Center, Midland, TX 79701
	3b	BLM	U.S.A.	19S	31E	24	SW/4	160	**Surface to 11,520'**	COG Operating LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701	Screwdriver 24 Federal Com #1H Screwdriver 24 Federal Com #2H	#30-015-43788 #30-015-42914	Devon Energy Corp. McVay Drilling Co. Moutray Properties, LLC COG Operating LLC Concho Oil & Gas LLC	20 N. Broadway Ave., Oklahoma City, OK 73102 P.O. Box 2450, Hobbs, NM 88241 P.O. Box 1598, Carlsbad, NM 88220 600 W. Illinois Ave., One Concho Center, Midland, TX 79701 600 W. Illinois Ave., One Concho Center, Midland, TX 79701
									All depths below 11,520'	-	-	-	-	Devon Energy Corp. ConocoPhillips Company	20 N. Broadway Ave., Oklahoma City, OK 73102 P.O. Box 7500, Bartlesville, OK 74005
	3c	BLM	U.S.A.	19S	31E	24	NW/4	160	**All Depths**	-	-	-	-	Devon Energy Corp.	20 N. Broadway Ave., Oklahoma City, OK 73102
	3d	BLM	U.S.A.	19S	31E	25	All	640	**All Depths**	Devon Energy Corp.	20 N. Broadway Ave., Oklahoma City, OK 73102	Spica 25 Federal #1H Spica 25 Federal #2H Spica 25 Federal #3H Spica 25 Federal #4H	#30-015-40099 #30-015-40222 #30-015-40220 #30-015-40105	McVay Drilling Co. Moutray Properties, LLC Devon Energy Corp. COG Operating LLC Concho Oil & Gas LLC	P.O. Box 2450, Hobbs, NM 88241 P.O. Box 1598, Carlsbad, NM 88220 20 N. Broadway Ave., Oklahoma City, OK 73102 600 W. Illinois Ave., One Concho Center, Midland, TX 79701 600 W. Illinois Ave., One Concho Center, Midland, TX 79701
NM-038690	4	BLM	U.S.A.	19S	32E	18	Lots 3 & 4, SE/4SW/4	121.63	**Surface to 7,190'**	-	-	-	-	COG Operating LLC Concho Oil & Gas LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701 600 W. Illinois Ave., One Concho Center, Midland, TX 79701
									All depths below 7,190'	COG Operating LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701	Crazy Horse 18 Federal #3 Lusk Deep Unit A #27H Lusk Deep Unit A #28H	#30-025-35087 #30-025-42209 #30-025-41291	COG Operating LLC Concho Oil & Gas LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701 600 W. Illinois Ave., One Concho Center, Midland, TX 79701
NMLC-064198-A	5	BLM	U.S.A.	19S	32E	18	SE/4	160	**Surface to 7,190'**	-	-	-	-	COG Operating LLC Concho Oil & Gas LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701 600 W. Illinois Ave., One Concho Center, Midland, TX 79701
									All depths below 7,190'	COG Operating, LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701	Crazy Horse 18 Federal #3 Lusk Deep Unit A #27H Lusk Deep Unit A #28H Lusk Deep Unit A #34H	#30-025-35087 #30-025-42209 #30-025-41291 #30-025-42525	COG Operating LLC Concho Oil & Gas LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701 600 W. Illinois Ave., One Concho Center, Midland, TX 79701

TABLE B-4
SUMMARY LAND INDEX
(LAND STATUS REPORT BY TRACT)

Lease	Tract Ref.	Land	Min. Owner	T	R	S	Legal	Acres	Depths	Operator	Address	Well Name	API	Lessees	Address
NM-025566	6a	BLM/Fee	U.S.A.	19S	32E	19	N/2/NE/4, SE/4NE/4, SE/4	280	**Surface to 4,500'**	-	-	-	-	Wallfam Limited Dan W. Irwin Kathleen Irwin Schuster Trust WK Land Company	1811 Heritage Blvd., Ste. 200, Midland, TX 79707 118 N. Grant St., Hinsdale, IL 60521 3213 Pepperwood La., Fort Collins, CO 80525 911 Kimbark St., Longmont, CO 80501
									From 4,500' to 7,190'	-	-	-	-	COG Operating LLC Concho Oil & Gas LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701 600 W. Illinois Ave., One Concho Center, Midland, TX 79701
									All depths below 7,190'	COG Operating LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701	Lusk Deep Unit A #1 Lusk Deep Unit A #5 Lusk Deep Unit A #14 Lusk Deep Unit A #21 Lusk Deep Unit A #23H Lusk Deep Unit A #34H SL East 30 Federal Com #2H	#30-025-00905 #30-025-20122 #30-025-34573 #30-025-35291 #30-025-40260 #30-025-42525 #30-025-42524	COG Operating LLC Concho Oil & Gas LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701 600 W. Illinois Ave., One Concho Center, Midland, TX 79701
	6b	BLM/Fee	U.S.A.	19S	32E	19	SW/4NE/4	40	**Surface to 2,815'**	Tom R. Cone	1304 Broadway Place, Hobbs, NM 88240	Souther California Pet Federal #1	#30-025-00906	Glenn Plemons Lucy Lee Plemons Mack Energy Corp.	P.O. Box 688, Morton, TX 79346 8216 Chicago St., Lubbock, TX 79424 P.O. Box 960, Artesia, NM 88211
									From 2,815' to 4,500'	-	-	-	-	Wallfam Limited Dan W. Irwin Kathleen Irwin Schuster Trust WK Land Company	1811 Heritage Blvd., Ste. 200, Midland, TX 79707 118 N. Grant St., Hinsdale, IL 60521 3213 Pepperwood La., Fort Collins, CO 80525 911 Kimbark St., Longmont, CO 80501
									All depths below 4,500'	Concho Oil & Gas LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701	Lusk Deep Unit A #5 Lusk Deep Unit A #14 Lusk Deep Unit A #21	#30-025-20122 #30-025-34573 #30-025-35291	COG Operating LLC Concho Oil & Gas LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701 600 W. Illinois Ave., One Concho Center, Midland, TX 79701
NM-016497	7	BLM	U.S.A.	19S	32E	19	Lot 1, NE/4NW/4	80	**Surface to 4,500'**	-	-	-	-	Big Three Energy Group	1801 West 2nd St., Roswell, NM 88201
									From 4,500' to 7,190'	-	-	-	-	Concho Oil & Gas LLC COG Operating LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701 600 W. Illinois Ave., One Concho Center, Midland, TX 79701
									All depths below 7,190'	Concho Oil & Gas LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701	Lusk Deep Unit A #5 Lusk Deep Unit A #14 Lusk Deep Unit A #21 Lusk Deep Unit A #24H Lusk Deep Unit A #26Y	#30-025-20122 #30-025-34573 #30-025-35291 #30-025-40863 #30-025-42858	Concho Oil & Gas LLC COG Operating LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701 600 W. Illinois Ave., One Concho Center, Midland, TX 79701
NMLC-065863	8a, 8b	BLM	U.S.A.	19S	32E	19	NE/4SW/4, Lot 4	80	**Surface to 4,500'**	-	-	-	-	Apache Corporation Chisos, Ltd. Black Shale Minerals LLC	303 Veterans Airpark Lane, Ste. 3000, Midland, TX 79705 670 Dona Ana Rd. SW, Deming, NM 88030 P.O. Box 2243, Longview, TX 75606
									From 4,500' to 7,190'	DCP Midstream, LP	370 17th St., Ste. 2500, Denver, CO 80202	ZIA AGI #2	#30-025-42207	Concho Oil & Gas LLC COG Operating LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701 600 W. Illinois Ave., One Concho Center, Midland, TX 79701
									All depths below 7,190'	COG Operating LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701	Lusk Deep Unit A #5 Lusk Deep Unit A #14 Lusk Deep Unit A #21 Lusk Deep Unit A #24H Lusk Deep Unit A #26Y	#30-025-20122 #30-025-34573 #30-025-35291 #30-025-40863 #30-025-42858	Concho Oil & Gas LLC COG Operating LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701 600 W. Illinois Ave., One Concho Center, Midland, TX 79701
	8c	BLM	U.S.A.	19S	32E	19	Lot 2	40	**Surface to 2,700'**	Remnant Oil Operating LLC	P.O. Box 509, Perryton, TX 79070	Miller Federal #1	#30-025-00902	Remnant Oil Operating LLC	P.O. Box 509, Perryton, TX 79070
									From 2,700' to 4,500'	-	-	-	-	Apache Corporation Chisos, Ltd. Black Shale Minerals LLC	303 Veterans Airpark Lane, Ste. 3000, Midland, TX 79705 670 Dona Ana Rd. SW, Deming, NM 88030 P.O. Box 2243, Longview, TX 75606
									From 4,500' to 7,190'	DCP Midstream, LP	370 17th St., Ste. 2500, Denver, CO 80202	ZIA AGI #1	#30-025-42208	Concho Oil & Gas LLC COG Operating LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701 600 W. Illinois Ave., One Concho Center, Midland, TX 79701
									All depths below 7,190'	COG Operating LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701	Lusk Deep Unit A #5 Lusk Deep Unit A #14 Lusk Deep Unit A #21 Lusk Deep Unit A #24H	#30-025-20122 #30-025-34573 #30-025-35291 #30-025-40863	Concho Oil & Gas LLC COG Operating LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701 600 W. Illinois Ave., One Concho Center, Midland, TX 79701
NM-149956	9	BLM	U.S.A.	19S	32E	19	Lot 3	40	**Surface to 7,190'**	DCP Midstream, LP	370 17th St., Ste. 2500, Denver, CO 80202	ZIA AGI #1 ZIA AGI #2	#30-025-42208 #30-025-42207	Concho Oil & Gas LLC COG Operating LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701 600 W. Illinois Ave., One Concho Center, Midland, TX 79701
									All depths below 7,190'	COG Operating LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701	Lusk Deep Unit A #5 Lusk Deep Unit A #14 Lusk Deep Unit A #21 Lusk Deep Unit A #24H	#30-025-20122 #30-025-34573 #30-025-35291 #30-025-40863	Concho Oil & Gas LLC COG Operating LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701 600 W. Illinois Ave., One Concho Center, Midland, TX 79701
												Gulf Federal #1	#30-025-00909	Concho Oil & Gas LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701

TABLE B-4
SUMMARY LAND INDEX
(LAND STATUS REPORT BY TRACT)

Lease	Tract Ref.	Land	Min. Owner	T	R	S	Legal	Acres	Depths	Operator	Address	Well Name	API	Lessees	Address
NMLC-068019	10	BLM	U.S.A.	19S	32E	19	SE/4NW/4	40	Surface to 7,190'	Tom R. Cone	1304 Broadway Place, Hobbs, NM 88240	Gulf Federal #2	#30-025-00910		
												Gulf Federal #3	#30-025-20876	COG Operating LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701
									All depths below 7,190'	COG Operating LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701	Lusk Deep Unit A #5	#30-025-20122		
												Lusk Deep Unit A #14	#30-025-34573	Concho Oil & Gas LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701
												Lusk Deep Unit A #21	#30-025-35291		
												Lusk Deep Unit A #26Y	#30-025-42858	COG Operating LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701
NMLC-068947	11	BLM	U.S.A.	19S	32E	19	SE/4SW/4	40	Surface to 7,190'	-	-	-	-	Concho Oil & Gas LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701
														COG Operating LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701
									All depths below 7,190'	COG Operating LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701	Lusk Deep Unit A #5	#30-025-20122		
												Lusk Deep Unit A #14	#30-025-34573	Concho Oil & Gas LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701
												Lusk Deep Unit A #21	#30-025-35291		
												Lusk Deep Unit A #26Y	#30-025-42858	COG Operating LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701
NM-0107697	12a	BLM	U.S.A.	19S	32E	30	Lot 1	40	All depths, save & except the Strawn Formation	COG Operating LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701	SL Deep Federal Com #1	#30-025-35088	Apache Corporation	303 Veterans Airpark Lane, Ste. 3000, Midland, TX 79705
														Chisos, Ltd.	670 Dona Ana Rd. SW, Deming, NM 88030
												SL Deep Federal #4H	#30-025-39538	Black Shale Minerals LLC	P.O. Box 2243, Longview, TX 75606
									Covering Strawn Formation	Chisos, Ltd.	670 Dona Ana Rd. SW, Deming, NM 88030	Delhi Federal #1	#30-025-20025	Apache Corporation	303 Veterans Airpark Lane, Ste. 3000, Midland, TX 79705
														Chisos, Ltd.	670 Dona Ana Rd. SW, Deming, NM 88030
														Black Shale Minerals LLC	P.O. Box 2243, Longview, TX 75606
														Concho Oil & Gas LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701
														COG Operating LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701
	12b	BLM	U.S.A.	19S	32E	30	Lot 2	40	Surface to Top of Bone Spring Formation	Oxy USA Inc.	P.O. Box 4294, Houston, TX 77210	Federal 30 #1	#30-025-31039	OXY Y-1	P.O. Box 27570, Houston, TX 77227
														Myco Industries, Inc.	105 S. 4th St., Artesia, NM 88210
									All depths below the Top of the Bone Spring, save & except the Strawn Formation	COG Operating LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701	SL Deep Federal #4H	#30-025-39538	Apache Corporation	303 Veterans Airpark Lane, Ste. 3000, Midland, TX 79705
														Chisos, Ltd.	670 Dona Ana Rd. SW, Deming, NM 88030
												SL Deep Federal Com #1	#30-025-35088	Black Shale Minerals LLC	P.O. Box 2243, Longview, TX 75606
									Covering Strawn Formation	Chisos, Ltd.	670 Dona Ana Rd. SW, Deming, NM 88030	Delhi Federal #1	#30-025-20025	Apache Corporation	303 Veterans Airpark Lane, Ste. 3000, Midland, TX 79705
														Chisos, Ltd.	670 Dona Ana Rd. SW, Deming, NM 88030
														Black Shale Minerals LLC	P.O. Box 2243, Longview, TX 75606
														Concho Oil & Gas LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701
														COG Operating LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701
NM-0107698	13a	BLM	U.S.A.	19S	32E	30	E/2NW/4	80	Surface to Top of Strawn Formation	COG Operating LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701	SL Deep Federal Com #1	#30-025-35088	Apache Corporation	303 Veterans Airpark Lane, Ste. 3000, Midland, TX 79705
												SL Deep Federal #2	#30-025-36257	Chisos, Ltd.	670 Dona Ana Rd. SW, Deming, NM 88030
														Concho Oil & Gas LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701
												SL Deep Federal #3	#30-025-39441	COG Operating LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701
									Covering Strawn Formation	Chisos, Ltd.	670 Dona Ana Rd. SW, Deming, NM 88030	Delhi Federal #1	#30-025-20025	Concho Oil & Gas LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701
														COG Operating LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701
														Apache Corporation	303 Veterans Airpark Lane, Ste. 3000, Midland, TX 79705
														Chisos, Ltd.	670 Dona Ana Rd. SW, Deming, NM 88030
														Prize Energy Resources, LP	20 E. 5th St., Ste. 1400, Tulsa, OK 74103
									All depths below the Base of the Strawn Formation	-	-	-	-	Concho Oil & Gas LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701
														COG Operating LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701
														ConocoPhillips Company	P.O. Box 7500, Bartlesville, OK 74005
	13b	BLM	U.S.A.	19S	32E	30	SE/4NE/4	40	Surface to Top of Strawn Formation	COG Operating LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701	SL East 30 Federal Com #2H	#30-025-42524	Concho Oil & Gas LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701
														COG Operating LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701
									Covering Strawn Formation	-	-	-	-	Chase Oil Corporation	P.O. Box 1767, Artesia, NM 88211
														Prize Energy Resources, LP	20 E. 5th St., Ste. 1400, Tulsa, OK 74103
														OXY Y-1	P.O. Box 27570, Houston, TX 77227
									All depths below the Base of the Strawn Formation	Oxy USA Inc.	P.O. Box 4294, Houston, TX 77210	Elliott Hall A #1	#30-025-20104	ConocoPhillips Company	P.O. Box 7500, Bartlesville, OK 74005
										COG Operating LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701	SL Deep Federal Com #1	#30-025-35088	Concho Oil & Gas LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701
														COG Operating LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701
	14a	BLM	U.S.A.	19S	32E	30	NE/4NE/4	40	Surface to 11,346'	-	-	-	-	Tenison Oil Company	1925 Hospital Pl., Abilene, TX 79606
														Sharbro Energy LLC	423 W. Main St., Artesia, NM 88211
														Yates Industries, Inc.	P.O. Box 1091, Artesia, NM 88210
														OXY Y-1	P.O. Box 27570, Houston, TX 77227
									Depths below 11,346'	COG Operating LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701	SL Deep Federal Com #1	#30-025-35088	Sharbro Energy LLC	P.O. Box 890, Artesia, NM 88210
												SL East 30 Federal Com #2H	#30-025-42524	Yates Industries, Inc.	P.O. Box 1091, Artesia, NM 88210
														OXY Y-1	P.O. Box 27570, Houston, TX 77227
														COG Operating LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701
												Elliott Hall A #1	#30-025-20104	D2 Resources LLC	P.O. Box 10187, Midland, TX 79702

TABLE B-4
SUMMARY LAND INDEX
(LAND STATUS REPORT BY TRACT)

Lease	Tract Ref.	Land	Min. Owner	T	R	S	Legal	Acres	Depths	Operator	Address	Well Name	API	Lessees	Address
NM-01218										OXY Y-1	P.O. Box 27570, Houston, TX 77227			Solis Energy LLC	P.O. Box 51451, Midland, TX 79710
	14b	BLM	U.S.A.	19S	32E	30	E/2SW/4	80	**Surface to 11,080'**	-	-	-	-	Tenison Oil Company Sharbro Energy LLC Yates Industries, Inc. OXY Y-1	1925 Hospital Pl., Abilene, TX 79606 423 W. Main St., Artesia, NM 88211 P.O. Box 1091, Artesia, NM 88210 P.O. Box 27570, Houston, TX 77227
									Depths below 11,080'	COG Operating LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701	SL Deep Federal Com #1	#30-025-35088	Sharbro Energy LLC Yates Industries, Inc. OXY Y-1 COG Operating LLC D2 Resources LLC Solis Energy LLC	423 W. Main St., Artesia, NM 88211 P.O. Box 1091, Artesia, NM 88210 P.O. Box 27570, Houston, TX 77227 600 W. Illinois Ave., One Concho Center, Midland, TX 79701 P.O. Box 10187, Midland, TX 79702 P.O. Box 51451, Midland, TX 79710
NM-01218-A	**15**	BLM	U.S.A.	19S	32E	30	NW/4NE/4	40	**Surface to Top of Strawn Formation**	COG Operating LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701	SL East 30 Federal Com #1H	#30-025-40154	Concho Oil & Gas LLC COG Operating LLC Chase Oil Corporation	600 W. Illinois Ave., One Concho Center, Midland, TX 79701 600 W. Illinois Ave., One Concho Center, Midland, TX 79701 P.O. Box 1767, Artesia, NM 88211
									Covering the Strawn Formation	Oxy USA Inc.	P.O. Box 4294, Houston, TX 77210	Elliott Hall A #1	#30-025-20104	Chase Oil Corporation Prize Energy Resources, LP OXY Y-1	P.O. Box 1767, Artesia, NM 88211 20 E. 5th St., Ste. 1400, Tulsa, OK 74103 P.O. Box 27570, Houston, TX 77227
									From the Base of the Strawn Formation to 12,740'	COG Operating LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701	SL Deep Federal Com #1	#30-025-35088	Concho Oil & Gas LLC COG Operating LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701 600 W. Illinois Ave., One Concho Center, Midland, TX 79701
									Depths below 12,740'	-	-	-	-	ConocoPhillips Company	P.O. Box 7500, Bartlesville, OK 74005
NM-0107698-A	**16**	BLM	U.S.A.	19S	32E	30	SW/4NE/4	40	**Surface to 11,346'**	Oxy USA Inc.	P.O. Box 4294, Houston, TX 77210	Elliott Hall A #1	#30-025-20104	Tenison Oil Company Sharbro Energy LLC Yates Industries, Inc. OXY Y-1	1925 Hospital Pl., Abilene, TX 79606 423 W. Main St., Artesia, NM 88211 P.O. Box 1091, Artesia, NM 88210 P.O. Box 27570, Houston, TX 77227
									Depths below 11,346'	Oxy USA Inc. COG Operating LLC	P.O. Box 4294, Houston, TX 77210 600 W. Illinois Ave., One Concho Center, Midland, TX 79701	Elliott Hall A #1 SL Deep Federal Com #1 SL East 30 Federal Com #1H	#30-025-20104 #30-025-35088 #30-025-40154	Sharbro Energy LLC Yates Industries, Inc. OXY Y-1 COG Operating LLC D2 Resources LLC Solis Energy LLC	423 W. Main St., Artesia, NM 88211 P.O. Box 1091, Artesia, NM 88210 P.O. Box 27570, Houston, TX 77227 600 W. Illinois Ave., One Concho Center, Midland, TX 79701 P.O. Box 10187, Midland, TX 79702 P.O. Box 51451, Midland, TX 79710
NMLC-068882	**17**	BLM	U.S.A.	19S	32E	30	Lot 3	40	**Surface to 7,400'**	OXY Y-1	P.O. Box 27570, Houston, TX 77227	Federal 30 #1	#30-025-31039	MYCO Industries, Inc. OXY Y-1 Tenison Oil Company	105 S. 4th St., Artesia, NM 88210 P.O. Box 27570, Houston, TX 77227 1925 Hospital Pl., Abilene, TX 79606
									Below 7,400' save & except the Strawn & Morrow Formations					Sharbro Energy LLC Yates Industries, Inc. OXY Y-1 COG Operating LLC Devon Energy Corp. Tenison Oil Company	423 W. Main St., Artesia, NM 88211 P.O. Box 1091, Artesia, NM 88210 P.O. Box 27570, Houston, TX 77227 600 W. Illinois Ave., One Concho Center, Midland, TX 79701 20 N. Broadway Ave., Oklahoma City, OK 73102 1925 Hospital Pl., Abilene, TX 79606
									Strawn Formation	COG Operating LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701	SL Deep Federal Com #1	#30-025-35088	Sharbro Energy LLC Yates Industries, Inc. OXY Y-1 Tenison Oil Company COG Operating LLC	P.O. Box 890, Artesia, NM 88210 P.O. Box 1091, Artesia, NM 88210 P.O. Box 27570, Houston, TX 77227 1925 Hospital Pl., Abilene, TX 79606 600 W. Illinois Ave., One Concho Center, Midland, TX 79701
									Morrow Formation	COG Operating LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701	SL Deep Federal Com #1	#30-025-35088	Sharbro Energy LLC Yates Industries, Inc. OXY Y-1 Tenison Oil Company COG Operating LLC	P.O. Box 890, Artesia, NM 88210 P.O. Box 1091, Artesia, NM 88210 P.O. Box 27570, Houston, TX 77227 1925 Hospital Pl., Abilene, TX 79606 600 W. Illinois Ave., One Concho Center, Midland, TX 79701
NMLC-068882-A	**18**	BLM	U.S.A.	19S	32E	30	Lot 4	40	**All depths, save & except the Morrow and Strawn Formations**	Yates Petroleum Corp.	105 S. 4th St., Artesia, NM 88210	Flood AFN Federal #1	#30-025-30944	Yates Petroleum Corp.	105 S. 4th St., Artesia, NM 88210
									Strawn Formation	COG Operating LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701	SL Deep Federal Com #1	#30-025-35088	Yates Petroleum Corp. COG Operating LLC	105 S. 4th St., Artesia, NM 88210 600 W. Illinois Ave., One Concho Center, Midland, TX 79701
									Morrow Formation	COG Operating LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701	SL Deep Federal Com #1	#30-025-35088	Yates Petroleum Corp. COG Operating LLC Devon Energy Corp. ConocoPhillips Company	105 S. 4th St., Artesia, NM 88210 600 W. Illinois Ave., One Concho Center, Midland, TX 79701 20 N. Broadway Ave., Oklahoma City, OK 73102 P.O. Box 7500, Bartlesville, OK 74005
NM-059045	**19**	BLM	U.S.A.	19S	32E	30	SE/4	160	**All Depths**	COG Operating LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701	SL Deep Federal Com #1 SL East 30 Federal Com #1H SL East 30 Federal Com #2H	#30-025-35088 #30-025-40154 #30-025-42524	Concho Oil & Gas LLC COG Operating LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701 600 W. Illinois Ave., One Concho Center, Midland, TX 79701

TABLE B-4
SUMMARY LAND INDEX
(LAND STATUS REPORT BY TRACT)

