RAILROAD COMMISSION OF TEXAS
HEARINGS DIVISION

April 18, 2017

OIL & GAS CASE NO. 0302524
STATUS NO. 809170

APPLICATION OF SHARP IMAGE, INC. FOR AN EXCEPTION TO STATEWIDE RULE 37 FOR THE FIVE RESOURCES 25 LEASE, WELL NO. 1PU, WILDCAT, GAR-KENT (STRAWN), SWENSON-BARRON (ELLEN.), LYN KAY (6150), SWENSON-GARZA (ELLEN.), S.N.B. (CISCO), SWENSON-GARZA (STRAWN), KALGARY (PENN. LIME), SUSAN (CANYON), SWENSON-GARZA (STRAWN B) AND SWENSON-GARZA, NE (CANYON) FIELDS, GARZA COUNTY, TEXAS

PROPOSAL FOR DECISION

HEARD BY: Jennifer Cook – Administrative Law Judge
Richard Eyster, P. G. – Technical Examiner

PROCEDURAL HISTORY:

Application Filed:	November 4, 2016
Notice of Application:	November 15, 2016
Notice of Intent to Protest Filed:	December 6, 2016
Notice of Hearing:	January 6, 2017
Hearing Date:	February 8, 2017
Transcript Received and Record Closed:	March 13, 2017
Proposal for Decision Issued:	April 18, 2017

APPEARANCES:

For Applicant, Sharp Image, Inc. –
Clay Nance and Grant Chumlea
Rash Chapman Schreiber Leaverton & Morrison LLP

For Protestant, Robert Hitzelberger –
John G. Soule, Olga Kobzar and Stephanie Kover
Scott Douglass & McConnico LLP

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I. Statement of the Case

Sharp Image, Inc. ("Sharp" or "Applicant") filed an application ("Application") with the Railroad Commission ("Commission" or "RRC") seeking a lease line spacing exception permit under the provisions of 16 TEX. ADMIN. CODE § 3.37 ("Statewide Rule 37" or "Rule 37").

Applicant seeks an exception to drill a vertical well closer than the minimum lease line distance for the Five Resources 25 Lease ("Lease"), Well No. 1PU ("Well") in the Wildcat, Gar-Kent (Strawn), Swenson-Barron (Ellen.), Lyn Kay (6150), Swenson-Garza (Ellen.), S.N.B. (Cisco), Swenson-Garza (Strawn), Kalgary (Penn. Lime), Susan (Canyon), Swenson-Garza (Strawn B) and Swenson-Garza, Ne (Canyon) Fields, because the proposed location of the Well is closer than allowed to an internal tract within the Lease having unleased and/or non-pooled interests. The Application is protested by Robert Hitzelberger ("Protestant"), who owns unleased undivided mineral interests in one of the two tracts comprising the Lease.

The Lease consists of two 40-acre tracts pooled by Sharp. Both tracts are approximately the same in size and shape, each being rectangular and together forming a rectangular shaped Lease with one internal lease line in approximately the center of the Lease. One of the 40-acre tracts is west of the internal lease line (the "West Tract") and one is east of the internal lease line (the "East Tract"). The East Tract is fully leased to Sharp and where the proposed Well is located. The West Tract is fully leased to Sharp except for Protestant. The location of the proposed Well is 97 feet from the internal lease line splitting the two tracts, and almost directly in the center of the Lease.[1] The Commission fields that Applicant requests an exception for either have a 467-foot or 660-foot minimum lease line spacing limit. Both limits are considered in the Examiners' analysis. A copy of a plat of the Lease is attached as Appendix A.[2]

Applicant, relying on seismic data, seeks the exception to drill into a water drive pinnacle reef trap reservoir; this top of the reef reservoir ("Top Reef") is Applicant's primary target. Applicant asserts that this pinnacle reef is an unusual local anomaly justifying a Rule 37 exception. Because it is a water drive reservoir, Applicant needs to drill at the highest location because any reserves located updip of the Well would not be produced and would be wasted. Applicant also asserts that for these types of pinnacle reefs in this area, it is preferable to determine the reef axis and drill to the east of it.

Should the Top Reef prove unproductive, Applicant has a second and third potential target reservoir, referred to as the bailout targets ("Bailouts"). If the Top Reef is unproductive, Applicant intends then to drill to the second target, referred to as the mid-reef ("Mid Reef") and if that is unproductive, Applicant intends to drill to the third potential target, the Strawn "C" formation ("Strawn 'C'"). Applicant provided structure maps of both the Top Reef and the Strawn "C". Applicant estimates that the peak of the Strawn "C" is approximately 500 feet east of the Top Reef. Applicant asserts it is most important to drill

[1] Tr. at 9:3 to 10:1.
[2] The attached plat is Applicant Ex. 2 at 3.

in the highest structural location in the Top Reef; Sharp also claims that should the Bailouts become necessary to be drilled, there is more drilling risk and poor reservoir quality the further east of the Strawn "C" peak the Well is drilled.

Based on other productive wells in the area, Applicant's expert estimates that the Well at the proposed location will produce approximately 270,000 barrels of oil. Applicant's expert testified that there is no regular location[3] in the East Tract that would prevent substantial waste and confiscation because all regular locations fall outside the top contour of the target reef and that all reserves updip would be lost which could be up to 30 percent of the estimated Top Reef production. Applicant did not provide calculations or otherwise compare the amount of waste or confiscation that would occur if a regular location in the West Tract were used as the proposed Well location. Applicant acknowledges that any location on the West Tract is a regular location as to the internal lease line because Applicant has leased 100% of the East Tract which is the only offsetting tract to this lease line. Applicant acknowledges that a regular location three feet west of the internal lease line and located in the West Tract is equivalent in the estimated production from the Top Reef as the proposed Well location; it is also east of the reef axis as identified by Applicant's expert. Applicant provided no calculations or comparisons of potential waste or confiscation regarding the Strawn "C," the Mid Reef or of not drilling to the east of the Top Reef's axis.

Protestant asserts that there are regular locations at the highest structural points of the top Reef; according to Applicant's structure map there are approximately 33 acres in the top contour of the target pinnacle reef. Protestant and Applicant agree that most the drainage area of the Top Reef is on the West Tract, the tract containing Protestant's mineral interests. Protestant argues that there is no evidence of any amount waste or confiscation for regular locations on the West Tract. Protestant maintains that the proposed location is one of the most detrimental locations for Protestant-even a little more east would be less detrimental due to less drainage of the West Tract; a regular location on the West Tract would allow Protestant to be compensated for drainage of his mineral interests in the West Tract. Protestant claims that these types of reservoirs are isolated traps such that the appropriate field for the Application is the Wildcat Field.

The Examiners respectfully submit this Proposal for Decision ("PFD") and recommend the Commission deny the Application for the Rule 37 exception. There is insufficient evidence that allowing the exception is necessary to prevent confiscation, prevent waste or protect correlative rights.

II. Jurisdiction and Notice[4]

Rule 37 is authorized pursuant to sections 81.051 and 81.052 of the Texas Natural Resources Code, which provide the Commission jurisdiction over all persons owning or

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[3] A "regular location" refers to a well location that complies with lease line spacing limits such that no Rule 37 exception would be required for that location.

[4] The hearing transcript in this case is referred to as "Tr. at [pages:lines]." Applicant's exhibits are referred to as "Applicant Ex. [exhibit no.]". Protestant's exhibits are referred to as "Protestant Ex. [exhibit no]."

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.[5]

Rule 37 contains provisions regarding notice of the application for a spacing exception and notice of any hearing on an application.[6] Regarding notice of the application, Rule 37 requires:

> When an exception to only the minimum lease line spacing requirement is desired, Applicant shall file a list of the mailing addresses of all affected persons, who, for tracts closer to the well than the greater of one-half of the prescribed minimum between-well spacing distance or the minimum lease line spacing distance, include:
>
> (i) the designated operator;
>
> (ii) all lessees of record for tracts that have no designated operator; and
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> (iii) all owners of record of unleased mineral interests.[7]

Notice of the Application was provided as required.[8]

After notice of the Application was provided, the Commission received the protest by Protestant, thereby necessitating a hearing on the Application. Rule 37 requires that notice of hearing be given to the same persons who were provided notice of the Application.[9] The Commission's Hearings Division sent notice of the hearing to all persons required to be provided notice.[10] Both Applicant and Protestant, who filed the only protest of the Application, appeared at the hearing.

