

BLM Wyoming Federal Lease Sales Q2 & Q3 Parcels

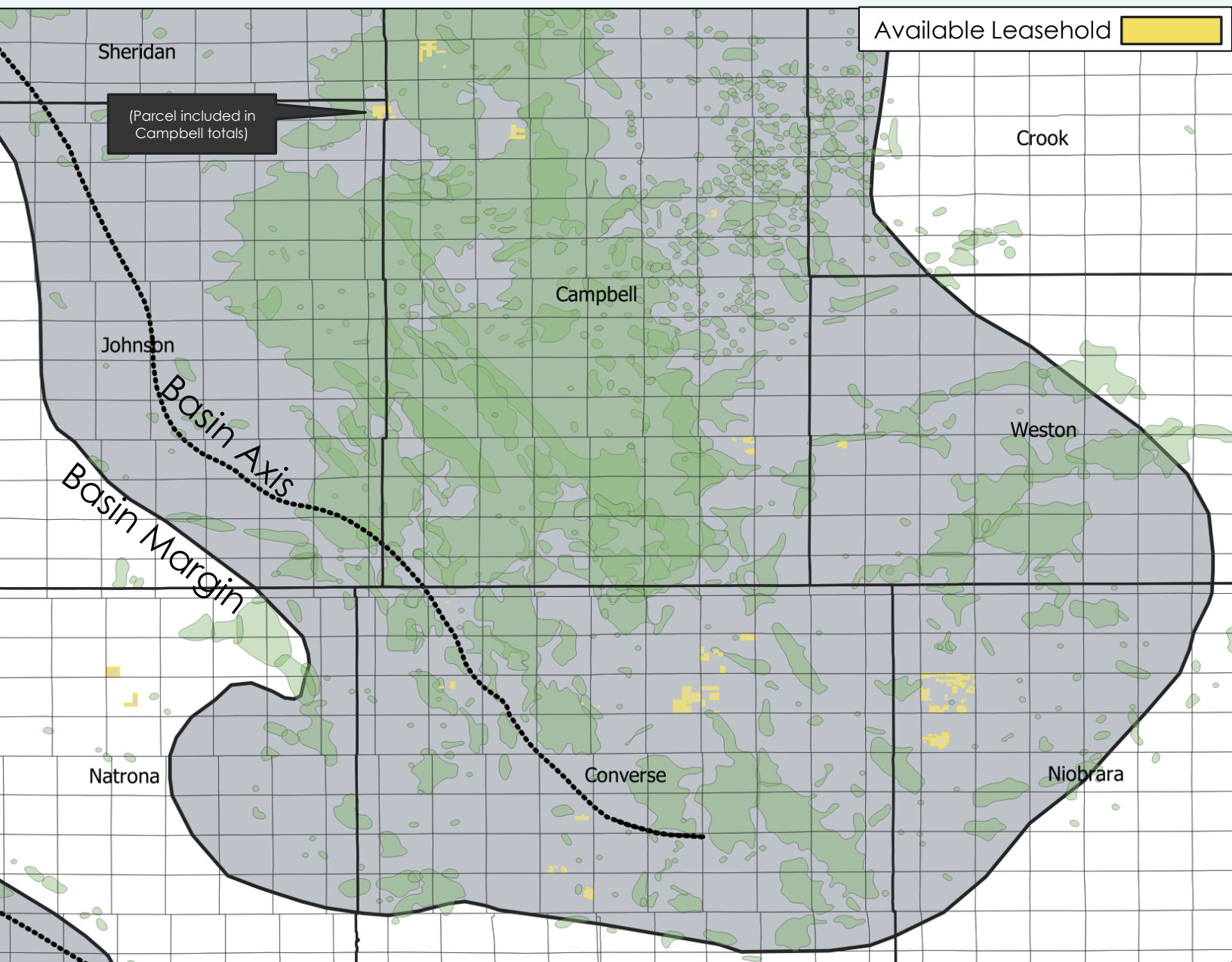
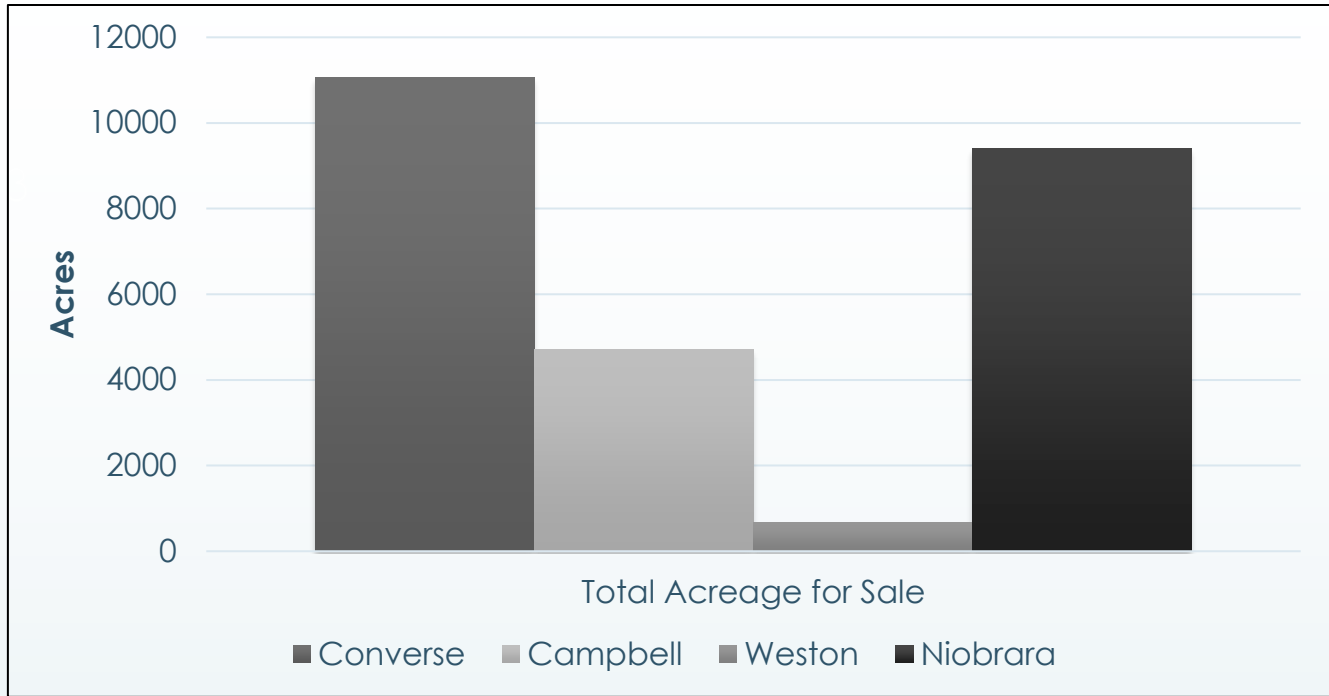
**Prepared for:
Magnum Producing, LLC**

***Nick Downs
Perennial Geoscience LLC
9/14/2020***

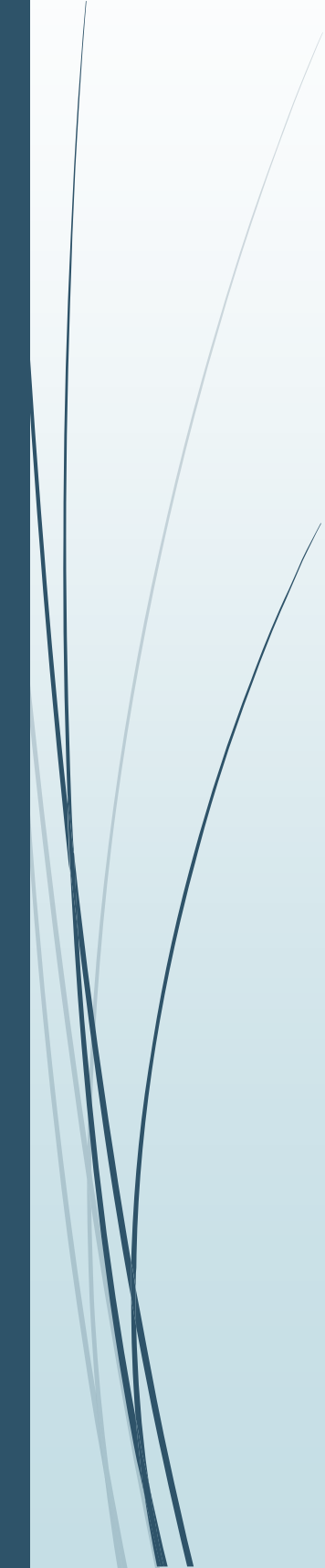
Project Scope

- Consultant agrees to provide high-level geologic & leasing summaries for individual parcels (or groups of geologically similar parcels) in Converse, Campbell, Niobrara, and Weston Counties, Wyoming, covering the 2nd Quarter 2020 BLM Lease Sale and the 3rd Quarter 2020 BLM Lease Sale.
- The geologic and leasing summaries will include commentary on the potential for ten (10) different formations of interest, with a High/Medium/Low recommendation and a brief description of how those rankings were justified.
- The analysis will also include rankings for exploration upside, number of stacked targets, geologic hazards, likelihood of development, and an overall subsurface recommendation for the parcel (or parcel group).
- Additionally, Consultant will provide information on the historical prices of offsetting acreage, as well as any additional context from Consultant's contacts at various companies operating in the basin.

Q2 Available Leasehold

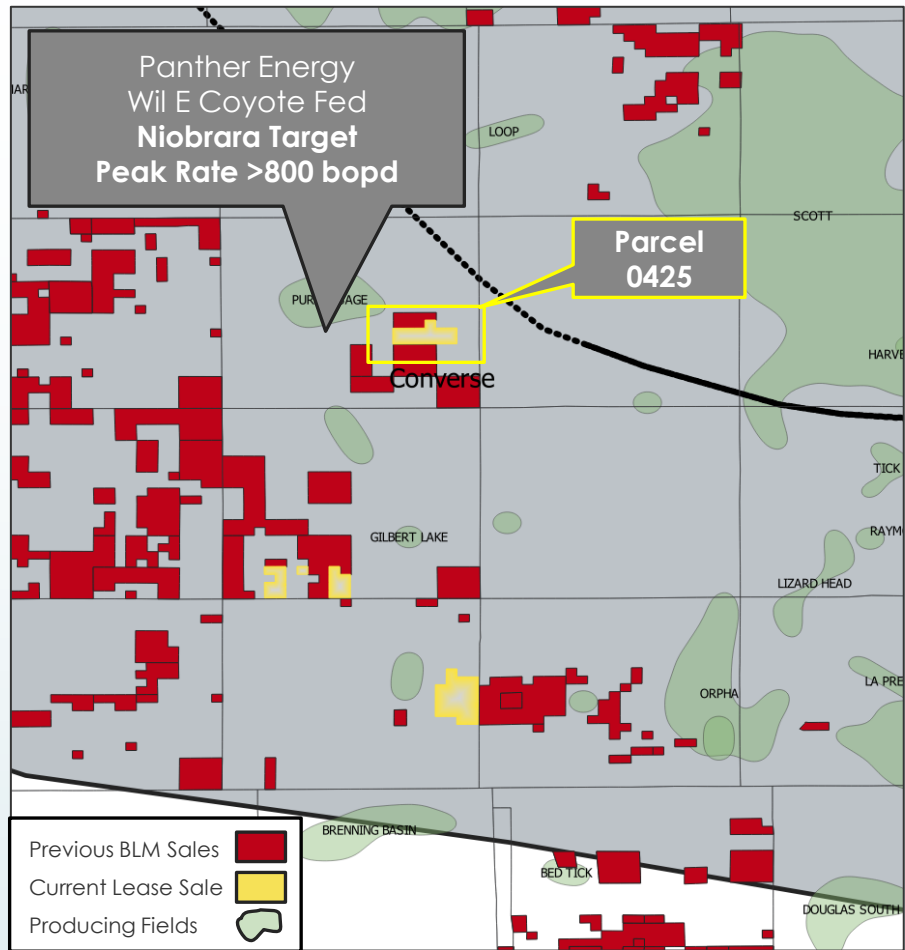
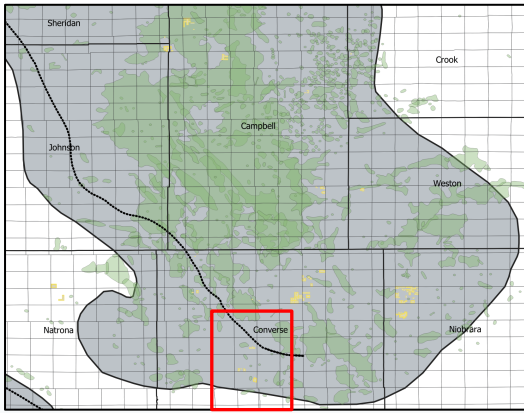


Converse County

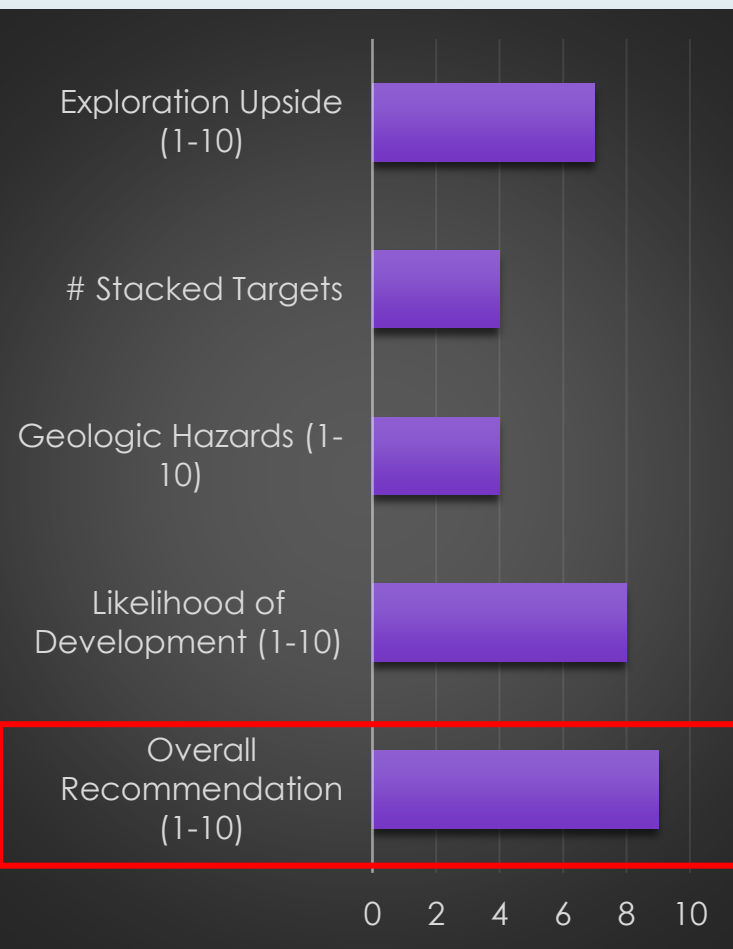


PARCEL "WY-2020-06-0425"

520 Acres



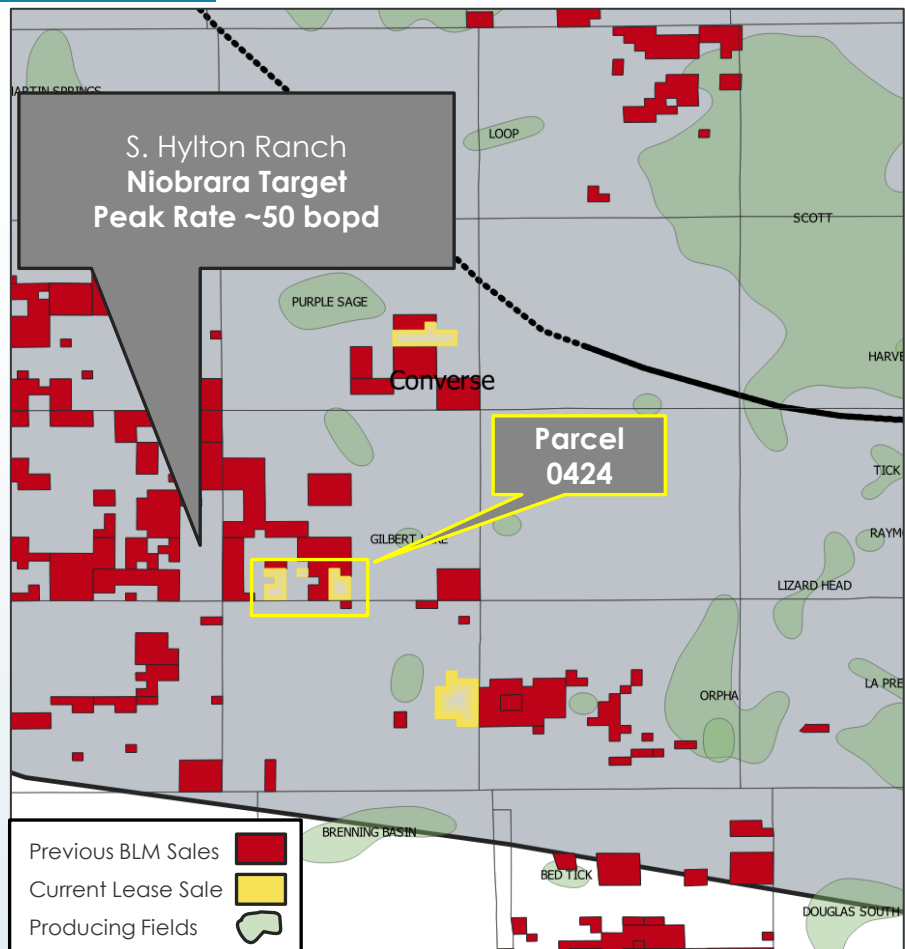
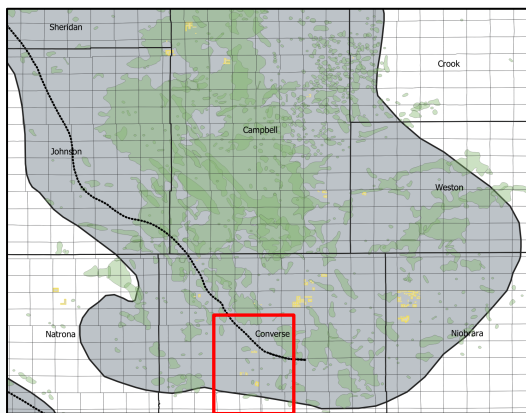
- Parcel has high potential for development & consolidation
- Highly recommend bidding aggressively (ie \$1,500-\$2,000/acre)
- Offsetting acreage purchased by Panther Energy in 9/2019 for **\$1,548/acre**
- Offset Operators include Panther, Renos, Lincoln, and Chesapeake
- *Panther's Geologist told me they are excited about the Niobrara and Mowry in this area, and the Frontier also has potential. They are planning on drilling more wells in this township.*



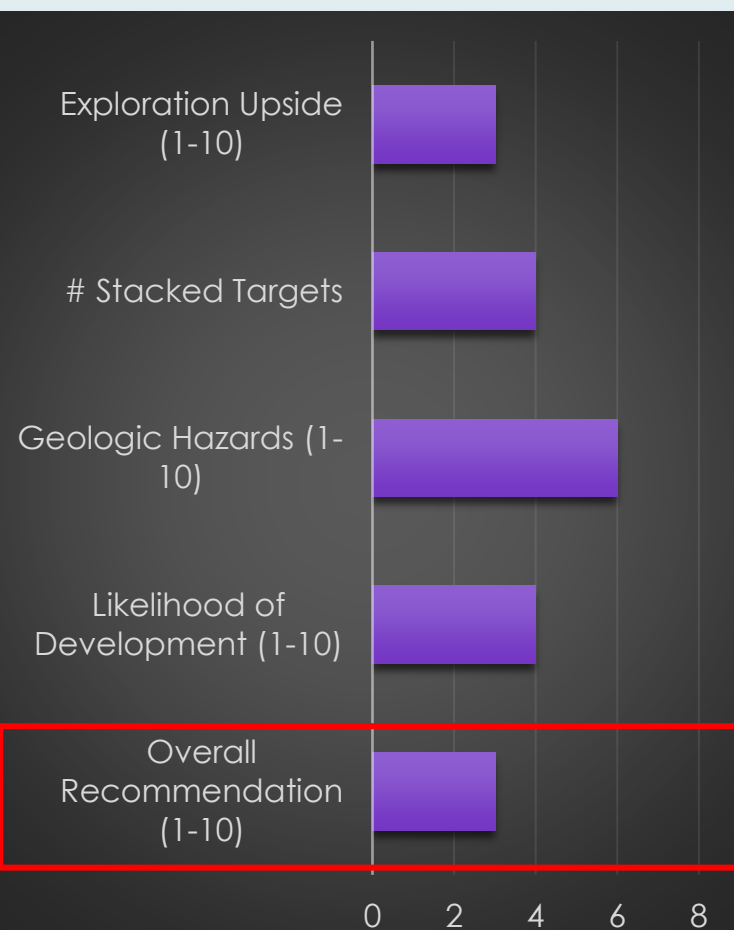
Formation	Potential	Justification
Teckla	Low	Downdip; undercharged; wet
Teapot	Low	Undercharged; wet; SWD Target
Parkman	Low	Low gas shows; undertrapped
Sussex	Low	Tight
Niobrara	High	High pressure grad; B Chalk porous; may frac Up B Chalk
Turner	Low	West of subcrop
Frontier	Medium	Good reservoir quality but may be undercharged or undertrapped
Mowry	High	High pressure grad; lower clay
Muddy	High	Multiple channels in this area
Paleozoic	Low	No shows; tight & wet

PARCEL "WY-2020-06-0424"

596 Acres



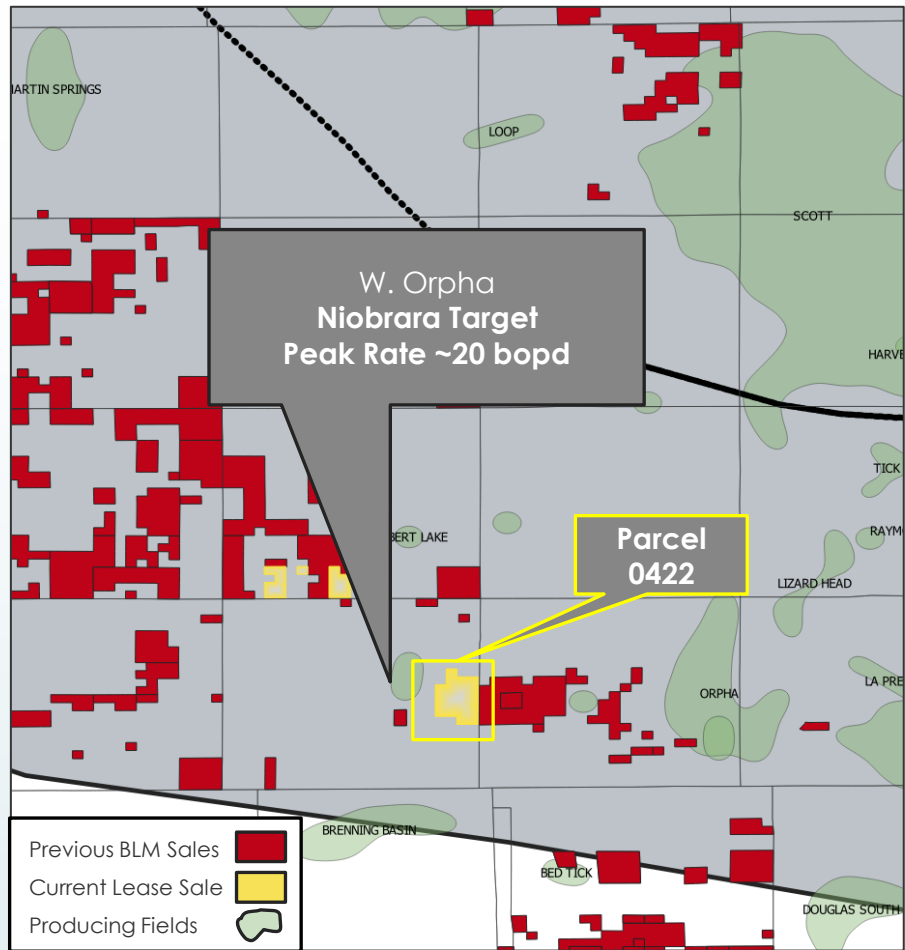
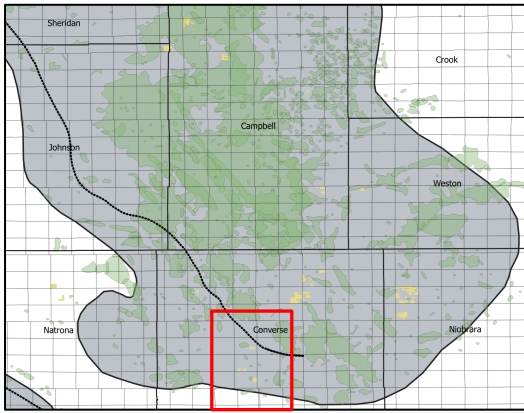
- Parcel has medium-low potential for development & consolidation
- Recommend bidding conservatively (ie <\$300/acre)
- Offsetting acreage purchased by KNPB in June 2019 for **\$252/acre**
- Offset Operators include Lincoln and Panther
- *As you move to the West, potential for the Niobrara and Frontier decreases. Structural complexity close to the basin margin becomes a risk as well.*



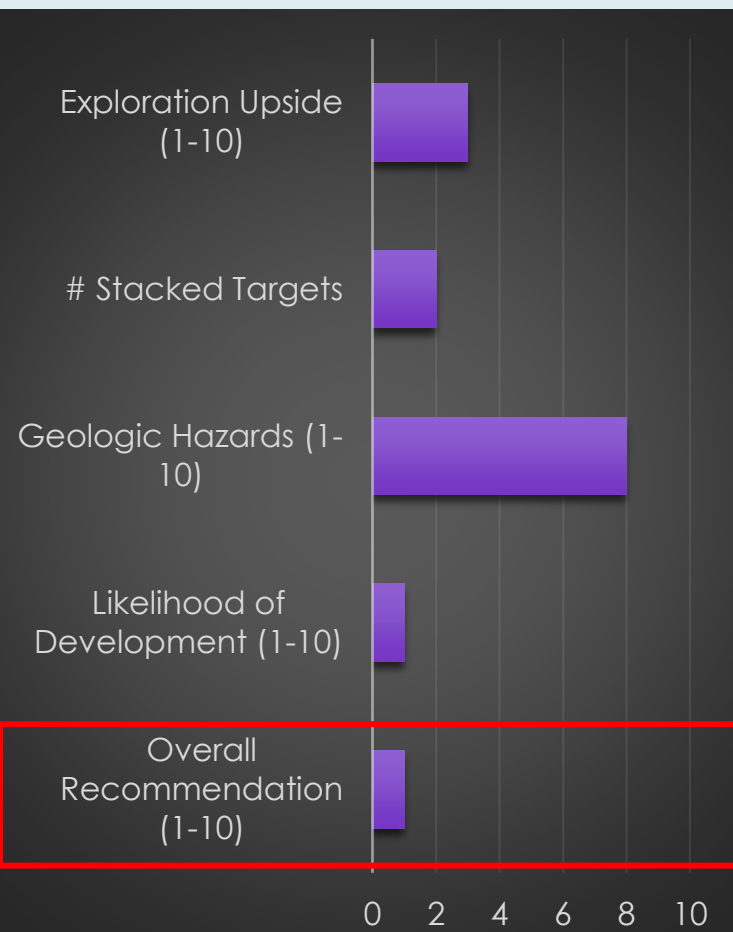
Formation	Potential	Justification
Teckla	Low	Tight & wet
Teapot	Low	Wet
Parkman	Low	Undertrapped & Wet
Sussex	Low	Tight
Niobrara	Medium-Low	Chalks thinner than elsewhere, structural complexity a risk
Turner	Low	West of subcrop
Frontier	Medium-Low	Excellent reservoir but likely wet. Possibility for local structural trapping.
Mowry	Medium	High pressure grad; lower clay
Muddy	Medium	Multiple channels in this area, required structural config.
Paleozoic	Low	No shows; tight & wet

PARCEL "WY-2020-06-0422"

880 Acres



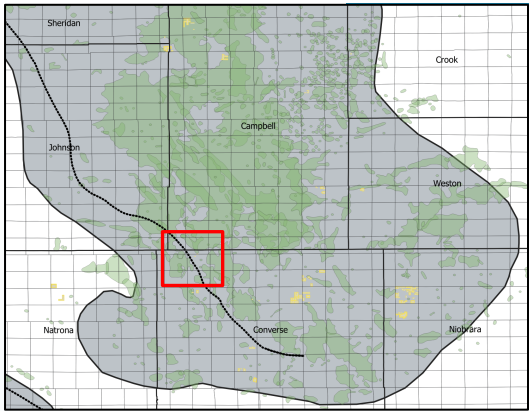
- Parcel has **LOW** potential for development & consolidation
- Recommend not bidding or bidding very conservatively (ie <\$100/acre)
- Offsetting acreage purchased by Langham in June 2019 for **\$208/acre**
- Offset Operators include Langham, Panther, and Lincoln
- *High risk of seal breach and trap integrity with this parcel. Disappointing nearby Nio results suggest tossing out a lowball bid or avoiding this parcel entirely.*



Formation	Potential	Justification
Teckla	Low	Tight & wet
Teapot	Low	Wet
Parkman	Low	Undertrapped & Wet
Sussex	Low	Tight
Niobrara	Low	Seal breach possible
Turner	Low	West of subcrop
Frontier	Low	Likely undertrapped
Mowry	Low	Seal breach likely
Muddy	Low	Requires structural trap
Paleozoic	Low	No shows; tight & wet

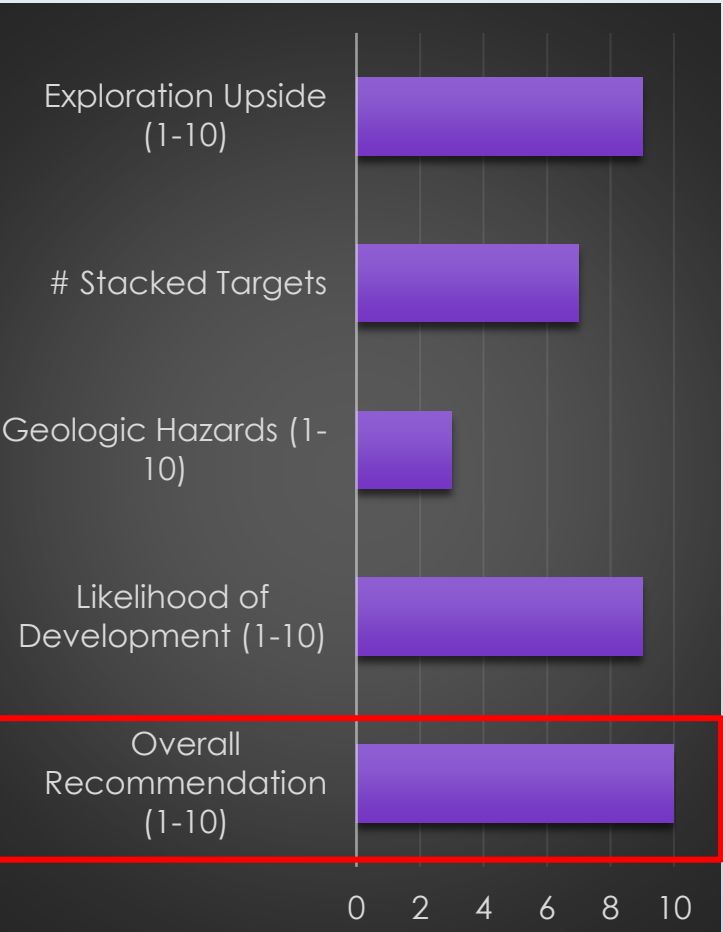
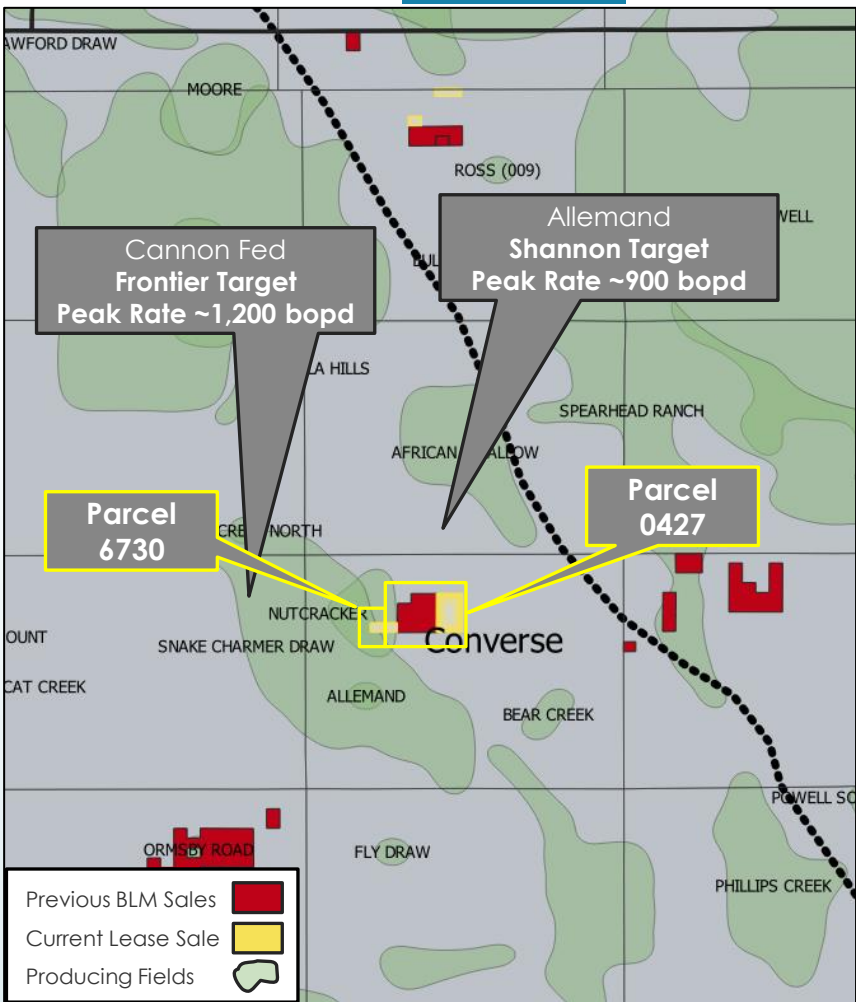
PARCEL “WY-2020-06-0427” & “WY-2020-06-6730”

360 Acres



- Parcel has **VERY HIGH** potential for development & consolidation
- Recommend bidding aggressively (ie >\$1,500-\$2,000/acre)
- Offsetting acreage purchased by Samson in Dec 2019 for **\$1,501/acre**
- Offset Operators include Wold, Northwoods, Samson, EOG, North Finn
- Very high potential for multiple stacked reservoirs. One of the best parcels in the basin. Impressive exploration potential for up and coming formations of interest (Muddy, Dakota, Mowry).

