Alta Mesa Resources, Inc.

Enercom Dallas 2018

February 2018

Disclaimer

FORWARD-LOOKING STATEMENTS

The information in this presentation and the oral statements made in connection therewith include "forward-looking statements" within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. All statements, other than statements of present or historical fact included in this presentation, regarding our strategy, future operations, financial position, estimated revenues and losses, projected costs, prospects, plans and objectives of management are forward-looking statements. When used in this presentation, including any oral statements made in connection therewith, the words "could," "should," "will," "may," "believe," "anticipate," "intend," "estimate," "expect," "project," the negative of such terms and other similar expressions are intended to identify forward-looking statements, although not all forward-looking statements contain such identifying words. These forward-looking statements are based on management's current expectations and assumptions about future events and are based on currently available information as to the outcome and timing of future events. We caution you that these forward-looking statements are subject to all of the risks and uncertainties, most of which are difficult to predict and many of which are beyond our control, incident to the development, production, gathering and sale of oil, natural gas and natural gas liquids. These risks include, but are not limited to, commodity price volatility, low prices for oil and/or natural gas, global economic conditions, inflation, increased operating costs, lack of availability of drilling and production equipment, supplies, services and qualified personnel, processing volumes and pipeline throughput, uncertainties related to new technologies, geographical concentration of operations of our subsidiaries Alta Mesa Holdings, LP ("Alta Mesa") and Kingfisher Midstream, LLC ("KFM"), environmental risks, weather risks, security risks, drilling and other operating risks, regulatory changes, the uncertainty inherent in estimating oil and natural gas reserves and in projecting future rates of production, reductions in cash flow, lack of access to capital, Alta Mesa's and KFM's ability to satisfy future cash obligations, restrictions in existing or future debt agreements of Alta Mesa or KFM, the timing of development expenditures, managing Alta Mesa's and KFM's growth and integration of acquisitions, failure to realize expected value creation from property acquisitions, title defects and limited control over non-operated properties, our ability to complete an initial public offering of the KFM midstream business and the other risks described in our filings with the Securities and Exchange Commission (the "SEC"). Should one or more of the risks or uncertainties described in this presentation and the oral statements made in connection therewith occur, or should underlying assumptions prove incorrect, our actual results and plans could differ materially from those expressed in any forward-looking statements. Except as otherwise required by applicable law, we disclaim any duty to update any forward-looking statements, all of which are expressly qualified by the statements in this section, to reflect events or circumstances after the date of this presentation.

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Reserve engineering is a process of estimating underground accumulations of hydrocarbons that cannot be measured in an exact way. The accuracy of any reserve estimate depends on the quality of available data, the interpretation of such data and price and cost assumptions made by reserve engineers. In addition, the results of drilling, testing and production activities may justify revisions of estimates that were made previously. If significant, such revisions could impact our strategy and change the schedule of any further production and development drilling. Accordingly, reserve estimates may differ significantly from the quantities of oil and natural gas that are ultimately recovered. Estimated Ultimate Recoveries, or "EURs," refers to estimates of the sum of total gross remaining proved reserves per well as of a given date and cumulative production prior to such given date for developed wells. These quantities do not necessarily constitute or represent reserves as defined by the SEC and are not intended to be representative of anticipated future well results of all wells drilled on our STACK acreage.

INDUSTRY AND MARKET DATA

This presentation has been prepared by us and includes market data and other statistical information from sources we believe to be reliable, including independent industry publications, government publications or other published independent sources. Some data is also based on our good faith estimates, which are derived from our review of internal sources as well as the independent sources described above. Although we believe these sources are reliable, we have not independently verified the information and cannot guarantee its accuracy and completeness.

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Alta Mesa: Sustainable STACK Development

Integrated upstream & midstream with fully funded growth and low leverage

- **Disciplined Operations with 10+ year Horizon in STACK Oil Window, growing to 10-12 rig cadence**
  - Highly contiguous ~130,000 net acres; infrastructure a key competitive advantage
  - Low cost operator, resilient well economics in low commodity price environment, low leverage development plan
  - Kingfisher Midstream (KFM) purpose built and highly synergistic; flow assurance de-risks production growth
  - KFM initial 60 MMCFD plant full, additional volumes bridged via offtake agreements
  - KFM 200 MMCFD expansion in startup; 350 MMCFD total system capacity at completion
- **2012-2017 Execution and Results De-Risk Investment**
  - 250+ horizontal STACK wells drilled by Alta Mesa across entirety of Kingfisher acreage
  - Multi-well development projects initiated in 2017; previous pattern tests validate approach
  - Consistency and geographic breadth of well results underscores repeatable development
- **Experienced Management Team Aligned with Shareholders**
  - Alta Mesa Resources, Inc. (AMR) management team remain large shareholders
  - Demonstrated discipline to sustain and grow the enterprise through cyclical downturns
- **Comprehensive Application of Best Practices and Technology**
  - Efficient, scalable drilling team currently managing 6 rig program delivering > 2 wells per month per rig
  - Geoscience team applying full suite of tools including 3-D seismic and geosteering to optimize development
  - Completions team providing top-tier design and execution of hydraulic fracture stimulations
  - Production team enhances individual well performance by daily managing compression and artificial lift

Alta Mesa Resources

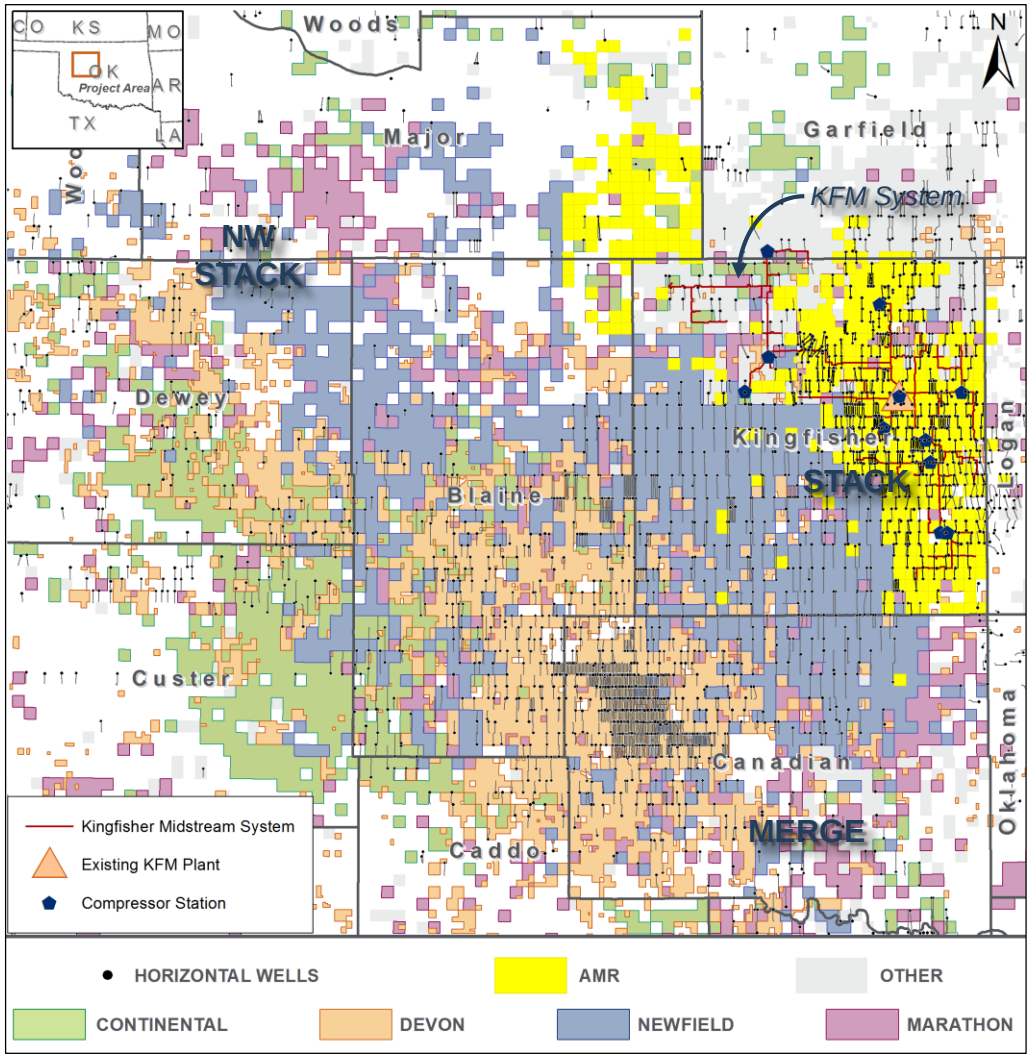
Focused on development and consolidation in the STACK

Upstream Metrics

Net STACK Surface Acres	~130,000
Current Net Production (BOE/D)	~24,000
% Liquids	69%
Resource Potential (MMBOE)[1]	>1,000
Breakeven Oil Price, $/BBL WTI	< $30
Single-well IRR	>80%
Gross Identified Base Case Locations[2]	4,196
Operated STACK Hz. Wells Producing / Operated STACK Hz. Wells Drilled[3]	221/ 247
Early 2018 rig count	6

Midstream Metrics

Natural Gas Processing Feb 18	350[4] MMCF/D
Pipelines	400+ miles
Dedicated Acreage	~300,000 gross acres
Oil Storage Capacity	50 MBBL with 6 loading LACTs[5]



