

THE WOLFERRY CHRONICLE CHARTS THE RISE OF A SMALL TEXAS OIL COMPANY FROM SLIM PICKINGS TO THE JACKPOT

By Kenneth Barry*

A business book tracing the history of a low-profile, Midland, Texas oil and gas company with nary a villain, scandal, or a larger-than-life wheeler-dealer at its center does not sound like the recipe for a spicy page-turner. However, *The Wolferry Chronicles and Other Permian Basin Tales from the Henry Oil Company* (*Wolferry Chronicles*), published in 2021 by company insider Gregory Berkhouse, is anything but dull. The book admirably succeeds on two fronts: first, it provides an engaging narrative of how Jim Henry – a hardworking, fundamentally decent, and only moderately risk-taking petroleum engineer – launched his own exploration and production (“E&P”) company at the dawn of the 1970s, building it from scratch into a dynamo worth over half a billion dollars; and, second, it educates the reader along the way on the geological underpinnings and evolution of shale drilling and fracking technology as they vaulted the U.S. into a global leadership position beginning in the early 2000s.

Berkhouse wisely employs a folksy, often droll style to make all that technical and financial information cohere and go down easily. Yet, he strives not to “dumb down” the many business and engineering facets – and challenges – of developing an E&P company seeking its niche between the broad shoulders of the majors. As the author puts it in his introduction:¹

Oil is a technical industry. I wanted to make this book interesting and understandable to readers who don’t have a petroleum background, but without compromising the technical accuracy. One of my guiding principles . . . was: *accessible to the non-technical, inoffensive to the technical*. To that end, I have provided brief explanations of most of the technical terms and concepts. I have also devoted a few “pull-over” chapters to more fundamental technical terms and concepts.

A couple of pages later, Berkhouse self-identifies as “a geologist and an engineer” but “not a writer,” joking that “two out of three ain’t bad.”² He needn’t apologize, however. The book not only mines the sweet spot between the overly technical and the simplistic; it also manages to be stylistically lucid and punchy, avoiding the turgidity one might expect from a flattering corporate biography written by a technology-steeped insider.

Another stylistic trick Berkhouse employs to good effect is to end most chapters with a short tease – a peek ahead at an intriguing turn in the story about to

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1. GREGORY BERKHOUSE, *THE WOLFERRY CHRONICLES AND OTHER PERMIAN BASIN TALES FROM THE HENRY OIL COMPANY* iii. (2021) (“*The Wolferry Chronicles*”).

2. *Id.* at 1.

unfold. While it doesn't exactly convert the narrative into a whodunit, it averts getting too bogged down in a morass of drilling statistics and corporate personnel shuffling.

It amounts, all in all, to a heartening, surprisingly human tale. We tag along amiably with Jim Henry and his cohorts as they build a company from the ground up; and while there is no single dramatic arc tying the five decades of company history together, we are shuttled back and forth between failures and successes, big and small, as we root for the Henry team to make its mark. About midway through, several threads converge as we learn how Henry's geological and operations managers assemble an assortment of clues to locate, test, and ultimately hit a lucrative (but previously little-known) Permian Basin oil play known as the "Wolfcamp." The "Wolfberry" label featured in the book's title was concocted by the characters to link the better-known "Sprayberry" play – which gave Henry Oil its start – with its move into Wolfcamp geological strata to create a transformational double-play accessed via a single wellbore. In the Wolfberry chapters, Berkhouse credits a particular drilling supervisor who joined the Henry team halfway through its growth period with perfecting a new fracking methodology that worked like a charm in coaxing oil out of Wolfcamp geology (though he candidly explains that several other companies in the 1990s were independently reaching similar conclusions).

I. SETTING UP SHOP

The origin story of Henry Oil makes for an important baseline: Berkhouse wants his readers to fully appreciate how Jim Henry, who ended up an ultra-wealthy Midland oil baron and philanthropist, started out as just a middle-class guy with a solid engineering education and enough gumption to incubate his own business after a handful of years working for bigger companies fresh out of college. (We learn over the course of the book that such individual entrepreneurship has been characteristic of the Texas oil and gas culture; little guys can spring up, carve out a space for themselves in the shadow of the industry giants they probably began with, and, with luck and pluck, grow their small businesses into big ones.)

