

SAFETY

Safety is an important factor when digging with a skid steer loader. The operator is not usually looking behind the machine which may often back out of the trench. Therefore, it is imperative that no one be permitted in the trench while excavation is in progress. The trench monitor stays within the excavation unit in front of the machine and in clear view of the operator. Nor should anyone be permitted around the screening station (see Chapter 3) except the screening crew. They are separated from the loader by the screens. The operator must be in absolute control of his machine and should be instructed to shut it down whenever he believes that there might be the slightest unsafe condition (nearby visitors, animals, children, or vehicles). Nor should the operator drive the machine on any slopes or ramps which he regards as even remotely unsafe. A dealer once told me that almost all loader accidents resulted from driving the machine on slopes which were too steep (nearly a hundred Case loaders are lost in this manner every year). Generally speaking, the machine is better balanced when carrying a load and it is sometimes a good idea to pick up a load before moving the machine up a hill. Of course, all of these cautionary remarks are a matter of simple common sense. There is absolutely no reason that a skid steer loader cannot be used safely on archaeological operations. Merely read the safety instructions which come with the machine and put safety at the forefront of operating considerations.

EXCAVATION WITH TRACTOR-MOUNTED LOADERS =====

Tractor-mounted loaders are larger and more powerful than the small skid-steer loaders, but they can be used to excavate in the same manner (fig. 2-6) . The great advantage to a tractor-mounted loader is that it has a larger bucket and will hold more dirt. The bucket of an aver-

BACKHOE SAMPLING

Backhoes	
Pros:	Cons:
Find buried site deposits and large features such as house remains very rapidly Move large volume of earth in short time Give fast picture of site contents and stratigraphy Can dig wide and deep trenches	Can be destructive of finds Expensive to rent Require some skill to operate

Backhoes are probably used more frequently by archaeologists than any other mechanized digging device (fig. 1-19). These machines can be invaluable in both test and salvage operations. However, because they are capable of performing major excavations, the technical aspects of backhoes are discussed in the next chapter. Here backhoes are discussed in terms of their application to testing programs. Because they can dig to considerable depths (up to 18 feet or 5-6 meters), backhoes are particularly valuable at finding buried site deposits, and they have been effectively used to locate such things as buried lake shore sites. They also have a particular value in historical sites where large amounts of sterile soil need to be dug in order to locate buried foundations and similar constructions.

In testing, backhoes have the advantage that they will dig a trench in only a few minutes. The trench will provide a stratigraphic section which can be invaluable in distinguishing intact deposits, fills, and sterile