Lease	Tract Ref.	Land	Min. Owner	T	R	S	Legal	Acres	Depths	Operator	Address	Well Name	API	Lessees	Address
NMLC-065710-A	20	BLM	U.S.A.	19S	32E	20	W/2	320	**Surface to 7,190' save & except the Lusk West Unit**	Shackelford Oil Co.	P.O. Box 10665, Midland, TX 79702	Lusk Federal A #11 Lusk West Delaware Unit #6 Lusk West Delaware Unit #12	#30-025-34173 #30-025-34032 #30-025-20874	Shackelford Oil Co. COG Operating LLC	P.O. Box 10665, Midland, TX 79702 600 W. Illinois Ave., One Concho Center, Midland, TX 79701
									Lusk West Unit (6,474' to 6,508')	-	-	-	-	Cimarex Energy Company	1700 Lincoln St., Ste. 1800, Denver, CO 80203
									Lusk Deep Unit (All depths below 7,190')	COG Operating LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701	Lusk Deep Unit A #17 Lusk Deep Unit A #25H Lusk Deep Unit A #30H Lusk Deep Unit A #31H Lusk Deep Unit A #32H Lusk Deep Unit A #35H	#30-025-35095 #30-025-40193 #30-025-41513 #30-025-43124 #30-025-42210 #30-025-42211	COG Operating LLC Shackelford Oil Co.	600 W. Illinois Ave., One Concho Center, Midland, TX 79701 P.O. Box 10665, Midland, TX 79702
NMLC-063586	21	BLM	U.S.A.	19S	32E	29	NW/4	160	**Surface to 4,500'**	-	-	-	-	Dan Wallace Irwin, ssp WK Land Company Kathleen Irwin Shuster Trust Shackelford Oil Co.	118 N. Grant St., Hinsdale, IL 60521 911 Kimbark St., Longmont, CO 80501 3213 Pepperwood La., Fort Collins, CO 80525 P.O. Box 10665, Midland, TX 79702
									Depths below 4,500', save & except the Lusk West Unit	Cimarex Energy Company Shackelford Oil Co.	1700 Lincoln St., Ste. 1800, Denver, CO 80203 P.O. Box 10665, Midland, TX 79702	So. California 29 Federal #16H Southern California 29 Federal #18H Southern California Federal #7	#30-025-39853 #30-025-39889 #30-025-30328	Cimarex Energy Company Shackelford Oil Co. Apache Corporation MRC Delaware Resources, LLC Chevron, USA, Inc.	1700 Lincoln St., Ste. 1800, Denver, CO 80203 P.O. Box 10665, Midland, TX 79702 2000 Post Oak Blvd., Ste. 100, Houston, TX 77056 5400 Lyndon B. Johnson Fwy., Ste. 15, Dallas, TX 75204 15 Smith Road, Midland, TX 79705
									Lusk West Unit (6,474' to 6,508')	-	-	-	-	Cimarex Energy Company	1700 Lincoln St., Ste. 1800, Denver, CO 80203

Land Status Report by Tract

(Basis for Table B-4)

Tract #1

Township 19 South, Range 31 East, N.M.P.M.
Section 13: SE/4
Eddy County, N.M.
Containing 160 acres, more or less

Mineral Ownership

Ownership	Fraction	Interest	Acres	Lease Status
United States of America New Mexico BLM P.O. Box 27115 Santa Fe, NM 87502-0115	8/8	1.0000	160.00	***Held By Production*** Lease: NMNM-5470-C Date: 6/1/1951
	8/8	**1.0000**	**160.00**	

Leasehold Ownership

SE/4
Surface to 11,097'
and from 11,504' to 11,800'
and all depths below 12,697'

COG Operating LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701
Concho Oil & Gas LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701

Leasehold Ownership

SE/4
Covering the Strawn Formation
From 11,097' to 11,504'

Basin Petroleum Co.	P.O. Box 4028, Albuquerque, NM 87196
Amity Oil Co., Inc.	5924 Royal Lane, Ste. 153, Dallas, TX 75230
DNA Petroleum	P.O. Box 7118, Houston, TX 79702

COG Operating LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701
Concho Oil & Gas LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701

Leasehold Ownership

SE/4

From 11,800' to 12,040'

COG Operating LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701
Concho Oil & Gas LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701
Lynx Petroleum Consultants, Inc.	P.O. Box 1708, Hobbs, NM 88241
ConocoPhillips Company	P.O. Box 7500, Bartlesville, OK 74005

Leasehold Ownership

SE/4

Covering the Morrow Formation

From 12,040' to 12,697'

Concho Oil & Gas LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701
COG Operating LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701
Lynx Petroleum Consultants, Inc.	P.O. Box 1708, Hobbs, NM 88241

Tract #2

Township 19 South, Range 31 East, N.M.P.M.
Section 24: SE/4NE/4, SE/4, NE/4NE/4
Eddy County, N.M.
Containing 240 acres, more or less

Mineral Ownership

Ownership	Fraction	Interest	Acres	Lease Status
United States of America New Mexico BLM P.O. Box 27115 Santa Fe, NM 87502-0115	8/8	1.0000	240.00	***Held By Production*** Lease: NMLC-029358 Date: 1/1/1940
	8/8	**1.0000**	**240.00**	

Leasehold Ownership

NE/4NE/4
Surface to 4,500'

McVay Drilling Co.	P.O. Box 2450, Hobbs, NM 88241
Moutray Properties, LLC	P.O. Box 1598, Carlsbad, NM 88220
Devon Energy Corp.	20 N. Broadway Ave., Oklahoma City, OK 73102
Concho Oil & Gas LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701
COG Operating LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701

Leasehold Ownership

NE/4NE/4

All depths below 4,500’

Concho Oil & Gas LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701
COG Operating LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701

Leasehold Ownership

SE/4NE/4

Surface to 2,700’

Remnant Oil Operating LLC	P.O. Box 509, Perryton, TX 79070

Leasehold Ownership

SE/4NE/4

From 2,700’ to 4,500’

McVay Drilling Co.	P.O. Box 2450, Hobbs, NM 88241
Moutray Properties, LLC	P.O. Box 1598, Carlsbad, NM 88220
Devon Energy Corp.	20 N. Broadway Ave., Oklahoma City, OK 73102
COG Operating LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701
Concho Oil & Gas LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701

Leasehold Ownership

SE/4NE/4

All depths below 4,500'

COG Operating LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701
Concho Oil & Gas LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701

Leasehold Ownership

SE/4

Surface to 4,500'

McVay Drilling Co.	P.O. Box 2450, Hobbs, NM 88241
Moutray Properties, LLC	P.O. Box 1598, Carlsbad, NM 88220
Devon Energy Corp.	20 N. Broadway Ave., Oklahoma City, OK 73102
COG Operating LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701
Concho Oil & Gas LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701

Leasehold Ownership

SE/4

All depths below 4,500'

COG Operating LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701
Concho Oil & Gas LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701

Tract #3

Township 19 South, Range 31 East, N.M.P.M.
Section 24: W/2NE/4, NW/4, SW/4
Section 25: All
Eddy County, N.M.
Containing 1,040 acres, more or less

Mineral Ownership

Ownership	Fraction	Interest	Acres	Lease Status
United States of America New Mexico BLM P.O. Box 27115 Santa Fe, NM 87502-0115	8/8	1.0000	1040.00	***Held By Production*** Lease: NM-0107697 Date: 1/1/1940
	8/8	**1.0000**	**1,040.00**	

Leasehold Ownership

Section 24; W/2NE/4
Surface to 2,700'

Remnant Oil Operating LLC	P.O. Box 509, Perryton, TX 79070

Leasehold Ownership

Section 24; W/2NE/4
All depths below 2,700'

McVay Drilling Co.	P.O. Box 2450, Hobbs, NM 88241
Moutray Properties, LLC	P.O. Box 1598, Carlsbad, NM 88220
Devon Energy Corp.	20 N. Broadway Ave., Oklahoma City, OK 73102
COG Operating LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701
Concho Oil & Gas LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701

Leasehold Ownership

Section 24; SW/4
Surface to 11,520’

Devon Energy Corp.	20 N. Broadway Ave., Oklahoma City, OK 73102
McVay Drilling Co.	P.O. Box 2450, Hobbs, NM 88241
Moutray Properties, LLC	P.O. Box 1598, Carlsbad, NM 88220
COG Operating LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701
Concho Oil & Gas LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701

Leasehold Ownership

Section 24; SW/4
All depths below 11,520’

Devon Energy Corp.	20 N. Broadway Ave., Oklahoma City, OK 73102
ConocoPhillips Company	P.O. Box 7500, Bartlesville, OK 74005

Leasehold Ownership

Section 24; NW/4
All depths

Devon Energy Corp.	20 N. Broadway Ave., Oklahoma City, OK 73102

Leasehold Ownership

Section 25; All

All depths

McVay Drilling Co.	P.O. Box 2450, Hobbs, NM 88241
Moutray Properties, LLC	P.O. Box 1598, Carlsbad, NM 88220
Devon Energy Corp.	20 N. Broadway Ave., Oklahoma City, OK 73102
COG Operating LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701
Concho Oil & Gas LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701

Tract #4

Township 19 South, Range 32 East, N.M.P.M.
Section 18: Lots 3 & 4, SE/4SW/4
Lea County, N.M.
Containing 120 acres, more or less

Mineral Ownership

Ownership	Fraction	Interest	Acres	Lease Status
United States of America New Mexico BLM P.O. Box 27115 Santa Fe, NM 87502-0115	8/8	1.0000	120.00	***Held By Production*** Lease: NM-038690 Date: 10/1/1958
	8/8	**1.0000**	**120.00**	

Leasehold Ownership

Lots 3 & 4, SE/4SW/4
Surface to 7,190'

COG Operating LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701
Concho Oil & Gas LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701

Leasehold Ownership

Lots 3 & 4, SE/4SW/4
All depths below 7,190'

COG Operating LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701
Concho Oil & Gas LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701

Tract #5

Township 19 South, Range 32 East, N.M.P.M.
Section 18: SE/4
Lea County, N.M.
Containing 160 acres, more or less

Mineral Ownership

Ownership	Fraction	Interest	Acres	Lease Status
United States of America New Mexico BLM P.O. Box 27115 Santa Fe, NM 87502-0115	8/8	1.0000	160.00	***Held By Production*** Lease: NM-064198-A Date: 8/1/1951
	8/8	**1.0000**	**160.00**	

Leasehold Ownership

SE/4
Surface to 7,190'

COG Operating LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701
Concho Oil & Gas LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701

Leasehold Ownership

SE/4
All depths below 7,190'

COG Operating LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701
Concho Oil & Gas LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701

Tract #6

Township 19 South, Range 32 East, N.M.P.M.
Section 19: E/2
Lea County, N.M.
Containing 320 acres, more or less

Mineral Ownership

Ownership	Fraction	Interest	Acres	Lease Status
United States of America New Mexico BLM P.O. Box 27115 Santa Fe, NM 87502-0115	8/8	1.0000	160.00	***Held By Production*** Lease: NM-025566 Date: 9/1/1956
	8/8	**1.0000**	**320.00**	

Leasehold Ownership

N/2NE/4, SE/4NE/4, SE/4
Surface to 4,500'

Wallfam Limited	1811 Heritage Blvd., Ste. 200, Midland, TX 79707
Dan W. Irwin	118 N. Grant St., Hinsdale, IL 60521
Kathleen Irwin Schuster Trust	3213 Pepperwood La., Fort Collins, CO 80525
WK Land Company	911 Kimbark St., Longmont, CO 80501

Leasehold Ownership

N/2NE/4, SE/4NE/4, SE/4
From 4,500' to 7,190'

COG Operating LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701
Concho Oil & Gas LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701

Leasehold Ownership

N/2NE/4, SE/4NE/4, SE/4
All depths below 7,190’

COG Operating LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701
Concho Oil & Gas LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701

Leasehold Ownership

SW/4NE/4
Surface to 2,815’

Glenn Plemons	P.O. Box 688, Morton, TX 79346
Lucy Lee Plemons	8216 Chicago St., Lubbock, TX 79424
Mack Energy Corp.	P.O. Box 960, Artesia, NM 88211

Leasehold Ownership

SW/4NE/4
From 2,815’ to 4,500’

Wallfam Limited	1811 Heritage Blvd., Ste. 200, Midland, TX 79707
Dan W. Irwin	118 N. Grant St., Hinsdale, IL 60521
Kathleen Irwin Schuster Trust	3213 Pepperwood La., Fort Collins, CO 80525
WK Land Company	911 Kimbark St., Longmont, CO 80501

Leasehold Ownership

SW/4NE/4

All depths below 4,500’

COG Operating LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701
Concho Oil & Gas LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701

Tract #7

Township 19 South, Range 32 East, N.M.P.M.
Section 19: Lot 1, NE/4NW/4
Lea County, N.M.
Containing 80 acres, more or less

Mineral Ownership

Ownership	Fraction	Interest	Acres	Lease Status
United States of America New Mexico BLM P.O. Box 27115 Santa Fe, NM 87502-0115	8/8	1.0000	80.00	***Held By Production*** Lease: NM-016497 Date: 1/1/1955
	8/8	**1.0000**	**80.00**	

Leasehold Ownership

Lot 1, NE/4NW/4
Surface to 4,500'

Big Three Energy Group	1801 West 2nd St., Roswell, NM 88201

Leasehold Ownership

Lot 1, NE/4NW/4
From 4,500' to 7,190'

Concho Oil & Gas LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701
COG Operating LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701

Leasehold Ownership

Lot 1, NE/4NW/4
All depths below 7,190'

Concho Oil & Gas LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701
COG Operating LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701

Tract #8

Township 19 South, Range 32 East, N.M.P.M.
Section 19: Lots 2 & 4, NE/4SW/4
Lea County, N.M.
Containing 120 acres, more or less

Mineral Ownership

Ownership	Fraction	Interest	Acres	Lease Status
United States of America New Mexico BLM P.O. Box 27115 Santa Fe, NM 87502-0115	8/8	1.0000	120.00	***Held By Production*** Lease: NMLC-065863 Date: 1/1/1940
	8/8	**1.0000**	**120.00**	

Leasehold Ownership

Lot 4, NE/4SW/4
Surface to 4,500'

Apache Corporation	303 Veterans Airpark Lane, Ste. 3000, Midland, TX 79705
Chisos, Ltd.	670 Dona Ana Rd. SW, Deming, NM 88030
Black Shale Minerals LLC	P.O. Box 2243, Longview, TX 75606

Leasehold Ownership

Lot 4, NE/4SW/4
All depths below 4,500'

Concho Oil & Gas LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701
COG Operating LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701

Leasehold Ownership

Lot 2
Surface to 2,700’

Remnant Oil Operating LLC	P.O. Box 509, Perryton, TX 79070

Leasehold Ownership

Lot 2
From 2,700’ to 4,500’

Apache Corporation	303 Veterans Airpark Lane, Ste. 3000, Midland, TX 79705
Chisos, Ltd.	670 Dona Ana Rd. SW, Deming, NM 88030
Black Shale Minerals LLC	P.O. Box 2243, Longview, TX 75606

Leasehold Ownership

Lot 2
All depths below 4,500’

Concho Oil & Gas LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701
COG Operating LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701

Tract #9

Township 19 South, Range 32 East, N.M.P.M.
Section 19: Lot 3
Lea County, N.M.
Containing 40 acres, more or less

Mineral Ownership

Ownership	Fraction	Interest	Acres	Lease Status
United States of America New Mexico BLM P.O. Box 27115 Santa Fe, NM 87502-0115	8/8	1.0000	40.00	***Held By Production*** Lease: NM-149956 Date: 12/1/1961
	8/8	**1.0000**	**40.00**	

Leasehold Ownership

Lot 3
Surface to 7,190'

Concho Oil & Gas LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701
COG Operating LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701

Leasehold Ownership

Lot 3
All depths below 7,190'

Concho Oil & Gas LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701
COG Operating LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701

Tract #10

Township 19 South, Range 32 East, N.M.P.M.
Section 19: SE/4NW/4
Lea County, N.M.
Containing 40 acres, more or less

Mineral Ownership

Ownership	Fraction	Interest	Acres	Lease Status
United States of America New Mexico BLM P.O. Box 27115 Santa Fe, NM 87502-0115	8/8	1.0000	40.00	***Held By Production*** Lease: NMLC-068019 Date: 4/1/1951
	8/8	**1.0000**	**40.00**	

Leasehold Ownership

SE/4NW/4
Surface to 7,190'

Concho Oil & Gas LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701
COG Operating LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701

Leasehold Ownership

SE/4NW/4
All depths below 7,190'

Concho Oil & Gas LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701
COG Operating LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701

Tract #11

Township 19 South, Range 32 East, N.M.P.M.
Section 19: SE/4SW/4
Lea County, N.M.
Containing 40 acres, more or less

Mineral Ownership

Ownership	Fraction	Interest	Acres	Lease Status
United States of America New Mexico BLM P.O. Box 27115 Santa Fe, NM 87502-0115	8/8	1.0000	40.00	***Held By Production*** Lease: NMLC-068947 Date: 4/1/1952
	8/8	**1.0000**	**40.00**	

Leasehold Ownership

SE/4SW/4
Surface to 7,190'

Concho Oil & Gas LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701
COG Operating LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701

Leasehold Ownership

SE/4SW/4
All depths below 7,190'

Concho Oil & Gas LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701
COG Operating LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701

Tract #12

Township 19 South, Range 32 East, N.M.P.M.
Section 30: Lots 1 & 2
Lea County, N.M.
Containing 80 acres, more or less

Mineral Ownership

Ownership	Fraction	Interest	Acres	Lease Status
United States of America New Mexico BLM P.O. Box 27115 Santa Fe, NM 87502-0115	8/8	1.0000	80.00	***Held By Production*** Lease: NM-0107697 Date: 1/1/1940
	8/8	**1.0000**	**80.00**	

Leasehold Ownership

Lot 1
All depths, save & except the Strawn Formation

Apache Corporation	303 Veterans Airpark Lane, Ste. 3000, Midland, TX 79705
Chisos, Ltd.	670 Dona Ana Rd. SW, Deming, NM 88030
Black Shale Minerals LLC	P.O. Box 2243, Longview, TX 75606

Leasehold Ownership

Lot 1
Covering the Strawn Formation

Apache Corporation	303 Veterans Airpark Lane, Ste. 3000, Midland, TX 79705
Chisos, Ltd.	670 Dona Ana Rd. SW, Deming, NM 88030
Black Shale Minerals LLC	P.O. Box 2243, Longview, TX 75606
Concho Oil & Gas LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701
COG Operating LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701

Leasehold Ownership

Lot 2

Surface to Top of the Bone Spring Formation

OXY Y-1	P.O. Box 27570, Houston, TX 77227
Myco Industries, Inc.	105 S. 4th St., Artesia, NM 88210

Leasehold Ownership

Lot 2

All depths below the Top of the Bone Spring Formation, save & except the Strawn Formation

Apache Corporation	303 Veterans Airpark Lane, Ste. 3000, Midland, TX 79705
Chisos, Ltd.	670 Dona Ana Rd. SW, Deming, NM 88030
Black Shale Minerals LLC	P.O. Box 2243, Longview, TX 75606

Leasehold Ownership

Lot 2

Covering the Strawn Formation

Apache Corporation	303 Veterans Airpark Lane, Ste. 3000, Midland, TX 79705
Chisos, Ltd.	670 Dona Ana Rd. SW, Deming, NM 88030
Black Shale Minerals LLC	P.O. Box 2243, Longview, TX 75606
Concho Oil & Gas LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701
COG Operating LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701

Tract #13

Township 19 South, Range 32 East, N.M.P.M.
Section 30: E/2NW/4, SE/4NE/4
Lea County, N.M.
Containing 120 acres, more or less

Mineral Ownership

Ownership	Fraction	Interest	Acres	Lease Status
United States of America New Mexico BLM P.O. Box 27115 Santa Fe, NM 87502-0115	8/8	1.0000	120.00	***Held By Production*** Lease: NM-0107698 Date: 8/1/1951
	8/8	**1.0000**	**120.00**	

Leasehold Ownership

E/2NW/4
Surface to the Top of the Strawn Formation

Apache Corporation	303 Veterans Airpark Lane, Ste. 3000, Midland, TX 79705
Chisos, Ltd.	670 Dona Ana Rd. SW, Deming, NM 88030
Concho Oil & Gas LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701
COG Operating LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701

Leasehold Ownership

E/2NW/4
Covering the Strawn Formation

Concho Oil & Gas LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701
COG Operating LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701
Apache Corporation	303 Veterans Airpark Lane, Ste. 3000, Midland, TX 79705

Chisos, Ltd.	670 Dona Ana Rd. SW, Deming, NM 88030
Prize Energy Resources, LP	20 E. 5th St., Ste. 1400, Tulsa, OK 74103

Leasehold Ownership

E/2NW/4

All depths below the base of the Strawn Formation

Concho Oil & Gas LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701
COG Operating LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701
ConocoPhillips Company	P.O. Box 7500, Bartlesville, OK 74005

Leasehold Ownership

SE/4NE/4

Surface to the Top of the Strawn Formation

Concho Oil & Gas LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701
COG Operating LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701

Leasehold Ownership

SE/4NE/4

Covering the Strawn Formation

Chase Oil Corporation	P.O. Box 1767, Artesia, NM 88211
Prize Energy Resources, LP	20 E. 5th St., Ste. 1400, Tulsa, OK 74103
OXY Y-1	P.O. Box 27570, Houston, TX 77227

Leasehold Ownership

SE/4NE/4

All depths below the base of the Strawn Formation

ConocoPhillips Company	P.O. Box 7500, Bartlesville, OK 74005
Concho Oil & Gas LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701
COG Operating LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701

Tract #14

Township 19 South, Range 32 East, N.M.P.M.
Section 30: E/2SW/4, NE/4NE/4
Lea County, N.M.
Containing 120 acres, more or less

Mineral Ownership

Ownership	Fraction	Interest	Acres	Lease Status
United States of America New Mexico BLM P.O. Box 27115 Santa Fe, NM 87502-0115	8/8	1.0000	120.00	***Held By Production*** Lease: NM-01218 Date: 5/1/1952
	8/8	**1.0000**	**120.00**	

Leasehold Ownership

NE/4NE/4
Surface to 11,346'

Tenison Oil Company	1925 Hospital Pl., Abilene, TX 79606
Sharbro Energy LLC	423 W. Main St., Artesia, NM 88211
Yates Industries, Inc.	P.O. Box 1091, Artesia, NM 88210
OXY Y-1	P.O. Box 27570, Houston, TX 77227

Leasehold Ownership

NE/4NE/4
All depths below 11,346'

Sharbro Energy LLC	P.O. Box 890, Artesia, NM 88210
Yates Industries, Inc.	P.O. Box 1091, Artesia, NM 88210
OXY Y-1	P.O. Box 27570, Houston, TX 77227
COG Operating LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701
D2 Resources LLC	P.O. Box 10187, Midland, TX 79702
Solis Energy LLC	P.O. Box 51451, Midland, TX 79710

Leasehold Ownership

E/2SW/4

Surface to 11,080’

Tenison Oil Company	1925 Hospital Pl., Abilene, TX 79606
Sharbro Energy LLC	423 W. Main St., Artesia, NM 88211
Yates Industries, Inc.	P.O. Box 1091, Artesia, NM 88210
OXY Y-1	P.O. Box 27570, Houston, TX 77227

Leasehold Ownership

E/2SW/4

All depths below 11,080’

Sharbro Energy LLC	423 W. Main St., Artesia, NM 88211
Yates Industries, Inc.	P.O. Box 1091, Artesia, NM 88210
OXY Y-1	P.O. Box 27570, Houston, TX 77227
COG Operating LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701
D2 Resources LLC	P.O. Box 10187, Midland, TX 79702
Solis Energy LLC	P.O. Box 51451, Midland, TX 79710

Tract #15

Township 19 South, Range 32 East, N.M.P.M.
Section 30: NW/4NE/4
Lea County, N.M.
Containing 40 acres, more or less

Mineral Ownership

Ownership	Fraction	Interest	Acres	Lease Status
United States of America New Mexico BLM P.O. Box 27115 Santa Fe, NM 87502-0115	8/8	1.0000	40.00	***Held By Production*** Lease: NM-01218-A Date: 5/1/1952
	8/8	**1.0000**	**40.00**	

Leasehold Ownership

NW/4NE/4
Surface to the Top of the Strawn Formation

Concho Oil & Gas LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701
COG Operating LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701
Chase Oil Corporation	P.O. Box 1767, Artesia, NM 88211

Leasehold Ownership

NW/4NE/4
Covering the Strawn Formation

Chase Oil Corporation	P.O. Box 1767, Artesia, NM 88211
Prize Energy Resources, LP	20 E. 5th St., Ste. 1400, Tulsa, OK 74103
OXY Y-1	P.O. Box 27570, Houston, TX 77227

Leasehold Ownership

NW/4NE/4

From the base of the Strawn Formation to 12,740’