In Chapter 1, titled "The Wonder Years," Berkhouse chronicles how Henry, early in his career as a petroleum engineer for a major company, realized that his own creativity and imagination were "stymied by stodgy management" and that, besides, he wasn't "very good at company politics."³ He switched jobs to work for smaller companies, but in 1969, just six months after he hooked up with a tiny firm, it folded. He took this setback as an opportunity to strike out on his own. Joining with an older geologist at the same firm – a more colorful personality who complemented Henry's serious side – the two set up a consulting firm, specializing in the Permian Basin's Sprayberry play.

Consulting, we learn, can be the first rung up the stepladder. In Texas, it is quite common for E&P companies to supplement their forces with consultants to tackle particular projects where they may be short staff or lack local expertise.⁴

3. *Id.* at 7.

4. *Id.* at 11.

Evaluating prospects and suggesting drilling locations can be the particular province of consulting geologists and engineers such as Henry and his partner became; and even the field operator mission may be delegated to a consulting firm.⁵ In any event, the nascent Henry consulting firm rapidly earned a solid reputation in the Midland area, leading to more requests for its services.

The duo began with virtually no capital – making consulting work basically their only option – yet didn't seek a deeper-pocketed partner to bankroll them; Jim Henry explained their independent streak this way: “We didn't want to get a money partner because we didn't want to share our success with anybody.”⁶ For basics – office rent and overhead – they took out a small bank loan.⁷ The oil market in the waning days of 1969 bespeaks a long-ago era: the commodity sold for \$3.35/b; and even adjusted for inflation, that amounts to just \$22/b.⁸ When Henry's geologist partner was offered an onsite gig in New Mexico to advise on drilling a pair of wells for six weeks, he was paid just \$125 *per day*; and their consulting work went for ten bucks an hour.⁹

More money came in the door when an area oilman offered the pair a finder's fee for each drilling prospect they generated, plus an overriding royalty on resulting lease production.¹⁰ And that trickle became a stream when business acquaintances hired them for \$7000 to do a comprehensive study of prospects in the Sprayberry formation, a sprawling and increasingly active oil play in the Permian Basin.¹¹ As a result of this work, Henry's budding firm earned a reputation as Sprayberry experts and were invited to spearhead more multi-well deals (the first of which unluckily fell through).¹² By early 1971, Henry Oil was hanging in there, surviving on consulting work when a bigger break with greater responsibility arose: it was asked to supervise a Sprayberry drilling program as “operator of record,” rather than just consultants.

By late 1971, with an assortment of drilling projects under their wing, Henry and his partner were at last “making real money.”¹³ Its oil field successes now resulted in deeper-pocketed outfits stepping in to buy working interests in their well drilling programs. Increasingly in the role of operators, the partners drilled more wells – 19 in 1972, 22 in the next year – and benefitted from international tensions pushing up the price of oil.¹⁴ In these years, Henry Oil added staff, but in early 1977 the geology partner decided it was time to scale back on his working life. This was the first in a long litany of personnel departures and arrivals that *The Wolfberry Chronicle* dutifully records. The reader unfamiliar with the industry soon learns that such coming and goings, and the unique talents and drive individuals bring to the table, are a major determinant in how an aspiring oil and gas

5. *The Wolfberry Chronicles*, *supra* note 1, at 11.

6. *Id.* at 13.

7. *Id.*

8. *Id.* at 14.

9. *The Wolfberry Chronicles*, *supra* note 1, at 14.

10. *Id.* at 15.

11. *Id.* at 16-17.

12. *Id.* at 18.

13. *The Wolfberry Chronicles*, *supra* note 1, at 23.

14. *Id.* at 29-30.

firm fares. In Berkhouse's telling, working side by side in a family business like Henry Oil also produces lasting friendships, and departures, however sad, were uniformly on good terms.

II. OIL AND GAS EXPLORATION 101

As previously noted, *The Wolfberry Chronicle* takes pains to teach the lay reader about the nuts and bolts of the oil and gas industry – both the business-running aspects and the technology. Berkhouse relishes describing incidents when Henry drilling projects ran into difficulties. These can be rather menacing, especially when the textbook solution for an unruly well doesn't fix the issue at hand, and supervisors have to improvise.¹⁵ Such undesired adventures, one imagines, make for spirited storytelling after-hours.

