

BEFORE THE STATE CORPORATION COMMISSION
OF THE STATE OF KANSAS

Before Commissioners: Pat Apple, Chair
Shari Feist Albrecht
Jay Scott Emler

In the Matter of the Application of Norstar)	Docket No. 17-CONS-3403-CVAC
Petroleum, Inc. for Authorization to Impose a)	
Vacuum on its Hume Bros. Lease located in the)	CONSERVATION DIVISION
NW/4 of Section 34, Township 29 South, Range)	
41 West, Stanton County, Kansas)	License No. 31652
_____)	

PRE-FILED DIRECT TESTIMONY

OF

KENNETH WHITE

ON BEHALF OF

WHITE EXPLORATION, INC.

1 Q. Please state your name and business address.

2 A. My name is Ken White, and my business address is 1635 N. Waterfront Parkway, Suite
3 100, Wichita, Kansas 67206.

4 Q. By whom are you employed and in what capacity?

5 A. I am the President and owner of White Exploration, Inc. ("White Exploration"). White
6 Exploration is an oil and gas producer and is a licensed operator in the state of Kansas.

7 Q. Please summarize your educational background.

8 A. I graduated from the University of Kansas in 1979 with a Bachelor of Science degree
9 in Business Administration.

10 Q. Please summarize your professional experience.

11 A. I have been involved in the exploration and production of oil and gas for more than 37
12 years. I started my career in 1980 working as Petroleum Landman purchasing oil and
13 gas leases in Kansas and Nebraska. In August of 1980, I was employed by Hummon
14 Corporation in Wichita, Kansas, as their Land Manager. I worked for Hummon
15 Corporation performing various jobs for nine (9) years. When I left Hummon
16 Corporation in 1989, I had attained the title of Vice President. During the time that I
17 worked for Hummon Corporation, I also served as Vice President of Big-H Drilling,
18 Inc. which was an affiliated rotary drilling contractor that operated drilling rigs in
19 Kansas and Nebraska. Since I left Hummon Corporation in 1989, I have been a self-
20 employed oil and gas producer and operator. During that time, I have been involved in
21 the exploration and production of oil and gas in Kansas, Nebraska, Colorado,
22 Oklahoma, Texas, Montana and Australia. I have been involved in all phases of the
23 exploration for and the production of oil and gas, including originating and evaluating
24 drilling prospects, purchasing oil and gas leases, drilling and completing wells, and

operating producing wells. I have also worked in the field supervising the drilling, completion and production of oil and gas wells and performing wellsite geological supervision on drilling wells.

Q. Have you held any positions with oil and gas industry groups?

A. Yes, I currently serve as the Chairman of the Kansas Independent Oil and Gas Association ("KIOGA"). I have served for many years as a member of the Natural Gas Committee of KIOGA, and I have extensive experience regarding natural gas purchase contracts in southwest Kansas, including with DCP Midstream which is the gas gatherer in the area that is the subject of the Application in this docket. I have also testified on behalf of KIOGA before the Kansas Legislature on several issues affecting the oil and gas industry and, in 2005, I served on working group formed by the KCC Working Group to study the impact of hydrogen sulfide (H₂S) on southwest Kansas natural gas consumers.

Q. What is White Exploration's interest in the Application filed by Norstar Petroleum, Inc. ("Norstar") in this docket?

A. White Exploration owns an interest in and operates several wells that are in the vicinity of the Hume Bros. Lease that is the subject of Norstar's Application. Attached hereto is Exhibit A is a plat showing the Hume Bros. Lease – covering the NW/4 of Section 34, Township 29 South, Range 42 West -- and all of the lands surrounding that lease, and that plat also includes the wells drilled on that acreage. White Explorations owns an interest in and operates the following leases that offset the Hume Bros. Lease: First, the Carr Lease covering the the SW/4 of Section 34, Township 29 South, Range 41 West, Stanton County, Kansas (the "Carr Lease"). White Exploration operates two (2) wells on the Carr Lease – the Carr 1-34 well and the Carr 2-34 well.

