

Drickey Queen Sand Unit CO2 Project--Application for EOR Project Involving Use of CO2 Miscible Displacement Production History and CO2 Project Forecast

- The original DQSU and subsequent additions were developed in the mid- to late-1950's when 144 wells were drilled on what is now the unit's 7002 acres. Wells were drilled on 40-acre spacing.
- Primary production in the Unit Area peaked in 1956 at 4659 BOPD. Production was at a low GOR and gas was vented due to lack of a market.
- Production was at a very low water cut until waterflood operations were started in 1959. Estimated Primary Recovery is 10% OOIP.
- The Unit Area was put on a conventional 5-spot, 80-acre pattern by converting one-half of the wells to injection. Injection peaked in 1965 at 21185 BWPD until Celero Energy II LP purchased the property after which injection peaked in 2008 and again in 2013 at 7537 BWPD and 12285 BWPD, respectively.
- Peak waterflood response occurred in 1962 at 5194 BOPD with 3634 BWPD. Peak water production occurred in 1968 at 17668 BWPD until Celero Energy II LP began returning wells to production and water peaked in 2008 and again in 2013 at 7829 BWPD and 11483 BWPD, respectively.
- Production continued to decline and the area became marginal by 1975. From that time to 2000, wells were plugged or shut in until only one producing well remained. Celero Energy II LP reactivated a number of wells between 2008 and 2013, and there are now 20 producers and 24 injectors.
- Secondary Recovery is estimated at 28% OOIP; total primary and secondary recovery is 38% OOIP. Secondary/Primary ratio is 2.8. Cumulative oil recovery is 16.6 MMBO, cumulative gas production is 4.5 BCF, and cumulative water production is 112 MMBW
- The Unit has had numerous operators throughout its life. Legacy Reserves LP purchased the property in May, 2014, specifically for the purpose of developing the Unit using CO2 miscible displacement.
- Estimated recovery from miscible CO2 is 5.2 MMBO or approximately 10% OOIP. Tertiary/secondary recovery ratio is 0.36.
- Purchased CO2 is estimated at 39.2 BCF; produced CO2 will be re-injected. Total CO2 injection is 183 BCF; CO2 utilization is roughly 35 MCF/STB.
- Anticipated date of first injection is August, 2015. Peak oil response is estimated at 2250 BOPD.

Oil Conservation Division
Case No. 15255
Exhibit No. 5