

## From Army platoon leader to tech firm chief:

ThoughtTrace CEO shares tips for getting started with AI

By Rachel Stowe Master

WHEN NICK VANDIVERE TOOK THE REINS AS CEO IN 2014,

ThoughtTrace focused on turning paper documents into digital records and consulting on third-party software. Today the tech firm uses its own in-house created artificial intelligence platform to help clients access their data and documents to make better, faster decisions.

Vandivere credits the company's success to its hiring practices and decentralized decision-making. ThoughtTrace focuses on recruiting and retaining people who are not only tech savvy, but also gracious with fellow employees and clients — in every interaction, he said.

"Our goal is to bring people on board who we enjoy working with, who are going to enjoy working with us and who are itching to have the responsibility to say, 'I've got a better way of doing things, boss, and I'm going to take this thing and run with it, and here's the help that I need from you,'" he said. "Company leadership sets clear guidance in terms of what's important, but employees have the freedom to maneuver and to figure out how to execute the plan in the most effective way."

## MILITARY MAN

After graduating with an economics degree from Texas A&M, Vandivere spent a year as a risk analyst for an energy trading firm before he felt the call to join the Army.

"I think like a lot of people, it was just based on where I was at that point in my life," he said. "The U.S. was involved in two wars, I was a young, single guy and I thought it made sense. If you're ever going to do that kind of thing, that's probably the time to do it."

On his way to a yearlong deployment in Iraq, Vandivere flew on a charter from Georgia to Ireland to Kuwait. "Just getting off the plane — I had never been to the Middle East before — it was like walking out onto the moon. The sky is this shade of orange, there's just desert all around and the whole base smells like diesel fuel because of trucks and military vehicles moving around. That was the first indication it was going to be a truly different experience," he recalled.

"The military is a big change, and being deployed to that kind of environment is a complete departure from normal life. But I will say the Army did an exceptional job of preparing us from a training standpoint. I felt like we were never at a loss in terms of how to react in very stressful situations."

In 2005, Vandivere led a platoon of 27 soldiers in the 3rd Infantry Division. They spent six months in Baqubah, Iraq, north of Baghdad, and six months in Ramadi, the capital of Anbar province. "Up near Baqubah, we ran a wide array of missions — from working with the Iraqi army to engaging the civilian populace. The second half of the deployment, in Ramadi, was a different story. Ramadi was at a whole different level in terms of the threat, so we exclusively focused on conducting combat operations against al Qaeda in Iraq and their affiliates."

While successful businesses know the value of strong teamwork, the military takes it to a whole new level, he said. "There's nothing I did in the Army that I did by myself. Everything is as a team. Success and failure is as a team. I lived and breathed that then, and it has really translated into how we have built the company. There is no single person or stroke of genius

## NICK VANDIVERE CEO, THOUGHTTRACE

### **Favorite military job:**

Platoon leader. It was the hardest job I ever had and amazingly rewarding at the same time. It made me into the person I am today.

**Favorite sport:** Snow skiing. I'm not that great, but I really love to ski.

**Favorite team:** Texas A&M football. Gig 'em!

**Favorite food:** I really like a nice, very rare filet mignon.

**Favorite book:** *Range* by David Epstein. I wish I had read it as an 18-year-old.

**Favorite movie:** *Back to the Future*

**Favorite musician or band:** Lyle Lovett and Pearl Jam. Yes, it is an odd combo.

**Hobbies:** With gyms being closed, I took up tennis and I really enjoy it. So that's been a nice side effect of the whole COVID-19 thing.

**Surprising fact:** I did not come from a computer science background. I majored in economics. I became a nerd by osmosis later on in life.

**Best advice you've ever received?** This is from a company commander in my old battalion: "Absolutely put your ego aside and pause and listen. If you have a point to make and you're in the leadership role, make it at the end of the meeting — not the beginning." I don't always follow that advice — it's hard — but you've got to strive for something.

### **Your advice to those just starting their career?**

Read, read, read. You should be a student for life and perpetually focused on being better at your craft and learning a variety of things to understand where you want to go next and how you want to get there. Keep reading.