1 Second, the Black Stone D lease which covers the W/2 SE/4 & SE/4 SE/4 of Section
2 28, Township 29 South, Range 41 West, Stanton County, Kansas (the "Black Stone D
3 Lease"). White Exploration operates three (3) wells on that lease – the Black Stone D
4 1 well, the Black Stone D 2 well and that Black Stone D 3 well.

5 Third, the Black Stone C Lease covering the SE/4 of Section 27, Township 29 South,
6 Range 41 West, Stanton County, Kansas (the "Black Stone C Lease"). White
7 Exploration operates two (2) wells on the Black Stone C Lease – the Black Stone C 1
8 well and the Black Stone C 2 well.

9 Fourth, the Ewert-Rausch Lease covering the NE/4 of Section 33, Township 29 South,
10 Range 41 West, Stanton County, Kansas (the "Ewert-Rausch Lease"). White
11 Exploration operates one (1) well on the Ewert-Rausch Lease – the Ewert-Rausch 1
12 well.

13 Fifth, the Black Stone B Lease covering the E/2 of Section 34, Township 29 South,
14 Range 41 West, Stanton County, Kansas (the "Black Stone B Lease"). White
15 Exploration operates three (3) wells on the Black Stone B Lease – the Black Stone B 1
16 well, the Black Stone B 3 well, and the Black Stone B 4 well.

17 All of those leases are adjacent to the Hume Bros Lease that is operated by Norstar and
18 is the subject of the Application. All of the wells on those leases are operated by White
19 Exploration and produce from the Lower Morrow Keyes Sand formation which is the
20 same formation that is producing in the three wells that are operated by Norstar on the
21 Hume Bros. Lease.

22 Q. What field are these wells located in and how familiar are you with that field?

23 A. All of the wells in the area depicted on Exhibit A are producing from what is known as
24 the Arroyo Field in Stanton County, Kansas. That field was discovered by J. M. Huber

1 in 1990. To date, all of the wells in that field have produced more than 2.6 million
2 barrels of oil and 35 BCF of gas. White Exploration drilled its first well in the Arroyo
3 Field in April 2000 and, since then, we have operated, drilled and/or produced more
4 than 25 wells in that area. White Exploration has also drilled, produced and operated
5 many other wells in Stanton County, Kansas, in the vicinity of the Arroyo Field. I
6 have either licensed or reviewed all of the 3-D Seismic data acquired by J. M. Huber
7 over parts of the Arroyo Field area. I have personally been responsible for the
8 exploration, drilling, completion and production decisions for all of the wells that
9 White Exploration has drilled in that area. With respect to the wells that are operated
10 by White Exploration in the vicinity of the Hume Bros. Lease, I have been personally
11 involved in the day to day operation of those wells in consultation with my Field
12 Manager.

13 Q. Have you reviewed the prefiled direct testimony of Brady Pfeiffer on behalf of Norstar
14 in this docket?

15 A. Yes, I have reviewed Mr. Pfeiffer's prefiled direct testimony and exhibits.

16 Q. At page 3, lines 14 – 15 of that testimony, Mr. Pfeiffer refers to the fact that Norstar
17 took over operations of the Hume Bros. Lease from C. H. Todd, Inc. effective
18 December 1, 2014, and therefore all of the data that was presented by Norstar was
19 limited to the period of time from December 2014 to present date. When did C. H.
20 Todd, Inc. take over operation of the Hume Bros. Lease and is there any relationship
21 between Norstar and C. H. Todd, Inc.?

22 A. According to the KCC Form T-1 for the Hume Bros. Lease, C. H. Todd, Inc. took over
23 the operation of that lease effective September 25, 2002. Also, according to records on
24 file with the Kansas Secretary of State, the same person, Mr. Per Burchardt, is both

1 President of C. H. Todd, Inc. and is President of Norstar. C. H. Todd, Inc. and Norstar
2 have common management. Thus, those two apparently related entities have operated
3 the Hume Bros. Lease since 2002. In Norstar's responses to our data requests in this
4 docket, Norstar stated that it did not have all the data from the period of time that the
5 lease was operated by C. H. Todd, Inc. and refused to provide that data. I do not know
6 why Norstar limited the data that it has provided in support of its Application in this
7 docket to only the period of time the lease was operated by Norstar.

