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

IN THE MATTER OF THE HEARING CALLED BY THE OIL CONSERVATION COMMISSION FOR THE PURPOSE OF CONSIDERING:

CASE NO. 16446

APPLICATION OF SALT CREEK MIDSTREAM, LLC FOR AUTHORIZATION TO INJECT ACID GAS INTO THE PROPOSED LEAVENWORTH AGI NO. 1 WELL IN SECTION 23, TOWNSHIP 26 SOUTH, RANGE 36 EAST, LEA COUNTY, NEW MEXICO.

ENTRY OF APPEARANCE AND NOTICE OF INTERVENTION

David Brooks hereby enters his appearance on behalf of the Oil Conservation Division, "the Division") as an intervening party.

The Division has standing to intervene as the agency responsible for reviewing these applications.

The Division requests that is late intervention be allowed, as it was not feasible to file sooner.

Respectfully submitted,

David K. Brooks

David K. Brooks
Assistant General Counsel
Energy, Minerals and Natural
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1220 S. St. Francis Drive
Santa Fe, NM 87505
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Attorney for the Oil Conservation Division

CERTIFICATE OF SERVICE

I hereby certify that a copy of the foregoing pleading was served upon the following party by e-mail on September 27, 2018:

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P.O. Box 2208
Santa Fe, NM 87504
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David K. Brooks

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OIL CONSERVATION DIVISION'S PRE-HEARING STATEMENT

The Oil Conservation Division through its counsel files the following Pre-hearing Statement.

PARTIES AND ATTORNEYS

APPLICANT
Salt Creek Midstream, LLC

APPLICANT'S ATTORNEYS
Adam G. Rankin
Holland & Hart, LLP
P.O. Box 2208
Santa Fe, NM 87504
(505)-988-4421
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INTERVENOR
Oil Conservation Division

INTERVERNOR'S ATTORNEY
David K. Brooks
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STATEMENT OF THE CASE

Salt Creek Midstream, LLC (Salt Creek) has filed an application for authorization to inject treated acid gas (TAG) for purposes of disposal through its proposed Leavenworth AGI Well No. 1 located in Section 23, Township 26 South, Range 36 East, NMPM in Lea County, New Mexico. Salt Creek proposes injecting an average daily rate of approximately 25,000,000 standard cubic feet of TAG (with a maximum daily rate of 60,000,000 standard cubic feet of TAG) into the Devonian and Silurian formations at a projected depth from approximately 16,459 feet to 18,600 feet.

The Oil Conservation Division does not oppose Salt Creek's request for the injection authority for the proposed well.

INTERVENOR'S PROPOSED EVIDENCE

WITNESS:

Phillip Goetze, Geologic Specialist, Oil Conservation Division of the Energy, Minerals and Natural Resources Department: Mr. Goetze has over 40 years of experience developing and implementing projects with environmental, hydrologic, mineral extraction, and regulatory application. Mr. Goetze's duties include the review of Class II Injection wells, along with serving as a hearing examiner for the Division in cases which include applications for injection permits and termination of injection authorization for breach of permit conditions. A copy of Mr. Goetze's resume describing his education and experience in detail is attached as Exhibit 3.

Mr. Goetze's testimony will include the results of the Division's review of the Form C-108 application submitted by Lonquist & Company, LLC, on behalf of Salt Creek. This will include recommendations for modifications of proposed activities described in the application and for conditions of approval to be incorporated into any order authorizing the injection of TAG for this proposed well.

Mr. Goetze's testimony is expected to last 20 minutes.

The Division will offer Mr. Goetze as an expert in petroleum geology and underground injection.

EXHIBITS

[1] Summary Table of Current UIC Class II Acid Gas Injection Wells in New Mexico

[2] Correspondence of proposed modifications and additional conditions of approval of authorization to inject

[3] Resume of Phillip Goetze

PROCEDURAL MATTERS

The Division's counsel knows of no procedural matters that the Commission needs to address.

Respectfully submitted,

David K. Brooks

David K. Brooks
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Resources Department
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Attorney for the Oil Conservation Division

Certificate of Service

I hereby certify that the Oil Conservation Division's Pre-Hearing Statement was served by e-mail on September 27, 2018.

