

**Oil and Gas Conservation Commission  
of the State of Colorado  
In the Matter of Alleged Violations of the  
Rules and Regulations of the Colorado Oil and Gas  
Conservation Commission by Monument Gas  
Marketing, Inc., Kiowa County, Colorado  
Cause No. 1, Docket Number 0121-GA-09**



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**AFFIDAVIT AND DECLARATION OF C. SCOTT ROBINSON**

State of Colorado            )  
  ) ss.  
County of Boulder            )

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I, , swear, declare and affirm under oath to the following:

1. That I have personal knowledge of all matters set forth in this Affidavit.
2. I am a citizen of the United States, residing in Wichita, Kansas.
3. That I am employed as the Geological manager at Murfin Drilling Co., Inc., 250 N. Water, Suite 300, Wichita, Kansas 67202.
4. That I have worked as an exploration geologist in eastern Colorado for over eighteen years.
5. That I have appeared before the Colorado Oil and Gas Conservation Commission in the past as expert witness.
6. That I have responded, in letter format, to a question from Monument Gas Marketing, Inc., Geologist, Jack Hickey regarding water salinity in the Cheyenne Formation on the Bucklen 2-34 well in Kiowa County, Colorado.
7. That I have reviewed the electric logs on the above referenced well over the interval from 1300' to 1450' using the Archie equation to solve for  $R_{tw}$ .
8. That, assuming the zone is 100% wet with an average porosity of 26% and an  $R_t$  of 1.5 ohmmeters, the apparent water resistivity of the formation would be .133 ohmmeters at an estimated formation temperature of 83 °F. This would be equivalent to 44,000 ppm NaCl.
9. That the prospect of successfully washing this hole down past this zone to get a cement plug below it are less than 50-50. With three 40 sx plugs in the Dakota, it will be extremely difficult to keep the bit in the cement and not have it wandering off and cutting a new hole in the softer surrounding sand.



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**AFFIDAVIT AND DECLARATION OF PETER DEBENHAM**

State of Colorado            )  
  ) ss.  
County of Boulder            )

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I, , swear, declare and affirm under oath to the following:

1. That I have personal knowledge of all matters set forth in this Affidavit.
2. I am a citizen of the United States, residing in Evergreen, Colorado.
3. That I am employed as a wellsite Geologist for Petrolific Consulting Services, 330 Hideaway Circle Road, Evergreen, Colorado 80439.
4. That I have worked as a wellsite geologist for over 22 years, and have worked in Eastern and Western Colorado since 1984.
5. That I have witnessed numerous logging programs, and a number of my well reports and striplogs are contained in the files of the Colorado Oil and Gas Conservation Commission.
6. That I sat all of Vintage Petroleum's wells within the area of question and have also sat a number of wells for UPRC, Yates Petroleum, Tom Spring, Berry Energy, Medallion Petroleum, Marathon, O'Brien Energy, and various other companies.
7. That I have provided a professional opinion to a request from Monument Gas Marketing, Inc., Geologist, Jack Hickey regarding formation top of the Cheyenne Formation on the Bucklen 2-34 well in Kiowa County, Colorado.
8. That formation tops as picked on the Bucklen #2-34 were a carry over from formation tops picked by companies I have worked for in the past, and by the original prospect Geologist on the Waterford River Prospect. This included the top picks on the Dakota, Cheyenne, and Morrison Formations. These are picks accepted as correct by company Geologists in this area. I have sat a number of wells (including the Barlow #2-3) from surface on down. Colored Shales and Sandstone are noted in the section that I am calling the top of the Morrison, and which are indicative of the Morrison.

9. That I have asked for a stratigraphic column or electric log responsive for specific formation top picks as noted by the Colorado Oil and Gas Conservation Commission, and have been told that are no specific guidelines for these picks. Specific characteristic needs to be addressed.

10. That it is my professional opinion that the formation tops as originally documented on the Bucklen #2-34 are correct (Dakota 982', Cheyenne 1076', Morrison 1280').

11. Please do not hesitate to contact me if additional information is needed. I am available to provide direct testimony in any administrative or judicial proceeding. I can be reached at 303-674-0633.

I declare under penalty of perjury that the foregoing facts are true and correct. Executed this 30th day of December, 2002, in the City of Boulder, State of Colorado.

**FURTHER AFFIANT SAYETH NAUGHT.**

**COPY**

\_\_\_\_\_

Affiant Date

The foregoing instrument was acknowledged by me this 30th day of December 2002, who is personally known by me or who has produced Colorado Driver License as identification and who did take an oath.

