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July 21, 2017

Lithium Exploration Group  
4635 S Lakeshore Dr, Suite 200  
Tempe, AZ 85282  
ATTN: Mr. Alex Walsh

**SUBJECT: WHITE TOP PROJECT, OVERHANG PROSPECT – MIOCENE RESERVOIRS  
SULPHUR MINES FIELD, CALCASIEU PARISH, LA**

We have acquired and reviewed the geologic and engineering data for the subject prospect area. The purpose of our review was to analyze Miocene reservoirs and estimate the reserves potential for the Overhang Prospect in Miocene sands. Additionally, we reviewed updates to previous analysis of the Miocene for the White Top Project and incorporated this in the summary data below. The Overhang Prospect is located on the east-southeast section of the White Top Project - Sulphur Mines Field Salt Dome. A summary of our findings and conclusions is listed below.

#### **FIELD SUMMARY**

Oil and Gas production in the Sulphur Mines Field first occurred in 1926. Production associated with this salt dome field has been from the lower Miocene and Upper Oligocene aged sands trapped on the flanks of the dome in structural traps formed by fault patterns associated with these types of piercement salt domes. Cumulative production is 32 million bbls. (North Summit Energy, LLC, 2016)

#### **FINDINGS AND CONCLUSIONS – White Top Project**

- The White Top Project: ~ 4,000 acres, 6 producing wells. Current production is ~ 65 BOPD.
- North Summit Energy's (NSE) Phase I plan is to further develop the shallow Miocene reservoirs by initially drilling 6 infill wells while acquiring high resolution 3D seismic data (2017 – 2018). \$475M per well - \$2.85 MM, Acquire & interpret high resolution 3D survey - \$1.0 MM. Additional Miocene locations expected, NSE anticipates 35 total Miocene development locations.
- NSE has identified deeper potential for the field in the Marg, Cib Haz, and Hackberry reservoirs. High resolution seismic is expected to delineate further development potential across all reservoirs.
- Phase II of the NSE plan is to exploit deeper potential (2018 – 2020). Acquire producing wells/Vonco/Yellow Rock stock for \$8.2 million. Drill additional 29 Miocene infill wells - \$13.77 MM. Then evaluate deeper potential with new seismic.

- Est. gross oil reserves, White Top Project: 756 MBO low, 1,379 MBO med., 1,754 MBO high.

<b>White Top Project, Reserves &amp; Economics Summary, as of July 1st, 2017</b>			
Category	Low	Medium	High
	Proved	Proved + Probable	Proved + Probable + Possible
Gross Oil Reserves, MBO	756	1,379	1,754
Gross Gas Reserves, MMCF	-	-	6,559
Net Oil Reserves, MBO	589	1,076	1,368
Net Gas Reserves, MMCF	-	-	5,116
NPV10, M\$	\$ 7,997	\$ 18,066	\$ 30,161
Nondiscounted Cashflow, M\$	\$ 11,901	\$ 26,916	\$ 51,420

\* Note: 78% NRI used for net, June 2017 NYMEX pricing, purchase and seismic not reflected in NPV estimate

- Low represents “Proved” values, those with reasonable certainty (90%) of being recovered. Medium represents “Proved + Probable” where probable values have roughly 50% likelihood of being recovered. And High represents “Proved + Probable + Possible” where Possible values have at least a 10% likelihood of occurring.
- Current reserve values primarily reflect shallow Miocene reservoirs with some deeper Hackberry gas accounted for in the possible category.
- Given the limited data available and limited resolution of currently available seismic, it’s likely that reserve estimates are restricted. Limited information was available due to the age of the field and vintage of acquired data.
- The Reserves & Economics table above represents a database which includes:
  - 6 producing wells, 25 shut-in wells
  - 13 Miocene drilling locations (3 added with overhang review). 6 of 13 are Proved Miocene locations, 7 are Probable Miocene locations.
  - 1 Possible Hackberry location
- Miocene drilling location wells were modeled after typical wells in North Summit’s drilling priority list: 65,000 to 90,000 barrels of recoverable oil per well.
- Additional potential for the White Top Project - Sulphur Mines Field is likely. Current work to acquire high definition seismic should broaden and increase these estimates for all reservoirs of interest (Micoene, Marg, Cib Haz, and Hackberry). It is expected that high resolution seismic will better define potential for the field in multiple reservoirs and enhance reserve estimates.