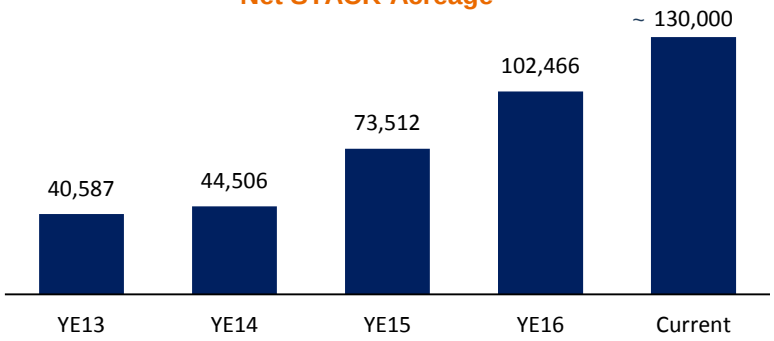
Source: Public Filings, Investor Relations
Note: Acreage as of 11/9/2017

[1] Does not include additional resource potential or undeveloped locations on ~20,000 net acres acquired mid-2017 in the Major County Acquisition
[2] Does not Include additional locations from downspacing in the Oswego, Meramec, Lower and Upper Osage formations or additional locations in the Big Lime, Cherokee, Manning, Chester, Woodford and Hunton formations
[3] Horizontal wells drilled as of 1/6/2018, 214 Meramec/Osage, 6 Oswego, 1 Manning on production
[4] Includes existing 90 MMCF/D offtake processing plus expected completion of 200 MMCFD expansion
[5] Lease Automatic Custody Transfer units

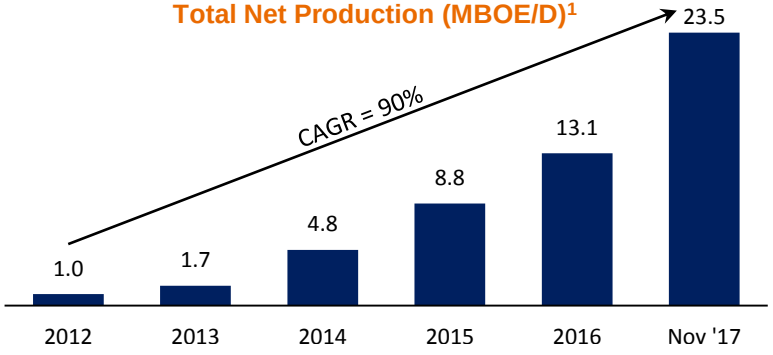
Progressive Execution through Cycles

Track record of growth in production, reserves, leasehold

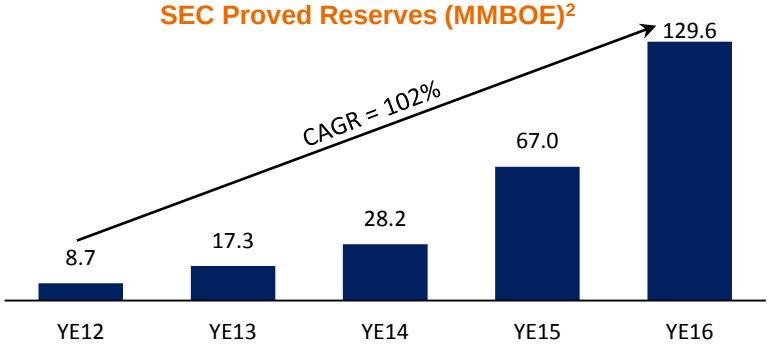
Net STACK Acreage



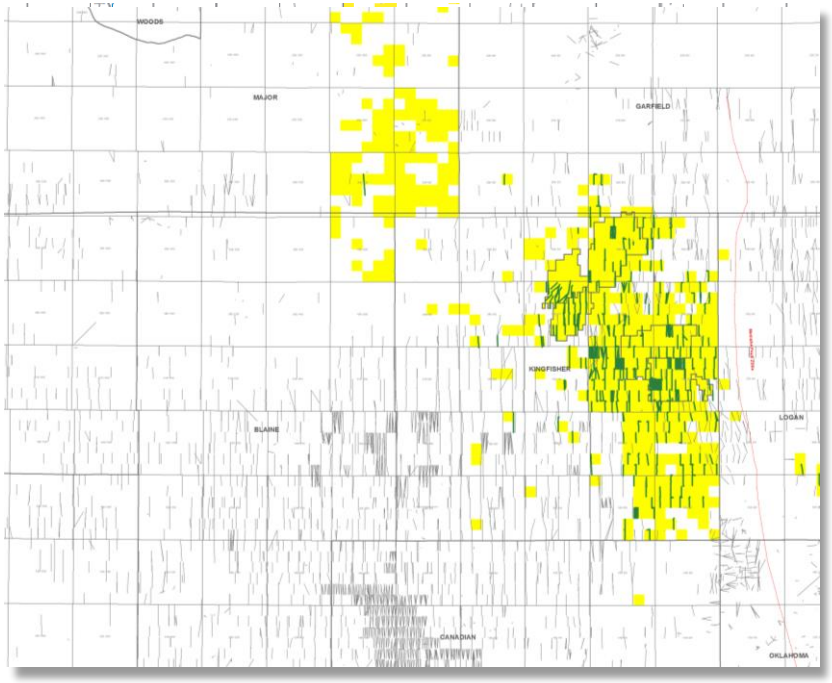
Total Net Production (MBOE/D)[1]



SEC Proved Reserves (MMBOE)[2]



Alta Mesa Footprint



- Disciplined acreage aggregation focused primarily on “bolt-on” acquisitions to increase contiguous position as STACK play has emerged
- Production has responded to systematic de-risking, delineation, and now development of acreage
- Proved reserves growth reflects significant continuity of producing acreage in Osage, Meramec, and Oswego

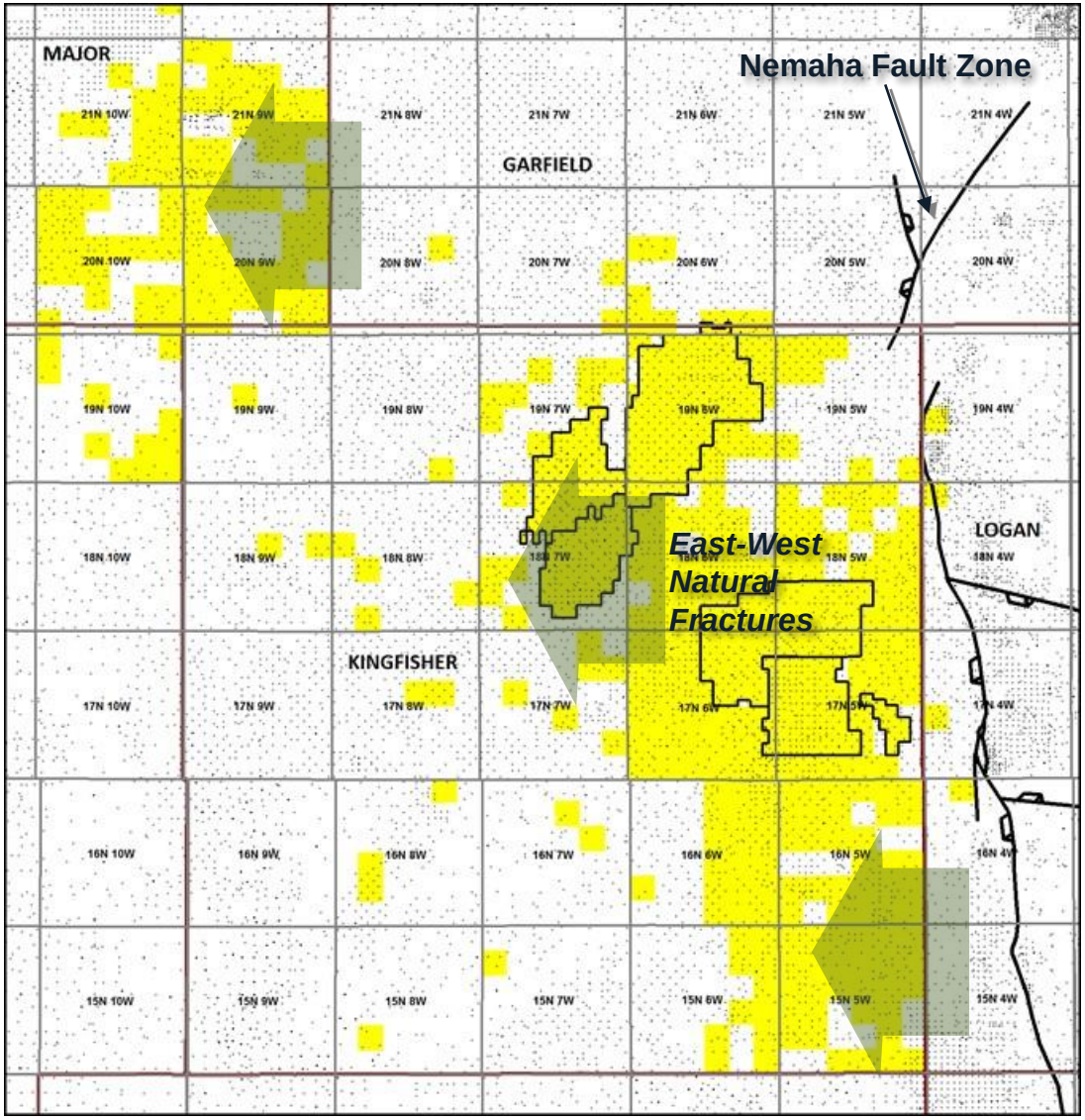
Source: Company data, Public Filings, IHS Herolds, RigData.