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Case No. 16446 Division Exhibit 1

2018 Inventory of UIC Class II Acid Gas Injection (AGI) Wells

AGI Wells as of 09/27/2018	API	Well Name	Current Operator	Legal (UL-Sec-Twp-Rge)	Footages	Permit Description	Injection Formation(s)	Open-hole or Perforations (Depth of interval; in ft)	Re-entry of Existing Well or New Well	Permitted Disposal Fluids	2017 C-115 Reported Fluids	MSIP / Rate Limitations	Schedule for Testing	Date of Current MIT	H_2S (Or Other Gas) - CO_2 Content	Admin Order (if applicable)	Hearing Order	Case No.	Effective Order Date (Admin or Hearing)	Associated Processing Facility	H_2S Contingency Plan For AGI Well (Date)	Notes
NA	30-039-22756	Sims Fed No. 1	Black Hills Gas Resources	J-13-30N-4W	1730' FSL & 1820' FEL	SWD only; amended to include acid gas	Morrison and Entrada	Perfs: 8600 to 9570	Re-entry	Produced water only	Only liquid reported	1720 psi	5-year MIT cycle	8/17/2017	NA	SWD-665-C	None	NA	3/9/2007	East Blanco Water / H_2S Disposal Facility	Not required under current operating conditions.	Acid gas injection authority approved under SWD-665-A (03/08/1998; 100 MSCFPD of 0.22% H_2S gas); rescinded 10/09/2007 under Administrative Order SWD-665-C.
NA	30-015-00037	Indian Basin Gas Com No. 1	OXY USA WTP Limited Partnership	E-23-21S-23E	1980' FNL & 660' FWL	Acid gas plus onsite waste water	Devonian	P&A open-hole: 10,100 to 10,400	Re-entry	Produced water and gas plant waste	No injection; producing gas well (Morrow)	2020 psi (1991)	MIT annually when injection order in effect	NA	NA	SWD-416-A	None	NA	4/12/2000	Indian Basin Gas Processing Plant	Not required	Wolfcamp perfs squeezed for period when well was injection; last injection reported January 24, 2001; 2001 recompleted as Morrow producer; Devonian open hole was plug backed with cement to 9792 ft. SWD-416-A expired *ipso facto*.
1	30-015-31294	AGI SWD No. 1	OXY USA WTP Limited Partnership	E-23-21S-23E	2139' FNL & 1061' FWL	Acid gas plus onsite waste water	Devonian	Open-hole: 10,350 to 11,000	New well	Produced water and gas plant waste	Only liquid reported	2070 psi; no differentiation for liquid vs. gas	5-year MIT cycle	10/9/2014	50% - 50%	SWD-784-0	NA	NA	8/17/2000	Indian Basin Gas Processing Plant	Not required under current operating conditions.	Replacement well for Indian Basin Com Well No. 1; no record of inclusion in H_2S plan; no gas injection reported.
2	30-025-21497	Eunice Gas Plant SWD No. 1	Targa Midstream Services	L-27-22S-37E	2580' FSL & 1200' FWL	Acid gas and wastewater	San Andres	Open-hole: 4,250 to 4,950	Conversion of existing well	Gas plant waste	Gas and liquid	1600 psi (see R-12809-D)	5-year MIT cycle (see R-12809-C)	8/2/2017	85% SO_2 - 15%	SWD-1161-0	R-12809-D	13865 and 14575	3/27/2012	Eunice Gas Plant	H2S-048-0 (Revised 2011)	Originally approved as new well under Order No. R-12809 (Case No. 13865); SWD order allowed for substitution of proposed well with existing well; gas disposal reporting initiated in 2011.
NA	30-025-36254	Versado AGI No. 1L	Targa Midstream Services	L-27-22S-37E	2251' FSL & 1201' FWL	Acid gas and production water	San Andres	Perfs: 4500 to 5000	New well	Gas and liquid plant waste	NA	900 psi [limited by bottom-hole pressure]	MIT every 2 years	NA	85% SO_2 - 15%	NA	R-12809	13865	9/14/2007	Eunice Gas Processing Plant	NA	Well was cancelled in 2010 (injection authority) and 2011 (federal APD); re-completed Eunice Gas Plant Well No. 1 as substitution.
