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RAILROAD COMMISSION OF TEXAS

HEARINGS DIVISION

PROPOSAL FOR DECISION

Oil and Gas Docket Nos. 03-0300034, 03-0300035, 03-0300036, 03-0300037, 03-0300038, 03-0300039, 03-0300040, 03-0300041, 03-0300042, 03-0300043, 03-0300044, 03-0300045, 03-0300046, 03-0300047, 03-0300048, 03-0300049, 03-0300050, 03-0300051, 03-0300052, 03-0300053, 03-0300054, 03-0300056, 03-0300058, 03-0300059, 03-0300061, 03-0300062, 03-0300063, 03-0300065, 03-0300066, 03-0300067, 03-0300068, 03-0300069, 03-0300070, 03-0300071, 03-0300072, 03-0300073, 03-0300074, 03-0300075, 03-0300076, 03-0300077, 03-0300078, 03-0300079, 03-0300080

Applications of Riley Exploration OPG Co, LLC to Consider an Exception to Statewide Rule 21 Pertaining to Fire Prevention and Swabbing of Various Wells, Serbin (Taylor Sand) Field, Bastrop and Lee Counties, Texas

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Heard by: Jennifer Cook — Administrative Law Judge
Paul Dubois — Technical Examiner

Appearances:

For Applicant -
Dale E. Miller,
Engineer

Harold Atkinson, Jr.,
Executive Vice President-Land

Laura Winkler,
Regulatory Compliance Specialist

Applicant -
Riley Exploration OPG Co, LLC

Procedural History:		
	Notice of Hearing	April 15, 2016
	Hearing on the Merits	May 17, 2016
	Considered at Conference	June 21, 2016

I. Statement of the Case

Riley Exploration OPG Co, LLC (Operator No. 712153), ("Riley" or "Applicant"), seeks swabbing authority under Statewide Rule 21[1] for 43 wells ("Wells") in the Serbin (Taylor Sand) Field ("Field"), located in Bastrop and Lee Counties, Texas. Appendix A of this Proposal for Decision ("PFD") is a chart providing identifier information for each well including the name of the well, API number, Commission lease number and the corresponding Commission docket number. No one protested the applications for swabbing authority. The Administrative Law Judge and Technical Examiner (collectively "Examiners") respectfully submit this PFD and recommend the Commission grant the subject applications.[2]

II. Jurisdiction and Notice

The Commission has jurisdiction to adopt and implement the provisions regarding swabbing in Rule 21 under sections 81.051 and 81.052 of the Texas Natural Resources Code, which provide the Commission with jurisdiction over all persons owning or engaged in drilling or operating oil or gas wells in Texas and the authority to adopt all necessary rules for governing and regulating persons and their operations under the jurisdiction of the Commission.[3]

At least ten days' notice of the hearing is required to be given to "the mineral interest owners of record and surface owners of record of the lease on which a well for which an exception is sought is located . . . ."[4] For each docket number, at least ten days' notice of hearing was provided to all mineral interest owners of record and surface owners of record of the lease on which a well for which an exception is sought.[5]

III. Applicable Legal Authority

Statewide Rule 21 (or "Rule 21") states:

> Swabbing, bailing, or air jetting of wells is prohibited as a production method for wells unless the Commission has, after notice and hearing, granted an exception. . . .[6]

Rule 21 contains six requirements that must be met in order for an operator to obtain an exception to the prohibition on swabbing. The six requirements are:

1. the method of production proposed;

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[1] Statewide Rule 21 refers to 16 TEX. ADMIN. CODE § 3.21.

[2] The hearing for these dockets are contained in two audio files which will be referred to "Vol. 1" and "Vol. 2"and will be referred to as "Vol. [1 or 2] Tr. at [minute start:second start]". The Applicant provided a separate set of exhibits for each docket number containing information specific to the well at issue in that docket. Riley also provided a master set of exhibits, which is a compilation of like-kind exhibits from each individual set. Because the master set is a compilation the exhibits specific to each well, the exhibts referenced in this PFD will be to the master set and will be referred to in the PFD as "Applicant Ex. [exhibit no.] at [page no.]".