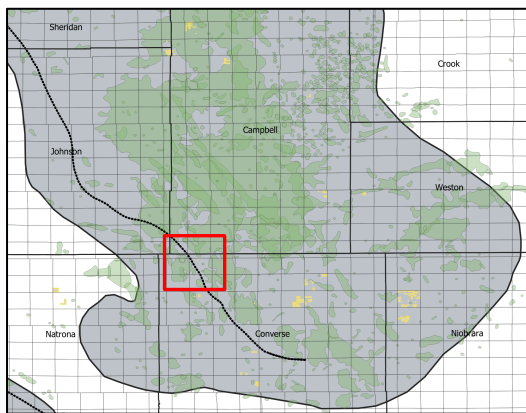
40 Acres



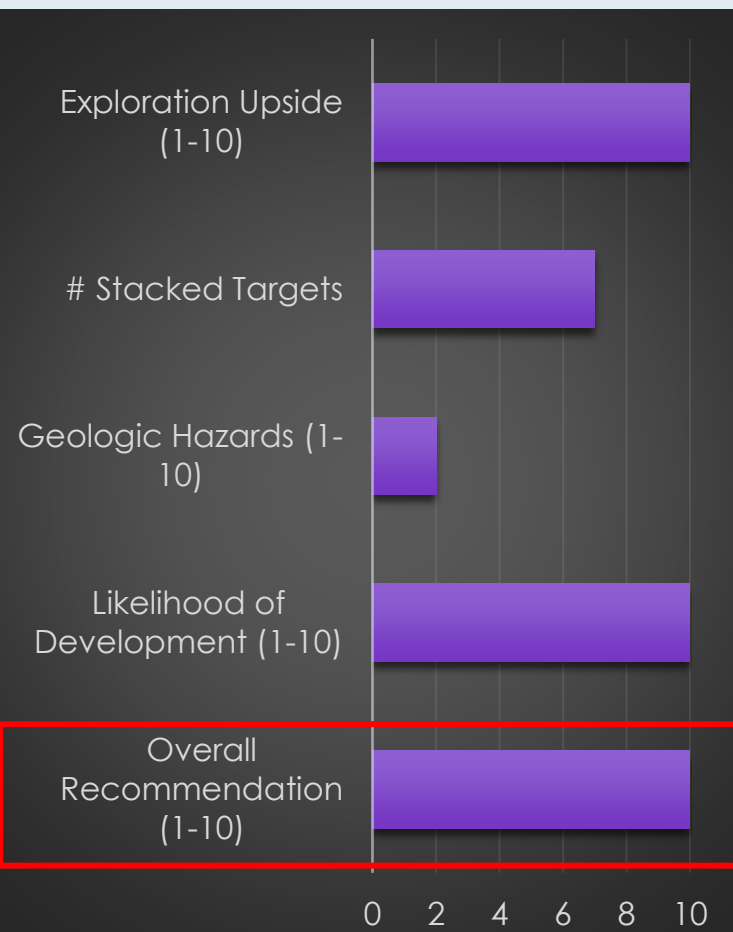
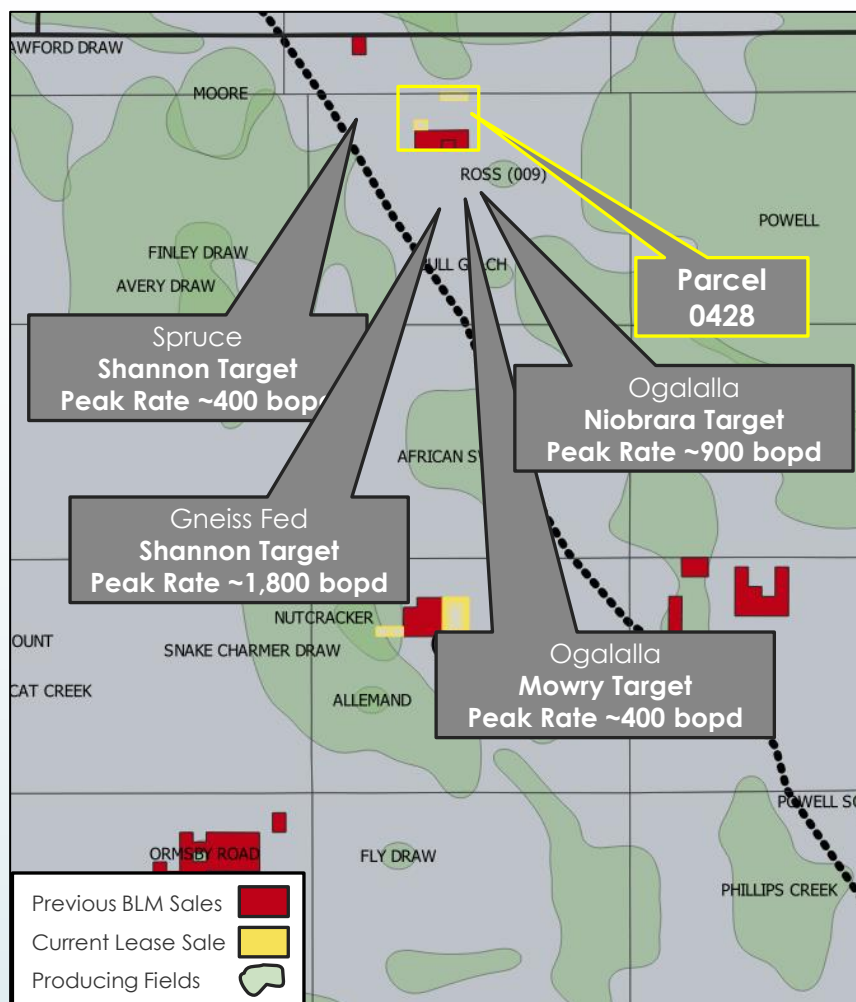
Formation	Potential	Justification
Teckla	Low	Likely wet
Teapot	Low	Likely wet
Parkman	Low	Undertrapped & Wet
Sussex	Low	Tight
Shannon	High	On trend with strong producers
Niobrara	High	High upside potential; deep & highly pressured
Turner	Med-High	Good reservoir potential; inconsistent offsetting prod; west of basin axis
Frontier	Med-High	Facies variable; west of basin axis
Mowry	High	Deep; high pressure; high upside
Muddy	High	African Swallow offset potential; proven production
Dakota	High	Nutcracker Hz extension potential
Paleozoic	Low	No shows; tight & wet

PARCEL "WY-2020-06-0428"

111Acres



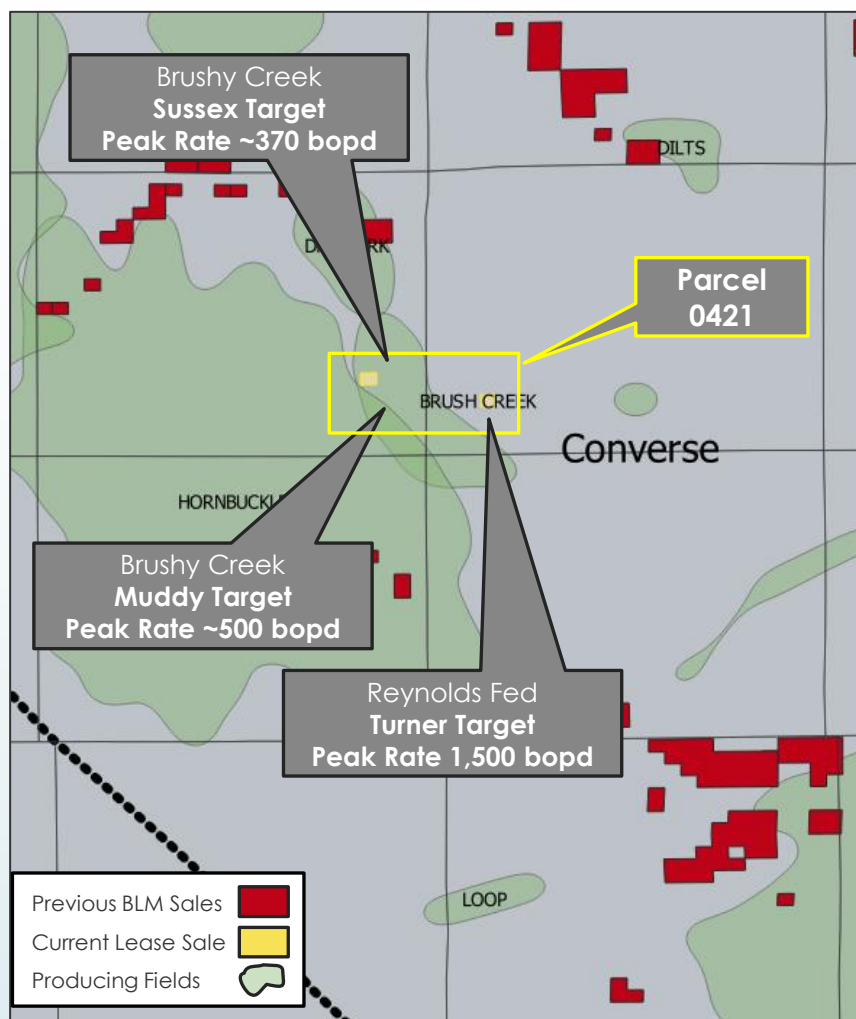
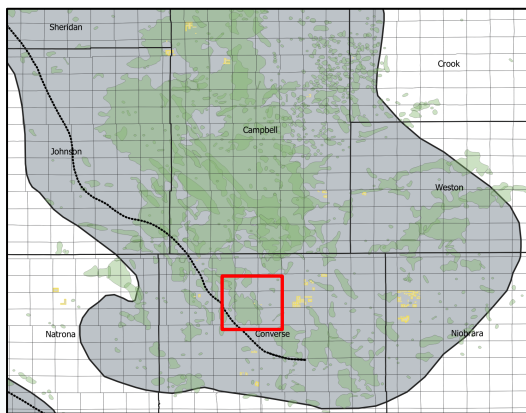
- One of the best parcels in the basin; it has **VERY HIGH** potential for development & consolidation
- Recommend bidding aggressively (ie >\$2,500/acre)
- Offsetting acreage purchased by Titan in Sept 2018 for **\$7,500/acre**
- Offset Operators include Titan, Samson, Northwoods, EOG, Noble
- My contacts at Noble Energy report that they recently leased 50,000 acres in this area. Exceptional potential for multiple prolific formations.



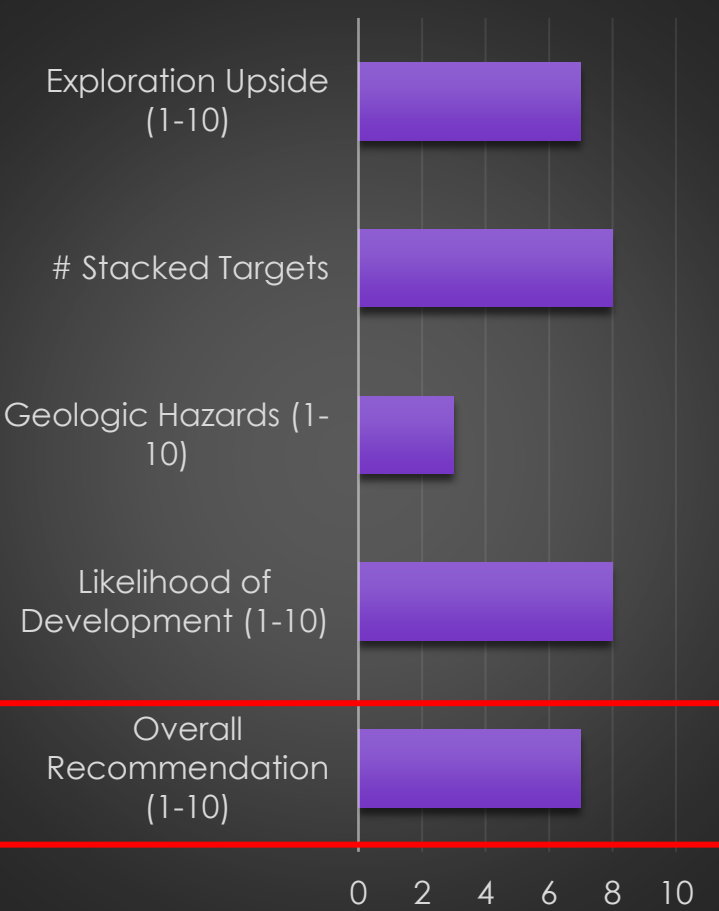
Formation	Potential	Justification
Teckla	Low	Likely wet
Teapot	Low	Likely wet
Parkman	Low	Undertrapped & Wet
Sussex	Medium	Offset potential from legacy fields
Shannon	High	Top tier reservoir quality; good structural setting
Niobrara	High	High upside potential; favorable maturity window
Turner	Med-High	Favorable trapping config.
Frontier	Med-High	Facies variable; advantageous trapping config.
Mowry	High	Favorable maturity; high upside
Muddy	Medium	Offset potential; unproven Hz prod
Dakota	Medium	Hz potential unproven; reservoir quality may be inconsistent
Paleozoic	Low	No shows; tight & wet

PARCEL “WY-2020-06-0421”

80 Acres



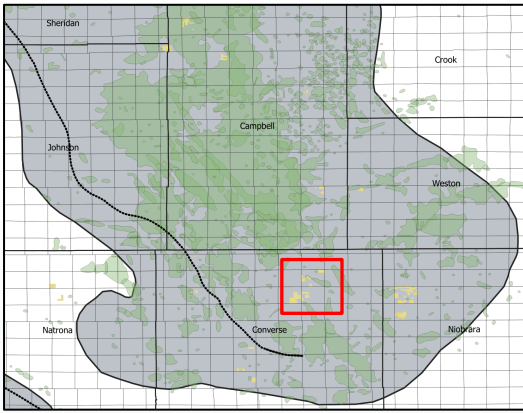
- This parcel has medium-high potential for development & consolidation
- Recommend bidding strongly (ie >\$1,750/acre)
- Offsetting acreage purchased by Samson in Nov 2019 for **\$1,526/acre**
- Offset Operators include Samson, Devon, Elephant
- *Devon is eager to consolidate their position in this part of the basin and moving west from their core position is something they are likely to pursue over the next year. This is also Samson's core operating area, and they will likely drill additional wells here.*



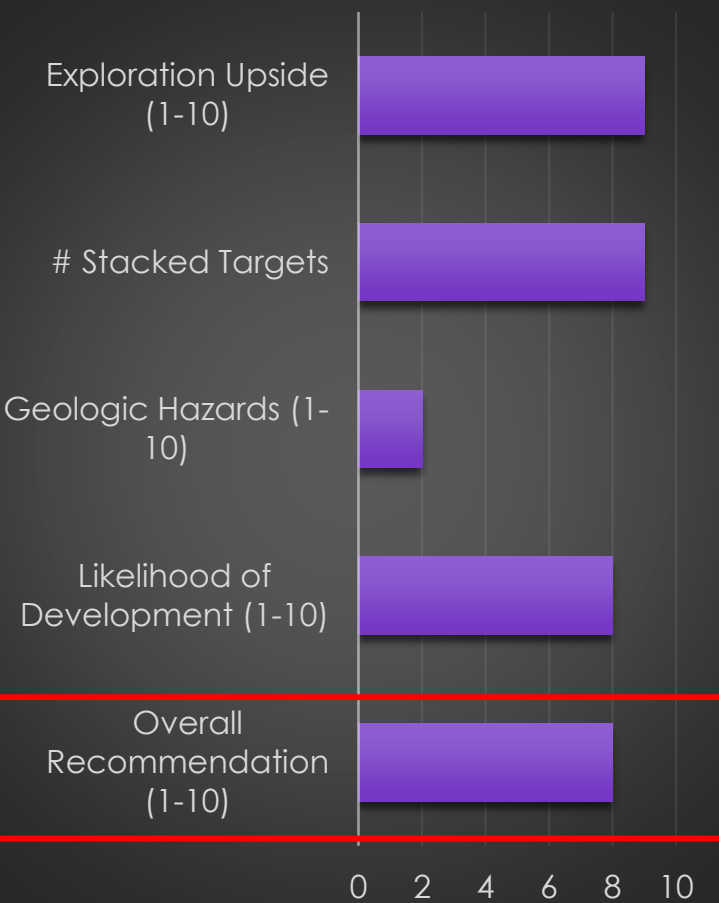
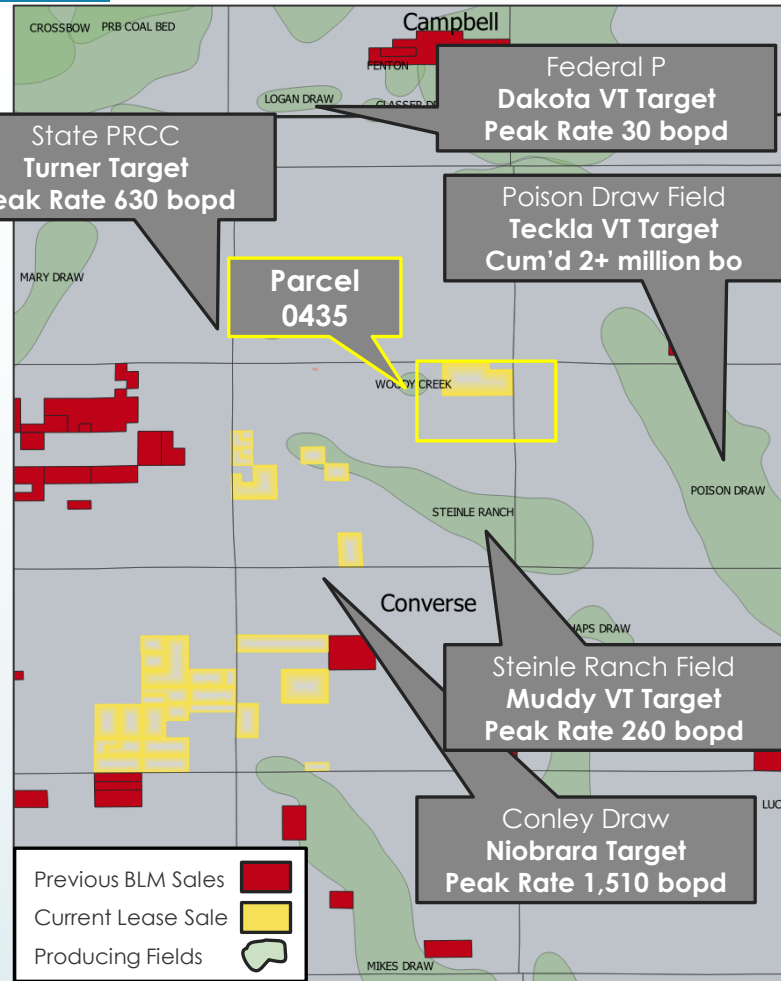
Formation	Potential	Justification
Teckla	Low	Likely wet
Teapot	Low	Likely wet
Parkman	Low	Vertical target in this area
Sussex	Medium	H_z offset from Hornbuckle is a proven play here. Inventory low.
Shannon	Med-Low	Modest potential, but untested.
Niobrara	High	High upside potential; Recent fracs untested in this part of the basin.
Turner	Med-High	Excellent area for Turner. Likely 2 wells/section.
Frontier	Med-High	Facies variable; Could share flow unit with Turner in this area.
Mowry	High	Favorable maturity; high upside; Untested in this immediate area.
Muddy	High	Legacy Samson wells have significant upside.
Dakota	Med-Low	Likely inconsistent reservoir here.
Paleozoic	Low	No shows; tight & wet

PARCEL "WY-2020-06-0435"

881 Acres



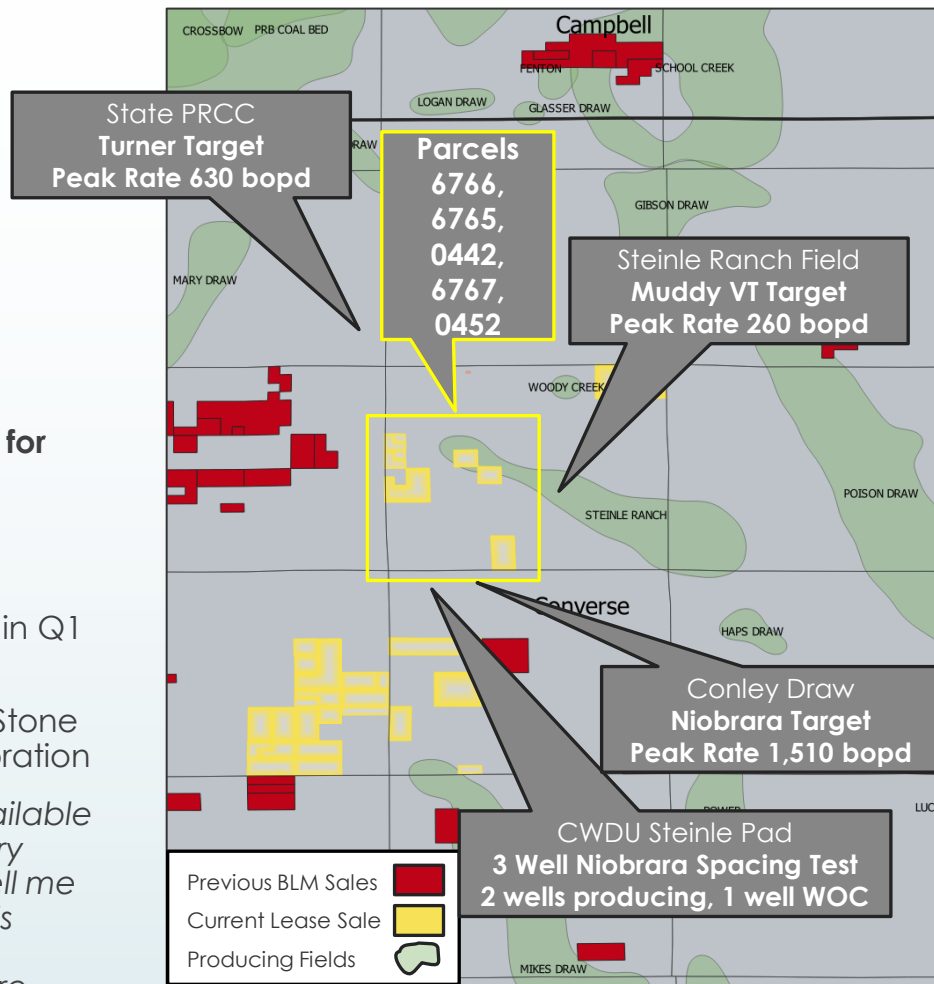
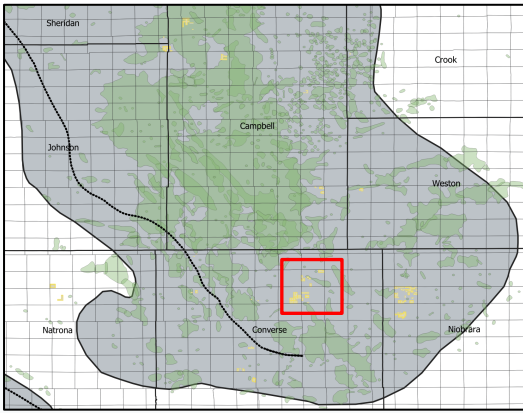
- This parcel has high potential for development & consolidation
- Recommend bidding strongly (ie ~\$1,000/acre)
- Offsetting acreage purchased by Samson in Q1 2018 for **\$608/acre**
- Offset Operators include Stone Energy, Devon, Chaco Energy, Richardson Operating, Maurice Brown LLC, Titan Exploration
- This parcel is slightly east of Devon's core area, but is on trend with multiple productive reservoirs. Both the Niobrara and the Mowry will be productive here, and there is potential for several Cretaceous sandstone reservoirs as well. Devon will not bid as strongly here as they will further to the west, so Magnum may be able to purchase these quality parcels at a good (<\$1,000/acre) price.



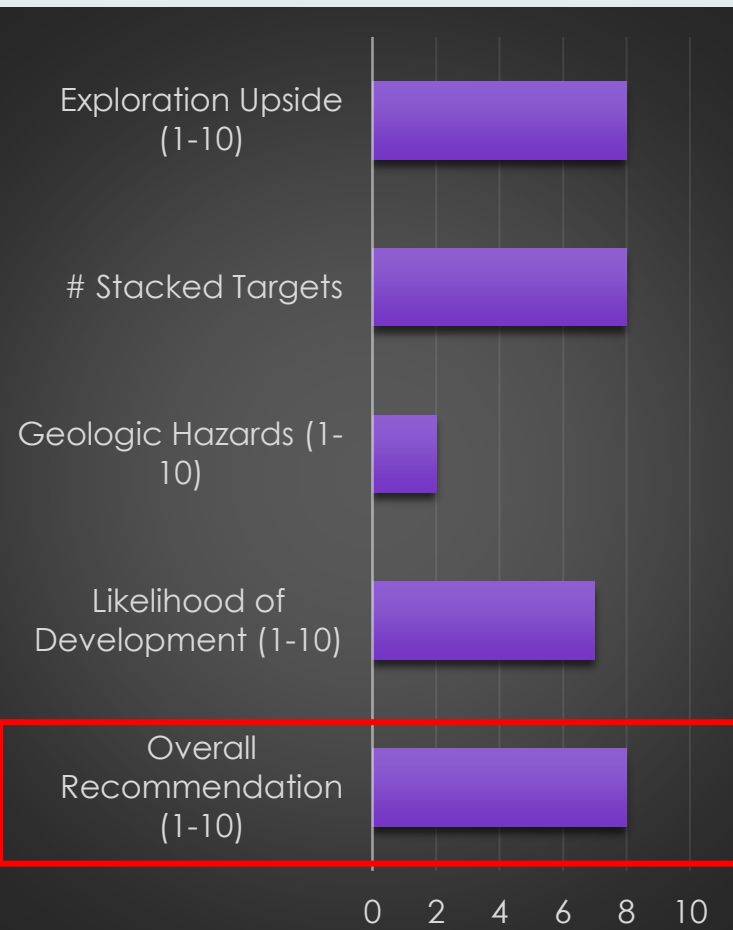
Formation	Potential	Justification
Teckla	High	Offsetting Poison Draw Teckla Vt field—there are Teckla shows in this area and additional fields will be discovered.
Teapot	Medium	If porous, will likely be charged on structure.
Parkman	Low	Likely tight at this location.
Sussex	Med-Low	Generally considered tight but reports of shows in this immediate area.
Shannon	Low	Tight here.
Niobrara	High	Strong recent Devon results to the south. Spacing likely 1,980'-2,640'.
Turner	Med-High	Strong Turner results to the west, but will tighten as you move east
Frontier	Med	Tidal facies variable; Likely shares flow unit with Turner here.
Mowry	High	High upside. Shallow and liquids rich here.
Muddy	High	One of the most promising areas for Muddy in the basin.
Dakota	Med	Shows and scattered Vt production here. Unproven as Hz target.
Paleozoic	Low	No shows; tight & wet

PARCELS "WY-2020-06-6766, 6765, 0442, 6767, 0452"

1,445 Acres Total



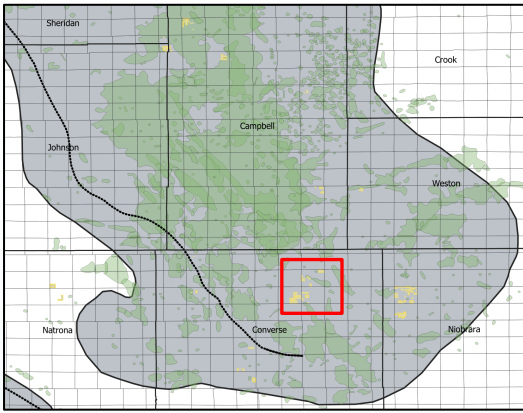
- These parcels have very high potential for development & consolidation
- Recommend bidding strongly (ie ~\$2,000/acre)
- Offsetting acreage purchased by R&R in Q1 2020 for \$526/acre
- Offset Operators include R&R, Devon, Stone Energy, Maurice Brown LLC, Titan Exploration
- These are some of the best parcels available this sale, and I recommend bidding very strongly here. My contacts at Devon tell me they may be capital-constrained at this upcoming sale, so Magnum has an opportunity to grab prime acreage here.