**Favorite part about NAPE?** Conversations in the booth and on the floor, and the happy hours are a lot of fun.



that has been the key to our success — it really is the product of highly effective teams.”

His military experience also changed the way Vandivere relates to people.

“The Army is a microcosm of society. You have people from all walks of life, from folks who may not have finished high school to people who graduated from Ivy League schools, and all points in between. But it’s how effective you are at your job that matters. You learn to value grittiness and perseverance over somebody’s pedigree or educational credentials. In terms of work and in my personal life, I began to look at people in a different way that made for more positive relationships. It’s not about where you start in life, it’s really about what you choose to do with it. That’s the mindset in the Army, and it’s an approach that can unlock enormous potential in both people and companies.”

Vandivere also learned the value of time. “Life is short, and you discover that on a first name basis. It certainly teaches you to make the most of your time.”

### TRANSITION TO CIVILIAN LIFE

Three years after his Army deployment, Vandivere returned to Iraq in a civilian advisory role for the Department of State. “It was really interesting,” he said. “Our job was to work with the military on stabilization issues in Mosul, which is where I was stationed.”

After spending a good deal of his 20s working overseas, Vandivere shifted gears to the private sector. “I had no plans to get off my path at the time, but then I met my wife. Sometimes life is full of wonderful surprises that really change your priorities. She is just an amazing partner and sounding board for me.”

In January 2010 Vandivere joined the company that would become ThoughtTrace. “People knew us for years as Agile Upstream when we provided document management services,” he said. “Then we noticed a crippling problem across all of our customers: People could not easily access the data living in their contracts and documents, and this data had major implications for businesses and the people they employed — from financial and strategic to tactical operations. When we began work on the AI platform to solve this problem, we knew this solution was needed outside of just upstream oil and gas, and that’s where the name ThoughtTrace came about.”

Vandivere was named CEO in 2014. “One of my focuses was on driving the company to a place where we could control our own destiny from a product perspective, and building our own software was step one in creating the sort of customer and user experience that we aspired to.”

### TURNING POINT

In 2015, the company began building the code for what would become the ThoughtTrace Contract Analytics & Document Intelligence Software platform.

“We took something that started off as a really fascinating science project and turned it into a viable product in 2017, and adoption really took off from there. The way we contextualized what the software was doing within the oil and gas industry resonated with a small number of companies, and they took it and ran with it,” Vandivere said.

Working with those early clients gave ThoughtTrace a deeper understanding of the structure of oil and gas companies, and Vandivere’s team became laser focused on building out the capabilities to meet their needs. “We went from zero to



**NAME:** Vandivere, Nick\_

**LOCATION:** Ramadi, Iraq

**DATE:** 2005

**MISSION:** Platoon Leader



14 customers in year one, and then it really took off in 2018. Now we have about 70 customers and are growing every month, even during COVID.”

When the ThoughtTrace platform first launched, it could recognize about 30 facts — or specific provisions and elements — in oil and gas leases. “Today, out of the box, we can accurately recognize well in excess of 1,000 provisions and data elements spanning leases, deeds, joint operating agreements, commercial agreements, ROW, gas gathering and many, many more document types. We make additions every two weeks to this list, which is pushed out free of charge to our customers,” he said.

“Our focus on building extremely detailed and accurate data extraction models is part of the core ThoughtTrace value proposition, and we invest substantial resources in making those models more comprehensive, domain relevant and exquisitely accurate,” he added. “We do this specifically so that our customers do not have to shoulder the burden of building AI models themselves.”

We asked Vandivere to share some of his insights on artificial intelligence with *NAPE* readers.

***NAPE:* How long have you been working with artificial intelligence?**

***NV:*** In some form or another for about five years now.

***NAPE:* What do you see as its greatest potential?**

***NV:*** To me, the beauty of AI is that it can make difficult decisions and judgments exceptionally less complex, across many use cases. Whether that is reading and analyzing 20,000 land documents in an hour or helping researchers understand the interplay between genes and disease, when well executed AI can massively expand the boundaries of human understanding.