Concho Oil & Gas LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701
COG Operating LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701

Leasehold Ownership

NW/4NE/4

All depths below 12,740’

ConocoPhillips Company	P.O. Box 7500, Bartlesville, OK 74005

Tract #16

Township 19 South, Range 32 East, N.M.P.M.
Section 30: SW/4NE/4
Lea County, N.M.
Containing 40 acres, more or less

Mineral Ownership

Ownership	Fraction	Interest	Acres	Lease Status
United States of America New Mexico BLM P.O. Box 27115 Santa Fe, NM 87502-0115	8/8	1.0000	40.00	***Held By Production*** Lease: NM-0107698-A Date: 8/1/1951
	8/8	**1.0000**	**40.00**	

Leasehold Ownership

SW/4NE/4
Surface to 11,346'

Tenison Oil Company	1925 Hospital Pl., Abilene, TX 79606
Sharbro Energy LLC	423 W. Main St., Artesia, NM 88211
Yates Industries, Inc.	P.O. Box 1091, Artesia, NM 88210
OXY Y-1	P.O. Box 27570, Houston, TX 77227

Leasehold Ownership

SW/4NE
All depths below 11,346'

Sharbro Energy LLC	423 W. Main St., Artesia, NM 88211
Yates Industries, Inc.	P.O. Box 1091, Artesia, NM 88210
OXY Y-1	P.O. Box 27570, Houston, TX 77227
COG Operating LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701
D2 Resources LLC	P.O. Box 10187, Midland, TX 79702
Solis Energy LLC	P.O. Box 51451, Midland, TX 79710

Tract #17

Township 19 South, Range 32 East, N.M.P.M.
Section 30: Lot 3
Lea County, N.M.
Containing 40 acres, more or less

Mineral Ownership

Ownership	Fraction	Interest	Acres	Lease Status
United States of America New Mexico BLM P.O. Box 27115 Santa Fe, NM 87502-0115	8/8	1.0000	40.00	***Held By Production*** Lease: NMLC-068882 Date: 3/1/1952
	8/8	**1.0000**	**40.00**	

Leasehold Ownership

Lot 3
Surface to 7,400'

MYCO Industries, Inc.	105 S. 4th St., Artesia, NM 88210
OXY Y-1	P.O. Box 27570, Houston, TX 77227
Tenison Oil Company	1925 Hospital Pl., Abilene, TX 79606

Leasehold Ownership

Lot 3
Below 7,400' save & except the Strawn & Morrow Formations

Sharbro Energy LLC	423 W. Main St., Artesia, NM 88211
Yates Industries, Inc.	P.O. Box 1091, Artesia, NM 88210
OXY Y-1	P.O. Box 27570, Houston, TX 77227
COG Operating LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701
Devon Energy Corp.	20 N. Broadway Ave., Oklahoma City, OK 73102
Tenison Oil Company	1925 Hospital Pl., Abilene, TX 79606

Leasehold Ownership

Lot 3

Covering the Strawn Formation

Sharbro Energy LLC	P.O. Box 890, Artesia, NM 88210
Yates Industries, Inc.	P.O. Box 1091, Artesia, NM 88210
OXY Y-1	P.O. Box 27570, Houston, TX 77227
Tenison Oil Company	1925 Hospital Pl., Abilene, TX 79606
COG Operating LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701

Leasehold Ownership

Lot 3

Covering the Morrow Formation

Sharbro Energy LLC	P.O. Box 890, Artesia, NM 88210
Yates Industries, Inc.	P.O. Box 1091, Artesia, NM 88210
OXY Y-1	P.O. Box 27570, Houston, TX 77227
Tenison Oil Company	1925 Hospital Pl., Abilene, TX 79606
COG Operating LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701

Tract #18

Township 19 South, Range 32 East, N.M.P.M.
Section 30: Lot 4
Lea County, N.M.
Containing 40 acres, more or less

Mineral Ownership

Ownership	Fraction	Interest	Acres	Lease Status
United States of America New Mexico BLM P.O. Box 27115 Santa Fe, NM 87502-0115	8/8	1.0000	40.00	***Held By Production*** Lease: NMLC-068882-A Date: 12/1/1999
	8/8	**1.0000**	**40.00**	

Leasehold Ownership

Lot 4
All depths, save & except the Morrow & Strawn Formations

Yates Petroleum Corp.	105 S. 4th St., Artesia, NM 88210

Leasehold Ownership

Lot 4
Covering the Strawn Formation

Yates Petroleum Corp.	105 S. 4th St., Artesia, NM 88210
COG Operating LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701

Leasehold Ownership

Lot 4

Covering the Morrow Formation

Yates Petroleum Corp.	105 S. 4th St., Artesia, NM 88210
COG Operating LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701
Devon Energy Corp.	20 N. Broadway Ave., Oklahoma City, OK 73102
ConocoPhillips Company	P.O. Box 7500, Bartlesville, OK 74005

Tract #19

Township 19 South, Range 32 East, N.M.P.M.
Section 30: SE/4
Lea County, N.M.
Containing 160 acres, more or less

Mineral Ownership

Ownership	Fraction	Interest	Acres	Lease Status
United States of America New Mexico BLM P.O. Box 27115 Santa Fe, NM 87502-0115	8/8	1.0000	160.00	***Held By Production*** Lease: NM-059045 Date: 9/1/1984
	8/8	**1.0000**	**160.00**	

Leasehold Ownership

SE/4
All Depths

Concho Oil & Gas LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701
COG Operating LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701

Tract #20

Township 19 South, Range 32 East, N.M.P.M.
Section 20: W/2
Lea County, N.M.
Containing 320 acres, more or less

Mineral Ownership

Ownership	Fraction	Interest	Acres	Lease Status
United States of America New Mexico BLM P.O. Box 27115 Santa Fe, NM 87502-0115	8/8	1.0000	320.00	***Held By Production*** Lease: NM-065710-A Date: 10/1/1951
	8/8	**1.0000**	**320.00**	

Leasehold Ownership

W/2

Surface to 7,190' save & except the Lusk West Unit

Shackelford Oil Co.	P.O. Box 10665, Midland, TX 79702
COG Operating LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701

Leasehold Ownership

W/2

Lusk West Unit

Cimarex Energy Company	1700 Lincoln St., Ste. 1800, Denver, CO 80203

Leasehold Ownership

W/2

All depths below 7,190’

Concho Oil & Gas LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701
COG Operating LLC	600 W. Illinois Ave., One Concho Center, Midland, TX 79701

Tract #21

Township 19 South, Range 32 East, N.M.P.M.
Section 29: NW/4
Lea County, N.M.
Containing 160 acres, more or less

Mineral Ownership

Ownership	Fraction	Interest	Acres	Lease Status
United States of America New Mexico BLM P.O. Box 27115 Santa Fe, NM 87502-0115	8/8	1.0000	160.00	***Held By Production*** Lease: NMLC-063586 Date: 10/1/1947
	8/8	**1.0000**	**160.00**	

Leasehold Ownership

NW/4

Surface to 4,500’

Dan Wallace Irwin, ssp	118 N. Grant St., Hinsdale, IL 60521
WK Land Company	911 Kimbark St., Longmont, CO 80501
Kathleen Irwin Shuster Trust	3213 Pepperwood La., Fort Collins, CO 80525
Shackelford Oil Co.	P.O. Box 10665, Midland, TX 79702

Leasehold Ownership

NW/4

Depths below 4,500’ save & except the Lusk West Unit

Cimarex Energy Company	1700 Lincoln St., Ste. 1800, Denver, CO 80203
Shackelford Oil Co.	P.O. Box 10665, Midland, TX 79702
Apache Corporation	2000 Post Oak Blvd., Ste. 100, Houston, TX 77056
MRC Delaware Resources, LLC	5400 Lyndon B. Johnson Fwy., Ste. 15, Dallas, TX 75204
Chevron, USA, Inc.	15 Smith Road, Midland, TX 79705

Leasehold Ownership

NW/4

Lusk West Unit

Cimarex Energy Company	1700 Lincoln St., Ste. 1800, Denver, CO 80203

Example Notice Letter

July 25, 2016

Example notice letter
Party to be notified
Address

VIA CERTIFIED MAIL
RETURN RECEIPT REQUESTED

RE: CASE NUMBER XXXXX DCP MIDSTREAM LP PROPOSED ZIA AGI #2D

This letter is to advise you that DCP Midstream LP ("DCP") filed the enclosed C-108 application on July 12, 2016, with the New Mexico Oil Conservation Commission seeking authorization to drill an Acid Gas Injection (AGI) well at their Zia Plant (the "Plant") in Lea County, New Mexico. The proposed well will be located in Section 19, Township 19 South, Range 32 East, NMPM, Lea County, New Mexico. DCP plans to inject up to 15 million standard cubic feet per day (MMSCFD) of treated acid gas from the Plant at a maximum pressure of 5,028 psig into the Devonian and Upper Silurian Wristen and Fusselman Formations, approximately 13,755 to 14,750 feet below the surface. The proposed well will serve as a disposal well for acid gas at this plant.

This application (Case Number XXXXX) has been set for hearing before the New Mexico Oil Conservation Commission at 8:15am on August 25th, 2016, in Porter Hall at the New Mexico 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 DCP's 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 application at a later date.

A party appearing at the hearing is required by Division Rule 19.15.4.13 NMAC to file a Pre-Hearing Statement at least four days in advance of a scheduled hearing, but in no event not later than 5:00 p.m. Mountain Time on the Thursday preceding the scheduled hearing date. This statement must be filed at the Division's Santa Fe office at the above-specified address and should 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 an identification of any procedural matters that need to be resolved prior to the hearing.

If you have any questions concerning this application, or to obtain an entire copy of the C-108, you may contact Mr. Alberto Gutierrez at (505) 842-8000 at Geolex, Inc.; 500 Marquette Avenue NW, Suite 1350; Albuquerque, New Mexico 87102.

Sincerely,
Geolex, Inc.

Alberto A. Gutiérrez, C.P.G.
President
Consultant to DCP Midstream Services, LP

Enclosure: C-108 Application for Authority to Inject

APPENDIX C

Rule 11 H_2S Contingency Plan
DCP Midstream LP Zia II Gas Plant

H_2S Contingency Plan

Zia II Gas Plant

DCP Midstream, LP

July 2016

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Location of Plant

ZIA II GAS PLANT

DCP Midstream, LP (DCP) has constructed a new gas processing plant in southeastern New Mexico. In addition to processing gas, DCP will also operate two acid gas injection (AGI) and CO_2 sequestration wells at the gas plant which is located in Section 19, Township 19S, Range 32E in Lea County, New Mexico, approximately 35 miles west of Hobbs (Figure 1). The Plant and AGI wells are located on land leased from the Federal Bureau of Land Management (BLM) by DCP.

Physical/Mailing Address:

89 Lusk Road
Lovington, NM 88260

Driving Directions from Hobbs, New Mexico to the Plant:

Take Highway 62-180 west out of Hobbs, New Mexico for approximately 34 miles to State Road 243 – turn right (north) onto Road 243. Continue on State Road 243 approximately 4.5 miles to CR 126a – Maljamar Road. Turn right (north) onto CR 126a and proceed 5.5 miles to CR 126/248 – Lusk Road; turn left onto 126/248. Continue on 126/248 approximately 1 mile to the first Lease Road on the left (south). Turn left and continue south on the Lease Road for approximately ¼ mile. Plant site will be on the left (east) side of the road.

Coordinates for Plant:

Latitude: 32.643
Longitude: -103.809

ACID GAS INJECTION WELLS

The Zia II AGI Wells (Zia AGI Wells #1 and #2) are located on the northwest corner of the Plant (see Figure 1b)

Surface Locations are:

AGI #1: 2100’ FSL, 950’ FWL Section 19, T19S, R32 E
Latitude: 32.64459881, Longitude: -103.8111449 (API # 30-025-42208)

AGI #2:_1900’ FSL, 950’ FWL, Section 19, T19S, R32E
Latitude 32.64403555, Longitude: -103.8111449 (API # 30-025-42207)

GLOSSARY OF ACRONYMS UTILIZED IN THE PLAN

ACGIH	American Conference of Governmental Industrial Hygienists
AGI	Acid Gas Injection
ANSI	American National Standards Institute
API	American Petroleum Institute
CO_2	Carbon Dioxide
DCS	Distributed Control System
DOT	Department of Transportation
ERO	Emergency Response Officer
ESD	Emergency Shut-Down
H_2S	Hydrogen Sulfide
IC	Incident Commander
ICS	Incident Command System
ICC	Incident Command Center
IDLH	Immediately Dangerous to Life or Health
LEL	Lower Explosive Limit
LEPC	Local Emergency Planning Committee
MSDS	Materials Safety Data Sheets
NACE	National Association of Corrosive Engineers
NCP	National Contingency Plan
NIIMS	National Interagency Incident Management System
NIOSH	National Institute for Occupational Safety and Health
NGL	Natural Gas Liquid
NMAC	New Mexico Administrative Code
NMED	New Mexico Environment Department
NMOCC	New Mexico Oil Conservation Commission
OCD	Oil Conservation Division
OSHA	Occupational Safety and Health Administration
PLC	Programmable Logic Controller
PPE	Personal Protective Equipment
PPM	Parts Per Million
ROE	Radius of Exposure
SCBA	Self-Contained Breathing Apparatus
SERC	State Emergency Response Commission
SO_2	Sulfur Dioxide
STEL	Short Term Exposure Limit
TLV	Threshold Limit Value
TWA	Time Weighted Average

I. INTRODUCTION [NMAC 19.15.11 et. seq.][API RP-55 7.1 RP-49, RP-68]

DCP Midstream has just constructed the new Zia II Plant in order to process natural gas that will be coming into the plant from various gathering systems in the area. The Zia II Gas Plant (hereinafter the "Plant") is a natural gas processing plant which processes field gas containing hydrogen sulfide (H_2S) and handles and/or generates sulfur dioxide (SO_2). The Zia II Plant has two associated Acid Gas Injection wells (Zia II AGI #1 and Zia II AGI #2) which will be utilizing for disposal of H_2S. Thus, this Hydrogen Sulfide Contingency Plan (the "H_2S Plan" or "the Plan") is being submitted to document procedures that are to be followed in the event of an H_2S release that occurs at any location on the Plant or at the AGI Processing area where AGI #1 or #2 are located.

This plan complies with **New Mexico Oil Conservation Division (OCD) Rule 11*(§ 19.15.11 et. seq. NMAC).*** The plan and operation of the DCP Zia Plant conform to standards set forth in ***API RP-55 "Recommended Practice for Oil and Gas Producing and Gas Processing Plant Operations Involving Hydrogen Sulfide" as well as API RP 49 "Recommended Practice for Drilling and Well Servicing Operations Involving Hydrogen Sulfide" and API RP 68 " Oil and Gas Well Servicing and Workover Operations involving Hydrogen Sulfide", and applicable NACE standards for sour gas service and current best management practices.*** The Plant does not have any storage tanks in which H_2S or other gas or gas products are stored, and thus, API regulations and OCD regulations (specifically 19.15.11.12.E NMAC) relative to those types of storage are not applicable for this plant. Drilling and completion of the Zia II Plant AGI Wells was done in compliance with NMAC 19.15.11.11. The terms used in this Plan are used as defined in Title 19 Chapter 15 Part 11 of the New Mexico Administrative code (19.15.11.7-Definitions) unless otherwise defined herein. Safety precautions in the event of a release could include placement of road blocks, evacuation along designated routes or instructions to shelter-in-place. When the term "shelter-in-place" is used in this Plan, it means that individuals should go inside homes, businesses, etc., turn off heating and air conditioning systems, close windows and doors and put towels or tape around doors and/or windows that are not sealed and wait for further instruction.

II. SCOPE [API RP-55 7.2]

This Plan is specific to the Zia II Gas Processing Plant and AGI Wells. It contains procedures to provide an organized response to an unplanned release of H_2S from the Plant or the AGI Wells contained within the Plant and documents procedures that would be followed to alert and protect any members of the public, residents in surrounding areas and/or contractors working on or around the plant in the event of an unplanned release. This H_2S Contingency Plan has been prepared to minimize the hazard resulting from an H_2S release. It will be used to inform company personnel, local emergency responders and the public of actions to be taken before, during and after an H_2S release. All operations shall be performed with safety as the primary goal. The primary concern of the Zia II Gas Plant, during an H_2S release, is to protect company employees, contractors and the public; the secondary concern is to minimize the damage and other adverse effects of the emergency. In the event of a release, any part of the Plant operation that might compromise the safety of individuals will cease until the operation can be re-evaluated and the proper engineering controls to assure safety can be implemented. No individual should place the protection of the Plant property above his or her own personal safety.

It must be kept in mind that in a serious situation involving an H_2S release, not only Zia II personnel are involved, but local Fire Departments, Law Enforcement, BLM, County and even State of New Mexico agencies may be interested parties. Cooperation will expedite all decisions. In any emergency situation

involving a H_2S release, delegation of duties will be made to appropriate employees and groups. These duties will be reviewed on an annual basis to ensure complete understanding and facilitate a well-coordinated response by all involved personnel to the emergency situation.

III. PLAN AVAILABILITY [API RP-55 7.3]

The H_2S Plan shall be available to all personnel responsible for implementation, regardless of their normal location assignment. A copy of the Plan will be maintained at the Zia II Plant Control Room, in the Plant Supervisor's office at the plant, in the Asset Manager's office at the Hobbs office, and at the Permian Region Safety Manager's office in Midland, Texas. See Appendix E for the H_2S Plan Distribution List, which lists all the additional entities that will be provided a copy of the H_2S Plan.

IV. EMERGENCY PROCEDURES [NMAC 19.15.11.9.B(2)(a)] [API RP-55 7.4 a] [29 CFR 1910.1200]

RESPONSIBILITIES AND DUTIES OF PERSONNEL DURING AN EMERGENCY

It is the responsibility of all personnel on-site to follow the safety and emergency procedures outlined in this H_2S Contingency Plan as well as the following documents:

- DCP Midstream Safe Work Practices
- DCP Midstream Zia II Plant Emergency Response Plan, Groundwater Discharge Plan, and Oil Spill Contingency Plan; and
- DCP Midstream Environmental Policies and Programs.

The Plant uses the Incident Command System (ICS) for emergency response (see Figure 7 for a diagram of the DCP command structure). The ICS structure used is based on the National Interagency Incident Management System (NIIMS), and is consistent with the National Contingency Plan (NCP). All Plant employees shall be prepared to respond to an H_2S emergency at the Plant and the AGI Wells. In the event of an accidental release that results in the activation of the H_2S Plan all personnel will have been evacuated out of the affected area, and the Plant Supervisor, or designee, will be the on-scene Incident Commander (IC in this Plan). The IC will contact and coordinate with DCP Midstream's management.

The Plant Supervisor or his designee shall determine:

1) Plant Shutdowns
2) Isolation of pipeline segments
3) Repairs, tests or restarts as required

If an emergency occurs, the Plant Supervisor, or designee, shall be notified first, and that individual shall notify the Southeast New Mexico Asset Director who will notify the Regional Operations Vice President; the Regional Operations Vice President shall contact the Permian Business Unit President to activate the DCP Midstream Crisis Management Plan. If any person in this chain of command is unavailable, the DCP Midstream employee shall elevate the communication to the next level. The intention of this process is to allow the IC to make one phone call and then be able to focus on the incident response.

Site Security [NMAC 19.15.11.12.B]
In order to have an accurate listing of all personnel on-site in the event of an emergency, a daily sign-in log sheet shall be utilized. The sign-in log sheet shall include at a minimum the person's name, the company name, the time of arrival, and the time of departure. All personnel are required to sign in at the Plant Office/Control Room. The Incident Commander shall be responsible for assuring that all personnel sign-in upon arrival and sign-out upon departure from the job site. The Incident Commander may, at his discretion, assign the responsibilities for the daily sign-in log sheet to the individual designated as the Record Keeper or another designee. At the discretion of the Incident Commander, a security coordinator and/or a security team may be established, and the access to the job site restricted. In compliance with 19.15.11.12.B NMAC the Plant and AGI Wells are contained within a secure fenced area with locking gates.

Discovery and Internal Reporting
All personnel, including contractors who perform operations, maintenance and/or repair work in sour gas areas within the Plant wear personal H_2S monitoring devices to assist them in detecting the presence of unsafe levels of H_2S. When any person, while performing such work, discovers a leak or emission release they are to attempt to resolve the issue as long as H_2S levels remain below 10 ppm. The personal monitoring devices they wear will give off an audible alarm at 10 ppm. If the response action needed to resolve the issue is more than simply closing a valve or stopping a small leak, the personnel who have discovered the leak shall notify the Plant Supervisor or his designee, initiate and maintain a Chronologic Record of Events Log (See Appendix F) which records the time, date and summary of events, and convey, at a minimum, the following information:

- Name, telephone number, and location of person reporting the situation
- Type and severity of the emergency
- Location of the emergency and the distance to surrounding equipment and/or structures
- The cause of the spill or leak, name and quantity of material released, and extent of the affected area including the degree of environmental hazard
- Description of injuries and report of damage to property and structures

If any person detects H_2S levels of 10 ppm or greater, either as a result of an alarm from their personal monitoring device or one of the plant fixed monitors, they will immediately report this to the Control Room Operator who will contact the Plant Supervisor for assistance, and the responding Operator will put on the 30-minute Self Contained Breathing Apparatus (SCBA). All non-essential persons shall be notified of the release and evacuated from the area. The responding Operator, wearing the SCBA, will first help any persons requiring assistance during the evacuation, then attempt to resolve the issue. The Control Room Operator is responsible for notifying the Plant Supervisor or his designee so that the H_2S Contingency Plan can be activated, if necessary.

Once the Plant Supervisor/IC is contacted, he or his designee is to contact the appropriate DCP management and Plant emergency response personnel and notify them of the existing situation. Local emergency response providers will also be contacted as deemed necessary by the IC. If necessary, the Control Room Operator will then conduct the notifications of federal and state regulatory agencies including the BLM Field Office in Carlsbad, the NMOCD District Office and emergency response agencies listed in Appendix C. DCP operations personnel are to advise any contractor and all others on-site or attempting to enter the Plant that the H_2S Plan has been activated.

IMMEDIATE ACTION PLAN

Immediate Action Plans outlining procedures and decision processes to be used in the event of an H_2S release are contained in Appendix A. These procedures and decision processes have been designed to ensure a coordinated, efficient and immediate action plan for alerting and protecting operating personnel and the public as well as to prevent or minimize environmental hazards and damage to property. Emergency response actions may be taken for a variety of situations that may occur. The Plan is activated in progressive levels (Levels 1, 2 and 3), based on the concentration and duration of the H_2S release. Response Flow Diagrams illustrating these Immediate Action Plans are contained in Appendix B.

Zia II Plant Operators are authorized to elevate the level of response based on observed conditions if they feel a lower level response may not be effective in protecting personnel, the public, or the environment. Additional or long-term response actions will be determined on a case-by-case basis, if needed, once the Incident Command Center (ICC) and System (ICS) are established following the immediate response.

TELEPHONE NUMBERS, COMMUNICATION METHODS AND MEDIA SITE

Telephone Numbers and Communication Methods

In the event of activation of the Plan, emergency responders, public agencies, local government, BLM and other appropriate public authorities must be contacted. Telephone contact information for those entities in included in Appendix C.

Media Site

If a Level 2 Response occurs, the Media Site will be located adjacent to Emergency Assembly Area 2 (see Figure 4). If a Level 3 Response occurs, the Media Site will be located adjacent to Emergency Assembly Area 3 (see Figure 4). The IC will designate a Media Site adjacent to the Emergency Assembly Area. The IC will also designate an individual to assume the duties of Media Liaison Officer. Under no circumstances will media personnel be allowed inside the warm or hot zone (road blocked area). Media personnel will only be allowed inside the road blocked area once the area has been monitored and restored to a cold zone (less than 10 ppm H_2S) and the IC has approved their entry. Media personnel shall not be allowed to enter DCP Midstream property without the approval of the DCP Midstream Asset Manager or his designee, and shall be escorted by DCP Midstream personnel at all times.

LOCATION OF NEARBY RESIDENCES, ROADS AND MEDICAL FACILITIES

Public awareness and communication is a primary function of this Plan. DCP has compiled a list of various public, private, federal, state, and local contacts that are to be notified at various phases during the activation of the Plan. The Level 1, 2 and 3 Immediate Action Plans and the Response Flow diagrams contained in Appendices A and B indicate when certain entities are to be contacted in event of activation of this Plan. There are no businesses, residences, medical facilities or other public places located within the 500 or 100 ppm ROE of the Plant; only producers are located within the ROE. Appendix C contains a listing of all producers with wells within the 500 ppm and 100 ppm ROE who will be contacted in the event of activation of the H_2S Plan. DCP will inform all state and local response organizations if the H_2S Plan is activated; contact information for them is also contained in Appendix C. All entities contacted will be advised of the following:

- The nature and extent of the release/emergency at the Plant and recommendations for protective actions, such as evacuation or shelter-in-place.
- Any other event-specific information that is necessary to protect the public.