III. Applicable Legal Authority

Statewide Rule 37 provides statewide well spacing limits for all fields that do not have special field rules. In this case, Applicant requests an exception for multiple fields, some of which have special field rules and some which do not. Rule 37 applies to applications for an exception to spacing limits whether the Rule 37 spacing limits apply or there are spacing limits in the Field Rules.[11]

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[5] TEX. NAT. RES. CODE §§ 81.051 and 81.052; *see, e.g.*, 29 Tex. Reg. 8271 (August 27, 2004).
[6] Rule 37 exception provisions apply whether the spacing limits are in Rule 37 or special field rules. *See, e.g.,* Vol. 2 Ernest E. Smith and Jacqueline Lang Weaver, *Texas Law of Oil and Gas* § 9.4 (2d. ed. 2016).
[7] 16 TEX. ADMIN. CODE § 3.37(a)(2)(A).
[8] Tr. at 21:24 to 22:12; Applicant Ex. 3. Other than Applicant, Protestant was the only person required to receive notice because the lease line at issue is internal, Protestant is the only owner of an unleased mineral interest, and Applicant has leased the remaining mineral interests for the Lease.
[9] 16 TEX. ADMIN. CODE § 3.37(a)(3).
[10] Tr. at 22:17 to 23:3; Applicant Ex. 4.
[11] 2 Ernest E. Smith and Jacqueline Lang Weaver, *Texas Law of Oil and Gas* § 9.4 (2d. ed. 2016).

Rule 37 provides that the Commission may grant an exception to the Rule 37 as follows:

> [T]he commission, in order to prevent waste or to prevent the confiscation of property, may grant exceptions to permit drilling within shorter distances than prescribed in this paragraph when the commission shall determine that such exceptions are necessary either to prevent waste or to prevent the confiscation of property.[12]

Rule 37 further provides:

> At any such hearing, the burden shall be on the applicant to establish that an exception to this section is necessary either to prevent waste or to prevent the confiscation of property.[13]

In sum, for Applicant to obtain an exception to the minimum lease line distance limit, Applicant has the burden to prove the exception is necessary to either prevent waste or prevent the confiscation of property.

IV. Discussion of Evidence

Complainant provided the testimony of one witness and seventeen exhibits. Protestant provided no witnesses and one exhibit.

A. Summary of Applicant's Evidence and Argument

Applicant maintains that the proposed Well is necessary to prevent waste, prevent confiscation and to protect correlative rights. Applicant relies on seismic and geology information and asserts that the exact location proposed is necessary for optimal production of reserves.[14]

Applicant's only witness was David Hugh Burgard, Jr. who is a consulting geophysicist with Sharp. He has been a consultant for Sharp since 2011 and consulting fulltime since 1987. He has a bachelor's degree in geology. He has extensive experience in geophysical interpretation of seismic data.[15] He has been working with Sharp on a 3-D seismic project in the area of the proposed Well in Garza and Kent County. Sharp has drilled two successful wells in the 3-D project in question just immediately east of the Garza-Kent County line and located in Kent County. Mr. Burgard has been working with Sharp on a number of projects in this area and has performed this type of work in this area for other clients.[16]

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[12] 16 TEX. ADMIN. CODE § 3.37(a)(1).
[13] 16 TEX. ADMIN. CODE § 3.37(a)(3).
[14] *See* Tr. at 9:3 to 10:1.
[15] Tr. at 12:9 to 15:19; Applicant Ex. 1.
[16] Tr. at 15:20 to 16:23.

Mr. Burgard provided and discussed the Application for the Well. In the Application, Applicant seeks to drill in eleven Commission designated fields. At hearing, Applicant withdrew five fields from its application, leaving six fields remaining.[17] The table below summarizes the fields in the application, identifying which ones have been withdrawn, which remain, and the applicable lease line spacing limit for the remaining fields.

	Field Name	Lease Line Spacing Limit	Field Rule/R37	Remaining/ withdrawn
1	Wildcat	467	R37	Remaining
2	~~Gar-Kent (Strawn)~~	N/A	N/A	Withdrawn
3	~~Swenson-Barron (Ellen.)~~	N/A	N/A	Withdrawn
4	~~Lyn Kay (6150)~~	N/A	N/A	Withdrawn
5	~~Swenson-Garza (Ellen.)~~	N/A	N/A	Withdrawn
6	S.N.B. (Cisco)	660	Field Rule	Remaining
7	Swenson-Garza (Strawn)	660	Field Rule	Remaining
8	Kalgary (Penn. Lime)	467	R37	Remaining
9	~~Susan (Canyon)~~	N/A	N/A	Withdrawn
10	Swenson-Garza (Strawn B)	467	R37	Remaining
11	Swenson-Garza, Ne (Canyon)	467	R37	Remaining

Mr. Burgard testified that the designation of the Lease, and the fact that Applicant gave equal weight to both leases was so that Applicant could drill the Well in a central position on the seismic anomaly and give fair and correlative rights to both tracts within the Lease.[18]

Protestant's interest is in the West Tract that he acquired from heirs, which Mr. Burgard refers to as the "Swenson heirs." Mr. Burgard testified that Protestant was not leased but Sharp leased the remaining Swenson heirs via a seismic option. He testified that everyone within the 80-acre Lease is leased with Sharp other than Protestant. He estimates Protestant's mineral interests to be a little over four net acres of the 80-acre Lease. He believes Protestant owns slightly more than ten percent of an undivided interest in the mineral rights of the West Tract.[19]

Sharp has been a Commission authorized operator for over 25 years. Sharp operates over a hundred producing wells and Sharp's production is approximately a thousand barrels per day.[20] Mr. Burgard testified that Sharp bases its exploratory

[17] Tr. at 115:25 to 117:16.
[18] Tr. at 16:24 to 20:5; Applicant Ex. 2.
[19] Tr. at 20:6 to 21:23.
[20] Tr. at 23:4 to 24:10; Applicant Ex. 5.

decisions upon 3-D seismic data. Sharp actively conducts exploration of pinnacle reefs in what he refers to as the "apron areas"—the underlying shallow marine environment that represents the low-stand reefs where the pinnacle reefs dominate—of the Horseshoe Atoll and that this area is Sharp's main exploratory interest.[21]

Mr. Burgard provided an enlarged plat of the Lease and explained the location choice for the Well. He explained that Sharp chooses a well location based on the coordinates from the 3-D seismic data. Using the coordinates, a surveyor then identifies the location and creates a survey plat. He testified that the proposed Well location "represents the primary location that I recommended first to Sharp Image Energy in March of this year."[22] The survey plat in this case covers two sections. The West Tract is in Section 26, Block No. 2, H. & G. N. RR. Co. Survey and the East Tract is in Section 25 of that survey. He testified that the proposed location for the Well is centrally located within the Top Reef, on the east side of the reef area.[23]

Mr. Burgard provided a pooled unit designation for the Lease. This designation identifies the written oil and gas and mineral leases pertaining to the Lease. He testified that the designation and all leases are recorded in the county records of Garza County. He testified that Sharp wanted to create the Lease from the midline out to obtain 40 acres on each side of the line between Sections 25 and 26 such that the Lease would be equally divided between the two sections since there is different mineral ownership in the two sections.[24]

Mr. Burgard discussed in detail the reason for choosing this area to drill the Well. He provided a plat from the West Texas Geological Society Publication No. 79-1 entitled the Petroleum Geology of the Permian Basin to illustrate the paleogeography during the late Pennsylvanian timescale, and the features of the Horseshoe Atoll. The area around the Horseshoe Atoll is what he refers to as the apron where the low-water stand pinnacle reefs are that Sharp targets. The area pertinent to this case is the area just northwest of northeastern tip of the Horseshoe Atoll (or the Salt Creek Field) in Garza County near the Garza and Kent County lines. He testified that the proposed Well is at the very end extension of what he refers to as the apron area of the Horseshoe Atoll. He testified that this area, around the Salt Creek Field, has been Sharp Image's primary area of focus since 2011. He also provided a diagram of wells in the area with his calculation for the contact point between the Pennsylvanian shale and the carbonate below which he estimates as the top of these reefs in the area. He used the well logs and refers to these calculations as the "log tops" for the wells. He discussed two productive wells in the area that Sharp Image operates; he testified that these Sharp Image wells have higher log tops than plugged and dry hole wells surrounding them. He used this as a demonstration of the nature of the targets Sharp Image seeks in this area with the 3-D seismic data it obtains—isolated water drive pinnacle reefs. The two productive Sharp Image wells in the area were completed by setting the pipe right at the top of the reef to create a completed

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[21] Tr. at 24:11 to 25:14.
[22] Tr. at 26:9 to 26:11.
[23] Tr. at 25:15 to 27:14; Applicant Ex. 6.
[24] Tr. at 27:16 to 29:23; Applicant Ex. 7.

