

OIL & GAS DOCKET NO. 08-0240234

ENFORCEMENT ACTION AGAINST GEORGE M. CAMPBELL DBA PRODUCTION SERVICE CO. (OPERATOR NO. 680870) FOR VIOLATIONS OF STATEWIDE RULES ON THE HENDRICKS -M- LEASE, WELL NO. 18, HENDRICK FIELD, WINKLER COUNTY, TEXAS

APPEARANCES:

FOR MOVANT:

Lowell E. Williams
Bill Drury
Keith Barton, P.E.

MOVANT:

Enforcement Section
Railroad Commission of Texas

FOR RESPONDENT:

Floyd Holder
George M. Campbell

RESPONDENT:

George M. Campbell
DBA Production Service Co.

PROPOSAL FOR DECISION

PROCEDURAL HISTORY

DATE COMPLAINT FILED:	January 6, 2005
DATE OF NOTICE OF HEARING:	March 24, 2005
DATE OF HEARING:	April 7, 2005
HEARD BY:	Thomas H. Richter, P.E., Technical Examiner James M. Doherty, Hearings Examiner
DATE PFD CIRCULATED:	June 28, 2005

STATEMENT OF THE CASE

This proceeding was called by the Commission on the recommendation of the District Office to determine the following:

1. Whether the respondent George M. Campbell DBA Production Service Co. ("PSC") violated Statewide Rule 14(d)(2) [Tex. R. R. Comm'n, 16 TEX. ADMIN. CODE §3.14(d)(2)] by failing to properly plug the Hendricks -M- (02618) Lease, Well No. 18, Hendrick Field, Winkler County, Texas ("subject well") by setting cement plugs to isolate each productive horizon and usable quality water strata;
2. Whether PSC has violated provisions of Title 3, Oil and Gas, Subtitles A, B, and C, Texas Natural Resources Code, Chapter 27 of the Texas Water Code, and Commission rules and laws pertaining to safety or prevention or control of pollution by failing to properly plug the subject well;
3. Whether PSC should be assessed administrative penalties of not more than \$10,000 per day for each offense committed regarding the subject well; and
4. Whether any violations of Statewide Rule 14(d)(2) by PSC should be referred to the Office of the Attorney General for further civil action pursuant to TEX. NAT. RES. CODE ANN. §81.0534.

A hearing was held on April 7, 2005. Lowell Williams, Staff Attorney, appeared representing the Enforcement Section of the Office of General Counsel ("Enforcement"). Floyd Holder, attorney, and George M. Campbell appeared representing PSC and presented evidence. Enforcement's certified hearing file was admitted into evidence, and Enforcement also presented the testimony of Keith Barton, P.E.

Enforcement recommends that an administrative penalty of \$2,000 be imposed against PSC and that PSC be ordered to place the subject well into compliance with all Commission rules.

APPLICABLE LAW

The operator of a well must properly plug the well when required and in accordance with the Commission's rules. *See* TEX. NAT. RES. CODE ANN. §89.011(a). Statewide Rule 14(d)(2) requires operators, when plugging wells, to set cement plugs to isolate each productive horizon and usable quality water strata.

DISCUSSION OF THE EVIDENCE

Matters Officially Noticed

The examiners have officially noticed Commission records showing the following: (1) the subject well originally was drilled in 1928 and then plugged in 1956; (2) when originally drilled in 1928, the well was completed with 12 ½ " surface casing set at 333', 8 5/8" intermediate casing set at 2,465', and 6 5/8" production casing set at 2,990' (as deepened on 11/06/29); (3) PSC obtained a permit to reenter the well in 1977, and has been the operator of the well with responsibility for

compliance with Commission rules since April 1, 1977; (4) when PSC reentered the well in 1977, 4 ½" longstring casing was placed in the well at 2,450' and cemented with 200 sacks of cement with a calculated annular height of cement slurry at 1,158'; and (5) the base of usable quality water as determined by the Texas Commission on Environmental Quality occurs to a depth of 650'.

Background

On August 25, 2003, PSC filed a Form W-3A (Notice of Intention to Plug and Abandon) for the subject well. This Form W-3A reported that the well was completed with 12 ¼" surface casing set at 333' and cemented to the surface with 200 sacks of cement, 8 5/8" intermediate casing set at 2,450' with 200 sacks of cement and with a top of cement at 2,000', and 4 ½" production casing set at 2,876' with 200 sacks of cement and with a top of cement at 2,076'. Perforations were reported from 2,600' to 2,750'.

