Seep Tour, Geology and Whale Watching

Santa Barbara Channel - Coal Oil Point Area, California

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The marine hydrocarbon seeps near Coal Oil point, Santa Barbara, California are the second largest in the world. The seeps are leaking around 100 - 200bop/d and about 5 mmcf/d, that is entering the water column and polluting the atmosphere. Historically, the native Chumash used tar from the seeps to waterproof baskets and bowls as well as to seal their ocean-going, plank canoes. The iridescent hue on the ocean was first described by westerners when Spanish explorer, Juan Rodriguez Cabrillo sailed into the area in 1542. More recently, tar washing up on the beaches in southern California, is mistakenly attributed to the oil industry and to the platforms that are visible from the shore. Since the blowout in 1969 that dumped an estimated 50,000 barrels into the ocean, the offshore production facilities in California have produced more than 1 billion barrels of oil with about 875 barrels spilled. That is less than the volume that seeps each week around Coal Oil Point.

Just a couple miles from the coast, the La Goleta seeps overlie the Monterey reservoir that makes up the South Ellwood field. Hydrocarbons filling this accumulation, estimated at 2.1 billion barrels, leak through faults and fractures in the 3,000’ of overburden to escape from the sea floor. In fact, pressure monitoring indicates an almost direct
connection between the reservoir and the ocean through these fault zones. We will begin the tour with a review of the geology of the seeps while in the Santa Barbara harbor, and then cruise along the near shore observing the exposed strata in the coastal bluffs. The Condor Express is a double-hulled, hydrofoil assisted whale watching boat with a top cruising speed of about 28 knots. Along the way we may see dolphin, migrating Gray whales and their calves, along with unique views of Hope Ranch, More Mesa and UCSB.

As we approach Coal Oil Point, we’ll begin to see the various, charted seeps that are identified by the gaseous emissions and the sheen from associated liquids. You can visit www.bubbleology.com beforehand to see some of the on-going research. We will also make a close trip around Platform Holly, which was set in 1966 by Arco and where the Monterey was first ‘discovered’.

We’ll then have a couple hours for whale watching, which may include Gray whales that are migrating from the Sea of Cortez up to Alaska, Humpbacks that spend the summer months in the Santa Barbara Channel and, if we’re lucky, the early arrival of the largest creature on earth, the Blue whale. Based on ocean conditions, we could cross the Channel in search of whales which would also afford us a look at the geology of the Channel Islands.

We will be back on the harbor by 12:30pm for you to enjoy Santa Barbara, a world class destination with both great restaurants and shopping the nearby.