3	30-015-32324	Duke AGI No. 1	DCP Operating Company	O-7-18S-28E	1232' FSL & 1927' FEL	Treated acid gas	Devonian	Perfs: 11,200 to 11,500	New well	Acid gas	Gas only	Gas (with SpG of 0.8): 3240 psi Water: 2240 psi	Annual MIT	8/16/2013	35% - 63%	SWD-838-B	None	NA	11/5/2002	Artesia Gas Plant	H2S-051-0 (Feb 2015)	Pressures reported are below Maximum Surface Injection Pressure (MSIP) for gas; annual MIT requirement on page 2, Ordering Paragraph (3), SWD-838-B.
4	30-015-31905	Metropolis Disposal No. 1	Agave Energy	K-36-18S-25E	1650' FSL & 1650' FWL	Treated acid gas	Devonian, Fusselman, and Montoya	Open-hole: 9,930 to 10,500	Re-entry	Acid gas	Gas only	3280 psi	MIT every 2 years	12/7/2016	61% - 38%	SWD-936-0	R-13371	14601	3/14/2011	Dagger Draw Gas Plant	H2S-054-0 (June 2012)	Pressures reported are below MSIP.
5	30-025-40448	Red Hills AGI No. 1	Lucid Energy Delaware, LLC	I-13-24S-33E	1600' FSL & 150' FEL	Treated acid gas	Cherry Canyon	Perfs: 6,230 to 6,585	New well	Acid gas	Gas only	2085 psi; not to exceed 13 MMSCFD	MIT every 2 years	1/12/2018	5% - 95%	NA	R-13507-F	14720	11/9/2017	Red Hills Gas Plant	H2S-064-0 (April 2018)	Order No. R-13507 has original design specification; well changed ownership; previously drilled but not perforated until recently (well was TA for a period without final perforations); amended order required to re-instate injection authority approved by Commission; commenced injection May 2018.
6	30-045-35172	Pathfinder AGI No. 1	CCI San Juan	F-1 -29N-15W	1650' FNL & 2260' FWL	Treated acid gas	Entrada	Open-hole: 6,350 to 6,490	New well	Gas byproducts	Gas only	2160 psi	MIT every 2 years	1/4/2018	20% - 78%	NA	R-13201-B	14329 and 14080	2/15/2011	San Juan River Gas Processing Plant	H2S-057-0 (October 2009)	Administrative Order IPI-387 increases MSIP to 2160 psi.
7	30-025-40420	Maljamar AGI No. 1	Frontier Field Services	O-21-17S-32E	130' FSL & 1813' FEL	Treated acid gas	Lower Leonard and Wolfcamp	Perfs: 9,579 to 10,130	New well	Gas processing waste	Gas only	3200 psi; not to exceed 3.5 MMSCFD	Annual MIT	8/4/2017	12% - 88%	NA	R-13443-A	14664 and 15193	8/11/2011	Maljamar Gas Processing Plant	H2S-044-0 (Revised Oct 2015)	Order No. R-13443 has original design specification; Order No. R-13443-C permits a 3.5 MMSCFD into both wells or for a single operating well; Administrative Order IPI-454 increases MSIP to 3200 psi.
8	30-025-42628	Maljamar AGI No. 2	Frontier Field Services	O-21-17S-32E	400' FSL & 2100' FEL	Treated acid gas	Lower Leonard and Wolfcamp	Perfs: 9,600 to 10,220	New well	Gas processing waste	Gas only	3200 psi; not to exceed 3.5 MMSCFD	Annual MIT	8/4/2107	12% - 88%	NA	R-13443-B	15193	11/19/2014	Maljamar Gas Processing Plant	H2S-044-0 (Revised Oct 2015)	Order No. R-13443-C permits a 3.5 MMSCFD into both wells or for a single operating well; Administrative Order IPI-506 increases MSIP to 3200 psi.
9	30-025-38576	Linam AGI No. 1	DCP Operating Company	K-30-18S-37E	1980' FSL & 1980' FWL	Treated acid gas	Lower Bone Springs (Wolfcamp)	Perfs: 8,710 to 9,085	New well	Gas processing waste	Gas only	Gas (with SpG of 0.8): 2644 psi	MIT every 6 months until new packer installed, then annual testing (Ordering Paragraph (Z) amended order R-12546-K)	6/7/2017	25% - 75%	NA	R-12546-K	13589	5/6/2008	Linam Ranch Gas Processing Plant	H2S-043-0 (Revised Jan 2015)	Commission Orders R-12546 with amended orders -A though -K cover both AGI wells; No. 1 well developed leaking tube set (failed MIT) requiring additional hearings on restricted operation and additional monitoring / reporting requirements that are now SOP for AGI wells; R-12546-I removed temporary rate and pressure limits.