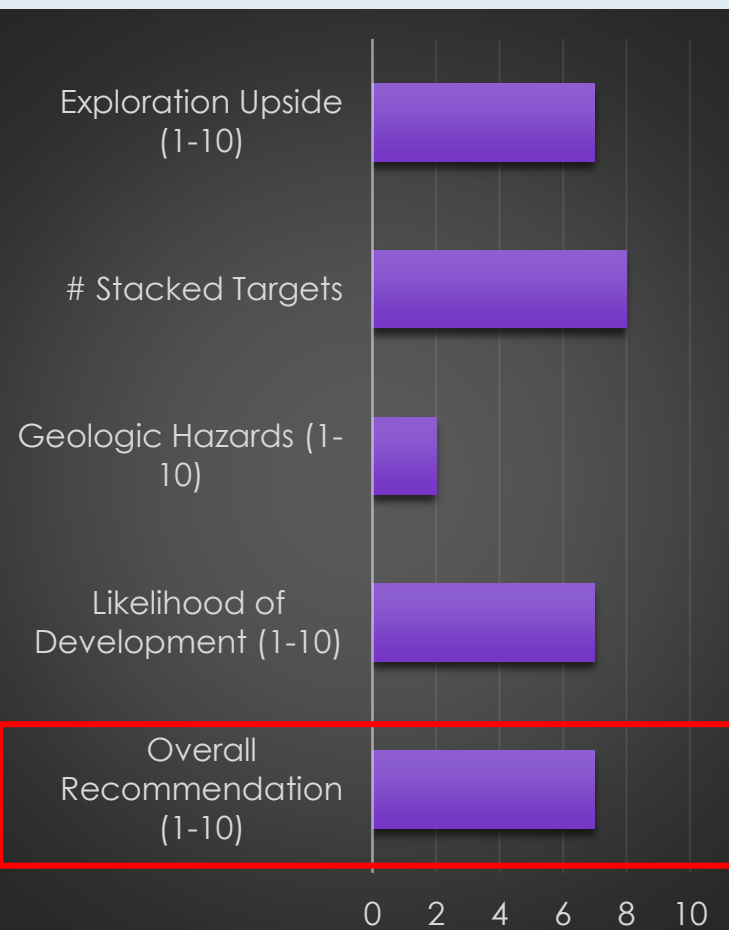
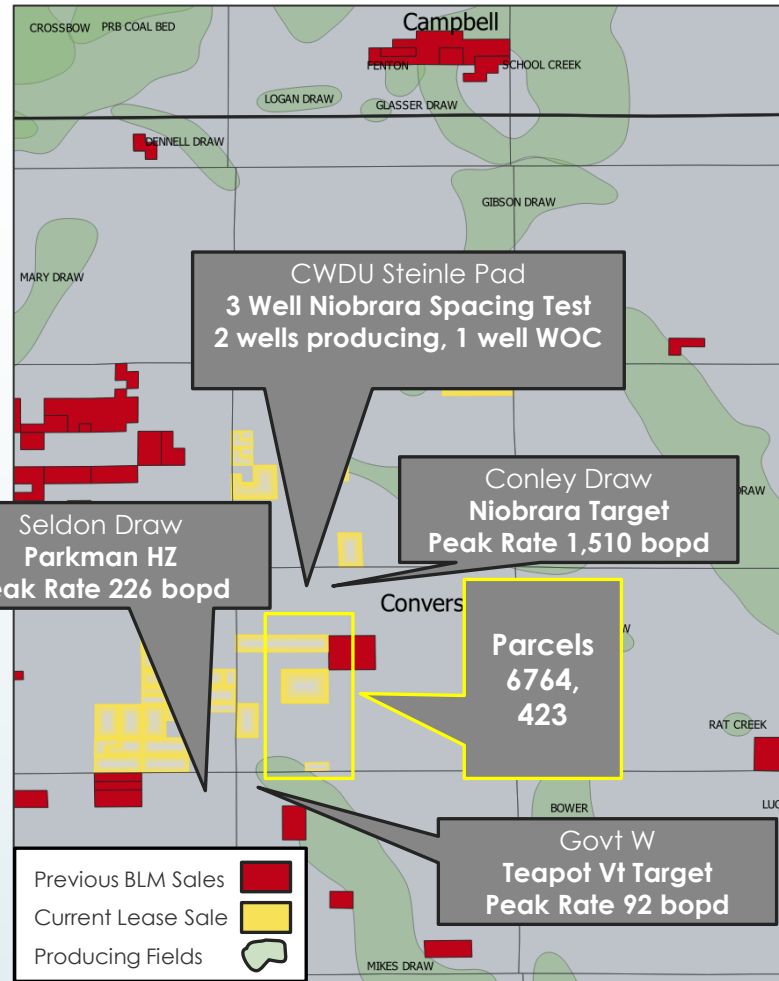
Formation	Potential	Justification
Teckla	Medium	Teckla gas shows in the area but production is unproven. Proximal and down dip from Poison Draw field.
Teapot	Medium	Some shows but may require structure if now stratigraphically trapped.
Parkman	Low	Likely too distal and tight at this location.
Sussex	Low	Likely tight.
Shannon	Low	Tight here.
Niobrara	High	Southern Steinle pad just TIL'd in July - 11 days prod reported as of 9/13/20. Looking strong so far.
Turner	Med-High	Good potential but untested in this STR
Frontier	Med	Likely shares flow unit with Turner here. 2 wells/section.
Mowry	High	High upside. Distal Mowry turbidites are an emerging play concept.
Muddy	High	Promising w/ some offsetting vt prod.
Dakota	Med	Shows but unproven as Hz target.
Paleozoic	Low	No shows; tight & wet

PARCELS "WY-2020-06-6764, 0423"

1,354 Acres Total



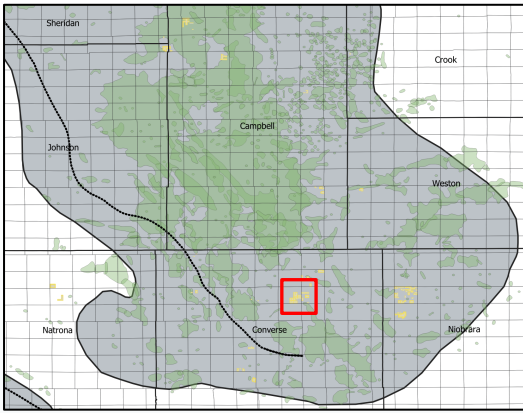
- These parcels have high potential for development & consolidation
- Recommend bidding strongly (ie ~\$1,500/acre)
- Offsetting acreage purchased by Kirkwood in Q4 2019 for **\$201/acre (a very good price!)**
- Offset Operators include Kirkwood, Devon, Chaco Energy, Richardson Operating, Maurice Brown LLC, Stone, Titan
- These are also very compelling parcels, and Magnum would do well to bid strongly here. Multiple stacked zones have potential—notably the Niobrara, Turner, and Mowry. Parkman is likely wet and/or tight at this specific location, based on surrounding logs.



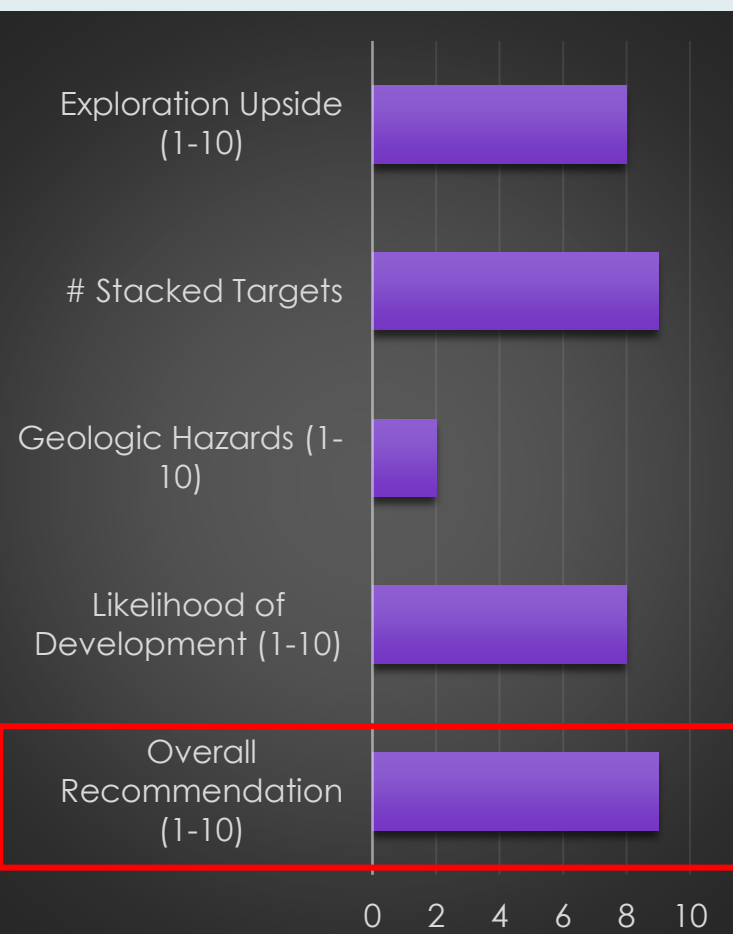
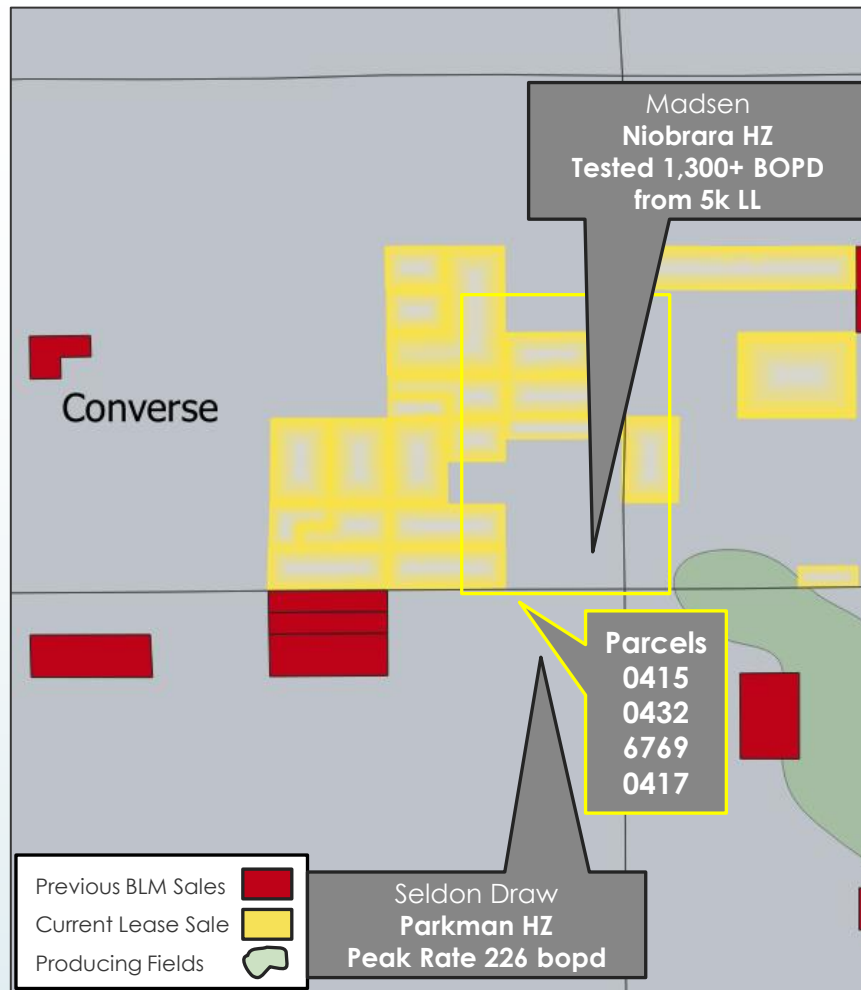
Formation	Potential	Justification
Teckla	Med-Low	Teckla shows are sparse for these specific parcels. Likely eroded.
Teapot	Medium-High	Close proximity to Mike's Draw field; potential to extent horizontally. Immediately on trend with Downs Fed wells—extremely prolific.
Parkman	Low	Tight & wet here.
Sussex	Low	Likely eroded at this specific location.
Shannon	Low	Tight here.
Niobrara	High	Both chalks present at this location; likely one flow unit. Strong nearby results to date.
Turner	Med-High	Prospective but unproven at these exact parcels.
Frontier	Med	Reservoir facies variable; Likely shares flow unit with Turner here. Bentonite present at this location.
Mowry	High	Favorable GOR & depth at these parcels. Highly prospective.
Muddy	Medium-High	May be trending out of the primary Muddy fairway.
Dakota	Med	Untested but has potential.
Paleozoic	Low	No shows; tight & wet

PARCELS "WY-2020-06-0415, 0432, 6769, 0417"

1,108 Acres Total

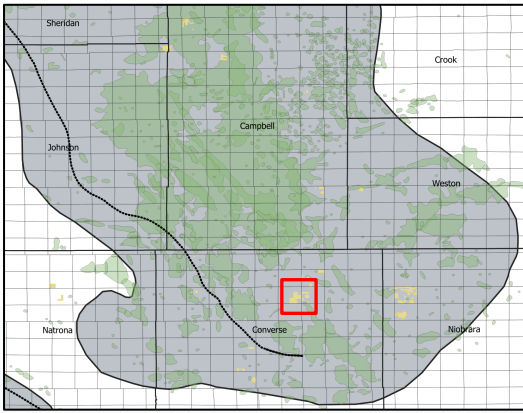


- These are high potential parcels and will likely be developed/acquired by Devon or other operators in the near/medium term.
- Recommend bidding strongly (ie ~\$2,000/acre)
- Offsetting acreage purchased by K2T2 in Q1 2020 **\$634/acre**
- Offset Operators include Texas Independent Exploration, Devon, K2T2 Resources, Rockies Resources, Kirkwood
- These parcels are approaching the classic updip pinchout of the Parkman system but are still highly prospective for other horizons. If Devon were to expand their traditional position, it would be to the east with these parcels. Niobrara chalks are brittle and porous in this area, as proven by the Madsen hz testing at 1,300+ BOPD from a short lateral.

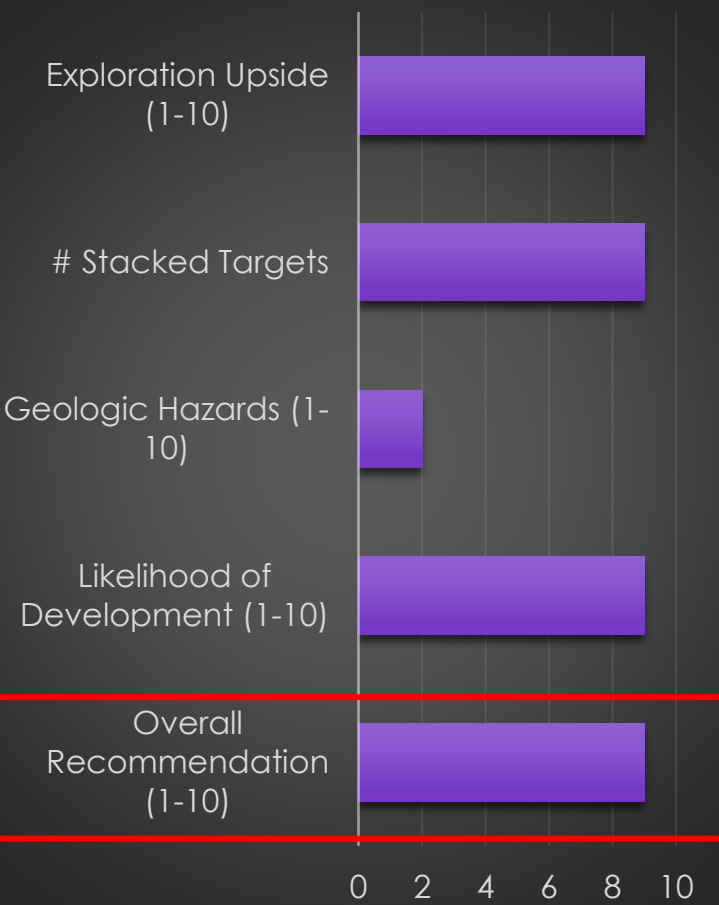
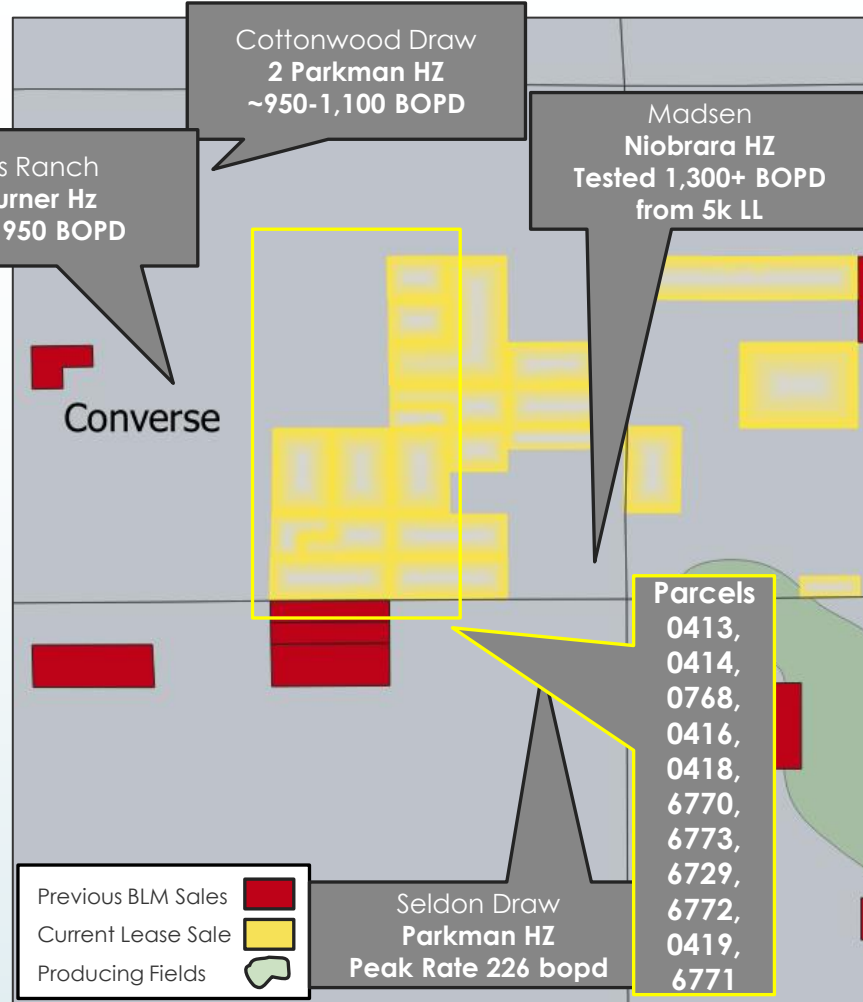


Formation	Potential	Justification
Teckla	Med-Low	Sporadic shows; approaching pinchout
Teapot	Medium-High	Good potential, especially with any structural closure.
Parkman	Low-Med	Likely tight but still has some potential—need additional derisking
Sussex	Low	Eroded/tight.
Shannon	Low	Tight.
Niobrara	High	Upper/Lower B Chalks & B Marl all highly prospective
Turner	Med-High	Good potential if porous
Frontier	Med	Unproven but classic low resistivity low contrast pay may have been bypassed historically
Mowry	High	High potential for shallow, low GOR Mowry
Muddy	Medium-High	Untested by Devon in this area in spite of shows & amplitudes on seismic
Dakota	Med-Low	Not much data but could work. Likely difficult to drill due to silica cementation
Paleozoic	Low	No shows; tight & wet

PARCELS "WY-2020-06-0413, 0414, 0416, 0418, 0419, 6768, 6770, 6773, 6729, 6772, 6771" 3,680 Acres Total

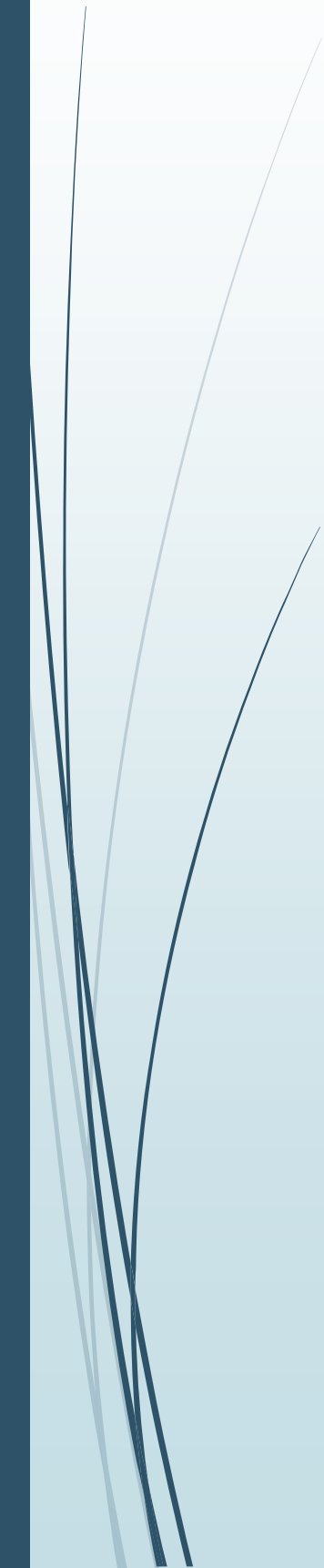


- These parcels have very high potential for development & consolidation and are among the best in the basin.
- Recommend bidding strongly (ie ~\$2,500/acre)
- Offsetting acreage purchased by K2T2 in Q1 2020 \$634/acre
- Offset Operators include K2T2 Resources, Devon, Texas Independent Exploration, Rockies Resources, Kirkwood
- These parcels are in a sweet spot, located between Devon's established position to the NW and their southern Niobrara focus area. Oxy, CHK, and others are pursuing multiple zones from the south, heading in the direction of these parcels. Based on my mapping, these parcels are within the Parkman fairway, which is not the case for all offsetting parcels. The Parkman adds significant value to this acreage, as it is the shallowest and highest oil cut formation in this part of the basin.



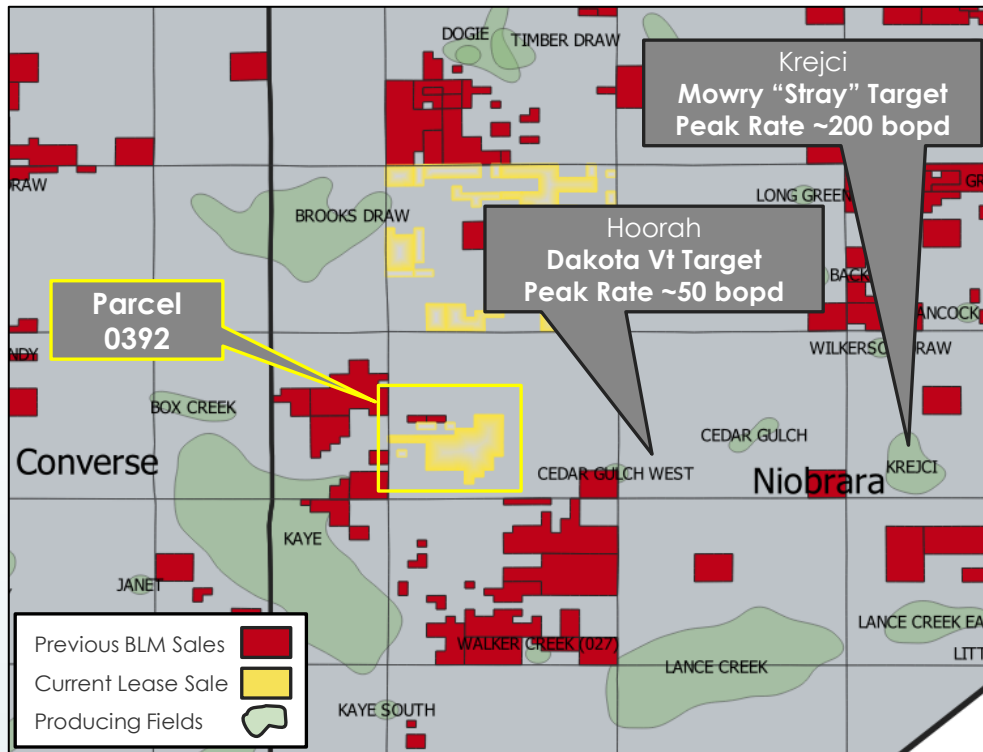
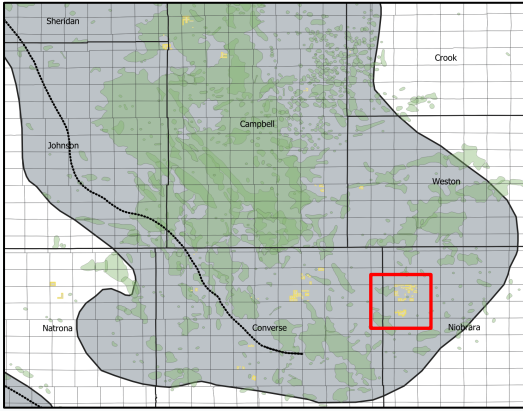
Formation	Potential	Justification
Teckla	Med-Low	Some gas shows, but Nio sourced oil likely trapped by the Parkman.
Teapot	Medium-High	On trend with Downs Fed hz wells. Some charge risk here due to porous underlying Parkman sandstones.
Parkman	High	Porous, charged, and prolific. 1,000+ BOPD common, with favorable water cuts at this location
Sussex	Low	Eroded/tight.
Shannon	Low	Tight.
Niobrara	High	B Chalk porous w/ high resistivity. B Marl also prospective here.
Turner	Med-High	Has potential. If porous, likely charged.
Frontier	Med	Requires additional data to derisk but could add to Turner flow unit.
Mowry	High	Highly prospective for structurally benign Mowry development. (Lower risk)
Muddy	Medium-High	Has potential as a stand along target or as part of the Mowry FU.
Dakota	Med-Low	Few penetrations; modest potential
Paleozoic	Low	No shows; tight & wet

Niobrara County

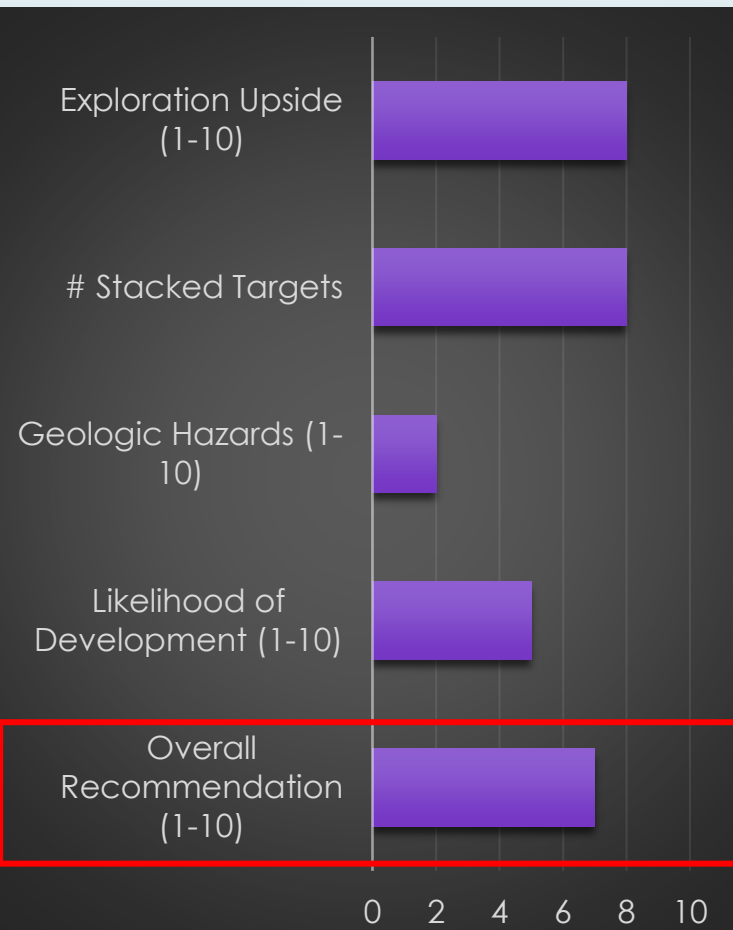


PARCEL "WY-2020-06-0392"

2,400 Acres



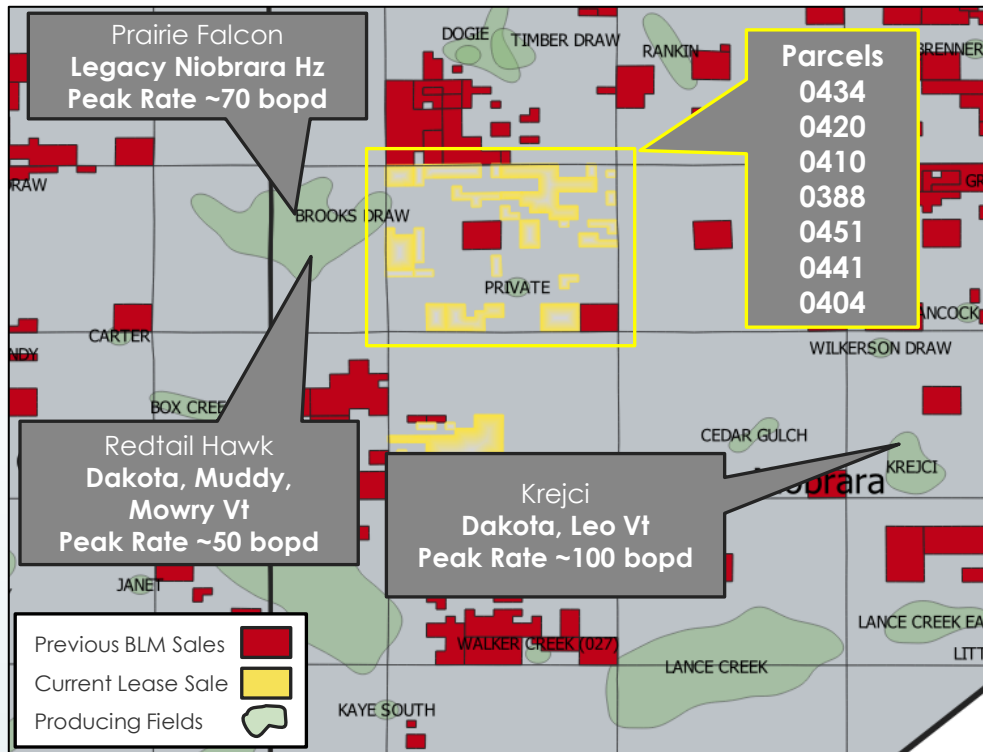
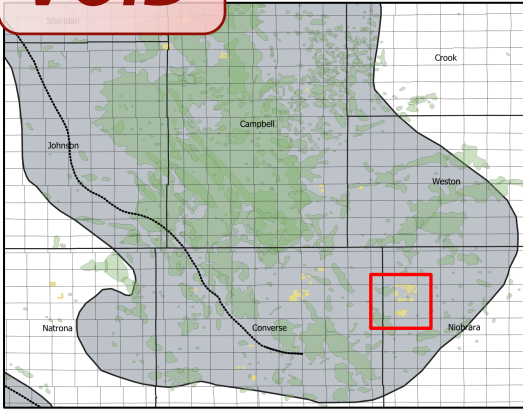
- An exploratory parcel; it has medium potential for development & consolidation
- Recommend bidding modestly (ie <\$100/acre)
- Offsetting acreage purchased by CEM in March 2019 for **\$52/acre**
- Offset Operators include Midland, Thunder Basin, Bayless, Colorado Energy Minerals
- *This is an underexplored area with interesting potential from multiple formations. Multiple companies are studying this area as an updip, shallow, high oil cut exploration focus area. Acreage is still cheap in this area, but prices could appreciate significantly as more exploration wells are drilled.*



Formation	Potential	Justification
Teckla	Low	Likely tight; undercharged
Teapot	Medium	Underexplored; potential for new discoveries
Parkman	Low	Likely tight
Sussex	Low	Likely tight
Shannon	Low	Likely tight
Niobrara	High	Updip, high oil cut, & shallow; well developed chinks
Turner	Medium	Underexplored; potentially normally pressured
Frontier	Medium	Facies variable; likely normally pressured
Mowry	High	Stray sands proven highly productive on per foot basis; Favorable maturity;
Muddy	High	Underexplored; high potential
Dakota	Medium	H ₂ potential unproven
Paleozoic	Med-High	Proven production to SE; current exploration target

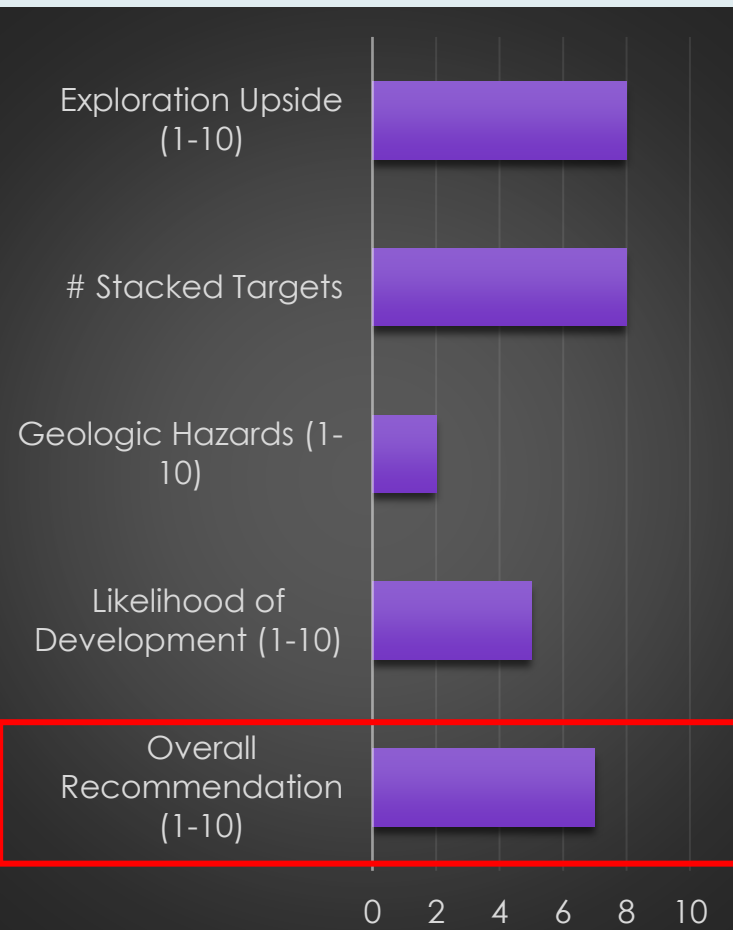
PARCELS “WY-2020-06-0434, 0420, 0410, 0388, 0451, 0441, 0404” 6,970 Acres

VOID

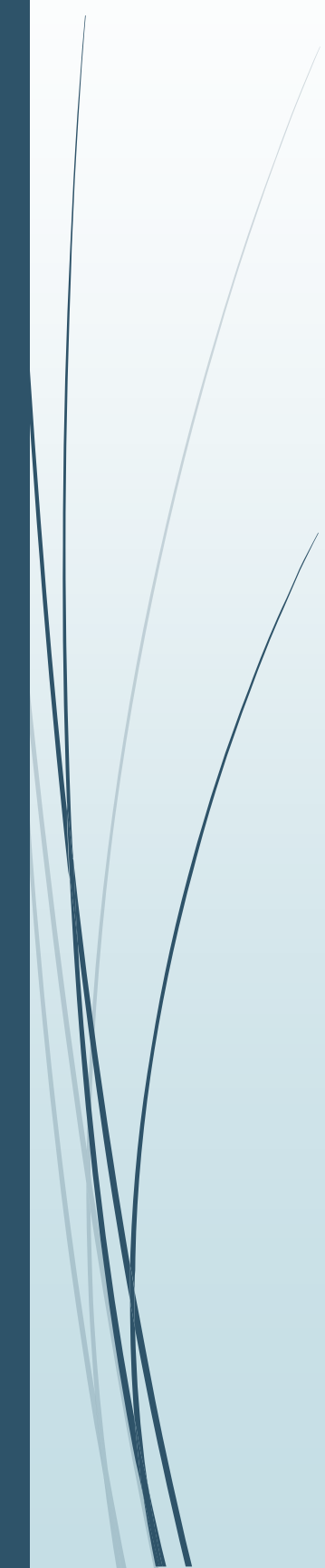


- Opportunity to purchase a significant number of acres in an unproven but intriguing part of the basin. It has medium potential for development & consolidation
- Recommend bidding modestly (ie <\$100/acre)
- Offsetting acreage purchased by Century O&G in September 2018 for \$66/acre
- Offset Operators include Sunshine, Midland, Thunder Basin, Bayless, Colorado Energy Minerals, Century,
- If Magnum is interested in this underexplored part of the basin, this would be a good opportunity to acquire acreage before it gets proved up. Significant potential from multiple updip, shallow Cretaceous and Paleozoic reservoirs.

