

PRACTICAL ADVICE FOR THE REAL WORLD

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Special Field Rules in South Texas Shale Plays

May 3, 2011

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Overview

- What do you get to keep when the drilling stops?
 - Spacing and Density requirements
 - Proration allocation
 - Allowables

Overview

➤ Four Fields

1. Hawkville

La Salle, McMullen and Wilson

2. Eagleville (2)

Karnes and DeWitt

3. Eagleville (1)

Atascosa, Gonzales, La Salle, McMullen and Wilson

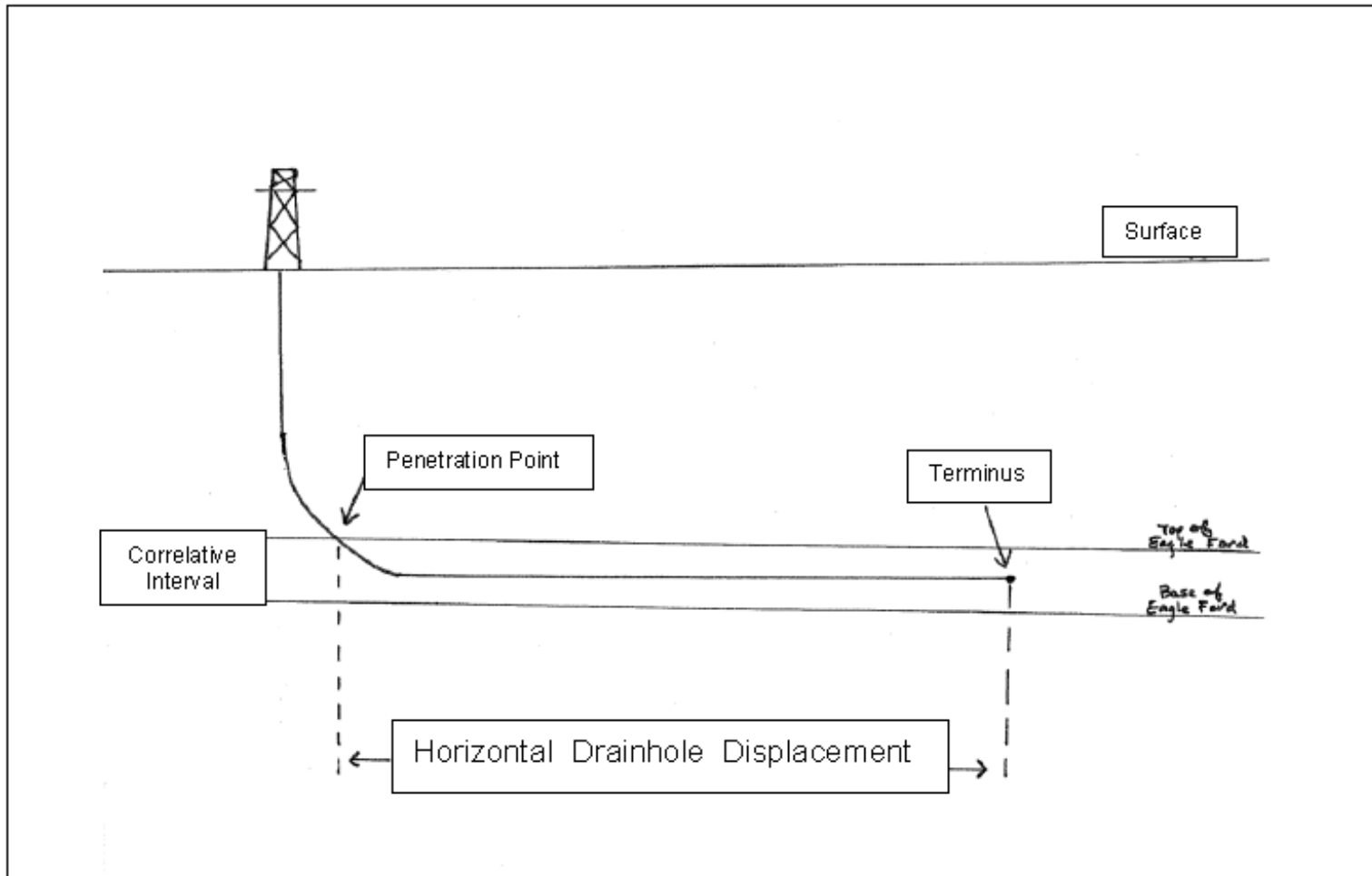
4. Sugarkane

Bee, Karnes and Live Oak

APPENDIX B

1. “...provided that should governmental authority having jurisdiction prescribe or permit the creation of units larger than those specified, units thereafter may conform substantially in size with those prescribed by governmental regulations.”
2. “If larger units than any of those herein permitted, either at the time established, or after enlargement, are required under any governmental rule or order, for the drilling or operation of a well at a regular location, or for obtaining maximum allowable from any well to be drilled, drilling, or already drilled, any such unit may be established or enlarged to conform to the size required by such governmental order or rule.”
3. “...provided that, should governmental authority having jurisdiction prescribe or permit the creation of any drilling, spacing or proration units larger than those specified above, such units may be created or enlarged to conform in size to the drilling or spacing units so prescribed or permitted or to the proration units as may be authorized for obtaining the maximum allowable production from one well.”
4. “...provided that should governmental authority having jurisdiction prescribe or permit the creation of units larger than those specified, for the drilling or operation of a well at a regular location or for obtaining maximum allowable from any well to be drilled, drilling or already drilled, units thereafter created may conform substantially in size with those prescribed or permitted by governmental regulations.”

Rule 86 – Definitions



Rule 86 – Definitions

- Horizontal Drainhole Well
 - Any well that is developed with one or more horizontal drainholes having a horizontal drainhole displacement of at least 100 feet.
- Horizontal Drainhole
 - That portion of the wellbore drilled in the correlative interval, between the penetration point and the terminus.
- Correlative Interval