open hole in the very top of the reef section. The wells need to be completed at the top of the reefs due to the water drive in the area. He estimates the top of the reef to be around 6100 feet. He stated Sharp Image has requested a depth to 7,500 feet but he believes Sharp Image will go no deeper than 7,350. His estimate of where he anticipates the productive interval for the Well is between 6,160 to 7,312 feet.[25]

Mr. Burgard provided an illustration of productive fields in the area where the Well is proposed to be located. According to Mr. Burgard, there is a trend of pinnacle reefs from the northeast towards the southwest along the structural spine, or maximum buildup of the reef platform. The proposed Well location is to the southwest of other productive wells positioned along this trend.[26]

Mr. Burgard provided Commission records for one of Sharp Image's other wells in the area, Well No. 1 in the Five Resources 24 Lease (API No. 42-263-32103) ("Well No. 1"). The completion for Well No. 1 was approved by the Commission June 8, 2015. This was Sharp's first well drilled as a result of the 3-D seismic survey of this area. It is an open hole vertical well at the top of a pinnacle reef. Once Sharp Image encounters the reef limestone while drilling a well, Sharp Image stops drilling and runs a drill stem test; the optimum way of completing wells on the reef buildup is to set the pipe right at the top of the reef, go back in with the completion tools, clean out the cement and bottom, drill another foot or two—no more than five or six feet—down into the reef. Well No. 1 has been flowing since completion essentially water free and thus far has produced over 53,000 barrels of oil.[27]

Mr. Burgard provided seismic profiles related to the proposed location to illustrate the seismic anomaly at issue. He also provided a structure map of the Top Reef. The proposed location of the Well is within the top contour of the structural interpretation of the Top Reef.[28] He provided an east-west seismic profile across the reef anomaly.[29] He noted the Strawn "C" and the Mid Reef which is about midway between Strawn "C" and the Top Reef. He testified that the Mid Reef and the Strawn "C" are two other potential productive intervals that may be encountered at the proposed Well location.[30] At the Top Reef, he expects a porosity buildup, which a consulting geologist was able to corroborate. Based on logs, he concludes that there was porosity in the top of several of the offsetting wells and a thickening of that porosity could produce this type of seismic anomaly, which he believes is the core of the Top Reef and where the location of the Well is proposed.[31] He provided a northeast to southwest profile across the Top Reef. The proposed Well location is centrally located on the seismic anomaly and the Top Reef is asymmetric as

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[25] Tr. at 29:24 to 42:20; Applicant Exs. 8, 10.
[26] Tr. at 44:17 to 50:24; Applicant Exs. 8 at 3, 10.
[27] Tr. at 53:19 to 58:10; Applicant Exs. 9 and 11.
[28] Tr. at 62:9 to 63:6.
[29] Tr. at 63:7 to 64:15.
[30] Tr. at 64:16 to 65:4.
[31] Tr. at 65:5 to 66:16.

to the two tracts of the Lease. It is steeper on the southwest flank than it is on the northeast flank.[32] He provided a north-south profile across the feature.[33]

He provided a structure map of the Strawn "C" showing anticlinal closure in the northwest corner of Section 25, the same section containing the East Tract. He testified that if the Top Reef were unproductive, Sharp would continue to drill and perhaps steer east, down to the Strawn "C" level, which would also provide a penetration of the Mid Reef. According to him, there is a crestal position at the Mid Reef level, also east of the proposed Well location. Sharp's primary target is the Top Reef. The top of the Strawn "C" is approximately 500 feet east of the lease line with the top of the Mid Reef occurring between. No structure map for the Mid Reef was provided. He testified that is because he did not have sufficient correlative points for the Mid Reef from the wells in the area.[34] He testified that the target is to hit the Top Reef. He testified not drilling at the highest structural location of the Top Reef would cause waste of any hydrocarbons at shallower depths than the Well, which is what you typically expect in a water drive area.[35]

He testified it would not be economic to drill one well at the Top Reef and a second well at the top of the Mid Reef because there is a 500-foot distance between the two. He stated it would be more economical to put on a drill motor and steer it slightly to the east to drill the top of the Mid Reef. He testified that the proposed Well is what he refers to as "a controlled wildcat well." There are several dry holes already drilled in the area. It is considered controlled due to the 3-D seismic data, but none of the surrounding wells is producing from that horizon. The Well would be the equivalent, if it is structurally high as mapped, of one of these pinnacles building up above the base level like the first two wells that Sharp has been successful with to the east, and other productive wells trending from the northeast to southwest in this area.[36]

He provided an outline of the total area of the Top Reef potential production, which by planimeter is approximately 67 acres. He also outlined the main drainage area and crest of the pinnacle, the reef core, being the thickest part of the buildup at approximately 33 acres.[37] He has estimated the location of the axis of the Top Reef and proposes drilling immediately southeast of it.[38] When asked why Sharp could not drill at a regular location, he testified that moving the location 467 feet to the east of the lease line—such that the Well location would remain in the East Tract—would place the Well at a structurally lower location, producing waste. He acknowledged that a regular well could be drilled within what he designated as the core area of the reef. He testified that placing the Well at a regular location west of the lease line would sacrifice potential production from either the Mid Reef or the Strawn "C;" it would also be on the other side of what he identifies as the axis which he stated is potentially poorer reservoir quality. He acknowledged that the Mid Reef and Strawn "C" would not be penetrated if Sharp were to be successful at the Top

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[32] Tr. at 66:19 to 67:14.
[33] Tr. at 67:15 to 68:16.
[34] Tr. at 68:21 to 71:3.
[35] Tr. at 71:4 to 73:18; Tr. at 73:20 to 74:20.
[36] Tr. at 74:21 to 76:2.
[37] Tr. at 78:14 to 79:2.
[38] Tr. at 79:3 to 82:5; Applicant Ex. 12, 12A.

Reef. If successful at the Top Reef, Sharp would drill an open hole and complete at the top of the Top Reef.[39] If the pinnacle reef is unproductive, he suggests that the other zones are potential production areas and Sharp would then drill those other zones. He claims that moving the Well east to a regular location would move the Well out of the top contour and in the flank of the reef, which would cause waste. He claims that moving the Well west would move the Well further from the Bailout reservoirs, causing waste and confiscation. The proposed Well location is just to the east of the lease line. He testified that placing the Well in the middle of the unit provides balance between the West Tract and East Tract mineral interest owners.[40]

He provided a letter he prepared for investors for another reef well in the area (in Section 24 which is the section east of the East Tract). In the letter, he compares this Section 24 well with five other more eastern wells. The well referenced in the letter produced a better start than five other wells east and no water from March 2015 through June 2016.[41]

He provided a compilation of the production testing that was reported for the Gulf Oil Corporation's Swenson Land and Cattle No. 1, a well in Section 25 that was drilled in 1938 and completed in March 8, 1939. Over 40 production tests were performed for this well in various formations. The well was never completed as a producer.[42] He used this information to estimate where different formations were, including the two Bailout reservoirs, the Mid Reef and Strawn "C."[43] In the production testing results, there are approximately initially 12 tests in the midreef area, with two reporting hydrocarbon production. Six later tests in the midreef to do not show reported production. There were initially six tests in the Strawn "C" all showing some production. Nine later tests of the Strawn "C" shows no reported production of hydrocarbons. He provided an alternate proration unit should it be necessary to complete out of the Mid Reef or the Strawn "C."[44]

He provided a letter sent to investors about the proposed Well dated August 30, 2016 regarding the reasons for drilling the Well. It describes Sharp's primary interest in the Top Reef. It also describes the Bailouts—the Mid Reef and Strawn "C"—which would only be drilled if the Top Reef is marginal or nonproductive. The nearest Strawn "C" well that has been productive is in southwest corner of Section 16, which is the section directly south of the West Tract.[45]

He testified that his opinion is that the proposed location is reasonable and the preferred location. He testified that he believes drilling a regular location to the east or west of the proposed location would result in waste. He testified that the proposed location allows the mineral owners, both in the East and West Tracts except for the Protestant,

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[39] Tr. at 82:8 to 87:11.
[40] Tr. at 87:12 to 92:9.
[41] Tr. at 97:2 to 99:21; Applicant Ex. 14.
[42] Tr. at 102:8 to 105:4; Applicant Ex. 15.
[43] Tr. at 105:6 to 109:8; Applicant Ex. 15.
[44] Tr. at 109:9 to 110:13; Applicant Ex. 16.
[45] Tr. at 110:14 to 113:13; Applicant Ex. 17.

the opportunity to recover their fair share and it prevents them from being deprived of their fair share of the minerals.[46]

B. Summary of Protestant's Evidence and Argument

Protestant had no witness but did cross examine Mr. Burgard. Protestant admitted one exhibit.