The PSC Form W-3A as approved by the District Office required that the subject well be plugged as follows: (1) load the hole with at least 9.5 lbs. per gallon mud; (2) place a bottom plug at 2,500'-2,750' with 25 sacks of cement, then wait on cement and tag; (3) place a water board plug at 600'-700' by perforating and squeezing 75 sacks of cement, then wait on cement and tag; (4) place a surface casing shoe plug at 283'-383' by perforating and squeezing 100 sacks of cement; and (5) place a surface plug at 15' to the surface by perforating and squeezing 10 sacks of cement.

In September 2003, PCS attempted to plug the subject well by setting the plugs required by the approved Form W-3A. With respect to the water board plug, on September 16-17, 2003, PCS perforated the well and squeezed 75 sacks of cement into the perforations at 700', but was not able to tag the waterboard plug at 600'. According to a PSC letter to the District Office dated October 13, 2003, explaining the procedure used by PSC in plugging the well, after the well was perforated at 700' and 383', PSC ran a packer in the hole to 575' and attempted to circulate with 55 barrels of water with no returns. PSC then pumped 50 sacks of cement, cleared the perforations, and let the cement set overnight. The following day, PSC went back in the hole with the packer set at 575' and was able to circulate with water, indicating a seal. PSC then pumped an additional 75 sacks of cement under the packer. Cement was circulated, and started dropping in the cellar at the surface from valve openings on an old bradenhead from between the 8 5/8" casing and the 12 ½ " casing. After the cement started to fall, pumping was resumed, the perforations were cleared with water, and the packer was pulled out of the hole and operations were shut down overnight. The next day, PSC ran the packer back in the hole and set it at 575', pumped an additional 25 sacks of cement. The following day PSC went back in the hole and tagged cement at 285', indicating that cement apparently came back into the perforations at 383'.

On October 21, 2003, the District Office sent PSC a letter stating that it appeared that during the plugging of the well, 75 sacks of cement had been squeezed through perforations at 700' on September 16, 2003, but the following day, tubing was run to 727' with no tag, and another 25 sacks of cement were squeezed through the packer at 575'. Then on September 18, 2003, PSC reported tagging cement at 285', with the packer still set at 575'. The District Office letter stated that the

water board plug at 600' was not tagged as required, and, accordingly, PSC was directed to drill out all cement above 600' and tag the water board plug. The letter stated further that if the water board plug was not there, PSC was required to properly set a water board plug, surface casing shoe plug, and surface plug.

Thereafter, PSC drilled out all cement above 600', tagged the water board plug at 600', and set a 15' surface plug. On April 8, 2004, the District Office sent PSC another letter stating that PSC had failed to set the surface casing shoe plug at the interval between 283'-383' and had improperly set the surface plug in that the approved Form W-3A required a 10 sack (cement) surface plug and PSC had set a 3 sack surface plug. This letter directed PSC to drill out the surface plug, perforate at 383' and squeeze 100 sacks of cement under a packer, then set a 10 sacks surface plug. PSC declined to take these additional steps, believing them to be unnecessary, and this enforcement action ensued.

Enforcement's Position

Enforcement takes the position that by failing to properly set a surface casing shoe plug at the interval between 283'-383' and a surface plug as called for in the approved Form W-3A and the District Office's letter dated April 8, 2004, PSC failed to set cement plugs to isolate each productive horizon and usable quality water strata, and thus violated Statewide Rule 14(d)(2). According to Keith Barton, P.E., ("Barton") Field Operations, an Enforcement witness, the main concern is that the annulus between the 4 ½" production casing and the 8 5/8" intermediate casing may not properly be sealed off to prevent fluid migration.