[1] Inclusive of Net Production from Bayou City JV. 2012 and 2013 data reflects occurrence date and not accounting date LOS, due to the reasoning that occurrence date method incorporated a change in NGL accounting; whereas accounting date LOS does not.

[2] Proved reserves based on SEC pricing.

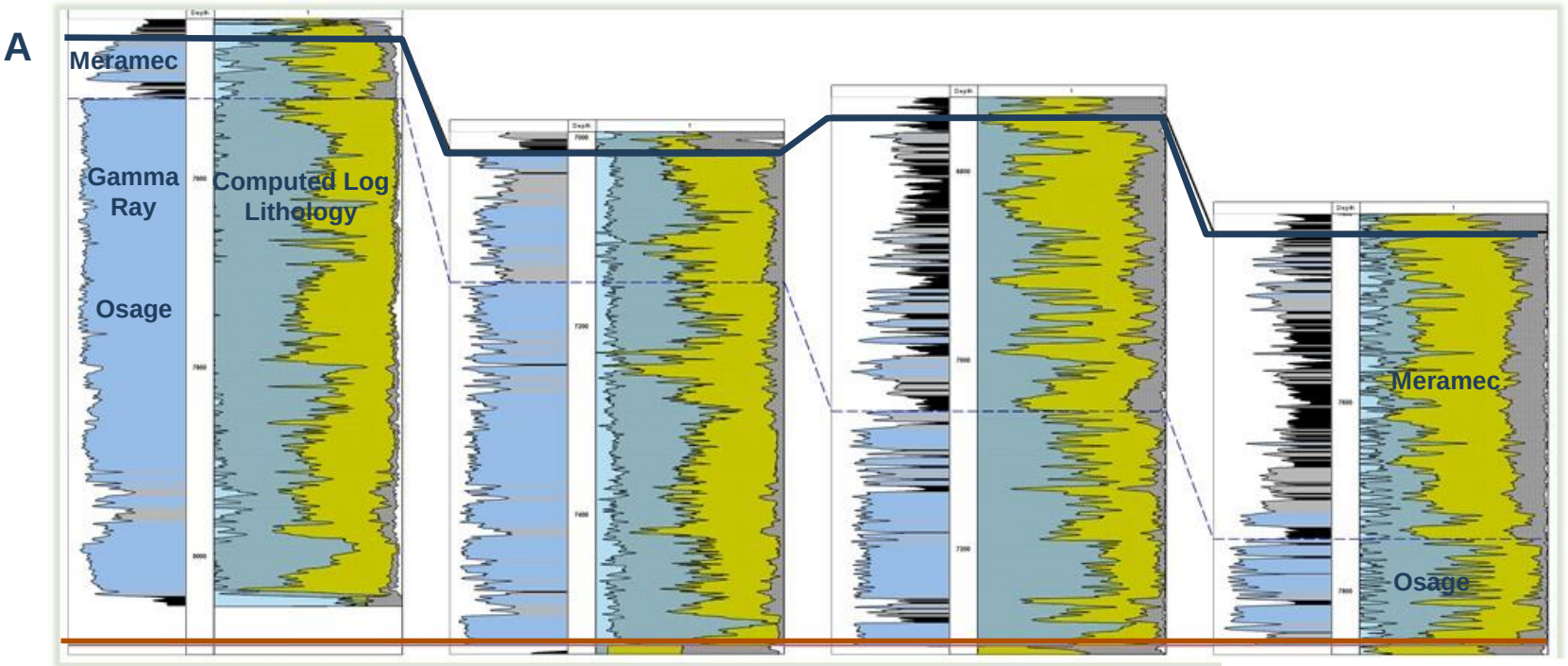
Meramec/Osage Natural Fracture Fairways

- Quartz-rich Meramec and Osage zones are intensely fractured near the Nemaha Fault zone
- Fracture fairways create migration pathways through the matrix
- Oil and gas is stored in both the matrix and fracture porosity (dual system)
- Effects of natural fractures on fluid flow seen in vertical well (black spots) performance, which is often related to the proximity to fractures
- Fracturing / fracture fairways identified from multiple sources including Formation Micro-Imaging (FMI) logs, lost returns in drilling, low ISIP's on frac stages, cores and 3D seismic
- Alta Mesa typically targets the Meramec and Osage benches with interbedded chert and silty carbonates with the strongest oil cuts

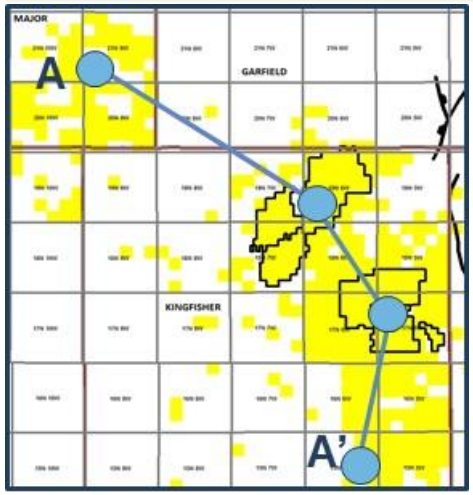


Meramec/Osage Key Targeted Interval

Siliceous siltstone/carbonate section between Chester and Woodford Shales



Flattened on Woodford Shale



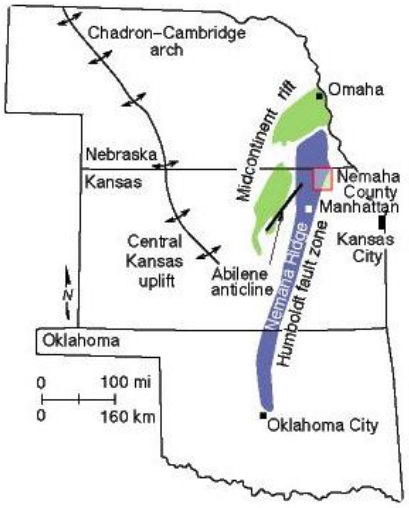
- Gamma Ray measurement, used as a lithology "quick-look" in carbonates/silts, is limited for adequate characterization of STACK siliceous limestone/siltstone
- High tier computed log lithology describes the laminated siliceous limestone/dolomite character of Meramec and Osage as seen in cores
- Nemaha uplift and related faulting created highly fractured, dual porosity system in quartz-rich siltstone/carbonate system of eastern Kingfisher County

Computed Log Lithology

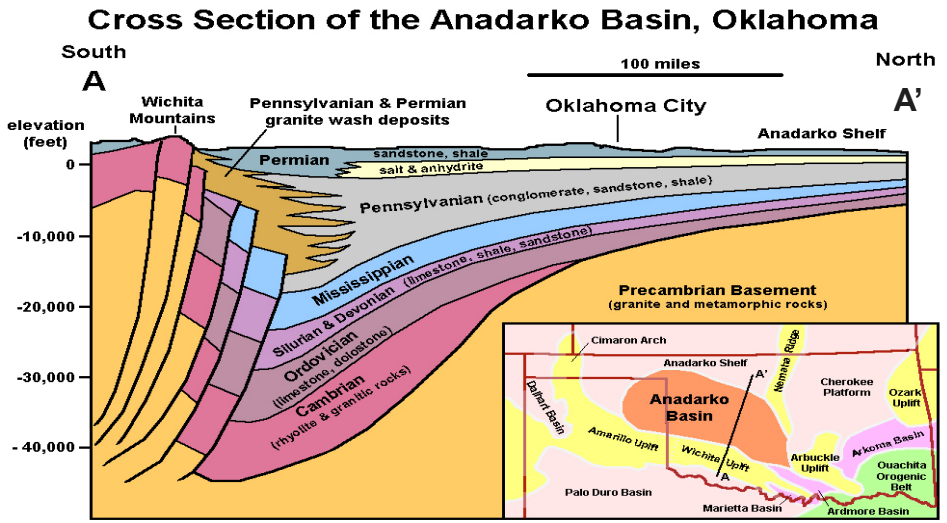
- Dolomite
- Limestone
- Quartz – Chert/Siltstone
- Clay

Meramec/Osage Key Targeted Interval

Shelf and natural fractures result from significant uplift of Cambrian/Pre-Cambrian



