

Bell Lake North Field Compared to Antelope Ridge Field - Demonstrating a similar field that produces more gas via more wells

	Bell Lake North	Antelope Ridge
Observation		
OBHP	6400 psi	6300 psi
Field Size	1002 acres	1100 acres
Cumulative gas production	31 bcf	39 bcf
OGIP Estimates	80.8 bcf	58.3 bcf
Recovery Factor (RF)	38%	67%
Producing Well Count	1	4

WASTE AND CORRELATIVE RIGHTS CONCERNS -- Hydrocarbons are being wasted at Bell Lake North field by virtue of 640 acre spacing, supported by its low RF

Water prod	5,000,000 bbls	2,291,000 bbls
Water rates	800 bwpd, max rate	400 bwpd, max rate
BHP vs. Time	see data below - both fields exhibit water drive pressure support	
Gas prod history	Pressure supported see decline curve & BHP data	Pressure supported see decline curve & BHP data
Prod Interference	not applicable	additional wells at Antelope did not interfere

Fact	Conclusions
they have similar BHP	Could produce similarly
they have similar size	Could have similar hydrocarbon recovery factors??.....they do not
Antelope Ridge recovered more gas	Multiple wells yielded higher Ultimate Recovery in Devonian Gas Reservoirs
Based on Planimeter volumetrics	
Antelope Ridge has a higher RF	Multiple wells yield higher RF in Devonian Gas Reservoirs
Antelope Ridge has more wells	Multiple wells are required in Devonian Gas Reservoirs to obtain higher Ultimate Recoveries

To prevent waste, multiple wells spaced less than 640 acres are required to drain the Devonian.

Antelope Ridge more efficiently drained reservoir and had reduced water influx
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Production mechanism is the same

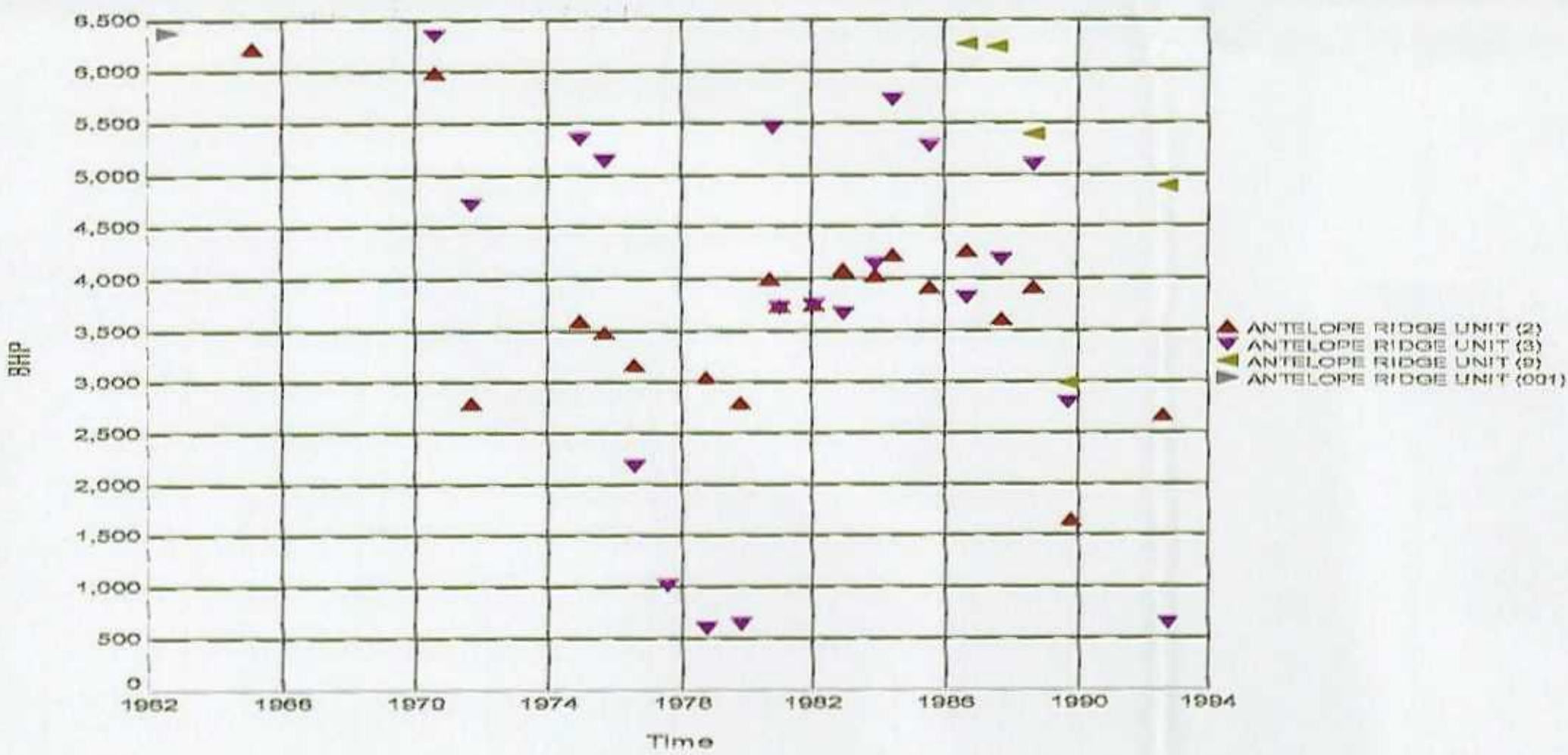
Production mechanism is the same

Antelope wells did not compete for reserves Multiple wells did not cause waste, they increase Ultimate Gas recovery