On cross, Mr. Burgard agreed that over 50% of the Top Reef core—approximately 60% according to him—is on the West Tract where Protestant owns unleased mineral interests.[47] He acknowledged also that more of the remaining potential drainage area of the Top Reef is also on the West Tract; he estimated 55% in the West Tract compared to 45% in the East Tract.[48]

He clarified the goal of drilling on the east side of the axis of the Top Reef. He testified there is no range limitation east of the axis and that east of the axis, the only limitation would be to stay within the top part of the Top Reef and preserve a reasonable opportunity to test the Bailouts at the same time. He testified there is no regular location east of the proposed location that would remain in the highest contour of the Top Reef, and would potentially give up the top 10 feet of the closure, which amounts to approximately 30 percent of the estimated volume.[49] He acknowledged he performed no calculations.[50]

There was substantial discussion about which Commission field or fields should be authorized for this Rule 37 exception, should an exception be granted at all. Mr. Burgard testified that the preferred field that Sharp requests for authorization to drill the Top Reef is the S.N.B. (Cisco) Field.[51] He identified two other S.N.B. (Cisco) completions in the area. One is approximately one and a half miles away from the proposed Well and is operated by Sharp, the Five Resources 24 Lease, Well No. 1 (API No. 42-263-32103). The other is the discovery well for the field, the Swenson-Morrison Lease, Well No. 1 (API No. 42-263-31662) and is located approximately four miles from the proposed Well. He stated that while he has no data, it is possible that these wells are in pressure communication. Specifically, he testified:

> We don't have pressure data -- under the assumption, it's possible to be in pressure communication and have comparable reservoir development above the base level of the platform. And that was the justification for picking the S.N.B. Field is that the S.N.B. Field we have very good information telling us that it was staked based on 3-D seismic showing a localized structure above the surrounding area. And that's what our field is -- is based upon.

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[46] Tr. at 113:16 to 115:6.
[47] Tr. at 125:15 to 127:14.
[48] Tr. at 129:20 to 130:9.
[49] Tr. at 127:17 to 128:25.
[50] Tr. at 129:1 to 129:12.
[51] Tr. at 144:18 to 150:5.

As for whether the hydrocarbons are in communication, he acknowledged that they do not compete with each other but as to whether the hydrocarbons from these different S.N.B. (Cisco) wells are in "communication," he was also unsure. Specifically, he testified:

> Mr. Burgard: To our knowledge they're not in competition with each other. We can't be certain of communication because the wet wells that low were not produced. . . .
>
> Question: So, in other words, they are severed hydrocarbon reservoirs. Correct?
>
> Mr. Burgard: They are separate buildups above the base level. Yes, that is correct.

He acknowledged and referred to the proposed Well as a "controlled Wildcat." He testified that the main reason that historically these pinnacle reef reservoirs were not treated as a new field discovery despite being isolated, was to avoid going through a new field discovery process for each well and to obtain an allowable on an existing field.[52]

He also clarified the reason for requesting a Rule 37 exception as to the secondary and third target—the Mid Reef and the Strawn "C" as follows:

> A If the reef, for whatever reason, at the top turns out to be nonproductive, the plan would be to continue on down to check the Mid-reef, and take it all the way down to the Strawn "C" if the Mid-reef was not productive. If we found the Mid-reef productive, we'd never get to the Strawn zone at this location.
>
> Q Okay. Let's say that the top of the reef is not productive and so you're going down to the Mid-reef.
>
> A Going down to the Mid-reef approximately 500 feet below the top.
>
> Q Okay. And what is the basis for asking for a Rule 37 spacing exception as to the Mid-reef?
>
> A It would be to preserve the correlative rights within the proration unit, although we would go to the alternate proration unit.
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> Q For the Mid-reef -- I thought the purpose for having to build the well close to the lease line is because that was the peak of the reef area.

[52] Tr. at 150:3 to 154:13.

A That is the primary objective, is to stay within that top closure as indicated on the structure map, and stay well within that top closure centered on the reef anomaly as envisioned from the seismic data. . . .

A If the reef prospect were not there, I cannot imagine that Sharp Image would be drilling to the Mid-reef based on the limited information we have at that level.

Q So you would have no basis to request a Rule 37 exception as opposed to requesting a regular well location?

A No, the only basis at that point would be if the exception were granted and we had gotten to that point continuing with the well --

Q Right. But that's -- that's --

A -- hundred feet deep.

Q That's not what I'm asking you about. I'm trying to make sure --

A I see.

Q -- and that absent -- that your basis for the Rule 37 exception as to the Mid-reef is dependent on your Rule 37 exception request to the top reef.

A Yes.

Q Is that correct? Okay.

A That's correct.

Q Okay. Would that also be true for the Strawn?

A Yes, that would also be true for the Strawn in the event --

Q Okay.

A -- in the event that the Mid-reef as well were nonproductive.

According to the witness, Sharp's basis for asking for the Rule 37 exception at the proposed location is to drill at the highest structural location of the Top Reef.[53]

Mr. Burgard discussed each remaining Commission field and identified which of the target formations (the primary Top Reef, the secondary Mid Reef target and the third

[53] Tr. at 154:24 to 159:17.

Strawn "C" target) related to each of the remaining Commission fields. The table below summarizes his testimony with the pertinent lease line spacing.

	Field Name	Lease Line Spacing Limit	Target Formation(s)
1	Wildcat	467	Mid-reef
2	S.N.B. (Cisco)	660	Top of reef
3	Swenson-Garza (Strawn)	660	Strawn "C"
4	Kalgary (Penn. Lime)	467	Strawn "C"
5	Swenson-Garza (Strawn B)	467	Strawn "C"
6	Swenson-Garza, Ne (Canyon)	467	Mid-reef

Regarding the fields for the Strawn "C", in comparison between the Kalgary (Penn. Lime) and the Swenson-Garza (Strawn), he stated that Sharp might prefer the Swenson-Garza (Strawn) because it is a stronger producer and the Kalgary (Penn. Lime) is no longer producing. He acknowledged the Kalgary (Penn. Lime) is a closer field and approximately a quarter-mile from the proposed Well location; he also acknowledged that he thinks the Commission would assume the Kalgary (Penn. Lime) Field is the proper field due to its proximity. He acknowledged that both fields are "clearly a separate trap." For the Mid-Reef, he stated that Sharp would have to claim the Wildcat Field and that the Swenson-Garza, Ne (Canyon) Field might also be appropriate. He acknowledged, like the other pinnacle reef traps in this area, the wells in the Swenson-Garza, Ne (Canyon) Field are "noncontinuous reservoirs." [54] His primary criteria for choosing the appropriate field is the correlative interval based on logs and nearby production. He acknowledged that in this area, the wells are not in direct communication as strictly interpreted and they would need to be declared a Wildcat as suggested by Protestant.[55]

For the Top Reef, Sharp prefers the S.N.B. (Cisco) Field even though the discovery well is four miles away. He acknowledged the proposed Well will not be located in the same trap as the discovery well, as indicated by the presence of intervening dry holes.[56]

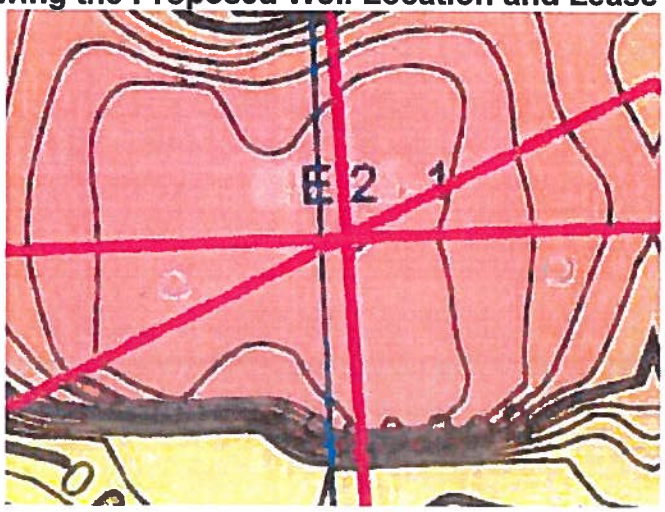
He also discussed the Swenson-Garza (Strawn B) field, presumably in the context of listing it as a potential field of the third target, the Strawn "C." He acknowledged that like the other traps, the proposed Well would not be in the same trap as the other Swenson-Garza (Strawn B) Field wells he looked at in determining the appropriate fields. Further, he testified that each of the isolated pinnacle reefs are not continuous in the area, but instead are isolated buildup above the base level.[57]

During cross examination, there was a discussion regarding Mr. Burgard's structure map and diagrams of the Top Reef within the Lease. The portion of Mr. Burgard's structure map containing the highest contour of the Top Reef is below, with the

[54] *Id.*; Tr. at 159:18 to 160:20; Tr. at 160:23 to 162:4.
[55] Tr. at 219:3 to 234:10.
[56] Tr. at 162:5 to 164:15.
[57] Tr. at 164:16 to 166:1.

proposed location being at the intersection of the lines and the internal lease line down the middle.[58]

Top Contour of the Top Reef
Showing the Proposed Well Location and Lease Line



Mr. Burgard described this segment as "the uppermost portion of the pinnacle reef, and it represents a 10-foot contour interval." When asked why he chose the proposed location, he stated:

> Well, I think there are probably multiple points within that top closure that we calculate as the highest point. . . .
>
> There could be multiple bends within that upper closure that have an equivalent value.
>
> Yes, it's as high a location as we can find anywhere within that top closing contour.