10	30-025-42139	Linam AGI No. 2	DCP Operating Company	K-30-18S-37E	1600' FSL & 1750' FWL	Treated acid gas	Lower Bone Springs (Wolfcamp)	Perfs: 8765 to 9006	New well	Gas processing waste	Gas only	Gas (with SpG of 0.8): 2644 psi	Annual MIT	2/16/2017	25% - 75%	NA	R-12546-K	13589	2/14/2013	Linam Ranch Gas Processing Plant	H2S-043-0 (Revised Jan 2015)	Commission Orders R-12546 with amended orders -A though -K cover both AGI wells.
11	30-025-38822	Jal 3 AGI No. 1	ETC Field Services	E-33-24S-37E	1550' FNL & 1000' FWL	Acid gas and production water	San Andres	Perfs: 4375 to 5200	New well	Gas and liquid plant waste	Liquid only	986 psi for original mixed liquid and gas injection; temporary 1330 psi gas only (ending 12/01/2015)	MIT every 2 years	7/27/2017	20% - 78%	NA	R-12921	14080	3/21/2008	South Eunice Gas Processing Plant	H2S-045-0 (2008)	Temporary MSIP increase approved and ended 12/1/2015; C-115 reports show all produced water with no gas injection and pressures below MSIP of 986 psi.
12	30-025-42208	Zia AGI No. 1	DCP Operating Company	Lot 3 (L)-19-19S-32E	2100' FSL & 950' FWL	Treated acid gas	Cherry Canyon and Brushy Canyon	Perfs: 5682 to 6260	New well	Gas processing waste	Gas only	2233 psi	MIT annually	7/26/2017	11% - 89%	NA	R-13809	15073	3/13/2014	Zia II Gas Processing Plant	H2S-063-0 (Revised 2016)	Order No. R-13809-A approved new surface and bottom-hole locations for both wells.
13	30-025-42207	Zia AGI No. 2	DCP Operating Company	Lot 3 (L)-19-19S-32E	1900' FSL & 950' FWL	Treated acid gas	Cherry Canyon and Brushy Canyon	Approved for 5470 to 6070	New well	Gas processing waste	NA	2233 psi	MIT annually	NA	11% - 89%	NA	R-13809	15073	3/13/2014	Zia II Gas Processing Plant	NA	Order No. R-13809-A approved new surface and bottom-hole locations for both wells.
		Zia AGI D No. 2	DCP Operating Company	Lot 3 (L)-19-19S-32E	1893' FNL & 950' FWL	Treated acid gas	Devonian and Silurian	Open-hole: 13755 to 14750	New well	Gas processing waste	Gas only	5028 psi	MIT annually	1/25/2017	11% - 89%	NA	R-14207	15528	9/6/2016	Zia II Gas Processing Plant	H2S-063-0 (Revised 2016)	Operator modified injection interval to Devonian section through Commission hearing and used existing APD approval for deeper well; the original Zia AGI No. 2 well never spud.
NA	30-025-40002	Monument AGI No. 1	Targa Midstream Services	O-36-19S-36E	662' FSL & 2513' FEL	Acid gas plus onsite waste water	Devonian and Fusselman	Open-hole: 8,350 to 9,200 (TD)	New well	Production water plus gas	P&A'd on 10/11/2017	1660 psi	MIT every 2 years	NA	28% - 62%	NA	R-13052	14181	11/16/2006	Monument Gas Plant	H2S-046-0 (2012)	Well is plugged and abandoned; replaced by two new AGI wells.
14	30-025-43470	Monument AGI D No. 2	Targa Midstream Services	O-36-19S-36E	685' FSL & 2362' FEL	Treated acid gas	Devonian and Silurian	Open-hole: 8350 to 9210	New well	Gas processing waste	Gas only	3000 psi; not to exceed 5.0 MMSCFPD	MIT annually	3/22/2017	18% - 82%	SWD-1654-0	R-13052-B	15740	9/6/2016	Monument Gas Processing Plant	Amendment of 2012 plan pending	Replacement well approved through administrative order using content of Commission Order No. R-13052 (as amended) as template.
15	30-025-Pending	Monument AGI D No. 3	Targa Midstream Services	O-36-19S-36E	905' FSL & 2362' FEL	Treated acid gas	Devonian and Silurian	Open-hole: 8350 to 9210	New well	Gas processing waste	Gas only	3000 psi; not to exceed 5.0 MMSCFPD	MIT annually	NA	18% - 82%	SWD-1671-0	R-13052-B	15740	4/24/2017	Monument Gas Processing Plant	Amendment of 2012 plan pending	Redundant well to D No. 2; no approved APD at present; replacement well approved through administrative order using content of Commission Order No. R-13052 (as amended) as template.