Formation	Potential	Justification
Teckla	Low	Likely tight; undercharged
Teapot	Medium	Underexplored; potential for new discoveries
Parkman	Low	Likely tight
Sussex	Low	Likely tight
Shannon	Low	Likely tight
Niobrara	High	Updip, high oil cut, & shallow; well developed chalks; likely modest overpressure
Turner	Medium	Underexplored; likely normally pressured
Frontier	Medium	Tidal facies highly variable; likely normally pressured
Mowry	High	Stray sands proven highly productive on per foot basis; Favorable maturity; Oil window
Muddy	High	Underexplored; high potential
Dakota	Medium	Offset Vt production; Hz potential unproven
Paleozoic	Med-High	Proven production to SE; current exploration target

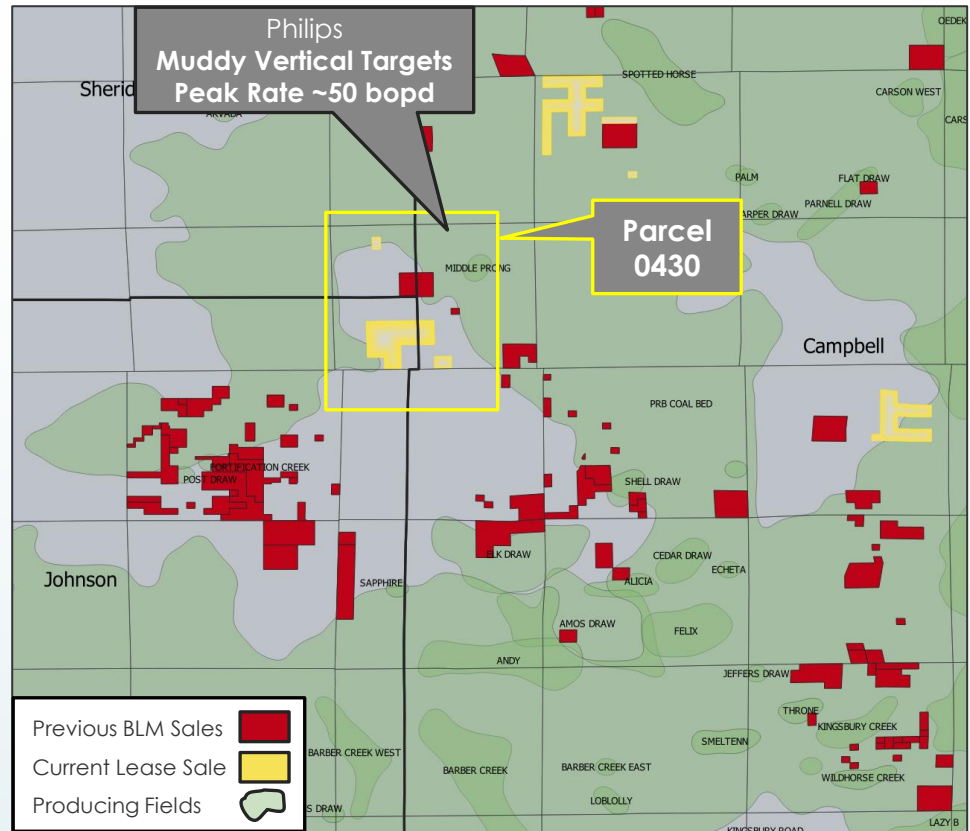
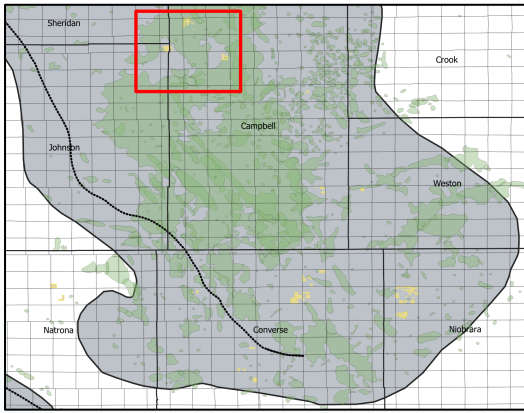


Campbell County



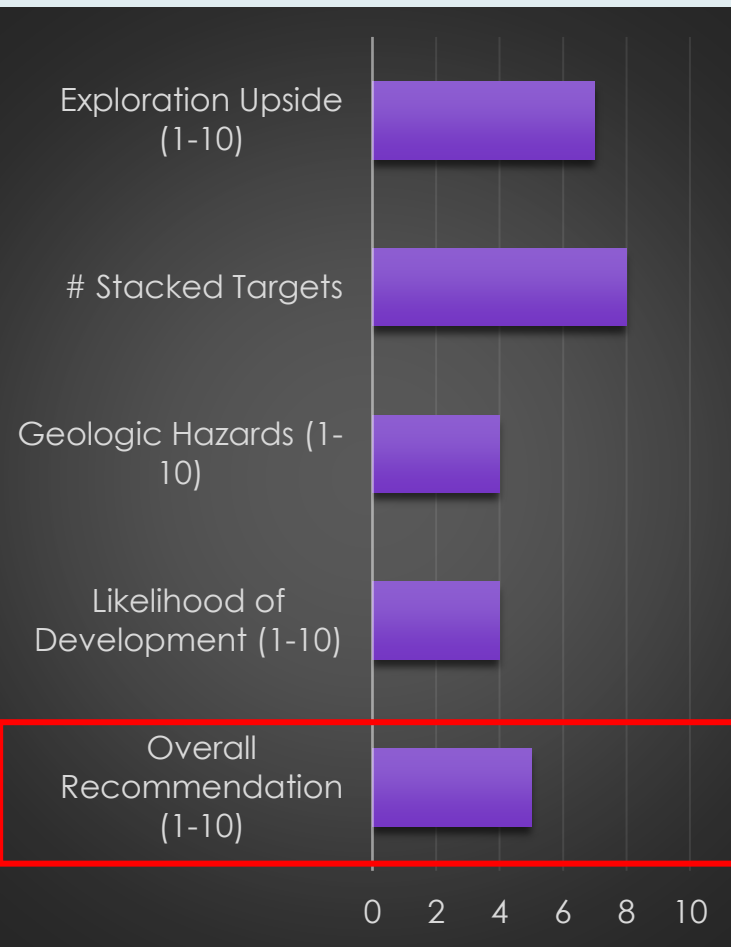
PARCELS "WY-2020-06-0430"

1,949 Acres (listed in Sheridan County)



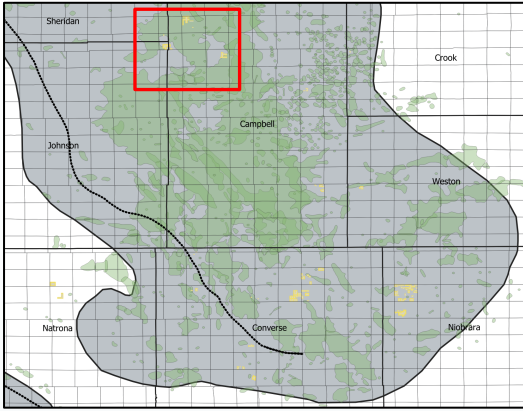
- This parcel has medium-low potential for development and consolidation.
- Recommend bidding modestly (ie <\$150/acre)
- Offsetting acreage purchased by Mason in Q1 2019 for **\$180/acre**
- Offset Operators include Anschutz, EOG, Noble, Ballard, Baseline, Mason Resources
- This immediate area has seen little development to date, except for CBM wells. However, there is reasonable exploration upside and multiple operators are actively leasing in this area.

Formation	Potential	Justification
Teckla	Low	Likely tight; undercharged
Teapot	Low	Tight & wet
Parkman	Medium	On trend with some existing fields. Potential exists.
Sussex	Low	Likely tight
Shannon	Medium	Facies variable but has potential. Good position relative to known source rocks.
Niobrara	High	Underexplored. High potential here.
Turner	Medium	Underexplored but has potential.
Frontier	Med-Low	May share flow unit with Turner. Offset attempts have disappointed.
Mowry	High	Proximity to "third hot spot" encouraging. Untested.
Muddy	High	Legacy Vt attempts. Facies may be more variable than many expect.
Dakota	Med-low	Few penetrations. Untested.
Paleozoic	Low	Downdip from classic Minnelusa fields. Likely undercharged. Will require 3D.

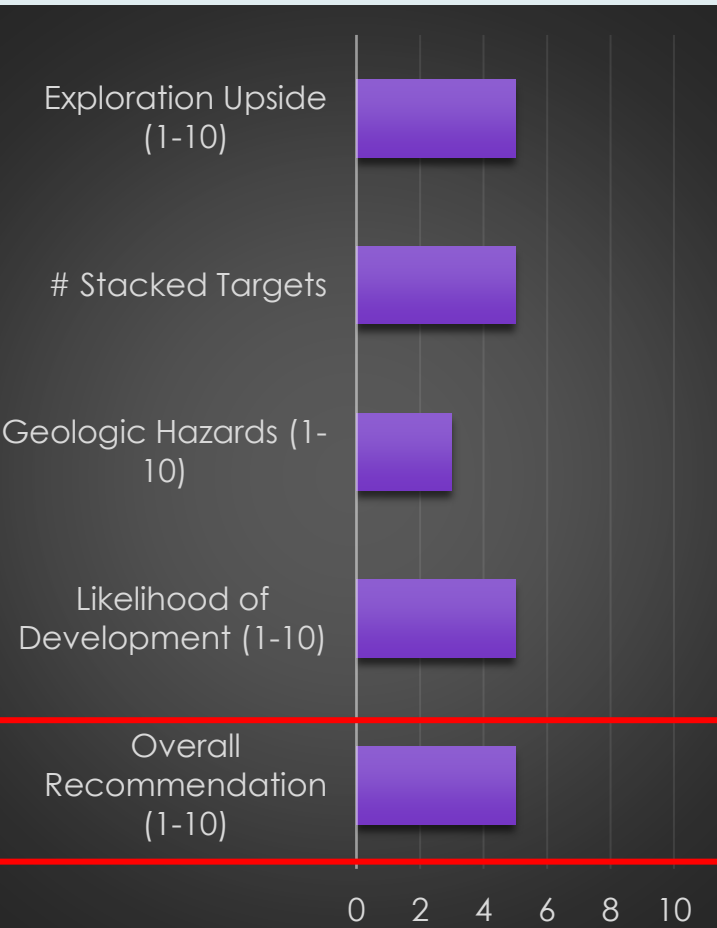
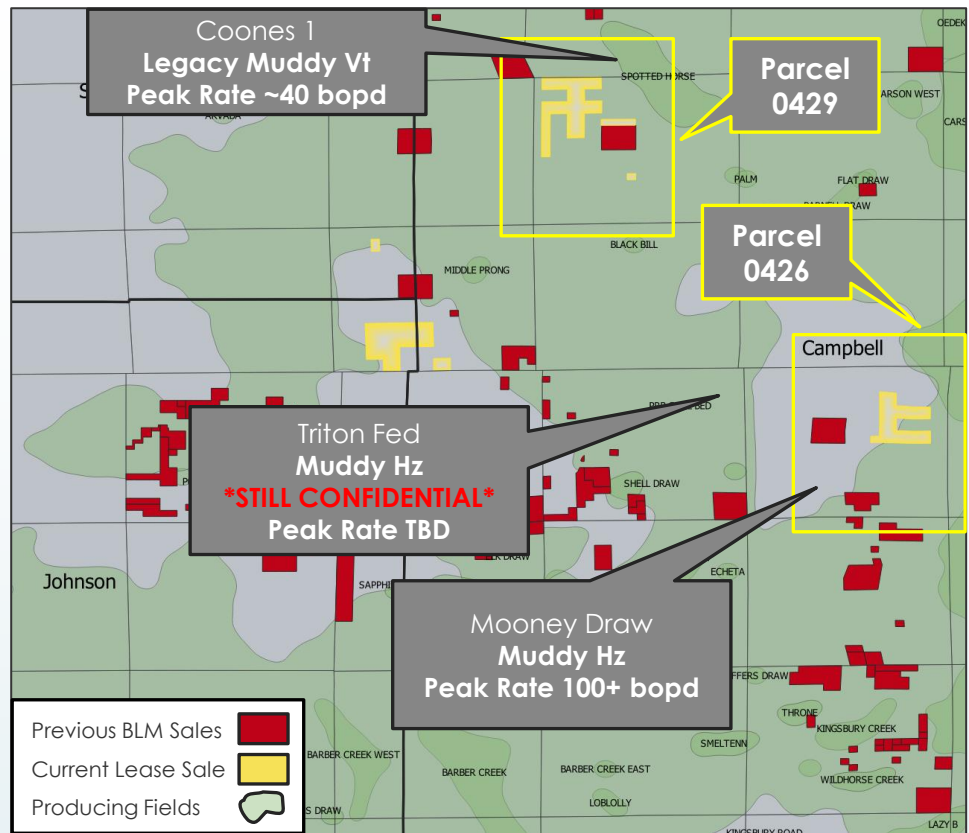


PARCELS “WY-2020-06-0429 & 0426”

2,066 Acres (0429) & 1,327 Acres (0426)



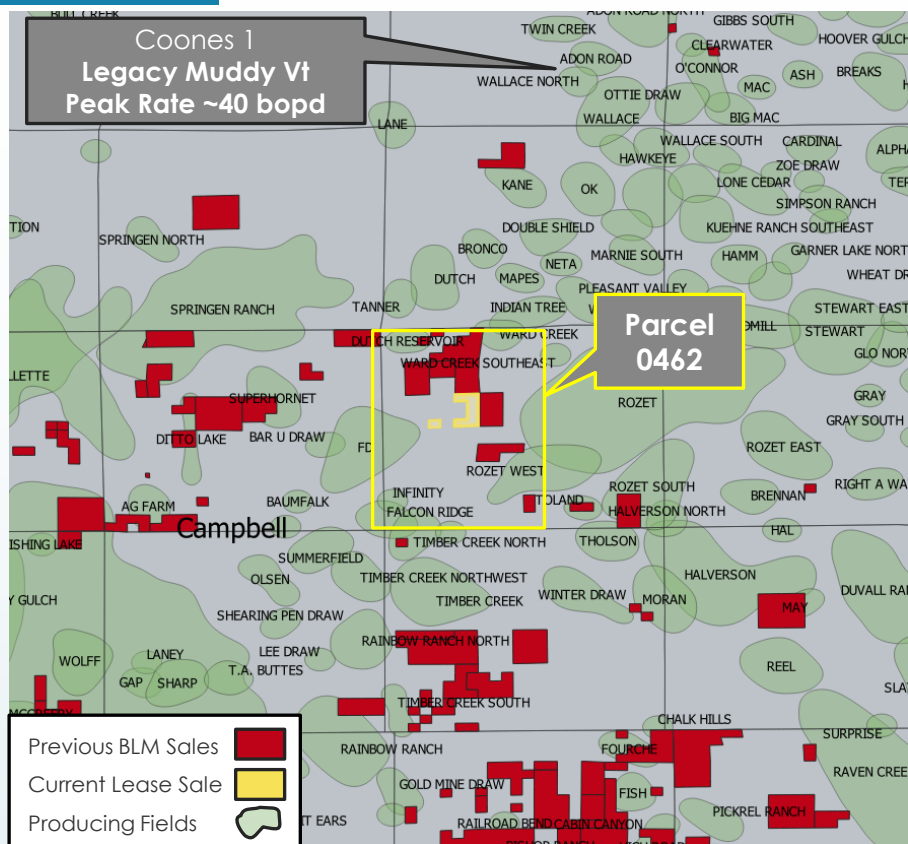
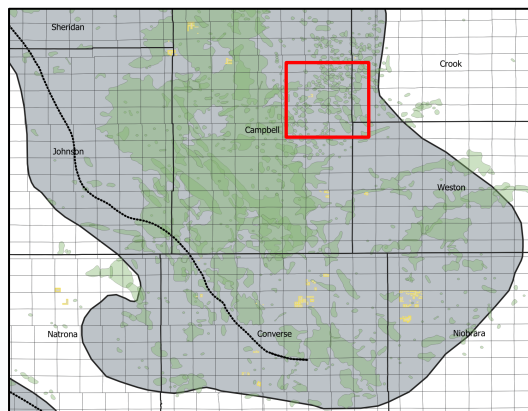
- This parcel has medium potential for development and consolidation.
- Recommend bidding moderately (ie <\$750/acre)
- Offsetting acreage purchased by Baseline in Q4 2019 for **\$640/acre**
- Offset Operators include Kirkwood, Anschutz, EOG, Noble, Ballard, Baseline, Mason Resources, Seven Sisters
- *Lots of vertical Muddy production, but nobody has successfully converted the Muddy to a horizontal play...yet. Baseline is leasing aggressively in this area. A key well for this area will be AEC's Triton well – a 10k Muddy attempt. My contacts at Anschutz tell me they tracked it in April and plan to TIL later this summer. This area was also the focus of recent CHK exploration attempts.*



Formation	Potential	Justification
Teckla	Low	Distal & tight
Teapot	Low	Undercharged; wet; SWD target
Parkman	Low	Distal & tight
Sussex	Low	Tight
Shannon	Low	Distal & tight
Niobrara	Medium	Underexplored. May be immature.
Turner	Low	May be tight.
Frontier	Med-Low	Underexplored but has been a target of operators in the past.
Mowry	High	Proximity to “third hot spot” encouraging. Untested. Bentonite thickness likely internal baffle.
Muddy	High	Unproven but very promising.
Dakota	Med-low	Few penetrations. Untested.
Paleozoic	Low	Downdip from classic Minnelusa fields. Likely undercharged. Will require 3D.

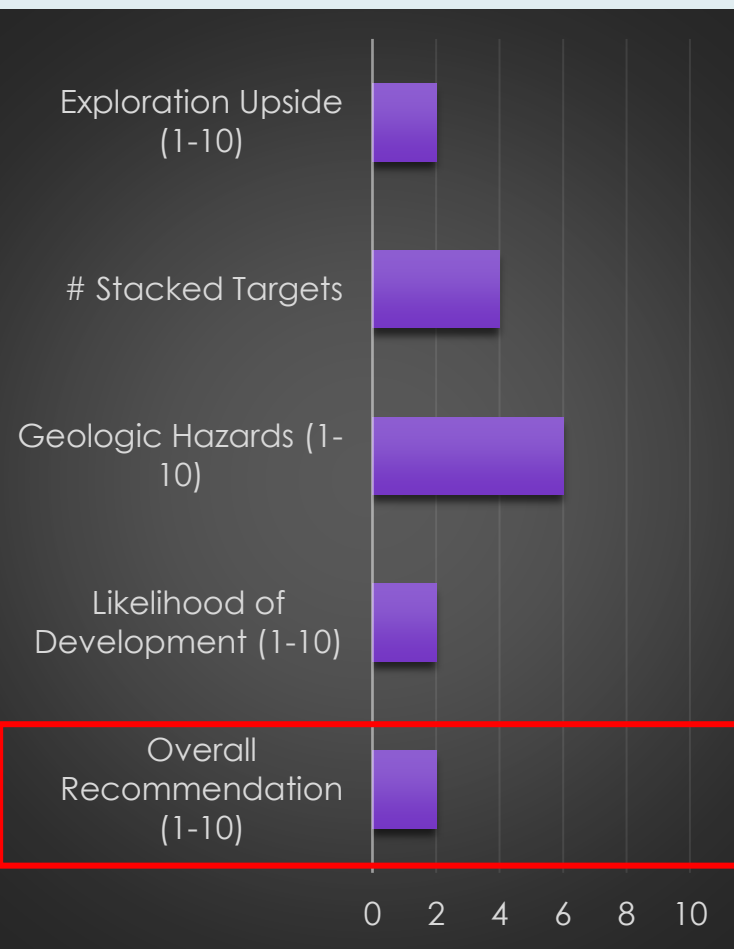
PARCELS "WY-2020-06-0462"

309 Acres



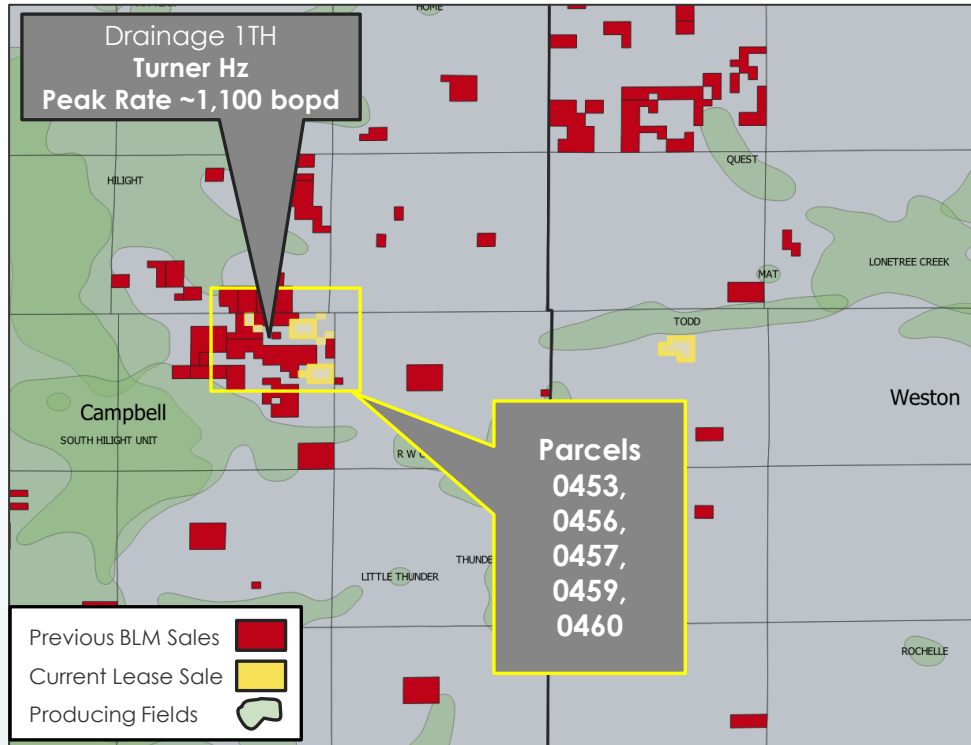
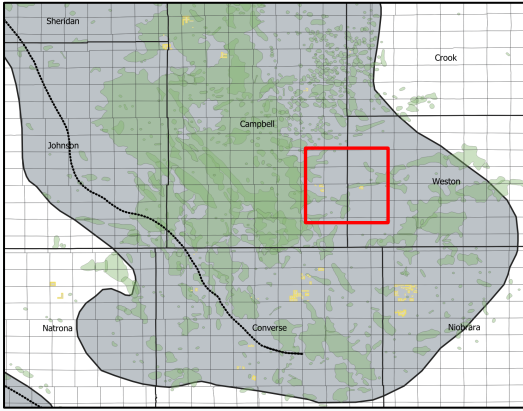
- This parcel has low potential for development and consolidation.
- Recommend tossing out a lowball bid or not bidding at all (ie <\$50/acre)
- Offsetting acreage purchased by Land Energy Inc Q3 2019 for **\$122/acre**
- Offset Operators include Western American Resources, Land Energy, Kirkwood
- This parcel is located in an area of legacy Minnelusa fields, but also has scattered vertical Lower Cretaceous production (Muddy and Dakota). This area is not being aggressively leased and Minnelusa production is notoriously spotty and difficult. 3D seismic is an absolute necessity to make an economic go of it. Recommend securing good rock by applying your capital elsewhere.

Formation	Potential	Justification
Teckla	Low	Wet & undercharged
Teapot	Low	Wet & undercharged
Parkman	Low	Tight
Sussex	Low	Tight
Shannon	Low	Too distal; tight
Niobrara	Low	Likely immature & unprospective
Turner	Low	Undercharged & tight
Frontier	Low	Tight & undercharged
Mowry	Med-Low	Marginally mature. Untested in this area.
Muddy	Med-Low	Legacy Vt production; may be charge challenged in this area.
Dakota	Med-Low	Likely charge challenged. Untested horizontally.
Paleozoic	Med-Low	Lots of penetrations; difficult exploration target. Vt target only here.



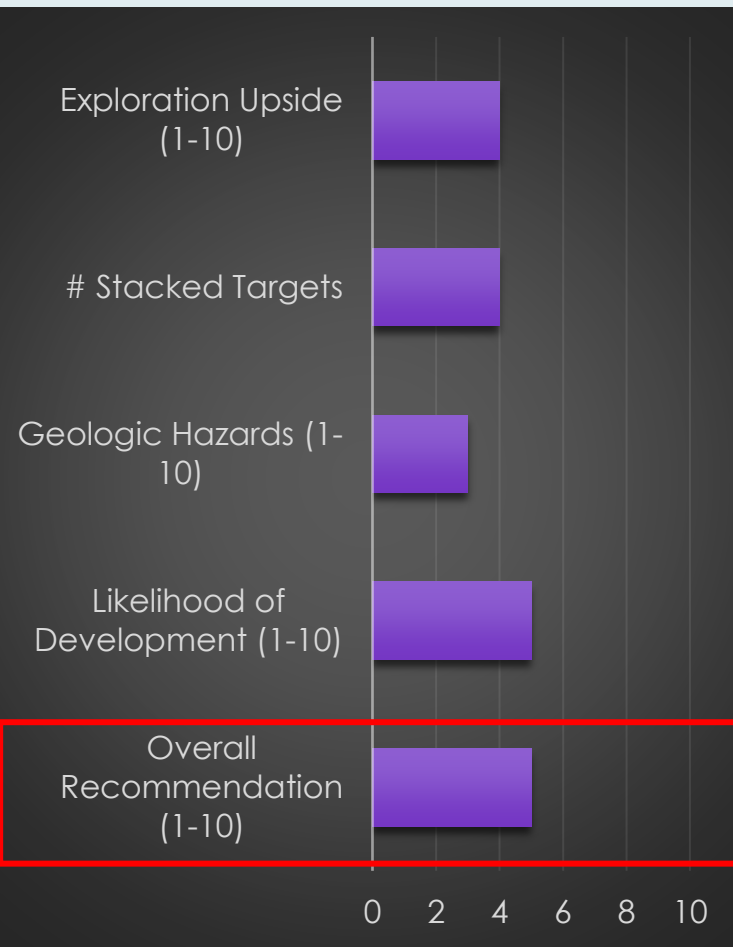
PARCELS “WY-2020-06-0453, 0456, 0457, 0459, 0460”

1,005 Acres Total

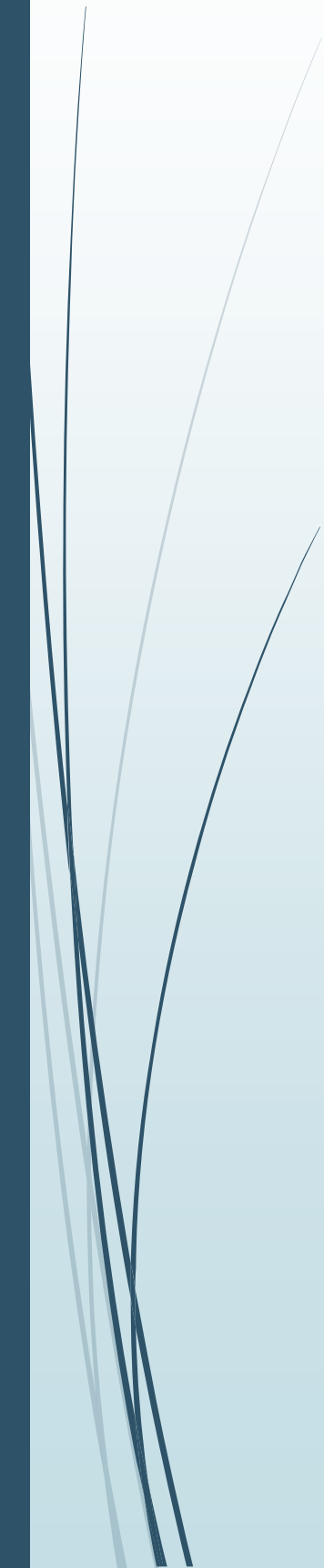


- These parcels have medium potential for development and consolidation.
- Recommend bidding reasonably and being careful not to overbid on this acreage (ie <\$1,500/acre)
- Offsetting acreage purchased by Rockies Resources in Q3 2018 for **\$3,111/acre**
- Offset Operators include Rockies Resources, Sharbro Energy, Kirkwood, MCL1,
- These parcels overlie decent-but not exception-reservoir quality. They are updip of the legacy Hilight field (Muddy production) and have seen some promising recent Turner production (verging on normally pressured). The main Cretaceous source rocks are untested in this area with modern fracs and hold the most upside. Take care not to get in a bidding war for these parcels—they are good but not great.

Formation	Potential	Justification
Teckla	Low	Tight
Teapot	Low	SWD Target
Parkman	Low	Distal, tight
Sussex	Low	Eroded, tight
Shannon	Low	Distal; tight
Niobrara	Low	Likely immature & unprospective
Turner	Med-Low	Normally pressured where charged
Frontier	Low	Tidal facies tight here
Mowry	Med-Low	Mature but untested with modern frac. Could be decent.
Muddy	Med-Low	Legacy Vt production; Could be a Hz candidate.
Dakota	Med-Low	Likely charge challenged. Untested horizontally.
Paleozoic	Low	Tight & wet

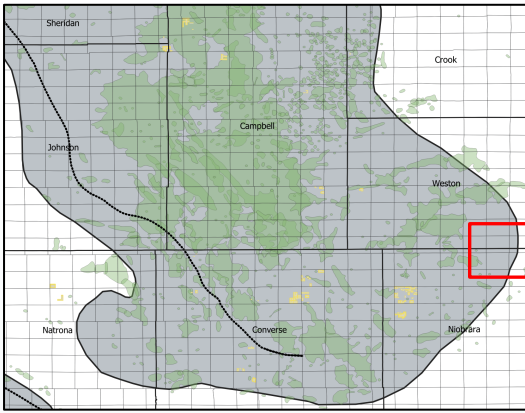


Weston County

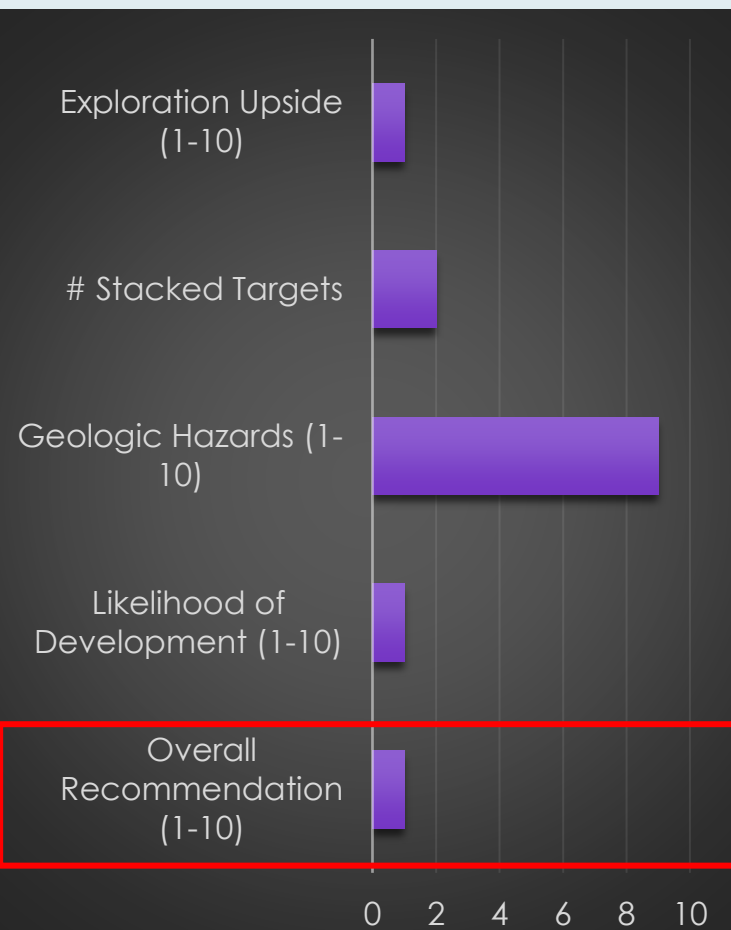
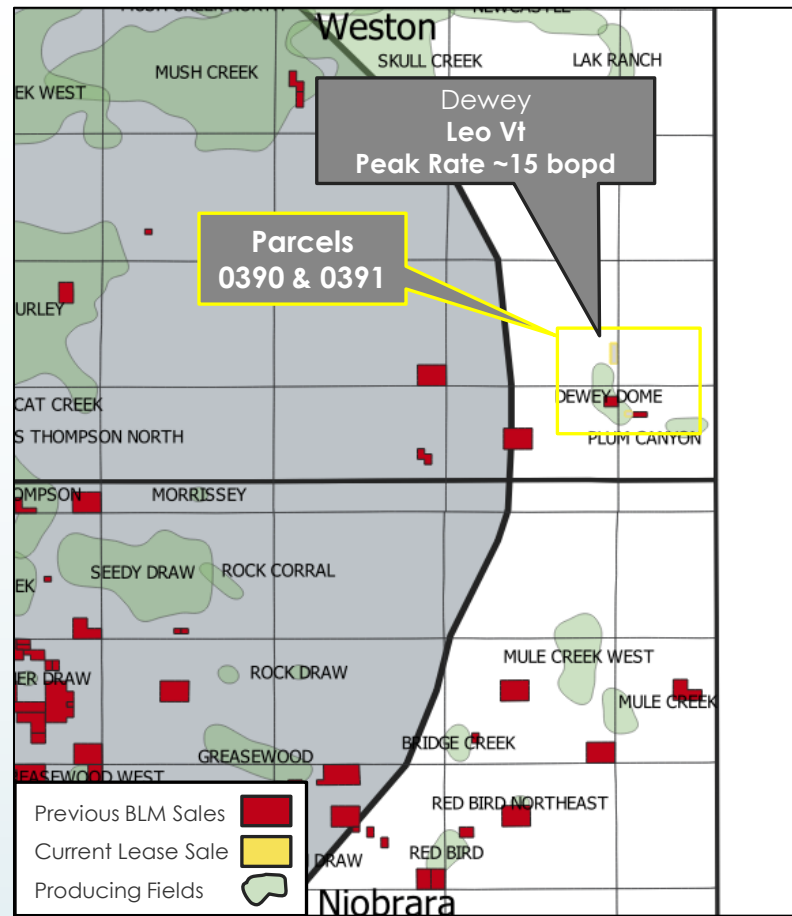


PARCELS “WY-2020-06-0390 & 0391”

199 Acres



- **Recommend avoiding this parcel; high structural risk and very limited upside. Very low chance of development or consolidation.**
- **Recommend NOT bidding**
- Offsetting acreage purchased by Providence March 2018 for **\$2/acre**
- Offset Operators include Vermillion & Providence

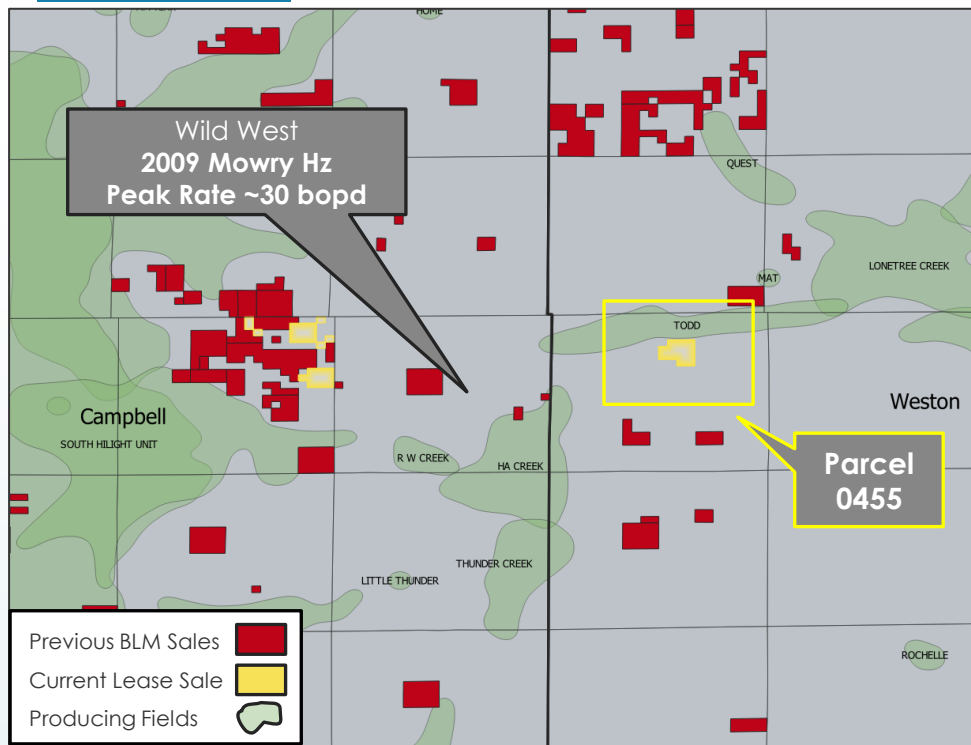
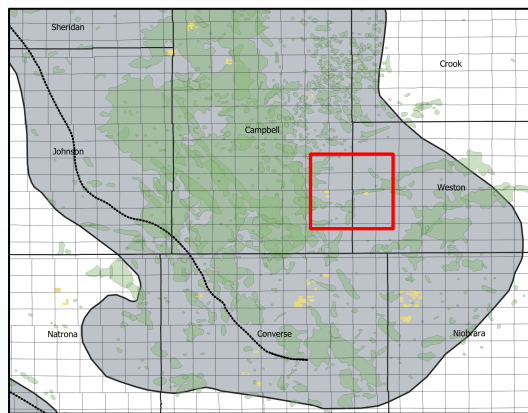


Formation	Potential	Justification
Teckla	Low	Eroded
Teapot	Low	Eroded
Parkman	Low	Eroded
Sussex	Low	Eroded
Shannon	Low	Eroded
Niobrara	Low	Eroded
Turner	Low	Eroded
Frontier	Low	Eroded
Mowry	Low	High structural complexity
Muddy	Low-Med	Modest vertical potential
Dakota	Low	Likely wet
Paleozoic	Low-Med	Productive on structure; possibly sour

VOID

PARCELS "WY-2020-06-0455"

309 Acres



➤ This parcel has low potential for development and consolidation.

➤ Recommend tossing out a lowball bid or not bidding at all (ie <\$20/acre)

➤ Offsetting acreage purchased by Land Energy Inc Q1 2018 for **\$22/acre**

➤ Offset Operators include Wellstar, Century, Western American Resources, Midland, Kirkwood

➤ Legacy production in this area consists of Muddy, Dakota, and normally pressured Turner. The offsetting Wild West Mowry attempt in 2009 was disappointing, but only had a 300 lb/ft frac – there is additional upside in this area if the acreage can be had for very cheap.

Formation	Potential	Justification
Teckla	Low	Tight
Teapot	Low	SWD Target
Parkman	Low	Distal, tight
Sussex	Low	Eroded, tight
Shannon	Low	Distal; tight
Niobrara	Low	Likely immature & unprospective
Turner	Med-Low	Normally pressured where charged
Frontier	Low	Tidal facies tight here
Mowry	Med-Low	Mature but untested with modern frac. Could be decent.
Muddy	Med-Low	Legacy Vt production; Could be a Hz candidate.
Dakota	Med-Low	Likely charge challenged. Untested horizontally.
Paleozoic	Low	Tight & wet

Exploration Upside
(1-10)

Stacked Targets

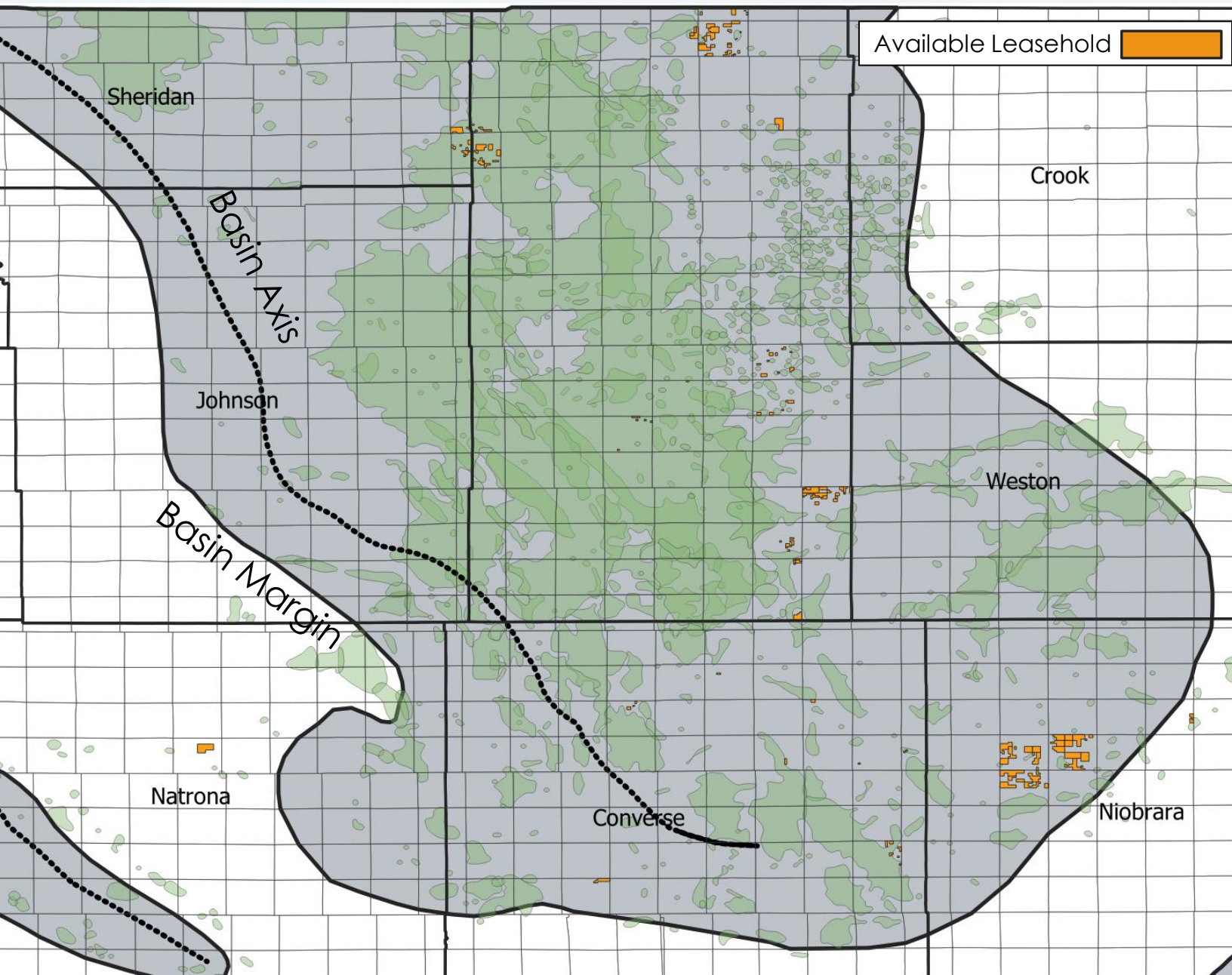
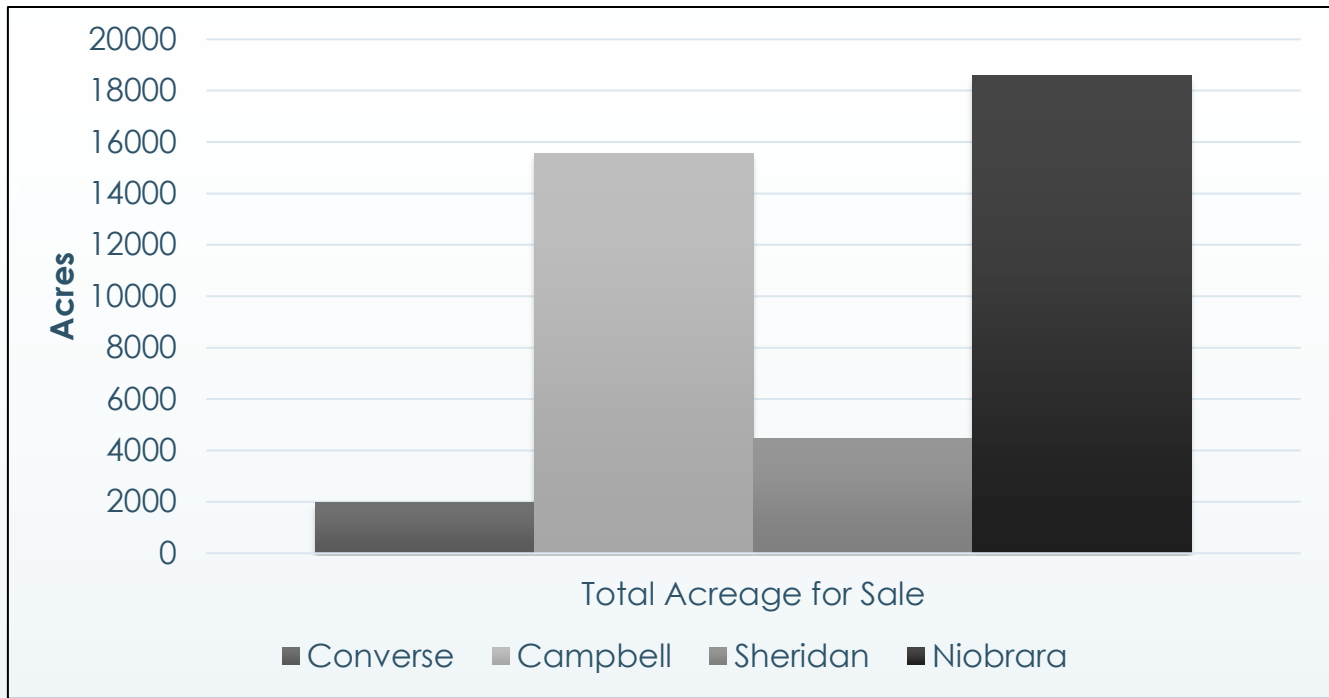
Geologic Hazards (1-10)

Likelihood of Development (1-10)

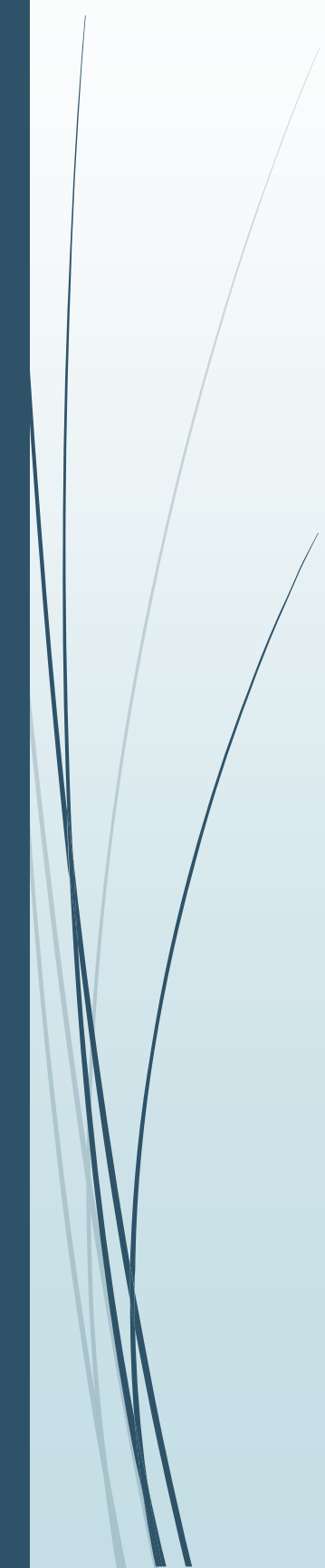
Overall Recommendation
(1-10)

0 2 4 6 8 10

Q3 Available Leasehold

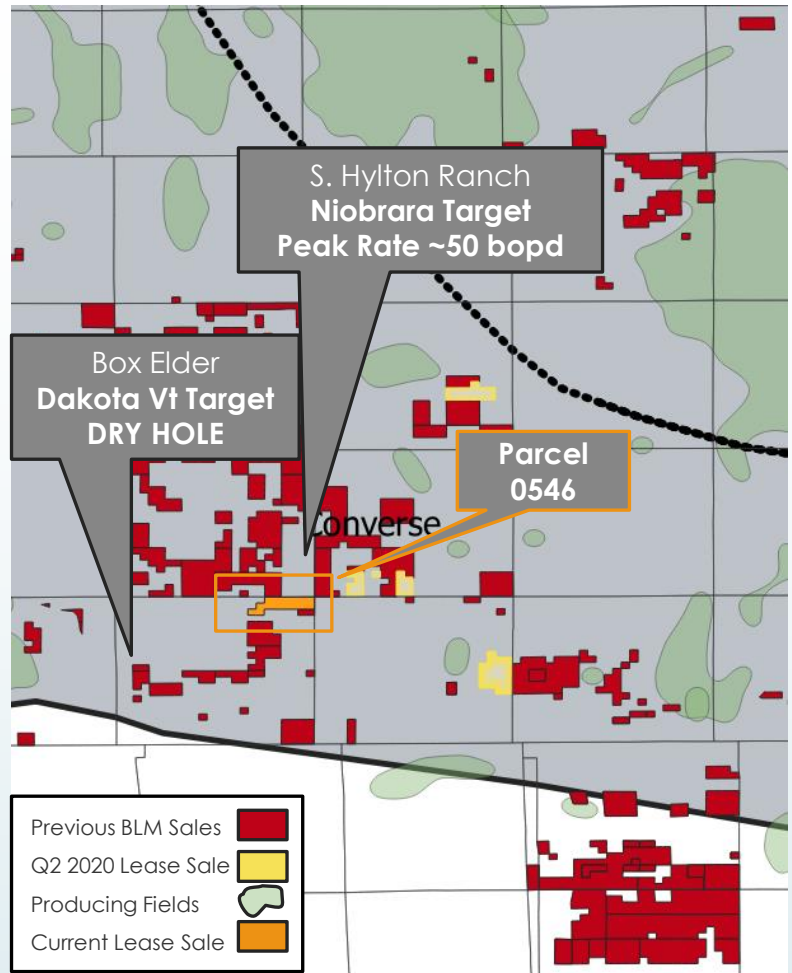
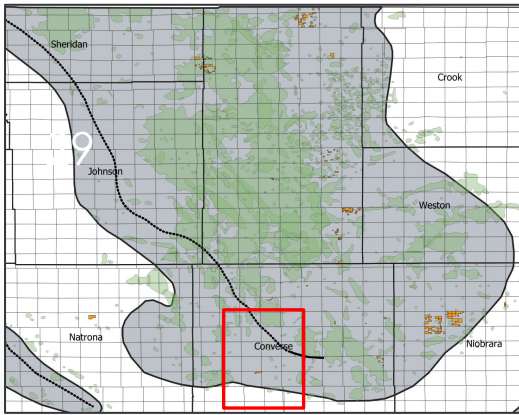


Converse County

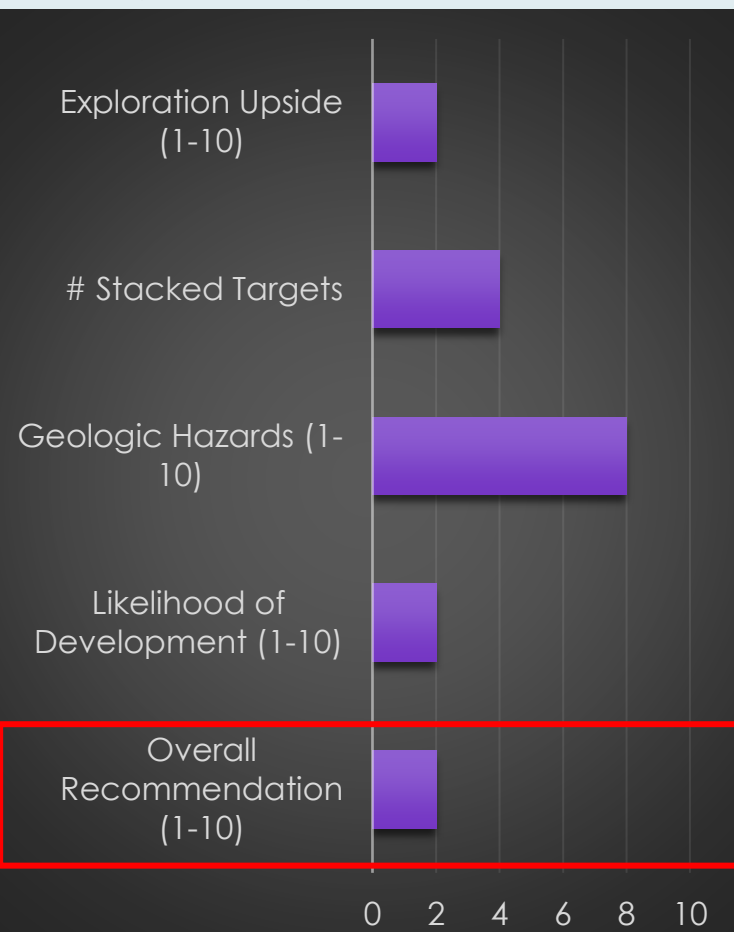


PARCEL "WY-2020-09-0546"

553 Acres



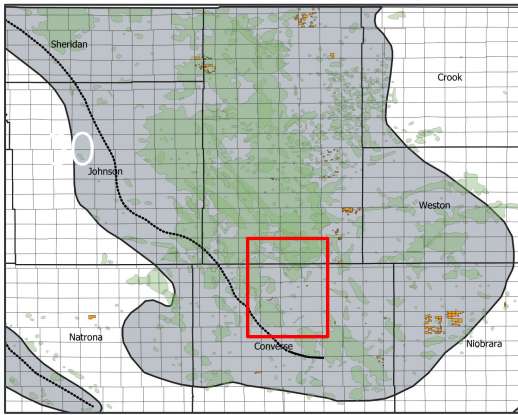
- Parcel has low potential for development & consolidation
- Recommend bidding conservatively (ie <\$50/acre) or deploying capital elsewhere
- Offsetting acreage purchased by R&R in Q1 2020 for **\$27/acre**
- Offset Operators include Lincoln and Panther
- *This parcel is dangerously close to the steeply dipping basin margin. 2D seismic lines indicate several structures/closures in this area that could be effective traps, but the prize is likely modest.*



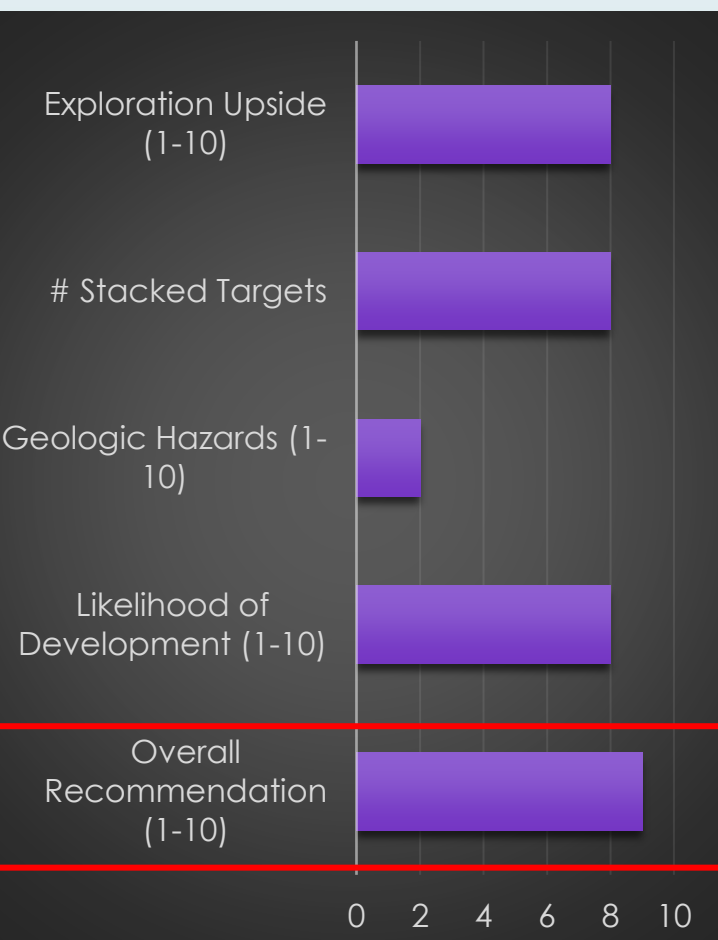
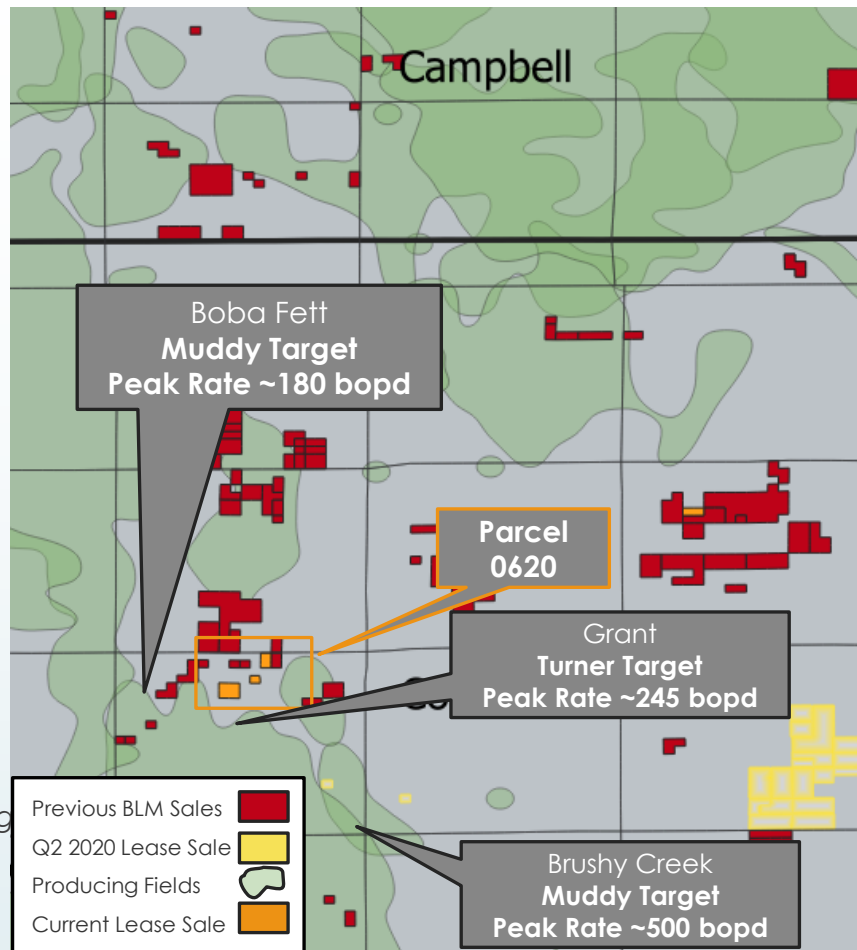
Formation	Potential	Justification
Teckla	Low	Wet
Teapot	Low	Wet
Parkman	Low	Undertrapped & Wet – offsetting dry holes confirm
Sussex	Low	Tight/Eroded
Niobrara	Medium-Low	Structure will make for difficult drilling; likely fractured
Turner	Low	Eroded
Frontier	Medium-Low	Local closures could be effective if 3D seismic avail.
Mowry	Medium	Nicely fractured; high pressure grad
Muddy	Medium	Existing Vt fields to the west (Big Muddy) confirm channels in area.
Paleozoic	Low	No shows; tight & wet

PARCEL "WY-2020-09-0620"

239 Acres



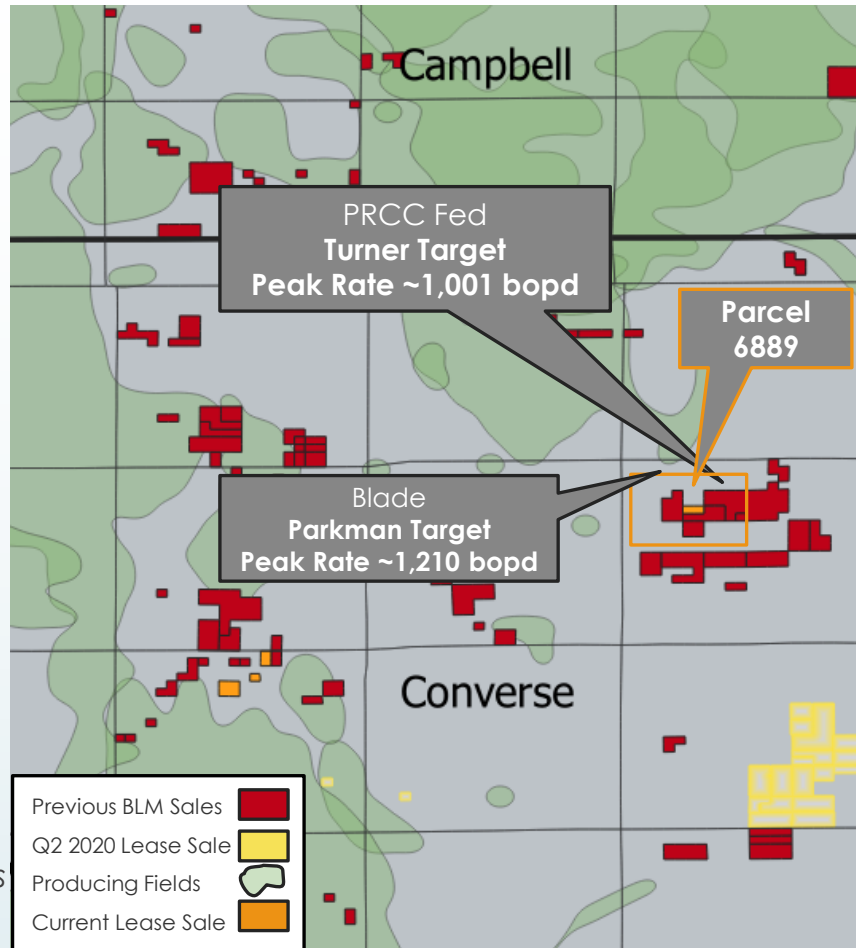
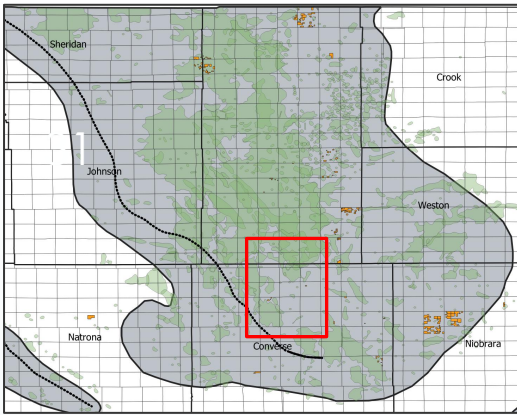
- Parcel has high potential for development & consolidation
- Recommend bidding aggressively (ie ~\$2,000/acre)
- Offsetting acreage purchased by Titan in Q1 2019 for **\$5,751/acre**
- Offset Operators include Samson, EOG, Wold, Elephant, Impact
- These are high quality parcels on trend with multiple emerging plays in the powder including the Sussex, Shannon, and Muddy. Given that Samson is a pure play PRB operator now and these parcels are in the core of their holdings, it's highly likely that they will be developed or acquired.