\_\_\_\_\_(Seal)  
Notary Public  
State of

My Commission Expires:

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**AFFIDAVIT AND DECLARATION OF JOE POOLE**

State of Colorado                    )  
  ) ss.  
County of Boulder                    )

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I, , swear, declare and affirm under oath to the following:

1. That I have personal knowledge of all matters set forth in this Affidavit.
2. I am a citizen of the United States, residing in Denver, Colorado.
3. That I am employed as a Senior Engineer at Schlumberger Oilfield Services, 6501 S. Fiddler's Green Circle, Suite 400, Greenwood Village, Colorado 80111.
4. That I have responded, in letter format, to a question from Monument Gas Marketing, Inc., Geologist, Jack Hickey regarding water salinity in the Cheyenne Formation on the Bucklen 2-34 well in Kiowa County, Colorado.
5. That after reviewing the Compensated Neutron, Litho-Density, Array Induction, and gamma ray logs over the interval from 1300' to 1450', on the above referenced well, I have determined that if the fluid in the sand intervals is entirely filled with water, then the apparent water resistivity is 0.15 ohm-meters. This translates to approximately 40,000 ppm NaCl, assuming a formation temperature of 80°F.
6. That over this interval, the logs were recorded at a speed of 100 feet per minute. Where as this is slow enough for the Array Induction measurement, it is not optimal for the Compensated Neutron and Litho-Density (which were not requested over this interval).
7. That I am comfortable and can affi as to the accuracy of the readings for the purpose of approximating water salinity
8. Please do not hesitate to contact me if additional information is needed. I am available to provide direct testimony in any administrative or judicial proceeding. I can be reached at 303-572-1301.

I declare under penalty of perjury that the foregoing facts are true and correct. Executed this 30th day of December, 2002, in the City of Boulder, State of Colorado.

**FURTHER AFFIANT SAYETH NAUGHT.**

**COPY**

\_\_\_\_\_

Affiant Date

The foregoing instrument was acknowledged by me this 30th day of December 2002, who is personally known by me or who has produced Colorado Driver License as identification and who did take an oath.

\_\_\_\_\_  
Notary Public (Seal)  
State of Colorado

My Commission Expires:

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**AFFIDAVIT AND DECLARATION OF PAUL WIEMANN**

State of Colorado            )  
  ) ss.  
County of Boulder            )

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I, , swear, declare and affirm under oath to the following:

1. That I have personal knowledge of all matters set forth in this Affidavit.
2. I am a citizen of the United States, residing in Denver, Colorado.
3. That I am employed as a Geologist with West Bay Production Company.
4. That I have seventeen years experience working southeastern Colorado as a geologist.
5. That I have responded, in letter format, to a question from Monument Gas Marketing, Inc., Geologist, Jack Hickey regarding water salinity in the Cheyenne Formation on the Bucklen 2-34 well in Kiowa County, Colorado.
6. That after analyzing the well logs on the Bucklen #2-34, I have picked formation tops and completed log analysis on the Cheyenne Sandstone. The Cheyenne Sandstone top is located at 1076. The analysis (from logs) of the water contained in the Morrison (the sandstone the Colorado Oil and Gas Conservation Commission is calling the Cheyenne) is approximately 50,000 parts per million. This is recognized as salt water and therefore cannot be the Cheyenne Sandstone. The Cheyenne Sandstone is recognized as a fresh water aquifer. The analysis of the water in the Cheyenne is approximately 2000 parts per million, which is considered brackish water, drinkable but salty.
7. That in my 17 years of experience working southeastern Colorado as a geologist, the Cheyenne Sandstone has always been located at the stratigraphic equivalent of 1076 in the Bucklen #2-34.
8. That it is not advantageous to change the cement plugs in the Bucklen #2-34 to protect a water zone that has 50,000 parts per million.

8. Please do not hesitate to contact me if additional information is needed. I am available to provide direct testimony in any administrative or judicial proceeding. I can be reached at 303-423-5343.

I declare under penalty of perjury that the foregoing facts are true and correct. Executed this 30th day of December, 2002, in the City of Boulder, State of Colorado.

**FURTHER AFFIANT SAYETH NAUGHT.**

**COPY**

\_\_\_\_\_  
Affiant

\_\_\_\_\_  
Date

The foregoing instrument was acknowledged by me this 30th day of December 2002, who is personally known by me or who has produced Colorado Driver License as identification and who did take an oath.

\_\_\_\_\_  
(Seal)

Notary Public  
State of

My Commission Expires: