GOLD AND DIAMOND POSSIBILITIES IN ILLINOIS

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Foreword

The material that follows was accumulated in order to bring together for Survey use, the scattered information existing regarding gold and diamond possibilities in Illinois and to arrive at preliminary judgments concerning the most likely mode of occurrence of the two minerals and the location of general and specific sites or areas where prospecting would seem to have the best chances for success.

Certain suggestions are made regarding the study of gold and diamond possibilities in the state which, if actively pursued, will (1) put the Survey in the desirable position of being able to show that it has been alert to gold and diamond in Illinois should questions be raised regarding them and (2) serve as a basis for the planning of additional studies should they prove desirable.

Although gold has been found or reported at several places in Illinois, the prospects for the occurrence of sizable commercial deposits are uncertain in the light of present information. Therefore, it is not recommended that a formal investigation of gold possibilities be undertaken at present but it is suggested that potentially promising sand or gravel deposits be sampled and the samples studied for gold whenever such a procedure can be conveniently carried out in connection with other work.

The basis for expecting to find diamonds in Illinois is as tenuous as that for gold and derives chiefly from (1) the fact that there have been reports of diamond finds in Illinois (2) that diamonds have been found in Indiana in those areas where major concentrations of gold have been found, (3) from the presence of diamonds in the glacial deposits of southern Wisconsin and (4) from the occurrence in southern Illinois of igneous rock of a lithologic kind that in some places carries commercial diamond deposits.

A special investigation of diamonds in the glacial deposits of the state does not appear presently justified but any samples taken for the study of gold resources might well be examined for diamonds and possibly some special samples taken and studied.

Recommended is a specific investigation of the diamond possibilities of the Pope and Hardin County igneous rocks.

Publication of the material herewith is considered undesirable at present because most of the information relating to gold and diamonds in Illinois is inferential and more or less speculative. If the work proposed brings to light any positive results, the matter of publication would then seem to merit consideration.

GOLD

Introduction

The current world interest in gold raises the question of the possibilities for gold in Illinois. Vein deposits occurring in the bedrock of the state are improbable. Any possibilities that do exist lie in the state's gla[illegible]a materials, some of which may contain gold derived from deposits in Ca[illegible]a, Figure 1, brought into Illinois by a glacier or glaciers

that spread over Illinois from that area. Any such gold would be incorporated either in till, in alluvial deposits derived from and associated closely with till or in water sorted deposits laid down by glacial floods.

Comparatively numerous and apparently authentic occurrences of gold in glacial deposits are reported in Indiana. Around 1900 some of them were sources of gold worked on a small scale by local miners. Occurrences of gold also have been reported in Illinois.

It is proposed here to (1) examine the data regarding the mode of occurrence of the Indiana deposits and their distribution with reference to the age and topographic configuration of the glacial materials in which the gold is found and (2) to make whatever inferences are possible regarding the whereabouts of glacial materials of similar age, source and occurrence in Illinois.

Gold in Indiana

The distribution of gold in Indiana, as reported in the 27th Annual Report of the Indiana Geological Survey, 1901, recently reprinted, is shown in Figure 2. The gold occurs in several ways but the greatest concentrations appear to be in gravel and sand deposits resting on bedrock in the valley flats of comparatively small or medium sized streams. The impression is given that many of the gold bearing deposits are post glacial, probably relatively recent, and represent the load which the streams carry or have recently carried when they were in flood. An alternative would be that the gold occurs in the beds of small streams that carried melt water and sediment from a slowly melting stagnant glacier. The gold in the stream deposits is, therefore, a concentrate that may have been derived from glacial sand, gravel

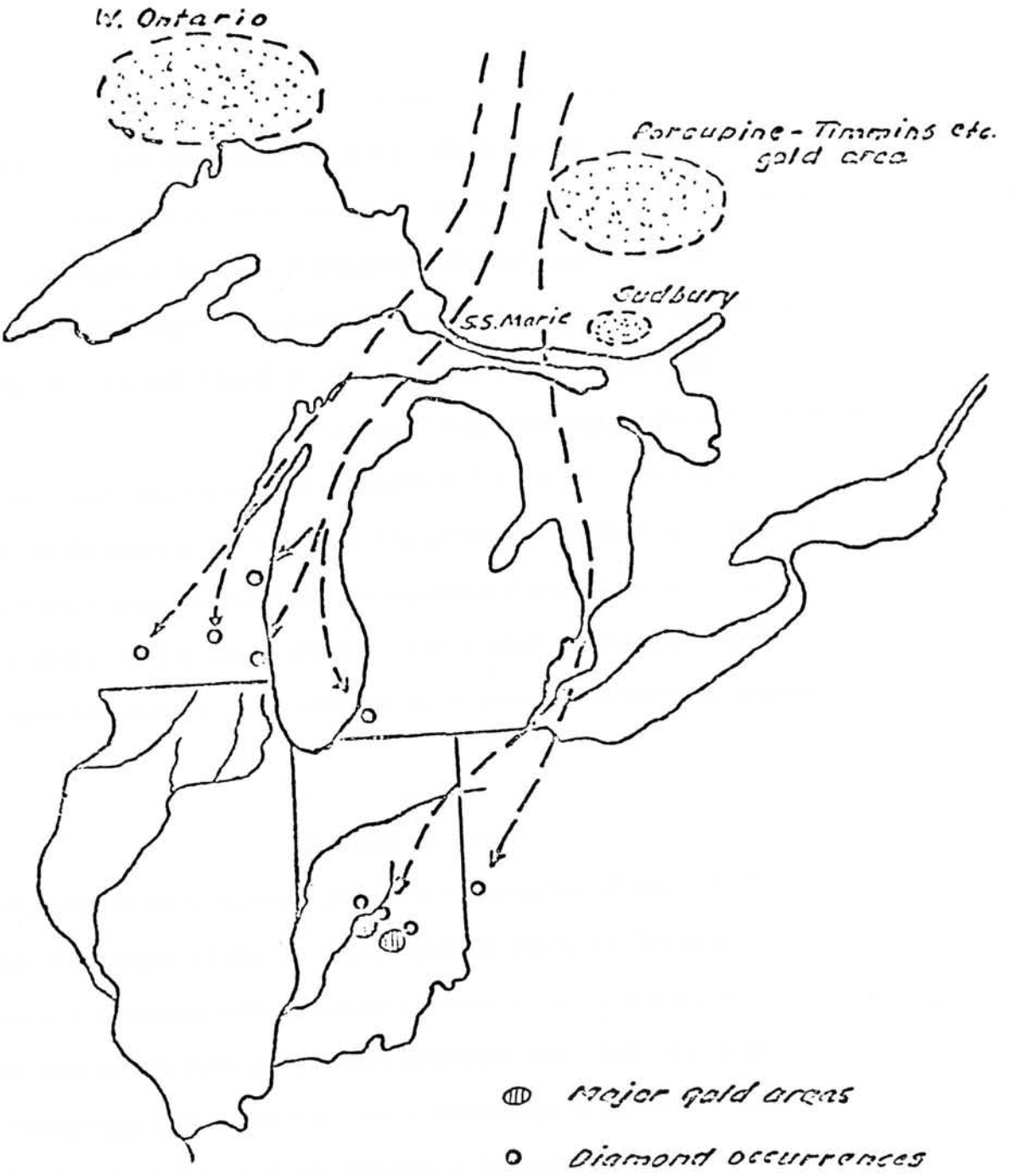

Figure 1. Principal gold bearing areas in Indiana and in Ontario, Canada; occurrence of diamonds in the states adjacent to Illinois together with conjectural paths of travel of diamonds from an unknown source or sources in Canada. Data regarding diamonds from Flint, 1957 and Schwartz, 1965.

Figure 2. Gold occurrences in Indiana.

Compiled from Blatchley (1903).

or till. However, other occurrences, especially those of a scattered nature, may well be local concentrations in glacial outwash discovered by panning carried out by individuals at about the turn of the century when interest in Indiana gold was apparently high. A listing of all types of occurrences is given in Table 1.

The greatest concentration of Indiana gold, as judged by the amount of activity relating thereto about 1900, was in northeast Brown County, about 20 miles east of Bloomington, and in central Morgan County in the general vicinity of Martinsville, Figure 2. The deposits lie at or near the south margin of the Wisconsinan drift. The Morgan County deposits are found within a re-entrant in the drift margin which is bordered on the northeast at a distance of some 2 to 10 miles by a moraine, (A. J. Wayne, 1958).