 - The producing interval for the field in which the horizontal drainhole is completed.
- Horizontal Drainhole Displacement
 - the calculated horizontal displacement of the horizontal drainhole from the penetration point to the terminus. Additional allocation of acreage for proration purposes under Rule 86 is directly tied to the horizontal drainhole displacement of the well.

Rule 86 – Spacing

- No point on a horizontal drainhole shall be drilled nearer than 467 feet, or other lease-line spacing requirement under applicable rules for the field, from any property line, lease line, or subdivision line.
- No point on a horizontal drainhole shall be drilled nearer than 1,200 feet (horizontal displacement), or other between-well requirement under applicable rules for the field, to any point along any other horizontal drainhole in another well, or to any other well completed or drilling in the same field on the same lease pooled unit or unitized tract.
- Surface location of well is not relevant to spacing; only the penetration point and terminus must be within the same proration unit.

Hawksville Special Field Rules – Spacing

- No well for oil or gas shall be drilled nearer than 330 feet to any property line, lease line, or subdivision line.
- No well shall be drilled nearer than 660 feet to any applied for, permitted or completed well in the same reservoir on the same lease, pooled unit or unitized tract, provided that this restriction on spacing between horizontal wells shall not apply to horizontal drainholes that are parallel or subparallel (within 45 degrees of parallel) and do not overlap more than 500 feet. No minimum between-well spacing requirement between vertical wells and horizontal drainhole wells on the same lease or pooled unit.
- **Watch out for express drainage clauses tied to the statewide standard.**

Hawksville Special Field Rules – Spacing

- A take point in a horizontal well is any point along a horizontal drainhole where oil and/or gas can be produced from the reservoir/field interval.
- The first take point may be at a different location than the penetration point and the last take point may be at a location different than the terminus point.
 - Surface location of well is not relevant to spacing.
 - Because the first take point may be at a different location from the penetration point, and may be located within 100 feet of a lease or property line, this strongly implies that location of the penetration point is not relevant to spacing, but this is not expressly stated.

Eagleville (1 & 2) and Sugarkane Special Field Rules – Spacing

- No well for oil or gas shall be drilled nearer than 330 feet to any property line, lease line, or subdivision line.
- There is no minimum between well spacing requirement.
- Again, watch out for express drainage provisions.
 - Make sure the distances specified in the lease match the special rules for the field with the least restrictive spacing requirements.

Eagleville (1 & 2) and Sugarkane Special Field Rules: Spacing

- The first take point may be at a different location than the penetration point and the last take point may be at a location different than the terminus point.
- Surface location of well is not relevant to spacing.
- The penetration point may be located off of the lease, pooled unit, or unitized tract so long as proper notice is given to, or waived by the (i) designated operator, (ii) all lessees of record with no designated operator and (iii) unleased mineral owners of the offsite tract.

The “Take Point” Rule

- Rule 86 has no “take point” rule.
- All points along the horizontal wellbore between the penetration point and the terminus must comply with the applicable spacing rule.
 - This is true even if that portion of the wellbore out of compliance with the spacing rule is incapable of draining hydrocarbons from the formation.

The “Take Point” Rule

- § Sugarkane defines “take point” but does not adopt the rule:
- The first take point and last take point in a horizontal drainhole well shall not be nearer than 100 feet from the property line, lease line or subdivision line
 - The minimum distance measured perpendicular to a horizontal drainhole *for all points between the first take point and the last take point* on such drainhole to any point on any property line, lease line or subdivision line shall be a minimum of 330 feet.
 - If any point on a horizontal drainhole between the first take point and the last take point does not comply with the spacing requirements specified above, a Rule 37 exception is required.

The “Take Point” Rule

§ Hawkville:

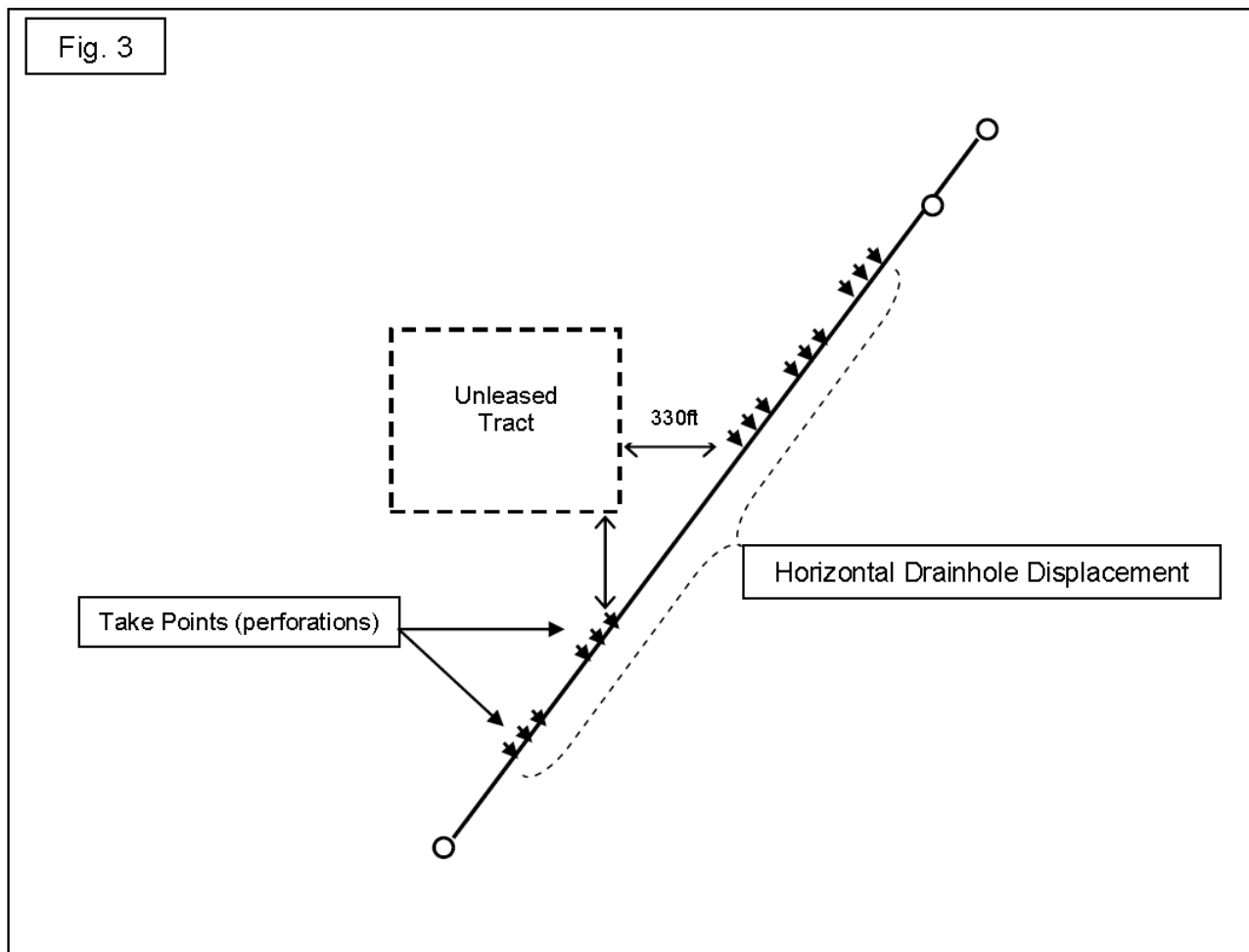
- The first take point and last take point in a horizontal drainhole well shall not be nearer than 100 feet from the property line, lease line or subdivision line
- The minimum distance measured perpendicular to a horizontal drainhole *from any take point on such drainhole* to any point on any property line, lease line or subdivision line shall be a minimum of 330 feet.
- **Except for horizontal drainholes that are parallel or subparallel, all take points in a horizontal drainhole well shall be a minimum distance of 660 feet from take points in any existing, permitted, or applied for horizontal drainhole on the same lease, unit or unitized tract.**

The “Take Point” Rule

§ Eagleville (1 & 2):

- The first take point may be at a different location than the penetration point and the last take point may be at a location different than the terminus point.
- The first take point and last take point in a horizontal drainhole well shall not be nearer than 100 feet from the property line, lease line or subdivision line.
- The minimum distance measured perpendicular to a horizontal drainhole from any take point on such drainhole to any point on any property line, lease line or subdivision line shall be a minimum of 330 feet.
- No between well minimum spacing requirement for this field.

The “Take Point” Rule



The “Take Point” Rule

- The wellbore on the previous slide would not require a Rule 37 Exception under rules adopting the Take Point Rule
 - Spacing based upon minimum distances from take points, i.e. if a horizontal well path is closer to a property line than otherwise allowed under the special field rule, but no **take point** is closer to such property line than the rule allows, a Rule 37 exception is not necessary.
 - There is some question as to whether this is allowed without an express “No Perf Zone” Rule.

The “Take Point” Rule

§ Eagleville (1&2):

- “No Perf Zone” Rule: If the applicant for a drilling permit represents that there will be portions of the wellbore within the field interval without take points, the wellbore may be closer than permitted under Rule 37 so long as no take point is within such distance.

Eagleville (1 & 2) and Sugarkane

The “Box” Rule

- “Box” Rule: A *properly permitted* horizontal drainhole will be considered to be in compliance with the spacing rules set forth herein if the as-drilled location falls within a rectangle established as follows:
 - Two sides of the Rectangle are parallel to the permitted drainhole and 33 feet on either side of the drainhole;
 - The other two sides of the rectangle are perpendicular to the side described in (a) above, with one side passing through the first take point and the other side passing through the last take point.

Density

- Rule 86: Refers back to Rule 38. Rule 38 specifies a minimum density of 40 acres for vertical wells where the minimum spacing requirements are 467/1200.
- Hawkville and Sugarkane: 320 acres (plus 10% tolerance for **gas wells** as to proration assignment).
- Eagleville (2) : 80 acres (plus tolerance of additional 40 acres that may be assigned to last well drilled).
- If the “governmental authority” provision in your retained acreage clause is limited to additional acreage “required” by the applicable rules, this is all you are going to get.

Allocation:

- § Rule 86: Acreage MAY be assigned to each horizontal drainhole well for the purpose of allocating allowable oil or gas production up to the amount specified by the applicable rules for a proration unit for a vertical well plus the additional acreage assignment as provided in the chart attached to the rule.

Additional Acreage Assignment
For Fields with a Density Rule of 40 Acres or Less

Horizontal Drainhole Displacement, ft	Additional Acreage Allowed, acres
100 to 585	20
586 to 1,170	40
1,171 to 1,755	60
1,756 to 2,340	80
2,341 to 2,925	100
2,926 to 3,510	120
etc. - 585 ft increments	etc. - 20 acre increments

Additional Acreage Assignment
For Fields with a Density Rule Greater Than 40 Acres

Horizontal Drainhole Displacement, ft	Additional Acreage Allowed, acres
150 to 827	40
828 to 1,654	80
1,655 to 2,481	120
2,482 to 3,308	160
3,309 to 4,135	200
4,136 to 4,962	240
etc. - 827 ft increments	etc. - 40 acre increments

Allocation:

- § Hawkville: the acreage assigned to *gas well* which has been drilled as a horizontal drainhole MAY contain more than 320 acre providing that the following formula is utilized to determine the proper assignment of acreage:

$$\text{§ } A = (L \times 0.16249) + 320 \text{ acres.}$$

- § Where “L” equals the length of the horizontal drainhole distance measured in feet between the first take point and the last take point. This formula is capped at 640 acres.
- § Maximum Diagonal: \sqrt{A} , where A equals the acres actually assigned to the proration unit.

Allocation:

- § Sugarkane: the acreage assigned to *gas well* which has been drilled as a horizontal drainhole MAY contain more than 320 acre providing that the following formula is utilized to determine the proper assignment of acreage:

$$\text{§ } A = (L \times .20) + 320 \text{ acres}$$

- § rounded up to the next whole number divisible by 40

§

- § Where “L” equals the length of the horizontal drainhole distance measured in feet between the first take point and the last take point.
- § **No cap.**

Allocation:

- Eagleville: Refers back to Rule 86
 - For the purpose of assigning additional acreage to a horizontal well pursuant to Rule 86, the distance from the first take point to the last take point shall be used in such determination.

Additional Acreage Assignment
For Fields with a Density Rule Greater Than 40 Acres

Horizontal Drainhole Displacement, ft	Additional Acreage Allowed, acres
150 to 827	40
828 to 1,654	80
1,655 to 2,481	120
2,482 to 3,308	160
3,309 to 4,135	200
4,136 to 4,962	240
etc. - 827 ft increments	etc. - 40 acre increments

Allowables:

- § Rule 86: the maximum daily allowable for a horizontal drainhole well shall be determined by multiplying the applicable allowable for a vertical well in the field with a proration unit containing the maximum acreage authorized by the applicable rules for the field, exclusive of tolerance acreage, by a fraction, the numerator of which is the acreage assigned to the horizontal drainhole well for proration purposes and the denominator of which is the maximum acreage authorized by the applicable field rules for proration purposes, exclusive of tolerance acreage.

Allowables:

- § Hawkville: 90% deliverability -- 10% acreage
- § Eagleville (1&2) : Sets the maximum daily oil allowable at 800 barrels a day for each vertical well. Otherwise repeats the allocation formula for Rule 86.
- § Sugarkane : 100% acreage. Suspends allowable.

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Recommendations:

- **Prescribed *or Permitted*:**
 - Make this as broad as possible:
 - for spacing, allocation or proration purposes
 - wells drilled, drilling or to be drilled
 - In the alternative:
 - Cap the additional acreage at a fixed number.
 - Cut and paste the spacing formula from the applicable rules.

- Make sure the pooling clause and the retained acreage clause are consistent.

Helpful Information.

RRC Field Rules Index (New, Temporary and Amended):

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<http://www.rrc.state.tx.us/meetings/ogpfd/ogpofldrules/fldrIsindx.php>

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