In addition to testifying that there were multiple bends within this top contour that have an equivalent value, he did not provide underlying information distinguishing the structural position of the proposed location from any other location within this top contour.[59]

Regarding potential regular locations on the East Tract, Mr. Burgard testified that the top contour encompasses the highest points on the reef structure. He estimates that any location 467 feet to the east of the lease line would fall outside the top contour. He estimates that from the lease line to the end of the top contour to be between 300 to over 400 feet, depending on where you measure from the lease line.[60] He acknowledged that if the proposed Well were drilled on the East Tract, the further away from the West Tract

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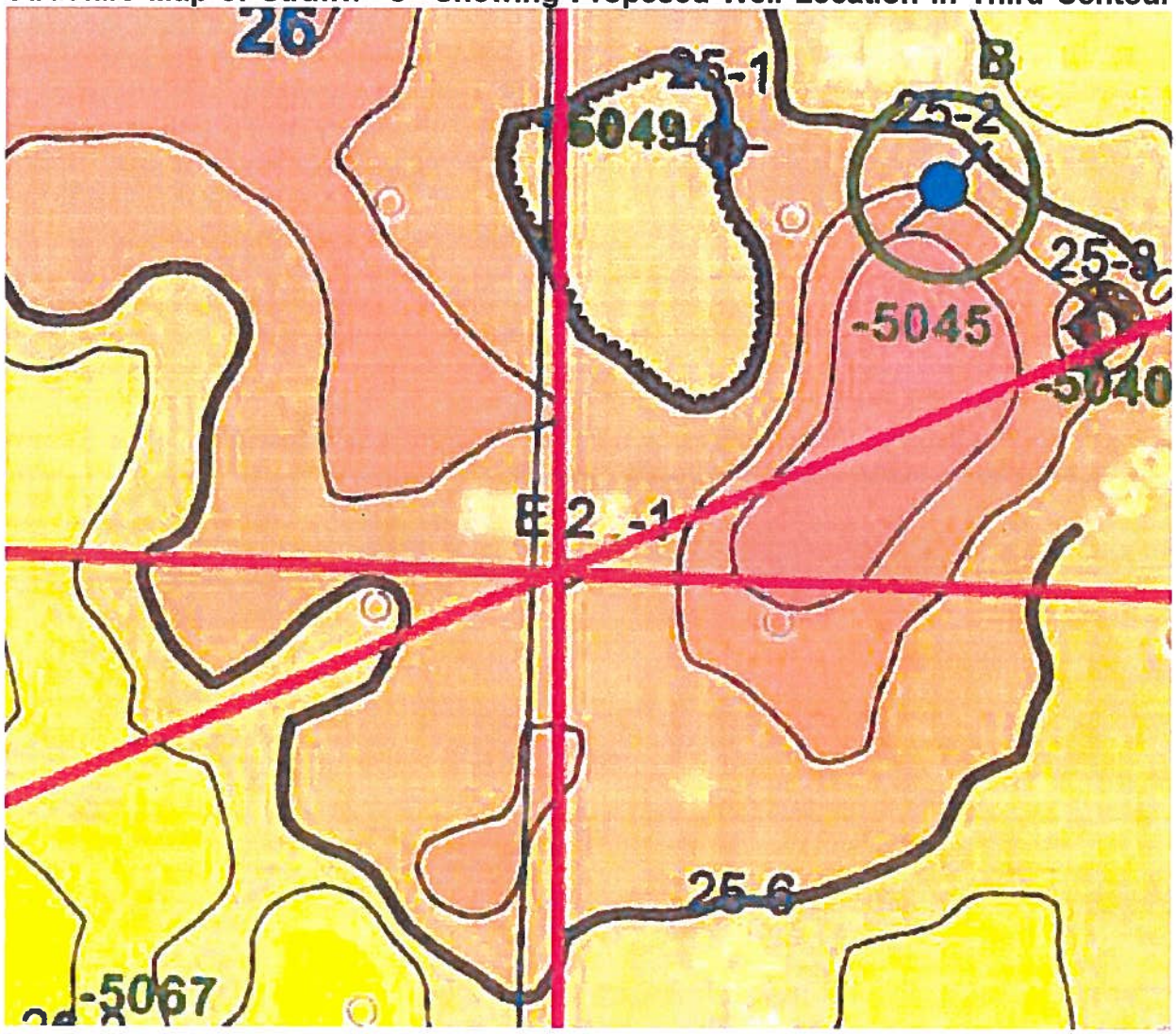
[58] *See* Applicant Ex. 12 at 1.
[59] Tr. at 166:2 to 169:20.
[60] Tr. at 170:11 to 172:24.

it is drilled, the less drainage of the West Tract will occur; he acknowledged that even drilling 340 feet from the lease line will drain significantly less reserves from the West Tract. He emphasized that it is important not to drill down structure and the loss of any structure will cause waste of reserves assuming this is a water drive trap. He stated there is no regular location on the East Tract that does not cause significant waste because all regular locations are outside the top contour of the reef. Regarding potential regular locations on the West Tract, he estimates that any location approximately 600 feet to the west of the lease line would fall outside the top contour at the narrowest point.[61]

He also testified that the further west that the Well is drilled, the more risk that the Bailout targets will be poorer reservoir quality, which is only an issue if the Top Reef is unproductive.[62] He provided a structure map of the Strawn "C." The proposed Well location is within the third contour of his structure map; the third contour is significantly larger than the first and second. The portion of Mr. Burgard's structure map of the Strawn "C" showing the proposed Well location is below.[63]

[61] Tr. at 172:25 to 176:15; Tr. at 176:16 to 179:7.
[62] Tr. at 179:5 to 179:15.
[63] Applicant Ex. 12 at 5.

Structure Map of Strawn "C" Showing Proposed Well Location in Third Contour



Mr. Burgard provided no structure map of the Mid Reef target but testified it is between the Top Reef and the Strawn "C."[64]

Mr. Burgard acknowledged he has no volumetric calculations comparing the proposed location to a regular location. He did not perform any engineering calculations. He does estimate the proposed Well will be productive in the Top Reef based on a comparison to other wells in the area.[65] He estimates the proposed Well will produce approximately 270,000 barrels of oil.[66] The only calculation he has done for the proposed Well is to identify the Target Reef core and base area.[67]

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[64] Tr. at 179:16 to 182:10.
[65] Tr. at 182:11 to 183:6; *see, e.g.,* Applicant Exs. 14, 17.
[66] Tr. at 194:20 to 199:5.
[67] Tr. at 204:3 to 204:20.

He acknowledged that one foot from the lease line on the West Tract is structurally equivalent to the proposed Well location as to the Top Reef. He clarified that every foot that the Well is moved to the west is a foot further away from the top of the nearby Strawn "C." While he testified that Sharp's current plan is to drill vertically only, he did discuss the option of drilling directional east if the Top Reef is not productive to get to the crest of the Strawn "C." He testified that Sharp has drilled a number of directional wells including going from the top of a reef to steer to a better location at the Strawn "C" level, which is similar to the situation in this case. He qualified that even if you drill directionally, there is more drilling risk the further you have to drill directionally, which is why he proposes drilling in the East Tract, closer to the crest of the Strawn "C." He acknowledged that the current proposed Well location has the potential to damage the Protestant the most and that there are many variables he is considering.[68] He admitted the Strawn "C" is a backup plan to the backup plan of drilling the Mid Reef and that the concern with moving the location 100 feet west is that it would be further away from the top of the Strawn "C." He acknowledged he has performed no calculations to demonstrate how much reserves are recoverable from the Strawn "C" or how much less will be recovered from the Strawn "C" if a regular location is used for the Well. He acknowledged that if the Well remains vertical, there is no location on the Top Reef that would penetrate the structural crest of the Strawn "C" and that the crest of the Strawn "C" is east of the Top Reef; the only way to drill the crest is to drill directionally from the Top Reef if the Top Reef is not productive.[69]

He acknowledged there is no current production from the two bailout zones—the Mid Reef and Strawn "C"—within two miles of the proposed Well location.[70] Regarding reserves in the Top Reef and the bailout zones, he testified there has been no historical production beneath the East and West Tracts and that the proposed Well is a discovery well and an exploration attempt. He testified:

> It is a discovery well based upon the seismic anomaly that straddles the section line.[71]

When asked the basis for the assertion that it is important to drill east of what he determined to be the reef axis, he could not provide specifics. He stated:

> I cannot cite the publication. This is an article that I have read in the past or a presentation that was given at some symposium that I went to.
>
> He has personally been involved with approximately four wells that have utilized this strategy of well positioning.[72]

The parties agreed that a location in the West Tract three feet from the lease line is a regular location because Sharp has leased all mineral interests in the offsetting East

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[68] Tr. at 183:9 to 188:15.
[69] Tr. at 188:21 to 191:24.
[70] Tr. at 205:15 to 209:17.
[71] Tr. at 209:20 to 210:25.
[72] Tr. at 213:21 to 219:2.