The Brown County deposits likewise adjoin a broader but less pronounced re-entrant in the drift margin which is also bordered by a moraine some 3 to 6 miles to the northeast.

Another single occurrence of gold in a marked re-entrant in the margin of the Wisconsinan is recorded about 10 miles south and a little west of Connersville in eastern Indiana.

Other gold occurrences show no readily discernible relationship to moraines. Some occur in the area of Wisconsinan drift, others in the area of pre-Wisconsinan drift and still others in areas mapped as bedrock.

Occurrences of Gold in Illinois

Reasonably known and reported occurrences of gold in Illinois are listed in Table 2 and shown in Figure 3. All occurrences except numbers 6 and 8 probably are in glacial outwash. The Greenup occurrence may duplicate the occurrence of gold in the major Indiana gold districts.

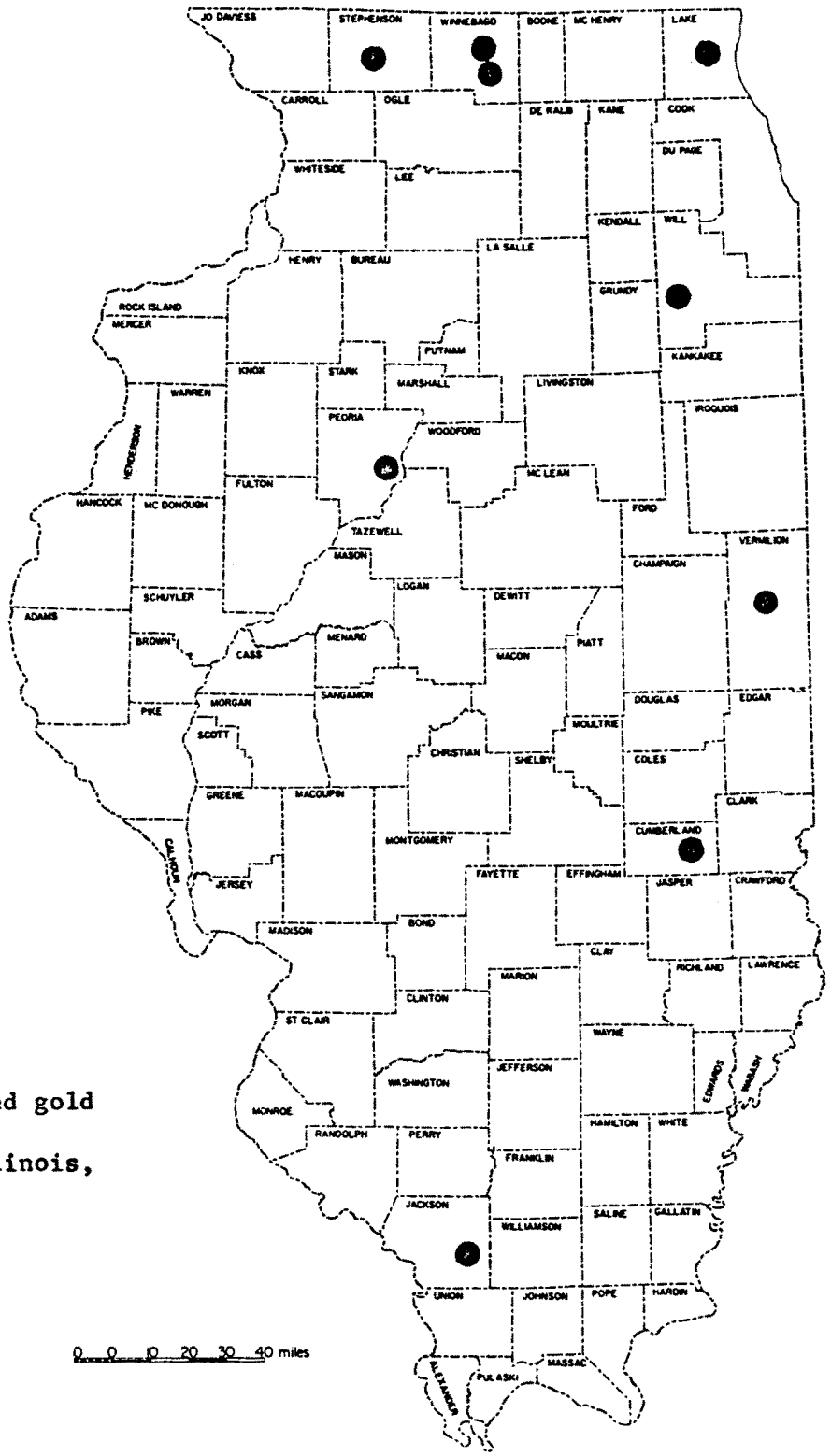

Figure 3. Reported gold occurrences in Illinois, see Table 2.