Case No. 16446 Division Exhibit 2

State of New Mexico
Energy, Minerals and Natural Resources Department

Date: September 27, 2018

To: New Mexico Oil Conservation Commission

From: Phillip Goetze, Engineering Bureau, OCD Santa Fe
William V. Jones, Bureau Chief, Engineering Bureau, OCD Santa Fe [Reviewer]

RE: STATEMENT REGARDING DIVISION'S REVIEW OF C-108 APPLICATION

***Case No. 16446*: Application of Salt Creek Midstream, LLC for Authorization to Inject Acid Gas into the Proposed Leavenworth AGI No. 1 well in Section 23, Township 26 South, Range 36 East, Lea County, New Mexico.**

Introduction

As part of the reviews performed for UIC Class II well applications, the Division requests applicant for acid gas injection (AGI) wells file for a hearing before the Oil Conservation Commission. With this request for a Commission hearing, the Division is obligated to provide the Commission with the results of an analysis of the information submitted in the Form C-108 application.

The applicant has provided to the Division two C-108 applications for Case No. 16446: one dated August 20, 2018 and a second dated September 20, 2018. The Division received the second application on September 27, 2018, limiting the time for review. The Division will provide the Commission with any additional recommendations should further review find issues.

Review of the C-108 Application Dated September 20, 2018

The Division has made several remarks and recommendations following a cursory review of the original C-108 application dated August 20, 2018. As a result, the applicant addressed these items in the second application:

1. The change of casing design: the well was originally proposed with a 7⅝-inch production liner hung from 10¾-inch intermediate casing. The Division had requested the applicant reconsider this design to have the liner replaced with a production casing string that was set at the top of the injection interval extending to surface. The new C-108 application contains a well design that provides for a cemented, 9⅝-inch production casing from the top of the injection interval to surface. The remaining casing strings and corresponding cement programs have been reconfigured to accommodate the larger production casing. The production casing design also includes 160 feet of corrosion-resistant casing at the base in contact with the injection interval.

This design change also addresses a concern by the Division for the use of 5½-inch tubing that was proposed for use with the 7⅝-inch production liner. The Division is not opposed to the use of 5½-inch tubing with the 9⅝-inch production casing.

2. Water well samples: the new application includes two recent water samples from water wells within one mile that satisfies Section XI of the Form C-108 application.

Recommendations to the Commission

The Division supports the approval of the application by Salt Creek for the proposed Leavenworth AGI Well No. 1 with the following recommendations for incorporation into any order authorizing injection. Some of these conditions, such as obtaining an approved hydrogen sulfide contingency plan prior to injection, were noted in the application, but the Division suggests their inclusion into an order to accommodate both the applicant and the Division's district inspectors in satisfying the requirements for compliance.

1. In addition to the proposed geophysical suite, the Division requests a mudlog be included into the drilling program.
2. Conduct a mechanical integrity test ("MIT") on the proposed AGI well annually.
3. All well drilling logs along with a static bottomhole pressure and temperature measured after completion of the well shall be submitted to the Division's District I office.
4. The final reservoir evaluation should confirm that the open-hole portion of the AGI well does not intersect any fault planes in the Devonian-Silurian section.
5. Conduct a step-rate test on the completed well before commencing injection. The maximum injection pressure for the proposed well may be appropriately adjusted after a step-rate test with the approval of the Division Director.
6. Include a biocide component in the annular fluid (diesel) of the well.
7. Keep a maintenance log of its annular fluid (diesel) replacement activities in the annulus of the well.
8. Incorporate temperature controls to govern the temperatures of injected fluid within parameters set by the operator and provide an alarm system for those controls should the parameters be exceeded.
9. Conduct continuous monitoring of surface TAG injection pressure, temperature and rate, surface annular pressure and bottomhole temperatures and pressures inside the annulus.
10. Equip the well with a pressure-limiting device including a one-way safety valve on the tubing approximately 250 feet below the surface.
11. Provide summary data on injection parameters monitored in item 8, as requested by the Division in quarterly reports. After one year, the Division may approve submission of such reports annually upon request.
12. Prior to commencing injection, the operator shall prepare and secure approval of the Division's Environmental Bureau in the Santa Fe office of a hydrogen sulfide contingency plan that complies with Division Rule 19.15.11.9 NMAC.

