

# **CREATING AND ATTACKING DAMAGE ESTIMATES IN LITIGATION INVOLVING OIL AND GAS RESERVES**

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# OIL AND GAS RESERVE ESTIMATES ARE COMMONLY RELIED UPON IN THE COMMERCIAL WORLD

- Publicly traded E&P Companies use them to establish asset value;
- Borrowers provide them to assess the value of the security pledged for their loans;
- Entrepreneurs used them to estimate potential returns for private placement drilling or acquisition deals;
- They are used as the starting point of analysis for most oil and gas property sales.

# TYPES OF RESERVES

*Proved* reserves are those that are *reasonably certain* to be recovered and other more specific criterion must also be present. A 90% probability of recovery is necessary to classify reserves as *proved*.

- Proved Developed Producing;
- Proved Developed Non-Producing (Behind Pipe), and
- Proved Undeveloped.

*Probable* reserves are those that are *more likely than not* to be recovered, i.e. that the probability of recovery is greater than 50/50.

*Possible* reserves are any that are less likely to be recoverable than probable reserves.

SPE, *Estimating and Auditing Standards for Reserves*, 2001 §5.9.

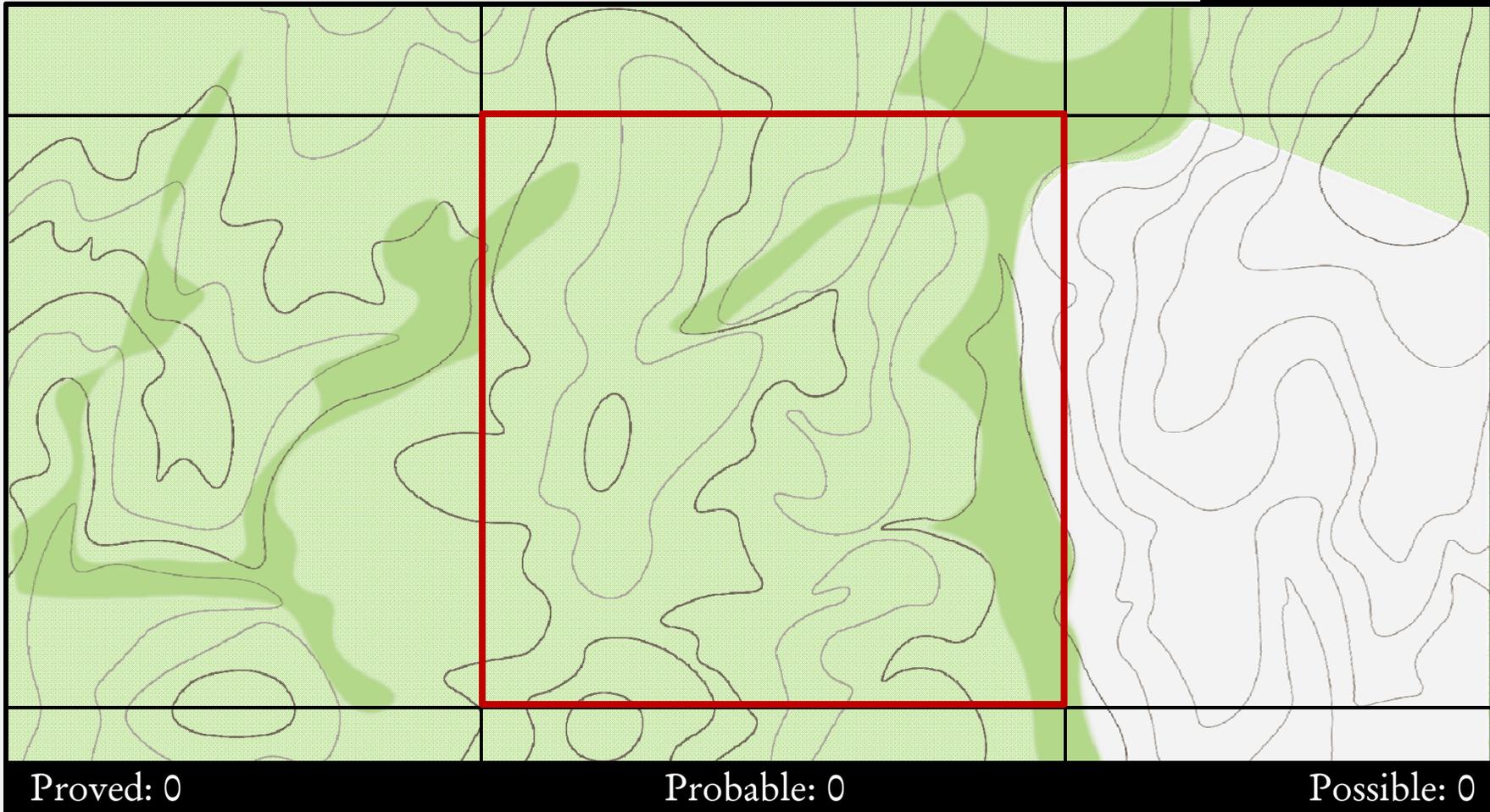
# “EXTENSIVE JUDGMENTS” MUST BE MADE BY THE RESERVE ESTIMATOR

- Do I have enough geological, geophysical and/or production data?
- Is the exploration effort technologically feasible?
- How much does it cost to create production?
- At what price will the oil or gas sell for? Now and in the future.
- What decline curve of production should I use?
- What discount rate do I use to calculate the present value of future revenues streams?

# Estimating Reserves

Y-Bar O Ranch – Kenedy County (1" = 3,000')

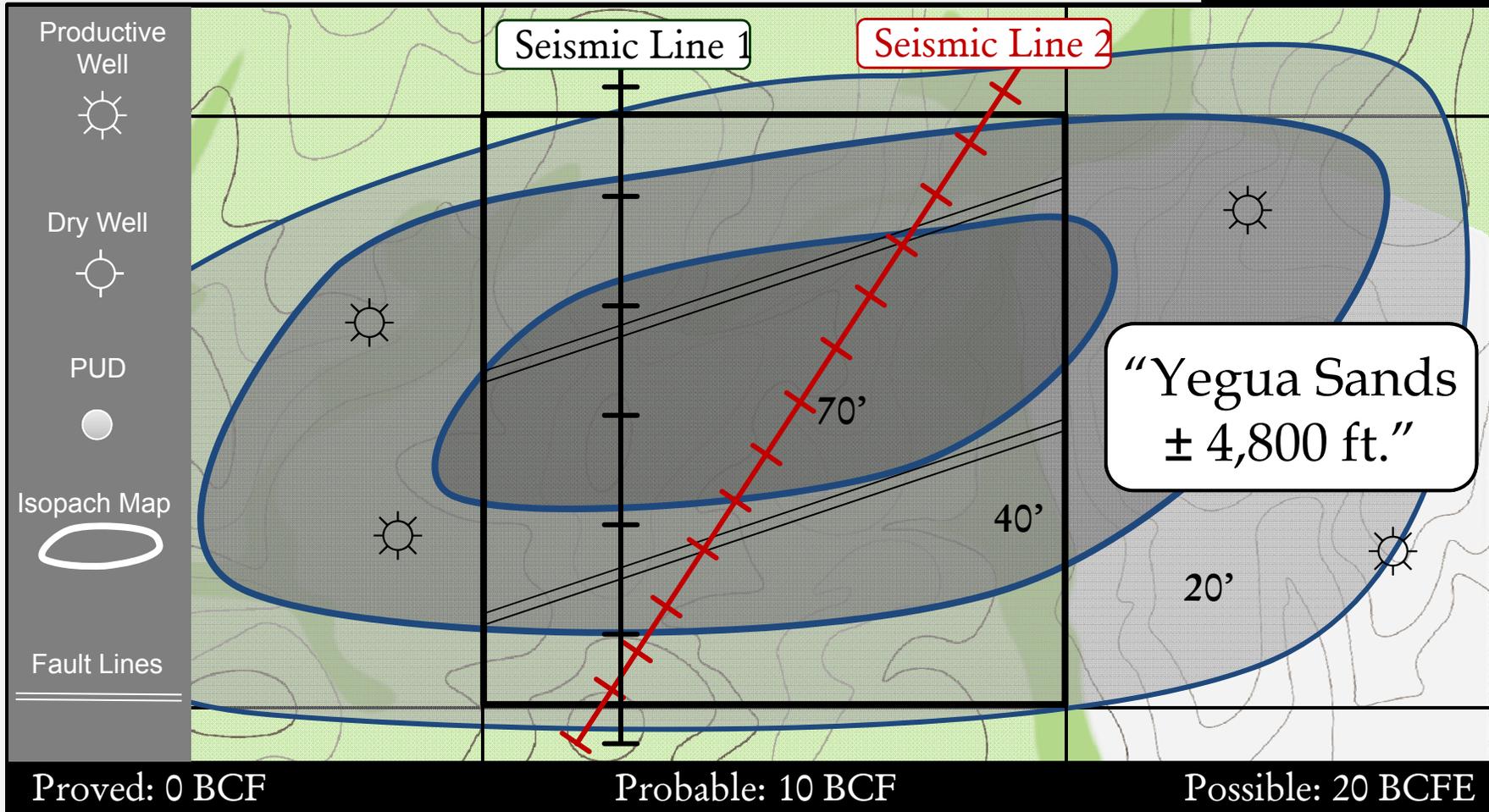
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# Estimating Reserves

Y-Bar O Ranch – Kenedy County (1" = 3,000')

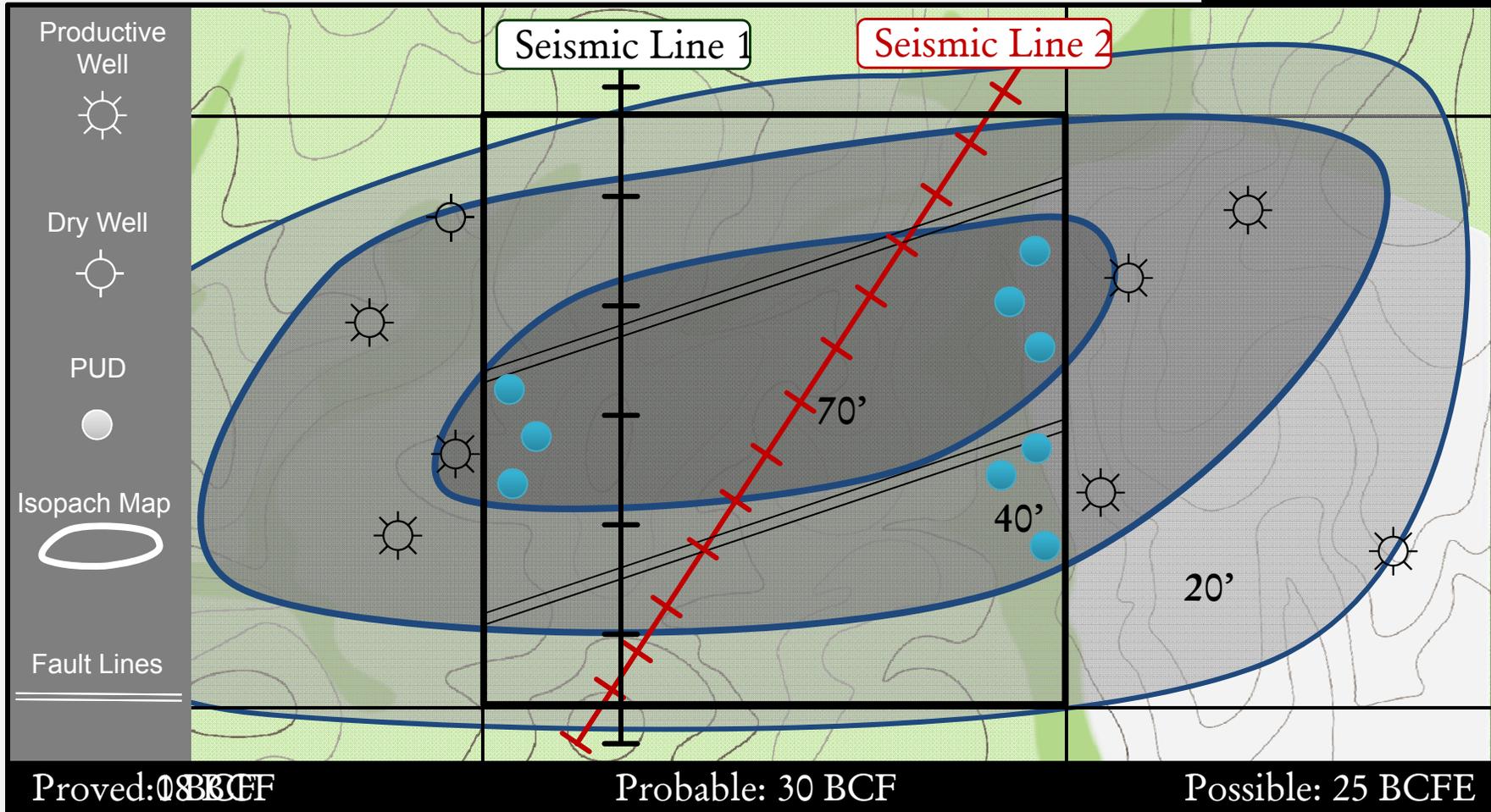
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# Estimating Reserves

Y-Bar O Ranch – Kenedy County (1" = 3,000')

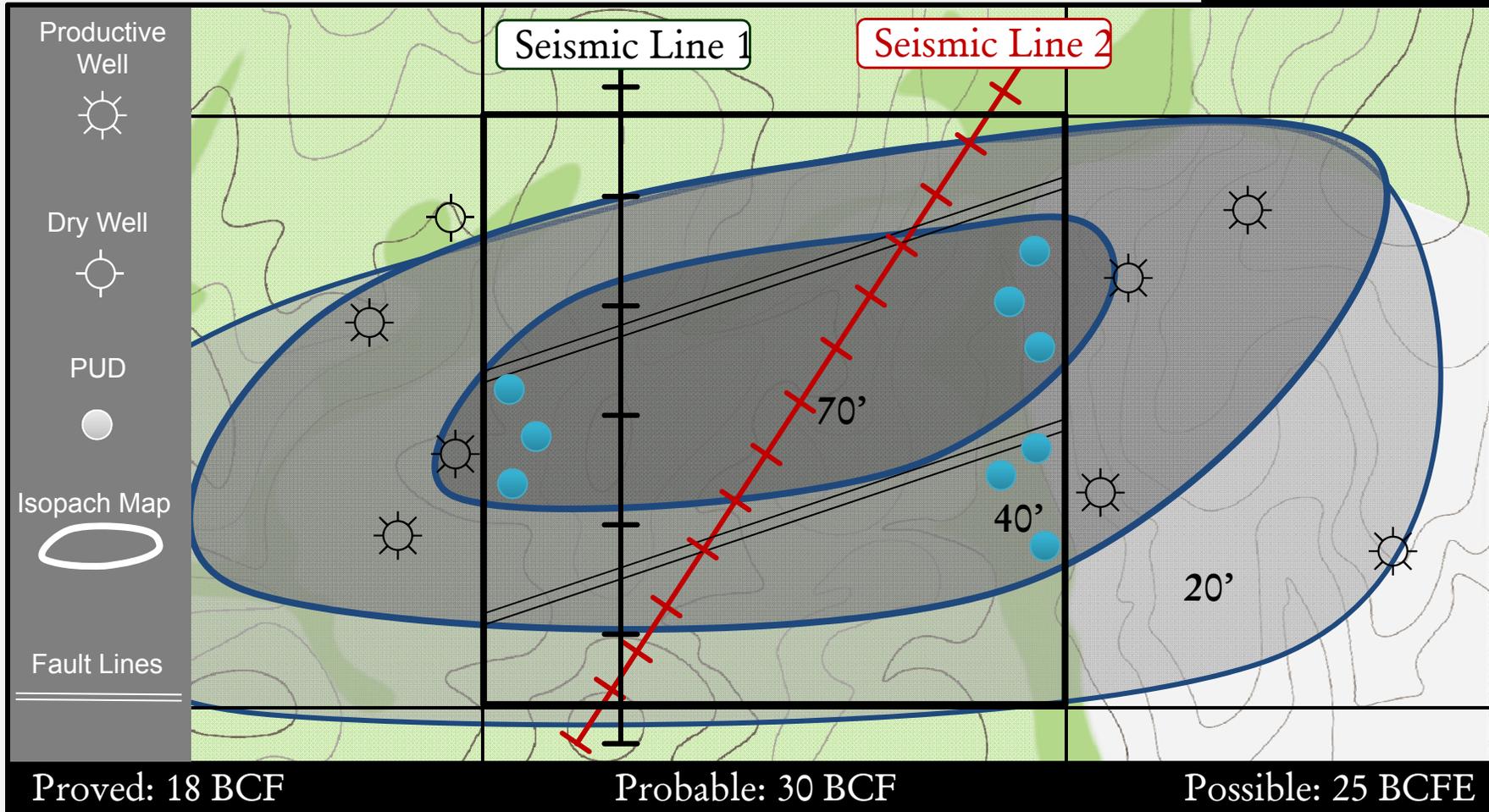
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# Estimating Reserves

Y-Bar O Ranch – Kenedy County (1" = 3,000')

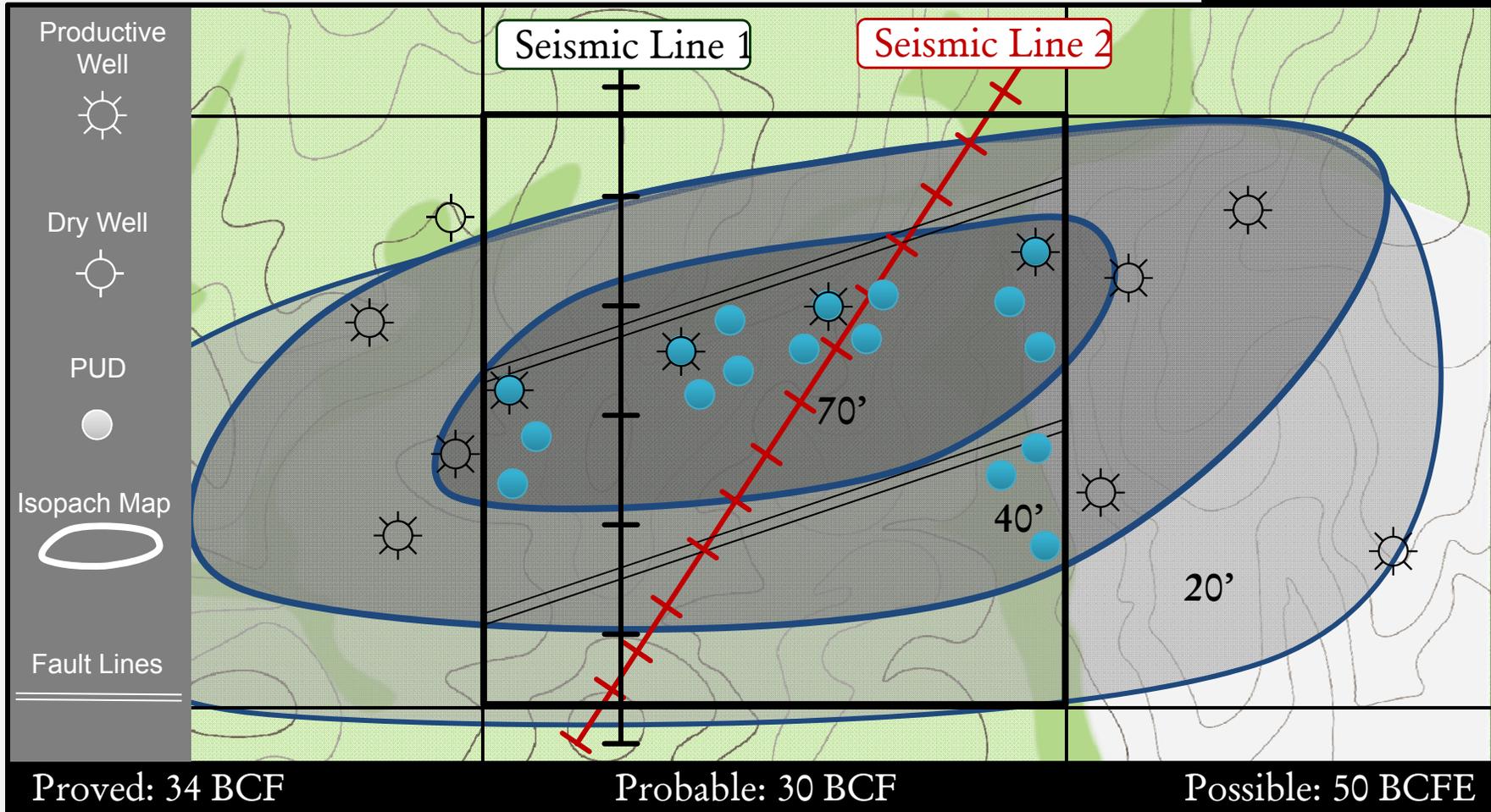
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# Estimating Reserves

Y-Bar O Ranch – Kenedy County (1" = 3,000')

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# MAJOR PRICE SWINGS LEAD TO RESERVE-BASED LITIGATION

- Bankruptcy, including motions for relief from stay under 11 U.S.C. §362 and other valuation disputes.
- Securities fraud claims by limited partners in private placement offerings or by disappointed shareholders facing reserve write-downs by publicly traded companies.
- Broken deals to explore, develop or connect oil & gas acreage.
- Theft of trade secret claims surrounding attendance at data rooms, employee departures or busted AMI relationships.
- Joint Interest Billing claims in which the operator's actions are contested.
- Non-development and drainage claims by disappointed royalty owners.

## COURTS HAVE BEEN MORE RETICENT THAN INDUSTRY TO ACCEPT OF RESERVE ESTIMATES IN LOST PROFIT CLAIMS

“...the law is well-settled: lost profits can be recovered only when the amount is proved with reasonable certainty. Proof need not be exact, but neither can it be **speculative**....[p]rofits which are largely speculative, as from an activity dependent on uncertain or changing market conditions, or on chancy business opportunities or on promotion of untested products or entry into unknown or unviable markets, or on the success of a new and unproven enterprise, cannot be recovered....The only common thread running through these cases is the necessity that the claim of lost profits not be **hypothetical** or **hopeful** but **substantial** in the circumstances.”

*Phillips v. Carlton Energy Group, LLC*, 475 S.W.3d 265, 278-79 (Tex. 2015).

## AND HAVE INFREQUENTLY SUSTAINED JUDGMENTS BASED ON THEM

- “Merely laying out the calculation, with its sweeping assumptions, demonstrates how completely conjectural it is.” *Phillips*, 475 S.W.3d at 282.
- Verdict of \$64 million on \$640 million damage estimate for loss of Kazakhstan field – reversed. “...we conclude that there is no evidence to prove with reasonable certainty what profits Plaintiffs lost as a result of the Ramco Parties’ breach of contract.” *Ramco Oil & Gas Ltd. v. Anglo-Dutch (Tenge) L.L.C.* 207 S.W.3d at 825.
- Verdict reversed where expert used standard and accepted methodology for calculating lost profits, but a speculative factual underpinning for inputs. *Aquila Southwest Pipeline v. Harmony Exploration*, 48 S.W.3 225, 246 (Tex. App. – San Antonio, TX).
- Damages arising from trespass sustained only because they consisted of “past and present production rates, prices and the time value of money” and were “essentially uncontested.” *Coastal Oil & Gas Company v. Garza Energy Trust*, 268 S.W.3d 1, 20(Tex. 2008) (rev’d on other grounds).

## THE COURT IS LIKELY TO REVERSE ANY VERDICT BASED SOLELY ON PROBABLE OR POSSIBLE RESERVES

“By contrast, Arkoma’s reserve estimates for the remaining six partnerships concerned mineral interests in the south Panola field, a new field in which there had been little drilling or production. Interests here were purchased “ahead of the play” –in areas where minerals had not yet been found but might be...”

“...we hold that Arkoma’s reserve estimates in the mature Wilburton field were actionable as statements of fact, while those in the South Panola field were nonactionable statements of opinion.” *Arkoma Basin Exploration Inc. v. FMF Associates*, 249 S.W.3d 380, 385-7(Tex. 2008) (applying Virginia law).

*I.e., statements of probable or possible reserves are so speculative that no one could rely on them as a matter of law.*

# THE SPE DOES CLAIMANTS USING RESERVES NO FAVORS

It begins by classifying the reserve process in a way that would permit reserves to be admitted in a Court of Law:

## **“1.2 Estimating and Auditing Reserve Information in Accordance with Generally Accepted Engineering and Evaluation Principles**

The estimating and auditing of Reserve Information is predicated upon certain **historically developed principles of petroleum engineering and evaluation, which are in turn based on principles of physical science, mathematics and economics.** Although these generally accepted petroleum engineering and evaluation principles are predicated on established scientific concepts, the application of such principles involves extensive judgments and is subject to changes in (i) existing knowledge and technology; (ii) economic conditions (iii) applicable statutory and regulatory provisions and (iv) the purposes for which Reserve Information is to be used.”

Then gives opponents of the reserve estimation process ammunition....

## **“1.3 The Inherently Imprecise Nature of Reserve Information**

The reliability of Reserve Information **is considerably affected** by several factors. Initially it should be noted that Reserve Information is **imprecise** due to the **inherent uncertainties** in, and **limited** nature of, the database upon which the estimating and auditing of Reserve Information is predicated....The extent and significance of the judgments to be made are, in themselves, sufficient to render Reserve Information **inherently imprecise.**”

SPE, *Estimating and Auditing Standards for Reserves*, 2001.

# WHAT ARE THE KEY STEPS TO CREATING SUSTAINABLE DAMAGE ESTIMATES?

- Pick the right forum. If you can **arbitrate**, do so.
- Pick **the right Expert**. FEDERAL RULES OF EVIDENCE 702 applies—reserve estimates are not within “common knowledge” or subject to “lay opinions.”
- **K.I.S.S.** Make the estimate as simple as humanly possible—the greater the number of variables at play, the more likely one of them can be successfully attacked.
- Establish your “**but for**” **causality on rock**.
  - The Client could have purchased (or did own) the property
  - The Client could have drilled the acreage and captured the reserves “but for” the activities of the defendant.
- **Harden** the reserve estimate itself.
- Use **comparable properties** as a valuation method when available.

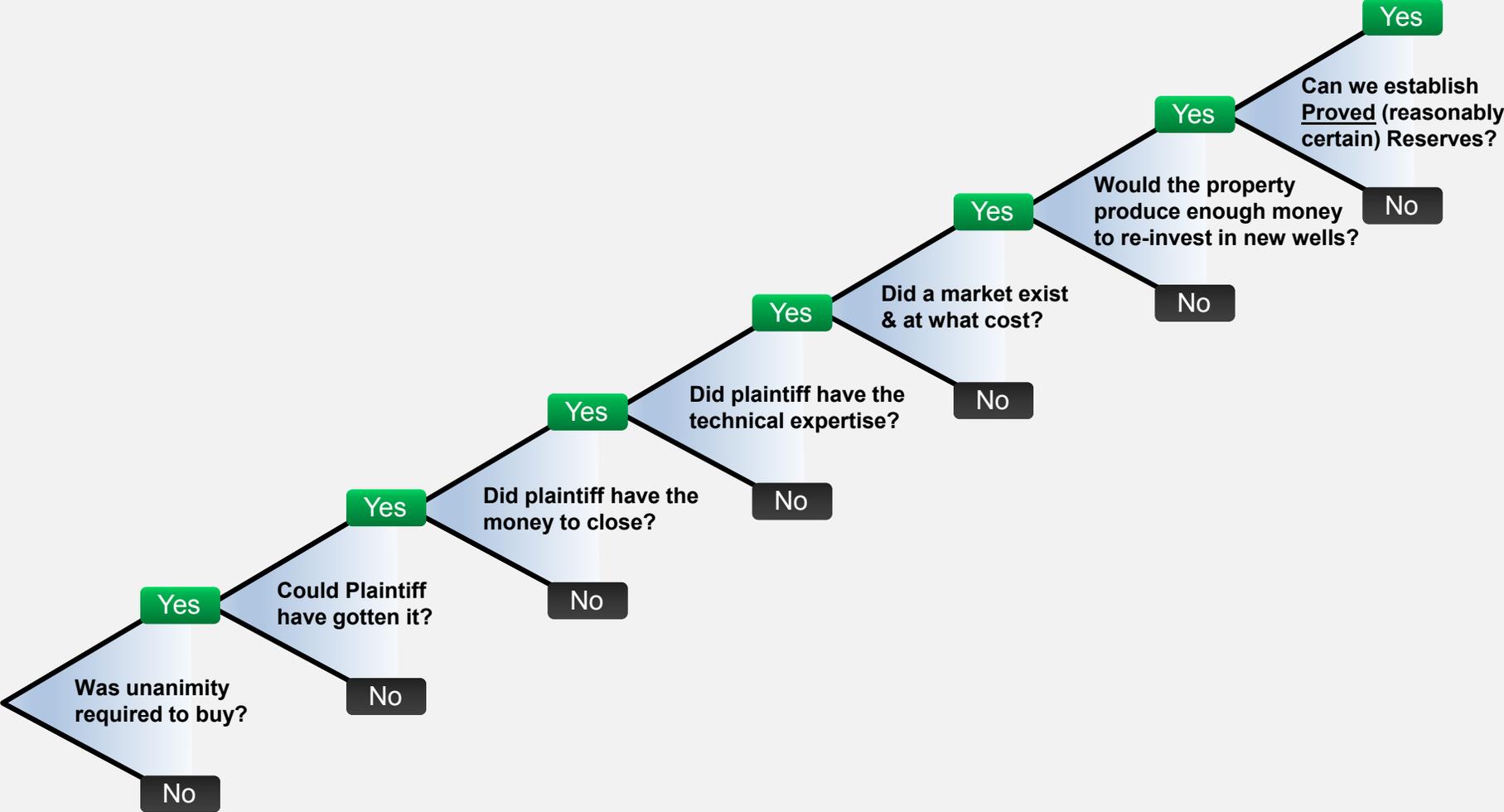
# STEP ONE: PICK THE RIGHT FORUM- STRONGLY CONSIDER ARBITRATION

- Texas appellate Courts frequently pay little heed to large jury verdicts, but reviewing courts treat arbitration awards much more kindly.
- Why? A reviewing court is to be “exceedingly deferential” to an arbitrator’s award, which may be reversed only upon:
  - Limited statutory grounds, such as corruption or fraud, or outright misconduct by arbitrators. 9 U.S.C. §10(a)
  - A manifest disregard for the law—the arbitrators understood the existence of a clearly governing principle of law, but decided to ignore or pay no attention to it.
  - An arbitration outcome that violates public policy.
  - Arbitrariness or capriciousness is not enough. *Kerogosien v. Ocean Energy Inc.*, 390 F.3d 346, 353-4 (5<sup>th</sup> Cir. 2004).
- Arbitrators may consider hindsight in certain circumstances. *Amco Asia Corp v. Indonesia*, 1 ISCID (W. Bank) 559, 614 (May 31, 1990).
- The right arbitrator has dealt in large numbers before and is more likely to give full credit to well-explained and documented reserve reports and accompanying damage estimates.

## STEP TWO: PICK THE RIGHT EXPERT(S)

- Look for the following attributes in your Petroleum Engineer
  - Is she a member of the SPE and other bodies governing reserve estimation?
  - Do people rely on her in the real world to estimate their reserves?
  - Do people rely on her in the real world to audit their reserves?
  - Has she done reserve estimates in the *field* involving the *type of reserves* that are present in your dispute?
  - Has she taken positions in previous litigation that are inconsistent with the position you are now taking?
  - Has her testimony ever been excluded under *Daubert/Robinson*? Has she set standards for herself in prior testimony that she cannot meet?
  
- Recognize that a Second Expert is likely to be needed to reach the “but for” case estimate acquisition, financing or “parsing” the interests are necessary
  - Could the Plaintiff have acquired the property but for the actions of the defendant?
  - When he goes to the market to finance exploration, how of the play must he give up to acquire and drill it?
  - Are we evaluating unique interests that require non-reserve calculations?

# STEP THREE: K.I.S.S.



## STEP FOUR: BUILD THE “BUT FOR” CASE ON HARD ROCK

“Brickhill did not dispute that Plaintiffs’ damage model depends on Van Dyke’s ability to obtain financing and buy out the Kazakhtenge members. If Van Dyke could not acquire the interests of these members, there would be no lost profits. Brickhill’s model also assumes Van Dyke would get the approximately \$14 million from outside investors needed to start production, without which, Brickhill acknowledged, Van Dyke would have no lost profits.”

*Ramco*, 207 S.W.3d at 812.

“...the evidence does not show a reasonable certainty that any such approval would have been obtained. Brickhill’s testimony that the transaction would have occurred is speculative....The evidence at trial that Plaintiffs would have obtained sufficient financing to acquire the interests of the Kazakhtenge members and to commence operations under Schaefer’s production plan is speculative and not reasonably certain.”

*Ramco*, 207 S.W.3d at 817, 820.

# STEP FIVE: HARDEN YOUR RESERVE/DAMAGE ESTIMATE

- Know and use standardized techniques approved by the SPE and the SEC.
  - Pick the locations that, based on data, are reasonably certain to produce oil or gas revenues in paying quantities.
  - Use the standard set price deck in damage calculations.
  - If Probable or Possible reserves are valued, discount them significantly per the rules.
- Educate both the jury and the appellate Court—mere protests that an expert is “reasonably certain” aren’t enough. *Aquila*, 48 S.W.3d at 246. Remind the court that proved reserves are, by their nature, reasonably certain to occur.
- Make your expert consider all applicable information. Don’t do *Ramco* in which the expert...
  - Ignored the dry holes on the property.
  - Ignored actual historic production in estimating decline curves and
  - Ignored indications that a pipeline might cost 3X the value of reserve.
- Do one number, not a range of potential values.
- Don’t over-extend the reserve estimate:
  - a \$20 million verdict based upon reasonably certain *proved* reserves is worth more than a \$200 million verdict reversed on appeal based on possible reserves.
  - If the jury verdict is 10% or 1% of your estimate, it reinforces the speculative nature of the estimate and it will be reversed. The jury cannot “risk adjust” reserves for you. *Ramco*, 207 S.W.3d 823.

## STEP SIX: USE COMPARABLE PROPERTY SALES BEING CAREFUL OF WIDELY DISPARATE RESULTS

- Courts use comparable sales data every day in foreclosure disputes, condemnation disputes and so in disputes within the housing market.
- The Texas Supreme Court has commented favorably on them, even when the underlying data or opportunity is speculative.
  - *“...the law should not require greater certainty in projecting those profits than the market itself would....The prospect of winning millions in the lottery is too small to support any award of potential proceeds for, say, theft of a ticket; still the ticket itself has some value – the price it commands on the market.” Phillips v. Carlton, 475 S.W. 3d at 280.*

## STEP SIX: CONTINUED

- Substantial data on comparables exists.
  - Sales by publicly traded companies.
  - Auctions, including online auctions.
  - Websites dedicated solely to offering current developed, undeveloped and all combinations in between.
  
- The key factor in using comparable property sales is that they be comparable.
  - Is it the same kind of production? (Oil? Gas? Liquids?).
  - Is it from the same formation as the property in dispute?
  - Is the marketability of the production the same?
  - Does it have the same access to pipelines or transportation services?
  - Are the physical characteristics of production the same (e.g. do both require salt water disposal)?

# BUT BEWARE OF HIGHLY DISPARATE RESULTS

- Expert in *Phillips* used three measures of value.
  - The value of gas in the ground at \$1/MCF. 475 S.W.3d at 273.
  - Value based upon development of Proved Undeveloped Locations alone. 475 S.W.3d at 274.
  - The value of the property based upon extrapolations from actual buy-sell agreements amongst the parties. *Id.*
  
- But these three methods yielded dramatically different results
  - Gas in the ground--\$9.3--\$11.3 Billion.
  - Proved Undeveloped Locations--\$12.54-\$38 Million.
  - Negotiated Value--\$31.16 Million.
  
- The Court noted this wide variance to reverse. It ultimately remanded the case to the Court of Appeals solely to consider whether a \$31.16 Million verdict based upon negotiated value was sustainable or was against the great weight and preponderance of the evidence.

# CONCLUSIONS

- Pick your forum carefully--consider arbitrating.
- Pick the right expert.
- K.I.S.S. If you can do a simpler damage model, do it.
- Anchor your “but for” case to demonstrable facts.
- Harden your reserve estimates by using established norms.
- Don't forget to use market comparables, but make sure they're comparable.

# QUESTIONS

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