Types of Potential Occurrences of Gold

The occurrence of bedrock gold near Elroy in Stephenson County (Table 2, item 8) is considered to be a scientific curiosity. Had it been more than this it would doubtless have been exploited commercially. No record of such activity has been found. The best possibilities for significant amounts of gold appear to lie in the drift and it is possible that gold may be found in many areas of the Wisconsinan and Illinoian drift in Illinois where conditions are favorable to its concentration. It is believed (J. C. Frye, pers. comm., 1968), that the drift of the Iroquois moraine in particular (Figure 4) may have originated in that part of the Canadian shield which includes the general gold bearing region in the vicinity of Timmins, Ontario, hence, areas of this drift may be more likely to contain gold than other areas of Wisconsinan drift. However, the illitic Illinoian till of southern Illinois also may have been derived in part from the Timmins area, and some of the montmorillonitic Illinoian till of the western part of Illinois may have come from the gold bearing area of western Ontario.

Regarding specific occurrences of gold, there are five major types of glacial deposits in which gold may be present, as follows: (1) those sorted from debris laden glacial floods by the waters of these floods and occurring in outwash deposits, (2) those sorted by later streams from outwash deposits, (3) those concentrated by streams that have been or are eroding till, (4) deposits made behind (downstream) bedrock obstacles in glacial floodways and (5) deposits formed on, within or under a glacier.

In the case of (1), gold deposits might be expected to be found in streaks or bands at any place vertically within the deposits though possible

STATE GEOLOGICAL SURVEY

Landforms of
Illinois

Figure 6. Moraine recurrence.
(In part modified from Willman et al, 1963)

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reworking during deposition might favor the basal portions of outwash deposits for gold concentrations.

Deposits of type 2, because they are reworked, would seem most likely to have any gold concentrations in their basal portions. The concentrations would be favored at or near the contact of type 2 deposits with bedrock or with erosion resistant till. Relatively small streams or their confluences might offer advantages for a concentration of any gold in their sediment load. The conditions set up in (3) may also apply.

Type 3 occurrences would be favored under those topographic conditions which afford small streams cutting into or paralleling till ridges such as moraines. Many small streams actively eroding till and converging into a larger stream, thus creating a fan shaped drainage pattern, could well produce gold concentrations in the larger stream. The latter should have a flood plain in which gravel or coarse sand is being moved and is being considerably rehandled during flood stages. Under such conditions gold concentrations are most likely at or near the base of the alluvial deposits especially in those parts of the flood plain where the alluvial materials rest on bedrock or erosion resistant till. A gravelly or sandy source till might have advantages over a clayey till.

Type 4 deposits may be formed in the alluvial deposits trailing downstream behind sizable bedrock masses existing in glacial floodways or in depressions, of varying but possibly comparatively small size, in the bedrock comprising the floor of the channels that carried the glacial floods.

Type 5 deposits include accumulations of sand and gravel in water courses on, in or beneath glaciers or within crevasses. These now appear as eskers and other ridges. The chances for gold in esker gravels and sands

seem interesting because of the possibility for local concentrations of gold in the beds of the streams in which the sand and gravel were deposited. Among other Wisconsinan eskers are those near Adeline, Kaneville, Garden Plain, Grand Detour and along Embarass River about 6 miles east of Charleston. A ridge near Exeter in Scott County is believed to be an Illinoian esker. Crevass deposits of Illinoian age appear near Greenville, in the vicinity of Vandalia and at other places.

General Prospecting Suggestions

The gold in Indiana was commonly found as a part of or associated with dark colored sands owing their color to dark colored heavy mineral grains. This association could well be utilized in Illinois prospecting.