- Updated status of the release and continued safety measures to be taken, including but not limited to when to evacuate and/or when it is safe to return to the area.

Public Roads
There are three public roads located within the 500 ppm ROE: Lusk Plant Road (CR 248), Dry Lake Road (CR 126) and Maljamar Road (CR 126a). All three of these roads also have sections within the 100 ppm ROE. There are emergency trailers, equipped with flashing lights, windsocks, and roadblock signs for use in alerting the public of hazardous conditions on any of these three roads. In the event of activation of this Plan, Zia personnel will be dispatched to establish roadblocks on these roads to prevent entrance into the 500 and/or 100 ppm ROE, depending on the response level and as designated by the IC (see Figure 4). Roadblocks will be established at the designated locations regardless of wind direction in anticipation that variations in wind conditions can occur. Signs warning of the potential presence of H_2S have been installed where the 500 and 100 ppm ROEs of the Plant intersect the above referenced public roads. (See Figure 4 for the location of these signs, and see Figure 8 for a photograph of one of these signs).

Businesses or Other Public Areas
The Plant and AGI wells are located on land leased from the Federal Bureau of Land Management (BLM) by DCP, however, there are no businesses or other public areas within the 500 ppm or 100 ppm ROE. The DCP Lusk Booster Station (just north of the Zia II Plant) is located within the 500 ppm ROE but was closed and abandoned when the new Zia II Plant was brought on-line. The original Zia Plant is also located inside the 500 ppm ROE, but it has been closed and abandoned for a number of years.

In addition to notifying operators (listed in Appendix C) DCP personnel, as designated by the IC, will make a visual inspection of the ROE area to insure that no individuals are seen inside the ROE. If any are observed, they will be advised to evacuate immediately to the designated Emergency Evacuation Area described above (see Figure 4).

Medical Facilities
There are no medical facilities located within the ROE.

EVACUATION ROUTES, EMERGENCY ASSEMBLY AREAS AND ROAD BLOCK LOCATIONS

Evacuation Routes and Emergency Assembly Areas
Figure 1b shows the Plant plot plan and schematic of the Plant and location of the AGI Wells, and Figure 2e shows internal plant evacuation routes. Figure 4 shows the locations of Emergency Assembly Areas and recommended evacuation routes. Evacuation for all visitors and all personnel that are not operators begins at the 10 ppm H_2S intermittent alarm and flashing yellow beacons. The responding Plant operator(s) are to put on the 30-minute SCBA and first determine if any personnel are in distress and assist any distressed personnel to evacuate to Emergency Assembly Area 1. Emergency services (911) will be contacted if there are injuries or as otherwise deemed necessary. Responding operators, wearing the SCBAs, will then investigate the cause of the release. At the sound of the alarm and flashing yellow beacons, all other personnel in the Plant are to stop work, check the prevailing wind direction (using visible windsocks) and immediately proceed along designated evacuation routes and/or upwind to the pre-designated Emergency Assembly Areas shown in Figure 4. Prevailing winds for the area are from the southwest. Personnel should evacuate along the designated route unless that route is downwind of the release (based on the wind directions observed at the windsocks); in that event all evacuees should

proceed along a route that is perpendicular to the release and then upwind to the designated Emergency Assembly Area.

Roll call shall be conducted at the Emergency Assembly Area to ensure all personnel (including contractors and visitors) are accounted for and have evacuated safely. The Zia II Plant is a Process Safety Management (PSM) facility and requires all personnel to check-in and sign-in at the Plant Office or Plant Control Room before entering the Plant. The sign-in sheet will be used at the Emergency Assembly Areas to make a full accounting of all personnel and visitors.

At each Emergency Assembly Area, the ambient air quality will be monitored for H_2S concentration to ensure the area remains at less than 10 ppm. If the H_2S concentration rises to 10 ppm or greater, the assembly area will be relocated as detailed in the immediate action plan section of this document (see Appendix A).

Road Block Locations
Pre-planned road block locations (which would be utilized in the event of a Level 2 or Level 3 response) are shown on the ROE Map (Figure 4). Each location will have portable road barriers and flashing lights and warning signs. The IC will designate representatives to staff each of the roadblocks. If deemed necessary by the IC, the State or Local Police will be asked to assist with maintaining the roadblocks.

MONITORING EQUIPMENT, ALARM SYSTEMS, SAFETY EQUIPMENT AND SUPPLIES

Emergency Shutdown Systems [NMAC 19.15.11.12.D(1)]
DCP Midstream has installed an emergency shutdown (ESD) system at the Zia II Plant and AGI Wells. The ESD system is a fail-safe hardwired system that provides logic solving via a Foxboro Ticonex Safety System. Twenty ESD manual pull stations are placed throughout the Plant. Operators in consultation with the IC will determine if an H_2S release situation warrants ESD of the plant. When activated the ESD System is designed to perform the following actions through the use of a hardwired interface:

- Close all hydrocarbon inlet and outlet valves to and from the Plant and AGI Wells.
- Initiate a distinct alarm and/or light which is separate from the general plant alarm.
- Shut off fuel at all individual fuel users.
- Isolate NGL storage tanks and NGL product pumps.
- Shut down all electric motors (with exceptions such as lube oil pumps, flare blowers, instrument air compressors, etc.).
- Shut down rotating equipment (engine-driven equipment, expander/compressors, pumps, etc.)
- Isolate fuel to engine-driven equipment.

The locations of the ESD buttons and Isolation Valves are shown in Figures 2a and 3. The ESD systems are designed to prevent a Level 3 response. Block valves on incoming lines can be closed where they enter the Plant perimeter (see Figure 3). Additional isolating block valves outside the Plant perimeter on the incoming lines can be closed to prevent further gas flow into the Plant. The block valves furthest upstream can isolate the entire system from the field gathering lines coming into the Plant. At the discretion of the IC, operations personnel may be designated to close valves at field locations on inlet gas pipelines to insure that incoming gas is shut off.

AGI compressors will be shut-down if two or more of the H_2S sensors located in the fenced AGI Well area go into high alarm (90 ppm). When AGI compressors are shut-down isolation valves upstream and downstream of the units will close as well as those located on the wellhead.

The Plant ESD can be activated at any time by the Zia II Plant Operators and is to be activated if efforts to control the release have failed or if a catastrophic release has occurred.

ALARMS, VISIBLE BEACONS AND WIND INDICATORS

Colored beacons, horns, and wind direction indicators and ESD stations are situated in various locations throughout the Plant and are shown on Figures 2, 2a and 2b and 3. The audible signal for an emergency response is an intermittent alarm that sounds at 10 ppm H_2S. Flashing yellow beacons are also activated at 10 ppm H_2S. The alarm will become continuous when the concentration of the H_2S release is 90 ppm or higher, and evacuation of the Plant will be initiated. As per 19.15.11.12.C, wind direction indicators which are visible night and day are installed throughout the Plant as shown in Figure 2b. At least one wind direction indicator can be seen from any location within the Plant as well as from any point on the perimeter of the Plant.

SIGNS AND MARKERS [NMSA 19.15.11.10]

The Plant and AGI Wells (which are contained totally within the Plant boundaries) have readily readable warning, caution and notice signs which conform to the current ANSI standard Z535.1-2002 (Safety Color Code). These signs contain language warnings about the presence of H_2S/Poisonous Gas and high pressure gas; they are posted at the Plant entrance and around the perimeter of the Plant and where isolation/block valves are located (see Figure 3). The signs are of sufficient size to be readable at a distance of 50 feet and contain the words "Caution Poison Gas". Emergency response phone numbers are also posted at the entrance to the Plant, and there are signs at the Plant entrance requiring that all visitors sign-in at the Plant office. DCP does not have the authority to require individual operators who send gas to the Plant for processing to conform to OCD and/or Department of Transportation (DOT) regulations relative to placement of warning signs at individual wells or on gathering lines. It is the responsibility of these individual operators to conform to appropriate regulations and to certify compliance with those regulations to those regulating agencies, as required. Signs warning of the potential presence of H_2S have been installed where the 500 and 100 ppm ROEs of the Plant intersects the above referenced public roads. (See Figure 4 for the location of these signs, and see Figure 8 for a photograph of one of these signs).

EMERGENCY EQUIPMENT

Emergency Trailers

Emergency trailers, equipped with flashing lights and windsocks will be utilized at public road locations to establish roadblocks (as shown in Figure 4) to alert the public in the event of hazardous conditions.

First Aid Equipment

The first aid stations are located at the all Emergency Assembly Area (see Figure 4) and at other strategic locations throughout the plant.

GAS DETECTION EQUIPMENT

Fixed Monitors

DCP Midstream has installed 65 ambient hydrogen sulfide detectors strategically throughout the Plant to detect possible leaks. Upon detection of hydrogen sulfide at 10 ppm at any detector, visible beacons are activated and an alarm is sounded. Upon detection of hydrogen sulfide at 90 ppm at any detector, an evacuation alarm is sounded throughout the Plant at which time all personnel will proceed immediately to a designated evacuation area. The Plant utilizes fixed-point monitors to detect the presence of H_2S in ambient air. The sensors are connected to the Control Room alarm panel's Programmable Logic

Controllers (PLCs), and then to the Zia II Distributed Control System (DCS). The monitors are equipped with a yellow flashing beacon. The yellow flashing beacon is activated at 10 ppm. The plant and AGI Well horns are activated with an intermittent alarm at 10 ppm and a continuous alarm at 90 ppm.

The Plant operators are able to monitor the ppm level of H_2S of all the Plant and AGI Well sensors on the DCS located in the control room. The AGI system monitors can also be viewed on the PLC displays located at the Plant. These sensors are all shown on the plot plans (see Figure 2). All sensors must be acknowledged and will not clear themselves. This requires immediate action for any occurrence or malfunction. All H_2S sensors are calibrated quarterly.

Personal and Handheld H_2S Monitors

All personnel working at the Zia II Plant wear personal H_2S monitors. The personal monitors are set to alarm and vibrate at 10 ppm. Handheld gas detection monitors are available at strategic locations around the Plant so that plant personnel can check specific areas and equipment prior to initiating maintenance or work on the process or equipment. The handheld gas detectors have sensors for oxygen, LEL (explosive hydrocarbon atmospheres), H_2S and carbon dioxide (CO_2).

RESPIRATORS

There are 30 minute SCBA respirators and cascade hose reel systems strategically located throughout the Plant. The cascade hose reel systems have 2-4 compressed air cylinders hooked up in series to provide a sustained supply of breathing air for extended work time in a hazardous atmosphere. Each cylinder will supply a person 6-8 hours of breathing air at normal workloads or 3 hours at medium/heavy workloads. Several hose reels and masks may be attached to a cascade system. The system is equipped with a low pressure alarm to allow workers to safely exit the hazardous area with plenty of reserve air capacity. The respirator containers and equipment locations are shown in Figure 2c. All Plant personnel are trained and fit tested annually to use the SCBA respirators.

PROCESS PURGE SYSTEM

All vessels, pumps, compression equipment, and piping in the acid gas injection process are designed and equipped to allow purging with pipeline quality gas to remove the acid gas prior to conducting maintenance or inspection work. The purge gas stream with residual acid gas is routed safely into the acid gas flares located at the plant. Operating procedures include this purging of all equipment to avoid acid gas exposure to personnel and to prevent acid gas from escaping to the environment.

FIRE FIGHTING EQUIPMENT

Plant personnel are trained only for incipient stage fire-fighting. The fire extinguishers located in the Plant process areas, compressor buildings, process buildings, and company vehicles are typically a 30# dry chemical fire extinguisher. The Zia II Plant is also equipped with portable fire extinguishers that may be used in an emergency, and air packs which can be utilized for escape or rescue located throughout the plant in key locations.

V. CHARACTERISTICS OF HYDROGEN SULFIDE (H_2S), SULFUR DIOXIDE (SO_2) CARBON DIOXIDE (CO_2) [NMAC 19.15.11.9.B(2)(b)] [API RP-55 7.4 b.]

HYDROGEN SULFIDE (H_2S)

The current inlet gas streams into the Plant contain approximately 1.0 ppm (or 0.9992 mole percent) of H_2S based on data generated from the sampling of the combined inlet gas stream. The current inlet to the AGI pipeline, and injection well contains 14.2853 mole percent H_2S. H_2S is a colorless, toxic and flammable gas, and has the odor of rotten eggs. It is heavier than air and presents a significant health hazard by paralyzing the respiratory system resulting in serious injury or death.

Hydrogen Sulfide Properties and Characteristics	
CAS No.	7783-06-4
Molecular Formula	H_2S
Molecular Weight	34.082 g/mol
Ceiling Concentration	20 ppm (OSHA)
Ceiling Peak Concentration	50 ppm (OSHA)
Threshold Limit Value (TLV)	15 ppm (ACGIH)
Time Weighted Average (TWA)	10 ppm (NIOSH)
Short Term Exposure Level (STEL)	15 ppm (ACGIH)
Immediately Dangerous to Life or Health (IDLH)	100 ppm
Specific Gravity Relative to Air (Air=1.0)	1.189
Boiling Point	-76.5F
Freezing Point	-121.8F
Vapor Pressure	396 psia
Auto-ignition Temperature	518F
Lower Flammability Limit	4.3%
Upper Flammability Limit	46.0%
Stability	Stable
pH in water	3
Corrosivity	Reacts with metals, plastics, tissues and nerves

Physical Effects of Hydrogen Sulfide		
Concentration		**Physical Effects**
Ppm	%	
1	0.00010	Can be smelled (rotten egg odor)
10	0.0010	Obvious & unpleasant odor; Permissible exposure level; safe for 8 hour exposure
20	0.0020	Acceptable ceiling concentration
15	.005	Short Term Exposure Limit (STEL); Safe for 15 minutes of exposure without respirator
50	0.0050	Loss of sense of smell in 15 minutes
100	0.0100	Immediately dangerous to life and health (IDLH) loss of sense of smell in 3-15 minutes; stinging in eyes & throat; Altered breathing
200	0.0200	Kills smell rapidly; stinging in eyes & throat
500	0.0500	Dizziness; Unconscious after short exposure; Need artificial respiration
700	0.0700	Unconscious quickly; death will result if not rescued promptly
1000	0.1000	Instant unconsciousness; followed by death within minutes

SULFUR DIOXIDE (SO_2)

SO_2 is produced as a by-product of H_2S combustion. The waste gas stream consisting of H_2S and CO_2 is routed to the plant acid gas flare during abnormal conditions when the acid gas injection equipment is out of service. Waste gas is routed to the acid gas flare at the AGI Well sites during maintenance operations when equipment needs to be blown down. It is colorless, transparent, and is non-flammable, with a pungent odor associated with burning sulfur. SO_2 is heavier than air, but can be picked up by a breeze and carried downwind at elevated temperatures. It can be extremely irritating to the eyes and mucous membranes of the upper respiratory tract.

Sulfur Dioxide Properties & Characteristics	
CAS No.	7446-09-5
Molecular Formula	SO_2
Molecular Weight	64.07 g/mol
Permissible Exposure Limit (PEL)	5 ppm(OSHA)
Time Weighted Average (TWA)	2 ppm(ACGIH)
Short Term Exposure Level (STEL)	5 ppm(ACGIH)
Immediately Dangerous to Life and Health (IDLH)	100 ppm
Specific Gravity Relative to Air (Air = 1.0)	2.26
Boiling Point	14°F
Freezing Point	-103.9°F
Vapor Pressure	49.1 psia
Auto-ignition Temperature	N/A
Lower Flammability Limit	N/A
Upper Flammability Limit	N/A
Stability	Stable
Corrosivity	Could form an acid rain in aqueous solutions

Physical Effects of Sulfur Dioxide	
Concentration	**Effect**
1 ppm	Pungent odor, may cause respiratory changes
2 ppm	Permissible exposure limit; Safe for an 8 hour exposure
3-5 ppm	Pungent odor; normally a person can detect SO_2 in this range
5 ppm	Short Term Exposure Limit (STEL); Safe for 15 minutes of exposure
12 ppm	Throat irritation, coughing, chest constriction, eyes tear and burn
100 ppm	Immediately Dangerous To Life & Health (IDLH)
150 ppm	So irritating that it can only be endured for a few minutes
500 ppm	Causes a sense of suffocation, even with first breath
1,000 ppm	Death may result unless rescued promptly.

CARBON DIOXIDE (CO_2)

The projected inlet gas streams to the Plant contain approximately 6% CO_2. The inlet to the AG pipeline and injection well is projected to contain approximately 85.7 mole percent of CO_2. CO_2 is a colorless, odorless and non-flammable. It is heavier than air.

Carbon Dioxide Properties & Characteristics	
CAS No.	124-38-9
Molecular Formula	CO_2
Molecular Weight	44.010 g/mol
Time Weighted Average (TWA)	5,000 ppm
Short Term Exposure Level (STEL)	30,000 ppm
Immediately Dangerous to Life and Health (IDLH)	40,000 ppm
Specific Gravity Relative to Air (Air = 1.0)	1.5197
Boiling Point	-109.12°F
Freezing Point	-69.81°F
Vapor Pressure	830 psia
Auto-ignition Temperature	N/A
Lower Flammability Limit	N/A
Upper Flammability Limit	N/A
Stability	Stable
pH in Saturated Solution	3.7
Corrosivity	Dry gas is relatively inert & not corrosive; can be corrosive to mild steels in aqueous solutions

Physical Effects of Carbon Dioxide	
Concentration	**Effect**
1.0 %	Breathing rate increases slightly
2.0 %	Breathing rate increases to 50% above normal level. Prolonged exposure can cause headache, tiredness
3.0 %	Breathing rate increases to twice normal rate and becomes labored. Weak narcotic effect. Impaired hearing, headache, increased blood pressure and pulse rate
4 – 5 %	Breathing increases to approximately four times normal rate, symptoms of intoxication become evident, and slight choking may be felt
5 – 10 %	Characteristic sharp odor noticeable. Very labored breathing, headache, visual impairment, and ringing in the ears. Judgment may be impaired, followed within minutes by loss of consciousness
10 – 100 %	Unconsciousness occurs more rapidly above 10% level. Prolonged exposure to high concentrations may eventually result in death from asphyxiation

VI. RADII OF EXPOSURE [NMAC 19.15.11.7. K]

WORST CASE SCENARIOS: See Appendix D for actual ROE calculations. The basis for worst case scenario calculations is as follows:

- The worst case ROE for this Plan has been calculated utilizing the maximum inlet and TAG flow rates (24-hour rate) contained in the permit issued by OCD for this Plant which is 200 MMCFD. The ROE calculation in this Plan utilizes that inlet flow rate and an H_2S concentration for inlet gas of .9992 mole percent. Based on this inlet flow analysis, the calculated TAG flow rate from the amine unit to the AGI well is 13.9892 MMCFD with an H_2S concentration of 14.2853 mole percent. Although the H_2S concentration is lower in the inlet gas than in the TAG stream, the flow rate is much higher for the inlet gas than for the TAG stream. The calculated ROE's for the inlet gas and TAG streams are identical as shown in the calculations in Appendix D.

- The worst case scenario ROE assumes an uncontrolled instantaneous release of a 24-hour volume of gas at the Plant. Because the Plant is a throughput process plant, it is impossible that the entire 24 hour-throughput volume of the Plant could be released instantaneously as is assumed in the worst case scenario calculations of the ROE. Further, the Plant's ESD systems would be activated in the event of a catastrophic emergency and would prevent the flow of gas into the Plant and would isolate the AGI compressors and equipment and route the acid gas safely to the Plant acid gas flare. To comply with NMAC 19.15.11, the worst case scenario calculations (assuming an instantaneous release of the 24-hour processing and/or TAG volume) are utilized here (see Appendix C for actual calculations).

The formulas for calculating the radius of exposure (ROE) are as follows:

100 ppm ROE Calculation (as per 19 NMAC 15.11.7.K.1):
X=[(1.589)(hydrogen sulfide concentration)(Q)](0.6258)

500 ppm ROE Calculation (as per 19 NMAC 15.11.7.K.2):
X=[(0.4546)(hydrogen sulfide concentration)(Q)](0.6258)

Where:
X = radius of exposure in feet
"hydrogen sulfide concentration" = the decimal equivalent of the mole or volume fraction of hydrogen sulfide in the gaseous mixture
Q = Escape rate expressed in cubic feet per day (corrected for standard conditions of 14.73 psi absolute and 60 degrees Fahrenheit)

ROE FOR ZIA II PLANT WORST CASE SCENARIO

500-ppm ROE 5,354 feet (1.01 miles)
100-ppm ROE 11,717 feet (2.22 miles)

The ROE for the Plant and AGI Wells are shown on Figure 4. This ROE pattern is designed to include the 100 ppm and 500 ppm radii for a potential worst case failure at any point in the system.

VII. FACILITY DESCRIPTION, MAPS AND DRAWINGS [NMAC 19.15.11.9.B (2)(c)] [API RP-55 7.4 c.]

DESCRIPTION OF PLANT OPERATIONS AND ZIA #1 AND #2 AGI WELLS

The Plant and AGI Wells are in operation and are manned 24-hours-a-day, 7-days-a week. The Plant operations include gas compression, treating and processing. The Plant gathers and processes produced natural gas from Lea and Eddy Counties in New Mexico. Once gathered at the Plant, the produced natural gas is compressed, dehydrated to remove the water content and processed to remove and recover natural liquids. The processed natural gas and recovered natural gas liquids are then sold and shipped to various customers. The inlet gathering lines and pipelines that bring gas into the plant are regulated by DOT, NACE other applicable standards which require that they be constructed and marked with appropriate warning signs along their respective right-of-ways.

Because the natural gas that is gathered and processed at the Plant contains H_2S ("sour gas"), it must be treated or processed to remove these and other impurities. The CO_2 and H_2S stream that is removed from the natural gas in the amine treating process is compressed to approximately 1,500 – 2,644 psi. This is accomplished using electric driven, reciprocating compressors. Water vapor contained in the gas stream is removed during compression and cooling and is disposed of through a wastewater disposal system. The compressed acid gas is transported via an overhead stainless stainless-steel, corrosion-resistant, NACE-compliant pipe, approximately 1,050 feet in length, from the compressor to the AGI Wells. AGI #1 injects into the lower Cherry Canyon (5,470 to 5,670 feet) and upper Brushy Canyon (5,670 to 6,070 feet) Formations. AGI #2 will inject into the Siluro-Devonian between 13,700 and 14,650 feet. The pipe between the compressors and the AGI Wells is contained totally within the boundaries of the Plant and does not cross any public roads. H_2S sensors are located at critical junctions along the pipe which is run on an overhead pipe rack. The pressure in the pipe is monitored continuously so that the acid gas injection process could be stopped should there be any unusual variations in pressure.

The AGI Wells are integral components of the Zia Gas Plant design. Both of the wells are constructed using the materials shown in Figures 5a and 5b. The overall schematic of the AGI wells is shown in Figure 6. The intermediate casing of each well extends to 4,600 feet to assure the protection of the Capitan Aquifer and the Upper Delaware Group. Each string of the telescoping casing is cemented to the surface and includes the "downhole" subsurface safety valves (SSVs) which are located approximately 250 feet below the surface 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 are filled with diesel fuel (an inert fluid) as a further safety measure which is consistent with injection well designs that have been approved by NMOCD for acid gas injection.

Per National Association of Corrosion Engineers (NACE) specifications, downhole components including the SSV and packer are constructed of Inconel 925. Corrosion Resistant Alloy (CRA) joints are constructed of a similar nickel alloy manufactured by Sumitomo. The gates, bonnets and valve stems within the Christmas tree are nickel coated as well. The rest of the Christmas tree is made of standard carbon steel components and outfitted with annular pressure gauges that remotely reports operating pressure conditions in real time to a gas control center. Pursuant to NMAC 19.15.11.12.D(2), in the case of abnormal pressures or any other situation requiring immediate action, the acid gas injection process can be stopped at the compressor, and the wellhead can be shut in using a hydraulically operated wing valve on the Christmas tree. The Plant operator or IC may also shut the SSV. In addition, the well has profile nipples which provide the ability to insert a blanking plug into the base of the well below the packer which would allow for the safe reentry of the well. These safety devices provide for downhole

accessibility and reentry under pressure for permanent well control. The SSV provides a redundant safety feature to shut in the wells in case the wing valves do not close properly (see Figures 5 and 6).