Nemaha Ridge (Uplift) is nearly 500 miles long



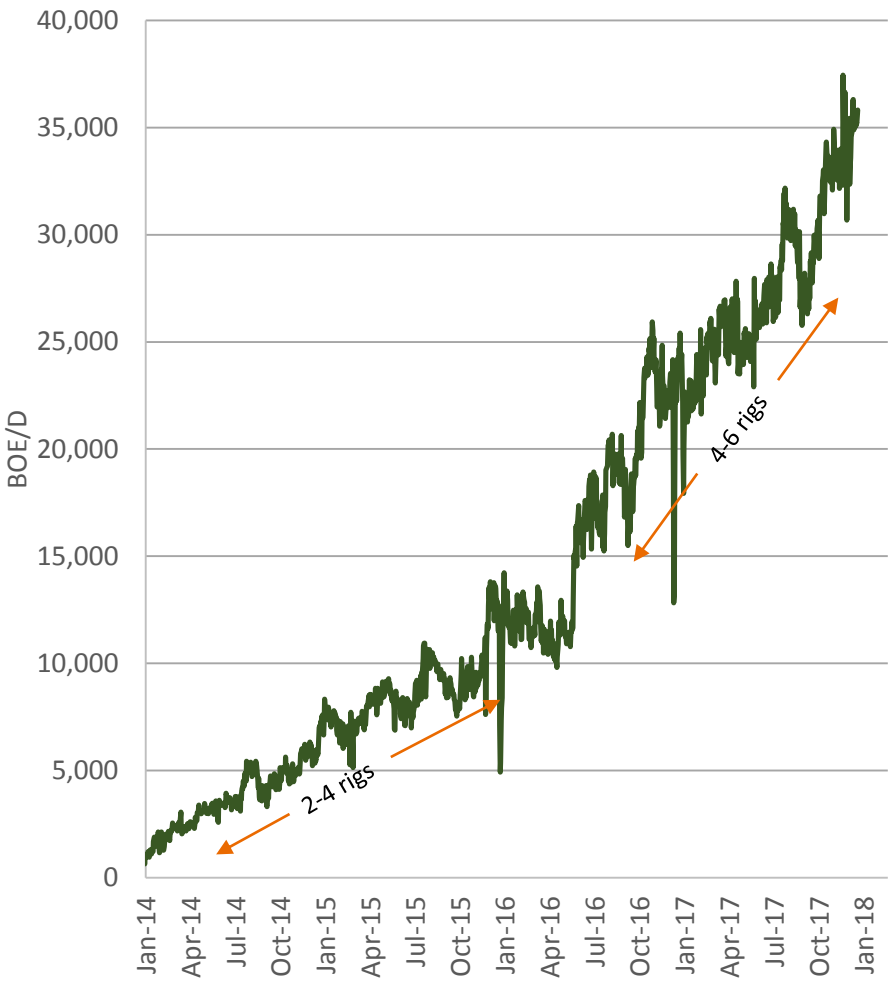
Shelf created by basement upthrust resulting in highly fractured carbonates

Woodford below; Kinderhook (lower Osage) above (highly fractured)