Gold has a specific gravity of 14 to 19 depending on the amount of other metals in it. A 1 mm. cube of gold having a specific gravity of 19 would have about the same weight as a cube of quartz that is 1.9 mm. on a side. Expressed in terms of sieve mesh (U. S. Standard) the gold particle would be about 18 mesh whereas the quartz particle would be about 10 mesh. These data give a rough idea of the comparatively size of gold particles and the materials that might be associated with them assuming that the carrying power of water is the same for both sized particles. This is probably not exactly the case as some gold occurs as flakes.

The price of gold in the United States is currently $34 per ounce. A deposit containing free gold in this amount would probably normally be commercial at present. A concentration of 1 ounce of per ton is 1 part in 32,000. If a deposit of sand contained 1 ounce of gold per ton and the gold consisted of a single piece, it would be incorporated in a volume of about

20 cubic feet of sand. The probability that the piece of gold would be included in a 100 pound sample of the sand would be 1 in 320. Fortunately, the gold present in the glacial sands is to a considerable extent, possibly mostly, small flakes. Hence, the chances of having gold in a 100 pound sample are much greater. It seems evident that sand and gravel samples of 100 pounds or more are desirable to afford a fair chance that they will be representative and significant so far as the gold content of a deposit is concerned. The foregoing applies primarily to normal gravity sands dredged from rivers or lakes, bank sands and the like. Black sands and similar high gravity sands may not require such large samples but 50 pounds would seem a minimum for such sands and 100 pounds preferable. The Survey has equipment for the rapid concentration of gold or diamonds from 100 pound samples (Ehrlinger, pers. comm. 1968).

Specific Sites for Prospecting

Below are given a number of specific areas in which gold possibilities might bear inspection. Others doubtless exist and further investigation may greatly add to the list of areas.

Deposits in Outwash, Type 1.

No specific information is available regarding where deposits of this type may occur. Presumably numbers 2 and 3 in Table 2 are of this character. As a generalization it is suggested that black sands in outwash of suitable particle size which is near its source might have better chances for gold than similar sands further downstream. Hunter (personal communication 1967) studied black sand accumulations along the Wabash River in eastern and southern Illinois but found no gold in them.

Reentrants in Moraines, Types 2 and 3.

Following the idea that reentrants in moraines serve as desirable areas for drainage patterns that may concentrate gold, the lettered areas in Figure 4 are of note. Details as to bedrock outcrops in creeks of these areas have not been investigated in detail but Pennsylvanian limestone crops out along creeks in the vicinity of Marshall, area A. In area B limestone outcrops south and southwest of Lincoln along Salt Creek and at C bedrock crops out in places along Kickapoo Creek. Area D has bedrock outcrops along the East Fork of Spoon River in the northeast part of Stark County. In areas E, F, and G limestone or dolomite outcrops along major streams and some minor streams. H and I are notable moraine reentrants but in neither one is bedrock known to outcrop except near Garden Prairie in I. Considerable sand and gravel is associated with I but gravel is less common in H although a sizable gravel pit in "blue gravel" operates near Gibson City.

Areas J, K and L are located along the margin of the Buffalo Hart moraine. In J outwash is known along Spoon River and small tributaries valleys are cutting into till. There is a reasonable possibility of bedrock in some of the valleys. K is a minor reentrant in the moraine with a stream cutting in till and the possibility of bedrock in its bed. L is a rather broad reentrant with several small streams eroding till and a possibility of bedrock in the stream valleys.

The Iroquois moraine, in the county of the same name, is a deposit of an ice sheet that is regarded as probably having passed over, or originated, in the gold bearing area of Ontario. It is not clear to what extent ice from this area was a part of other Wisconsinan ice moraines. The Iroquois

moraine abuts sediments of Lake Watseka on the west. The best possibilities for gold concentrations appear to be along the Iroquois River or along its tributaries on the south side of the moraine, namely Gay, Fountain and Sugar Creeks and their tributaries. No bedrock is known to outcrop in the area of or surrounding the Iroquois moraine which eliminates gold occurrences in contact with the bedrock but would not preclude concentrations at places where the stream beds are ~~flowing on~~ clayey till.

Deposits in Glacial Floodways, Type 4.

The following general locations are considered of interest in connection with Type 4 deposits. A close scrutiny of local conditions and of the Pleistocene history of the deposits doubtless would sharpen up prospecting.