13. Thirty days prior to commencing injection, the operator shall, coordinate with the Division to establish immediate notification parameters for annulus pressure and tubing and casing differential pressure at a set injection temperature.
14. Ninety days after commencing injection, the operator shall review the pre-injection immediate notification parameters with the Division. If the Division determines that the parameters require modification, new immediate notification parameters shall be developed and implemented in coordination with the Division.
15. The immediate notification parameters shall be reviewed jointly by the operator and the Division periodically, but not less frequently than once a year.
16. Provide a report at the completion of every tenth year of injection summarizing the AGI well's performance and potential calibration of models due to information collected during the prior ten-year period.

The Division would also request that the Commission stipulate a time period for the applicant to obligate to the installation of a redundant AGI well to this proposed well. Prior experiences with single AGI well sites have shown severe adverse impacts to well operations and production as a result of the single AGI well being shut-in due to mechanical integrity issues. The Division would request a commitment for a redundant well to avoid waste of resources and reduce environmental concerns.

Finally, the Division request that the Commission provide to the Division's Director the authority to modify the order administratively for the following items:

1. Correction of the depths to the injection interval as a result of subsurface data after completing the proposed well;
2. Extension of the injection commencement date;
3. Modification of the well's surface location as long as the original notice of affected persons and area of review wells remain unchanged; and
4. Modification of the reporting requirements if endorsed by the Division following review of supporting information.

Case No. 16446 Division Exhibit 3

PHILLIP R. GOETZE

Oil Conservation Division

Energy, Minerals and Natural Resources Department, State of New Mexico

Over 40 years of experience developing and implementing a variety of projects with environmental, hydrologic, or regulatory applications.

PROFESSIONAL EXPERIENCES:

February 2013 to Present: Senior Petroleum Geologist / Hearing Examiner / Geohydrologist
Engineering Bureau, Oil Conservation Division, Energy, Minerals and Natural Resources Department
1220 South St. Francis Drive, Santa Fe, NM 87505

Administrative permitting for development and management of oil and gas resources under the state Oil and Gas Act. These projects include technical review of administrative applications and preparation of orders for non-standard locations, pool delineations, and non-standard proration units. Lead technical reviewer of applications for Class II wells (including salt water disposal wells and enhanced oil recovery (EOR) projects) under the New Mexico primacy agreement with the United States Environmental Protection Agency (USEPA) for its Underground Injection Control (UIC) Program under the Safe Drinking Water Act. Hearing examiner for Division hearings for cases regarding both protested and unprotested applications for approval of non-standard oil and gas circumstances that cannot be administratively permitted. Additional assignments related to the position:

- Provide technical assistance to District personnel and General Counsel staff regarding compliance issues for disposal and EOR wells.
- Development of protocols and recommended guidance for UIC related subjects such as induced seismicity, exempted aquifers and Class II disposal impacts on producing intervals.
- Prepare quarterly reports for review by the UIC coordinator for submission to the USEPA.
- Recommend changes in policy reflecting application of new technology or processes (e.g. injection rules per 19.15.26 NMAC).
- Provided expert testimony before the Oil Conservation Commission for applications and in support of rulemaking (e.g. acid gas injection well applications, casing requirements in the Roswell Artesian Basin, and reporting requirements for fracturing fluids).
- Provided expert testimony before the New Mexico Water Quality Control Commission (NMWQCC) in support of rulemaking (e.g. expanded authority for UIC Class I hazardous disposal wells).

Appointed as hearing examiner by the Division Director under 19.15.4.18 NMAC. Assist Santa Fe and District personnel with the Division's Loss Control Program.

March 2007 to February 2013: Hydrogeologist / Environmental Scientist / Project Manager
Gloreita Geoscience, Incorporated
1723 Second Street, Santa Fe, NM 87505

Multiple projects for environmental, hydrologic, and natural resource assessments including:

- Los Alamos National Laboratory (LANL): contract team leader for ground-water sampling (including springs, shallow wells, monitoring wells with Baski and Westbay systems) in support of the Ground Water Stewardship Program; four years of sediment mapping and soil sampling for contaminants as part of the LANL assessment of geomorphic influences following the Cerro Grande and Las Conchas fires; geodetic surveying (with Trimble RTK GPS and Geodimeter total station units) and waste characterization sampling following LANL and New Mexico Environment Department (NMED) protocols.
- Oversight of drilling, logging, and construction of deep exploration wells as part of Rio Rancho's City Water Program and the NM Office of the State Engineer (Ft. Sumner project).