Barton did not question the adequacy of the bottom plug and agreed that the water board plug is adequate within the 4 ½" production casing. He questioned however, where the cement placed outside the 4 ½" casing went. Based on evidence that 75 sacks of cement were pumped under a packer set at 575' and circulated to the surface, dropping into the cellar from between the 8 5/8" casing and the 12 ½" casing, Barton stated the opinion that there is cement above 700' between the 8 5/8" and 12 ½" casing, as well as between the 4 ½" and 8 5/8" casing, but because the annular volume between these casings from 700' to the surface exceeds the amount of cement pumped into the hole, he could not be certain that the well was properly sealed off. However, Barton also stated the opinion that cement placed by PSC between the 4 ½" and 8 5/8" casing should isolate the fresh water interval. He stated that he was not certain that a surface casing shoe plug is absolutely necessary to protect fresh water, but nonetheless the setting of a surface casing shoe plug is a District Office requirement.

Respondent's Position

George M. Campbell ("Campbell") testified that after learning of possible District Office

dissatisfaction with the manner in which PSC initially had attempted to plug the subject well, he sent the District Office his letter dated October 13, 2003, describing the plugging procedure that PSC had used and asking what else PSC was required to do. Campbell stated that the District Office responded with its October 21, 2003, letter that directed PSC to drill out all cement above 600', tag the water board plug, and "if not there" to set a water board plug, surface casing shoe plug and surface plug. Campbell believes that PSC did just as directed. He interpreted the District Office letter of October 21, 2003, to mean that if PSC was able to tag the water board plug at 600', which it did, the only additional thing that PSC needed to do was to set a surface plug, and only if the water board plug was "not there" when PSC attempted to tag it at 600' was PSC directed to reset the surface casing shoe plug.

Campbell stated the opinion that as a result of PSC's initial plugging effort, there is cement from 700' to the surface in the annulus between the 4 1/2" and 8 5/8" casing and there is also cement between the 8 5/8" and 12 1/2" casing, otherwise cement would not have dropped into the cellar from between the 8 5/8" and 12 1/2" casing when cement was pumped beneath a packer set at 575'. Campbell stated his opinion that it is not necessary to spend several thousands of dollars to drill out the surface plug, perforate the well at 383' and squeeze another 100 sacks of cement under a packer, since PSC believes all of the cement will run out on the surface.

EXAMINERS' OPINION

The examiners conclude that as a result of PSC's cement squeezes associated with the setting of the water board plug, cement circulated between the 4 1/2" and 8 5/8" casing and between the 8 5/8" and 12 1/2" casing to the cellar at the surface and then fell back to 285'. After the water board plug had been set, PSC tagged cement inside the 4 1/2" casing at 285'. Consistent with the principle of balancing of like fluid columns, this is indicative of cement between the 4 1/2" and 8 5/8" casing and between the 8 5/8" and 12 1/2" casing up to 285', or 48' of cement confinement inside the 12 1/2" casing above the base of the surface casing at 333'. The examiners are of the opinion that this is sufficient to isolate the usable quality water interval, and this is supported by the testimony of Keith Barton, staff engineer, a witness for Enforcement.

Requiring PSC to drill out the surface plug, perforate at 383' and squeeze an additional 100 sacks of cement under a packer, as directed in the District Office's letter to PSC dated April 8, 2004, is not necessary to isolate the fresh water interval. The evidence shows that the additional cement would have no where to go outside the 4 1/2" casing, and setting a surface casing shoe plug inside the 4 1/2" casing would have no added benefit to protection of the usable quality water because mud laden fluid composed of 10 lb. brine and salt gel is already loaded inside the 4 1/2" casing.

The examiners agree with Enforcement that PSC did not properly set the surface plug. PSC proposed in the Form W-3A to set the surface plug by perforating at 15' and squeezing 10 sacks of cement, and this was approved by the District Office. When PSC set the surface plug, it did not perforate and squeeze 10 sacks of cement. Instead, PSC went into the hole "open-ended" and set

a 15' surface plug inside the 4 ½" casing only. There is no evidence that there is any cement from 15' to the surface outside the 4 ½" casing. Statewide Rule 14(d)(8) requires that a 10 foot surface plug be placed in the top of the well. Accordingly, the examiners recommend that the Commission require by its final order in this docket that PSC place cement from 10' to the surface between the 4 ½" and 8 5/8" casing and between the 8 5/8" and 12 ½" casing. The examiners believe that this easily may be accomplished, without the need to drill out the existing surface plug inside the 4 ½" casing, by using one inch steel or coiled tubing and snaking it down through the annuli of the casing strings.