Flathead Mound (sec. 25, T. 35 N., R. 9 E.) was a large mound composed of gravel outwash west of Joliet along Illinois River. The gravel rested on bedrock dolomite and dolomite was exposed at the west end of the mound. Most or all of Flathead Mound has been removed for its gravel. Possibilities exist for gold concentrations in depressions in the top of the bedrock at the site of the mound or downstream from its west end.

Large areas of gravel resting on bedrock have been removed over an area of several sections northeast of Chanahon in the flats of Illinois valley. Bedrock is shallow in the general area. Possibilities for gold exist in depressions in the top of the bedrock or at the bottom of the gravel deposits.

Buffalo Rock (sec. 18, T. 33 N., R. 2 E.) is a St. Peter sandstone hill in the floodplain of Illinois River near Ottawa. There is a possibility for gold in the sand deposited by glacial floods behind the downstream (west) end of the Rock. Commercial production of sand and gravel was active here for a considerable time.

Duck Island (secs. 27 and 28, T. 6 N., R. 5 E.), south of Peoria, is a bedrock high in the floodplain of Illinois River that has caused a sand and gravel deposit to be formed downstream from it. A chance may be afforded to obtain sand or gravel from commercial operations at this place or from reported bedrock outcrops in the island proper. However, the deposits may be too far downstream to contain gold.

The Rock River has a bedrock bed at many places from the state line to Rock Island. A careful consideration of the most likely gold trapment areas would be worthwhile with the more northern area having as possible edge over more southerly areas.

Green River runs over bedrock in the vicinity of Amboy and was a glacial floodway. It may bear consideration.

Kankakee River is in another glacial floodway and has dolomite in its bed near Momence, Wilmington and probably other points. The Momence area being the fartherest upstream may have superior possibilities for gold as compared to those areas farther downstream.

DesPlaines valley in Lake County contains gravel terrace remnants and some gravel deposits that fill depressions in till. Both may bear investigation because of their proximity to an area in Wisconsin where diamonds were found, Figure 5.

Gravel Dredging Operations

Gravel is dredged at many places in Illinois from artificial lakes as near Chillicothe, Mahomet, Decatur, Greenup, Lincoln, Morris and Pekin. In many, if not most operations, the end of the suction pipe is at or near the base of the gravel deposit. Hence, it is in a position to suck up material