**“THERE IS NO SINGLE PERSON OR STROKE OF GENIUS THAT HAS BEEN THE KEY TO OUR SUCCESS — IT REALLY IS THE PRODUCT OF HIGHLY EFFECTIVE TEAMS.”**

Of course, our focus is on the former and not the latter, but the point is that the benefits of AI will be widespread and substantial, oftentimes in unexpected ways.

***NAPE:* How quickly is the field advancing?**

***NV:*** It depends on the area. In the narrow sense, we train AI to do a particular thing with extreme precision and accuracy, such as read various document types or, for example in radiology, distinguish between one type of break within a bone and another. AI in those areas is advancing at a ridiculously fast pace. General artificial intelligence — what some envision to be a substitute for human creativity and judgment, which is what concerns and scares some people — is not advancing nearly as fast. Within narrow domains — reading documents, drug discovery, transportation safety — AI is doing amazing things. Interestingly, I think the fears of AI substantially replacing skilled workers are dramatically overblown, while the understanding of how widespread AI will become integrated into the day-to-day of most skilled workers is greatly underappreciated.

***NAPE:* What are the biggest misconceptions about AI?**

***NV:*** A lot of people think of AI as a job killer, which is certainly not what we have observed. The folks that have approached it with the attitude of “AI

is not going to replace my job, but it will change how I do my job” are the ones who have seen their careers absolutely take off — because they have embraced that new capability. People can be fearful of change, but we have seen this time and time again with technology, from the combustion engine to the integrated circuit. The nature of jobs change, but demand for people to utilize those new tools and technologies expands demand for labor. Just be open to change, embrace it where it adds value and use it to really hone your craft.

***NAPE:* What kinds of O&G projects are good candidates for AI?**

***NV:*** Land and title, legal, regulatory, transport, supply chain — those are all areas across upstream and midstream that gain a ton of value right out of the gate. Owner relations is an emerging area where a lot of value can be added, and we have a handful of customers doing some amazing work there. On the operations side, there’s also great potential in production optimization and geology, but that’s not our focus.

***NAPE:* How can AI help?**

***NV:*** Oftentimes when decisions have to be made in the oil and gas industry, they have to be made in a very compressed timeline, which means you are having to make a decision with limited information. Artificial Intelligence can better inform those decisions, even when you don’t have the luxury of



**“OFTENTIMES WHEN DECISIONS HAVE TO BE MADE IN THE OIL AND GAS INDUSTRY, THEY HAVE TO BE MADE IN A VERY COMPRESSED TIMELINE. ... ARTIFICIAL INTELLIGENCE CAN BETTER INFORM THOSE DECISIONS, EVEN WHEN YOU DON'T HAVE THE LUXURY OF DELIBERATING FOR DAYS OR WEEKS.”**

deliberating for days or weeks. Here's an analogy: If I have a 1,000-piece puzzle and I just dump it on a table in front of you and say, "You've got 30 minutes. I'm not going to show you what this is a picture of, but put together all the pieces you can and tell me what you think it is." That's how a lot of our customers felt before they started using our software. They put the puzzle pieces together as best they could and said, "I think it's 'this' — but I could be wrong." AI allows them to assemble that puzzle much, much faster and more accurately than they otherwise could, so they can make better decisions with the data that they have today. That's the beauty of AI to me.

**NAPE: How does a company get started with AI?**

**NV:** There is one critical ingredient for success, and that is to be open to the idea that your processes tomorrow are not going to be exactly like they were yesterday. When you get new tools, especially very powerful tools, you are able to tackle all sorts of problems in entirely new and more effective ways, and that does require some adaptation. I think it is also important to understand that when you can create or make information accessible that was essentially inaccessible before, you will make decisions and allocate time and resources in a more

informed manner. You have a better understanding of the problem to be solved and the job to be done.

