



PROPOSED LITTLE BEAR STATE UNIT
SECTION 18, T24S - R25E
EDDY COUNTY, NEW MEXICO

GEOLOGICAL DISCUSSION

Little Bear Prospect targets lower Brushy Canyon sandstones productive at various locations in Lea and Eddy Counties including East Loving and Livingston Ridge Fields. The nearest producing analog to Little Bear Prospect is East Loving Field, located in T23S, R28E. The trap at East Loving is created by a low relief closure which affects the Lower Brushy Canyon "Loving" sand. The Loving sand is deposited as isolated submarine fan lobes which can be regionally defined by isoporosity mapping. Where ever porous Loving sands drape across low relief structures, such as at East Loving, hydrocarbons are frequently trapped.

Subsurface structure and isoporosity mapping of the Loving Sand in the Little Bear area strongly suggests favorable alignment of Loving Sand reservoir and structural trends. The accompanying structural cross-section A-A' is annotated on the Loving structure and isoporosity maps and documents the presence of two porous, prospective objectives in the lower Brushy Canyon. The cross-section further illustrates the continuity of these sands across the unit area and shows their anticipated structural position at the proposed location in the SW/4 NE/4 Section 18, T24S, R25E.

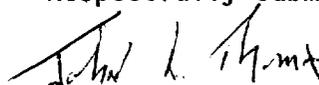
The proposed Little Bear Unit boundary is based on structural closure at the -790' elevation. The anticipated Loving sand closure could not be identified in the subsurface until the Santa Fe Energy Lamb Chop "17" State Com. #1, located in the SW/4 SE/4 of Section 17, T24S, R25E, was drilled and the data released in early 1992. The loving sand came in high to regional dip in the Lamb Chop well with a significant show of oil indicating proximity to an accumulation. The Fasken Maralo State 1-Y, located in the SW/4 NW/4 Section 18, T24S - R25E, was drilled and abandoned in 1980. No tests were run on the lower Brushy Canyon sands, however, a recent in house examination of the sample cuttings revealed shows of oil in the lower Brushy Loving and Little Bear sands as well as in two shallower Cherry Canyon sands. Log analysis of the lower Brushy Canyon sands in the Fasken well also suggest the well is proximal to, if not within, the objective Loving pool.

BEFORE EXAMINER CATANACH	
OIL CONSERVATION DIVISION	
MAZALO	EXHIBIT NO. 7
CASE NO.	10493

With the new data from both the Santa Fe and Fasken wells in hand it became evident that an economically viable Delaware Prospect existed on Maralo, Inc. leasehold in Section 18, T24S, R25E. On this basis Maralo, Inc. seeks approval to form the Little Bear State Unit encompassing Section 18, T24S, R25E, Eddy County, New Mexico. It is also the intent of Maralo Inc. to spud a 5600' Delaware test prior to August 1, 1992 within the proposed unit boundary. The proposed location for the Little Bear State Unit #1 is in the SW/4 NE/4 Section 18, T24S, R25E.

Should you have any geological questions regarding this application, please call me at (915) 684-7441. Your attention to this matter is sincerely appreciated.

Respectfully Submitted,



John L. Thoma
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