[3] TEX. NAT. RES. CODE §§ 81.051 and 81.052; *see, e.g.*, 27 Tex. Reg. 9149 (September 27, 2002).

[4] 16 TEX. ADMIN. CODE § 3.21(k)(1).

[5] Vol. 1 Tr. at 34:00; Notice of Hearing for each docket number.

[6] 16 TEX. ADMIN. CODE § 3.21(k).

2. that any production is properly accounted for pursuant to 16 TEX. ADMIN. CODE § 3.26;

3. that the proposed exception is necessary to prevent waste or protect correlative rights;

4. that wellhead control is sufficient to prevent releases from the well;

5. that no pollution of usable quality water or safety hazard will result from either the proposed production method or the condition of the well; and

6. that the operator possesses a good faith claim to the right to operate the well.[7]

Additionally, Rule 21 provides seven factors the Commission has the discretion to consider when determining whether to allow production by swabbing. They are:

1. whether the well has passed a mechanical integrity test within the preceding 12 months;

2. the estimated monthly and cumulative production from the well if the requested exception is granted;

3. whether production will be into an on-lease tank battery or a mobile tank;

4. the adequacy of the financial assurance provided by the operator to assure that the well will be timely and properly plugged;

5. whether production volume, fine sands in the reservoir, or other factors render pumping of the well impracticable;

6. whether the reservoir from which the well produces contains hydrogen sulfide; and

7. the operator's history of compliance with Commission rules.[8]

IV. Discussion of the Evidence

Each of the 43 above-referenced docketed cases was initiated by Riley filing an application for an exception to Statewide Rule 21 to produce a well by swabbing. No one

[7] 16 TEX. ADMIN. CODE § 3.21(k)(1)(B).
[8] 16 TEX. ADMIN. CODE § 3.21(k)(2).

protested these applications ("Applications").[9] At the hearing, Riley provided evidence as to each required element in the Rule. Riley provided testimony from two witnesses: Dale Miller and Harold Atkinson, Jr. Dale Miller is an engineering consultant. Harold Atkinson, Jr. is Riley's Executive Vice President—Land. The following is a summary of Riley's evidence in the order that it was presented and it substantially correlates with the audio recording of the hearing.

The perforated intervals for all 43 Wells are in the Serbin (Taylor Sand) Field. The Wells are near the county line between Bastrop and Lee Counties, with approximately half of the Wells in Lee County and half in Bastrop County.[10] The Field was discovered in November 1985.[11] The Wells were drilled over the timespan of 1986-1996.[12] The Serbin (Taylor Sand) Field is in the Taylor Sand Formation, which is the lower member of the Navarro Group. It is approximately 50-75 feet thick and occurs at a depth of about 5300-5700 feet.[13]

Riley began acquiring wells in the Field on April 30 2013.[14] The Field was originally developed with vertical wells. Riley plans to redevelop the Field using horizontal wells and unconventional fracking technology performed in multi-stages. Riley has acquired operating rights on 32,000 acres in the Field. Riley has drilled five exploratory wells outside the known Field boundary; four are commercially successful and one was drilled downdip and plugged. Riley is waiting for a more stable price environment before drilling more. The formation is tight with porosity ranging from 15-22% and permeability of 0.01-2.3 millidarcies. Horizontal fracking will enable significant additional recovery of Field reserves unattainable through vertical wells. Riley also drilled four horizontal wells within the known confines of the Field where there is vertical well development; all four are commercial producers. The horizontal wells are expected to produce five times what the vertical wells have been able to produce.

Mr. Miller testified that swabbing will prevent premature abandonment of the Wells thereby preventing waste and protecting correlative rights. Additionally it will provide time for Riley to horizontally develop the significant leasehold Riley has in the Field. Riley has made a substantial investment in this horizontal development.[15] In addition to the nine horizontal wells drilled to date, Riley is having a three-dimensional seismic reflection survey performed of the entire Field. Preliminary results indicate the Field is more complex and compartmentalized than originally thought. Riley estimates that a final report of the survey will be complete by the end of June 2016. Riley plans to drill 30 horizontal wells in the Field.[16]

Riley provided an area map identifying the location of each of the 43 Wells.[17] The Wells span an area of approximately 8 miles. The Field is approximately five miles wide and 20 miles

