

Atlas Sand was one of six in-basin sand plants (various stages of development) that we visited in the Permian Basin in early-February. Like with our five other in-basin frac sand stops, our purpose here was simply to learn more about the company's in-basin initiatives and document our observations.

We stopped by the first of two firm Atlas Sand in-basin projects – twin facilities are currently under construction. This first Atlas plant is a stone's throw away from the Hi Crush Kermit plant, and their second is being built on a 60-day lag about 35 miles south near Monahans.

Aggressive Atlas land purchases starting in March 2017 resulted in a massive dune sand portfolio consisting of 14,500 acres with a further 23,500 acres of off-dune sand deposits controlled by the company. The extent of the Atlas land grab is seen by some as one of the limiting factors on continuing proliferation of dune mining new entrants.

Joining us on location were COO Hunter Wallace, CFO John Turner, and VP Ops Tim Stauffer. Tim is overseeing the construction of both facilities and will be overseeing the operations of both plants when they go live, in coordination with Atlas's Kermit and Monahans plant managers. We took a ride with the team around the construction site, navigating seemingly endless sand drifts in the construction manager's turbo-charged Can-Am Maverick X3.



Although our dune buggy ride with the team was short, what we saw and heard gave us increased conviction that this new entrant is in it for the long haul.

We understand the temptation to shrug off eye-popping [statements](#) from new entrants in physical industries like mining. However, we saw first-hand evidence of financial commitment, talent, and determination on location. Most importantly, we saw long-term vision and thinking.

Atlas management came across as patient. They certainly aren't worried about hitting next quarters' earnings, and they didn't take private equity money. While the company did not deny the possibility when we asked about an IPO later this year or next, they seem focused on building capacity to serve Permian Basin E&P demand in the long run. This is a team that talks more about 2020-2030 trends than 2018-2020 trends.

Operation & Strategy Takeaways From Our Site Visit:

- **Doing Things A Little Different With An Eye Towards The Long Haul.** The company funded these Permian sand projects with a combination of founders' capital, family office funding, and strategic investors. Management emphasized during our visit that they have brought in a lot of strategic investors from within the industry into this development. And importantly, they left private equity money out of this project. Investor composition and expectations are important determinants of new entrant philosophy – Atlas has a unique funding story that we believe is conducive to prioritizing long-term returns on capital. Beyond the investor base, management is building these plants with no shortcuts with an eye on producing sand here for decades.

- *Bullet Continued From Previous Page...* They are also building with an eye towards minimizing opex/ton – management estimates they only need to sell 30-50% of nameplate capacity to generate positive cash flow from operations after debt service. And with significant volumes already spoken for, Atlas a) is already in the black, and b) was able to secure a \$150mm line of credit. Also of note, the company is acting as their own general contractor here – a confident move for a new entrant and a testament to the operational talent they recruited early on. After some challenges getting on concrete pour schedules, the company just brought in mobile batch plants to produce the concrete for their pours on site – these will be used at both locations.



Source: InfillThinking.com

- **Bigger Than Expected.** Recall that the company press released plans last year to spec their first two mines to produce a combined 6mmtpa. While on site, we learned that the company now anticipates producing a combined 7-8mmtpa from their first two plants. Initial disclosure last year was based on PBR permits, and since then Atlas has submitted NSR permit applications. Encouraged by a peer that received NSR permits in less than half a year, Atlas has designed their facilities to where they can (relatively) quickly bolt on the additional capacity when they receive their NSRs.

- **The Atlas Kermit Site Is A Beach.** There should be enough water here for Atlas to both mine sand and sell water. As shown in the picture below, we observed water pooling in a shallow dug-out no more than 10-15 ft. deep. The construction crew has been pulling water from this pool, after which it recharges. The company has so much water here that they've had to come up with a workaround to install foundation pilings (see next bullet).



- **Never Build On Sinking Sand – Atlas Is Installing 40 To 60 Ft. Concrete Pilings Under Everything.** In early-February, the company was running 40 ft. pilings under the silo foundation. Because of the heavy water content right beneath their sand, the construction crews couldn't run pilings the old fashioned way. They encountered issues with the sloughing in of the holes and the loss of concrete as they filled the holes. So the Atlas crews were driving temporary steel conductors to act as "sheaths" prior to setting the concrete pillars in place when we visited.