Summarizing:

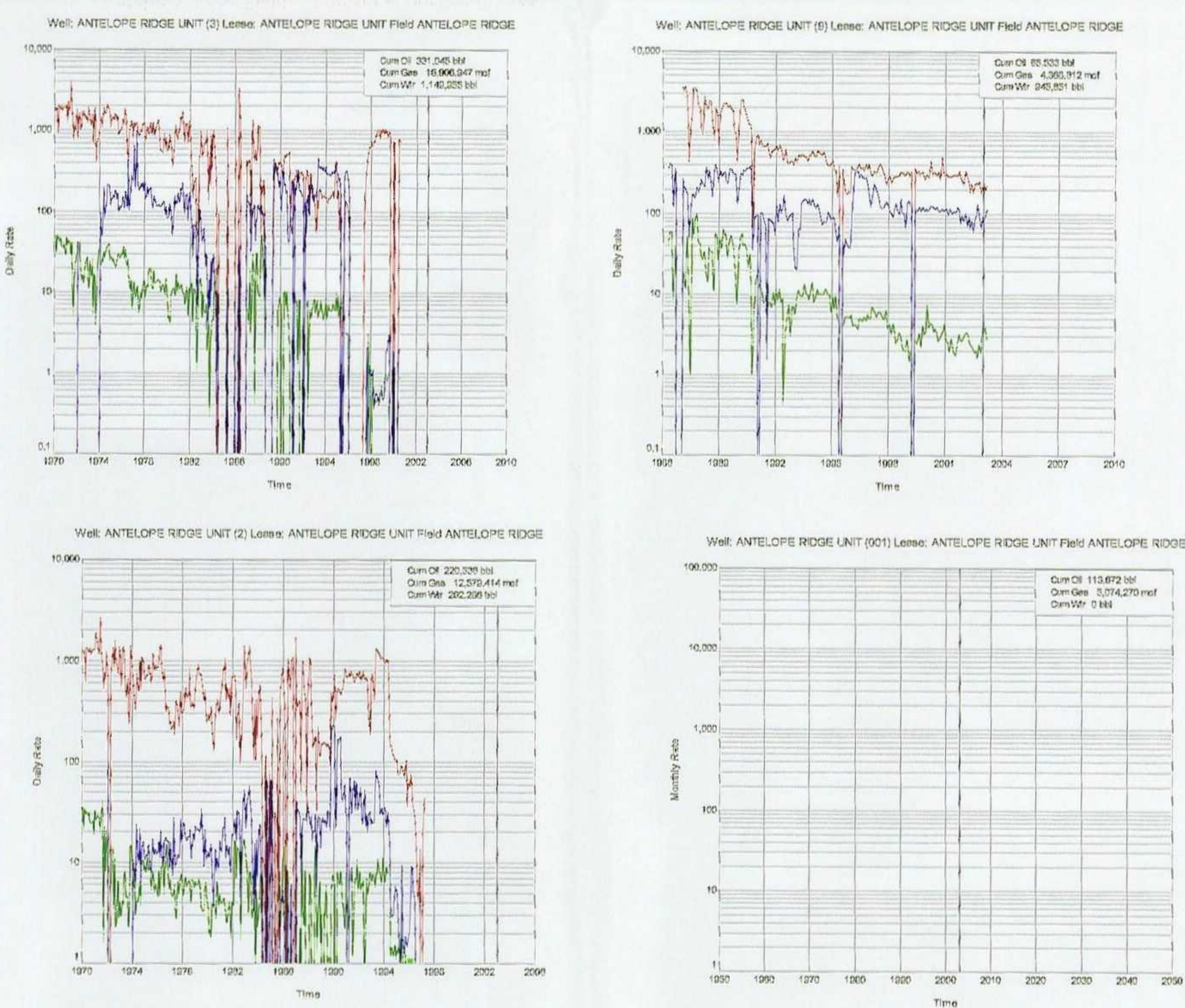
- Bell Lake North and Antelope Ridge Fields have similar field size, similar OBHP, similar water drive pressure support.
- Antelope Ridge recovered more gas via more wellbores, this did not cause waste and in fact added an additional 8 bcf of recoverable gas
- Antelope Ridge, with more wells, appears to have drained the Devonian reservoir better, water production was not as much an issue (less water volume and rate at Antelope Ridge)
- By virtue of producing less water volume, Antelope Ridge was more efficiently drained with more wells than was Bell Lake North.
- Devonian fields produce and recover more gas with multiple wells spaced on 200 acres.
- Antelope Ridge field wells do not appear to have competed for gas reserves, see decline curves.

- Antelope Ridge Field BHP vs Time Plot



- Based on these data, the wells at Antelope Ridge all found OBHP above 6000 psi
- Pressure depletion or pressure interference is not seen from this plot
- One may conclude that multiple wells spaced on current state wide rules are the most effective way to develop Devonian gas reservoirs.
- Wells drilled on current state wide rules, do not compete for reserves, do not cause waste or damage correlative rights.

- Antelope Ridge Field Individual Decline Curves



- Based on these decline curves, competition for reserves and/or interference is not seen.
- Again, the conclusion can be made that Antelope Ridge Field was efficiently produced with multiple wells that did not compete for reserves.
- Devonian gas wells drilled on current New Mexico State wide rules, do not cause waste or damage correlative rights.