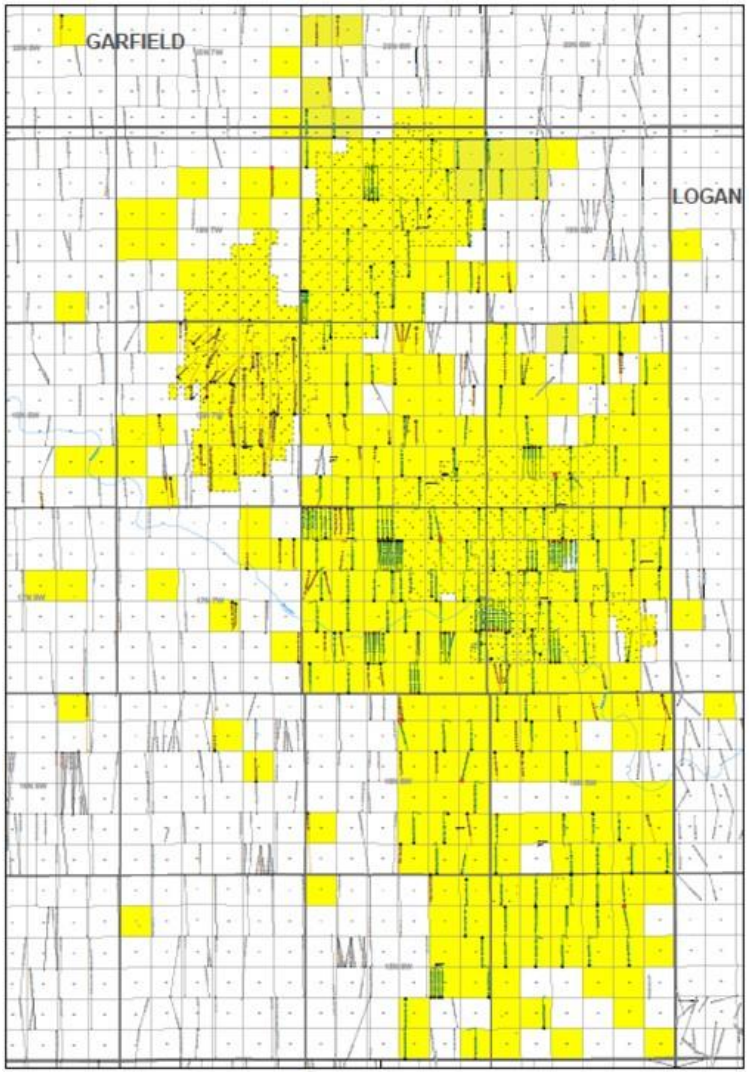
Production Growth in De-Risked Acreage

Consistent growth in STACK oil window

Gross Operated Horizontal Production, BOE/Day

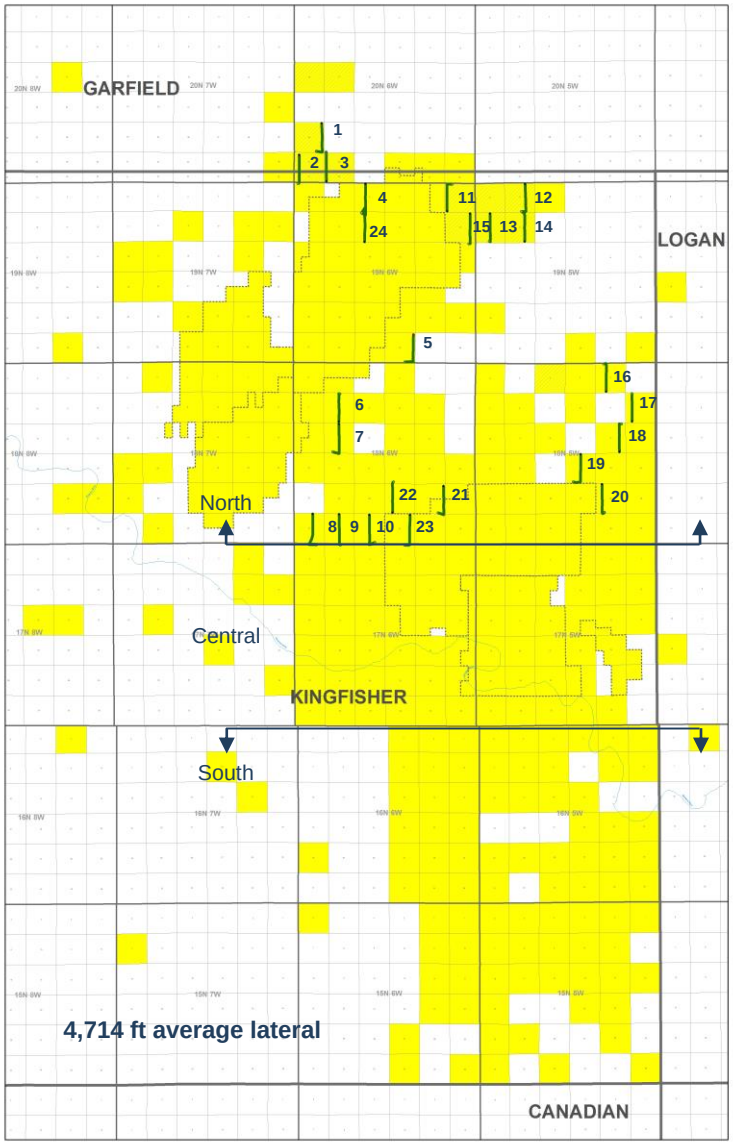


Wells in STACK Oil Window



Recent North Area Meramec/Osage Operated Wells

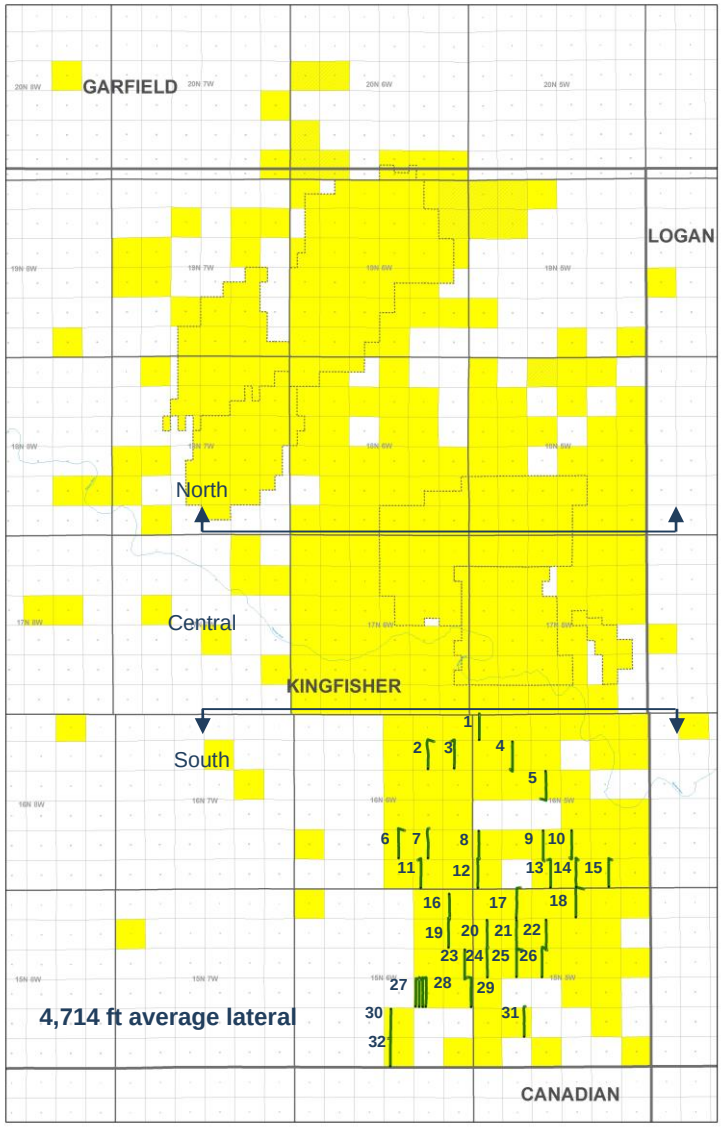
Production data



	Well Name	Landing	Days from 1st oil to Peak	Peak Day Rate BOD	Peak 30 Day Avg. BOD
1	Maly 30-M4H	Osage	103	531	272
2	Bugabago 2006 1-31MH	Osage	163	804	479
3	Maly 32-M1-H	Osage	46	633	470
4	EHU 236H	Osage	107	621	436
5	Scout 1906 1-34MH	Osage	48	525	363
6	Cobra 1806 1-8Mh (<30 Days)	Osage	27	559	268
7	Macallan 1806 4-17MH	Osage	36	523	423
8	Towne 1806 1-31MH	Osage	24	1096	763
9	Farrar 1806 1-32MH	Osage	48	768	497
10	McNulty 1806 1-33MH	Osage	81	847	619
11	Slughworth 1906 1-1MH	Osage	108	731	375
12	Buttercup 1905 1-5MH	Osage	90	203	119
13	Stags Leap 1905 1-7MH	Osage	64	460	287
14	Raisin Cane 1905 1-8MH	Osage	87	527	271
15	Fowler 1906 1-12MH	Osage	33	450	308
16	Pollard 1805 3-2MH	Osage	125	378	312
17	Vadder 1805 2-12MH	Osage	40	495	388
18	Oltmanns 1805 6-14MH	Osage	39	836	605
19	Edwin 1805 4-22MH	Osage	70	680	425
20	Cleveland 1805 2-26MH	Osage	47	602	420
21	Wendt 1806 1-26MH	Osage	101	508	433
22	Mitchell 1806 1-26MH	Osage	81	543	394
23	Steele 1806 1-34RMH	Osage	182	485	376
24	EHU 239H	Osage	74	808	387

Recent South Area Meramec/Osage Operated Wells

Production data



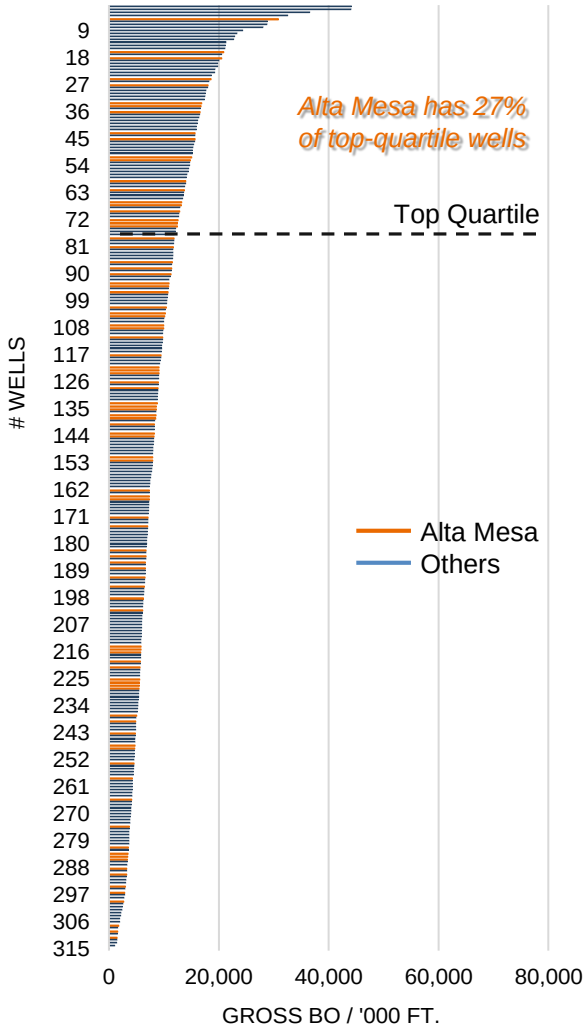
	Well Name	Landing	Days from 1st oil to Peak	Peak Day Rate BOD	Best 30 Day Avg. BOD
1	McLovin 1605 1-6MH	Osage	13	578	449
2	Aces High 1606 4-11MH	Osage	10	647	501
3	Odie 1606 1-12MH	Osage	27	446	270
4	Jacob 1605 1-8MH	Osage	16	594	479
5	Aberfeldy 1605 4-16MH	Osage	5	728	606
6	Speyside 1606 1-27MH	Osage	34	862	690
7	Peat 1606 1-26MH	Osage	49	573	405
8	Oak Tree 1605 2-30MH	Meramec	33	916	688
9	Hasley 1605 1-28MH	Osage	41	951	416
10	Ray 1605 3-27MH	Meramec	14	539	210
11	Sadiebug 1606 1-35MH	Osage	21	907	736
12	Dalwhinnie 1605 1-31MH	Meramec	19	875	490
13	Helen 1605 5-33MH	Meramec	104	587	337
14	PlumpJack 1605 1-34MH	Osage	18	1131	466
15	Opus One 1605 1-35MH	Osage	11	375	328
16	Red Queen 1506 1-1MH	Meramec	28	469	347
17	Best Thirty 1505 1-5MH	Osage	43	264	231
18	Shiner 1505 1-3MH	Osage	0	740	404
19	White King 1506 1-12MH	Osage	29	430	335
20	Redbreast 1505 4-7MH	Osage	91	438	371
21	Yellowstone 1505 4-8MH	Meramec	42	480	444
22	Martin 1505 4-9MH	Meramec	66	385	250
23	Cheshire Cat 1506 1-13MH	Meramec	42	368	328
24	Aberlour 1505 1-18MH	Osage	20	521	383
25	Three Wood 1505 4-17MH	Meramec	50	430	369
26	Dixon 1505 3-16MH	Meramec	34	570	391
27	Huntsman 1506 2-23MH	Meramec	35	670	458
28	Huntsman 1506 4-23MH	Meramec	154	620	298
29	Old Crab 1506 1-24MH	Osage	48	837	678
30	White Rabbit 1506 2-27MH	Osage	108	726	444
31	Samuel 1505 1-29MH	Meramec	14	492	403
32	Mad Hatter 1506 2-34MH	Osage	156	491	323

Top-Tier Results in STACK Oil Window

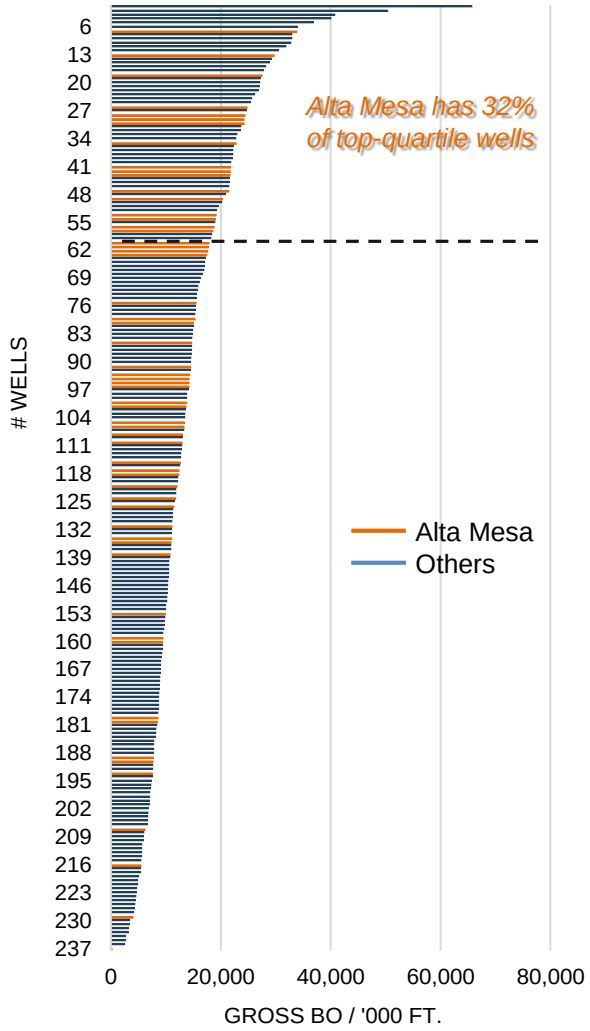
Horizontal Meramec/Osage wells, Kingfisher County

Public data illustrate Alta Mesa has significant portion of top quartile producers

