

OIL AND GAS DOCKET NOS. 06-0247411, 06-0247412, 06-0247413; 06-0247414 AND 06-0247415

THE APPLICATIONS OF EOG RESOURCES, INC. PURSUANT TO STATEWIDE RULE 23 REGARDING VACUUM PUMPS, VARIOUS LEASES, CARTHAGE (PETTIT, LOWER GAS) FIELD, PANOLA COUNTY; TEXAS

Heard by: Margaret Allen, Technical Hearings Examiner

Procedural history

Application received: May 4, 2006
Hearing held: May 31, 2006

Appearances

Philip Whitworth	Representing EOG Resources, Inc.
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EXAMINER'S REPORT AND RECOMMENDATION

STATEMENT OF THE CASE

EOG Resources ("EOG") is seeking exceptions to Statewide Rule 23(a)(2) to allow it to pull up to 20 inches of mercury vacuum in order to recover additional gas from the following 14 wells in the Carthage (Pettit, Lower Gas) Field :

<u>Lease</u>	<u>Well</u>	<u>Gas ID No.</u>	<u>Docket No.</u>
Boynton	No. 1	029972	06-0247411
Boynton	No. 2	182616	06-0247411
Daniels D	No. 1	029981	06-0247412
Daniels D	No. 2-T	129613	06-0247412
Daniels D	No. 3	182618	06-0247412
Daniels C	No. 2	035616	06-0247413
Daniels	No. 3	131177	06-0247414
Daniels	No. 4	155207	06-0247414
Thomas H	No. 1-L	029998	06-0247414
Thomas H	No. 2	182864	06-0247414
Pirkle	No. 1	029994	06-0247415
Pirkle	No. 2	157929	06-0247415
Daniels B	No. 1-L	029979	06-0247415
Daniels B	No. 1	029995	06-0247415

Rule 23(a)(2) states:

In a field which is depleted or practically depleted vacuum may be used, but no vacuum pump shall be installed or used without a permit from the Commission obtained upon application after notice to adjacent lease owners and operators and a public hearing on

such application.

DISCUSSION OF THE EVIDENCE

The Carthage (Pettit, Lower Gas) Field was discovered in 1942 and has about 350 wells. Many of the wells are nearing depletion and have very low bottomhole pressures. EOG wants to put vacuum pumps on 14 of these wells to draw the pressure down further. This has already been successful at increasing recovery in six of its wells in this field.

The following table illustrates the results expected by using up to 20 inches of vacuum:

Well name	Current gas rate	Current oil rate	Expected gas rate	Expected oil rate	Producing depth
Boynton 1	178	0	214	0	5820
Boynton 2	359	4	431	4	5961
Daniels 3	288	0	345	0	6043
Daniels 4	152	0	182	0	6066
Daniels C 2	146	1	175	2	6075
Daniels D 1	128	3	154	4	5978
Daniels D 2-T	190	4	228	5	6039
Daniels D 3	267	20	321	25	6007
Thomas H 1-L	303	4	363	5	6062
Thomas H 2	327	1	393	1	6108
Pirkle 1	307	0	368	0	5946
Pirkle 2	799	5	959	6	5984
Daniels B 1-L	556	4	667	4	5986
Pirkle B 1	4	0	5	0	6010

EOG used the results from its Phillips A Lease Well No. 1 as an example. This well established a straight trend on a P/Z vs. cumulative production graph. The well produced 22.76 BCF while drawing the pressure down from 1000 psi to 100 psia. The abandonment pressure was assumed to be 30 psia, at which time the cumulative production would be 23.39 BCF. By applying a vacuum, the abandonment pressure can be lowered to 16 psia. This allowed the recovery of an additional 120

MMCF of gas from this well.

FINDINGS OF FACT

1. Notice of these hearings was issued to owners and operators of adjacent properties in the Carthage (Pettit, Lower Gas) Field on May 11, 2006.
2. The wells in these applications were assigned different docket numbers based on the various offset operators who were notified of each application.
3. No protest was received to any of these applications.
4. There are 14 gas well leases operated by EOG Resources, Inc. included in these applications.
5. The properties in these applications have all reached the late stage of primary production.
 - a. The daily gas production ranges from 4 to 799 MCF, with an average of 286 MCF.
 - b. The daily condensate production ranges from 0 to 20 barrels, with an average of 3.3 barrels.
6. Installation of a vacuum pump on one well was able to decrease the abandonment pressure from 30 to 16 psia, thereby increasing ultimate recovery from 23.39 BCF to 23.51 BCF.
7. Pulling up to 20 inches of mercury vacuum will increase recovery from the wells in these applications.
 - a. The expected daily gas production ranges from 5 to 959 MCF, with an average of 343 MCF.
 - b. The expected daily condensate production ranges from 0 to 25 barrels, with an average of 4 barrels.
8. Pulling up to 20 inches of mercury vacuum will increase the incremental recovery from the 14 wells in these applications.

CONCLUSIONS OF LAW

1. Proper notice was given as required by statute.
2. All things have been done or occurred to give the Railroad Commission jurisdiction to resolve this matter.
3. Allowing EOG Resources, Inc. to pull up to 20 inches of mercury vacuum on the applied-for leases will prevent waste and protect correlative rights.

EXAMINER'S RECOMMENDATION

Based on the above findings and conclusions, the examiner recommends that EOG Resources, Inc. be allowed to use compressors with of up to 20 inches of mercury vacuum on the applied-for wells in the Carthage (Pettit, Lower Gas) Field in Panola County, as per the attached order.

Respectfully submitted,

Margaret Allen
Technical Hearings Examiner