The examiners have decided against recommending the imposition of an administrative penalty in this case for the following reasons. The violation alleged in Enforcement's complaint is a violation of Statewide Rule 14(d)(2) which requires an operator, when plugging a well, to set cement plugs to isolate each productive horizon and usable quality water strata. The examiners have concluded that the plugs set by PSC complied with this rule insofar as subsurface fluid migration is concerned and that the deficiency observed with respect to the surface plug, designed primarily to prevent fluid migration from the surface downhole, appropriately can be addressed through ordering compliance as recommended by the examiners. The examiners do not condone PSC's failure to comply to the letter with the approved Form W-3A and the October 21, 2003, directive from the District Office, but such failure to comply, while arguably a violation of Statewide Rule 14(d)(1), is not a violation of Statewide Rule 14(d)(2) which is the only violation alleged in Enforcement's complaint.

Based on the record in this case, the examiners recommend adoption of the following Findings of Fact and Conclusions of Law.

FINDINGS OF FACT

1. George M. Campbell DBA Production Service Co. ("PSC") was given at least ten (10) days notice of this proceeding by certified mail, addressed to PSC's most recent Form P-5 Organization Report address. PSC appeared at the hearing and presented evidence.
2. PSC is a sole proprietorship, and George M. Campbell is owner. PSC has an active Form P-5 Organization Report and has approved financial security on file in the amount of \$50,000.
3. PSC became the operator of the Hendricks -M- (02618) Lease, Well No. 18 ("subject well"), Hendrick Field, Winkler County, Texas by filing Form P-4 (Producer's Transportation Authority and Certificate of Compliance) approved and effective April 1, 1977.
4. The subject well originally was drilled by another operator in 1928 and completed with 12 ½" surface casing set at 333', 8 5/8" intermediate casing set at 2,465' and 6 5/8" production casing set at 2,990' (as deepened in November 1929).

5. The subject well was plugged by another operator in 1956, but PSC reentered the well in 1977, at which time 4 ½" longstring casing was placed in the well at 2,450' and cemented with 200 sacks of cement with a calculated annular height of cement slurry at 1,158'.
6. The base of usable quality water in the area of the subject well as determined by the Texas Commission on Environmental Quality occurs to a depth of 650'.
7. On August 25, 2003, PSC filed a Form W-3A (Notice of Intention to Plug and Abandon) for the subject well. The Form W-3A reported that the well was completed with 12 1/4" surface casing set at 333' and cemented to the surface with 200 sacks of cement, 8 5/8" intermediate casing set at 2,450' with 200 sacks of cement and with top of cement at 2,000', and 4 ½" production casing set at 2,876' with 200 sacks of cement and with a top of cement at 2,076'. Perforations were reported from 2,600' to 2,750'.
8. The PSC Form W-3A as approved by the District Office required that the subject well be plugged by loading the hole with at least 9.5 lbs. per gallon mud, placing a bottom plug at 2,500'-2,750' with 25 sacks of cement and tagging, placing a water board plug at 600'-700' by perforating and squeezing 75 sacks of cement and tagging, placing a surface casing shoe plug at 283'-383' by perforating and squeezing 100 sacks of cement, and placing a surface plug at 15' to the surface by perforating and squeezing 10 sacks of cement.
9. In September 2003, PSC attempted to plug the subject well by setting the plugs required by the approved Form W-3A.
 - (a) The bottom plug was set as required.
 - (b) To set the water board plug, PSC perforated at 700' and 383', ran a packer in the hole to 575' and pumped 50 sacks of cement through the packer to obtain a seal and the ability to circulate. On September 16, 2003, with the packer set at 575', PSC was able to obtain circulation, and squeezed 75 sacks of cement through the perforations at 700'. Cement circulated and started dropping into the cellar at the surface through valve openings on an old bradenhead from between the 8 5/8" and 12 ½" casing.
 - (c) On September 17, 2003, PSC could not tag the water board plug at 600'. PSC ran the packer back in the hole set at 575' and another 25 sacks of cement were squeezed through the perforations.
 - (d) On September 18, 2003, PSC tagged cement at 285'.
10. On October 21, 2003, the District Office sent PSC a letter stating that because the water board plug had not been tagged at 600', PSC was required to drill out all cement above 600' and tag the water board plug. This letter stated that if the water board plug was not there, PSC was required to properly set a water board plug, surface casing shoe plug, and surface

plug.