#### **FINDINGS AND CONCLUSIONS – Salt Dome Overhang Prospect**

- **A salt dome overhang is present on the east-southeast section of the Sulphur Mines Field, shown in the 2016 well logs for the Sulphur Brine #4 and Sulphur Brine #5 wells.**
- Salt dome overhangs often conceal oil in reservoir rock updip of productive wells drilled outside the salt during initial/early development. High resolution seismic data will aid in defining the salt face, identifying faults, and discovering deeper amplitude anomalies.
- The Sulphur Brine #4 log indicates ~ 290 feet of section under the overhang while the Sulphur Brine #5 log indicates ~ 1,000 feet of section. While reservoir quality pay does not appear in these logs, the downdip presence of productive Miocene reservoir is confirmed by offset wells.

- The Union Sulphur Co. FEE #785 is downdip of the overhang and produced 303,737 bbls from Miocene sands. Logs indicate multiple thick pay sands at ~ 45 degree angle of dip. These multiple Miocene sands can be filled updip of the FEE #785 well.
- Est. area for the Miocene Overhang Prospect is 4 acres with 100 feet of net pay most likely.
- Est. gross oil reserves, Overhang Miocene: 102 MBO low, 258 MBO medium, 460 MBO high.
- More overhangs at multiple producing horizons are anticipated to be identified with the new high resolution seismic.

### **Prestack Depth Migration and High Resolution Seismic Data**

Prestack Depth Migration is technology that has changed the interpretation of the shape of salt domes. Most salt domes, like Sulphur Mines, were originally interpreted as cylindrical "chimneys" of salt that extend to the "mother lode" of salt at depth (see Typical South Louisiana Salt Dome below). Contradictory to this view of salt domes as chimneys, Prestack Depth Migration has shown that many salt domes exhibit significant overhang, contain areas of sediment and prospects within the "core" of the dome at depth, and have a well-defined base rather than an extension to a "mother lode". Additionally, salt domes with a well-defined base open up the possibility of subsalt prospects not seen in older Post-stack Migrated data.

An article published on improved seismic imaging for salt domes regarding the Energy XXI Main Pass 73 Field (Kessler, et al. 2017) illustrates the type of shift in interpretation for existing salt dome fields that can occur with improved imaging. The results of the improved imaging for Main Pass 73 were:

- Significant overhangs seen at multiple horizons.
- Deep prospects were found in what was thought to be the "interior core" of the salt dome.
- Two wells were drilled into seismic amplitudes located in the historically interpreted salt body and found multiple hydrocarbon bearing sands. A well was reported to flow 5,500 BOPD.
- A subsalt prospect was found (undrilled at this time).

Our findings were based on a review of the available data and represent our best opinion. Actual reserves could be higher or lower than our estimates. For producing reservoirs, performance methods were used to estimate reserves. Extrapolations were made of historical data. Reserves and revenue estimates are based on information currently available and are subject to the uncertainties inherent in the application of judgmental factors in interpreting such information.

The data used in this evaluation was supplied by North Summit Energy, LLC or was obtained from public sources. Please find supporting geologic and engineering data attached.

Let me know if you have any questions. Thanks for letting us help with this project.