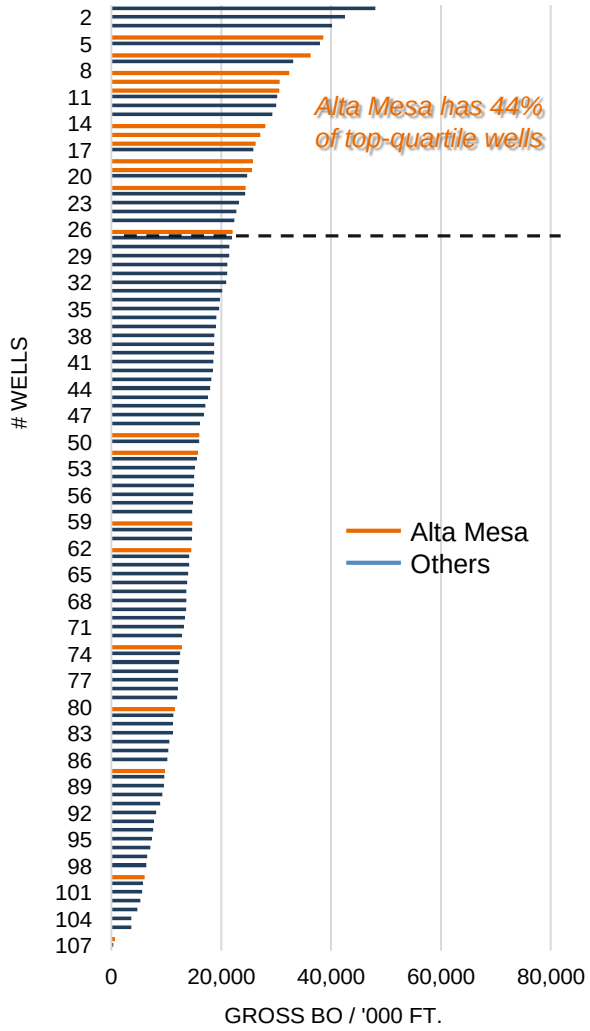
Cumulative BO @ 6 Months



Cumulative BO @ 12 Months



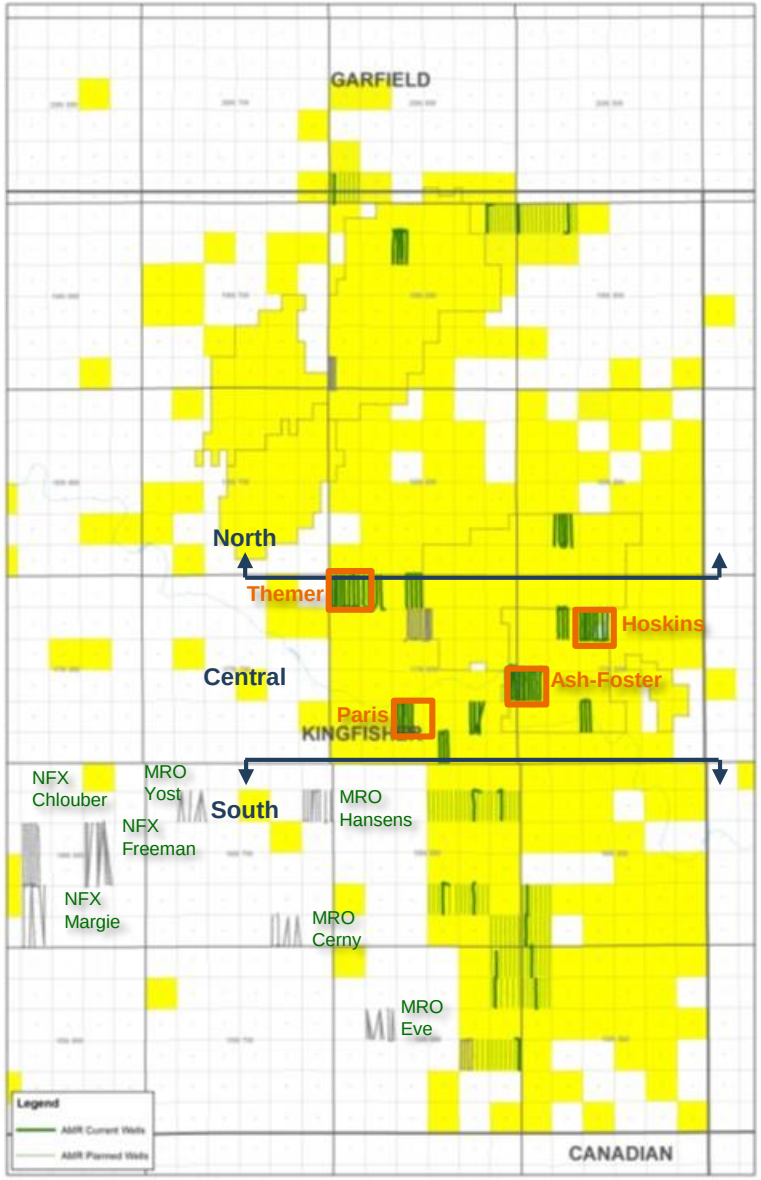
Cumulative BO @ 24 Months



Source: Drilling Info public production data, all horizontal wells in Kingfisher Co., all Operators, all vintages, Mississippian only.

