
Appendix J

Mineral Resources Valuation Memorandum



Memorandum

March 3, 2021

From: Warren Coalson

To: Joshua Saunders

Re: Resource Valuation for Border Properties

At your request, this analysis has been prepared to evaluate the value of mineral resources found on two adjacent parcels in extreme southwestern San Diego County, California. The properties are located south of Monument Road, at the intersection with Dairy Mart Road, and north of the International Border with Mexico. The two parcels subject to this evaluation (664-011-05 and 664-011-04) include a total area of 39.23 acres (Figure 1). Current ownership of the parcels is held by the County of San Diego.

The geology of the area is expressed by outcroppings of the San Diego and Lindavista formations. These formations are sedimentary and are composed of cobble conglomerates with a silty clay matrix and layers of mudstone and bentonite.

The California Geological Survey Special Report No. 240, "Update of Mineral Land Classification: Portland Cement Concrete-Grade Aggregate in the Western San Diego County Production-Consumption Region, California" identifies the subject properties as lying within Sector V(2) and classifies the resources in this sector as containing PCC grade aggregates (MRZ-2). Sector V(2) includes a total area of 146 acres, of which approximately 45 acres was mined by the Nelson & Sloan company in the 1980s. Mining disturbance extended onto approximately 15 acres within the eastern parcel (050). According to personal communication with a previous Nelson & Sloan employee, the resources on the site were used primarily for fill purposes (Jim Harris, Personal Communication, 2005). Mr. Harris indicated that the resource had a small percentage of rock per volume of material and was generally not acceptable for PCC aggregate uses.

The majority of the resources that could be mined are found within the 20-acre western parcel (040). The approximate quantity of materials available for recovery by mining includes 650,000 cubic yards (Figure 1). This estimate assumes a 100' property line setback with a 2:1 (H:V) final slope. In addition, it was assumed that all materials found above an average base elevation of 120' AMSL would be recovered.

Aggregates are measured in terms of weight (i.e., tons). The common conversion between volume and weight is 1 cubic yard equals 1.5 metric tons. The loaded weight of aggregates includes only the saleable product and does not include any materials that cannot be sold. It is assumed that any products that cannot be sold would be

used as fill onsite. Converting the measured volume of materials from cubic yard to tons yields 975,000 tons of recoverable materials from the property.




Mining of the site would be completed by conventional earth moving equipment (bull dozers, front end loaders, haul trucks). The recovered materials would be transported to an onsite processing plant where it would be crushed, screened to remove impurities and separate the materials by size class and then washed. Wash waters would be collected in a settling pond and then reused. The wash fines would be removed periodically and used as onsite fill or sold with other products. The cost for mining and processing is estimated at \$6.00/ton.

The San Diego and Lindavista formations are primarily composed of cobble conglomerates, with approximately 30 to 50 percent of the materials considered to be unsuitable for concrete or asphalt applications. The unsuitable materials are composed of fine sediments, bentonite, and mudstone and would be segregated from the cobbles during screening and washing. These materials would be retained onsite as fill or sold as unclassified fill at ±\$3.50/ton. The remainder is made up of cobbles ranging from ½” to 8” in size. These cobble materials are screened and crushed to appropriate size and then washed to remove the fine sediments. Current pricing for concrete and asphalt aggregates is ±\$17.00/ton. However, there are a variety of products that can be produced to meet customer orders. These products range from the highest valued products (asphalt and concrete aggregates) to unclassified fill materials. In the greater San Diego County market area, the average sales price for all materials is approximately \$12.00/ton.

Determining the value of the materials at the site, the cost of mining must be subtracted from the average sales price to determine the operating margin. As noted above, the cost for production is approximately \$6.00/ton. This calculates to an operating margin of \$6.00/ton. When multiplied with the total volume of materials, 975,000 tons, an operating margin of \$5,850,000 would be expected.