Hydrologic modeling and ground-water abatement plan development for multiple dairy facilities in southern and eastern New Mexico.
Numerous Phase I Environmental Site Assessments (ESAs) for commercial, industrial, and undeveloped properties in northern New Mexico, Nevada, and Texas.
Establish protocols, sampling requirements, and compile data for annual reporting for clients with Closure and Post Closure plans for landfills.
Oversight of petroleum storage tank removals, closures, and Minimum Site Investigations following closure.
Preparation and annual reporting of NPDES permits for commercial clients in New Mexico.
Preparation and implementation of Stage I Abatement Plans for dairies in violation of the NMWQCC ground-water standards.
Quality assurance for ground-water modeling and various sampling programs including mandatory monitoring and special client-specific events.

April 2006 to January 2007: Hydrogeologist / Project Manager
Tetra Tech EM Incorporated
6121 Indian School Road NE, Suite 205, Albuquerque, NM 87110

This position included responsibility for redevelopment of previous client relationships while maintaining obligations to state, Federal and private projects. Most significant projects include the following:

Supervising geologist for drilling, construction, and development of deep monitoring wells at Kirtland Air Force Base for Long-Term Monitoring Program.
Preparation of sampling and analysis plans for Texas Department of Criminal Justice landfills.

September 1999 to March 2006: Hydrogeologist / Project Manager
ASCG Incorporated *of New Mexico* (now the WH Pacific Corporation)
6501 Americas Parkway NE, Suite 400, Albuquerque, NM 87110

Responsible for a variety of environmental services for site assessment and remediation of contaminated sites associated with Federal, state, and private clients in New Mexico, Arizona, and the Navajo Nation. Significant projects entail the following:

Field Technical Leader (as subcontractor) for drilling, construction, and development of deep and shallow monitoring wells at LANL for 2005.
Developed and supervised assessment drilling programs for Risk-Based Corrective Action assessments of petroleum-contaminated NMED and Bureau of Indian Affairs (BIA) sites in New Mexico and Arizona.
Responsible for project development and management of soil and ground-water remediation of hydrocarbon and solvent-contaminated sites including quarterly water sampling events and air monitoring for compliance.
Supervised and participated in resolution of correction actions identified under USEPA CA/CO 1998-02 at approximately 35 Bureau of Indian Affairs federal facilities including review of asbestos programs, PCB investigations and remediations, Phase I ESAs for property transfer, AST/UST removals, hazardous waste disposal activities, environmental audits, and validation sampling of previous remedial activities.
Completed development and oversight of voluntary corrective actions of hazardous wastes cited in notice of violations at the Southwestern Polytechnic Indian Institute.
Provided sampling program for the AMAFCA Storm Water Study for assistance in compliance of the MS4 for the City of Albuquerque.
Completed assessment for hydrocarbon contamination and prepared plans for remedial actions for five locations at BIA facilities during the last quarter of 2004.

July 1996 to August 1999: Geologist / Environmental Scientist; General Contractor
Phillip R. Goetze, Consulting Geologist, Edgewood, New Mexico

Subcontractor for environmental firms providing on-site technical support and report preparation. Primary contractors included the following:

Billings and Associates, Inc., Albuquerque, New Mexico

Responsible for acquisition of both soil and water data for assessment and for installation of remediation systems for hydrocarbon-contaminated sites.

Roy F. Weston Inc., Albuquerque, New Mexico

Temporary position with responsibilities for on-site supervisor for data acquisition (three drilling rigs), for health and safety monitoring, and for quality assurance of installation of multiple ground-water wells at a Department of Energy tailings remediation (UMTRA) site near Tuba City, Arizona.

January 1993 to July 1996: Project Geologist / Project Manager
Billings and Associates, Inc.
6808 Academy Pkwy, E-NE, Suite A-4, Albuquerque, NM 87109

Responsible for acquisition of air, soil, and water data for site assessments related to leaking underground storage tanks throughout New Mexico. Participated and supervised installation, operation, and maintenance of biosparging/SVE remediation systems at five New Mexico locations. Site assessment activities included preparation of health and safety plans, drilling supervision, water and soil sampling preparation, chain-of-custody maintenance, analytical data review and compilation, and report preparation.