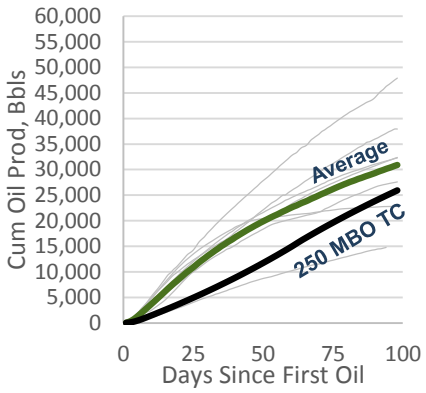
Development Process Underway

Spacing test pilots establish basis for development approach



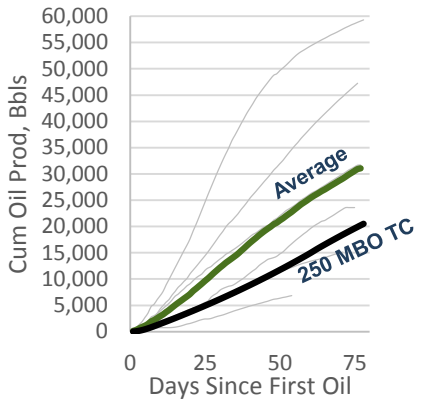
Ash-Foster Flowback ~100 days

2 parent, 8 infill wells



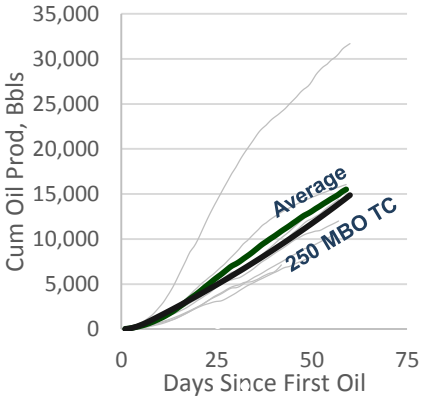
Themer Flowback ~75 days

1 parent, 7 infill wells



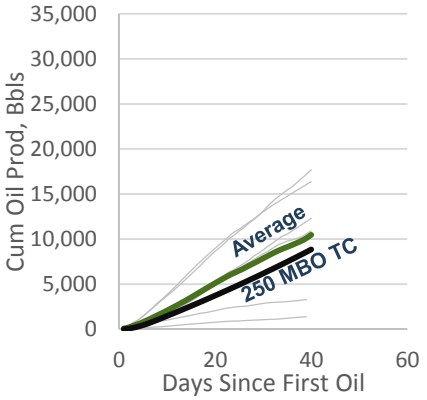
Hoskins Flowback ~60 days

1 parent, 7 infill wells



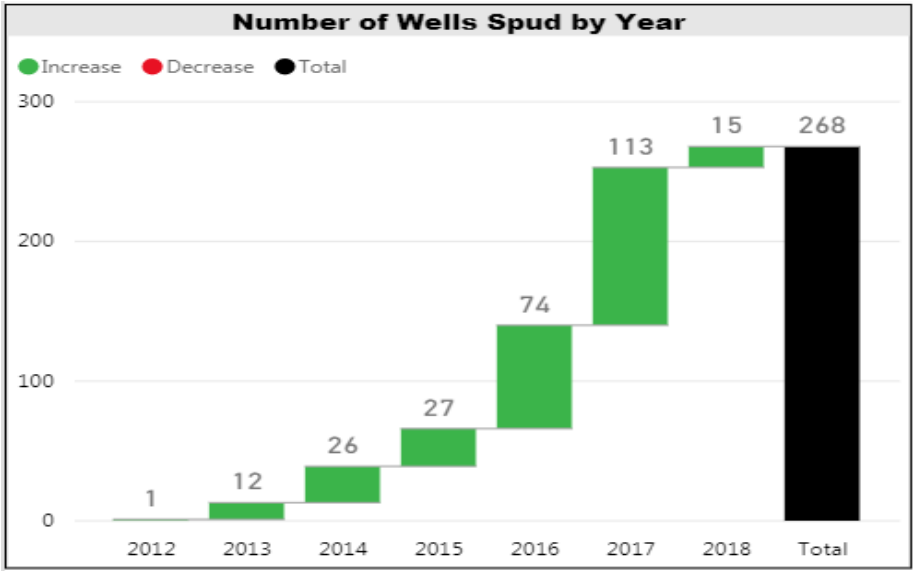
Paris Flowback ~40 days

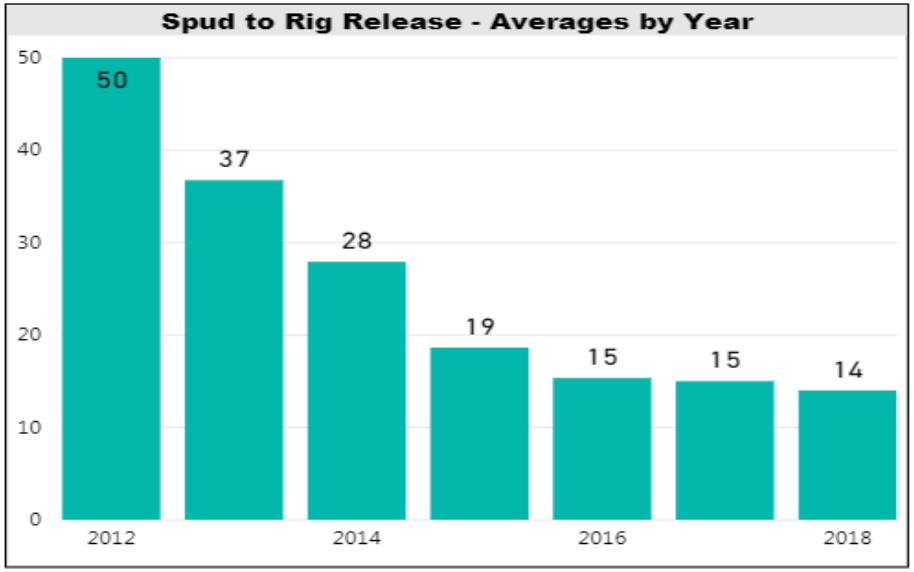
1 parent, 5 infill wells



Drilling Highlights

Building on over 250 STACK Horizontal wells in 5 years of development





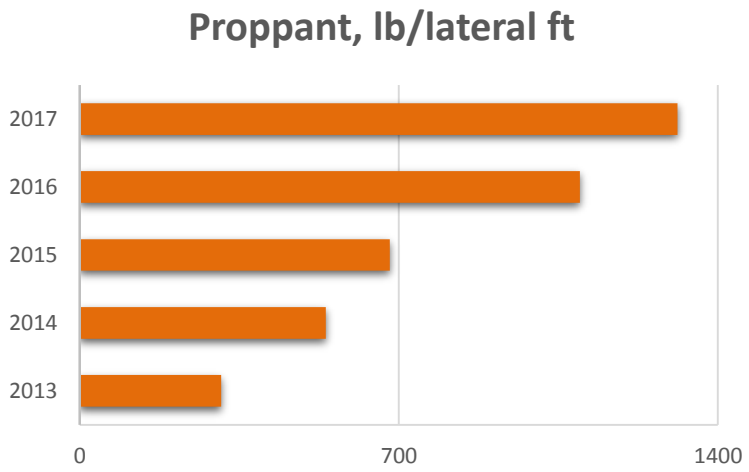
Current Rig Fleet

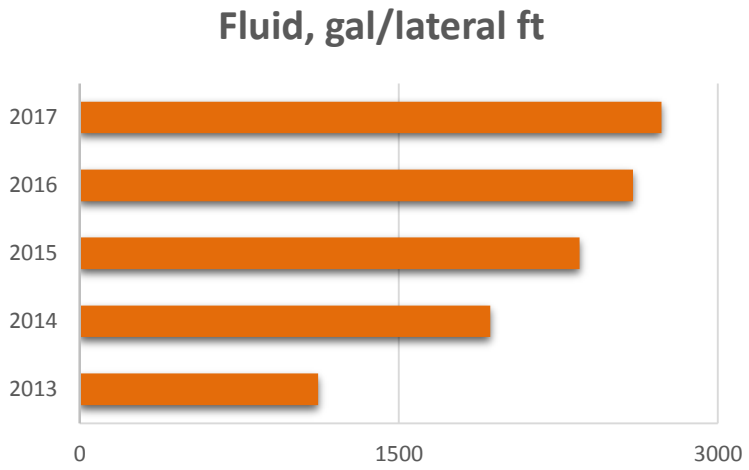
- Omaha – Latshaw Rig 39
  - Well Count: 61
  - Footage: 726,269ft
- Utah – Latshaw Rig 12
  - Well Count: 50
  - Footage: 609,808ft
- Juno – Latshaw Rig 29
  - Well Count: 42
  - Footage: 505,713ft
- Gold – Latshaw Rig 13
  - Well Count: 30
  - Footage: 3588,761ft
- Neptune – Latshaw 14
  - Well Count: 10
  - Footage: 108,209ft
- H&P 250
  - Well Count: 5
  - Footage: 50,209ft

Completions – Key to Value Realization

Progressive, Continuous Optimization

- **Completions**
  - 2013 – Q1 2014 – Sliding Sleeves / Mechanical Packers
  - Q2 2014 – Current – Plug and Perf / Swellable Packers
  - Improved frac coverage of lateral
- **Frac Stage Length**
  - 2013 – Q1 2014 – 300 ft spacing
  - Q2 2014 – Q4-2015 – 200 ft spacing
  - 2016 – 2017 - 140 ft spacing
- **Fracture Volumes**
  - Proppant
    - 2013 – 310 lbs/ft of lateral
    - 2014 – 540 lbs/ft of lateral
    - 2015 – 680 lbs/ft of lateral
    - 2016 – 1,097 lbs/ft of lateral
    - 2017 - 1,311 lbs/ft of lateral
  - Fluid
    - 2013 – 1,120 gal/ft of lateral
    - 2014 – 1,930 gal/ft of lateral
    - 2015 – 2,350 gal/ft of lateral
    - 2016 – 2,600 gal/ft of lateral
    - 2017 – 2,734 gal/ft of lateral





Artificial Lift Optimization

Key driver to maximize ROI, EBITDA and optimize reserves

Well Productivity Focus: Key to Long-Term Value

Gas Lift for Initial Well Design

- Flowback constrained to 100 Bbl total fluid per hr
- Up to 50% oil EUR recovered via gas lift
- Lower CAPEX / OPEX than ESP

Gas Lift Shift to Plunger Lift

- Up to 80% of EUR recovered in Gas Lift / Plunger Lift
- Lower OPEX, extends economic limit, increases NPV over time by downsizing/eliminating compressor
- Tolerant and robust (sand, deviation high GLR >5,000)

Further Drawdown Strategies

- Several technologies in field trials to maintain production rates in later life wells
- Small jet pumps (1-1/4”), hydraulic piston pumps, modified rod pumps (improved gas & deviation handling)

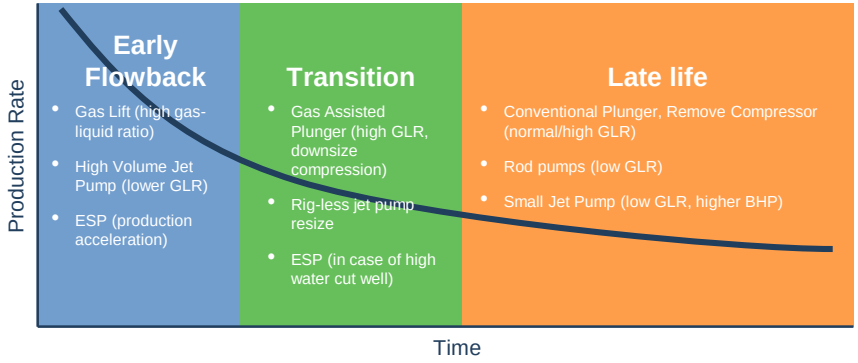
Key Factors

- Fit-for-purpose / well-specific solutions
- Accelerated production / maximize NPV
- CAPEX and LOE per BOE for production gains

Daily Lift Optimization Report Excerpt

Well	Oil Prod	Oil Avg (7)	Water Prod	Total Fluid	Gas Prod	Gas Avg (7)	Gas Inj		Inj Target	Total GLR	Natural GLR	TP	CP	GL Valve Status (from bottom)
Buckpasser 1605 1-4MH	331	42	1,394	1,725	145	47	751		0	519	84	115	890	No lift data
Pollard 1805 3-2MH	192	131	1,351	1,543	933	613	714		850	1068	605	174	898	GLV 4 of 9
Rowdy 1706 1-23MH	536	496	932	1,467	472	388	780		700	853	322	152	919	GLV 5 of 11
Lankard 1706 8-34MH	597	727	797	1,393	2,748	2,760	676		700	2458	1972	265	831	GLV 3 of 12
Hoskins 1705 10-9MH	425	247	963	1,388	812	278	700		700	1089	585	192	892	GLV 4 of 11
Todd 1706 7-4MH	215	149	1,060	1,275	397	234	885		700	1006	312	166	930	GLV 7 of 12
Carey 1805 5-6MH	0	0	1,275	1,275	13	11	772		900	616	10	119	1016	GLV 9 of 11
Paris 1706 4-28MH	460	433	763	1,223	764	150	833		830	1306	625	199	859	GLV 4 of 12
MacKelvey 1906 1-26MH	494	491	697	1,191	970	923	781		700	1470	815	181	867	GLV 3 of 11
Hasley 1605 1-28MH	134	142	995	1,129	849	833	668		850	1344	752	131	856	GLV 2 of 11
Todd 1706 8-4MH	102	92	1,008	1,110	161	128	821		700	884	145	169	938	GLV 6 of 11
Pinehurst 1706 5-5MH	0	0	1,072	1,072	8	4	827		850	779	8	115	613	GLV 1 (SO)
Walrus 1506 1-36MH	694	738	326	1,020	1,487	1,493	696		800	2140	1458	189	815	GLV 3 of 12
Paris 1706 6-28MH	275	319	726	1,001	1,284	1,294	296		300	1578	1283	165	838	GLV 2 of 11
Paris 1706 3-28MH	127	51	838	965	939	1,189	645		940	1641	973	141	898	GLV 5 of 12
Hoskins 1705 8-9MH	225	216	734	959	866	757	692		700	1625	903	163	830	GLV 2 of 11

