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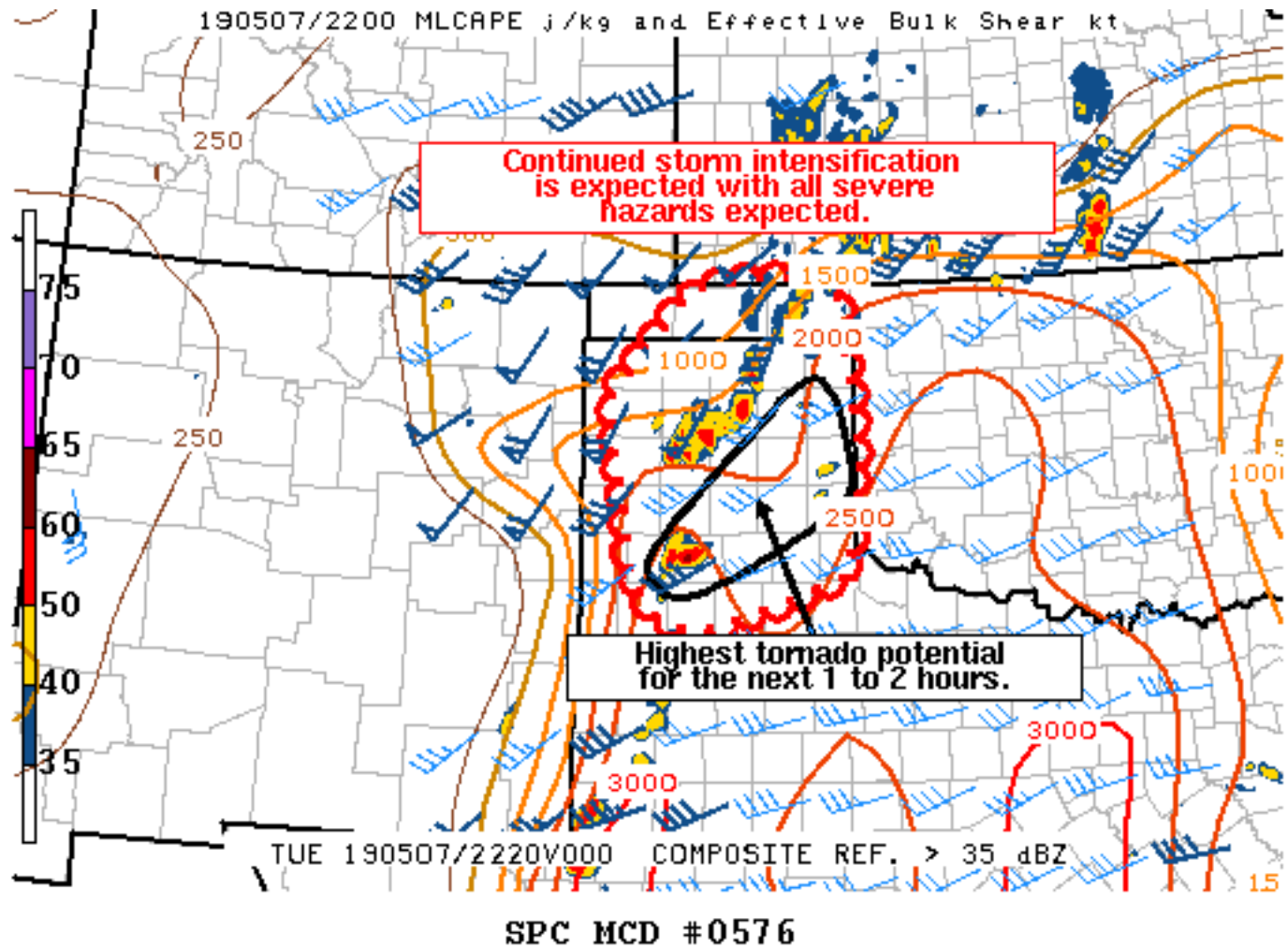
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Mesoscale Discussion 576

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Mesoscale Discussion 0576

NWS Storm Prediction Center Norman OK

0536 PM CDT Tue May 07 2019

Areas affected...The Texas and Oklahoma Panhandles

Concerning...Tornado Watch [144](#)...

Valid 072236Z - 072330Z

The severe weather threat for Tornado Watch 144 continues.

SUMMARY...Continued storm intensification and new development is expected over the next few hours. All severe weather hazards are expected including large hail (some very large), damaging winds, and tornadoes (some strong).

DISCUSSION...Numerous storms have developed in the Texas and Oklahoma Panhandles with many reports of large hail up to this point. Radar trends and surface observations suggest a large cold pool has started to develop northwest of Amarillo. This is likely



the beginning of the cold pool which will eventually move eastward across the Texas panhandle with an increasing damaging wind threat through the evening.

The storms with the greatest hail and tornado potential will be south and east of this outflow boundary where moderate to strong buoyancy and strong deep layer shear exists. This improving shear profile can be seen between the 17Z and 21Z AMA RAOB where effective shear increased from 39 knots to 50 knots and 0-1km SRH increased from 45 m2/s2 to 140 m2/s2. This increasing shear is expected to continue to improve through the evening as mid-level winds increase, surface winds back, and the low-level jet strengthens.

Given this improving shear profile, the tornado threat is expected to increase substantially through the evening. This will especially be the case for storms which remain discrete ahead of the eventual squall line. Currently the storm with the highest tornado potential is likely the mature supercell in Swisher county, Texas. This storm is discrete and expected to remain so for awhile. In addition, the isallobaric response of the low-level wind field has backed surface winds substantially in the vicinity of this storm in the last 2 hours. Additional discrete supercells may also develop in this environment (evidenced by storms currently developing in the eastern Texas panhandle). Any storms in this environment will pose a threat for tornadoes, some potentially significant.

..Bentley.. 05/07/2019

...Please see www.spc.noaa.gov for graphic product...

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