MAPS AND FIGURES

Figures 1 and 1a show the location of the Zia II Plant as well as AGI #1 and #2. Figure 1b shows the plot plan of the Plant. Figure 2, 2a, 2b, 2c and 2d show the locations of safety equipment at the plant. Figure 4 shows the 100 and 500 ppm ROE, escape routes, roadblock locations and emergency assembly areas. The design schematic of the AGI Wells is shown in Figures 5, and the schematic of the AGI Wells' tie-in to the Zia Plant is shown in Figure 6.

VIII. TRAINING AND DRILLS [NMAC 19.15.11.9.B(2)(d)] [API RP-55 7.4 d.]

DCP will conduct annual training for its own personnel as well as for the public and emergency responders, as detailed below. Training will include:

- Characteristics of H_2S and safety precautions
- An overview of the Zia II Plant and AGI operations
- A review of their roles in responding to activation of the Zia II H_2S Contingency Plan
- Location of the Radii of Exposure and how to protect the public within the Radii of Exposure
- Potential roadblock locations, potential evacuation routes, and how they can assist in implementing the Plan.

TRAINING OF ESSENTIAL PERSONNEL

Annual training for DCP personnel shall include plant operators, mechanics, instrument and electrical technicians, and maintenance support personnel. Plant Operators will be responsible for initiating and implementing the Plan. In addition, all Plant personnel will receive:

- Annual training on the H_2S Contingency Plan. This training will include a review of all aspects of the Plan and will include, at a minimum, one table top drill involving activation of the H_2S Contingency Plan.
- Plant Orientation Training - All Plant personnel, visitors, and contractors must attend a Plant overview orientation prior to obtaining permission to enter the Plant. A refresher course on this training is required annually for all persons. Included as part of this orientation is how to respond and evacuate safely in the event of a H_2S alarm or release. This training also complies with the requirements of the DCP and Zia II Plant's Process Safety Management Program and Procedures Manuals.
- All Plant personnel are also trained annually on the Zia II Emergency Response Plan.
- H_2S and SO_2 Training - All Plant personnel receive annual refresher training on H_2S and SO_2, which is conducted by DCP personnel. If an individual is unable to attend, they may be required to attend a third party training session. All contract employees are required to have had H_2S training and to provide the Plant a copy of their certification card prior to obtaining permission to enter the Plant.
- Respirators - All Plant personnel are trained annually on the proper use of respirators. In addition to the annual training, all Plant personnel are fit tested annually on the respirators. All Plant personnel must have medical clearance for respirator use.
- Hazard Communication - All Plant personnel are trained annually on Hazard Communication. The annual training includes, at a minimum, the use of material safety data sheets (MSDS) for those materials that are present at the Plant.

- Personal Protective Equipment (PPE) - All Plant personnel are trained annually on the DCP requirements for PPE. The training includes, at a minimum, a review of all the types and levels of personal protective equipment and how to select the correct equipment for the job.

ON-SITE OR CLASSROOM EMERGENCY RESPONSE DRILLS

- The Plant will conduct, at least, a tabletop drill annually. Multiple drills during the year may be scheduled at the discretion of the Plant Supervisor.
- The annual drill will execute this Plan and include, at a minimum, the Public Officials and Local Emergency Response Agencies listed below.
- Annual training a will also include making contact with the entities including any that are identified as being within the 500 ppm and 100 ppm ROE (see Appendix C) to make sure contact information for them in Appendix C is current. Appendix C will be verified and updated annually by DCP to be sure any changes of occupancy, ownership or new commercial and/or residential buildings are reflected, and all owners/occupants receive training on protective measures.
- The drills will also include briefing of public officials on issues such as evacuation or shelter-in-place plans.

NOTIFICATION AND TRAINING OF PRODUCERS LOCATED WITHIN THE ROE

DCP Midstream will provide annual training to the producers listed in Appendix C that includes:

- An overview of the Zia II Plant and AGI operations
- Design and operating safety features on the Zia II Plant
- A review of the H_2S alarms and significance
- Notification procedures
- Roadblock locations
- Potential evacuation routes
- Procedures for sheltering in place
- Radii of exposure

TRAINING OF PUBLIC OFFICIALS AND EMERGENCY RESPONSE AGENCIES

All of the Emergency Response Agencies listed in Appendix C will have copies of the H_2S Contingency Plan, and DCP Midstream will provide annual training to the following Emergency Response Agencies:

- NM State Police-Hobbs and Carlsbad Offices
- Eddy County 911 Emergency Response
- Eddy County Emergency Planning Committee
- Hobbs, Artesia and Carlsbad Police Department
- Lea County Sherriff's Department
- Hobbs, Artesia and Carlsbad Fire Department
- New Mexico Oil Conservation Division-Hobbs District Office
- Bureau of Land Management (BLM) Carlsbad Field Office

Training will include:

- An overview of the Zia II Plant and AGI operations
- Design and operating safety features on the Zia II Plant
- A review of the H_2S alarms and significance
- Notification procedures
- Roadblock locations
- Potential evacuation routes
- Procedures for sheltering in place
- Radii of exposure

DCP Midstream will also conduct, at a minimum, one annual tabletop drill involving the Emergency Response Organizations listed above on the activation of the Zia II Plant H_2S Contingency Plan.

TRAINING AND ATTENDANCE DOCUMENTATION [NMAC 19.15.11.9 G]

Per NMAC 19.15.11.9.G drill training will be documented, and those records will be maintained at the Plant and will be available to an OCD representative upon request. The documentation shall include at a minimum the following:

- Description or scope of the drill, including date and time
- Attendees and Participants in the drill
- Summary of activities and responses
- Post-drill debriefing and reviews

IX. COORDINATION WITH STATE EMERGENCY PLANS [NMAC 19.15.11.9.B(2)(e)]

NOTIFICATIONS AND REPORTS

The Plant has various notification and reporting obligations. Some are related to its state air quality permit that is overseen by NMED as well as state and federal spill reporting obligations. In addition to the regulatory obligations noted above, Plant personnel also have internal and external notification and reporting obligations associated with the activation of this Plan. Reporting obligations are as follows:

New Mexico Oil Conservation Division (OCD) [NMAC 19.15.11.16]
As soon as possible, but no later than four hours after plan activation, (recognizing that a prompt response should supersede notification), OCD will be notified by the IC or the IC's designee via email or fax to the District II Office of the activation of the H_2S Contingency Plan. In the event of a power failure, a phone call will be made within four hours. A full report of the incident to the OCD, utilizing Form C-141 shall be made no later than 15 days following the release (see Appendix G).

New Mexico State Police/ New Mexico Hazardous Materials Emergency Response Plan
The New Mexico State Police are responsible for overall scene management and coordination of all resources. A designated Emergency Response Officer (ERO) will establish the National Interagency Incident Management System (NIIMS) Incident Command System (ICS) as the Incident Commander (IC) and be responsible for management of all response resources on scene. Off-scene coordination of

response resources will be handled through designated Headquarters Emergency Response Officers. Law enforcement-related activities will be coordinated by State Police.

Bureau of Land Management (BLM)
The BLM will also be contacted (see Appendix C for phone number) in the event of activation of the plan since the Plant is located on land leased from BLM by DCP Midstream.

X. PLAN ACTIVATION [NMAC 19.15.11.9.C] [API RP-55 7.4 d]

The plan will be activated as described in the Immediate Action Plans and Response Flow Diagrams in Appendix A. **At a minimum, Per NMAC 19.15.11.8.C, the Plan also shall be activated at Level 3 (see Appendices A and B for detail) whenever a release may create an H_2S concentration of more than 100 ppm in a public area, 500 ppm at a public road or 100 ppm 3,000 feet from the site of release.**

ACTIVATION LEVELS

The Plan has three activation levels that are described in detail in the Immediate Action Plan Section of this Plan (see Appendix A) and in outline form in the Response Flow Diagrams (see Appendix B).

Level 1 - Intermittent alarm sounded and flashing yellow beacons activated for H_2S greater than 10 ppm at personal or fixed monitor. (See Appendices A, Level 1, and B Level 1 for detail.)

Level 2 - Continuous alarm sounded and flashing yellow beacons activated for H_2S greater than 90 ppm; when corrective actions at Level 1 have been unsuccessful or when Operators activate ESD. Notification of operators, businesses, public, BLM and state agencies is initiated. (See Appendices A, Level 2 and B, Level 2 for detail.)

Level 3 - Catastrophic release; fire; explosion; a continuous release of maximum volume for 24 hours; or Rule 11 mandatory activation for 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 or the release. Notification of operators, businesses, public, and state agencies is initiated. (See Appendices A, Level 3 and B, Level 3 for detail.)

As soon as the Plan has been activated based on the criteria above, the Plant Supervisor, or his designee will be notified.

EVENTS THAT COULD LEAD TO A RELEASE OF H_2S

- Inlet and plant piping failure
- Amine still failure (This would be a leak in the amine process equipment, or amine still utilized to separate methane from H_2S and CO_2.)
- Flange/gasket leaks on inlet and plant piping
- Flange/gasket leak on the acid gas compressors
- Flange/gasket or valve packing leak at the AGI Well or associated piping
- Valve packing failure
- Seal failure on acid gas compressors
- Failure of flare to ignite during Plant emergency blow down
- Damage to AGI Wellhead

XI. SUBMISSION OF H_2S CONTINGENCY PLANS [NMAC 19.15.11.9.D]

SUBMISSION

DCP Midstream, LP submitted this H_2S Contingency Plan to the OCD for review and approval in June 2015.

RETENTION

DCP Midstream shall maintain a copy of the contingency plan at the Zia II Gas Plant, at DCP Headquarters in Hobbs, NM and at DCP Headquarters office in Denver, CO. The plan as approved by the OCD will be readily accessible for review by the OCD at the facility upon request.

REVISIONS TO THE PLAN

The H_2S Plan will be reviewed annually and revised at that time as necessary to address changes to the Plant facilities, operations, or training requirements, contact information and the public areas including roads, businesses, or residents potentially affected by the operations of the Plant and AGI Wells, specifically those areas within the radii-of-exposure.

ANNUAL INVENTORY OF CONTINGENCY PLANS

DCP Midstream, LP will file an annual inventory of wells, facilities and operations for which H_2S Contingency Plans are on file with the OCD with the appropriate Local Emergency Planning Committee (LEPC) and the State Emergency Response Commission as per NMAC 19.15.11.9H. The inventory shall include the name, address, telephone number, and point of contact for all operations for which H_2S Contingency Plans are on file with the OCD.

FIGURES

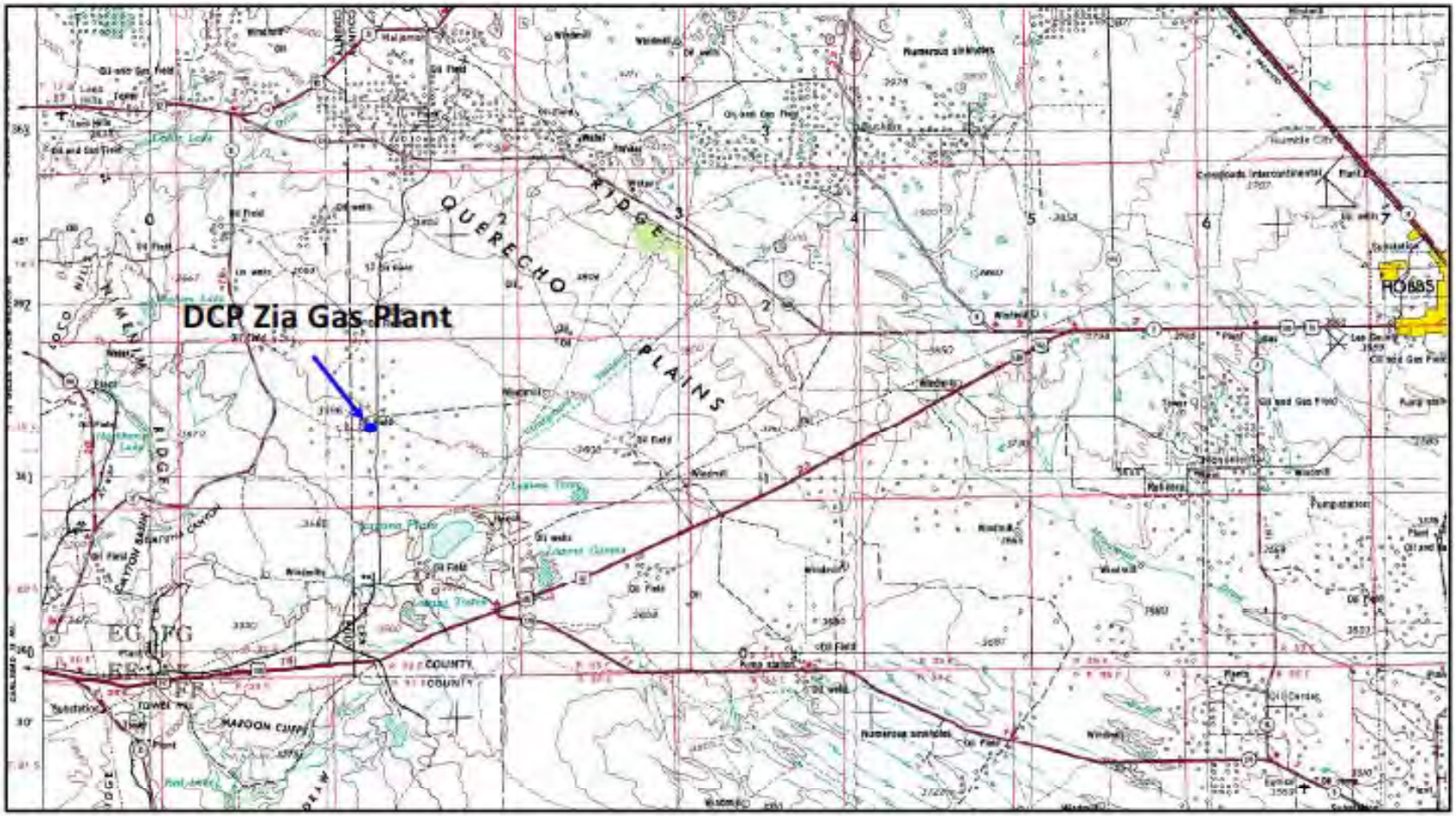


Figure 1: Location of the DCP Zia Gas Plant and AGI Wells
(USGS 1:250,000)

Figure 1a: Surface and Bottom Hole Locations of Zia AGI #1 and AGI #2

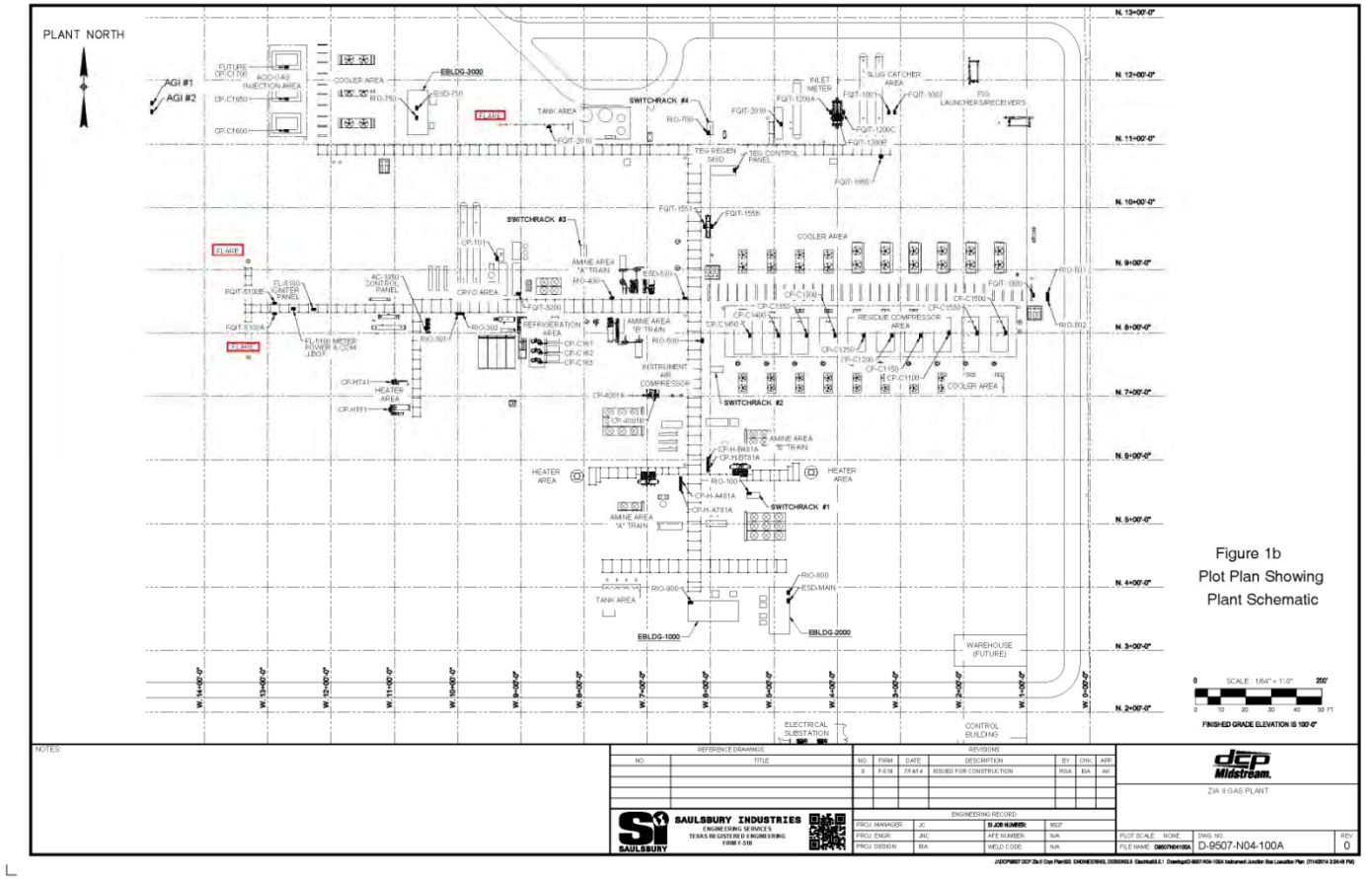


Figure 1b: Plot Plan Showing Plant Schematics

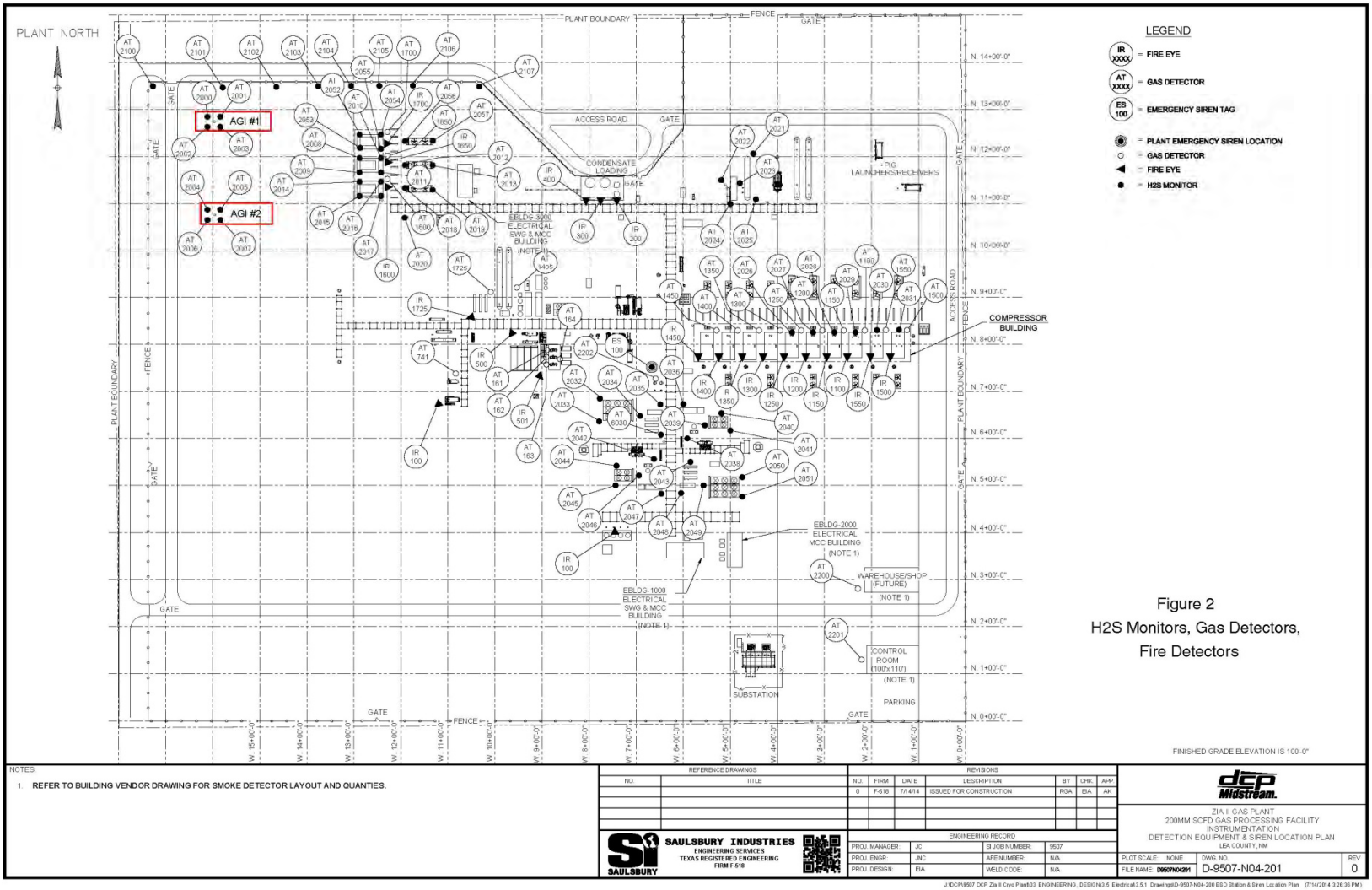


Figure 2: H2S Monitors, Gas Detectors and Fire Detectors

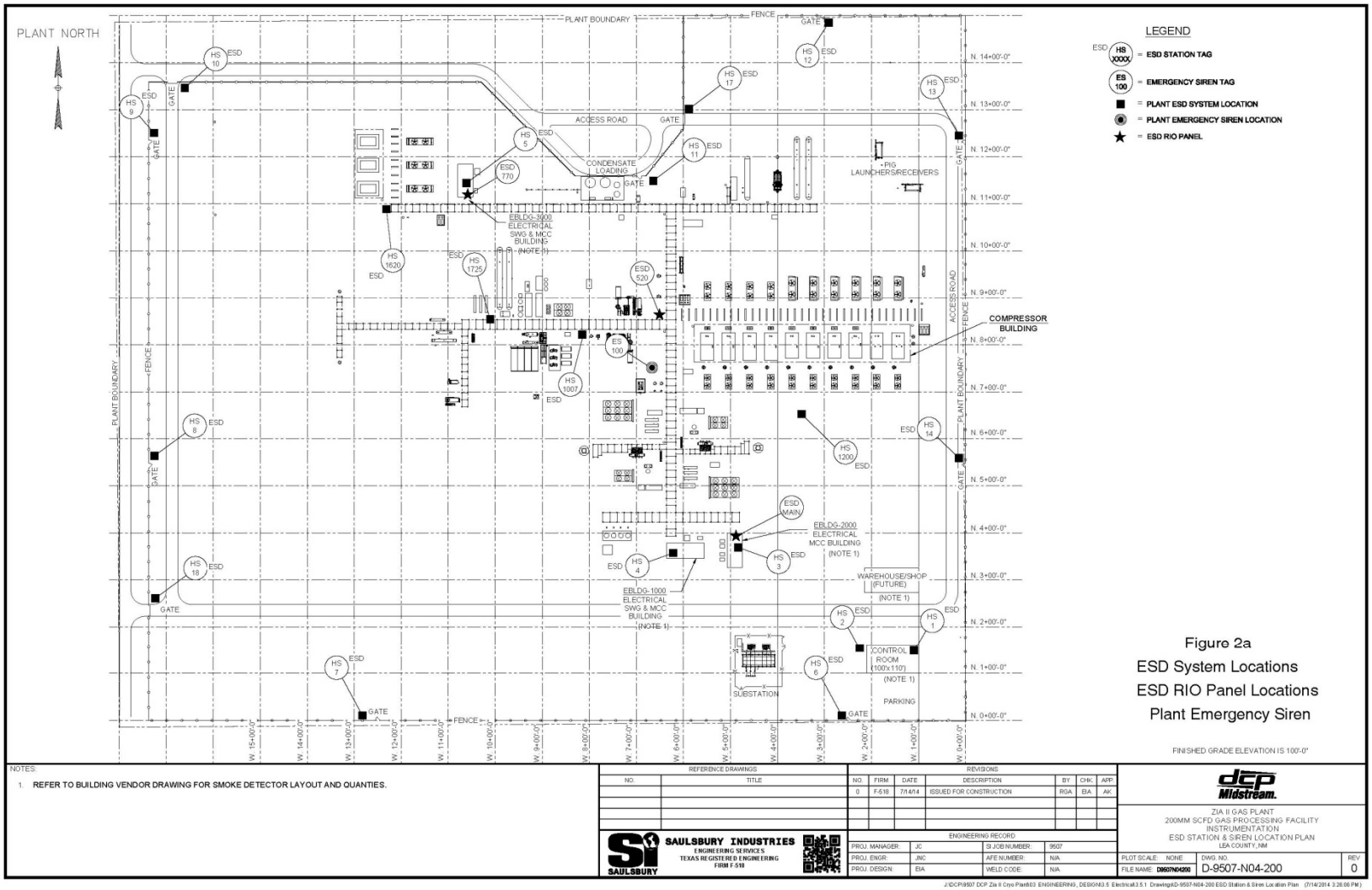


Figure 2a: ESD System Locations, ESD RIO Panel Locations and Plant Emergency Siren