Artificial Lift Lifecycle



Infrastructure

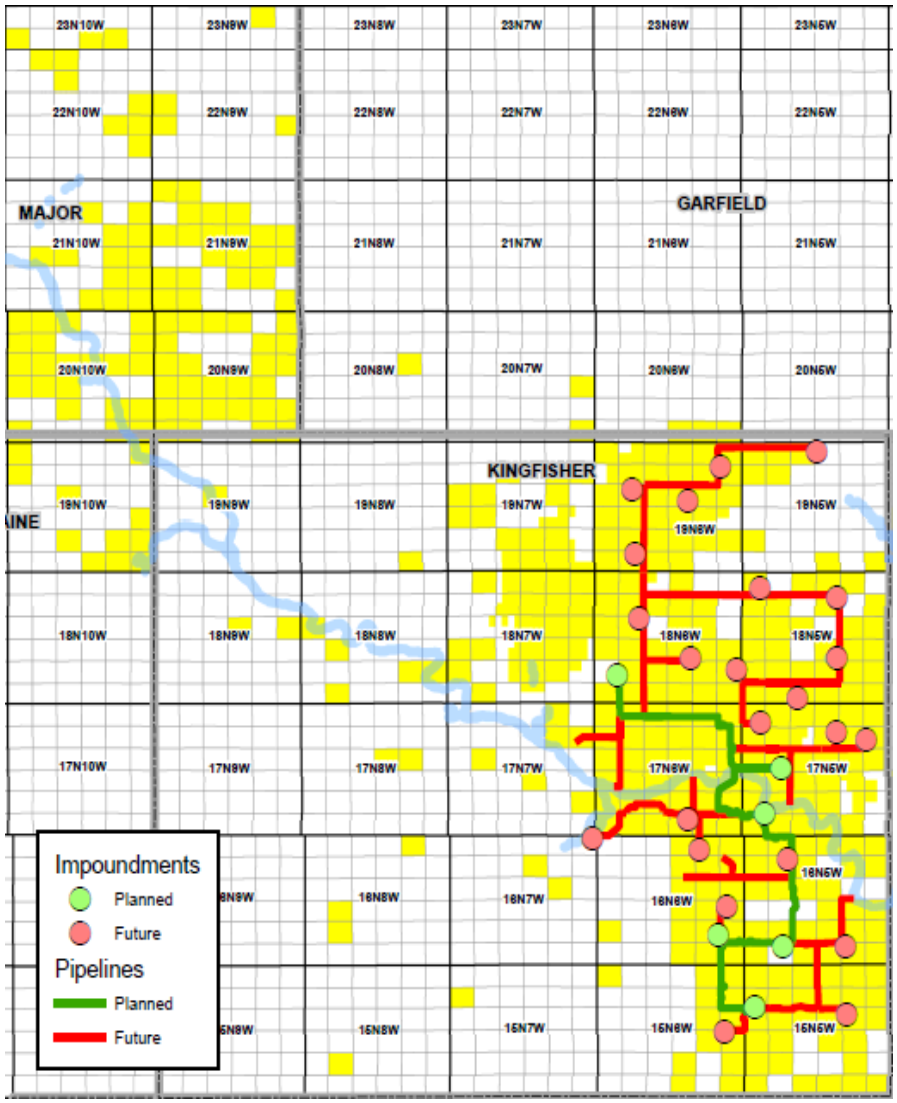
LOE reduction, capital cost control, and revenue generation

Saltwater Disposal System

- **100% AMR-owned system; assurance of disposal**
  - 170+ miles SWD pipelines
  - 11 active SWD wells throughout field area
  - SWD additions integrated into field development plan
- **Continual improvement of system**
  - Loop lines if capacity becomes constrained
  - Upgrade power supply for future development
  - Leverage data infrastructure for monitoring and optimization
- **Cost efficient and accretive to bottom line**
  - $1,00/BW charge vs $2.00 - $3.00/BW to haul offsite
  - Beneficial to 3rd-party working interest owners

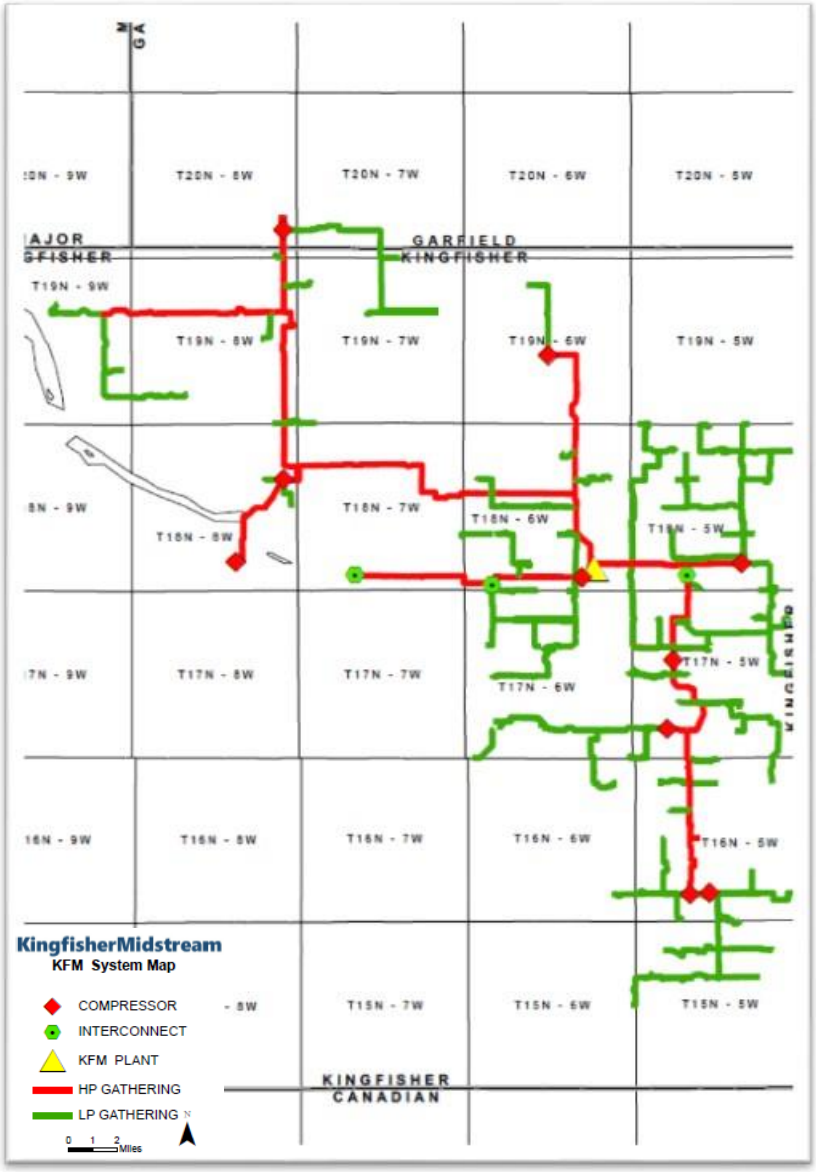
Expanded Operations Supply Water Network

- **Water supply system for cost control, reliability**
  - Water for drilling & completion ranges $40M - $400M, most variable cost in drilling & completion AFE
  - Supply cost driven by distance from source
- **Supply water network expansion underway**
  - “Fire hydrant” network of pipe, storage, and pumps
  - Ensure low cost supply of water for all operations
  - Phase I to supply water to highest cost area of field



Kingfisher Midstream System

Robust, expandable gathering and processing



Natural Gas Processing

- Current processing capacity of 150 Mmcf/d, inclusive of offtake agreements
- Incremental 200 Mmcf/d Cryo plant in startup
- 1,200 Bbl/d condensate stabilizer

Low Pressure Pipeline

- ~309 miles of low-pressure crude and gas gathering lines[1]
  - Natural gas gathering: 4”-16” pipeline
  - Crude gathering: 6”-12” pipeline

High Pressure Pipeline

- ~104 miles of 4”-16” rich gas transportation pipeline[2]
  - Average operating pressure of 1,100 psig and piggable
- 4 miles of 12” residue gas pipeline to PEPL
- 9 miles of 16” residue gas pipeline to OGT
- 4 miles of 6” NGL Y-grade pipeline, with 13,000 Bbl/d capacity to Chisolm Pipeline

Compression Facilities

- Field Compression:
  - 17 CAT 3516s (23,460 total HP)[3]
  - 3 CAT 3508s (2,070 total HP)
  - 1 CAT 3306 (203 HP)
- Inlet Compression:
  - 6 CAT 3606s (10,650 total HP)
- Residue Compression:
  - 3 CAT 3516s (4,140 total HP)
  - 5 CAT 3608s (12,500 total HP)[4]

Other Infrastructure

- 50,000 Bbl crude storage with 6 truck loading LACTS
- 3 NGL bullet tanks: 90,000 gallon capacity

Producer Connections

- 145 meters settled through November 2017

[1]7 miles under construction. [2]1 mile under construction. [3]6 under construction. [4]All under construction

Summary

Continued execution facilitates disciplined growth

- **Team**
  - 25+ years in Sooner Trend, 5+ years horizontal development
  - Multi-discipline continuous improvement + continual learning
- **Assets**
  - Highly contiguous acreage in black oil window
  - Multi-well patterns focus of 2018 development plans
  - Integrated purpose-built midstream system provides efficiency, flow assurance, and serves growing third-party needs in STACK
- **Processes**
  - Operating team has scaled up effectively
  - Established disciplines, controls, and systems
- **Balance Sheet**
  - Fully funded growth with low-leverage
  - Focus on capital efficiency