Tract. The parties also agreed that if the Well is drilled on the East Tract, Protestant would be entitled to nothing for the drainage of the West Tract, but if the Well is drilled on the West Tract, Protestant would be provided compensation for his mineral interest if the Well were a commercial producer.[73]

V. Examiners' Analysis

Rule 37 authorizes lease line spacing exceptions to prevent waste or prevent confiscation.[74] The Examiners recommend denying Sharp's Application for an exception to the lease line minimum spacing limit. The Commission fields in the Application have a 467-foot or 660-foot minimum lease line spacing limit. Both limits are considered in this analysis.

A. There is insufficient evidence that the Well is necessary to prevent waste.

Applicant maintains that the Well is necessary to prevent waste. In order for Applicant to prevail, Applicant must show: (1) localized unusual conditions exist such that an exception to spacing limits is necessary to recover hydrocarbons that would otherwise not be recovered by a regular well, and (2) the amount of hydrocarbons that would otherwise not be recovered is substantial.[75] The evidence in this case was insufficient to show that the localized unusual condition makes it necessary to obtain an exception and that there is no regular location that can recover the hydrocarbons the Well is anticipated to recover. Applicant also failed to establish that if the exception is not granted, there will be waste of a substantial volume of hydrocarbons. Applicant did not meet its burden of proof to show that drilling the Well at the proposed location is necessary to prevent waste.

The term 'waste' means the ultimate loss of oil; if a substantial amount of oil will be saved by the drilling of a well that otherwise would ultimately be lost, the permit to drill such well may be justified under the exception provided in Rule 37 to prevent waste.[76]

To obtain an exception to Rule 37, Applicant must demonstrate localized unusual conditions not common with the rest of the Field. As stated by the Texas Supreme Court:

> The waste exception clause in Rule 37 has no application where ordinary or usual conditions prevail. To justify an exception under that clause it is necessary to show that the conditions affecting the drainage of wells on a particular tract are so peculiar, unusual and abnormal that it is removed from

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[73] Tr. at 261:2 to 265:8.

[74] 16 TEX. ADMIN. CODE § 3.37(a)(1).

[75] *Hawkins v. Texas Company*, 209 S.W.2d 388, 342-348 (1948); *Wrather v. Humble Oil & Refining Company*, 214 S.W.2d 112, 117 (Tex. 1948); *Gulf Land Co. v. Atlantic Refining Co.*, 131 S.W.2d 73, 70 and 80 (Tex. 1939) ; *see also Exxon Corporation v. R.R. Comm'n of Tex.*, 571 S.W.2d 497 (1978); *Schlachter v. R.R. Comm'n of Tex.*, 825 S.W.2d 737 (Tex. App.—Austin 1992, writ denied); Tex. R.R. Comm'n, *Discussions of Law, Practice and Procedure* 32 (April 1991); Vol. 2 Ernest E. Smith and Jacqueline Lang Weaver, *Texas Law of Oil and Gas* §§ 9.5 (LexisNexis Matthew Bender 2015).

[76] *Gulf Land Co. v. Atlantic Refining Co.*, 131 S.W.2d 73, 80 (Tex. 1939).

> the same category of the surrounding area to which the general rule applies. When those peculiar and unusual conditions are found to exist in a localized area, exceptions may then be granted for the drilling of additional wells to the extent necessary to offset the abnormality and place it on parity, from the standpoint of efficient drainage, with other areas where the ordinary and usual reservoir conditions prevail.[77]

There is precedent for determining that unusual subsurface reservoir conditions warrant an exception; in fact, unusual subsurface reservoir conditions are perhaps the most typical situations warranting an exception.[78]

Applicant provided sufficient evidence to establish unusual localized conditions affecting drainage. Applicant provided evidence of a potential water drive pinnacle reef reservoir and showed the necessity of drilling at the structurally highest location in the reservoir to recover the maximum amount of hydrocarbons and any hydrocarbons located updip of the drilled will be unable to be recovered. This evidence was undisputed by Protestant.

In addition to establishing unusual localized conditions, Applicant must establish the amount of hydrocarbons that would otherwise not be recovered is substantial. The Examiners find that Applicant failed to establish that a substantial amount of hydrocarbons would be unrecovered if the Applicant's exception request is denied. While Applicant provided some evidence that a regular location on the East Tract would cause a substantial amount of hydrocarbons to be unrecovered, Applicant did not present sufficient evidence that there would be any, much less a substantial amount, of hydrocarbons not recovered if the Well were drilled at a regular location on the West Tract.

Applicant's expert testified to three primary considerations related to optimal production when choosing the proposed location for the Well: (1) drilling at the highest structural location of the Top Reef, the primary target, (2) drilling closest to the crest of the Strawn "C" east of the Top Reef, which is a Bailout and the third potential target of three and (3) drilling east of what he determines to be the axis of the Top Reef.

Regarding drilling at the highest location in the Top Reef, Applicant's expert admitted that there are equivalent locations in the West Tract. The evidence Applicant provided to show the top structural location for the Top Reef is a structure map. According to Applicant's structure map the top contour is 10 feet and contains regular locations in the West Tract. Applicant provided no evidence demonstrating that the proposed Well

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[77] *Wrather v. Humble Oil & Refining Co.*, 214 S.W.2d 112, 117 (Tex. 1948).

[78] *See, e.g., Letwin v. Gulf Oil Corp.*, 164 S.W.2d 234, 236 (Tex. Civ. App.—Austin 1942, writ ref'd) (citing *R.R. Comm'n v. Shell Oil Co.*,161 S.W.2d 1022 (Tex. 1942) and requiring unusual subsurface conditions to prove waste); *but see also Exxon Corporation v. R.R. Comm'n of Tex.*, 571 S.W.2d 497 (Tex. 1978) (court finds economic conditions can be considered stating, "[E]conomic factors were relevant to BTA's application and were properly considered by the commission in determining whether a Rule 37 exception was necessary to prevent the waste of oil."); *Anadarko E & P Co., L.P. v. R.R. Comm'n of Tex.*, 2009 WL 47112 (Tex. App.—Austin 2009, no pet.) (mem. op.) (court affirms Commission's consideration of local lease geometry in Rule 37 waste analysis).

location is any higher than any other location within the top contour. A majority of the top contour is on the West Tract.

Regarding drilling closest to the crest of the Strawn "C," applicant provided no comparisons of reserves that would be lost if the Well is drilled at a regular location west of the proposed location. The proposed location is not at the crest of the Strawn "C." According to Applicant's structure map, the proposed location is in the third contour. While he did generally testify that there would be higher drilling risk and risk of lower reservoir quality, he did not quantify or provide evidence that there would be substantial reserves unrecovered. As Protestant indicated, there is a regular location merely 100 feet west of the proposed location, which is also in the third contour of Applicant's Strawn "C" structure map.

Regarding drilling east of the Top Reef axis, there appear to be regular locations on the West Tract east of the axis. Originally, Applicant presented no evidence regarding where it asserts the axis is located. Upon request, Applicant's expert drew a rough estimate of where the axis is in relation to the Lease, internal lease line and proposed Well location.[79] According to this depiction, it appears that approximately one-third to one-quarter of the top contour of the Top Reef is located both on the West Tract and on the east side of the axis' estimated location. Moreover, Applicant provided no methodology for determining the axis and no underlying support for the theory that it is preferable to drill on the east side of the axis. When asked, Applicant's expert could not provide specifics and stated he may have read it in an article or seen it in a presentation. Consequently, there was little evidence provided in support of the axis location and the need to drill east of it.