8 Q. At page 3, line 21 to page 4, line 3 of his prefiled direct testimony, Mr. Pfeiffer refers
9 to the vacuum Application that was filed by Anadarko Petroleum Corporation
10 ("Anadarko") in KCC Docket No. 13-CONS-213-CVAC in which Anadarko received
11 permission to conduct vacuum operations on its Pro Farms 27-1 well. Are you familiar
12 with that Application?

13 A. Yes, I am familiar with that Application and with the well that was the subject of that
14 Application, namely the Pro Farms 27-1 well in the NE/4 SW/4 of Section 27. As you
15 will see on Exhibit "A," the Pro Farms 27-1 well does not directly offset the Hume
16 Bros. Lease. The lease on which that well is located lies directly north of Norstar's
17 lease, but the well that was the subject of that Application does not offset the Hume
18 Bros. Lease and the Order granting that Application was specifically limited to the Pro
19 Farms 27-1 well, and not to all of the wells on that lease.

20 Q. Does the fact that vacuum operations were authorized for the Pro Farms 27-1 well
21 mean that those operations actually occurred?

22 A. No, it does not. When that Application was filed, Anadarko filed several other
23 applications seeking approval for vacuum operations for its wells in the area. I do not
24 know, and only Anadarko (or perhaps Berexco) would know, whether that well was

1 ever put on a vacuum. Mr. Pfeiffer never states that vacuum operations were
2 performed on that well. It is logical, however, to assume that vacuum operations were
3 either not conducted on the Pro Farms 27-1 well or, if they were conducted, those
4 operations were not successful. The Pro Farms 27-3 well – which does directly offset
5 the Hume Bros. Lease -- was drilled and completed prior to the filing of the
6 Application for the Pro Farms 27-1 well. Anadarko chose not to include the Pro Farms
7 27-3 well in that Application. Moreover, after that Application for the Pro Farms 27-1
8 well was granted, neither Anadarko nor Berexco have sought permission to impose
9 vacuum compression on the Pro Farms 27-3 well. That leads me to conclude that
10 vacuum compression was either not used on the Pro Farms 27-1 well or that vacuum
11 compression was not successful on the Pro Farms 27-1 well.

12 Q. Can you explain to the Commission the difference between compression and vacuum
13 compression?

14 A. Yes, there is a big difference between providing compression to a well and the
15 introduction of a vacuum. White Exploration's wells on the Black Stone D Lease –
16 W/2 SE/4 & SE/4 SE/4 of Section 28 – and on the Carr Lease – SW/4 of Section 34 –
17 are on compression. We have installed a small compressor on each of those leases.
18 None of the other wells that are operated by White Exploration and are adjacent to the
19 Hume Bros. Lease are on compression. The compressors on the Black Stone D Lease
20 and the Carr Lease are plumbed into those leases in a way that they are only utilized to
21 help sell the casinghead gas that is produced from those wells. The compression is
22 used to move that casinghead gas into the gas gathering pipeline that is operated by
23 DCP Midstream. Casinghead gas has no natural pressure and the compression is
24 needed to move that gas into the sales line. Vacuum compression, on the other hand, is

1 a much different situation. Vacuum compression means that the compressor is used to
2 lower the gas line pressure at the wellhead to the point that it is at or below
3 atmospheric pressure. In other words, a negative pressure is created at the wellhead
4 that "sucks" the gas out of the well. The compression on White Exploration's leases is
5 not large enough to create a vacuum at the wellhead. The compression on our leases,
6 while it does enhance the production of oil from those wells, is used primarily as a
7 means of selling the casinghead gas. Absent that compression, that casinghead gas
8 must be used for power on the lease, flared or vented.