June 1985 to December 1992: Independent Geologist and Environmental Scientist
Phillip R. Goetze, Consulting Geologist, Albuquerque, New Mexico

Subcontracting services for data acquisition in geophysics and mineral exploration. Primary contractors included:

Charles B. Reynolds and Associates, Albuquerque, New Mexico

Performed functions of seismologist and crew chief for consulting group specializing in shallow seismic geophysics for environmental and engineering applications. Projects included USGS hydrologic assessment of Mesilla Bolson; plume and paleosurface mapping at Johnson Space Center facility north of Las Cruces; plume and paleosurface mapping in Mortandad Canyon and TA-22 site, LANL; plume and paleosurface mapping at Western Pipeline facility at Thoreau, NM; plume and paleosurface mapping at UNC Partners mill and tailings site north of Milan; engineering assessment of collapsible soils at Tanoan residential development and along the east edge of Albuquerque.

Glorieta Geoscience, Inc., Santa Fe, New Mexico

Initiated and conducted sampling program for assessing economic potential of low-grade gold occurrence in southwest New Mexico.

November 1983 to September 1984: Fluid Minerals Geologist
Bureau of Land Management, Department of Interior, Cheyenne, Wyoming

Temporary detail to Casper office to alleviate backlog of assessments of federal oil and gas leases in Wyoming and Nebraska. Assessments required geologic evaluation of oil and gas potential for lands in Powder River, Wind River, Big Horn and Denver-Julesburg Basins. Determination of "known geologic structures (KGSs)" per Secretarial Order for categorizing of federal oil and gas minerals into competitive and non-competitive status. Deposed as expert witness and provide expert summaries and affidavits for cases before the Interior Board of Land Appeals (example: Case No. IBLA 84-798 for protest of KGS delineation).

June 1982 to September 1983: Field Geologist
United States Bureau of Mines, Department of Interior, Lakewood, Colorado

Assisted primary authors with field inventory and evaluation of mineral occurrences in 15 wilderness areas in Colorado (Central Mineralized Region), southern Wyoming, and eastern Utah. Field work included field mapping and sampling of abandoned mines and mineral occurrences within these areas and adjacent areas with potential impacts on wilderness designation.

July 1979 to January 1982: Geologist
United States Geological Survey, Department of Interior, Casper, Wyoming and Lakewood, Colorado

First two years exclusively mapping, drilling, and classifying coal resources in south central Wyoming. Detailed for two years to special team for preparation of impact statement: one of four principle authors for the Cache Creek-Bear Thrust Environmental Impact Statement which documented effects of two proposed oil and gas wells in designated wilderness area near Jackson, Wyoming. Deposed as expert witness in federal court. Final year primarily responsible for assessments of federal oil and gas leases for lands in Wyoming and Nebraska.

July 1977 to July 1979: District Geologist
Bureau of Land Management, Department of Interior, Socorro District Office, Socorro, New Mexico

Responsible for District minerals program for federal lands in west central portion of state. Assisted in environmental reports for land exchanges, classification of saleable mineral sites, mining claim validity determinations, inspection of surface reclamation for mineral extractions, inspection of oil exploration and geothermal gradient wells, and assessments for location of water wells in support of grazing projects.

EDUCATION:
New Mexico Institute of Mining and Technology, Socorro, New Mexico
Bachelor of Science in Geology, 1977

Additional Courses: EPA course requirements for Asbestos Inspector (10 years as active inspector); completion of state program for Licensed Contractor (NM; GS-29); EPA course requirements for Lead-Based Paint Risk Assessor (EPA Regions VI and IX; two years as active inspector); GSI Course *Application of Ground Penetrating Radar*; NGWA Course *Monitoring Natural Attenuation of Contaminants*.

PROFESSIONAL MEMBERSHIPS, LICENSES, OR CERTIFICATIONS:
American Association of Petroleum Geologists, Member No. 51,310
American Institute of Professional Geologist, Certified Professional Geologist No. 6,657
Alliance of Hazardous Materials Professionals, CHMM No. 11,401
ASTM International, Member No. 1,314,118 (Voting Member); Committees D18 (Soil and Rock) and E50 (Environmental Assessment, Risk Management and Corrective Action)
OSHA 40HR and 8HR Refresher Hazardous Waste Operations and Emergency Response (Current)
OSHA Hazardous Waste Operations and Emergency Response Manager/Supervisor (Current)
State of Alaska, Licensed Professional Geologist No. 514
State of Arizona, Registered Professional Geologist No. 40,812
State of Nevada, Certified Environmental Manager No. 2,218
State of Texas, Licensed Professional Geologist No. 2,278