**NAPE: Any other tips for success?**

**NV:** Relative to other fields, AI is still fairly new. With that being the case, you should absolutely have the solution provider prove the viability of their software on data that it has not yet seen. We do this by uploading large document sets and letting the customer see what the results look like in real time, with their data. I say this because you need to have a very critical eye to make sure that the AI does what people tell you it will do — that it's not someone manipulating data for the demo, but that it's durable and it actually works. I would be very reticent with anyone who says "Give me your data, I'm going to go away for a month and then show you some results." That train-to-the-test mentality will utterly fail in a production environment, so I think it's critical to have any provider of AI show you what their solution can do in hours, or even minutes, with your data (that they have never seen before).

**NAPE: Where is AI headed?**

**NV:** My hope is that AI is headed to a place where, God willing, we will get to quit talking about AI. Whether

I'm interacting with an iPhone or ThoughtTrace, the fact that it's using AI should not matter to the end user. It should be a natural experience where the results and answers that they get are just dramatically better than anything they've dealt with before. It's not about the AI — it's about the value it creates.

**NAPE: How long have you been involved with NAPE and how has it benefited you?**

**NV:** I went to my first NAPE about six years ago. NAPE is the place where people absolutely connect. The conversations you have there would be hard to have in any other venue, and that's what we absolutely love about it.

**NAPE: Since 2009, the annual NAPE Charities Luncheon has distributed over \$3.8 million to help charities support U.S. veterans. What are your thoughts on NAPE's and the industry's commitment to veterans?**

**NV:** I think it's awesome. The oil and gas community understands that just because a veteran's résumé doesn't directly translate to what the company is hiring for does not mean you don't have someone you can quickly mold into one hell of a team member who adds value. I love the fact that the oil and gas industry provides a very natural stepping off point for people coming out of the military. There isn't really a civilian equivalent for someone who has led an infantry squad or been a gunner on a tank, but the oil and gas community has essentially said, "We can take your ability to work within a team to solve complex problems in an austere environment and make you a valuable member of our industry." That's a huge deal, and it's a mentality I hope the rest of the American economy will soon embrace. ♠

# Effective preparation for a successful due diligence review



By Peter J. Petrides  
Generation Land Management

**DUE DILIGENCE REVIEW IS A CRITICAL COMPONENT OF THE OIL AND GAS TRANSACTION.** Even though this year has provided many ups and downs for the industry, it is always best to prepare for what may lie ahead. This article discusses how to prepare for a successful due diligence review.

A good due diligence review is not just sending several landmen to rural courthouses and making document copies. Obtaining documents is certainly a component of the process, but it involves much more organization and a proper plan. While there is never enough time in the due diligence period to ensure a perfect transaction, hopefully this article can provide ways to help prepare a buyer and seller for an effective due diligence review.

## PLANNING AHEAD

Even before a transaction takes place, there are plenty of ways to prepare for a due diligence review. It is imperative that sellers organize their land files so that they are reviewable and contain all relevant information. A good land file could contain a lease purchase report, abstract of title, mineral ownership report and a title opinion.

Even in this digital age, one of the main obstacles in a due diligence review involves inconsistencies in a seller's land files. When a buyer and seller enter into a transaction, the buyer will most likely be taking possession of an asset (leases, wells or property). Additionally, the buyer will need to have copies of all seller's records relating to the asset.

It is important to constantly update the land file with any new data and to ensure that the paper copy of the land file matches the file in the virtual data room. An organized set of land files and a user-friendly virtual data room will go a long way to ensure a quality title review.

## MAKING YOUR CHECKLIST

Once the negotiation for the transaction takes place, the next step is to fully understand



the terms of the purchase and sale agreement. During the due diligence period, there will be deadlines to list potential defects, title concerns or any other issue that may alter the valuation of the transaction. It is always a good idea to create a checklist that contains all relevant deadlines and how to present the issues per the terms of the PSA.

This checklist should not be general in nature but specific to the transaction. A useful checklist will include relevant lease or well information, note any provisions in the lease that could create a title issue (i.e., Pugh clause) and contain the proper way to present a defect notice. Understanding the terms of the PSA and crafting a specific due diligence checklist is a crucial component to having an organized and effective review process.

#### UNDERSTANDING YOUR CHECKLIST

In addition to creating a thorough checklist, the buyer — and, in some instances, the seller — should understand the provisions and title materials that make up the checklist. Many buyers do not have a landman background and thus rely on land service providers or attorneys to ensure the due diligence goes smoothly.