Sincerely,



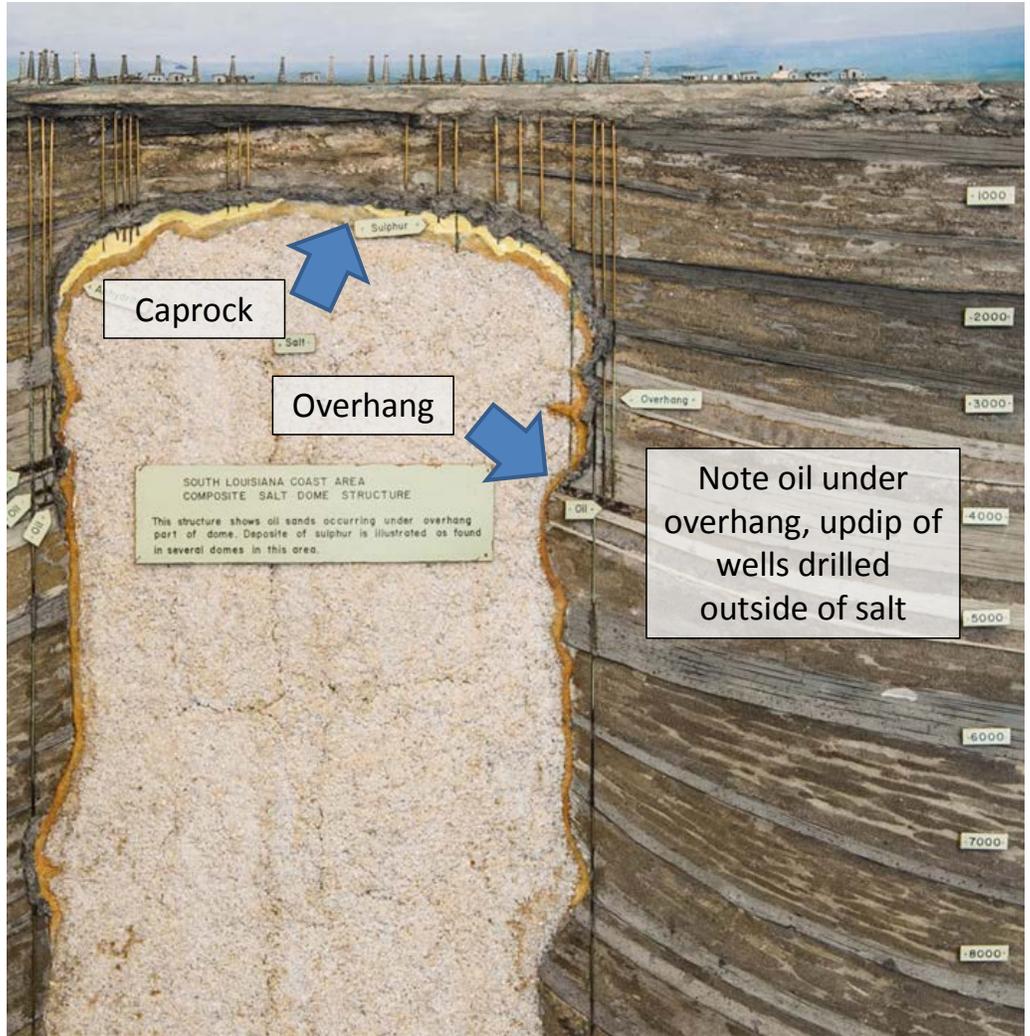
Kurt Mire

Petroleum Consultant

**Typical South Louisiana Salt Dome with Overhang**

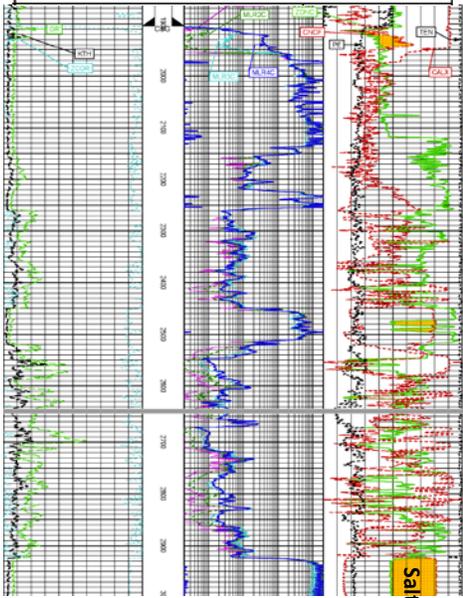
**High Resolution Seismic Data**

- Define salt face
- Identify faults
- Identify deeper amplitude anomalies



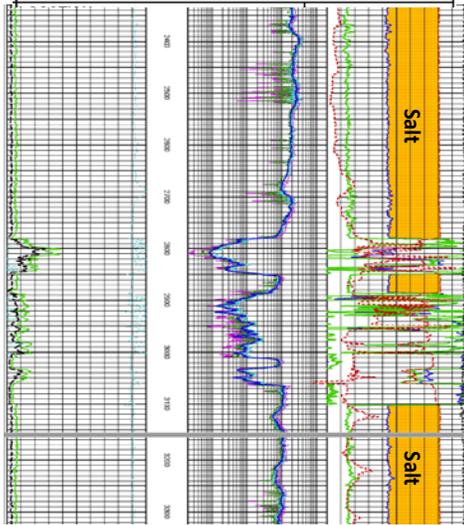
Louisiana State Exhibit Museum

COMPANY **BOARDWALK LOUISIANA MIDSTREAM LLC**  
 WELL **SULPHUR BRINE NO. 005**  
 FIELD **SULPHUR MINES**  
 PARISH **CALCASIEU** STATE **LOUISIANA**



