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

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

CASE NO. 12033

APPLICATION OF PUBLIC SERVICE COMPANY
OF NEW MEXICO FOR REVIEW OF OIL CONSERVATION
DIVISION DIRECTIVE DATED MARCH 13, 1998,
DIRECTING APPLICANT TO PERFORM ADDITIONAL
REMEDIATION FOR HYDROCARBON CONTAMINATION,
SAN JUAN COUNTY, NEW MEXICO.

VOLUME 2

PREPARED DIRECT TESTIMONY AND EXHIBITS

OF

JAMES E. RHODES

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PREPARED DIRECT TESTIMONY OF JAMES E. RHODES

I. INTRODUCTION AND QUALIFICATIONS

Q. STATE YOUR FULL NAME FOR THE RECORD.

A. James Edwin Rhodes.

Q. WHERE DO YOU RESIDE?

A. Farmington, New Mexico.

Q. BY WHOM ARE YOU EMPLOYED, AND IN WHAT CAPACITY?

A. I am Vice President of Plant Operations of Process Equipment & Service Company, Inc. This company was founded by my father in 1970. We manufacture, service and repair oil and gas production equipment. I am responsible for manufacturing, engineering and quality control of the equipment we sell, service and repair, which includes combination production units like the equipment installed at the Hampton 4 M well.

Q. REVIEW YOUR EDUCATIONAL BACKGROUND.

A. I graduated from New Mexico State University in 1978 with a Bachelor of Science degree in Mechanical Engineering. Following graduation, I returned to Farmington to work for Process Equipment & Service Company, Inc. I have worked there at all times since receiving my degree.

Q. TO WHOM HAS PROCESS EQUIPMENT & SERVICE COMPANY, INC. SOLD EQUIPMENT AND SERVICES?

A. Process Equipment & Service Company, Inc. has sold equipment and services to almost all oil and gas operators in the San Juan Basin including Burlington Resources Oil & Gas, Inc. and Public Service Company of New Mexico.

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Q. WHAT ARE YOUR RESPONSIBILITIES IN REGARD TO THE INSTALLATION OF THE EQUIPMENT WHICH YOU SELL, SERVICE AND REPAIR?

A. I make recommendations to the operators for whom we work on a broad variety of matters including the sizing and design of well head equipment.

Q. WERE YOU CONTACTED BY BURLINGTON RESOURCES OIL & GAS COMPANY CONCERNING THE HAMPTON 4M WELL SITE?

A. I was contacted by Burlington in May 1999 concerning contamination at the Hampton 4M well site.

II. PURPOSE OF TESTIMONY:

Q. WHAT WERE YOU ASKED TO DO?

A. I was asked to examine the equipment at the Hampton 4M Well site and advise Burlington on the efficiency of the equipment at this site, its ability to separate free liquids from the gas stream and the volumes of liquids that could have been discharged from this equipment.

Q. HAVE YOU EXAMINED THE EQUIPMENT AT THE HAMPTON 4M WELL SITE?

A. I have visited the well site and examined the production equipment at this site. The Burlington-operated combination production unit at the well and the dehydrator operated by PNM, the purchaser of gas at this location, are standard equipment commonly used in the San Juan Basin. Process Service & Equipment Company manufactures, services, and repairs this type of equipment, including production units, separators, scrubbers, heater treaters, and

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dehydrators. I have repaired and serviced identical and similar equipment for over twenty years.

Q. HAVE YOU REVIEWED THE TESTIMONY OF RODNEY HEATH AT THE EXAMINER HEARING ON PNM'S APPLICATION IN THIS CASE?

A. I have reviewed Mr. Heath's testimony and the Exhibits which he sponsored at the November 19, 1998 Examiner Hearing. I have also met with Burlington representatives on several occasions and visited the site in May 1999.

III. EFFICIENCY OF EQUIPMENT AT HAMPTON 4M WELL SITE.

Q. ARE YOU FAMILIAR WITH THE "SENSING ELEMENT" ON THE HAMPTON 4M WELL AND HOW IT WORKS?

A. I am familiar with the "sensing element" on the dehydrator operated by the gas purchaser at the Hampton 4M well site and how it works. The "sensing element " is a small separator or scrubber which catches free liquids in the gas stream. It is equipped with a mechanical device that will shut in the well when there are certain volumes of liquids in the gas stream coming into it.

How ?

I ran a performance test analysis on the dehydrator separator or "sensing element" at the Hampton 4M using industry standards and found that it could handle substantial volumes of liquid, or free phase hydrocarbons, per day with such minimal carryover that it would not have a detrimental effect on the glycol system. This sensing element when properly

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automatically?

functioning is very capable of handling and dumping the entire liquid production of the well and never send a signal to shut in the well. Furthermore, I observed no restriction in the operation of the dump valve. It dumped aggressively when manually tripped.

Q. FROM YOUR INVESTIGATION, CAN YOU DETERMINE HOW AND WHERE PRODUCTION COULD HAVE BEEN LOST WHICH CAUSED THE CONTAMINATION AT THE HAMPTON 4M WELL SITE?

A. In my opinion, oil produced by the Hampton 4M could have been lost in any of the four following ways:

The first, and least likely, involves blowing the well to the atmosphere on a regular basis. Blowing the well in this manner may be done when the well bore becomes packed with liquid and the gas has insufficient volume or velocity to lift it. Opening the well to the atmosphere decreases the downstream pressure, thus making it easier for the gas to lift the liquid. This operation may involve blowing this liquid to a pit on location, which would cause ground contamination.

The second way production could have been lost would be the result of leaks in the storage tanks.

The third way for production to be lost involves a malfunction of the production unit. This unit consists of a two phase high pressure separator that dumps the total liquid production into a three phase low pressure separator. If the oil dump malfunctions or the water box

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develops a hole, all of the oil would go to the pit along with the water.

The fourth way production could be lost would be if the liquid dump on the separator at the purchaser's dehydrator discharged liquids, including free phase hydrocarbons, into an unlined pit.

Q. FROM THE INFORMATION YOU HAVE REVIEWED, CAN YOU DETERMINE HOW PRODUCTION WAS LOST AT THE HAMPTON 4M WELL SITE?

A. The only way to now determine where liquid hydrocarbons were lost at this site is to examine the contamination concentrations at this well site.

Q. WHAT CONCLUSIONS CAN YOU REACH FROM YOUR REVIEW OF THE HAMPTON 4M WELL SITE?

A. PNM's dehydrator, when operating efficiently, could have permitted the discharge of substantial volumes of liquid hydrocarbons into the ground.

Q. DOES THAT CONCLUDE YOUR TESTIMONY?

A. Yes.

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VERIFICATION

STATE OF NEW MEXICO)
)ss:
COUNTY OF SAN JUAN)

James E. Rhodes, being first duly sworn upon oath, deposes and states that I am Vice President of Plant Operations for Process Equipment & Service Company, Inc., that I have read the foregoing Prepared Direct Testimony and the same is true and correct to the best of my information, knowledge and belief.

James E. Rhodes
Vice President of Plant Operations
Process Equipment & Service Co., Inc.

SUBSCRIBED AND SWORN to before me this 9th day of July, 1999 by James E. Rhodes.

Notary Public Christina S. Taylor

My commission expires: October 08, 2002

Notary for Bank of America

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