A key, though less dramatic, chapter is dubbed "Permian Basin Rocks for Jocks." A digression from the main storyline of the book, the chapter explains in geologic terms just what the Permian Basin is, how it came to be, and the ways in which this ancient seabed occupying what's now West Texas accumulated all that organic sediment¹⁶ that now yields oil. The section also reminds us that "rock-solid" is a relative term; sedimentary rock has variable degrees of both *permeability* and *porosity*.¹⁷ The tighter the formation, we learn, the more hydro-fracturing or "fracking" comes into play to release the embedded hydrocarbons.

Shale is labeled a "special case" of sedimentation by Berkhouse. It is formed when plankton (an omnibus term for "all manner of micro critters") dies and joins the "underwater rain of inorganic silt and clay blanketing the sea floor," turning together into rock, or "source rock" if it contains above a certain percentage of organic carbon.¹⁸ The author then observes that this kind of rock becomes the "major source of the earth's . . . oil and gas."¹⁹

The geology chapter, inevitably laden with terms and concepts that may be unfamiliar to readers not steeped in geology, is relatively heavy going, but it's leavened by Berkhouse's characteristically jocular tone. It may require going back and re-reading, but it is helpful in following the exploration saga that unfolds, leading the Henry team to develop those prolific "Wolfberry" wells.

III. GETTING THE FRACKING RECIPE RIGHT

Another salient aspect of *The Wolfberry Chronicles* is its detailing how the Henry team – spearheaded in this case by Dennis Phelps, an operations engineer

15. A not uncommon situation arising in the book is where a well nearing completion "kicks" – meaning the pressure of a just-tapped reservoir temporarily overcomes the control substances (such as "drilling mud") and devices used to regulate the flow of oil or gas released by the project. An extreme version is the classic "blowout." Equipment failures at this stage can also be an issue. Throughout the book, Berkhouse livens up the chronicling of routine well-drilling with tales of how the company dealt with problematic wells and the human factor that goes into these incidents.

16. The geology section also delves into the various types of sedimentation yielding different rock types. The nature of the sediment is crucial in pursuing oil-bearing formations (*i.e.*, those rich in "carbonates," composed of broken shells). *Id.* at 37-39.

17. *Id.* at 42-45.

18. *The Wolfberry Chronicles*, *supra* note 1, at 40.

19. *Id.*

lured out of early retirement – built a better mousetrap when it came to the fracking process. Phelps, then working for ARCO, had been experimenting with alternative engineering approaches to fracking.²⁰ His process insights, coupled with Henry Oil’s growing interest in probing the Wolfcamp geological zone, led to a resounding boom in the company’s oil production.

Preceding an in-depth account of this development, Berkhouse provides an enlightening capsule history of fracking. While the term has only come into broad national awareness in the 2000s, the roots of fracking lie deep. The author relates that not long after the oil industry got going in 1859, drillers realized that most wells need a form of artificial stimulation. The medium for “shooting the well,” as the expression went, was first gunpowder and then nitroglycerin. The dangers of handling explosives were an accepted but very real risk.²¹

Fracking took a leap forward towards *hydro*-fracking in the mid-1930s. By that time, acid had become a preferred medium for well stimulation. A chemist employed by Dow Chemical, Dr. Sylvia Stoesser (as it happens, the first woman chemist employed by Dow), discovered additives to the acid that would reduce corrosion to equipment (an undesirable side effect of acidizing) and, in the process, documented how pressurizing the fluid pumped into the well help trigger rock fractures at the target depth of the wellbore.²² While Dr. Stoesser was experimenting with brine wells, not oil, she and her supervisor published their findings in *World Petroleum Magazine*, suggesting the implications of pressurized fluid injection for oil exploration.²³ The chapter goes on to narrate how hydrofracking became more and more common in the decades that followed, with various protocols recommended for the use of thickening additives (to increase the pressure impact) and sand as a fracture “proppant.”²⁴

What Dennis Phelps deduced, first for ARCO and then, coming out of retirement, for Henry was that *less* sand, *less* viscosity, but *wider* pipes and *more* water pressure (along with certain specifications for perforating the well in the target zone on completion) was both cheaper and potentially more effective. Dubbed “slickwater fracking” (referring to friction-reducing additives), Phelps’s fracking recipe was picked up by Henry and applied to the new Wolfcamp/Sprayberry (or “Wolfberry”) dual-target wells which Henry’s geologists were hot on the trail of.²⁵

IV. HENRY OIL HITS THE BIGTIME

As the company’s early efforts around 2003 employing Phelps’s fracking method confirmed his findings, Henry turned its attention to the Wolfberry project. The company’s geologist studied the available data on other companies’ past wells in the target areas – good, bad, or indifferent – and then prognosticated the extent of the formation.²⁶ As exploratory wells drilled by Henry itself proved promising,

20. *Id.* at 166-67.