Regarding drilling a regular location on the East Tract, Applicant's expert estimated that the widest distance from the internal lease line and the line between the top contour and the second contour of the Top Reef structure map is slightly over 400 feet. Assuming that the distance is less than 467 feet, based on this estimate there appear to be no regular locations at the top structural location in the Top Reef on the East Tract. Precision as to this issue is unnecessary because Applicant failed to provide sufficient evidence that drilling a regular location in the West Tract would cause substantial hydrocarbons to be unrecovered.

The Examiners conclude that there is insufficient evidence the Well is necessary at the proposed location to prevent waste or protect correlative rights.

B. There is insufficient evidence that the Well is necessary to prevent confiscation.

Applicant asserts that the Well is necessary to prevent confiscation. The Examiners conclude that Applicant has not met the burden of proof necessary to prove that the Well is necessary to prevent confiscation. As stated by the Texas Supreme Court:

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[79] *See* Applicant Ex. 12A.

> The term 'confiscation' is a word capable of being used in many senses. . . . It is impossible to give a general definition which can be applied in all instances. . . . As used in Rule 37 and the Rule of May 29th, the term 'confiscation' evidently has reference to depriving the owner or lessee of a fair chance to recover the oil and gas in or under his land, or their equivalents in kin[d]. It is evident that the word refers principally to drainage. . . . It is the law that every owner or lessee of land is entitled to a fair chance to recover the oil and gas in or under his land, or their equivalents in kind. Any denial of such fair chance would be 'confiscation' within the meaning of Rule 37.[80]

In a confiscation analysis, Applicant must show (1) absent an exception, Applicant will not have an opportunity to recover its fair share of minerals under its tracts from a regular location and (2) the proposed location is reasonable.[81] While confiscation principally refers to drainage, that is not the exclusive method of confiscation.[82]

For the same reasons discussed in section V.A. above, Applicant failed to establish that Applicant and the other mineral interest owners would not have an opportunity to recover their fair share from a regular location. Applicant failed to provide sufficient evidence that a regular location on the West Tract would prevent Applicant from an opportunity to recover its fair share.

The Examiners further find that Applicant provided insufficient evidence that the proposed Well location is reasonable. Applicant proposes to drill in the East Tract when a majority of the Top Reef drainage area is in the West Tract where Protestant owns unleased mineral interests. Thus, the proposed Well location is expected to substantially drain Protestant's tract and because the Well would be located on the East Tract, all parties agree the drainage of Protestant's mineral interests in the West Tract would not be compensated. In contrast, if Applicant were to drill a regular location well on the West Tract, the law requires Protestant to be compensated for drainage of his mineral interests if the Well is a commercial producer.[83] Applicant's expert acknowledged that the proposed Well location is the most detrimental location to Protestant's mineral interests and that a well drilled further east but within the Top Reef would cause less drainage to the West Tract than the current location. For these reasons in addition to the other evidential deficiencies, the Examiners find that Applicant failed to establish the proposed Well location is reasonable.

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[80] *Gulf Land Co. v. Atlantic Refining Co.*, 131 S.W.2d 73, 80 (Tex. 1939); *see also R.R. Comm'n of Tex. v. Williams*, 356 S.W.2d 131, 136 (Tex. 1961); *R.R. Comm'n of Tex. v. Gulf Production Co.*, 132 S.W.2d 254, 255 (Tex. 1939).

[81] *Gulf Land Co. v. Atlantic Refining Co.*, 131 S.W.2d 73, 80 and 85 (Tex. 1939); *see also* Tex. R.R. Comm'n, *Discussions of Law, Practice and Procedure* 32-34 (April 1991); *see also* Vol. 2 Ernest E. Smith and Jacqueline Lang Weaver, *Texas Law of Oil and Gas* §§9.6 (LexisNexis Matthew Bender 2015).

[82] *See Gulf Land Co. v. Atlantic Refining Co.*, 131 S.W.2d 73, 80 (Tex. 1939).

[83] *See, e.g., Wagner & Brown, Ltd. v. Sheppard*, 198 S.W.3d 369, 378 (Tex. App.—Texarkana 2006), *rev'd on other grounds*, 282 S.W.3d 419 (Tex. 2008).

The Examiners find that Applicant failed to establish that the Well is necessary at the proposed Well location to prevent confiscation.

C. The Examiners recommend denying Applicant's application for an exception to the minimum lease line spacing distance as proposed.

The Examiners recommend denying Applicant's request for a well spacing limit exception to allow the Well to be drilled at the proposed location.

VI. Conclusion, proposed findings of fact and proposed conclusions of law

Based on the record in this case and evidence presented, the Examiners recommend that the Application be denied and that the Commission adopt the following findings of fact and conclusions of law.

FINDINGS OF FACT

1. Sharp Image, Inc. ("Sharp" or "Applicant") filed an application ("Application") for an exception to the minimum lease line distance limit for the Five Resources 25 Lease "Lease"), Well No. 1PU ("Well") in Garza County, Texas.

2. Applicant filed an exception to drill a vertical well closer than the minimum lease line distance limit in the Wildcat, Gar-Kent (Strawn), Swenson-Barron (Ellen.), Lyn Kay (6150), Swenson-Garza (Ellen.), S.N.B. (Cisco), Swenson-Garza (Strawn), Kalgary (Penn. Lime), Susan (Canyon), Swenson-Garza (Strawn B) and Swenson-Garza, Ne (Canyon) Fields, because the proposed location of the Well is closer than allowed to an internal tract within the Lease having unleased and/or non-pooled interests.

3. Applicant is an operator registered with the Railroad Commission ("Commission") and assigned Commission designated operator number 770731.

4. Notice of the Application was sent by mail to the addresses of the designated operator, all offset operators, all lessees of record for tracts that have no designated operator, and all owners of record of unleased mineral interests.

5. The Commission received a protest to the Application necessitating a hearing. The protestant is Robert Hitzelberger ("Protestant"), who owns an undivided interest in the minerals of one of the two tracts comprising the Lease.

6. The Notice of Hearing was sent by mail to Applicant, Protestant, the addresses of the designated operator, all offset operators, all lessees of record for tracts that have no designated operator and all owners of record of unleased mineral interests.

7. Protestant and Applicant appeared at the hearing.

8. The Lease consists of two 40-acre tracts pooled by Sharp. Both tracts are approximately the same in size and shape, each being rectangular and together forming a rectangular shaped Lease with one internal lease line in approximately the center of the Lease. One of the 40-acre tracts is west of the internal lease line (the "West Tract") and one is east of the internal lease line (the "East Tract"). The East Tract is fully leased to Sharp and where the proposed Well is located. The West Tract is fully leased to Sharp except for Protestant. The location of the proposed Well is 97 feet from the internal lease line splitting the two tracts, and almost directly in the center of the Lease.

9. At hearing, Applicant withdrew the Application as to five of the initial eleven Commission fields contained in the Application leaving the following six fields with their corresponding minimum lease line distance:

	Field Name	**Lease Line Spacing Limit**	**Statewide Rule 37 v. Field Rule**
1	Wildcat	467	Rule 37
2	S.N.B. (Cisco)	660	Field Rule
3	Swenson-Garza (Strawn)	660	Field Rule
4	Kalgary (Penn. Lime)	467	Rule 37
5	Swenson-Garza (Strawn B)	467	Rule 37
6	Swenson-Garza, Ne (Canyon)	467	Rule 37

For the six remaining Commission fields, four of them have a 467-foot minimum lease line spacing distance and for the remaining two, the minimum distance 660 feet.

10. There is an unusual localized condition at the proposed Well location and under the Lease. There is a potential water pinnacle reef reservoir ("Top Reef") under the Lease. It is necessary to drill at the structurally highest location in the reservoir to recover the maximum amount of hydrocarbons and any hydrocarbons located updip of the drilled will be unable to be recovered. The Reef Top is Applicant's primary target reservoir.

11. Should the Top Reef prove unproductive, Applicant has a secondary and third potential target reservoirs, referred to as the bailout targets ("Bailouts"). If the Top Reef is unproductive, Applicant intends then to drill to the second target, referred to as the mid-reef ("Mid Reef") and if that is unproductive, Applicant intends to drill to the third potential target, the Strawn "C" formation ("Strawn 'C'").

12. A well drilled in the top of the target pinnacle reef, including from the proposed Well location, is estimated to produce 270,000 barrels. No comparison was provided for regular locations within the Top Reef and the proposed Well location.

13. Applicant provided three primary considerations related to optimal production when choosing the proposed location for the Well: (1) drilling at the highest

structural location of the Top Reef, the primary target, (2) drilling closest to the crest of the Strawn "C" east of the Top Reef, which is a Bailout and the third potential target of three and (3) drilling east of what he determines to be the axis of the Top Reef.