1,020 feet of section under Overhang

COMPANY **BOARDWALK LOUISIANA MIDSTREAM LLC**  
 WELL **SULPHUR BRINE STRAT MINES WELL 4**  
 FIELD **SULPHUR MINES**  
 PARISH **CALCASIEU** STATE **LOUISIANA**



290 feet under Overhang

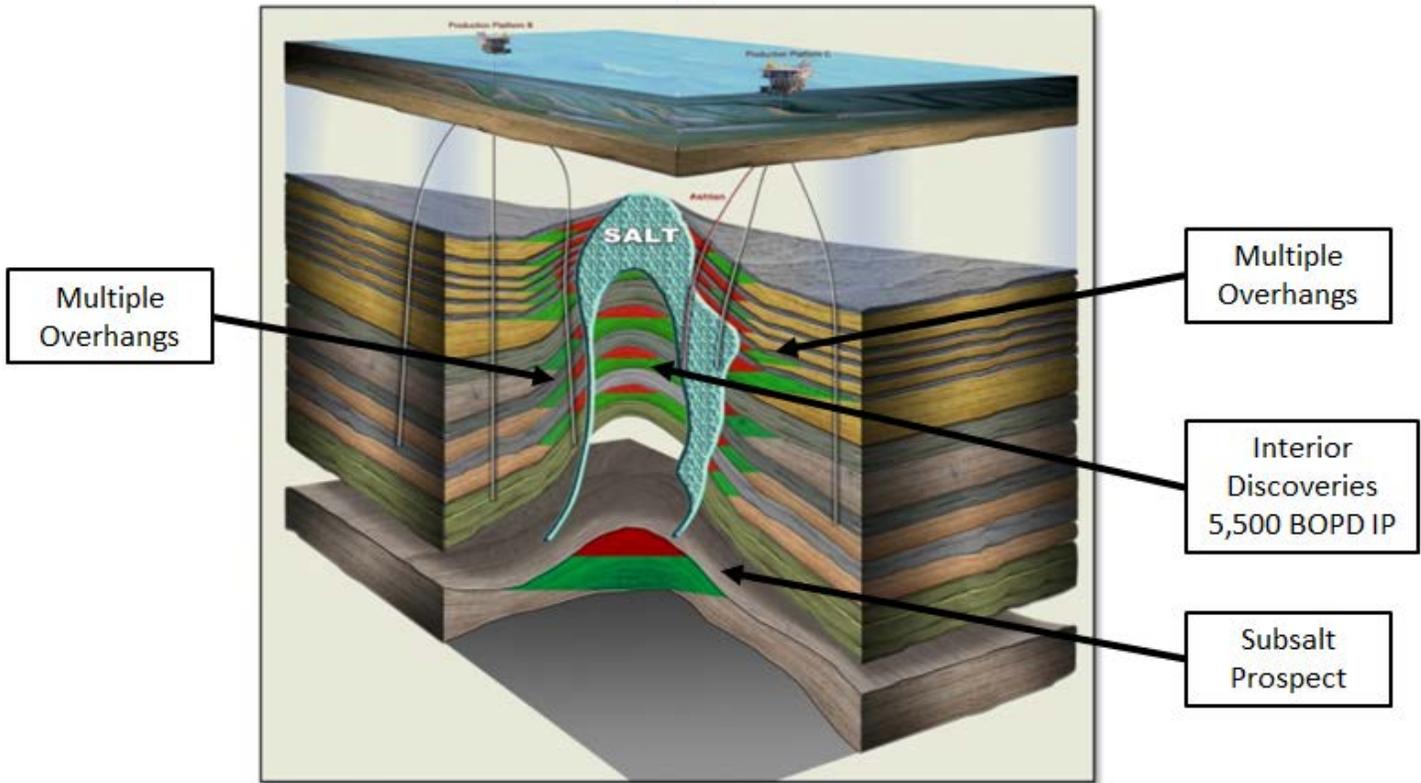
**Sulphur Brine #5 & Sulphur Brine #4 well logs indicating 1,000 feet and 290 feet of section under the overhang**



# Improved seismic imaging results for existing salt dome field at Energy XXI's Main Pass 73 (Kessler, et al. 2017)

<https://www.linkedin.com/pulse/model-building-depth-imaging-drilling-campaign-case-study-kessler>