If a landman or attorney provides a defect notice to the buyer that could significantly reduce the valuation, the buyer would do well to have a solid understanding as to why. While it is not possible to learn how to chain complicated title with numerous depth severances and reservations during the due diligence period, it is possible to understand how a Pugh clause works or the effects of an unreleased lien on an asset. Becoming

familiar with the essential terms in the checklist and understanding the practicality of each of those terms is key to a successful transaction.

#### FOCUSING ON VALUED ASSETS

Unless there is an infinite time period for the due diligence review, it is not feasible to expect a 100% confirmation of all title of the assets. Prioritize high-valuation assets. Buyers and the due diligence review team should work together before and during the due diligence to ensure that the most essential assets are under review.

Ultimately, the terms of the PSA will govern the threshold for the minimum valuation of assets reviewed. Traditionally, the minimum threshold for the due diligence review is 80% of the total valuation of the transaction. It is important to structure the review



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process around the most valuable assets of the transaction.

**PROVIDING A SUMMARY**

Not every landman or attorney performs a due diligence review in the same way. There are numerous methods to deliver different summaries of the review. Attorneys may be inclined to provide acquisition title opinions, summarizing all leasehold activity for the assets, while landmen may provide detailed run sheets and mineral ownership reports to the buyer. However, it should not be assumed that a buyer will understand the functionality of these documents. In addition to the run sheets, MORs or acquisition title opinions, a brief one- to two-page summary of the title review process could really help the buyer understand how the review period was handled and which assets were evaluated and analyzed.

A good summary wraps up all of the findings of the land due diligence, including acreage and total valuation reviewed, as well as any defects or potential red flags that the buyer needs to be aware of prior to closing. While the summary should not be as detailed as an ATO or an MOR, it should contain the total NRI cleared as well as how much of the total valuation was cleared. The summary is a culmination of the time and effort that the due diligence team has accumulated during the review and ultimately ensures that the buyer and the team have been on the same page since the beginning of the work review period.

**KEEPING COMMUNICATION OPEN**

Among the biggest mistakes a review team can make is failing to have open communication with the buyer (and the seller to an extent). In order to have as smooth a transaction as possible, it is critical that there are open lines of communication between

all parties. There may be portions of the due diligence review that can only be fixed by information provided by the seller, for example.

One of the best ways to communicate is having the review team consistently keep the buyer in the loop. The buyer should know when to expect the materials needed for all deadlines, what information will be presented and how much valuation has been reviewed. This information is not difficult to present to the buyer, but it is vital.

With the buyer’s approval, the due diligence team should establish communication with the seller immediately after the review period begins and maintain that open line of communication until the transaction is over.

**PREPARING FOR SUCCESS**

There is no right way to conduct a due diligence review. Every landman and attorney will have different methodologies or structure their organization and review in unique ways. But there are plenty of ways to enhance those methodologies and strengthen the review process.

If there is some free time in a busy schedule, utilize that to prepare for potential due diligence reviews. Organize those digital files so they match the paper files. In 2020, there are still due diligence reviews taking place where there is no virtual data room and just paper copies of land files. Potential sellers should invest in digital software and keep up the digital files as much as the paper files.

The due diligence review team should take the time to craft a specific checklist catered to the transaction. A general checklist will not suffice; it should contain all necessary materials and deadlines per the terms of the PSA.

The review team should also prioritize the review, making sure to conduct a thorough analysis of the highest-valued

assets. After the review is complete, it is a great idea to craft a brief summary of the due diligence. This summary should show the buyer how the title review was conducted, what assets were reviewed and any potential issues that could stand in the way of closing.

Finally, having an open line of communication is paramount. Keep the parties in the loop on any major issues, notify the buyer of possible defects and ask the seller for help whenever the review team cannot track down the answer.

No matter how a landman or attorney conducts a due diligence review, being prepared and organized both before and during the review period will go a long way for buyers and sellers to achieve a successful transaction. ♦

**ABOUT THE AUTHOR**



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