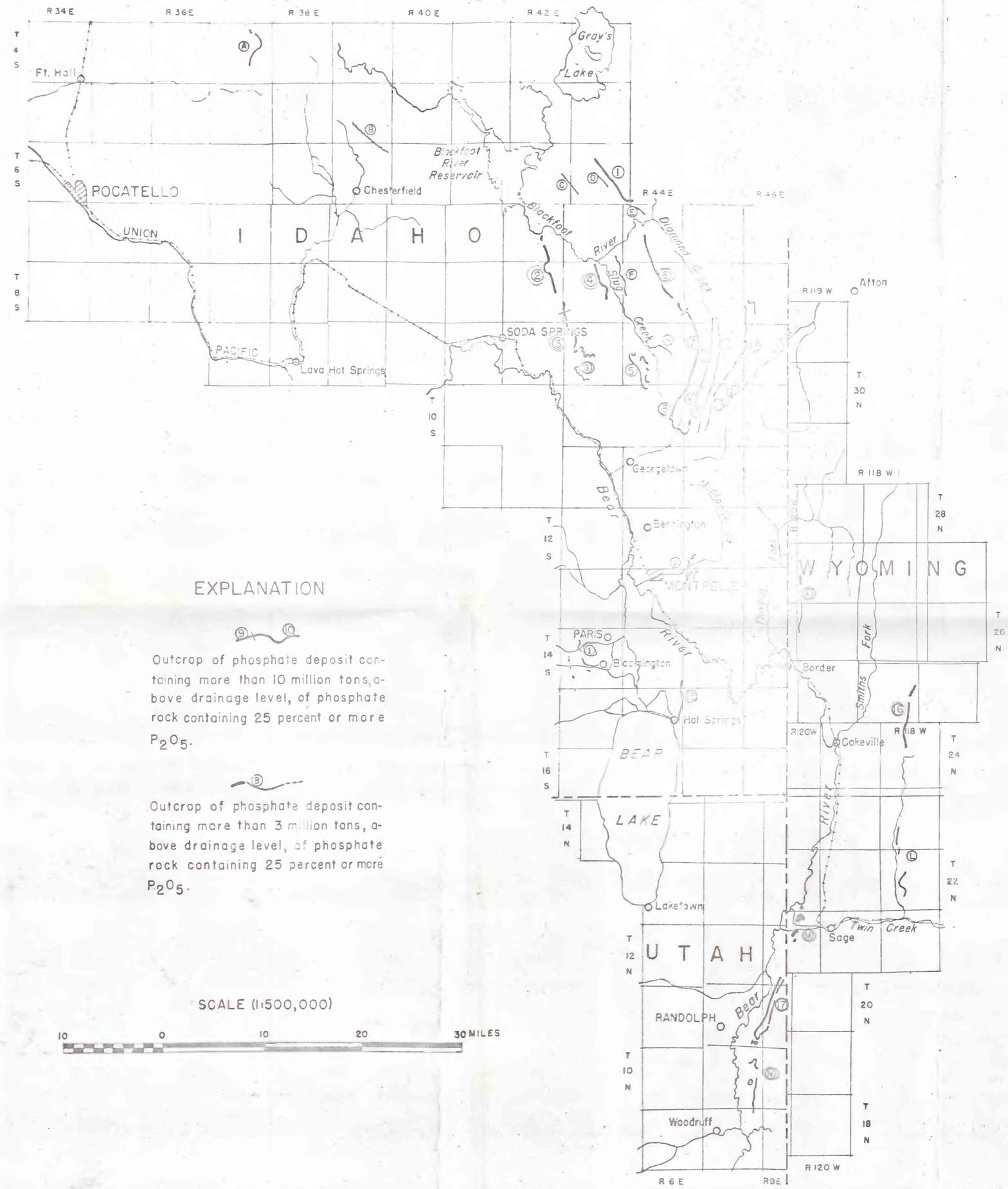
UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

PRELIMINARY MAP



EXPLANATION

⑨—⑩ Outcrop of phosphate deposit containing more than 10 million tons, above drainage level, of phosphate rock containing 25 percent or more P_2O_5.

Ⓑ Outcrop of phosphate deposit containing more than 3 million tons, above drainage level, of phosphate rock containing 25 percent or more P_2O_5.

SCALE (1:500,000)