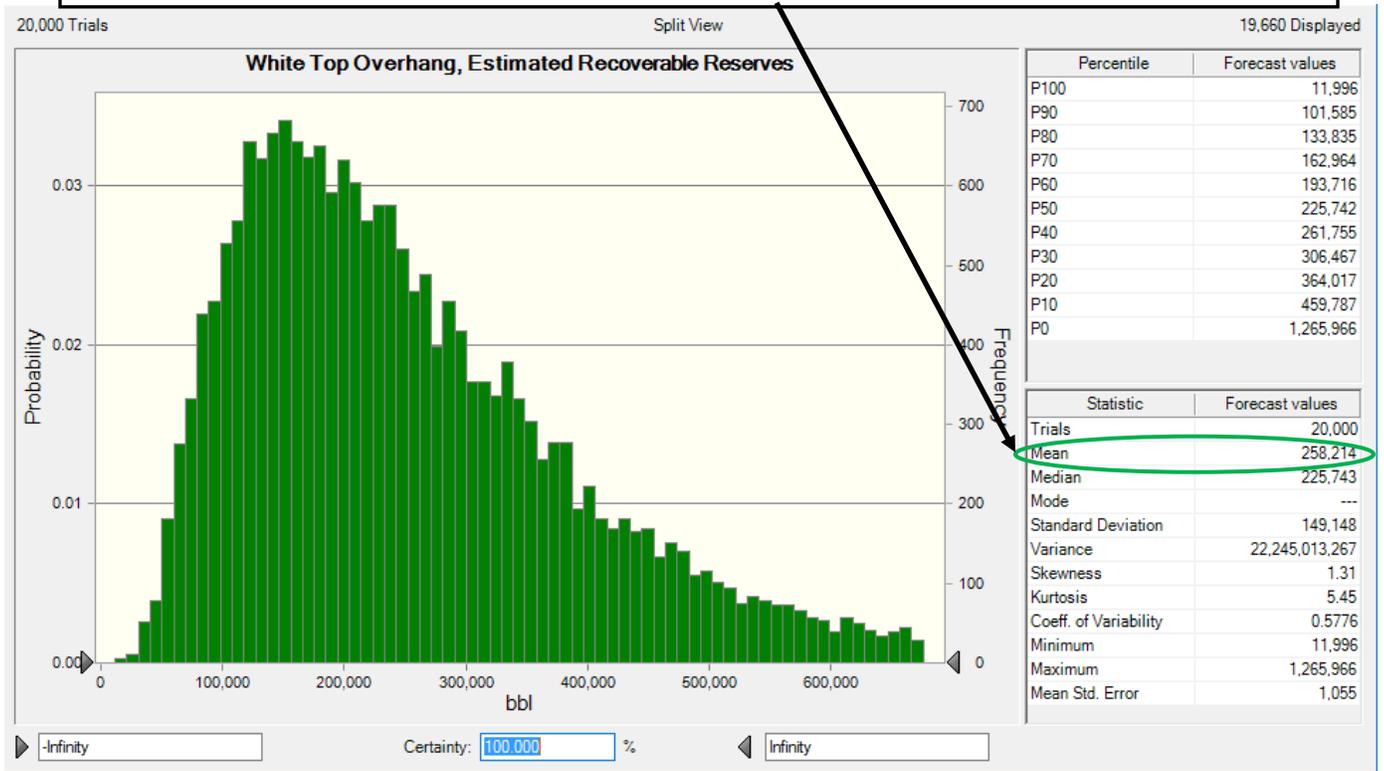
## MP 73 Field Energy XXI



(Kessler 2017)

White Top Overhang Prospect, Monte Carlo Simulation Reserves Summary			
Parameter	Low	Most Likely	High
Area, Acres	2.5	4	6
Total Net Pay, feet	50	100	200
Recoverable Oil, bbl/Acre Feet	550	600	680
<b>White Top Overhang, Estimated Reserves, bbl</b>	<b>101,585</b>	<b>258,214</b>	<b>459,787</b>

Monte Carlo Simulation Output for the Overhang Area indicating probability and forecasted results with a mean or most likely outcome of 258 MBO gross reserves





*Senior Engineering Consultant*



## **Kurt Mire, P.E.**

*Reservoir Engineering/Project Management*

### **Summary**

Mr. Mire is a senior reservoir and production engineer with thirty (30) years of experience in E&P. This experience has been gained at major and independent oil companies and by projects done for Tier I consulting firms Ryder Scott Company and Netherland, Sewell & Associates. Domestic experience includes Louisiana, Texas, Gulf of Mexico, Mid-Continent, and Rocky Mountains. International experience includes Mexico, South America, Iraq, Trinidad, and Asia. He has proven skills in reservoir and production engineering, operations, reserves estimation, Monte Carlo simulation, nodal analysis, field studies, and property evaluations.