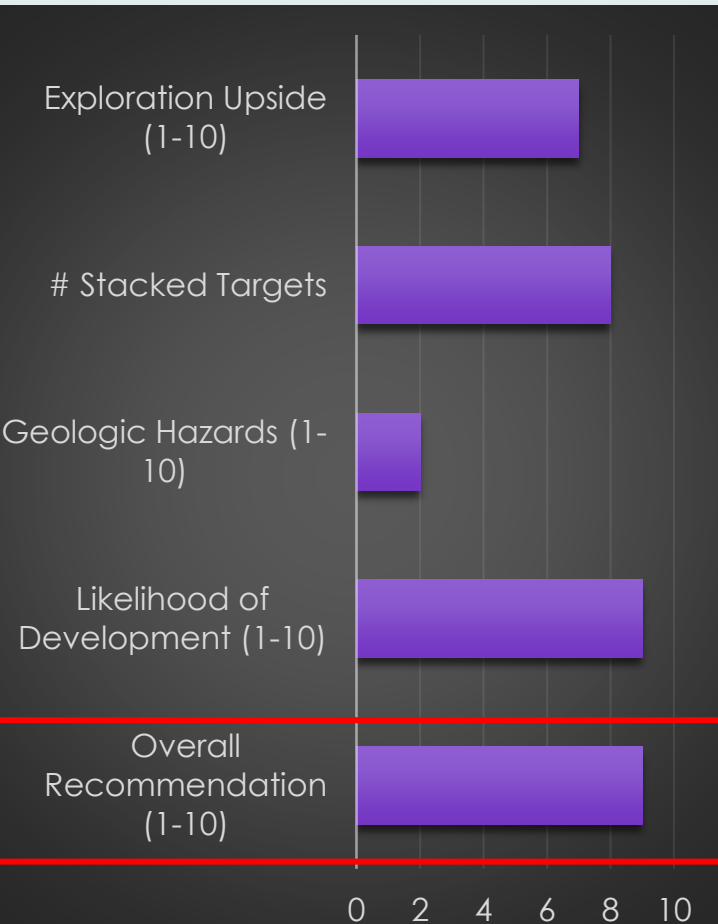
Formation	Potential	Justification
Teckla	Low	Wet
Teapot	Low	Wet
Parkman	Medium	Probably Vt target but may work as Hz on structure
Sussex	Med-High	Hornbuckle extension possible
Shannon	Medium	Multiple shows but reservoir unproven with these parcels
Niobrara	High	Not tested in this township but high potential
Turner	High	Likely a future Turner development area.
Frontier	Med-High	Likely shares flow unit w/ Turner but still prospective.
Mowry	High	High upside, especially if combined w/ Muddy flow unit/target
Muddy	High	Some of the most exciting Muddy potential in the basin
Paleozoic	Low	Likely tight & wet

PARCEL "WY-2020-09-6889"

80 Acres



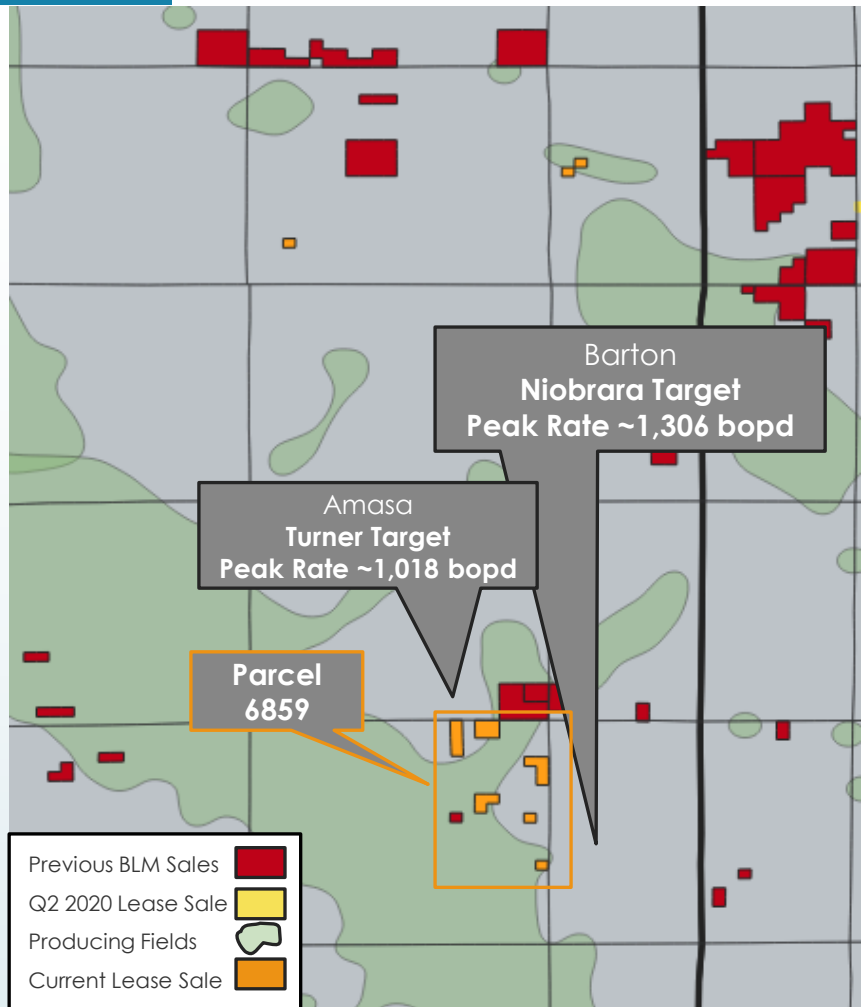
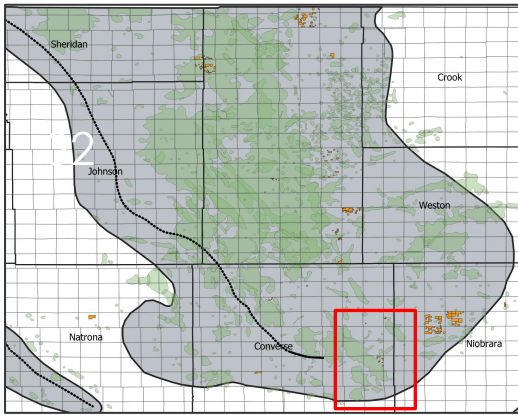
- Parcel has very high potential for development & consolidation
- Recommend bidding aggressively (ie ~\$2,500/acre)
- Offsetting acreage purchased by Moncrief in Q1 2020 for **\$526/acre**
- Offset Operators include Devon, EOG, Wold, Elephant, H&M, Impact, Moncrief
- *This is a low risk, high quality parcel. It's in one of Devon's core areas for Turner, Parkman, and Niobrara. Deeper potential is untested in this area (Muddy, Dakota, etc). This may be the lowest risks/highest confidence parcels in the sale.*



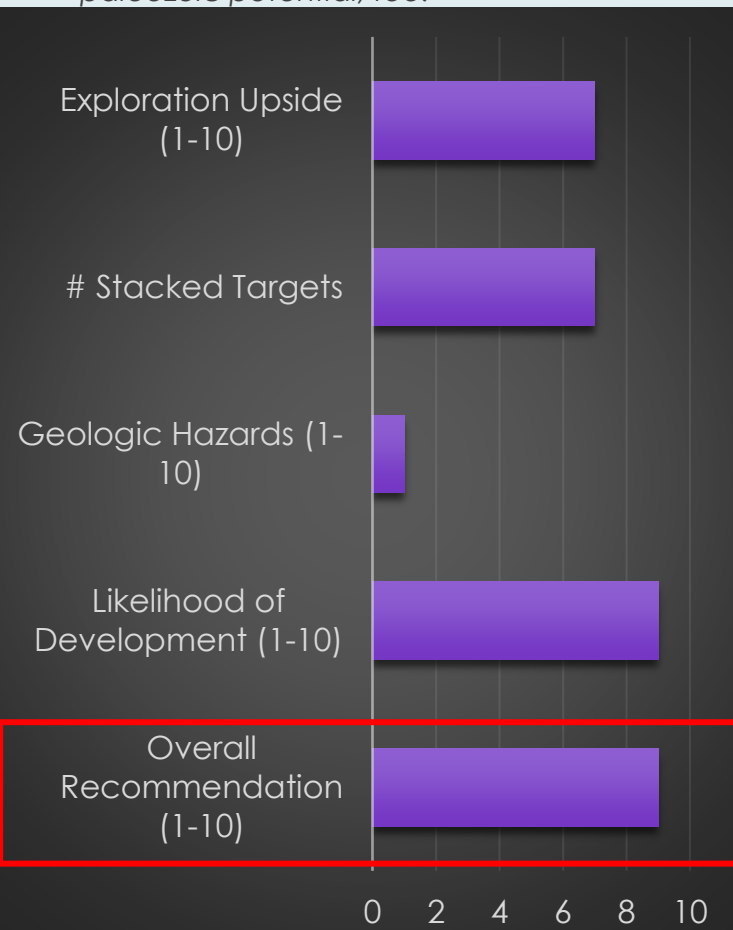
Formation	Potential	Justification
Teckla	Low	Wet
Teapot	Low	Wet
Parkman	High	Proven producer in this area. 600-1,200 bopd. Water cut highly variable.
Sussex	Med-Low	Reservoir untested here; may be tight
Shannon	Med-Low	Unproven reservoir quality
Niobrara	High	Devon expansion area. High quality B Chalk
Turner	High	Strong nearby well results—may already be developed
Frontier	Med-High	Likely accessed by Turner frac
Mowry	High	Untested in this township but highly prospective. Good GOR.
Muddy	Medium	Vertical Muddy present to the east, but untested here.
Paleozoic	Low	Likely tight & wet

PARCEL "WY-2020-09-6859"

679 Acres



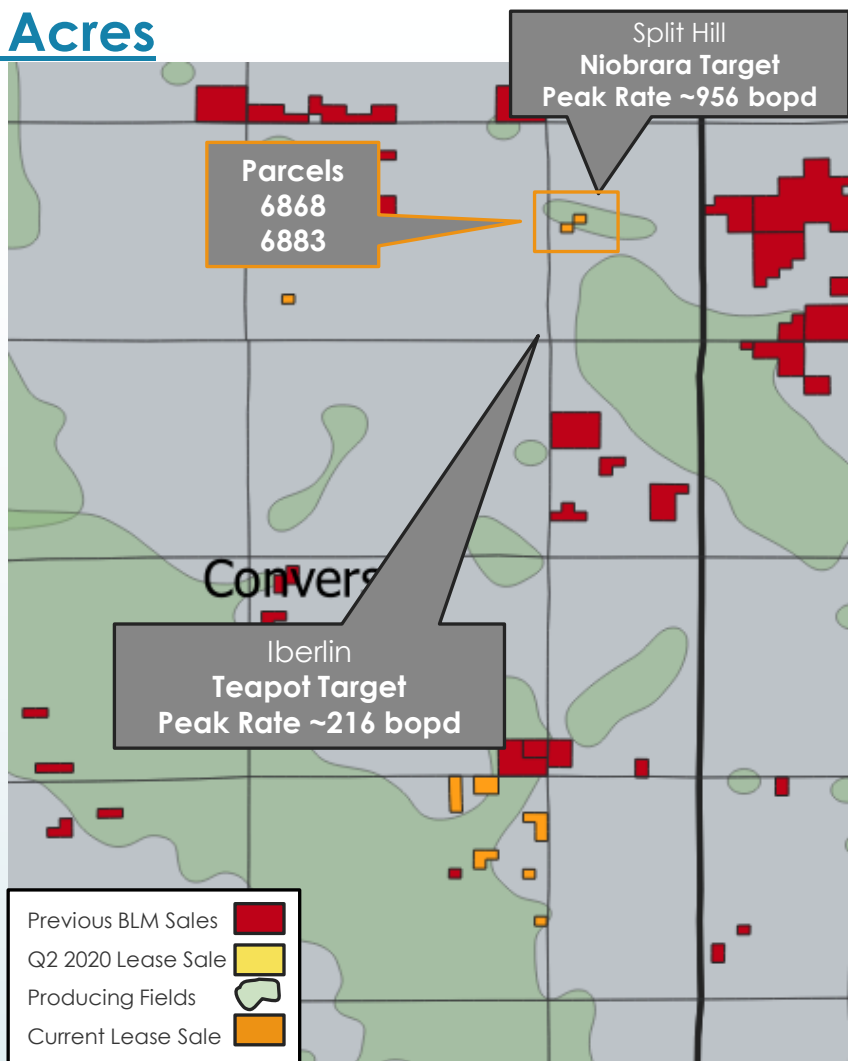
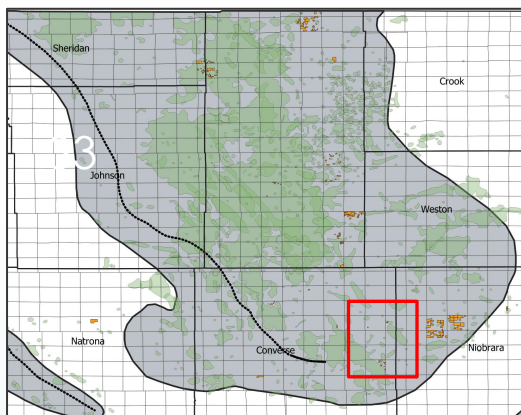
- Parcel has very high potential for development & consolidation
- Recommend bidding aggressively (ie ~\$2,500/acre)
- Offsetting acreage purchased by High West Q2 2018 for \$1,701/acre
- Offset Operators include Chesapeake, Oxy, High West, Balidior, Transworld
- These are very compelling parcels, in one of the best areas in the basin. These are in the core of the southern Niobrara sweet spot, where Chesapeake and Oxy have made some incredible wells. Strong offsetting Turner results and upside Teapot potential make these some great parcels – bid strongly here. Fascinating paleozoic potential, too.



Formation	Potential	Justification
Teckla	Low	Wet
Teapot	High	Updip Well Draw potential
Parkman	Low	Eroded & tight here
Sussex	Low	Reservoir tight here
Shannon	Low	Tight
Niobrara	High	Best parcels for Niobrara potential in the entire sale
Turner	High	Great area for Turner
Frontier	High	Highly productive—shares flow unit w/ Turner
Mowry	High	Structurally benign but good maturity window.
Muddy	Medium	Legacy Muddy prod on basin margin. Likely tight here.
Paleozoic	High	Untested dunes seen on 3D seismic.

PARCEL "WY-2020-09-6868, 6883"

80 Acres



Parcel has medium potential for development & consolidation

Recommend bidding moderately (ie ~\$500/acre)

Offsetting acreage purchased by Ossidiana in Q2 2019 for **\$102/acre**

Offset Operators include Finley, Devon, Chesapeake, Oxy, High West, Balidor, Wichita River, Ossidiana

These parcels are likely good value for your money, provided you can acquire them for less than \$500/acre. They are along trend with Kaye field (Teapot), but the greater potential here is with shallow Niobrara B Chalk, Turner, and Mowry. There are also Dakota & Muddy shows in this immediate area.

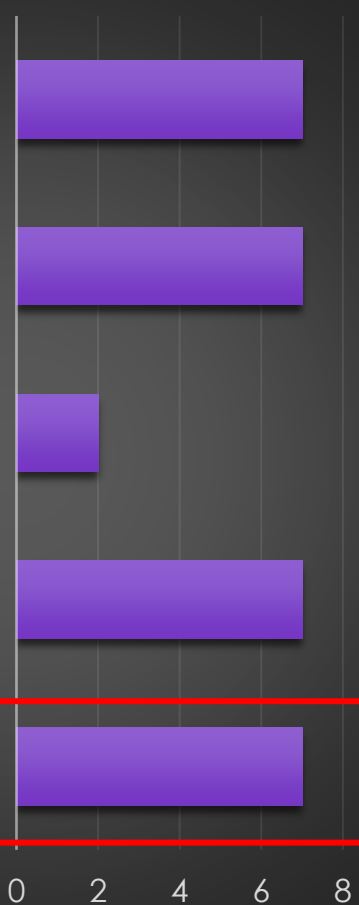
Exploration Upside (1-10)

Stacked Targets

Geologic Hazards (1-10)

Likelihood of Development (1-10)

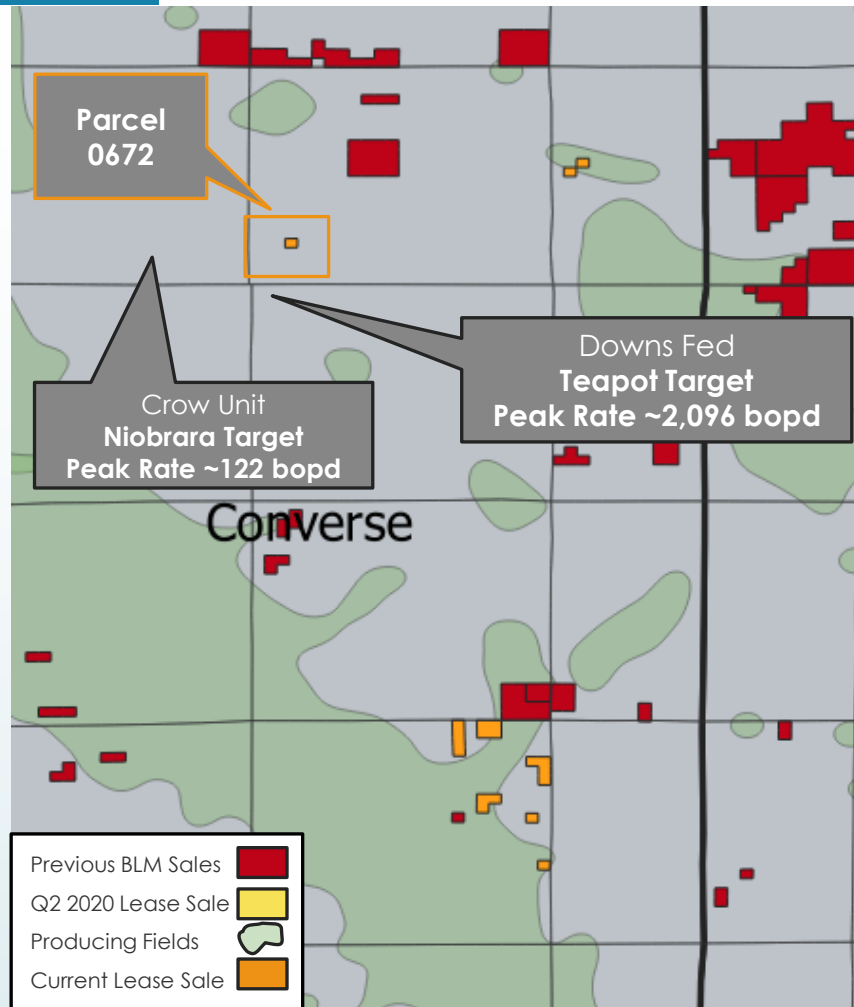
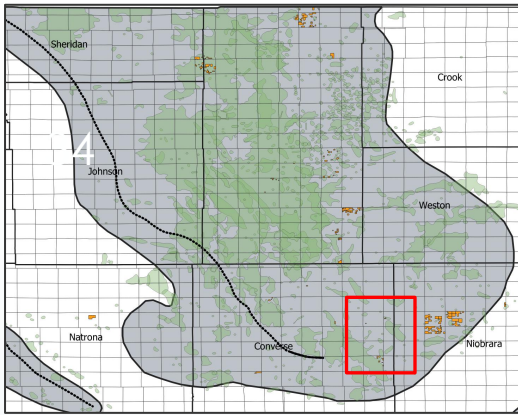
Overall Recommendation (1-10)



Formation	Potential	Justification
Teckla	Low	Wet
Teapot	Med-High	Along trend Kaye potential, but may be getting tight
Parkman	Low	Tight
Sussex	Low	Tight
Shannon	Low	Tight
Niobrara	High	Shallow, oily B Chalk target
Turner	High	Updip, lower pressure but good oil cut Turner
Frontier	Medium-High	Unproven in this township, may be tight. May also be accessed by Turner
Mowry	High	Shallow, low GOR. Good Mowry potential here.
Muddy	Medium	Shows in area but unproven.
Paleozoic	Medium-Low	Leo getting lean, Minnelusa could still be productive

PARCEL "WY-2020-09-0672"

40 Acres



➤ Parcel has medium-high potential for development & consolidation

➤ Recommend bidding moderately (ie ~\$1000/acre)

➤ Offsetting acreage purchased by Renos in Q3 2018 for **\$1,001/acre**

➤ Offset Operators include Devon, Renos, Conoco, Balidor, Wichita River, Ossidiana

➤ *This parcel is just slightly updip from Devon's incredible Teapot producers, the Downs Fed wells. They've located a Teapot sweet spot and have drilled multiple 2,000+ BOPD wells. Acquiring this parcel would be a good way to gain additional Teapot exposure. Niobrara potential is good here as well, in spite of the legacy well results in the area (small fracs). This is a solid parcel for anything less than \$1,000.*

Exploration Upside
(1-10)

Stacked Targets

Geologic Hazards (1-10)

Likelihood of
Development (1-10)

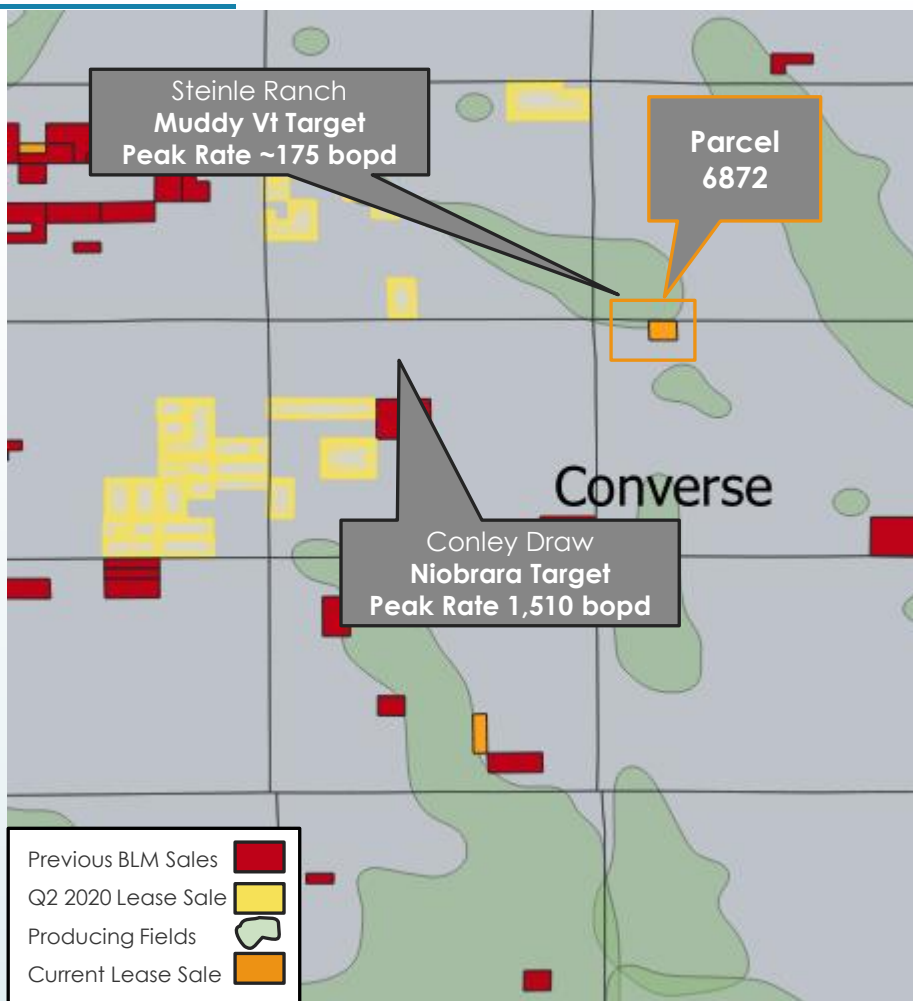
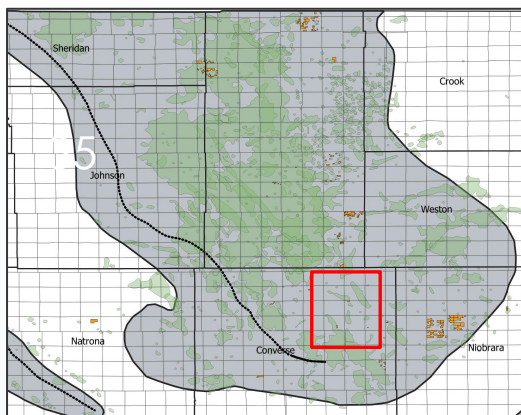
Overall
Recommendation
(1-10)

0 2 4 6 8

Formation	Potential	Justification
Teckla	Low	Tight/Wet
Teapot	High	Updip from Downs Fed parcels—best Teapot in the basin
Parkman	Low	Tight
Sussex	Low	Tight
Shannon	Low	Tight
Niobrara	High	Legacy wells surrounding, but Nio has low GOR and high carbonate content.
Turner	Medium	Unproven here but could be prospective.
Frontier	Medium	Tidal facies may be tight here
Mowry	High	Updip, attractive liquids Mowry potential
Muddy	Medium	Shows but unproven.
Paleozoic	Low	Low TOC, Minnelusa likely wet

PARCEL "WY-2020-09-6872"

161 Acres



➤ Parcel has medium potential for development & consolidation

➤ Recommend bidding moderately (ie ~\$500/acre)

➤ Offsetting acreage purchased by Midland Resources in Q1 2018 for **\$124/acre**

➤ Offset Operators include Devon, Matrix, Wexpro, Renos, Colorado Energy Minerals, Midland Resources, Sunrise Exploration, Stone Energy

➤ This parcel is on the updip fringe of Devon's northern Converse area. It is prospective for Niobrara, Turner, Mowry, and Muddy, but most of these zones are untested in this township. The legacy Steinle Ranch field is a Muddy field that could be converted to a horizontal play. This is a good parcel if it can be obtained for a low price—future operators will chase producing zones in this direction.

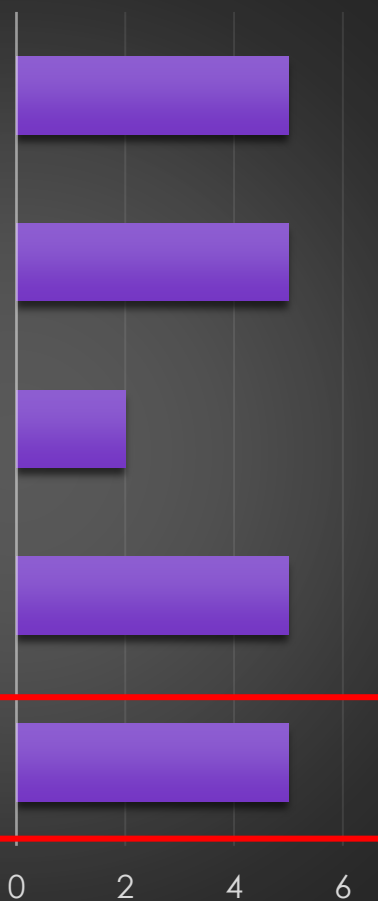
Exploration Upside (1-10)

Stacked Targets

Geologic Hazards (1-10)

Likelihood of Development (1-10)

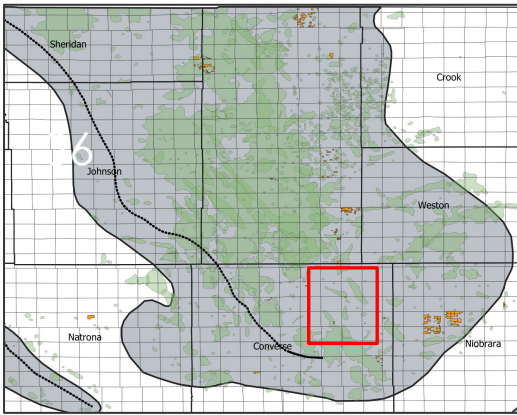
Overall Recommendation (1-10)



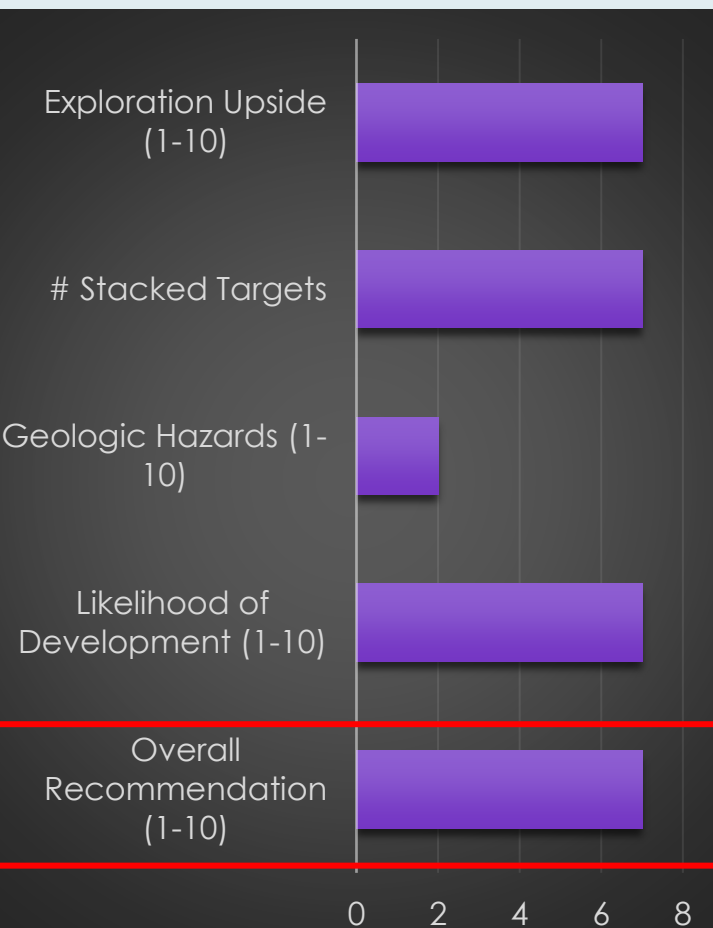
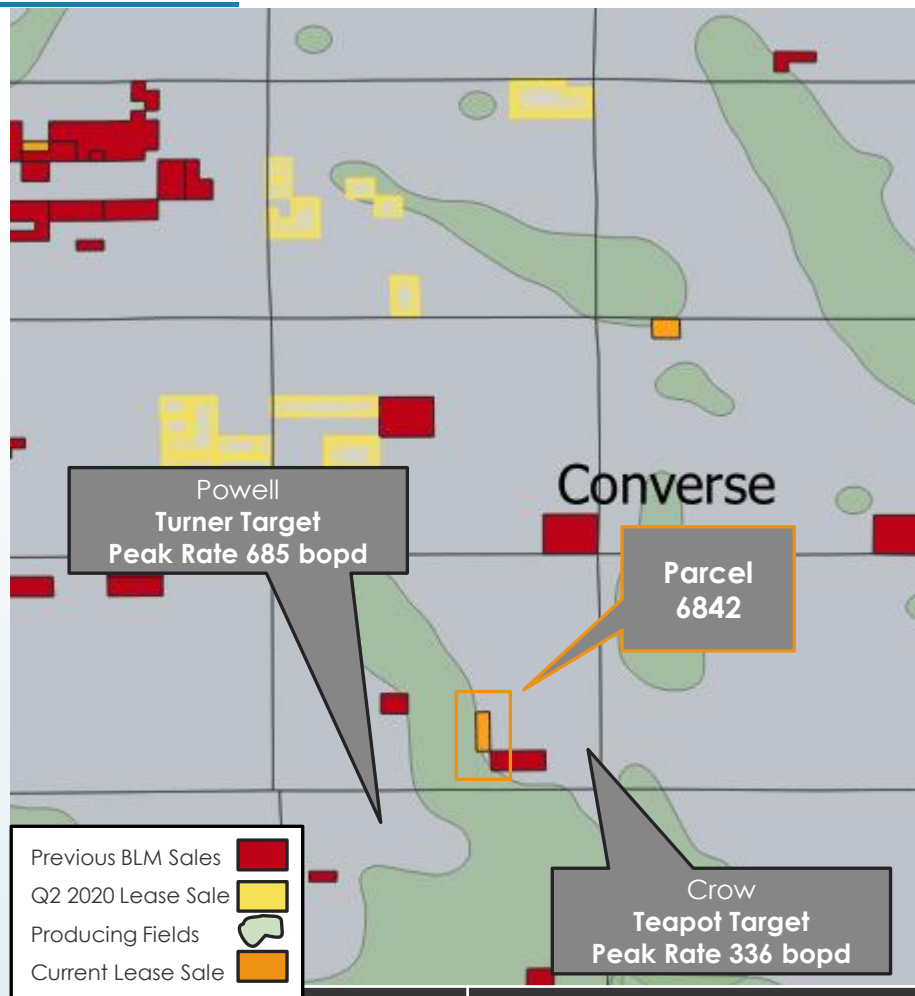
Formation	Potential	Justification
Teckla	Low	Tight
Teapot	Low	Likely tight
Parkman	Low	Tight
Sussex	Low	Tight
Shannon	Low	Tight
Niobrara	High	~9,000' TVD offers shallow but still over-pressured Nio oil
Turner	Medium	Unproven here but could be prospective here.
Frontier	Medium	Untested but large downdip fetch area
Mowry	High	Shallow Mowry at good maturity levels
Muddy	High	Great potential but untested as Hz here
Paleozoic	Low	Tight

PARCEL "WY-2020-09-6842"

160 Acres

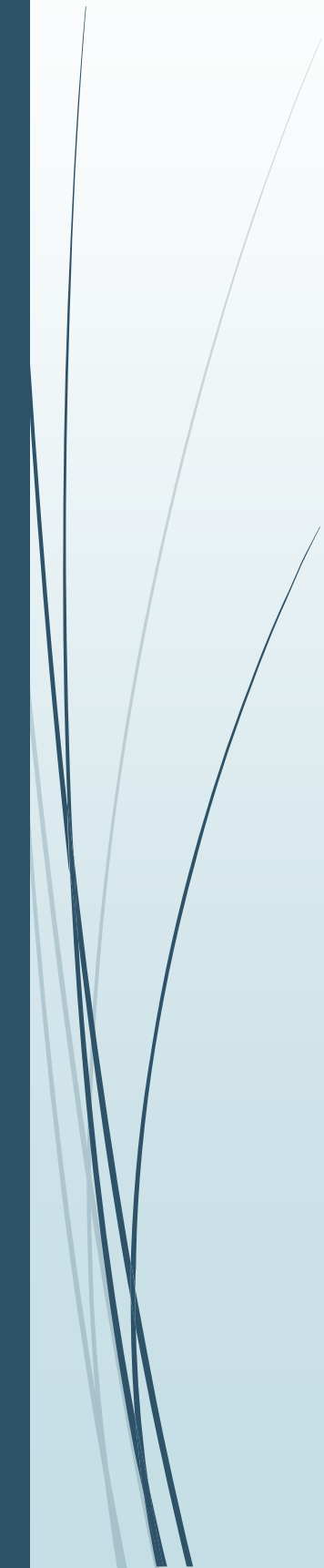


- Parcel has medium-high potential for development & consolidation
- Recommend bidding moderately aggressively (ie ~\$1000/acre)
- Offsetting acreage purchased by Kirkwood in Q2 2019 for \$201/acre
- Offset Operators include Devon, Oxy, Renos, Kirkwood, Anschutz, Chesapeake
- This parcel is updip and along trend with the vertical teapot fields Mikes Draw and Well Draw. Devon has had great success converting the fields' fringe areas into horizontal plays (Downs Fed area), but they have not tested modern completions in this township. Oxy is actively appraising Niobrara and Turner to the southwest, and success there will help prove up this parcel as well. Additionally, there is a seismic anomaly in the Sussex in this township that this parcel would give you exposure to.