9 Q. Did White Exploration protest the vacuum Application filed by Anadarko and, if not,
10 why not?

11 A. No, White Exploration did not protest the vacuum Application that was filed by
12 Anadarko. The only White Exploration wells that were within the 1/2-mile radius of the
13 Pro Farms 27-1 well are the wells on the Black Stone C Lease in the SE/4 of Section
14 27. The wells on that lease produce oil and gas out of a different zone than the Pro
15 Farms 27-1 well. Thus, we felt that Anadarko's decision to use vacuum compression
16 on its well would have no impact on the production from our Black Stone C Lease. To
17 this day, we have still not installed compression on those wells.

18 Q. Did you add compression to your wells on the Blackstone D Lease and on the Carr
19 Lease in response to Anadarko's authorization to utilize vacuum compression on its Pro
20 Farms 27-1 well?

21 A. No, we did not. The wells on the Blackstone D Lease are 1/2-mile or more away from
22 the Pro Farms 27-1 well. The compression on the Carr Lease was not added until more
23 than one (1) year after the Anadarko Application was granted and those wells are more
24 than one (1) mile from the Pro Farms 27-1 well.

1 Q. At page 6, lines 3-4 of his prefiled direct testimony, Mr. Pfeiffer states that because
2 White Exploration has compression on its Carr Lease and the Black Stone D Lease
3 Norstar needs to add compression to its wells on the Hume Bros lease to protect its
4 correlative rights. Do you have any objection to Norstar adding compression to its
5 wells on the Hume Bros. lease?

6 A. No, I do not object to Norstar adding compression to those wells that is similar to the
7 compression that White Exploration is using on the Carr Lease and the Black Stone D
8 Lease. In fact, Norstar does not need KCC approval to add that compression to their
9 wells. If correlative rights is their concern and that concern is based on the
10 compression that is being used on our leases, then Norstar can protect its correlative
11 rights by adding similar compression to its lease. Norstar does not need KCC approval
12 to do that. White Exploration's objection is to Norstar adding vacuum compression to
13 its wells.

14 Q. Why are you opposing the Application filed by Norstar?

15 A. We oppose the Application because, if Norstar is allowed to impose vacuum
16 compression on its wells on the Hume Bros. Lease, then White Exploration will be
17 forced, as a practical matter, to also seek approval and to use vacuum compression on
18 its leases and we do not believe that it is economically feasible or wise to place our
19 wells on a vacuum.

20 Q. Please explain why you feel that vacuum compression is not economically feasible for
21 your lease?

22 A. First, we will have to purchase and install compressors on the two directly offsetting
23 leases that do not presently have compression – namely, the Ewert-Rausch Lease and
24 the Blackstone B Lease. The added capital cost of those compressors, together with

1 the increased operating costs for those wells due to that compression, will reduce the
2 economic life of those wells.

3 Second, introducing a vacuum on those wells could significantly compromise, if not
4 eliminate, our ability to sell the casinghead gas from those wells. The only market for
5 that casinghead gas is DCP Midstream. Our current gas sales contract with DCP
6 Midstream contains a provision stating that if the gas contains any oxygen DCP
7 Midstream will stop taking that gas. With the use of vacuum compression, the
8 likelihood of oxygen being introduced into that gas is very likely, if not a certainty.
9 When that occurs, DCP Midstream – which monitors the gas for oxygen content – will
10 refuse to take gas from our wells and may even cancel our gas sales contract. If that
11 occurs, we will be forced to either vent or flare that gas to continue producing our
12 wells.

13 Q. Does that conclude your testimony?

14 A. Yes, that concludes my direct testimony, but I reserve the right to supplement my
15 testimony if any additional information becomes available.

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CERTIFICATE OF SERVICE

The undersigned hereby certifies that on the 22nd day of September, 2017, he caused a true and correct copy of the foregoing Pre-Filed Testimony of Kenneth White to be filed with the Kansas Corporation Commission, and that he caused a copy to be served via electronic mail to the following parties:

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s/ David E. Bengtson
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