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### **Experience – 30 years**

Mire & Associates, Inc., Houston	2004 – present
BP America, Houston	2001 – 2003
Independent Consultant, Lafayette, LA	1999 – 2001
Subsurface Consultants, Lafayette, LA	1993 – 1998
Black Gold Production Co., Hammond, LA	1991 – 1993
Independent Consultant, Morgan City, LA	1988 – 1991
Texaco, Inc., Morgan City, LA	1983 – 1987

### **Education**

<b>B.S., Petroleum Engineering</b>
University of Louisiana at Lafayette, 1982
Texas Professional Engineer #115886



Consultant



## James Moomaw, P.E.

*Petroleum Engineer*

### Summary

Mr. Moomaw is a petroleum engineer with 19 years of diverse E&P experience. He has performed reserves and acquisition evaluations, pressure transient analyses, field studies and has designed & supervised fracture stimulations. James has skills in reservoir engineering, well test analysis, workover identification and reserves reporting. He has worked on projects in Texas, Oklahoma, Louisiana, Alabama, New Mexico, Colorado, Utah, Wyoming, Montana, North Dakota, the Gulf of Mexico, Iraq and Tunisia.

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### Experience – 19 years

Mire & Associates, Inc.	2011 – 2016
Sierra Hamilton LLC	2013 - 2015
BC Johnson Associates	2008 – 2011
High Mount Exploration & Production LLC	2008 - 2008
BP America Production Company	2006 - 2008
El Paso Production Company	2004 - 2006
Contract Engineer BP, Burlington, Chevron	2002 - 2004
ARC Pressure Data	2001 - 2002
BJ Services Company	1997 - 2000

### Education

BS Petroleum Engineering, 1997, Texas A&M University  
EIT (Engineer in Training) Certification  
MBA Coursework, 2001, University of North Texas  
MBA Coursework, 2004 – 2005, University of Houston  
NYMEX Energy Risk Management – 18 hours  
Graduate Accounting and Finance Coursework



## Geological Consultant



# Tom Bath

*Geology/Seismic Interpretation*

## Summary

Mr. Bath is a Geologist with twenty-five (25) years of experience in E&P. This experience has been gained through employment at major oil companies, independent oil companies, and self-employed consulting. Domestic experience includes projects in the Gulf Coast Tertiary Basin onshore and offshore, primarily in Louisiana. He has proven skills in regional exploration, detailed field development, seismic interpretation, wellsite supervision, geological operations supervision, field studies, and property evaluations.

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## Selected Experience – 25 years

Mire & Associates, Inc., Houston	2016 – present
Energy XXI	2014-2015
W&T Offshore	2006-2010
Denbury Offshore	2001-2004
Tenneco Oil Co/Chevron USA	1982-1992

## Education

<b>M.S., Geology</b>
University of Arkansas, 1983
<b>B.S., Geology</b>
University of Arkansas, 1980



Consultant



## Diane Seidel

*Engineering Technologist*

### Summary

Mrs. Seidel is an IT professional with more than 17 years of experience in selecting, developing, and supporting scientific computing solutions for the oil industry. She worked as a project manager on systems ranging from Geographic Information Systems, Oracle database design and maintenance, and integrated upstream G&G systems including Landmark and Finder/Geoquest. In 2011, Diane began working as an engineering technologist/reserves analyst for Mire & Associates. Diane is proficient in using Excel and PHDWin to collect and analyze production data in support of reserve reports, field evaluations and royalty sales. She is skilled in using online data sources such as IHS Energy, Drilling Info and various state oil & gas data sites.

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### Experience – 18 years

Mire & Associates, Inc., Houston	2011 – present
Arco International Oil & Gas, Plano TX	1990 – 2000
Arco Oil & Gas Co., Plano TX	1983 – 1990
E-Systems, Inc., Greenville TX	1982 – 1983

### Education

Bachelor of Science in Computer Science, 1982
Baylor University, Magna Cum Laude
Graduate coursework in Computer Science 1983 – 1985
University of Texas at Dallas

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