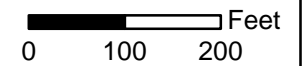
Border Pit Volume Calculation

Legend

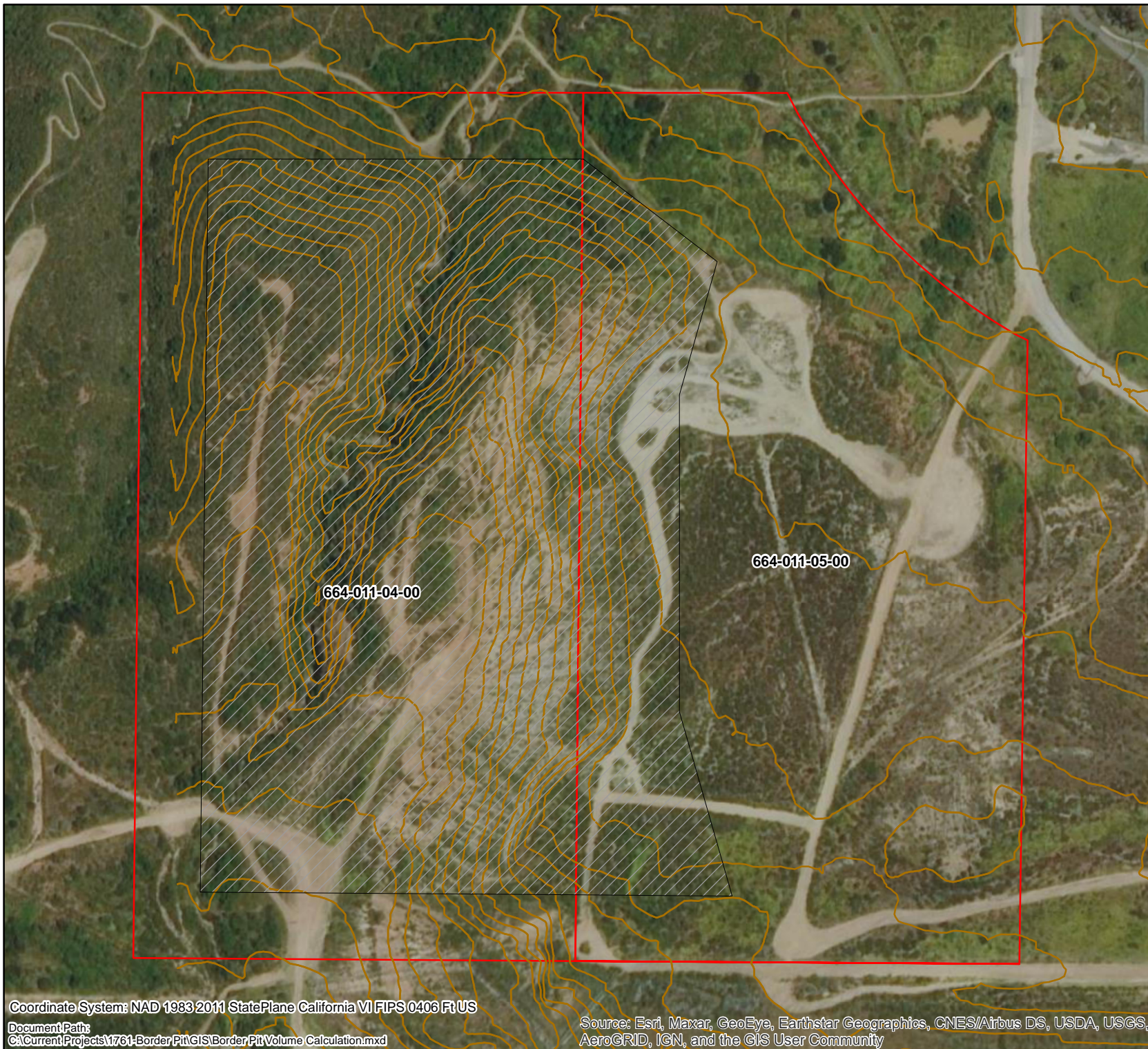
-  Design Boundary
-  Existing Ground - 10 FT
-  APN Boundary

Notes:

- 2:1 Cut Slope (H:V)
- 100' Buffer from APN Boundary
- Base at 115' (Base of eastern slope)
- 646,897 cu. yds.



Date: 2/25/2021



Coordinate System: NAD 1983 2011 StatePlane California VI FIPS 0406 Ft US

Document Path:
C:\Current\Projects\1761-Border Pit\GIS\Border Pit Volume Calculation.mxd

Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