10 0 10 20 30 MILES

DEPOSITS OF MORE THAN 10 MILLION TONS, ABOVE DRAINAGE LEVEL,# OF PHOSPHATE ROCK CONTAINING 25 PERCENT OR MORE P_2O_5*

1. Rasmussen Ridge, Idaho (west limb of Lanes Butte syncline; T. 6 S., R. 43, 44 E.)
2. Aspen Range, Idaho (west limb of Trail Creek syncline, Trail Canyon north to Blackfoot River; T. 7, 8 S., R. 43 E.; T. 8 S., R. 43 E.)
3. Aspen Range, Idaho (west limb of Trail Creek syncline, Trail Canyon south to head of Diamond Lake Gulch; T. 8, 9 S., R. 43 E.)
4. Aspen Range, Idaho (west limb of Slug Creek syncline; T. 8 S., R. 43 E.)
5. Aspen Range, Idaho (Dairy syncline; T. 9, 10 S., R. 44 E.)
6. Dry Ridge, Idaho (west limb of Georgetown syncline, head of Stewart Canyon to Blackfoot fault (T. 7, 8 S., R. 44 E.)
7. Dry Ridge, Idaho (west limb of Georgetown syncline, head of Stewart Canyon south to Bear Lake-Caribou County line; T. 8, 9 S., R. 45 E.)
8. Dry Ridge Idaho (west limb of Georgetown syncline, Bear Lake-Caribou County line south to Phosphoria Gulch (T. 10 S., R. 44, 45 E.)
9. Freemen Ridge, Idaho (east limb of Georgetown syncline, south fork of Deer Creek to Stewart Flat; T. 8, 9 S., R. 45 E.)
10. Snowdrift Mountain, Idaho (east limb of Georgetown syncline, Phosphoria Gulch north to south fork of Deer Creek; T. 10 S., R. 44, 45 E.)
11. Freemen Ridge, Idaho (east limb of Webster syncline, Deer Creek north to Timber Creek; T. 8, 9 S., R. 45 E.)
12. Snowdrift Mountain, Idaho (west limb of Webster syncline, Deer Creek south to fault; T. 10 S., R. 45 E.)
13. Webster Range, Idaho (east limb of Webster syncline, Deer Creek north to Smoky Canyon; T. 8 S., R. 45 E.; T. 8, 9 S., R. 46 E.)
14. Snowdrift Mountain, Idaho (east limb of Webster syncline, Deer Creek south to fault; T. 10 S., R. 45 E.)
15. Hot Springs, Idaho (T. 14, 15 S., R. 44 E.)
16. Tump Range, Wyoming, (T. 24, 25 N., R. 118 W.)
17. Crawford Mountains, Utah (northern part; T. 11 N., R. 7 E.; T. 11, 12 N., R. 8 E.)

ADDITIONAL DEPOSITS OF MORE THAN 3 MILLION TONS, ABOVE DRAINAGE LEVEL, OF PHOSPHATE ROCK CONTAINING 25 PERCENT OR MORE P_2O_5*

A. Fort Hall Indian Reservation, Idaho (T. 4 S., R. 37 E.)
B. Southeast limb of Draves Creek syncline, near Chesterfield, Idaho (T. 5, 6 S., R. 39 E.)
C. Wooley Range, Idaho (west limb, Georgetown syncline; T. 6 S., R. 42, 43 E.)
D. Rasmussen Ridge, Idaho (east limb of Georgetown syncline; T. 6 S., R. 43 E.)
E. Rasmussen Ridge, Idaho (east limb of Georgetown syncline; T. 7 S., R. 44 E.)
F. Schmid Ridge, Idaho (west limb of Schmid syncline, in the vicinity of Caldwell Canyon; T. 7 S., R. 43 E.; T. 8 S., R. 43, 44 E.)
G. Aspen Range, Idaho (Swan Lake Gulch-Diamond Lake Gulch; T. 9 S., R. 43 E.)
H. Schmid Ridge, Idaho (west limb of Schmid syncline, in the vicinity of Schmid's ranch; T. 9 S., R. 44 E.)
I. Paris-Bloomington area, Idaho (T. 13, 14 S., R. 43 E.)
J. Montpelier Canyon, Idaho (T. 12, 13 S., R. 47 E.)
K. Dubiette Ridge, Wyoming (T. 26, 27 N., R. 119 W.)
L. Dempsey Ridge, Wyoming (T. 22, 23 N., R. 118 W.)
M. Cockwith Hills, Wyoming (T. 21, 22 N., R. 120 W.)
N. Crawford Mountains, Utah (southern part, T. 9, 10 N., R. 7 E.)

#Drainage level for each deposit, i. e. the level to which a mine can be drained, is arbitrarily assumed to be the altitude at which a perennial stream crosses the outcrop. Where more than one perennial stream crosses the outcrop, drainage level is taken as the tangent to the points of intersection of the perennial streams with the outcrop; where no perennial stream crosses the outcrop, drainage level is taken as the altitude of the nearest point on a perennial stream.

* The list, which is based only on rough calculations, is preliminary and subject to revision. Very likely all the deposits listed contain more than the minimum amount of phosphate rock specified, but it is equally certain that the list does not include all deposits of the specified size. Heretofore only the highest-grade beds (containing 32 percent or more P_2O_5) have been sampled in most places, and data are therefore not available for estimation of reserves of lower-grade rock. Subsequent sampling probably will disclose other deposits that contain more than the minimum reserves specified. On the other hand, such sampling accompanied by detailed geologic mapping may also disclose structural complexities in the various deposits that will materially reduce their reserves of minable rock. The deposits are listed geographically, beginning at the northwest end of the region.

November, 1946
By V.E. McKelvey

INDEX MAP OF IMPORTANT PHOSPHATE DEPOSITS OF SOUTHEASTERN IDAHO AND ADJOINING PARTS OF WYOMING AND UTAH