- **Management Guided To Summer Startups...** Atlas broke ground in Kermit in October 2017, and the Atlas Monahans plant construction is tracking roughly 60 days behind. At the Kermit site, the company expects to be moving some sand around next month (April), but won't begin making dry sand and filling trucks until the June/July 2018 time-frame. Contractual commitments begin in July 2018. Based on the construction schedule, that implies their second site, Atlas Monahans, opens for business in August/September 2018.
- **...But About Those Start Dates.** As our piling installation observation above implies, the company was doing foundation work at Atlas Kermit during our visit in early-February 2018. The land was clear, pilings were mostly in, and some equipment was already on location (we saw dust collectors, conveyors, and dryer equipment).

- *Bullet Continued From Previous Page...* But most of the concrete hadn't been poured yet. The status of this construction project reminded us of our [Black Mountain Vest visit](#) in August 2017, maybe just a hair behind that. If Atlas were to match the Black Mountain startup timeline, then that would imply Atlas Kermit ships sand in August 2018, and Atlas Monahans ships sand in October/November 2018. In our view, these are best case scenario-type dates as we've seen slippage at many other local sites. But we've certainly been proven wrong before...
- **Equipment Downtime Won't be An Issue – Redundancies Are Everywhere.** If demand is there and Atlas can coordinate shipments, production here shouldn't be an issue beyond the normal warming up pains most in basin plants experience in the early days. In the construction trailer on location, management showed us the blueprint of the plant and a 3D rendering before we toured the grounds. Everything here is built to eliminate operational downtime. Both R&M and the unexpected outages are covered by redundant equipment. There's one or two "extra" of everything here – the plant is overbuilt so that it never goes down.
- **Production Mix Update.** Management expects their commercial product mix to consist 80% of 100 mesh and 20% of 40/70 grade sand. The company is one of the few we are aware of that has published their full [PropTester reports](#), and those show NWS-equivalent crush strengths for their 100 mesh and 7-8k K-factors on the 40/70.

- **Atlas Will Be More Aggressive Than Most On Spot Vs. Term.** Atlas is targeting a contract vs. spot mix of about 50:50 on plant sales. This is well below the contract cover most of their peers are targeting. When we asked management about their comfort on spot exposure, they reminded us of their history in E&P. As an E&P team before this frac sand venture, management was more aggressive in their hedging strategy than most operators (in other words they weren't big fans of it). Management believes in the Permian demand story and expects the spot market to remain attractive.
- **Operating Expenses Forecast To Hit The Low End Of The Range.** We assume most of the Permian in-basin mines will be able to produce sand in the \$10-\$20 opex/ton range. The Atlas Sand team told us they expect to be on the low end of that range for several reasons including: slurry mining, zero cost of water on site, a carefully planned decant process to reduce dryer strain, fluid bed dryers, low royalties, expected plant uptime because of redundancies, and potential for dredging. Also, they'll have dedicated Oncor substations that reduce their \$/kW by approximately 30%.
- **Miscellaneous Plant Operations Notes.** Atlas has designed their facility with:
 - a sophisticated man camp between the Kermit and Monahans locations that will have Jack and Jill cabins and amenities like a sport court, movie theater, and washer/dryers (about 100 direct employees per mine are expected and the key team members have been hired);
 - a slurry system employed from day one to move mined product to the wet plant (company will mine pay depths averaging 70-80 ft. in a northerly direction);

- no bucket elevators used in the design anywhere in the plant (management views these as a frequent point of failure, so they designed them out);
- three wet plants that conveyor sand to a decant building;
- two wet storage stockpile buildings (live storage volume is 40,000 tons per building, so 80,000 tons total) and there is an additional 160K tons of “dead volume” that a loader can go in and scoop as needed;
- wet storage stockpile buildings are walled but not roofed to speed up the drying process of damp feed;
- the decant buildings will use a tunnel system, but are built so that loaders can be used as backup if the tunnels clog and loaders will also be used to clear out fines and dead volume;
- washed product will sit for a minimum of five days before heading to the dryer to ensure acceptable moisture levels;
- three dryers with four screeners each;
- three conveyors coming out of the dry plant for redundancy;
- seven CST silos built to hold 5,000 tons each;
- forward staging is planned, but loading out from their lanes may be faster;
- no commitment to any specific last mile solution yet (they see pros and cons in each system);
- no resin capacity yet – management thinks this is a future possibility, but they are just focused on producing raw sand for now.