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[9] Riley originally filed 46 applications, which were docketed. The day of hearing Riley withdrew three applications, which were docketed as Oil & Gas Docket Nos. 03-0300057, 03-0300060 and 03-0300064. In Riley's master set of exhibts, references to information regarding the three withdrawn dockets are marked out.
[10] *See* Applicant Ex. 1.
[11] *See* Applicant Ex. 3.
[12] Applicant Ex. 4.
[13] Vol. 1 Tr. at 3:50.
[14] *Id.*
[15] Vol. 1 Tr. at 8:39.
[16] Vol. 1 Tr. at 10:26.
[17] Applicant Ex. 1.

long at its widest point.[18] The Field only has two operators, with Riley being one and having the right to operate a significant portion of the Field.

Pumping equipment for some of the Wells has been removed due to economics and the wells are ready to be swabbed if approved.[19] Applicant anticipates that as horizontal wells are drilled in this area, the vertical wells, including the Wells, will be plugged because the horizontal wells are expected to produce at a much higher rate. Riley explained this horizontal development replacing aging vertical development as a revitalization of the Field using advanced technologies.

Riley is the Commission operator of record for all the Wells.[20] Riley provided completion information for the Wells.[21] The perforated intervals of the Wells range between 5,200-5,800 feet. The base of usable quality for the Wells ranges between approximately 2,500-3,500 feet. Both the surface casing and production casing for all Wells are cemented to the surface indicating that the casings provide no risk of pollution and provide protection of usable quality water in the area.

The Field is 30 years old and some of the wells in the Field no longer produce and have been plugged.[22] Average cumulative production of the Wells is 20,462 barrels ("bbl") of oil and 40,523 MCF of gas per well.[23] Reviewing the annual production history for the Wells shows a consistent decline of production over time followed by a flattening.[24]

Mr. Miller explained the application process.[25] First, Riley submitted Commission Form W-21, *Application for Exception to Statewide Rule 21 to Produce by Swabbing, Bailing, or Jetting*, for each of the Wells. Riley filed the applications because pumping had become uneconomical.[26] He explained that pumping was costly due to the substantial expenses to maintain all the components and moving parts. Swabbing eliminates these charges; it is a waste prevention measure and allows Riley to continue to pursue its horizontal development plan. Wellhead control for the Wells is to be by a Balon Valve or 3M Master Valve.[27] The anticipated monthly production of oil for the Wells ranges from 15 to 70 bbl. During the swabbing operation, the swabbed oil will be transferred directly to the tank battery via piping.[28]

Mr. Miller explained that after the applications were filed, Commission Field Operations Staff inspected each of the Wells.[29] According to the investigation reports, the Wells are currently in compliance and equipped to produce by swabbing.[30] After the inspections were

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[18] Vol. 1 Tr. at 12:12.
[19] Vol. 1 Tr. at 13:56.
[20] Vol. 1 Tr. at 16:26; Applicant Ex. 3.
[21] Vol. 1 Tr. at 20:55; Applicant Ex. 4.
[22] Vol. 1 Tr. at 24:54.
[23] Vol. 1 Tr. at 25:45; Applicant Ex. 5.
[24] Vol. 1 Tr. at 26:55; Applicant Exs. 6 and 7.
[25] Vol. 1 Tr. at 30:50; Applicant Exs. 8 and 9.
[26] Vol. 1 Tr. at 37:05; *see also* Vol. 1 Tr. at 7:03; and Vol. 2 Tr. at 4:20.
[27] Applicant Exs. 8 and 9.
[28] Vol. 1 Tr. at 39:23.
[29] Vol. 1 Tr. at 41:45.
[30] Applicant Ex. 10. Most of the Wells were in compliance with Commission rules upon an initial inspection. Some had compliance issues that were resolved before a follow-up inspection.

complete, Commission Staff performed a review of each of the Applications indicating Riley has no history of enforcement cases or any holds on any of the leases on which the Wells are located.[31] Staff also reviews whether the Wells produce gas that has hydrogen sulfide as a constituent; documentation of the reviews indicates the Wells do not produce gas containing hydrogen sulfide. The review documentation notes that Applicant's P-5 Status is active, Applicant has provided a surface owner and mineral owner list for each of the Wells, and the production method is fixed to the tank battery. After the inspection and review, the Oil and Gas Division- Field Operations submitted a memorandum to the Hearings Division for each of the Wells stating:

> Field Operations has reviewed the application provided for the well(s) located on the subject lease and the inspection reports provided by the Houston District office and have no objection to the use of swabbing as a manner of production.[32]

Riley estimates the cost of swabbing will be fixed at $34.05 per barrel. By comparing the cost to the estimated price of oil, using the West Texas Index actual and futures pricing, swabbing is expected to be an economical method for continuing to produce the Wells.[33] Utilizing a five percent decline rate, Riley provided estimated monthly production for each of the Wells and estimates that the total recoverable reserves over fifteen years of swabbing will be approximately 200,000 bbl.[34]

Riley has three swabbing trucks and will utilize three swabbing units to swab the 43 Wells. The three crews will work five days a week, 8 hours a day moving from well to well to perform swabbing activities. Swabbing each well takes approximately 2 hours. Riley anticipates that each of the Wells will be swabbed bi-monthly.[35]

Riley's Organization Status with the Commission is active. Riley initially filed a Commission Form P-5 *Organization Report* on February 25, 2013 and filed its most recent *Organization Report* on January 20, 2016.[36] Riley has a $50,000 cash deposit and a $250,000 bond as its current financial assurance at the Commission.[37] Riley is the Commission record operator for 180 wells in the Field, including the subject Wells in this case.[38] Riley has leases covering each of the Wells.

All production will be properly accounted for since it is delivered directly from the well to a dedicated individual tank battery onsite.[39] Swabbing does not pose a safety hazard, as the oil will flow via piping directly from the well to the on-site tank battery.

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[31] Applicant Ex. 11.
[32] Applicant Ex. 12.
[33] Vol. 1 Tr. at 51:05; Applicant Ex. 13.
[34] Vol. 1 Tr. at 52:45; Applicant Ex. 14.
[35] Vol. 1 Tr. at 53:15; Applicant Ex. 15 and 16.
[36] Applicant Ex. 17.
[37] *Id.*
[38] Vol. 2 Tr. at 2:10.
[39] Vol. 2 Tr. at 00:40.

V. Examiners' Analysis

The Examiners' conclude that Applicant has met the burden of proof and the Applications should be granted.

A. There is sufficient evidence of each of the six requirements in Rule 21.

To be granted an exception to produce a well by swabbing, an operator must present evidence at hearing sufficient to meet the minimum requirements of the six elements outlined in Rule 21(k)(1)(B). An operator must demonstrate:

1) the method of production;
2) production will be properly accounted for;
3) the exception is necessary to prevent waste or protect correlative rights;
4) wellhead control is sufficient prevent releases;
5) production method and the well condition will not cause pollution or a safety hazard; and
6) the operator has a good faith claim to operate the lease and wells.

The Examiners conclude that Riley has provided sufficient evidence as to each of these required elements.

1. Riley provided the method of production proposed.

Riley provided sufficient evidence of the method of production proposed as required. [40] Riley will utilize three swabbing units which will swab each of the Wells approximately twice per month. The swabbed oil will be directly transferred to an onsite tank battery. After inspection of the Wells and reviewing Riley's planned swabbing methodology, Commission Field Operations has no objection to Riley producing by swabbing.

2. Any production will be properly accounted for.

Riley provided sufficient evidence that any production will be properly accounted for.[41] Because any swabbed oil will be transferred to the onsite tank battery, the oil will properly be allocated to the appropriate lease.

3. The proposed exception is necessary to prevent waste and protect correlative rights.

Riley provided sufficient evidence that the Wells are necessary to prevent waste and protect correlative rights.[42] The Wells were drilled between 1986-1996. Production of the Wells has declined over the years and it is no longer economical to produce the Wells by pumping at their current low production volumes. Production by swabbing is economical and will enable

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[40] 16 TEX. ADMIN. CODE § 3.21(k)(1)(B)(i).
[41] 16 TEX. ADMIN. CODE § 3.21(k)(1)(B)(ii).
[42] 16 TEX. ADMIN. CODE § 3.21(k)(1)(B)(iii).

recovery of additional reserves of approximately 200,000 bbl that would not otherwise be recoverable by pumping.