11. Responding to the District Office letter dated October 21, 2003, PSC drilled out all cement above 600', was able to tag the water board plug at 600', and then set a surface plug in the 4 ½" casing by going in the hole "open-ended" and pumping three sacks of cement.
12. On April 8, 2004, the District Office sent PSC another letter stating that PSC had failed to set a surface casing shoe plug at the interval between 283'-383' and had improperly set the surface plug by not perforating and squeezing 10 sacks of cement from 15' to the surface. The District Office letter stated that PSC was required to drill out the surface plug, perforate at 383' and squeeze 100 sacks of cement under a packer, then set a surface plug with 10 sacks of cement.
13. PSC declined to take the additional steps requested in the District Office's letter dated April 8, 2004, believing them to be unnecessary, and this enforcement action ensued.
14. PSC properly set the bottom plug and water board plug required by the approved Form W-3A.
15. Drilling out the surface plug set by PSC, perforating at 383', and squeezing an additional 100 sacks of cement under a packer is not necessary to isolate usable quality water strata. The subject well is plugged with cement around the base of the surface casing in the interval between 283'-383' in a manner sufficient to isolate the usable quality water strata.
 - (a) As a result of PSC's setting of the waterboard plug, cement circulated between the 4 ½" and 8 5/8" casing and between the 8 5/8" and 12 ½" casing to the cellar at the surface and then fell back to 285'.
 - (b) On September 18, 2003, after the water board plug had been set, PSC tagged cement inside the 4 ½" casing at 285', which is indicative of like cement between the 4 ½" and 8 5/8" casing and between the 8 5/8" and 12 ½" casing, consistent with the principle of balancing of like fluid columns.
 - (c) There is approximately 48' of cement confinement inside the 12 ½" casing above the base of the surface casing at 333'.
 - (d) Mud laden fluid composed of 10 lb. brine and salt gel is circulated inside the 4 ½" casing.
16. PSC did not set the surface plug in conformity with the approved Form W-3A. A 10 foot surface plug should be placed in the top of the subject well between the 4 ½" and 8 5/8" casing and between the 8 5/8" and 12 ½" casing to prevent surface to subsurface fluid

migration.

CONCLUSIONS OF LAW

1. Proper notice of hearing was timely issued to appropriate persons entitled to notice.
2. All things necessary to the Commission attaining jurisdiction have occurred.
3. George M. Campbell DBA Production Service Co. (“PSC”) is the operator of the Hendricks -M- (02618) Lease, Well No. 18, Hendrick Field, Winkler County, Texas (“subject well”) as defined by Commission Statewide Rules 14, 58, and 79 [Tex. R. R. Comm’n, 16 TEX. ADMIN. CODE §§3.14, 3.58, and 3.79] and Chapters 85 and 89 of the Texas Natural Resources Code.
4. As operator, PSC has the primary responsibility for complying with Statewide Rule 14 [Tex. R. R. Comm’n, 16 TEX. ADMIN. CODE §3.14], Chapter 89 of the Texas Natural Resources Code, and all other applicable statutes and Commission rules relating to the proper plugging of the subject well.
5. PSC plugged the subject well in compliance with Statewide Rule 14(d)(2) [Tex. R. R. Comm’n, 16 TEX. ADMIN. CODE §3.14(d)(2)] which requires that an operator, when plugging a well, to set cement plugs to isolate each productive horizon and usable quality water strata.
6. In plugging the subject well, PSC did not violate Statewide Rule 14(d)(2) [Tex. R. R. Comm’n, 16 TEX. ADMIN. CODE §3.14(d)(2)].
7. In setting the surface plug in the subject well, PSC did not comply with the approved Form W-3A (Notice of Intention to Plug and Abandon) and Statewide Rule 14(d)(8) [Tex. R. R. Comm’n, 16 TEX. ADMIN. CODE §14(d)(8)] which requires that a 10 foot surface plug shall be placed in the top of the well.

RECOMMENDATION

The examiners recommend that the Commission adopt the attached final order requiring

George M. Campbell DBA Production Service Co. to place a 10 foot surface plug in the top of the subject well between the 4 ½" and 8 5/8" casing and between the 8 5/8" and 12 ½" casing.

Respectfully submitted,

Thomas H. Richter, P.E.
Technical Examiner

James M. Doherty
Hearings Examiner