# The 2015-2016 Earthquake Sequence in Cushing, Oklahoma driven by Coulomb Stress Changes and Fluid Diffusions

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Table S1-S2

Table S1. Information for four reference events

| Event Number | Date (mm/dd/yyyy) | Time (hh:mm:ss.ss) | Magnitude (ML) | Latitude (°) (hypo2000) | Longitude (°) (hypo2000) | Depth (km) (hypo2000) | Depth (km) (Adjusted for Path Calibration) |
|---|---|---|---|---|---|---|---|
| 1 | 11/10/2015 | 13:36:45.76 | 3.3 | 35.9867 | -96.8082 | 3.06 | 2.4 |
| 2 | 11/11/2016 | 00:08:05.46 | 3.1 | 35.9817 | -96.8183 | 3.56 | 3.0 |
| 3 | 11/22/2016 | 09:55:33.51 | 3.5 | 36.0023 | -96.7750 | 2.59 | 2.6 |
| 4 | 11/24/2016 | 16:34:06.91 | 3.3 | 35.9875 | -96.8027 | 4.57 | 5.1 |

Table S2. Velocity structure of the VM3 model, shown in Figure 3.

| Thickness (km) | Vp (km/s) | Vs (km/s) |
|---|---|---|
| 0.008 | 1.70 | 0.30 |
| 0.03 | 2.06 | 0.60 |
| 0.03 | 2.23 | 0.75 |
| 0.03 | 2.41 | 0.9 |
| 0.03 | 2.58 | 1.05 |
| 0.03 | 2.75 | 1.20 |
| 0.03 | 2.93 | 1.35 |
| 0.20 | 3.10 | 1.50 |
| 0.20 | 3.30 | 1.68 |
| 0.20 | 3.50 | 1.86 |
| 0.20 | 3.70 | 2.04 |
| 0.20 | 4.00 | 2.31 |
| 0.20 | 4.34 | 2.53 |
| 0.20 | 4.69 | 2.75 |
| 0.20 | 5.03 | 2.96 |
| 0.20 | 5.38 | 3.18 |
| 2.93 | 5.72 | 3.40 |
| 6.00 | 6.18 | 3.62 |
| 4.00 | 6.32 | 3.67 |
| 20.00 | 6.60 | 3.70 |
| 11.00 | 7.30 | 4.00 |
| 99.00 | 8.20 | 4.70 |