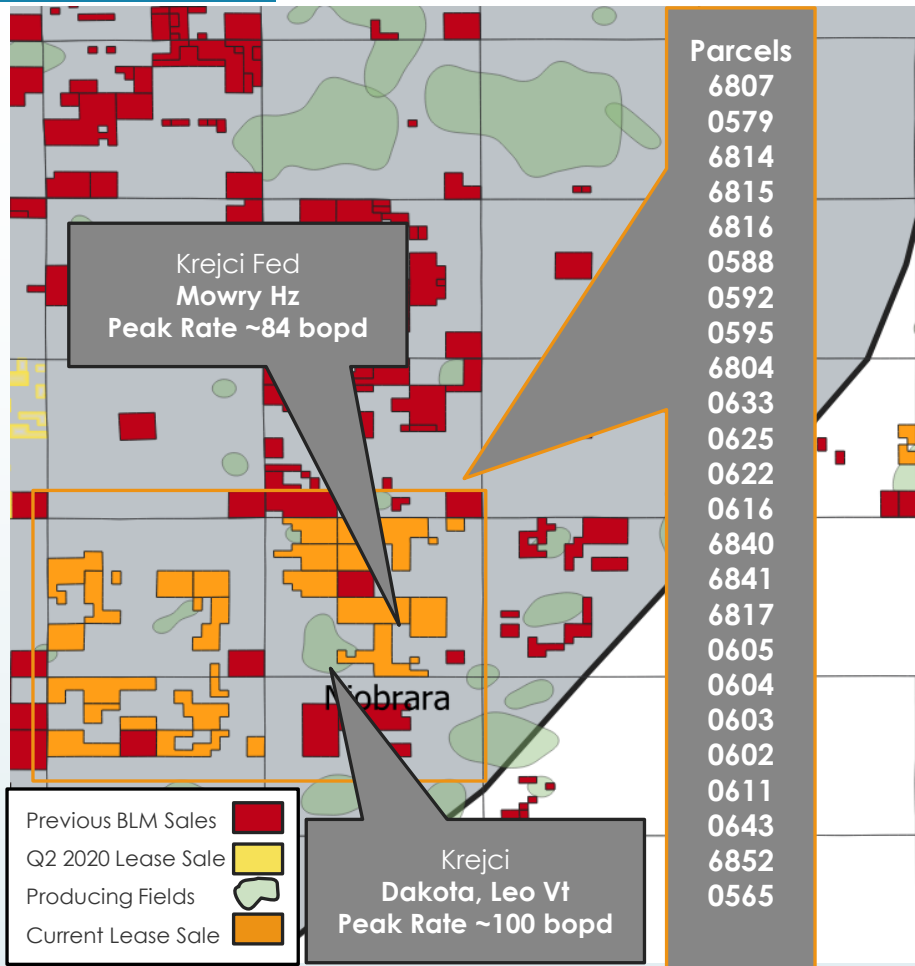
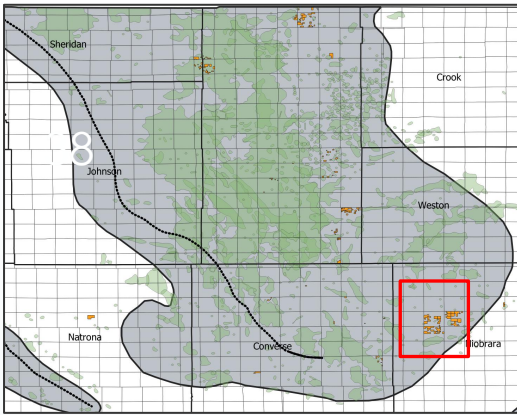
Formation	Potential	Justification
Teckla	Low	Tight
Teapot	High	Updip of Mikes Draw, needs to see a modern frac in tighter rock
Parkman	Low	Tight
Sussex	Medium	Seismic amplitude anomaly in 37N 70W
Shannon	Low	Tight
Niobrara	High	Thick chalks and highly over pressured—very good Nio
Turner	High	Some of the best Turner in the basin
Frontier	High	Great Frontier—nicely over pressured
Mowry	High	~1.4Ro Mowry offers good liquids at this location
Muddy	Medium	Reservoir may be tight—untested here
Paleozoic	Low	Tight

Niobrara County

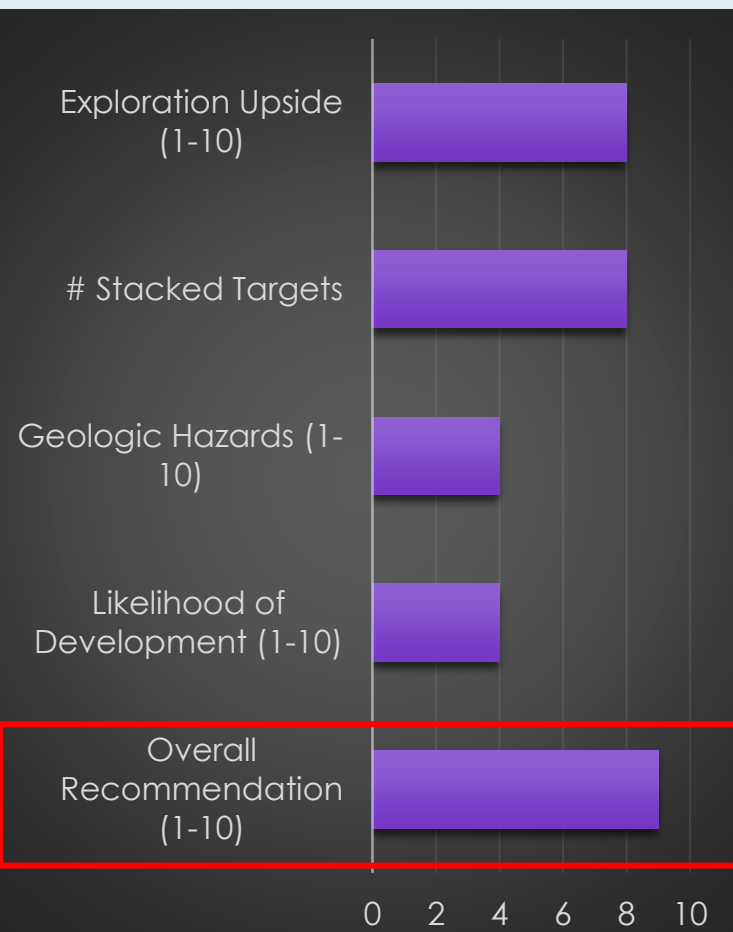


PARCEL "WY-2020-09-see parcel list below"

22,684 Acres



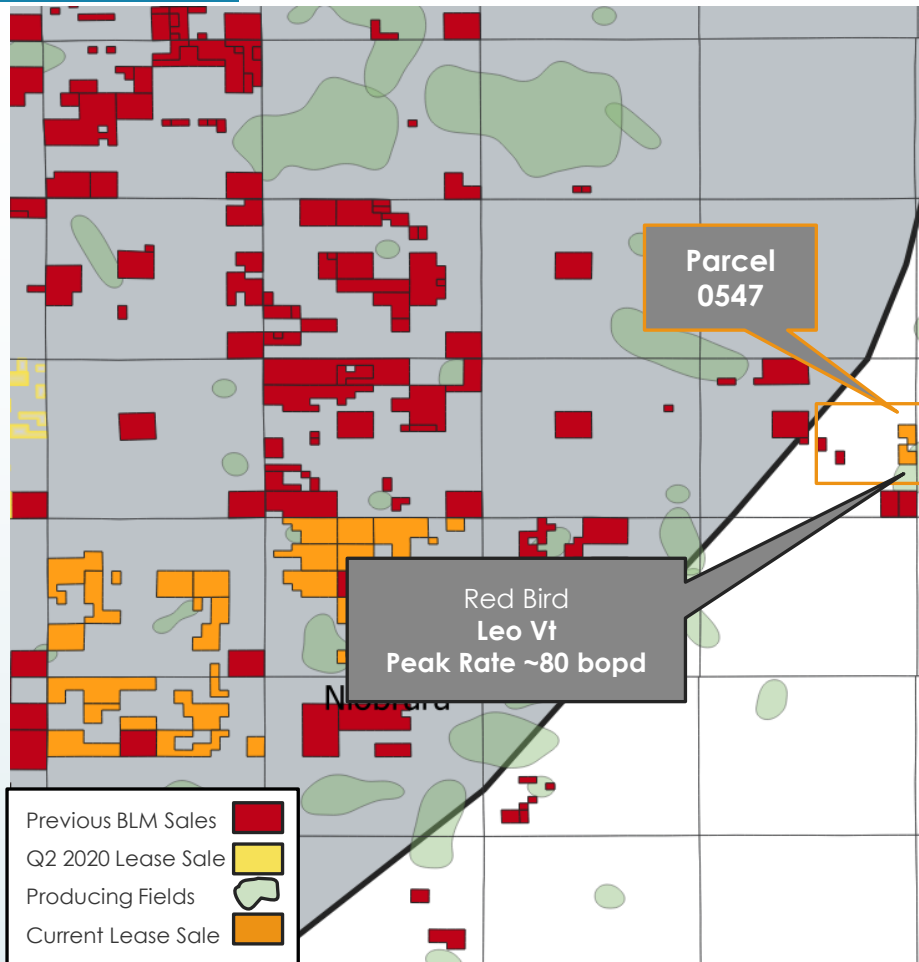
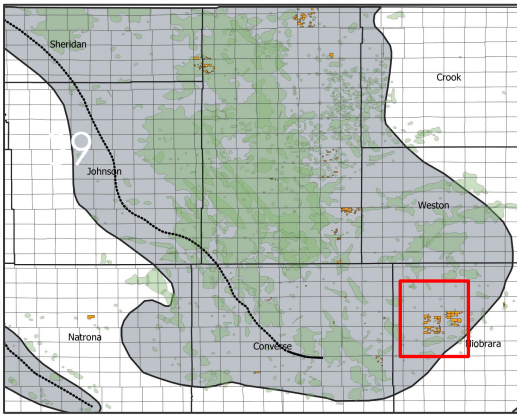
- Parcel has medium-high potential for development & consolidation
- Recommend bidding modestly (ie ~\$100/acre)
- Offsetting acreage purchased by Thunder Basin in Q2 2019 for **\$26/acre**
- Offset Operators include Gulf, Thunder Basin, Sunshine, Midland, Bayless, Colorado Energy Minerals, Century
- These parcels combine to make up more than 22 thousand acres of shallow, high oil cut exploratory potential from multiple Cretaceous and Paleozoic reservoirs. This area was a key exploration focus for CHK for several years, and multiple other large independents are interested in this part of the basin. If you can get these acres for less than \$100 you will have great exposure to an emerging exploration area.



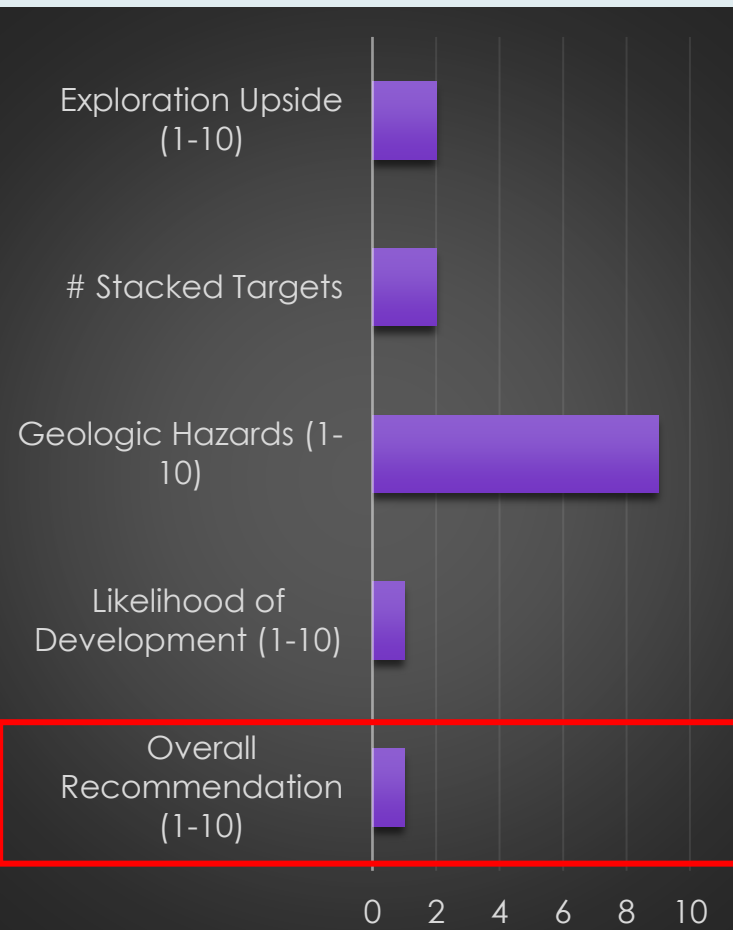
Formation	Potential	Justification
Teckla	Low	Tight
Teapot	Medium	Some shows but may need structure to trap
Parkman	Low	Tight
Sussex	Low	Tight
Shannon	Low	Tight
Niobrara	High	Shallow and both chalks present—untested in this area but highly prospective.
Turner	Medium	Normally/underpressured but could still be charged
Frontier	Medium	Tidal facies complicated but can have high reservoir quality
Mowry	High	Krejci Mowry wells are best Oil EUR/FT in the basin. Stray Mowry sands are highly productive
Muddy	High	Legacy prod confirms functional petroleum system
Dakota	High	Good offsetting Vt prod
Paleozoic	High	Leo highly prospective, with reports of bleeding oil and strong gas shows

PARCEL "WY-2020-09-0547"

400 Acres

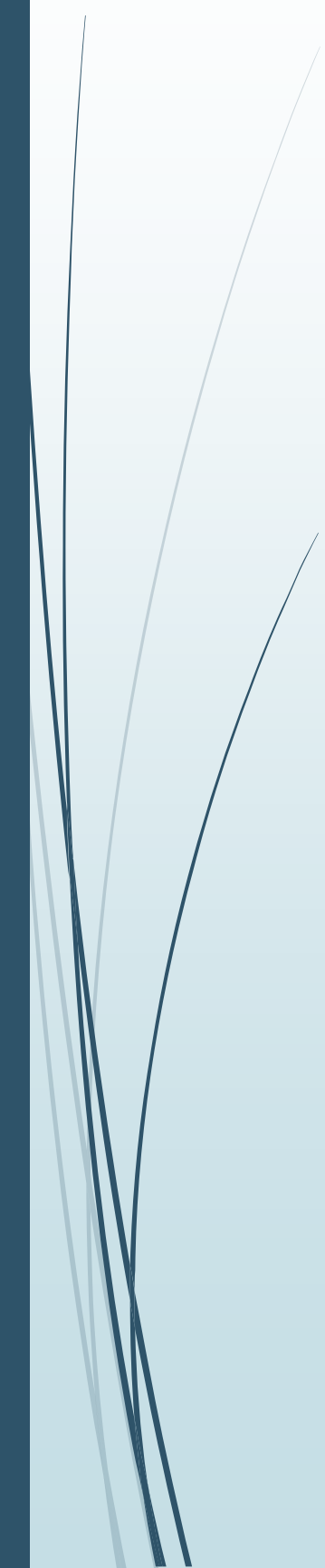


- Parcel has low potential for development & consolidation
- Recommend not bidding
- Offsetting acreage purchased by Western American in Q3 2018 for **\$6/acre**
- Offset Operators include Gulf, Western American
- *Structurally complex and with very limited potential. Recommend deploying your capital elsewhere.*



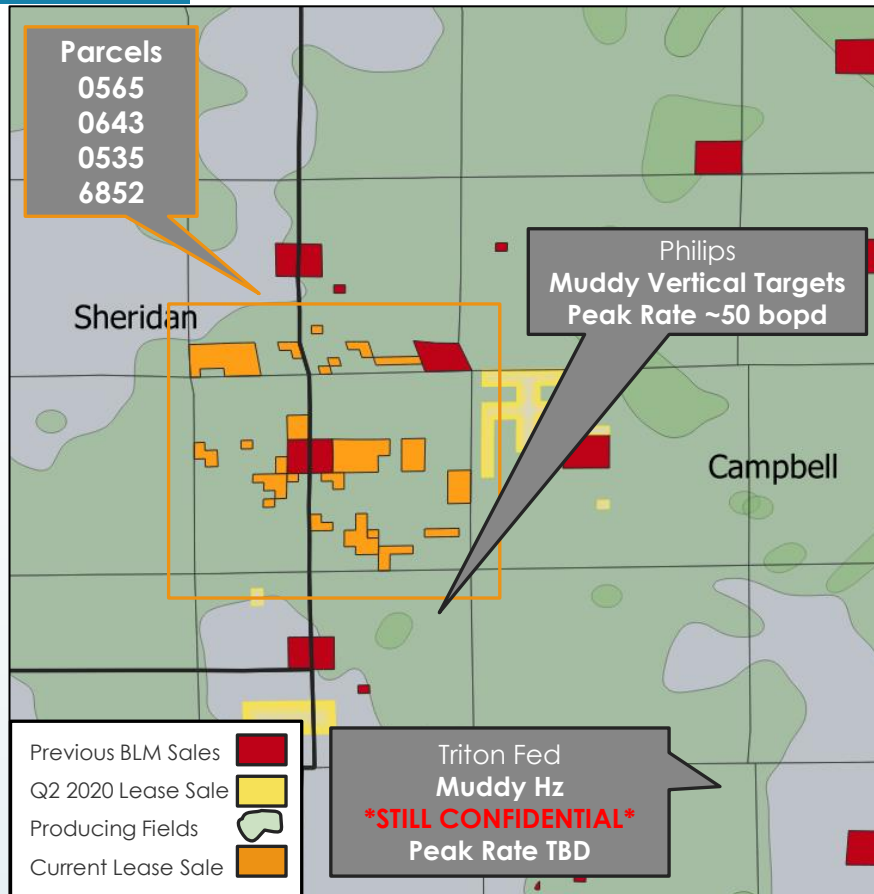
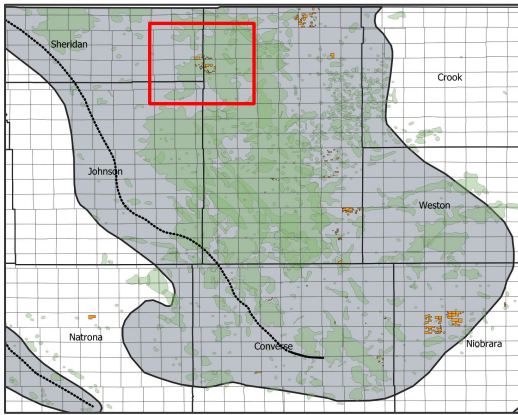
Formation	Potential	Justification
Teckla	Low	Tight
Teapot	Low	Tight
Parkman	Low	Tight
Sussex	Low	Tight
Shannon	Low	Tight
Niobrara	Low	Immature
Turner	Low	Likely undercharged
Frontier	Low	Likely undercharged
Mowry	Low	Marginally mature
Muddy	Med-Low	Nearby shows but likely wet
Dakota	Med-Low	Shows at Red Bird but likely wet
Paleozoic	Medium	Red Bird Leo production possible but highly risky

Campbell/Sheridan Counties



PARCELS "WY-2020-09-0565, 0643, 0535, 6852"

4,487 Acres



Formation	Potential	Justification
Teckla	Low	Likely tight & undercharged
Teapot	Low	Tight & wet
Parkman	Medium	On trend with some existing fields. Potential exists.
Sussex	Low	Likely tight
Shannon	Medium	Facies variable but has potential. Good position relative to known source rocks.
Niobrara	High	Underexplored. High potential here.
Turner	Medium	Underexplored but has potential.
Frontier	Med-Low	May share flow unit with Turner. Offset attempts have disappointed.
Mowry	High	Proximity to "third hot spot" encouraging. Untested.
Muddy	High	Legacy Vt attempts. Facies may be more variable than many expect.
Dakota	Med-low	Few penetrations. Untested.
Paleozoic	Low	Downdip from classic Minnelusa fields. Likely undercharged. Will require 3D.

These parcels have medium potential for development and consolidation.

Recommend bidding modestly (ie <\$500/acre)

Offsetting acreage purchased by Baseline in Q4 2019 for \$640/acre

Offset Operators include Baseline, EOG, Anschutz, Noble (Chevron), Ballard, Mason

These parcels are in an underexplored part of the basin that is seeing interest from multiple companies. These parcels are on trend with productive fields to the SE and there are pending well results that could quickly change how many people view this corner of the PRB. Limited well control means you should avoid overbidding for these parcels—anything less than \$500/acre is a good price.

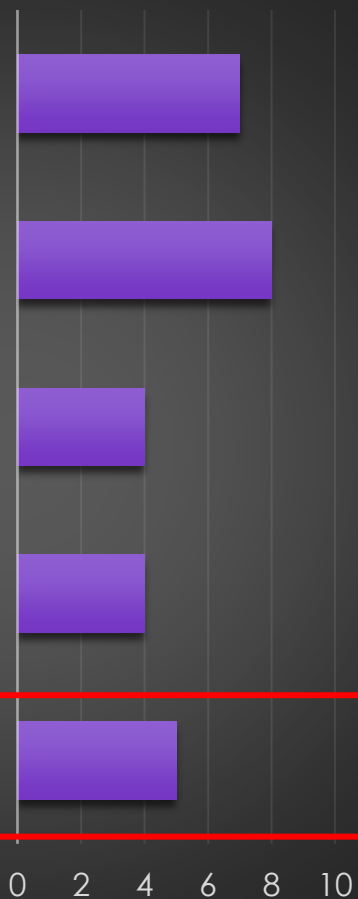
Exploration Upside (1-10)

Stacked Targets

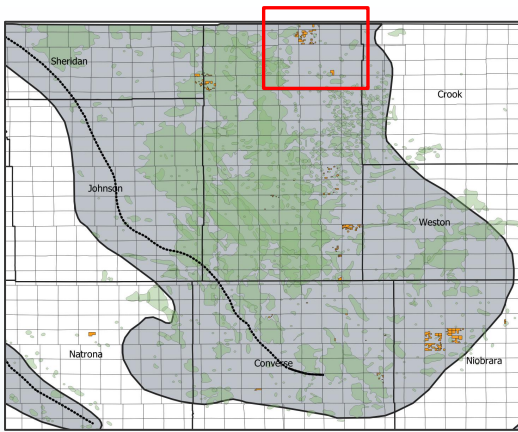
Geologic Hazards (1-10)

Likelihood of Development (1-10)

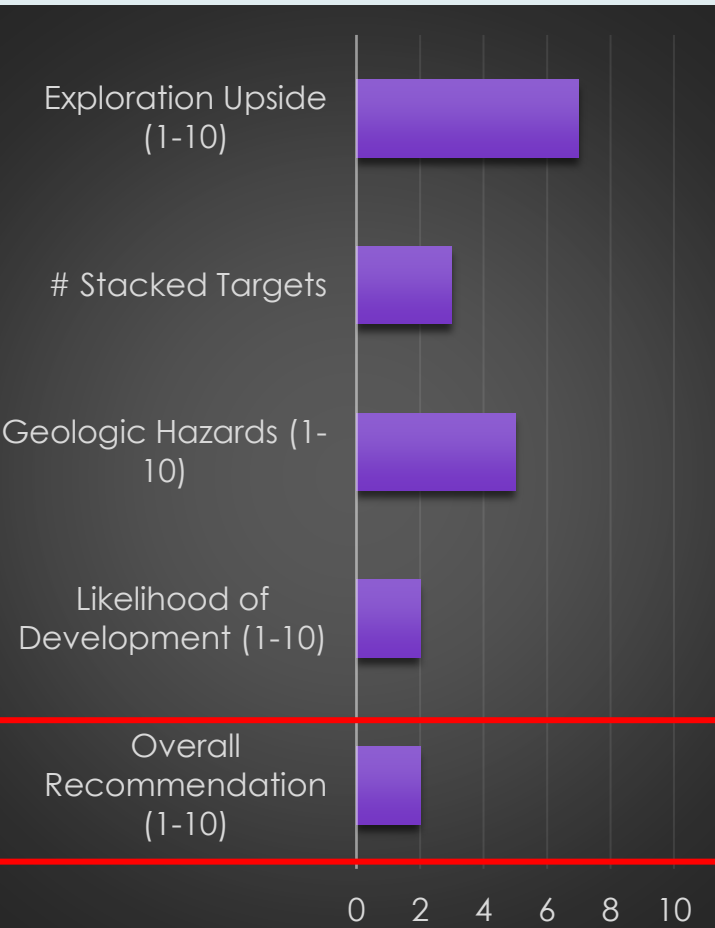
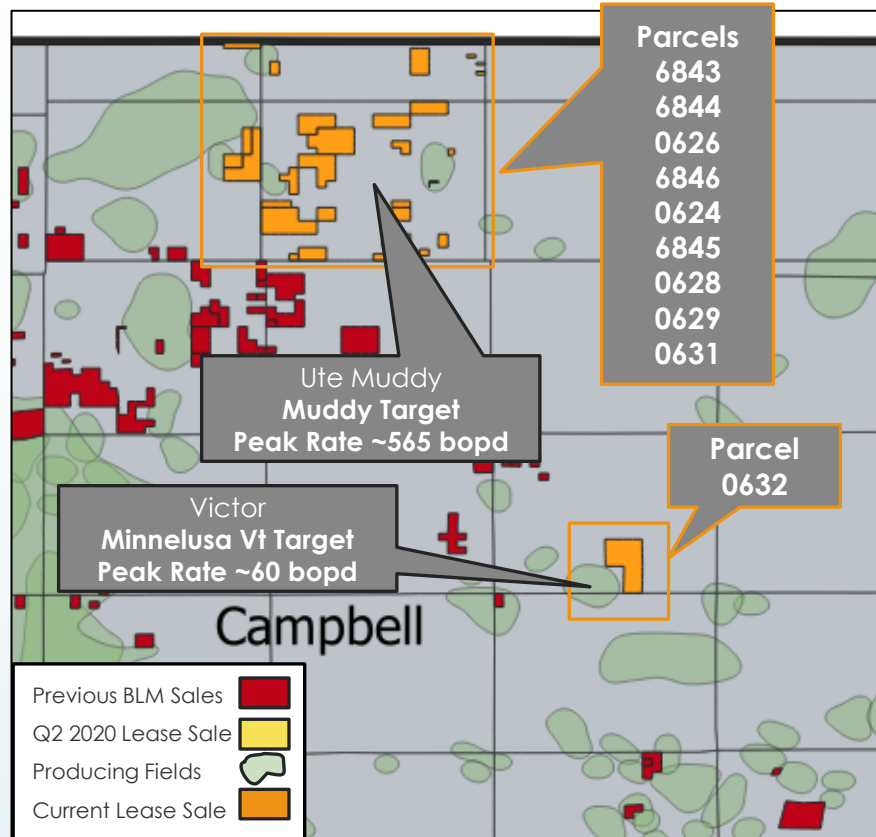
Overall Recommendation (1-10)



PARCELS "WY-2020-09-6843, 6844, 0626, 6846, 0624, 6845, 0628, 0629, 0631, 0632" 7,349 Acres



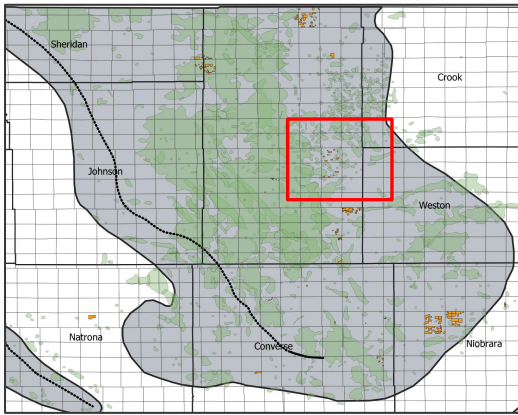
- These parcels have generally low potential for development and consolidation.
- Recommend bidding conservatively (ie <\$50/acre)
- Offsetting acreage purchased by Maurice Brown in Q3 2018 for **\$32/acre**
- Offset Operators include Maurice Brown, Boaz, True Oil, Davis Oil, Merit, Denbury, Carbon Creek, EOG
- These parcels are on the fringe northern extent of Wyoming side of the PRB and are only marginally prospective. Most legacy production has come from the Muddy or the Paleozoic Minnelusa. Everything else is generally tight, undercharged, or marginally mature. Recommend deploying your capital elsewhere.



