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26R RESERVOIR – POST BLOWDOWN

This presentation is a post blow down look back at the 26R Reservoir, Elk Hills CA., and efforts to develop an appropriate operating strategy. The 26R reservoir was dominated first by gas expansion and soon thereafter gravity drainage took on greater influence with pressure maintenance by crestal gas injection starting in 1975. In 1998 blow down was initiated. The reservoir is a highly layered and steeply dipping Stevens turbidite sandstone and is also characterized by numerous faults. The reservoir is contained within the steeply dipping southwestern limb of the 31S Anticline and had an initial oil column of 1,800 feet. Original oil-in-place (OOIP) was estimated at 462 million barrels. Cumulative gas injection was 958 BCF and cumulative production has been 220 MMBO and 1.24 TCF.

Recent reservoir description analysis efforts include: 3D seismic, EarthVision modeling, SCAT, Pressure monitoring, Geochemical monitoring, Cased Hole Formation Resistivity tests, Production Zonal testing, Aquifer modeling, Material Balance modeling, and Blow down modeling. Analysis has indicated, the post blow down remaining oil column is relatively intact and has been essentially unaffected by the aquifer. Analysis also indicate future operating strategies must change to accommodate the remaining oil column, and plan for even lower reservoir pressure compression requirements. The low reservoir pressures have presented additional well workover formation damage considerations. Additionally, low pressures are helping to define the faulted performance sectors.