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MICROSEISMIC FRACTURE MAPPING IN THE N-SHALE FOR HYDRAULIC FRACTURING TREATMENTS IN WELLS 344A-5G AND 315-4G, ELK HILLS FIELD

There are many situations where microseismic fracture analysis is the optimum method for determining fracture geometry. Several conditions can also exist where either surface or downhole tiltmeters cannot be utilized thereby necessitating the acquisition of a microseismic survey. Fracture length, height, azimuth, and effective coverage of the vertical section can be accurately defined using microseismic techniques. This talk will address the importance of knowing fracture geometry and some of the reasons for choosing to do a microseismic survey. The acquisition requirements and set-up, and the interpretation of the survey will also be discussed, which includes 2D and 3D time lapse examples of the two surveys acquired. The two examples presented will also illustrate several pitfalls which may be encountered when acquiring a microseismic survey and the steps necessary to resolve them.