4. Wellhead control is sufficient to prevent releases from each of the Wells.

Riley provided sufficient evidence that wellhead control is adequate to prevent releases from the Wells.[43] In the Applications, Riley provided information as to the type of wellhead control valve that will be used for each of the Wells. The Applications were reviewed and the wellheads for the Wells were inspected by Field Operations. Field Operations found the Wells to be equipped for swabbing.

5. No pollution of usable quality water or safety hazard will result from either the proposed production method or the condition of the Wells.

Riley provided sufficient evidence that no pollution of usable quality water or safety hazard will result from either the proposed production method or the condition of the well.[44] The Wells were inspected, are cemented to surface and the swabbed oil is transferred by piping directly from the well to an onsite tank battery.

6. Riley possesses a good faith claim to the right to operate the Wells.

Riley provided sufficient evidence that it possesses a good faith claim to the right to operate the well.[45] Riley's Operation Status with the Commission is "active". Riley has active leases covering all the Wells and is the current Commission operator of record for the Wells.

B. In addition to meeting all the requirements in Rule 21, Riley provided evidence that the discretional considerations weigh in its favor.

Rule 21 also identifies factors the Commission has the discretion to consider in addition to the requirements for swabbing in Rule 21. Regarding the discretionary factors the Commission can consider, Riley provided evidence of the estimated monthly and cumulative production from the Wells if the requested exception is granted; that production will be into an on-lease tank battery; that there is financial assurance for the Wells; that low production volumes render pumping of the Wells uneconomical; the reservoir from which the well produces does not contain hydrogen sulfide; and that Riley has no prior enforcement proceedings and the there are no lease holds where the Wells are located.[46]

Based on the record, the Examiners recommend that the Commission grant the Applications and adopt the following findings of fact and conclusions of law.

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[43] 16 TEX. ADMIN. CODE § 3.21(k)(1)(B)(iv).
[44] 16 TEX. ADMIN. CODE § 3.21(k)(1)(B)(v).
[45] 16 TEX. ADMIN. CODE § 3.21(k)(1)(B)(vi).
[46] 16 TEX. ADMIN. CODE § 3.21(k)(2).

Findings of Fact

1. Riley Exploration OPG Co, LLC (Operator No. 712153), ("Riley" or "Applicant"), seeks swabbing authority for 43 wells ("Wells") in the Serbin (Taylor Sand) Field ("Field"), each specifically identified in Appendix A, located in Bastrop and Lee Counties, Texas.

2. For each docket number, at least ten days' notice of hearing was provided to Riley, all mineral interest owners of record and all surface owners of record of the lease on which a well for which an exception is sought. Riley appeared at the hearing and presented evidence in support of the application. No one appeared in protest.

3. Riley's Organization Status with the Commission is active. Riley initially filed a Commission Form P-5 *Organization Report* on February 25, 2013 and filed its most recent *Organization Report* on January 20, 2016.

4. Riley is currently the operator of record for all the Wells, as the Commission has approved Riley's Form P-4, *Producer's Transportation Authority and Certificate of Compliance, filings* for the Wells.

5. Riley submitted $50,000 cash deposit and a $250,000 bond as its current financial assurance at the Commission.

6. Riley has leases for each of the Wells allowing it the right to operate.

7. Riley has three mobile swabbing units that will swab the Wells five days per week, eight hours per day. Riley estimates that the Wells will be swabbed bi-monthly using this methodology.

8. All 43 Wells are completed in the Serbin (Taylor Sand) Field.

9. Each of the Wells has been cemented from the total depth of the well to the surface.

10. Each of the Wells is equipped with wellhead control sufficient to prevent releases.

11. The estimated cumulative production from the Wells by swabbing is 200,000 bbl.

12. An exception to produce the Wells by swabbing is necessary to prevent waste. Production of the Wells by pumping is not economical due to declining production over time leading to current low production volumes. Production of the Wells by swabbing is economical.