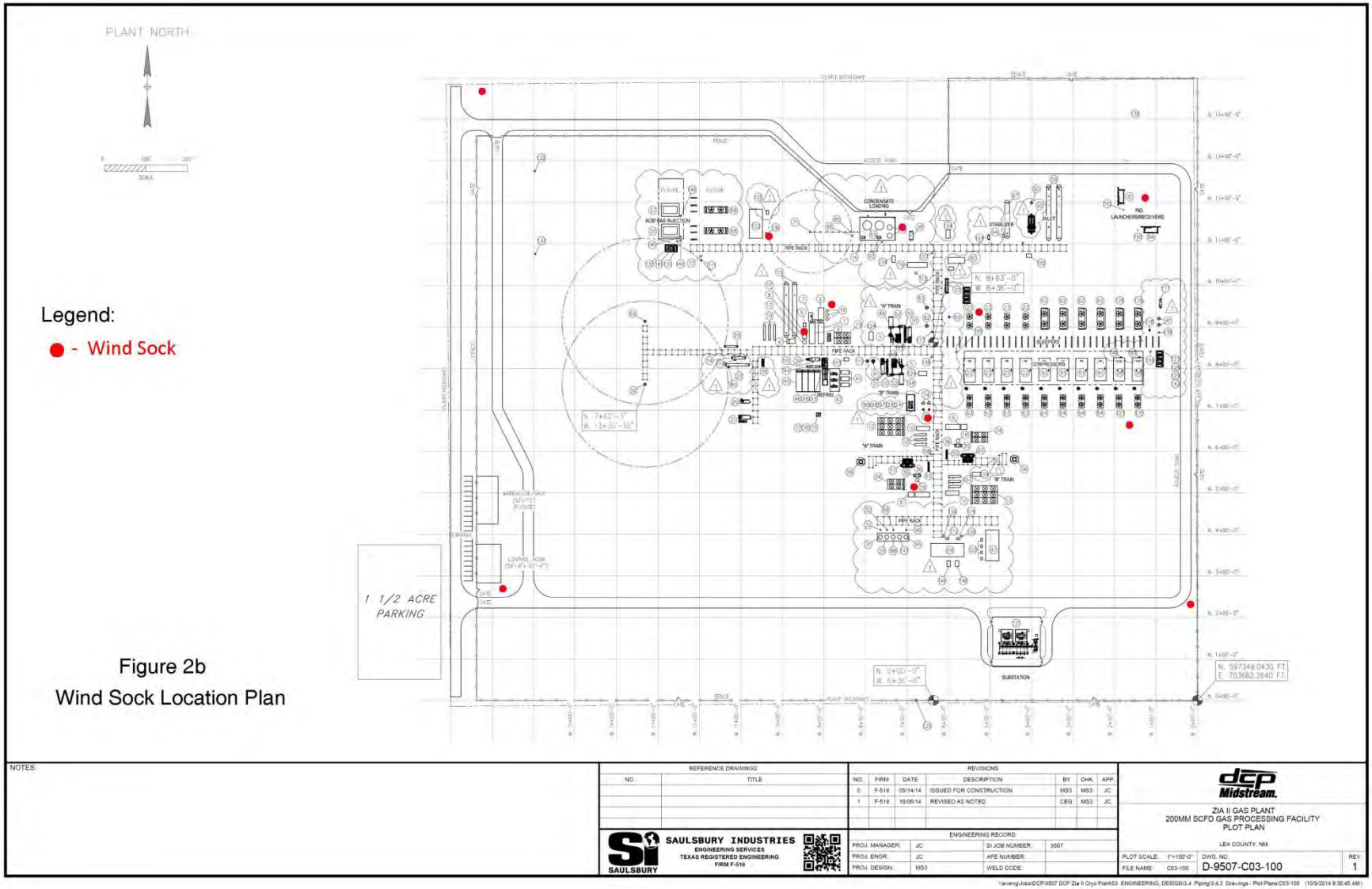


Figure 2b
Wind Sock Location Plan

Figure 2b: Wind Sock Location Plan

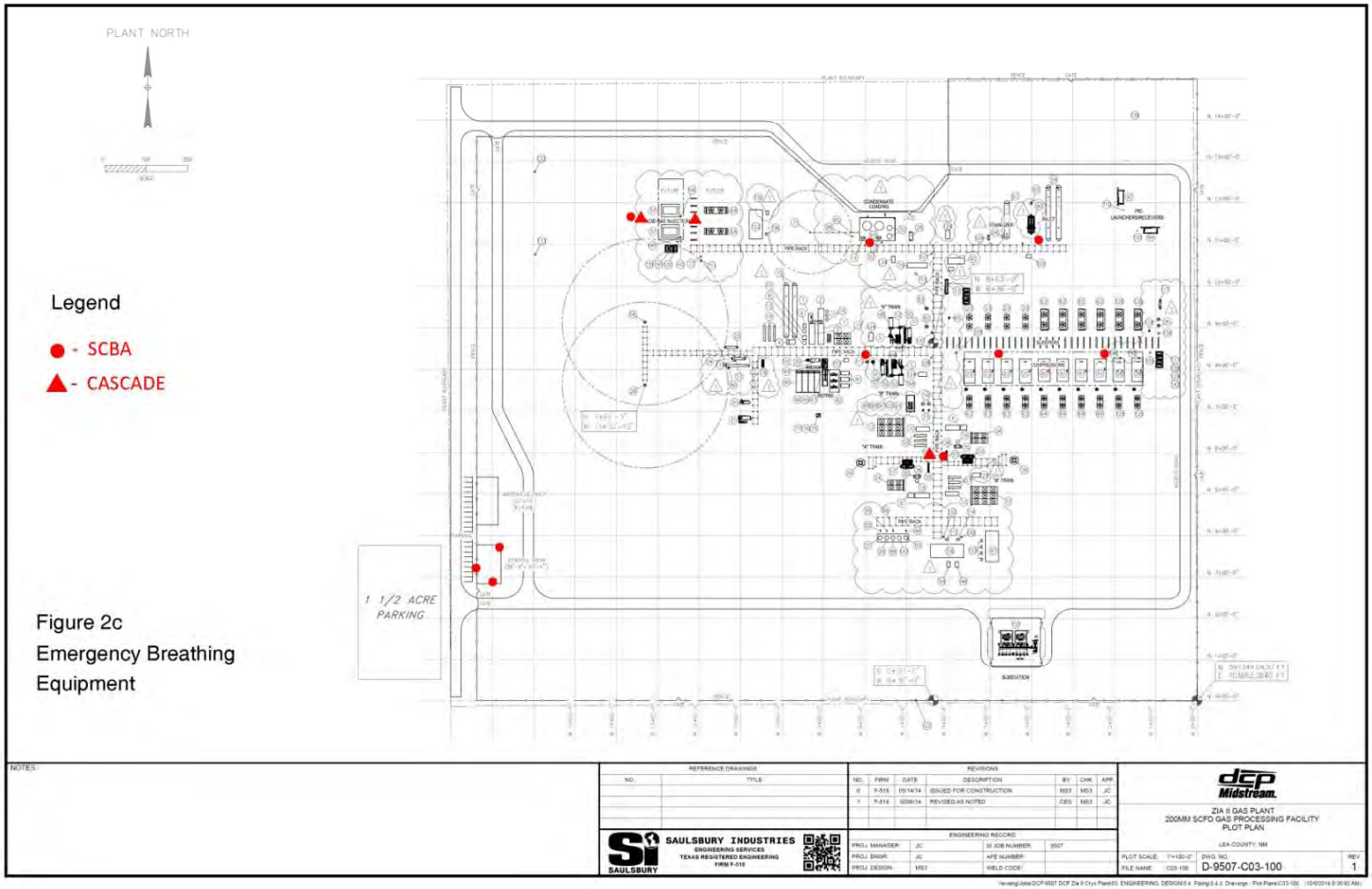


Figure 2c: Emergency Breathing Equipment

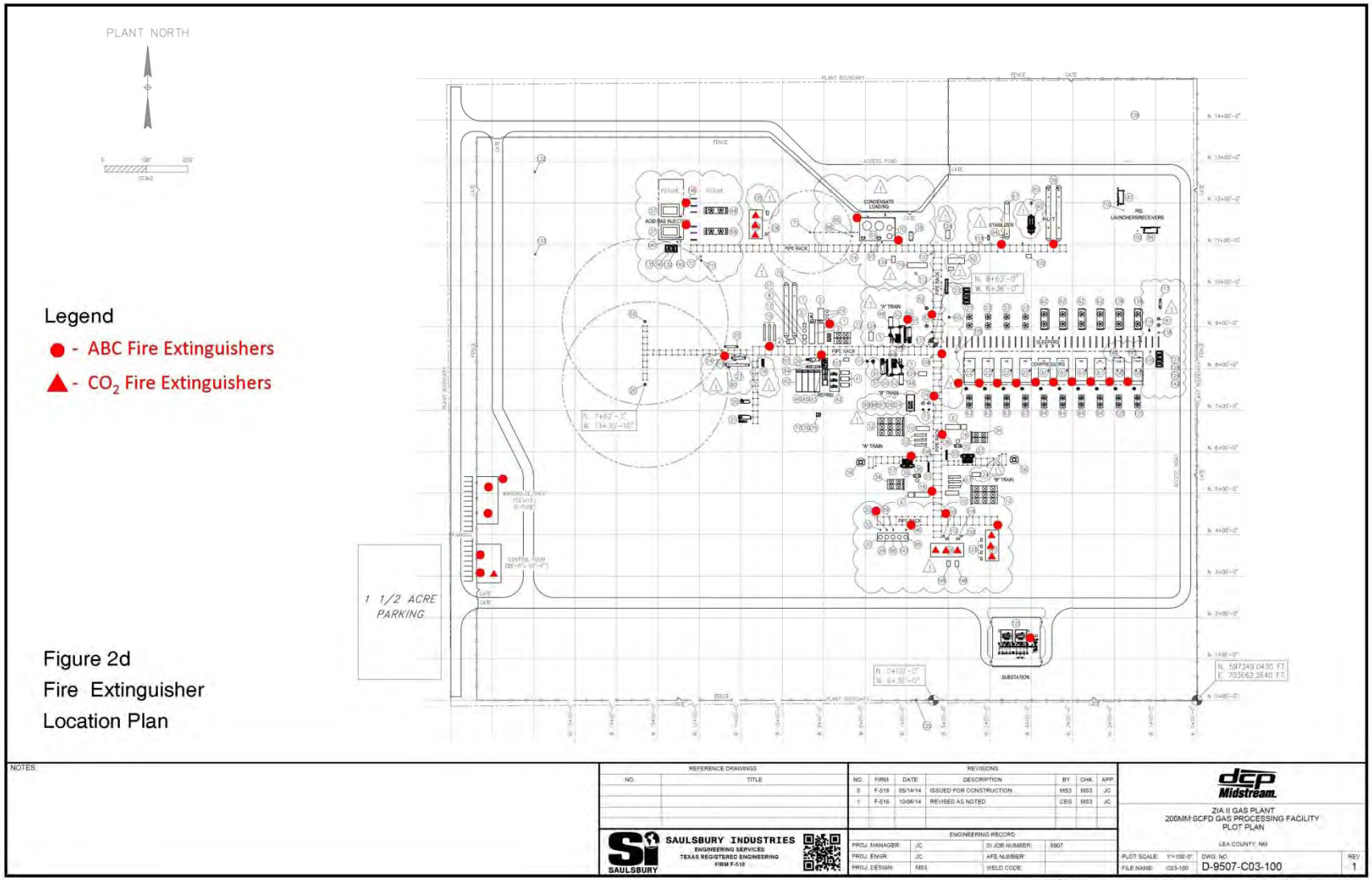


Figure 2d: Fire Extinguisher Location Plan

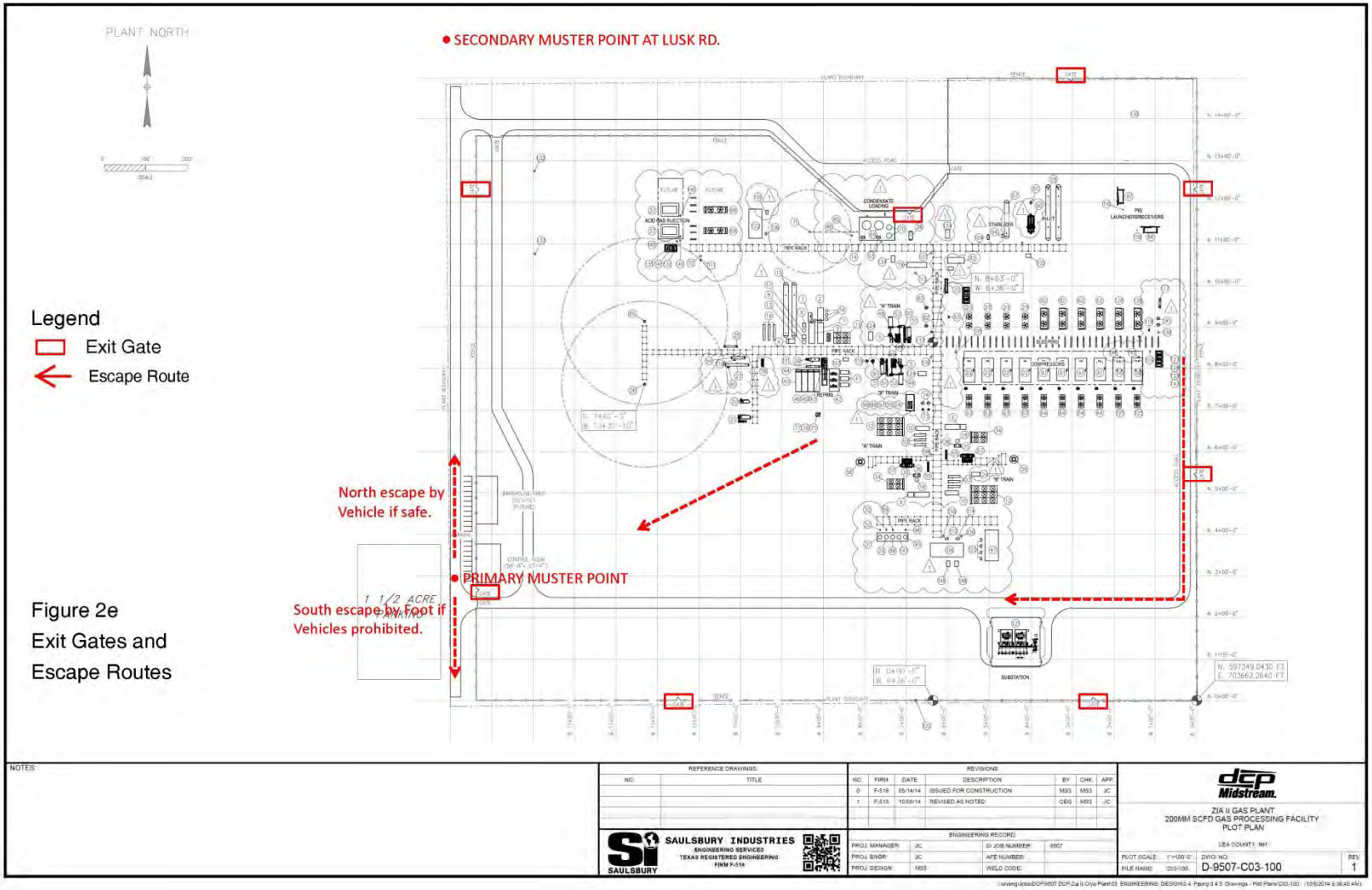


Figure 2e: Exit Gates and Escape Routes

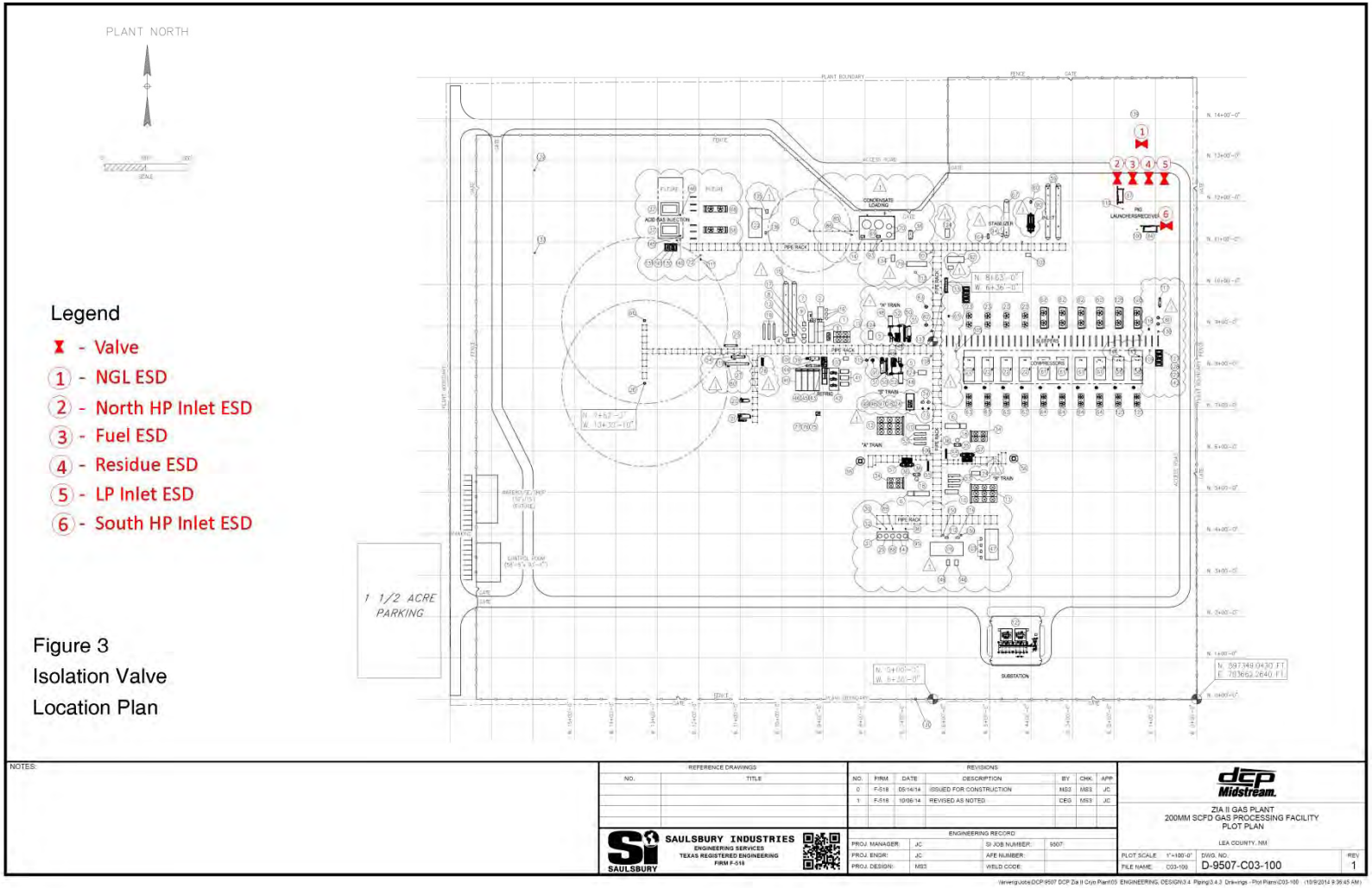


Figure 3: Isolation Valve Location Plan

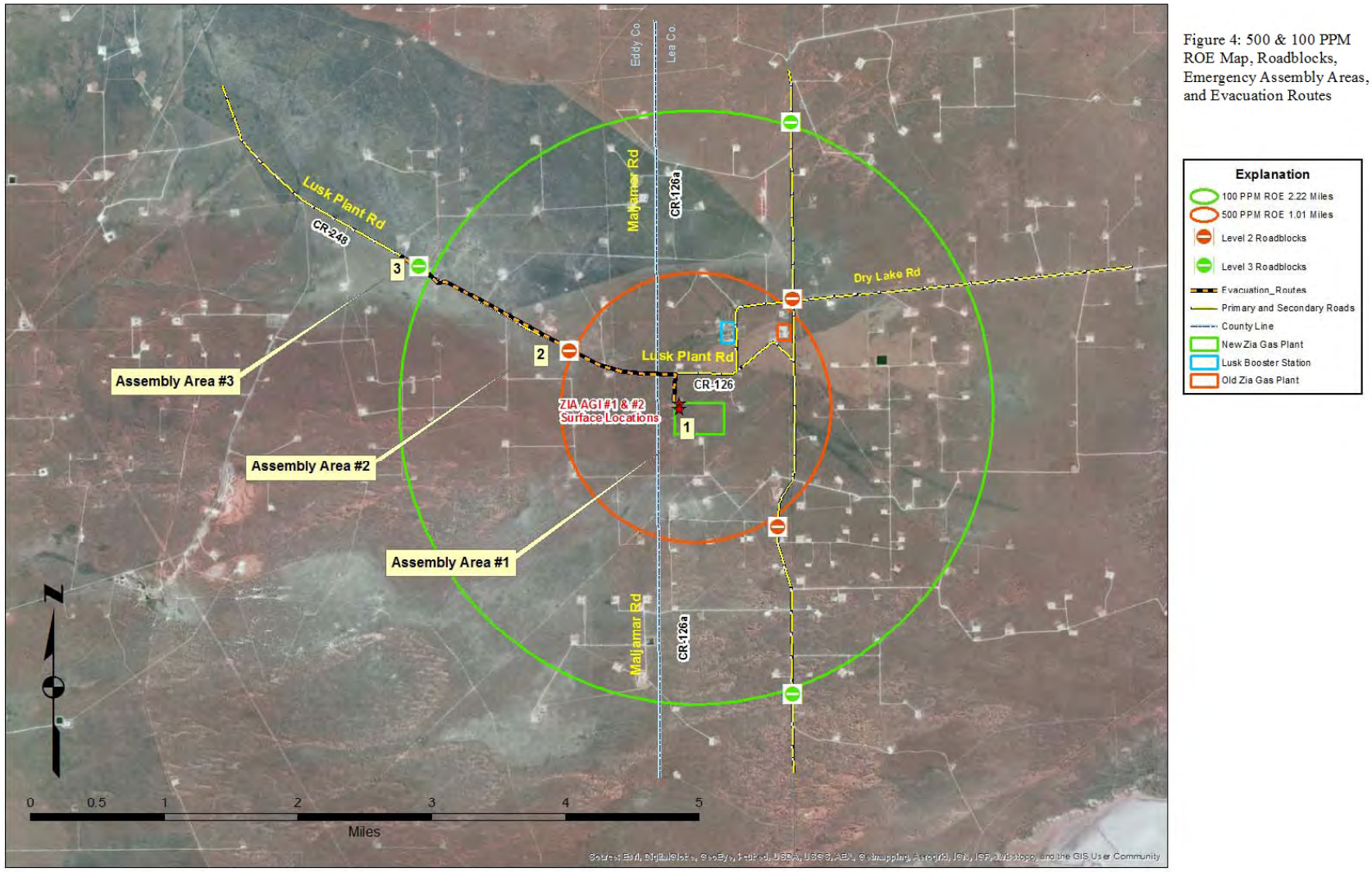


Figure 4: 500 & 100 PPM ROE Map, Roadblocks, Emergency Assembly Areas, and Evacuation Routes

Figure 4: 500 and 100 ppm ROE Map, Roadblocks, Emergency Assembly Areas and Evacuation Routes