14. Regarding drilling at the highest location in the Top Reef, there are equivalent regular locations in the West Tract. According to a structure map, the majority of the top contour is located within the West Tract. The proposed location is within the top contour. There was insufficient evidence that the proposed location was the highest structural location or that other regular locations were not equally high.

15. Regarding drilling closest to the crest of the Strawn "C," there were no comparisons of reserves that would be lost if the Well were drilled at a regular location west of the proposed location. The proposed Well location is not at the crest of the Strawn "C." According to a structure map, the proposed Well location is in the third contour. While it is possible that regarding the Strawn "C," there is higher drilling risk and risk of lower reservoir quality west of the proposed Well location, no amount of hydrocarbons was provided to show any would be lost if the Well were drilled in a regular location or that any amount would be substantial.

16. Regarding drilling east of the Top Reef axis, there are regular locations on the West Tract east of the axis. Approximately one-third to one-quarter of the top contour of the Top Reef is located both on the West Tract and on the east side of the axis' estimated location. There was no evidence of the impact that failing to drill east of the axis or other information on the amount of hydrocarbons that would be unrecovered if the Well is drilled at a regular location and not east of the axis.

17. Regarding drilling a regular location on the East Tract, it is estimated that the widest distance from the internal lease line and the line between the top contour and the second contour of the Top Reef structure map is slightly over 400 feet. Assuming that the distance is less than 467 feet, there appear to be no regular locations at the top contour, which contains the highest structural location, in the Top Reef on the East Tract.

18. The proposed Well location is unreasonable. Applicant proposes to drill in the East Tract when a majority of the Top Reef drainage area is in the West Tract where Protestant owns unleased mineral interests. The proposed Well location is expected to substantially drain Protestant's tract and because the Well would be located on the East Tract, drainage of Protestant's mineral interests in the West Tract would not be compensated. If Applicant were to drill a regular location well on the West Tract, Protestant would be compensated for drainage of his mineral interests if the Well is a commercial producer.

19. The proposed Well location is the most detrimental location to Protestant's mineral interests and that a well drilled further east but within the Top Reef would cause less drainage to the West Tract than the current location.

20. All locations on the West Tract are regular locations as to the internal lease line because Applicant has leased all mineral interests in the offsetting East Tract.

CONCLUSIONS OF LAW

1. Proper notice was issued in accordance with all applicable statutes and regulatory codes. *See* 16 TEX. ADMIN. CODE §§ 1.46 and 3.37(a)(2) and (a)(3).

2. The Commission has jurisdiction in this case. *See, e.g.,* TEX. NAT. RES. CODE §§ 81.051 and 81.052.

3. A Statewide Rule 37 exception is needed to drill at the proposed location because the proposed location is closer than allowed to an internal tract lease line within the Lease, pursuant to 16 TEX. ADMIN. CODE § 3.37.

4. Applicant failed to establish localized unusual conditions exist such that an exception to spacing limits is necessary to recover hydrocarbons that would otherwise not be recovered by a regular well location.

5. Applicant failed to establish that a substantial amount of hydrocarbons would otherwise not be recovered if the Well is drilled at the proposed location.

6. Applicant failed to establish that absent an exception, Applicant will not have an opportunity to recover its fair share of minerals under its tracts from a regular location.

7. Applicant failed to establish the proposed location is reasonable.

8. Applicant did not meet its burden of proof and satisfy the requirements to obtaining an exception pursuant to Statewide Rule 37. 16 TEX. ADMIN. CODE § 3.37.

9. There was insufficient evidence that granting the Application and approving the requested exception to Statewide Rule 37 is necessary to prevent waste, prevent confiscation or protect correlative rights.

EXAMINERS' RECOMMENDATION

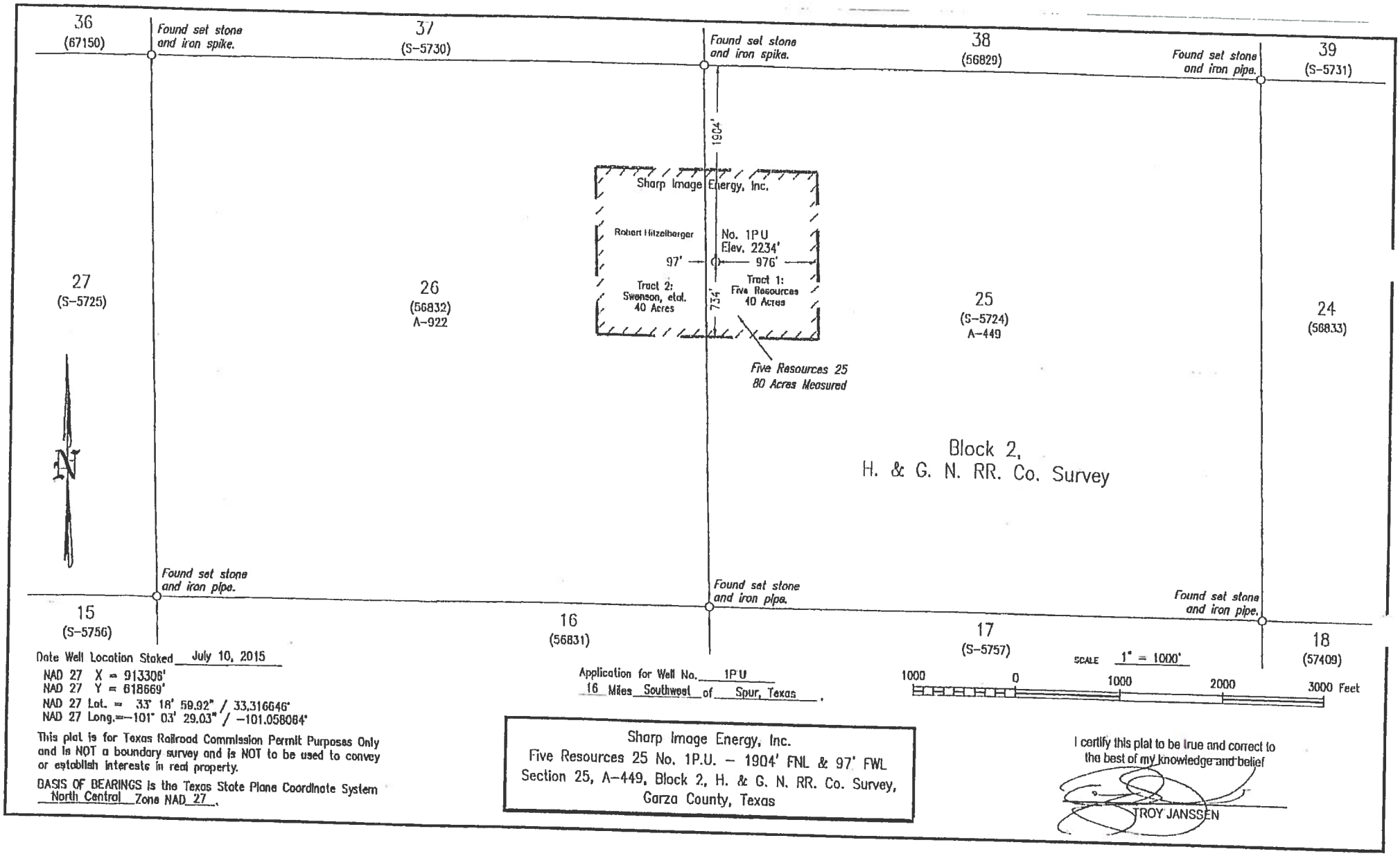
The Examiners recommend that the Commission deny Applicant's application for an exception to Statewide Rule 37.

Respectfully,

Jennifer Cook
Administrative Law Judge

Richard Eyster, P.G.
Technical Examiner

Appendix A



Date Well Location Staked July 10, 2015

NAD 27 X = 913308'
NAD 27 Y = 618669'
NAD 27 Lat. = 33° 18' 59.92" / 33.316646°
NAD 27 Long. = -101° 03' 29.03" / -101.058064°

This plat is for Texas Railroad Commission Permit Purposes Only and is NOT a boundary survey and is NOT to be used to convey or establish interests in real property.

BASIS OF BEARINGS is the Texas State Plane Coordinate System North Central Zone NAD 27.

Application for Well No. 1P U
16 Miles Southwest of Spur, Texas.

Sharp Image Energy, Inc.
Five Resources 25 No. 1P.U. – 1904' FNL & 97' FWL
Section 25, A-449, Block 2, H. & G. N. RR. Co. Survey,
Garza County, Texas

I certify this plat to be true and correct to the best of my knowledge and belief

TROY JANSSEN