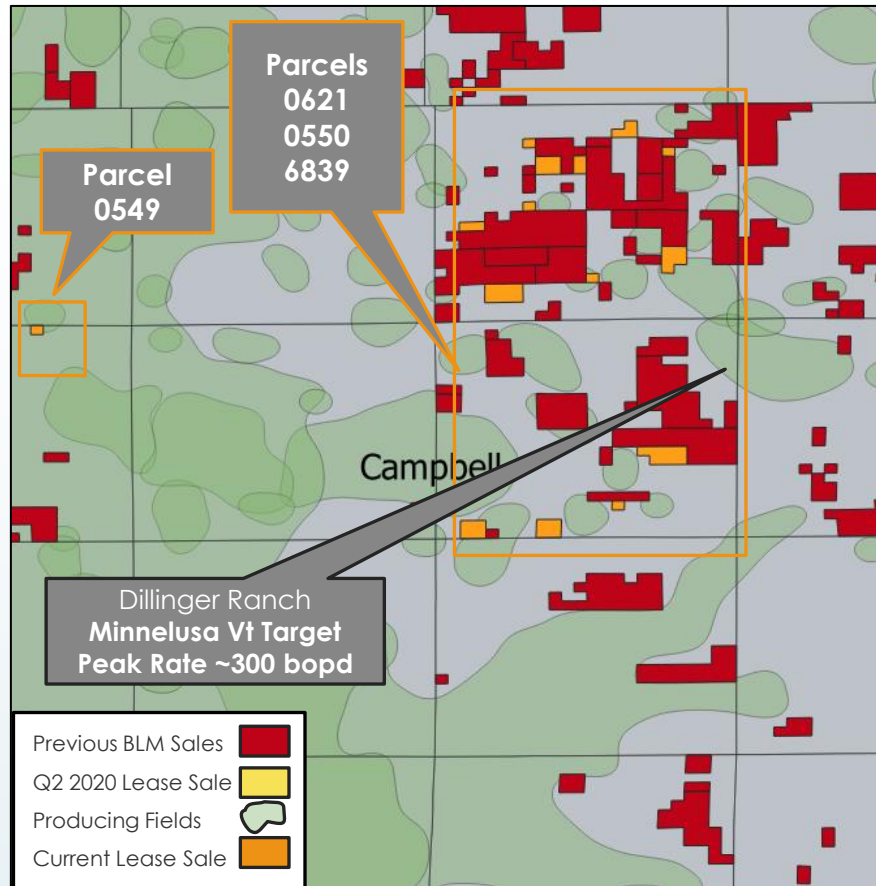
Formation	Potential	Justification
Teckla	Low	Wet/Undercharged
Teapot	Low	Wet/Undercharged
Parkman	Low	Wet/Undercharged
Sussex	Low	Likely tight
Shannon	Low	Reservoir quality dubious.
Niobrara	Low	Likely immature
Turner	Low	Undercharged & tight
Frontier	Low	Tight
Mowry	Med-low	Marginally mature
Muddy	Medium	Legacy Vt fields have yet to be converted to successful Hz wells. Trapping mechanism is weak link.
Dakota	Low	Tight
Paleozoic	Medium	Potential for additional dunes to be discovered, but requires 3D shoot

PARCELS "WY-2020-09-0549, 0621, 0550, 6839"

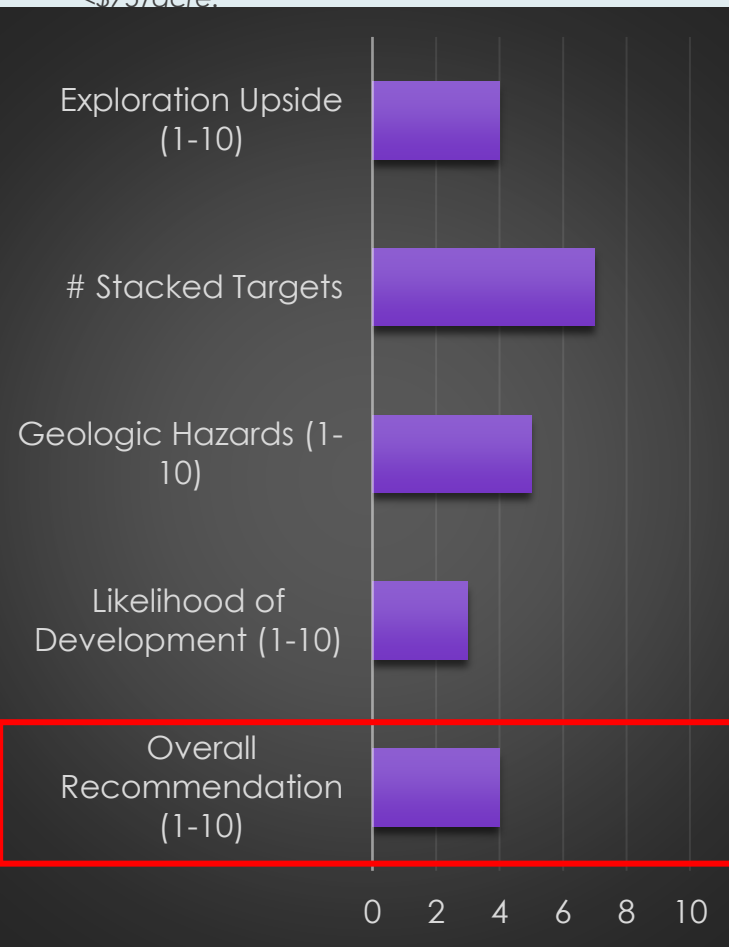
1,740 Acres



- These parcels have medium-low potential for development and consolidation.
- Recommend bidding conservatively (ie <\$75/acre)
- Offsetting acreage purchased by Sharbro in Q3 2018 for \$161/acre
- Offset Operators include Boaz, Ballard, Oxy, Martens & Peck, True Oil, Davis Oil, Merit, Denbury, Pine Haven, Carbon Creek, Sharbro, Pacer
- These parcels are in the core of the classic vertical Minnelusa eolian dune play, and they offer scattered production from several Cretaceous reservoirs as well. The Mowry and Muddy are most prospective here, but pressure gradients are likely low and water cut may be a challenge to economics. The Niobrara is barely mature (0.6 Ro or lower), so the Turner, Shannon, etc are likely undercharged. Recommend tossing out a lowball bid and trying to acquire these parcels for <\$75/acre.

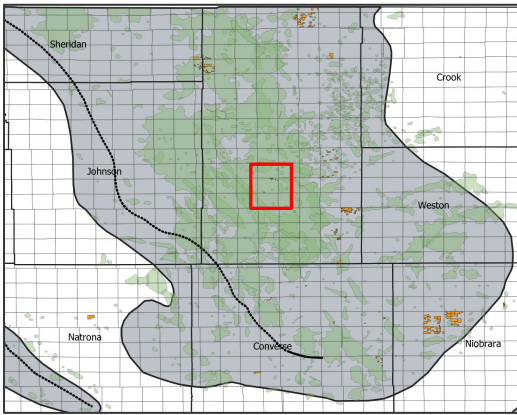


Formation	Potential	Justification
Teckla	Low	Wet/Undercharged
Teapot	Low	SWD Target (Wet)
Parkman	Low	Distal & tight
Sussex	Low	Likely tight
Shannon	Medium-Low	Shows but unproven charge or reservoir quality
Niobrara	Medium-Low	Marginally mature
Turner	Medium-Low	Shows but likely under pressured
Frontier	Low	Tight
Mowry	Medium	Some legacy vertical production, no significant Hz prod yet
Muddy	Medium	Multiple incised valleys are productive; reservoir quality diminishes rapidly
Dakota	Medium-low	A couple of offsetting producers, but highly silica cemented
Paleozoic	Medium	Heart of the Minnelusa play, but high failure rate without 3D seismic

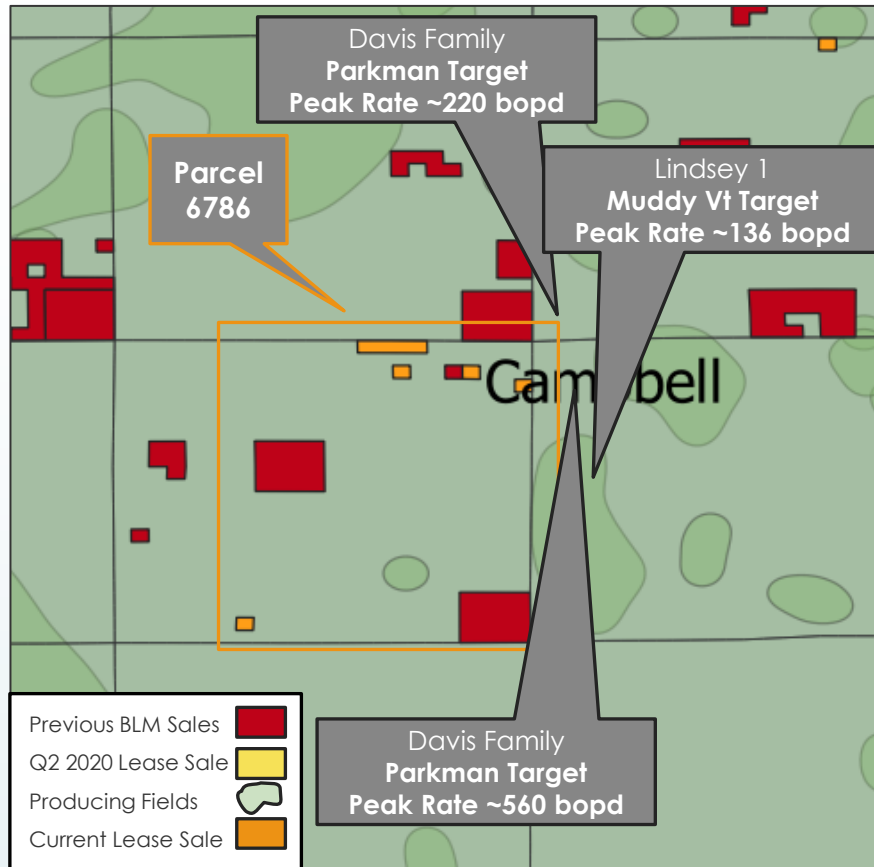


PARCEL "WY-2020-09-6786"

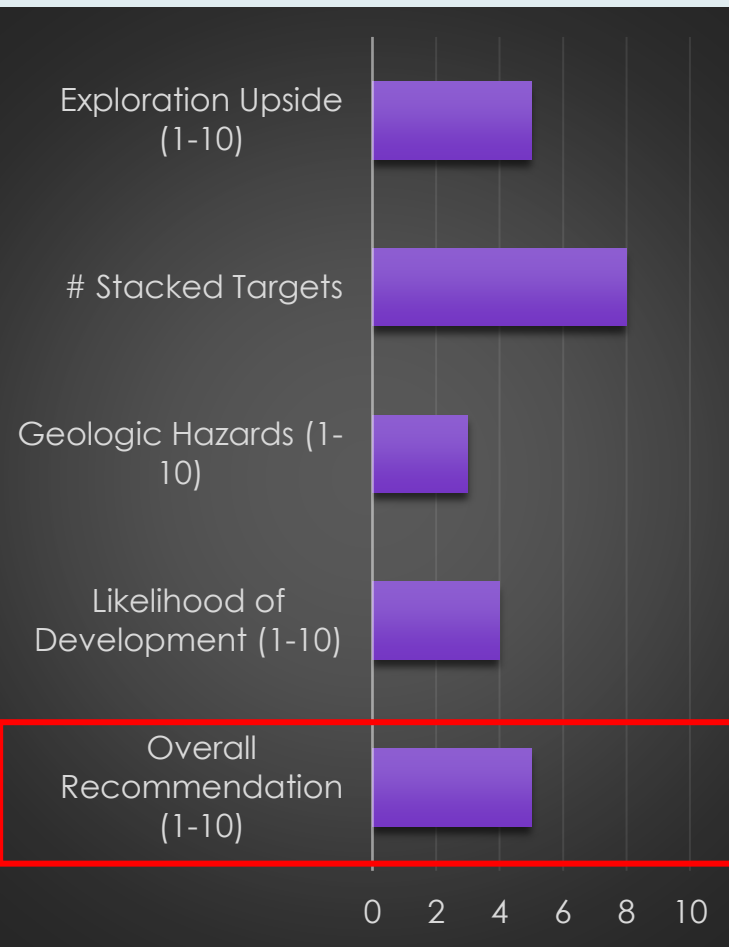
330 Acres



- This parcel has medium potential for development and consolidation.
- Recommend bidding conservatively (ie <\$500/acre)
- Offsetting acreage purchased by Stout Street in Q4 2019 for \$330/acre
- Offset Operators include Devon, DNR, Maxim, Ballard, Stout Street LLC, EOG, FDL, Oxy,
- This parcel is downdip of the main productive horizontal Parkman trend and is likely wet. However, deeper targets are untested and may prove highly productive, including the Niobrara, Turner, and Muddy. Offsetting Muddy vertical production is decent, which bodes well for future horizontal production from that zone. This is a decent but not great parcel that could see appreciation as more zones are proved up in this township.

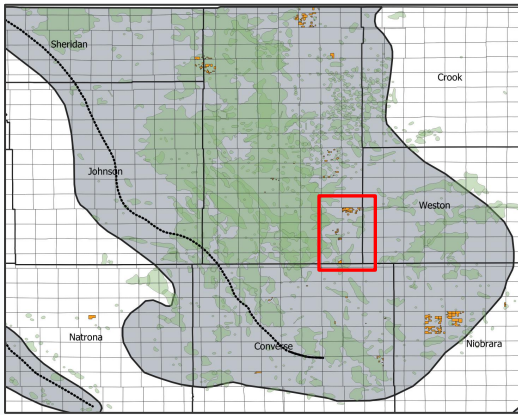


Formation	Potential	Justification
Teckla	Low	Wet/tight
Teapot	Low	Wet
Parkman	Medium-Low	This Parkman sand likely too far downdip & wet. Some potential still exists.
Sussex	Medium-Low	Updip of classic House Creek field but likely tight.
Shannon	Low	Tight
Niobrara	Medium-High	Untested in this area but should be productive—good maturity and pressures
Turner	Medium	Untested but likely overpressured if porous
Frontier	Medium	May be tight and/or share flow unit w/ Turner
Mowry	Medium	Untested w/ modern frac in this area. Gas condensate w/ good pressure
Muddy	High	Nearby vt prod untested as Hz but highly prospective.
Dakota	Medium-low	Sparse data but some gas shows
Paleozoic	Low	Likely Tight or Wet

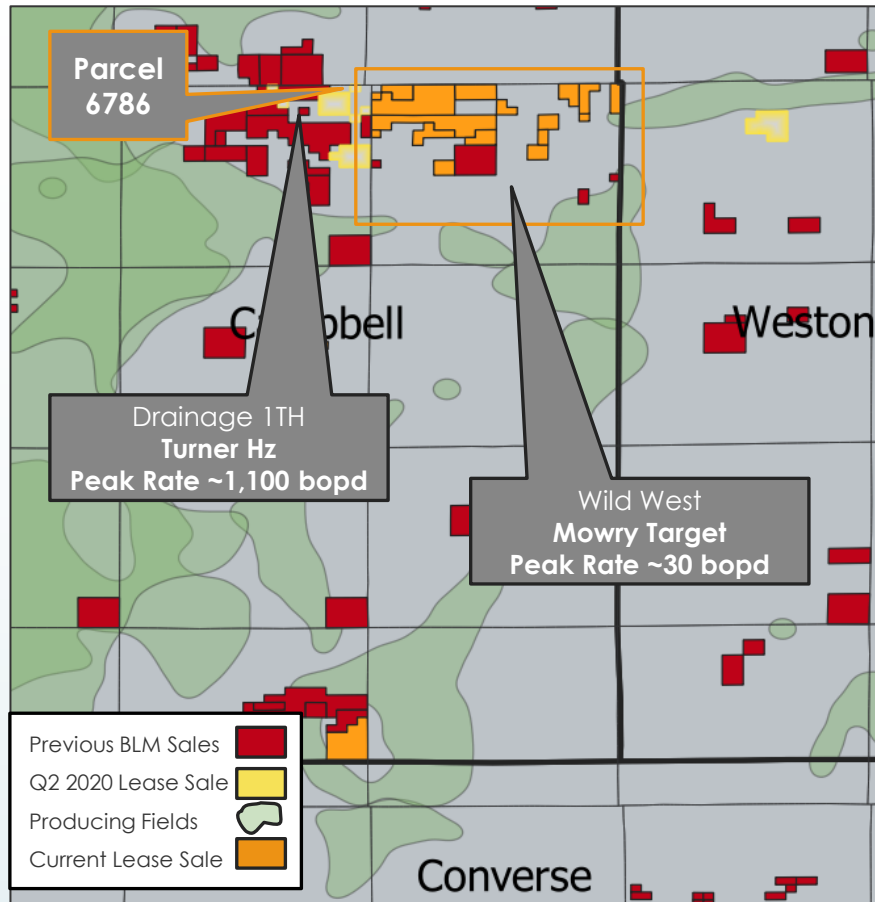


PARCELS "WY-2020-09-6875, 6874, 6890, 0676, 6873"

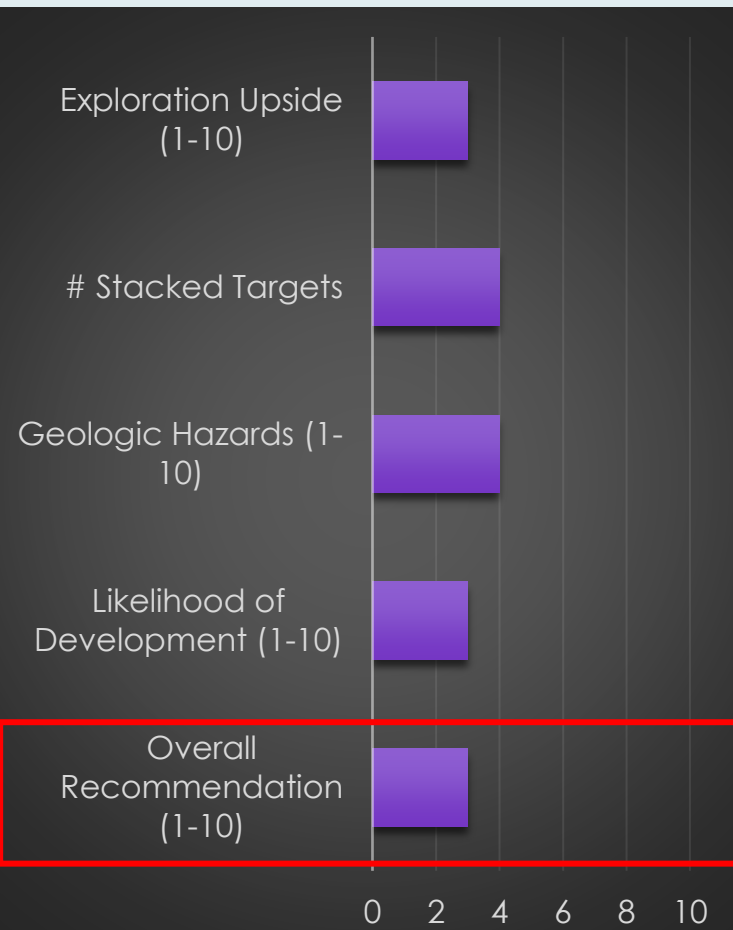
4,264 Acres



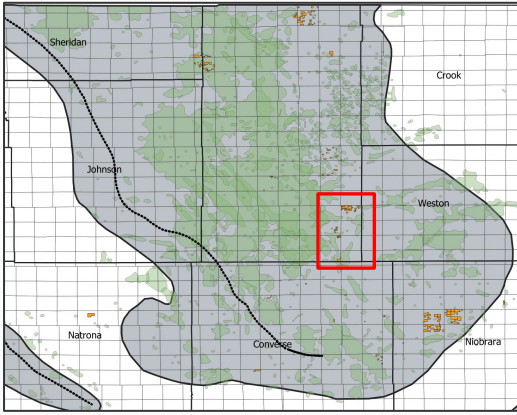
- These parcels have medium-low potential for development and consolidation.
- Recommend bidding conservatively (ie <\$100/acre)
- Offsetting acreage purchased by Grey Wolf in Q1 2019 **\$33/acre**
- Offset Operators include Devon, Grey Wolf, Rockies Resources, Kirkwood, Sharbro, Pathfinder, M&K Oil, Anschutz, Vermillion
- These parcels are approaching the updip edge of Niobrara productivity—without detailed mapping it's an unknown if the Nio is in the oil window here. However, deeper clastic targets can be sourced by the Mowry, and it is those deeper zones that are most prospective here. The Mowry was tested with a small frac (<300 lb/ft) in this township by Vermillion in 2009, but this is not indicative of what a modern frac could do to the Mowry or Muddy.



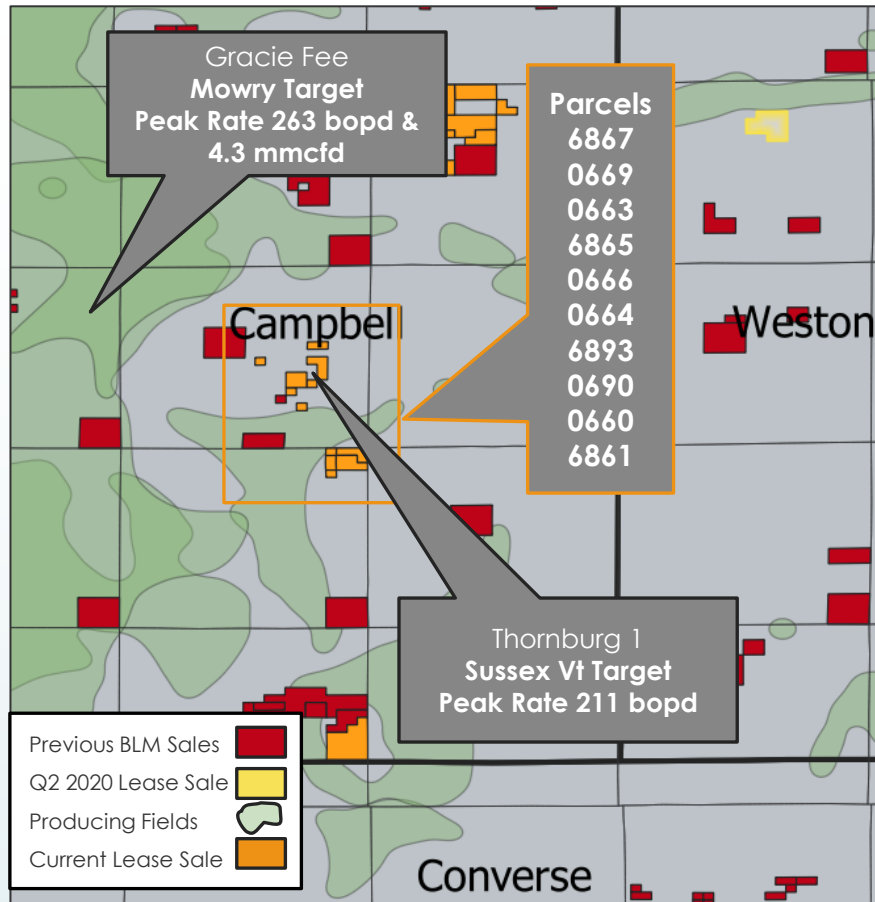
Formation	Potential	Justification
Teckla	Low	Tight or wet
Teapot	Low	SWD Target (undercharged)
Parkman	Low	Tight or wet
Sussex	Low	Reservoir likely eroded
Shannon	Low	Distal & tight
Niobrara	Low	Borderline immature—not clear without additional data.
Turner	Med-Low	May be charge challenged, but productive downdip
Frontier	Low	Likely tight
Mowry	Medium-Low	2009 Hz validated petroleum system but doesn't prove commercial potential
Muddy	Medium-Low	Untested as Hz target here, but most prospective sandstone in this township.
Dakota	Med-Low	Modest shows but possibly silica cemented
Paleozoic	Low	Tight & wet



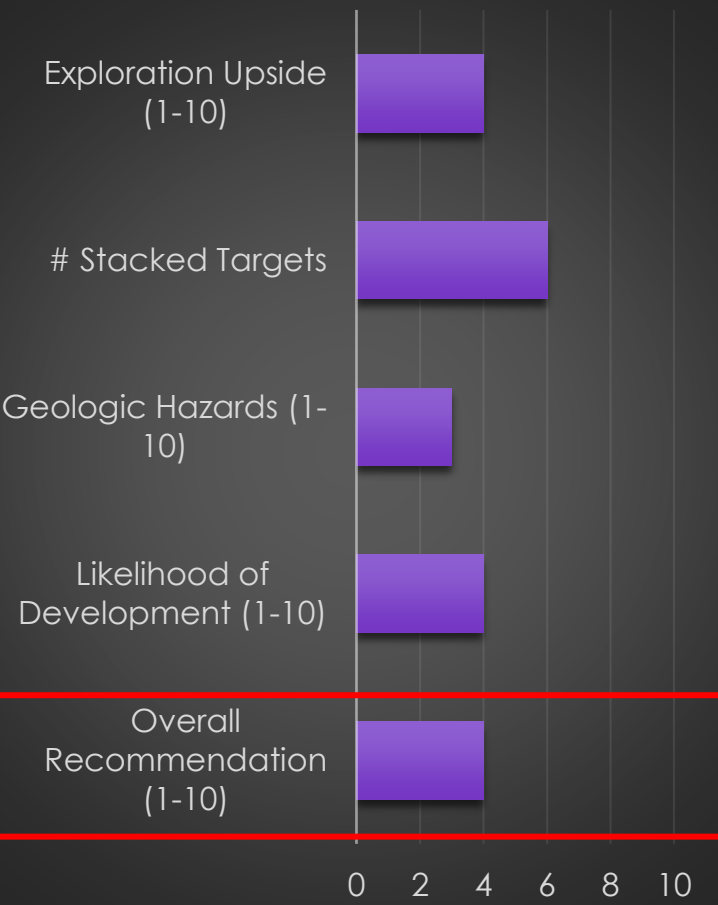
PARCELS "WY-2020-09-6867, 0669, 0663, 6865, 0666, 0664, 6893, 0690, 0660, 6861" 1,101 Acres



- These parcels have medium potential for development and consolidation.
- Recommend bidding conservatively (ie <\$200/acre)
- Offsetting acreage purchased by Prima in Q2 2018 **\$262/acre**
- Offset Operators include Berenergy, Devon, EOG, Oxy, Anschutz, Chaco, Peabody, True, Peak Powder
- These parcels have medium low potential, as they are updip of the main Cretaceous sandstone trends and are getting close to the edge of the Niobrara oil window. However, the legacy Sussex Payne field is productive from several zones, including the Sussex, Turner, and Muddy. These are decent but not great parcels, so we recommend bidding accordingly (<\$200/acre).

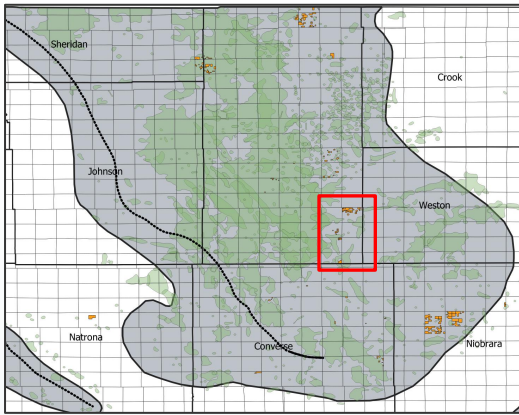


Formation	Potential	Justification
Teckla	Low	Tight or wet
Teapot	Low	SWD Target (undercharged)
Parkman	Low	Tight or wet
Sussex	Medium	Payne field productive vertically—untested horizontally
Shannon	Low	Distal & tight
Niobrara	Medium	Productive to the west, may still be over-pressured here.
Turner	Medium	Couple of productive Vt wells in Payne field—untested horizontally
Frontier	Low	Likely tight
Mowry	Medium	Gracie Fee to west validates petro system, but pressure grad will decrease as you move east
Muddy	Medium	Produced in Payne, untested horizontally
Dakota	Med-Low	Some shows but fairly tight & difficult to drill
Paleozoic	Low	Tight & wet

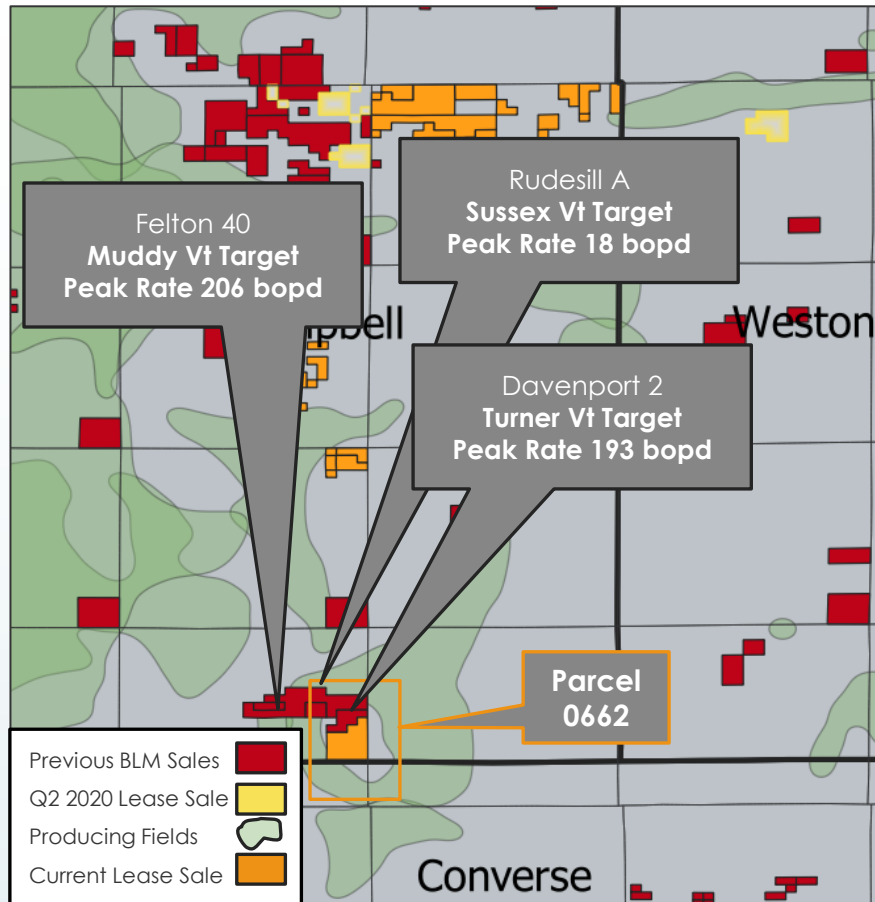


PARCELS "WY-2020-09-0662"

749 Acres



- This parcel has medium-high potential for development and consolidation.
- Recommend bidding moderately aggressively (ie <\$750/acre)
- Offsetting acreage purchased by Maurice Brown in Q3 2019 for \$253/acre
- Offset Operators include EOG, Maurice Brown, Devon, Anschutz, Chaco Energy, Kennedy Oil, Peak Powder
- This parcel does not have much existing horizontal production nearby, but it has impressive vertical production from several zones. The Turner, Sussex, and Muddy all have vertical production immediately surrounding the parcel, which bodes well for future horizontal development in the area. Additionally, this parcel is immediately updip from EOG's Blade development, which sports multiple stout Niobrara wells. In this area the "middle PRB hotspot" extends to the east, increasing the thermal maturity of the Nio and Mowry and increasing chances of production from the surrounding sandstone reservoirs. This is a solid parcel and is easily worth bidding \$750/acre.



Formation	Potential	Justification
Teckla	Low	Tight or wet
Teapot	Low	Likely wet
Parkman	Low	Likely tight
Sussex	Medium-high	Untested as Hz but Vt prod confirms petroleum system
Shannon	Low	Distal & tight
Niobrara	Medium-high	Blade production to the west is strong (2,000 bopd). Maturity & pressures will decrease to the east but could still be prolific.
Turner	Medium	Good chance of being charged if porosity is developed
Frontier	Low	Tidal facies likely tight here
Mowry	Medium	Likely approaching condensate window due to eastern extension of middle hotspot
Muddy	Medium-High	Looks prospective—warrants a future horizontal test
Dakota	Med-Low	Shows but unproven production
Paleozoic	Low	Tight & wet