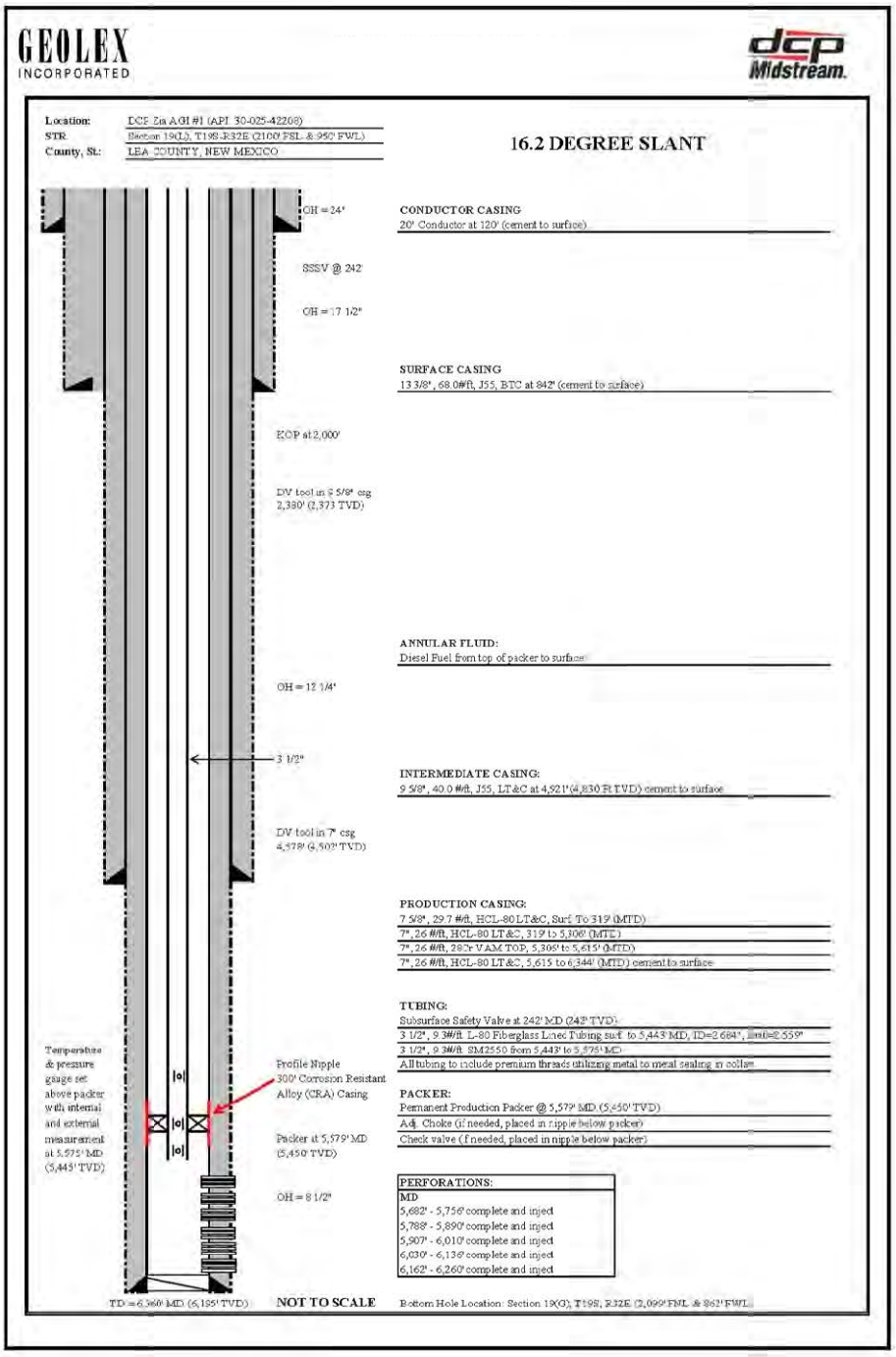


Figure 5a: Well Design Schematic – Zia AGI #1

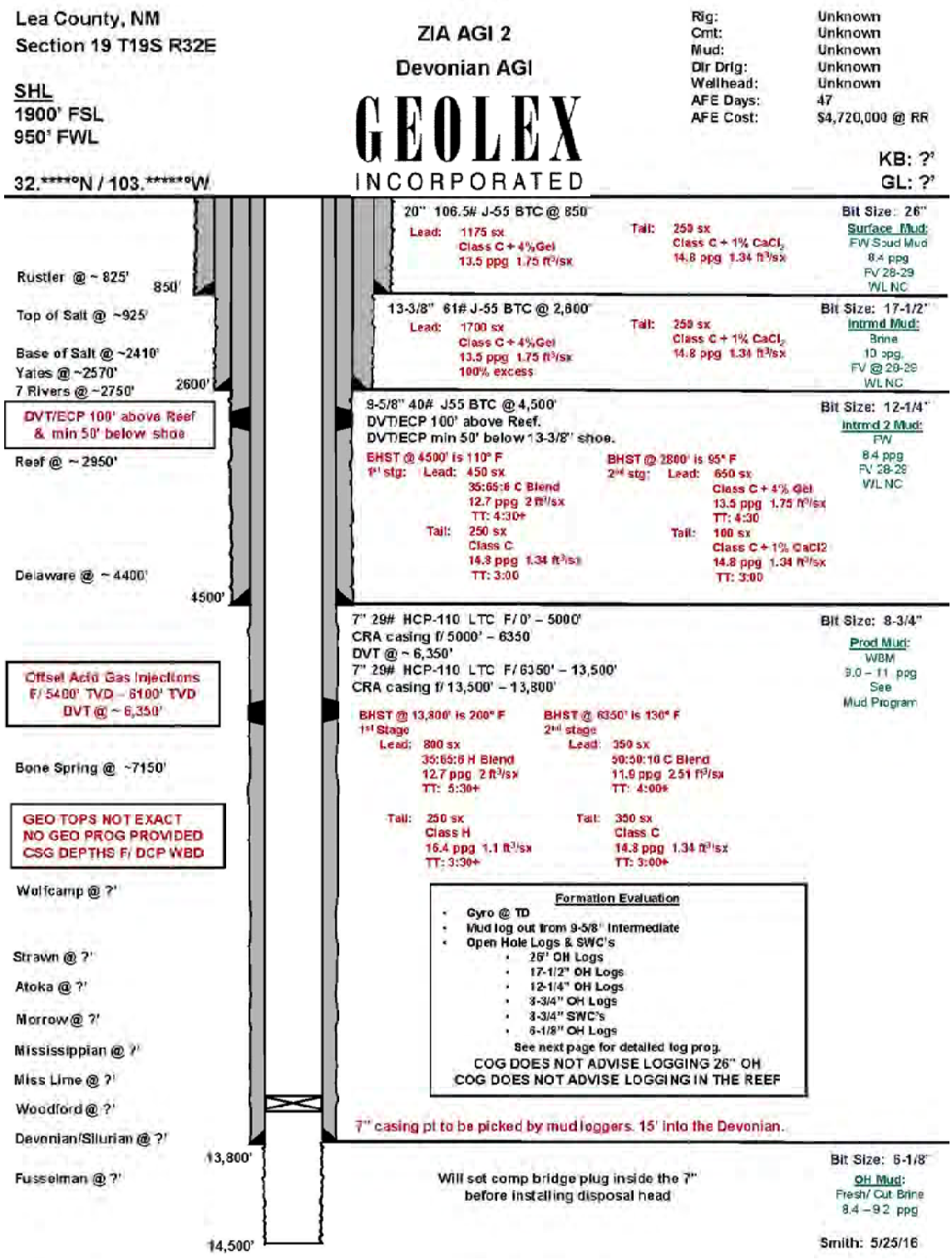


Figure 5b: Schematic of Proposed Zia AGI #2D Well Design

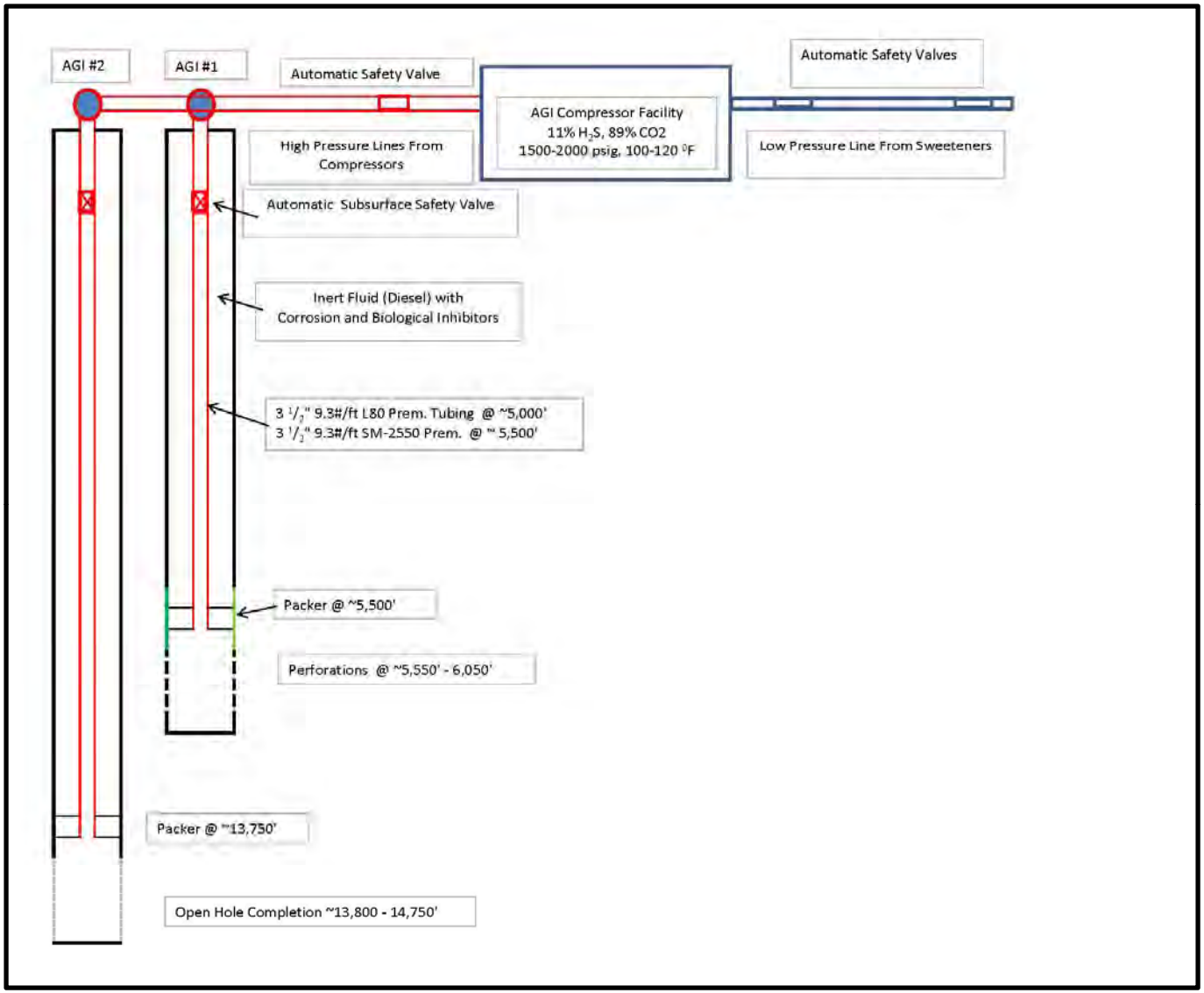


Figure 6: Generalized Zia AGI Facility and General Injection Well Design

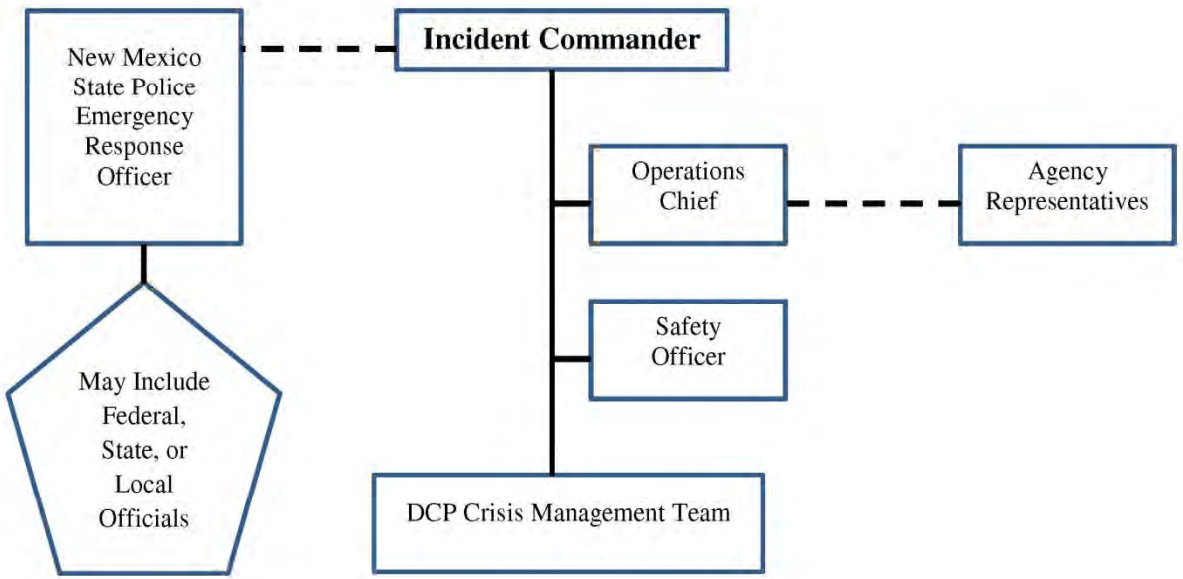


Figure 7: Incident Command System Structure

Figure 8: Photograph of H2S Warning Sign

APPENDICES

APPENDIX A

IMMEDIATE ACTION PLANS

LEVEL 1 ACTIVATION

Activating Conditions:

- **H_2S of 10 ppm or greater detected at any fixed monitor.**

Alarms and Automated Activations:

- **Flashing yellow lights or beacons and an intermittent horn are activated if any fixed monitor senses H_2S at 10 ppm or greater. The horn and flashing yellow lights are redundant systems which function independently of one another so that should one system fail, the other would remain active. These systems incorporate backup battery capabilities as recommended in API RP 55 which insure their operation in the event of a power failure.**
- **A computer in the Control Room and in the office of the Plant Supervisor establishes the location of the monitor(s) at the Plant or Wellsite that has activated the alarm and flashing yellow beacons.**
- **All employees also wear personal monitors that sound an audible alarm at 10 ppm H_2S or greater.**

Actions:

1. At the initial sound of an audible alarm or the sight of a flashing yellow beacon, responding Operator(s) in the vicinity of the alarm will put on 30 minute Self-Contained Breathing Apparatus (SCBA) and help any person in distress evacuate to Emergency Assembly Area 1.
2. All other personnel in the Plant complex shall immediately proceed to Emergency Assembly Area 1 (see Figures 2c and 4).
3. Control Room Operator and Plant Supervisor will be notified of the release. Plant Supervisor or designee will assume the role of IC. Control Room Operator will remain in the control room, identify the location(s) of the alarms and monitor H_2S concentrations throughout the Plant.
4. If a perimeter monitor (see Figure 2) detects 10 ppm H_2S or greater, all entities and individuals located within the 500 ppm ROE (see Figure 4) will be notified by the IC or designee that a release is occurring and to stand by for further instructions. Entities will be advised to alert their employees and any third parties working for them, or imminently scheduled to work in the area, of the release and to leave the area and not return until further notice. (Phone numbers are listed in Appendix C).
5. If deemed necessary, Plant personnel as designated by the IC will contact local emergency response service providers (phone numbers provided in Appendix C).
6. All personnel will be accounted for at Emergency Assembly Area 1 using the Plant sign in sheet and air quality will be monitored for H_2S concentrations. If H_2S concentrations reach 10 ppm or greater at Emergency Assembly Area 1, all personnel will be evacuated to Emergency Assembly Area 2 using the designated routes (see Figures 2C and 4).
7. If the concentration of H_2S in the control room reaches 10 ppm, the Control Room Operator will also put on a 30 minute SCBA.
8. Responding Operator(s) wearing SCBAs will assess the location of the alarm and attempt to make an initial determination of its cause and rule out potential false alarms based on sensor malfunction or other conditions. If the cause of the release is a minor problem such as a packing or seal leak, the Operator(s) will attempt to take the necessary steps to correct the situation and eliminate the source of the release.
9. IC will designate secondary re-entry teams in 30-minute SCBA's to re-enter and resolve the situation. Re-entry will occur in 15-minute increments at the direction of the IC until the problem is resolved or the Emergency Shutdown (ESD) is activated.
10. If corrective actions are successful, and the release is resolved and monitored H_2S levels in the Plant return to less than 10 ppm, the IC or designee will signal all clear, and personnel will be allowed to sign in and re-enter the Plant to resume work.
11. If the release is not resolved and H_2S levels continue to rise IC will initiate a Level 2 Response and/or instruct Operators to initiate Plant ESD.
12. The IC will initiate and maintain a Chronologic Record of Events Log (see Appendix F).
13. The Plant Supervisor or designee will contact the Oil Conservation Division (OCD) district office within 4 hours of a release that activates the plan at Level 1. **Per 19.15.11.16 NMAC, notification of Contingency Plan implementation will be submitted to the OCD via form C-141 within 15 days of release.**

LEVEL 2 ACTIVATION

Activating Conditions:

- **Corrective actions at Level 1 are unsuccessful;**
- **90 ppm of H_2S or greater is detected at any fixed monitor.**
- **Operators activate ESD.**

Alarm and Automated Activations:

- **Continuous horn and flashing yellow lights will be activated. The horn and flashing lights are redundant systems which function independently of one another so that should one system fail, the other would remain active. These systems incorporate backup battery capabilities as recommended in API RP 55 which insure their operation in the event of a power failure.**

Actions:

1. The responding Operator(s), will put on SCBAs and help any persons in distress to evacuate to Emergency Assembly Area 2 (see Figure 4).
2. The Plant Supervisor and the Control Room Operator will be notified. The Plant Supervisor, or designee, will assume the role of IC. The Control Room Operator will put on SCBA, remain in the control room and monitor H_2S concentrations throughout the Plant.
3. All personnel will be evacuated to Emergency Assembly Area 2 via designated routes (see Figure 4).
4. At Emergency Assembly Area 2, all personnel will be accounted for using the Plant sign-in list, and air quality will continue to be monitored for H_2S at Emergency Assembly Area 2.
5. If two or more monitors within the AGI fenced area or around the AGI compressor (see Figure 2) detect 90 ppm H_2S or greater, AGI compression will be shut down.
6. Plant ESD can be activated at any time by the Zia II Plant Operators as they and the IC determine that conditions are appropriate for such action.
7. Incident Command Center (ICC) will be established at Emergency Assembly Area 2.
8. A media staging area adjacent to Emergency Assembly Area 2 will be established and all media will be directed to it.
9. IC will designate personnel with H_2S monitors and emergency trailers to move to the designated Level 2 (500 ppm ROE) roadblock areas shown on ROE map. Lusk Plant Road (CR-248), Dry Lake Road (CR 126) and Maljamar Road (CR 126a) will be blocked to prevent entry into the 500 ppm ROE (see Figure 4). Air quality will be monitored at each road block.
10. Emergency Responders, local law enforcement BLM and state agencies, including the OCD District Office (phone numbers provided in Appendix C) will be notified of the release and the status of containment by the IC or designee.
11. Designated personnel will notify all entities, individuals and producers within the 500 and 100 ppm ROE (phone numbers provided in Appendix C) of the nature of the release and the status of containment. All will be instructed to evacuate, or shelter in place, depending on the nature of the release and the prevailing wind conditions. They will be instructed to immediately alert all company personnel, third party contractors and/or service companies working in the area and those imminently scheduled to work in the area of the Plant evacuation status and advise them to leave and not reenter the Plant vicinity until further notice. All will be advised of the roadblocks on Lusk Plant Road (CR-248), Dry Lake Road (CR 126) and Maljamar Road (CR 126a).
12. Re-entry will occur in full SCBA and at 15-minute increments at the direction of the IC until IC determines problem has been resolved.
13. If release is resolved and monitored levels of H_2S in the Plant are less than 10 ppm, IC or designee may authorize personnel to return to the Plant.
14. All entities and individuals previously notified will be informed that the release has been resolved and advised of the current monitored H_2S levels. Roadblocks will be recalled, and traffic will be restored.
15. If monitored H_2S levels at Emergency Assembly Area 2 or Level 2 roadblocks exceed 10 ppm, all personnel will evacuate to General Emergency Assembly Area 3 via designated route, ICC and media staging area will also be moved to Assembly Area 3.
16. If the release is not resolved or H_2S levels continue to increase, IC will initiate a Level 3 Response.
17. The IC will initiate and maintain a Chronologic Record of Events log. (Appendix F)
18. The Plant Supervisor or designee will contact the Oil Conservation Division (OCD) district office within 4 hours of a release that activates the plan at Level 1. **Per 19.15.11.16 NMAC, notification of Contingency Plan implementation will be submitted to the OCD via form C-141 within 15 days of release.**

LEVEL 3 ACTIVATION

Activating Conditions:

- **Corrective actions at Level 2 are unsuccessful;**
- **H_2S concentrations reach 10 ppm or greater at Emergency Assembly Area 2;**
- **H_2S concentrations reach 10 ppm or greater at Level 2 roadblocks;**
- **A catastrophic release, fire or explosion has occurred;**
- **A continuous release of maximum volume for 24 hours occurs;**
- **As per NMAC 19.15.11 there is indication of 100 ppm H_2S in any defined public area, 500 ppm at any public road, or 100ppm at a distance greater than 3,000 feet from the site of the release.**

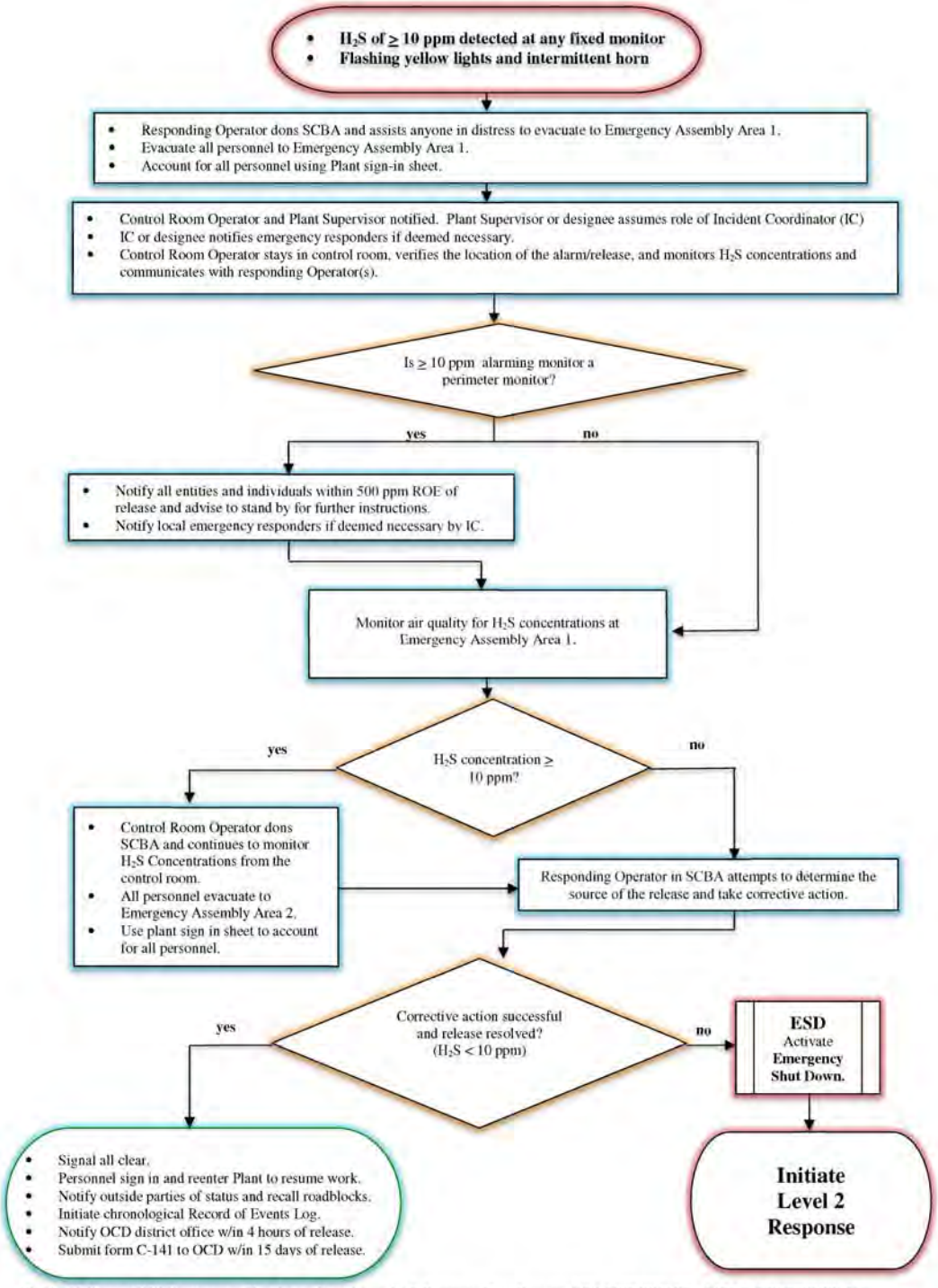
Actions:

1. All personnel should be evacuated to and accounted for at Emergency Assembly Area 3 using the Plant sign in sheet, and air quality will be monitored for H_2S concentrations (see Figure 4).
2. IC shall have activated or will immediately activate Plant ESD.
3. The ICC and media staging area shall be established and/or moved to Emergency Assembly Area 3.
4. Dispatch personnel with emergency trailers to move or establish designated Level 3 roadblocks at Lusk Plant Road (CR-248), Dry Lake Road (CR 126) and Maljamar Road (CR 126a) to prevent entry into the 100 ppm ROE (see Figure 4). Monitor H_2S concentrations at the roadblocks.
5. Local emergency responders, BLM, and state agencies, including the OCD District Office, will be notified of the release and status of containment (phone numbers provided in Appendix C).
6. All individuals and entities within the 100 ppm ROE will already have been notified to evacuate or shelter in place. IC will review the status of evacuation, and make the final decision whether individuals within the 100 ppm ROE should evacuate or shelter in place based on, but not limited to H_2S concentration, wind conditions and whether a safe evacuation can be implemented. If individuals within the 100 ppm ROE are instructed to evacuate, IC will recommend an evacuation route. All entities will be instructed to immediately alert all company personnel, third party contractors and/or service companies working in the area and those imminently scheduled to work in the area of the Plant evacuation status and advise them to leave and not enter, or re-enter the Plant vicinity until further notice. All will be advised of the roadblocks on Lusk Plant Road (CR-248), Dry Lake Road (CR 126) and Maljamar Road (CR 126a).
7. If escaping vapors have been ignited, the vapors should be allowed to continue to burn unless the fire endangers personnel, the public, other property, or other equipment.
8. Re-entry will occur in full SCBA and cascade breathing air systems at the direction of the IC until IC determines problem has been resolved.
9. Once release is resolved and monitored levels of H_2S in the Plant are less than 10 ppm, IC or designee may authorize personnel to sign in and return to the Plant.
10. All entities and individuals previously notified will be informed that the release has been resolved and advised of the current monitored H_2S levels at the Plant. Roadblocks will be recalled and traffic will be restored.
11. The IC will initiate and maintain a Chronologic Record of Events log. (Appendix F)
12. The Plant Supervisor or designee will contact the Oil Conservation Division (OCD) district office within 4 hours of a release that activates the plan at Level 1. **Per 19.15.11.16 NMAC, notification of Contingency Plan implementation will be submitted to the OCD via form C-141 within 15 days of release.**

APPENDIX B

RESPONSE FLOW DIAGRAMS

ZIA II Gas Plant—Level 1 Activation Response Flow



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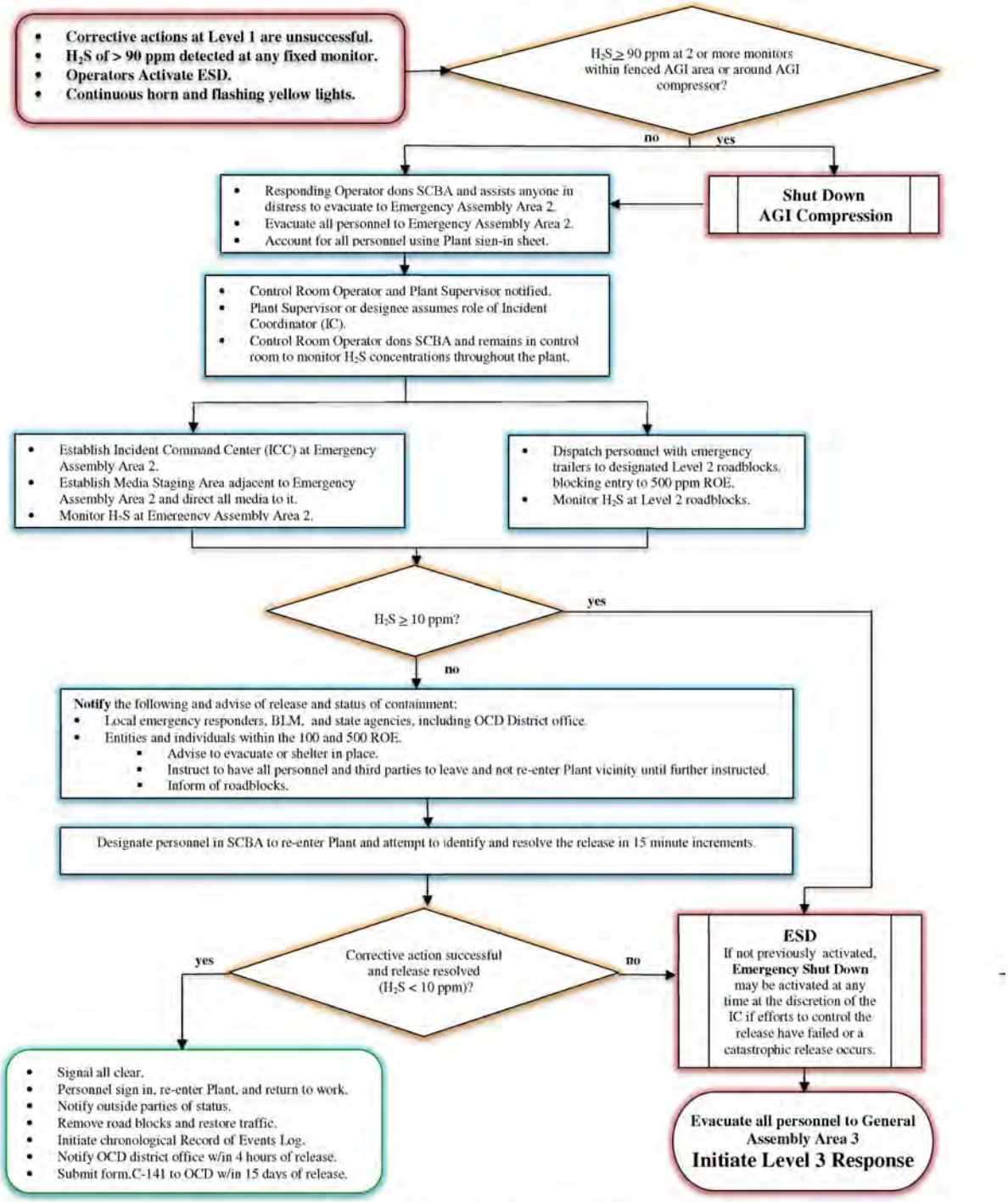
ZIA II Gas Plant —Level 2 Activation Response Flow



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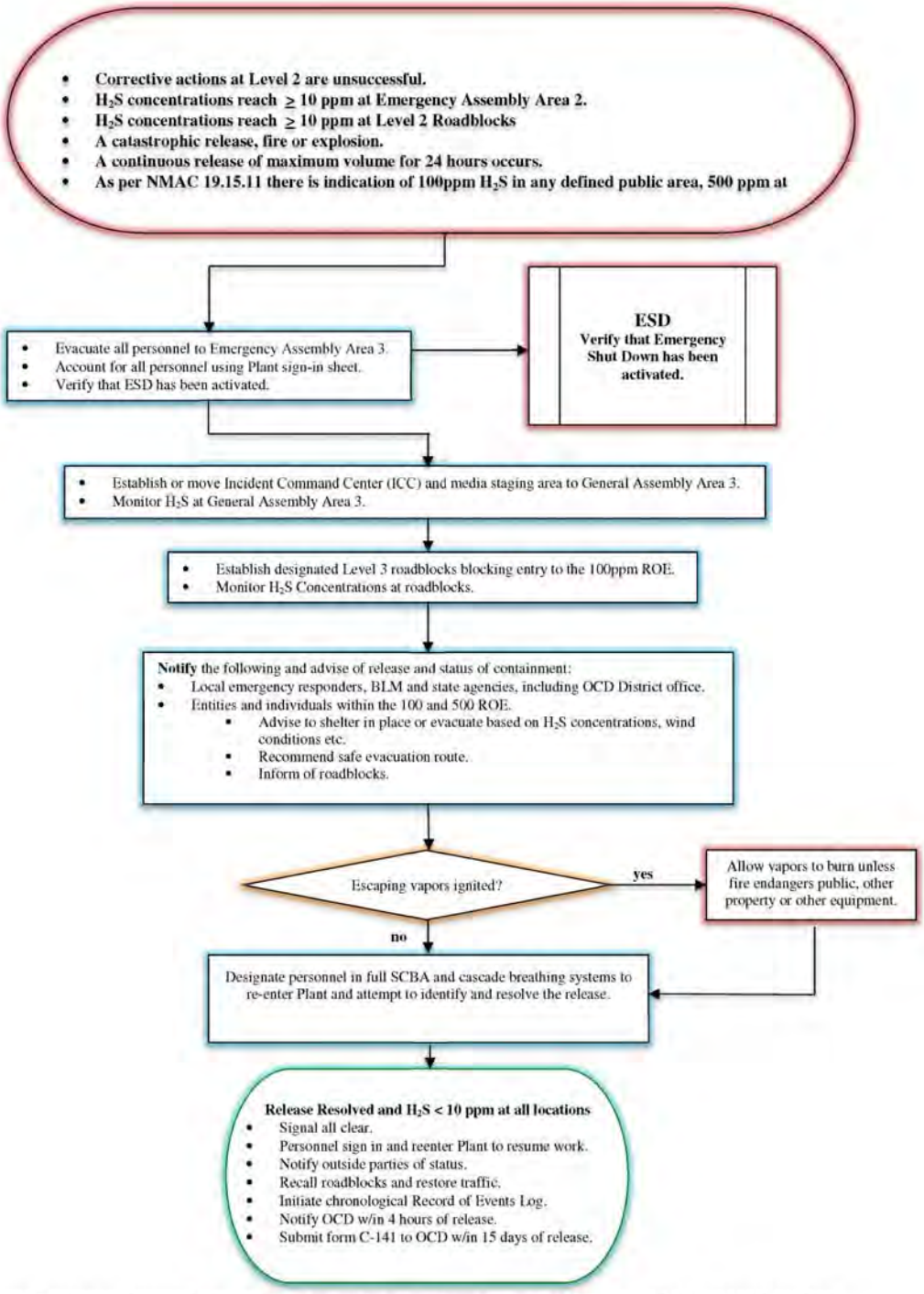
ZIA II Gas Plant—Level 3 Activation Response Flow



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APPENDIX C
TELEPHONE NUMBERS
EMERGENCY CALL LIST

BUSINESSES AND PUBLIC RECEPTORS WITHIN THE ROE
There are none

PRODUCERS WITH WELLS WITHIN THE ROE

PRODUCER	OFFICE LOCATION	Office Phone
500 ppm ROE		
Chisos, Ltd.	670 Dona Ana Rd SW Deming, NM 88030	575-546-8802
COG Operating LLC	600 W. Illinois Ave One Concho Center Midland, TX 79701	575-748 6940
Devon Energy	333 W Sheridan Ave Oklahoma City, OK 73102	405- 235-3611
Oxy USA, Inc.	1017 W Stanolind Rd Hobbs, NM 88240	575-397-8237
Shackelford Oil Co	203 W Wall St #200 Midland, TX 79701	432-682-9784
Tandem Energy Corp	200 N Loraine, Suite 500 Midland, TX 77210	432-686-7136
Tom R. Cone	1304 W Broadway Pl Hobbs, NM 88240	575-396-3681
100 ppm ROE		
Apache Corp.	303 Veterans Airpark Ln Suite 3000 Midland, TX 79705	432-838-1062
BOPCO, LP	3104 E Greene St Carlsbad, NM 88220	575-887-7329
Cimarex Energy Company of Colorado	600 N. Marienfeld Street, Suite 600 Midland, TX 79701	432-571-7800
Endurance Resources, LLC	11382 Lovington Hwy Artesia, NM 88210	575-308-0722
Lynx Petroleum Consultants, Inc.	3325 N Enterprise Dr Hobbs, NM 88240	575-392-6950
Ray Westall Operating, Inc.	PO Box 1 Loco Hills, NM 88255	575-677-2376
Yates Petroleum Corporation	105 South 4th Street Artesia, NM 88210	575-748-1471

DCP COMPANY INTERNAL NOTIFICATIONS

NAME	TITIE	OFFICE	CELL
Todd Allison	Zia II Plant Supervisor		361-318-3275
Charlie Joslin	Hobbs Plant Supervisor		575-802-5101
Russ Ortega	SENM Asset Director	575-597-5598	575-390-7160
Lionel Torrez	SENM Asset Safety Coordinator	575-677-5227	575-618-9475
Jackie Strickland	GM Operations Permian Region	432-620-4066	979-732-7893
Bryan Frederick	President G&P Business Unit	713-735-3667	713-503-3130
	Safety Manager Permian Region	432-620-4009	
	DCP Gas Control, Houston, TX	800-435-1679	N/A
Brad Griffith	PSM Coordinator	575-677-5223	575-499-6873

EMERGENCY RESPONDERS

AGENCY	PHONE
Emergency Dispatch	911
Hobbs Fire Department	575-397-9308
Hobbs Police Department	575-397-9265
Hobbs Ambulance Service	575-397-9308
New Mexico State Police (Hobbs)	575-392-5580
Lea County Sheriff's Office	575-396-3611
Hobbs-Lea Regional Medical Center	575-492-5000
Lubbock University Medical Center (UMC) (Level 1 Trauma Center)	806-345-9911
New Mexico Poison Control (Albuquerque)	800-222-1222
HELICOPTER SERVICES AeroCare (Lubbock) Air Med (El Paso)	 800-823-1991 800-527-2767

COUNTY AND LOCAL LAW ENFORCEMENT AND PUBLIC AGENCIES

AGENCY	PHONE NUMBER
Oil Conservation Division Santa Fe Office District 1 Office, Lea County (Hobbs)	 505-476-3440 575-370-3186
Local Emergency Planning Committee (LEPC) Lea County	 575-396-8607
New Mexico State Police (Hobbs)	575-392-5580

Lea County Sheriff's Office	575-396-3611
National Response Center (NRC)	800-424-8802
New Mexico Department of Homeland Security & Emergency Management (NMDHSEM)	505-476-9600
New Mexico Emergency Response Commission in NMDHSEM	505-476-9640
New Mexico Department of Public Safety	505-827-9282
Bureau of Land Management (Carlsbad Office)	575-234-5972

APPENDIX D

RADIUS OF EXPOSURE (ROE) CALCULATIONS

DCP

MIDSTREAM ZIA II PLANT INLET Stream ROE CALCULATIONS PURSUANT TO RULE 11

If data is provided in mole% use calculator below for getting ppm

Enter Mole % in cell C5	Mole %	ppm
Convert mole% to ppm	0.9992	9992

If data is provided in mole fraction use calculator below for getting ppm

Enter Mole Fraction in cell C10	Mole Fraction	ppm
Convert mole fraction to ppm		0

Use ppm derived from either of above calculations to input data below

Input Data Here	H_2S Concentration (ppm)	9992
	24 Hour Throughput (MMCFD)	200

The radius of exposure is calculated using the following equations:

100 ppm ROE calculation (as per 19 NMAC 15.11.7.K.1)

$$X_{100ppm} = [(1.589)(Conc_{H2S})(Q)]^{(0.6258)}$$

500 ppm ROE calculation (as per 19 NMAC 15.11.7.K.2)

$$X_{500ppm} = [(0.4546)(Conc_{H2S})(Q)]^{(0.6258)}$$

Where:

X = radius of exposure (ft)

$Conc_{H2S}$ = the decimal equivalent of the mole or volume fraction of H_2S in the gas

Q = daily plant throughput corrected to standard conditions (SCFD)

Plant parameters

Q =	200	MMSCFD =	200000000	SCFD		
$Conc_{H2S}$ =	9992	ppm =	0.9992	Mole %=	0.009992	Mole Fraction

ROE calculation:

X_{100ppm} = [(1.589)*(0.009992)*(200000000)]^(0.6258)

X_{100ppm} = 11717 ft = 2.22 miles

X_{500ppm} = [(0.4546)*(0.009992)*(200000000)]^(0.6258)

X_{500ppm} = 5354 ft = 1.01 miles

DCP MIDSTREAM ZIA II PLANT TAG Stream ROE CALCULATIONS PURSUANT TO RULE 11

If data is provided in mole% use calculator below for getting ppm

Enter Mole % in cell C5	Mole %	ppm
Convert mole% to ppm	14.2853	142853

If data is provided in mole fraction use calculator below for getting ppm

Enter Mole Fraction in cell C10	Mole Fraction	ppm
Convert mole fraction to ppm		0

Use ppm derived from either of above calculations to input data below

Input Data Here		
	H_2S Concentration (ppm)	142853
	24 Hour Throughput (MMCFD)	13.9892

The radius of exposure is calculated using the following equations:

100 ppm ROE calculation (as per 19 NMAC 15.11.7.K.1)

$$X_{100ppm} = [(1.589)(Conc_{H2S})(Q)]^{(0.6258)}$$

500 ppm ROE calculation (as per 19 NMAC 15.11.7.K.2)

$$X_{500ppm} = [(0.4546)(Conc_{H2S})(Q)]^{(0.6258)}$$

Where:

X = radius of exposure (ft)

$Conc_{H2S}$ = the decimal equivalent of the mole or volume fraction of H_2S in the gas

Q = daily plant throughput corrected to standard conditions (SCFD)

Plant parameters

Q =	13.9892	MMSCFD =	13989200	SCFD		
$Conc_{H2S}$ =	142853	ppm =	14.2853	Mole %=	0.142853	Mole Fraction

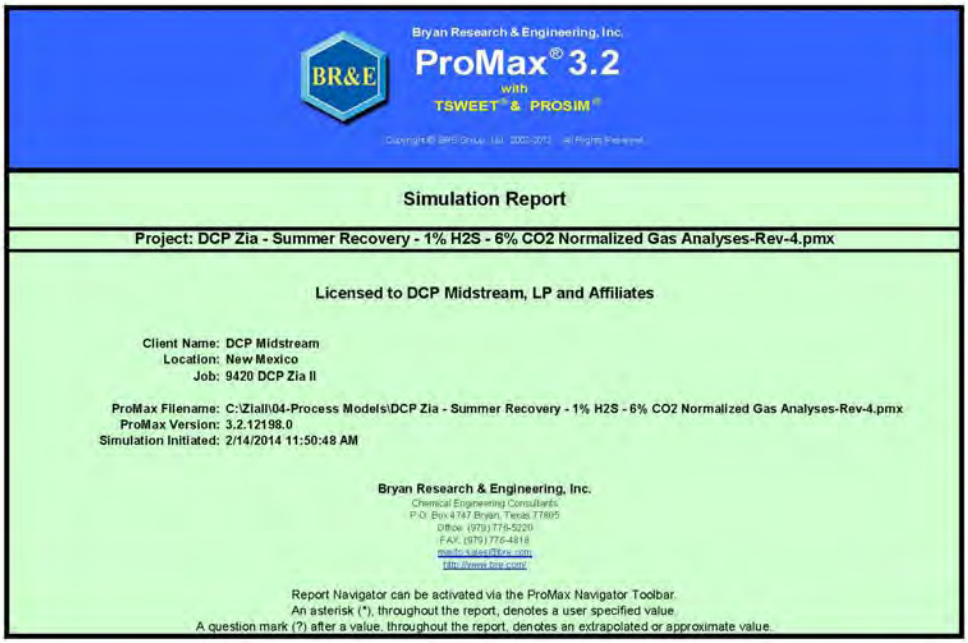
ROE calculation:

X_{100ppm} = [(1.589)*(0.142853)*(13989200)]^(0.6258)

X_{100ppm} = 11717 ft = 2.22 miles

X_{500ppm} = [(0.4546)*(0.142853)*(13989200)]^(0.6258)

X_{500ppm} = 5354 ft = 1.01 miles



Bryan Research & Engineering, Inc.

ProMax® 3.2

with

TSWEET® & PROSIM®

Simulation Report

Project: DCP Zia - Summer Recovery - 1% H2S - 6% CO2 Normalized Gas Analyses-Rev-4.pmx

Licensed to DCP Midstream, LP and Affiliates

Client Name: DCP Midstream
Location: New Mexico
Job: 9420 DCP Zia II

ProMax Filename: C:\Zia II\04-Process Models\DCP Zia - Summer Recovery - 1% H2S - 6% CO2 Normalized Gas Analyses-Rev-4.pmx
ProMax Version: 3.2.12198.0
Simulation Initiated: 2/14/2014 11:50:48 AM

Bryan Research & Engineering, Inc.
Chemical Engineering Consultants
P.O. Box 4747 Bryan, Texas 77805
Office: (979) 776-5220
FAX: (979) 776-4818
mailto:sales@bre.com
http://www.bre.com/

Report Navigator can be activated via the ProMax Navigator Toolbar.
An asterisk (*), throughout the report, denotes a user specified value.
A question mark (?) after a value, throughout the report, denotes an extrapolated or approximate value.

Component	Mol %
Hydrogen Sulfide	0.9992
Nitrogen	2.2311
Methane	68.3532
Carbon Dioxide	5.9954
Ethane	12.6577
Propane	6.1254
i-Butane	0.6925
n-Butane	1.6637
i-Pentane	0.3755
n-Pentane	0.3703
Neohexane	0.0035
Cyclopentane	0.0357
2-Methylpentane	0.0707
3-Methylpentane	0.0405
Hexane	0.0776
Methylcyclopentane	0.0493
Benzene	0.0458
Cyclohexane	0.0463
2-Methylhexane	0.0094
3-Methylhexane	0.0128
Cyclopentane, 1,1-Dimethyl-	0.0203
Heptane	0.0144
Methylcyclohexane	0.0248
Cyclopentane, 1,1,2-Trimethyl-	0.0012
Toluene	0.0169
2-Methylheptane	0.0062
3-Methylheptane	0.0012
Cyclohexane, 1,1-Dimethyl-	0.0036
Octane	0.0023
Ethylbenzene	0.0013
p-Xylene	0.0016
o-Xylene	0.0003
Cyclooctane	0.0021
Octane, 3-Methyl-	0.0030
Nonane	0.0004
Decane	0.0001
Undecane	0.0004
Dodecane	0.0003
Water	0.0439
DGA	0.0000
MDEA	0.0000
Piperazine	0.0000
TEG	0.0000
Total	100
Total Flow	200 MMSCFD

DCP ZIA GAS PLANT
CONVERSION OF INLET GAS TO TREATED AID GAS

Inlet Gas	Inlet Gas	TAG % (calculated)
H2S	0.9992	14.2853
C02	5.9954	85.7147
Various	93.0054	—
Total	100.0000	100.0000
Flow Rate	200	13.9892

APPENDIX E
H_2S PLAN DISTRIBUTION LIST

New Mexico Oil Conservation Division, Santa Fe Office

New Mexico Department of Public Safety (State Office)

Lea County LEPC/Emergency Manager*

Zia II Plant Supervisor's Office

Zia II Plant Control Room

DCP SENM Asset Manager's Office

DCP Permian Region Safety Manager's Office, Midland, TX

Zia II Plant Emergency Trailers

New Mexico State Police, Hobbs Office

State of New Mexico Emergency Response Commission (SERC)

Bureau of Land Management (BLM) Carlsbad Field Office

*Note: Lea County LEPC Emergency Manager will make and send copies of this plan to appropriate entities within his jurisdiction, including the Hobbs Fire Department.

APPENDIX F

CHRONOLOGIC RECORD OF EVENTS LOG

CHRONOLOGIC RECORD OF EVENTS LOG

1. Incident Name	2. Operational Period (Date/Time) From: To:	UNIT /ACTIVITY LOG ICS 214

3. Individual Name	4. ICS Section	5. Assignment/Location

6. Activity Log	Page	of

TIME	MAJOR EVENTS

7. Prepared by:	Date/Time

UNIT/ACTIVITY LOG		ICS 214

APPENDIX G

NEW MEXICO OIL CONSERVATION DIVISION
FORM C-141

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., 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 August 8, 2011

Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

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	API 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 Environmental Specialist:	
Title:	Approval Date:	Expiration Date:
E-mail Address:	Conditions of Approval:	Attached ☐
Date: Phone:		

* Attach Additional Sheets If Necessary