

**TABLE 8-5
COMPARISON OF POTENTIAL OIL SPILL VOLUMES FOR PROJECT ALTERNATIVES**

Alternative	Pipeline Length miles (km)		Oil Spill Volume							
			Drilling Blowout	Diesel Storage Tank Rupture	Pipeline Rupture		Chronic Leak			
	Offshore						Onshore			
	Offshore	Onshore			Offshore	Onshore		Solid Ice	Unstable Solid Ice	Broken Ice/ Open Water
1 ^A	0 (0)	0 (0)	0 bbls	0 bbls	0 bbls	0 bbls	0 bbls	0 bbls	0 bbls	0 bbls
2 ^B	5.96 (9.60)	11.12 (17.89)	15,000 bbls/day for 15 days ^C	2,800 bbls ^C	3,600 bbls	6,400 bbls	6,100 bbls	6,600 bbls	3,800 bbls	6,600 bbls
3	5.96 (9.60)	15.44 (24.84)			3,600 bbls	8,700 bbls ^D	6,100 bbls	6,600 bbls	3,800 bbls	8,900 bbls
4	9.03 (14.54)	11.95 (19.23)			5,300 bbls	6,800 bbls	7,700 bbls	8,200 bbls	5,500 bbls	7,000 bbls
5	8.90 (14.33)	11.78 (18.96)			5,200 bbls	6,700 bbls	7,700 bbls	8,100 bbls	5,400 bbls	6,900 bbls

Notes: A = No Action

B = BP Exploration (Alaska) Inc. proposed route

C = Same for Alternatives 2, 3, 4, and 5

D = Actual onshore release volume for Alternative 3 would be lower due to the location of a valve approximately 3.5 miles (5.6 km) downstream of the landfall location. A pipeline rupture occurring in the upstream portion of the onshore segment would have a maximum estimated spill volume of approximately 2,300 bbls, while a rupture occurring in the downstream segment would be approximately 6,800 bbls.

bbl = Barrels

km = Kilometers

Pipeline rupture calculation assumptions included:

- 1) Oil flowrate of 65,000 barrels per day.
- 2) Detection time of 5 minutes (INTEC, 1997:Calc. No. 340-001, pg 5).
- 3) Response time of 5 minutes for operator verification for valve closure (INTEC, 1997:Calc. No. 340-001, pg 5).
- 4) 1 percent increase in oil volume due to pressure decrease (INTEC, 1996d:Appendix B, 6).
- 5) Pipeline volume of 0.0996 barrels per foot (BPXA, 1998b:1-2).

Chronic pipeline leak calculation assumptions included:

- 1) Oil flowrate of 65,000 barrels per day.
- 2) Detection time of 30 days for offshore leaks during solid ice winter conditions.
- 3) Detection time of 35 days for offshore leaks during unstable solid ice conditions.
- 4) Detection time of 1 week for offshore leaks during broken ice or open water conditions.
- 5) Detection time of 1 week for onshore leaks, regardless of season.

Note: Estimated spill volumes for chronic leak scenarios include a time dependent component for leak detection, as well as the complete evacuation of pipeline volume. Although drainage of the entire pipeline volume between valves would likely be prevented by seawater intrusion (offshore) and operational measures, it is presented here as the worst case spill volume.