13. All swabbed oil is piped directly from each of the Wells to the on-lease tank batteries.

14. The reservoir from which the Wells are produced does not contain gas with hydrogen sulfide as a constituent.

15. Riley has no history of outstanding violations of Commission rules and there are no Commission holds on leases where the Wells are located.

Conclusions of Law

1. Proper notice of hearing was timely given to all persons legally entitled to notice.

2. All things have occurred to give the Commission jurisdiction to decide this matter.

3. Riley's application satisfies the mandatory requirements for an exception to Statewide Rule 21 to produce the Wells by swabbing.

    a. Riley provided evidence of the method of production.

    b. The production will be properly accounted for.

    c. An exception to produce the Wells by swabbing is necessary to prevent waste.

    d. The wellhead control for each well is sufficient to prevent releases.

    e. No pollution to usable quality water or safety hazard will result from the proposed production method or the condition of the Wells.

    f. Riley possesses a continuing good faith claim of the right to operate the Wells.

4. In addition to meeting all of the requirements in Rule 21, consideration of the discretionary factors in Rule 21 favors Riley obtaining authorization to do production by swabbing.

Recommendation

The Administrative Law Judge and Technical Examiner recommend that Riley's 43 Applications be granted to allow for the production of the Wells by swabbing, in accordance with the attached final order.

Respectfully,

Jennifer Cook
Administrative Law Judge

Paul Dubois
Technical Examiner

Appendix A

Docket No.	API No.	Lease Name & Well No.	Lease No.
03-0300034	021-31378	Louise #1	20841
03-0300035	021-31295	Steglich, J.C. "D" #4	20485
03-0300036	021-31227	Steglich, J.C. #3-C	20281
03-0300037	021-30956	Steglich "E" #3	22673
03-0300038	021-31034	Weatherston, George #2	19633
03-0300039	021-31092	National Pete "A" #2	20195
03-0300040	021-31111	Winton/Barker #1	19950
03-0300041	021-31440	Steglich #3	19876
03-0300042	021-31190	Behrens, C. #1	130571
03-0300043	021-31297	Amber, Amy #2	20478
03-0300044	021-31514	Act Ranch "B" #1B	22872
03-0300045	021-31193	Behrens, M. #1	20115
03-0300046	021-31204	Horn #2	20176
03-0300047	021-31235	Friebe, Eugene #2	20309
03-0300048	021-30976	Droemer "A" #1 A	19743
03-0300049	021-31013	Snider, Bert #1	19884
03-0300050	021-31214	Mueth, Leonard #1	20229
03-0300051	021-31091	National Pete #1	19863
03-0300052	287-32329	Luecke B #3	21315
03-0300053	287-32366	Gersch-Karnstaot #1	21937
03-0300054	287-32109	Mersiovsky #2	19780
03-0300056	287-31934	Mutscher #1	19259
03-0300058	287-32432	Marquis #7 #7	22463
03-0300059	287-32237	Steinbach #2	20405
03-0300061	021-31069	Lindner #1	19804
03-0300062	287-32172	Weise "B" #B 2	19980
03-0300063	287-32242	Arldt, Erwin E. #5	19346
03-0300065	287-32279	Arldt, Erwin E. "B" #6	20956
03-0300066	287-32115	Arldt, Erwin E. #4	19346
03-0300067	021-31513	Meuth, Leonard 'B' #1	22864
03-0300068	287-32005	Calvin, Jr. #1	19519
03-0300069	287-32075	S & M Energy-Marquis #6	19663
03-0300070	287-32311	Lorenze #5	21165
03-0300071	287-32220	Behrens Family #1	20258

Docket No.	API No.	Lease Name & Well No.	Lease No.
03-0300072	287-31994	Roitsch #1	19577
03-0300073	287-31932	Qchulze, Alfred V. #1	19258
03-0300074	287-32296	Roitsch -A- #1	20864
03-0300075	287-32097	Hern #1	19744
03-0300076	287-32053	Holmes #2	19533
03-0300077	287-32002	Schurmeier #1	19593
03-0300078	287-32036	Schurmeier #3	19593
03-0300079	287-31945	Stewart #1	19352
03-0300080	287-31973	Lorenz, Rudolf "A" #6	19459