21. *Id.* at 150-51.

22. *The Wolfberry Chronicles*, *supra* note 1, at 152-53.

23. *Id.*

24. *Id.* at 154-55.

25. *Id.* at 172 *et seq.*

26. *The Wolfberry Chronicles*, *supra* note 1, at 182-95 (Chapter 11: “Birth of the Wolfberry”).

the firm leased more and more acreage, joining up with deeper-pocketed partners (eventually, Chevron as the acquirer of Unocal).²⁷ Henry remained the well operator, and took an increasing (if still minority) equity interest, as its confidence in the play (and finances) grew.

The drilling program, and the revenues of the company, snowballed in the mid-2000s. The steadily climbing market price of oil helped, too. At first, Henry tried to keep its objectives and results on the downlow to keep competition in the dark. Secrecy can only go so far, but the company did manage to accumulate a huge amount of acreage and increase its market value exponentially by locating and more intensively drilling developmental wells (wells drilled in proven areas).²⁸ Departures of key leadership team members – generally to start their own E&P firms – pockmarked these years of hard-earned success, but the holes were filled with new hires and internal promotions.

The financial bonanza made possible by Henry Oil's Wolfberry initiative leads to some surprising corporate upheavals, but that last part of the story should be left to the reader's discovery. The denouement of Henry's glory days occupies the final pages, including an extended period of doldrums accompanying its radical restructuring, downsizing, and management swings.²⁹ The best war story in the book – the nearest thing to a page-turner – is saved for last, documenting Henry's first adventure in horizontal drilling (which the company got around to only in late 2013). It was an epic "learning experience," as everything seemed to go haywire.³⁰ But we apprehend how the integration of horizontal drilling techniques in the Permian in the 2000s, coupled with the "slickwater" fracking pioneered by Henry, turbocharged the productivity of the region's shale deposits.

V. CONCLUSION

Throughout *The Wolfberry Chronicles*, Berkhouse wants his audience to appreciate that the founder and his family insisted on sharing their good fortune with their employees, through generous bonuses and options to buy working interest shares in new drilling projects. Jim Henry's charitable donations to the community are likewise underscored. The biography of Henry Oil, the book stresses, is above all a tale of a decent man whose enterprising spirit, ability to attract like-minded managers with a "win-win" approach to business deals, and customarily conservative financial practices led to considerable success, despite the roller coaster of oil and gas prices and the inevitable encounters with failure on some projects.

This reviewer would have found helpful the inclusion of a few maps and diagrams accompanying certain chapters. Not all readers are as familiar with West Texas locations as the author. And while technical terms are usually well-explained, there are a few lapses into industry cant that could stand a bit of elaboration. However, these lapses are few enough; Berkhouse molds this welter of personalities, drilling projects, production data, and placenames stretching over 50

27. *Id.* at 214-15.

28. *Id.* at 231.

29. *Id.* at 243 *et seq.* (Chapter 16: "Transitions").

30. *The Wolfberry Chronicles, supra* note 1, at 267 *et seq.* (Chapter 17: "Henry Goes Sideways").

years into a comprehensible and informative whole. It should appeal to a wide audience of those interested in a deeper understanding of the evolution and transformative technical changes behind the growth in North America's oil and gas industry.³¹

31. The company's moral ethos has a strong religious undercurrent that surfaces on several occasions. It is encapsulated in Jim Henry's quoted remark in the final chapter: "What I'd like is for the basic principle of our company to continue. I want this to be Christian company . . . It is what drives us, what is at the heart of our company." *Id.* at 281. This may discomfort readers of other denominations, and gave this reviewer pause. But it's plainly who Jim Henry is, and the book is in no small part his biography. We also learn in that chapter that, as an engineer, Henry rates the potential of nuclear as a "clean energy" option above solar and wind. *Id.* at 280-81.