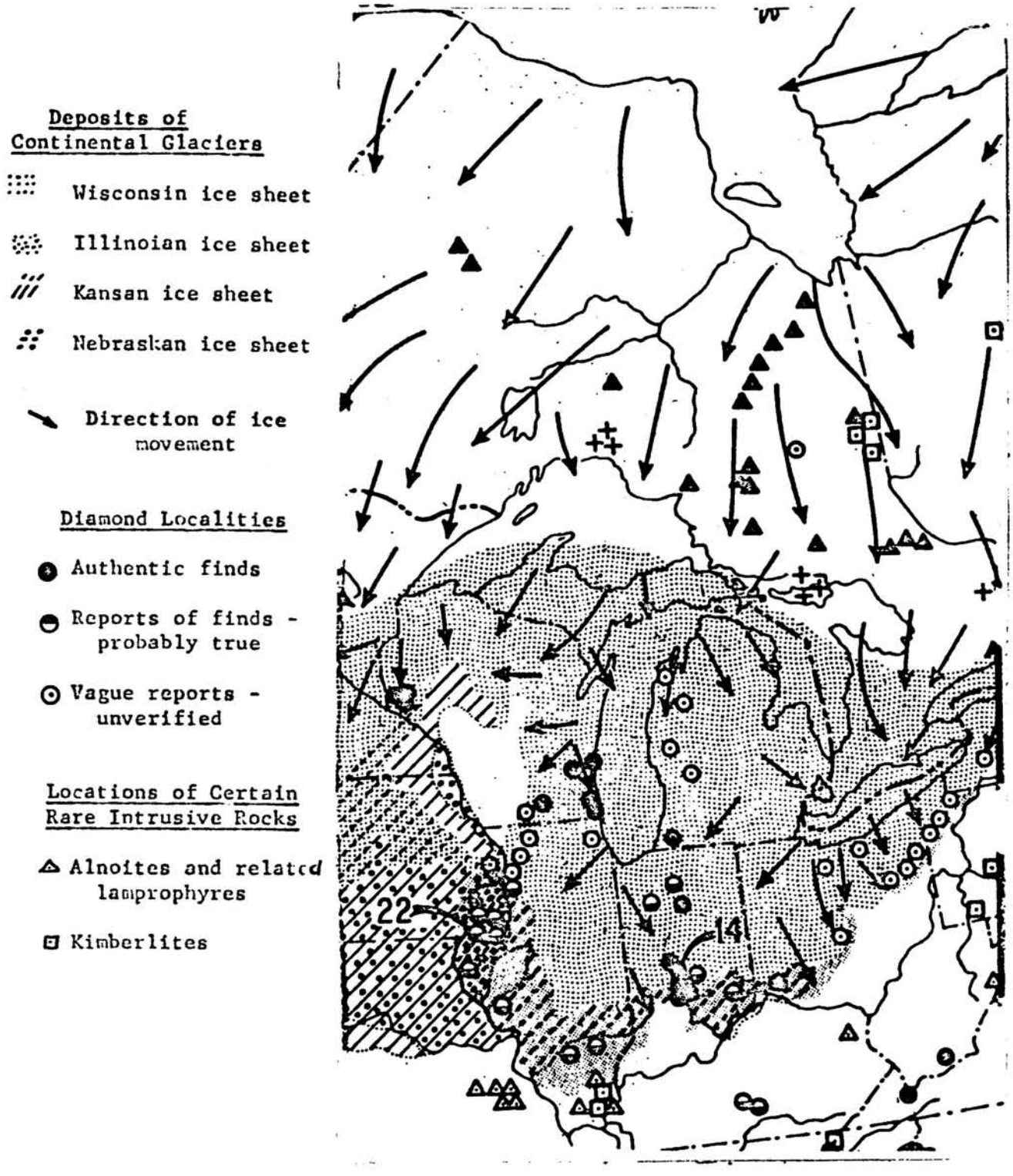

Figure 5. Diamonds in the Midwest. A portion of Fig. 2, Gold (1968), enlarged about 4 times.

from the basal parts of the gravel deposits. A preliminary study of the sands so produced seems in order. Also worth sampling are the sands dredged from the bars and sand banks of Illinois rivers, especially the Rock and Mississippi River above St. Louis.

Relation of Gold to Diamonds

Subsequently the occurrence of diamonds in Indiana is discussed and it is to be noted that most of the diamonds were found in Brown and Morgan Counties in the vicinity of Bloomington and Martinsville which is also the area of greatest gold abundance. No certain finds of diamonds have been reported from Illinois, but the information existing regarding them suggests the Rock River and upper Mississippi River in Illinois and general central southern Illinois as possible ~~gold~~ diamond bearing areas. Gold has been found in the first and last areas.

Simple Gold Recovery Methods

Although the production of gold in quantity may never be a reality in Illinois there is a possibility that either of the two simple methods of gold recovery described below could provide a moderate profit. Both involve processing of the sand resulting from commercial operations wherein the sand is carried in suspension in water, such as dredging or washing. Lenhart (1962) suggests running the sand and water through a flume or sluice a portion of which is floored with wool carpet. The carpet traps the gold which is recovered periodically by removing and shaking the carpet. Shaw (1932) describes a sluice with various kinds of baffles or riffles to trap the gold, such as common, pole, zigzag, block, and rock riffles. The gold collects behind the riffles and is recovered periodically.

Diamonds

The possibilities for the occurrence of diamonds in Illinois reside in the glacial materials and the igneous rocks and explosion breccias in Hardin and Pope Counties. In the case of the former, Gold (1968), in his article on diamonds in North America, has a small map indicating the occurrence of diamonds in the United States, a part of which is reproduced herewith, Figure 5. No bonafide finds of diamonds are indicated in Illinois but seven places are shown where there have been "reports of finds - probably true" along the Mississippi River, roughly above St. Louis, and along the lower Rock River. There are also three "vague unverified" reported occurrences further up the Rock.

Two reports of finds "probably true" are shown in central southern Illinois just outside of what is probably the margin of the Wisconsinan drift. One of the finds might well be in the Greenup area where an apparently bonafide occurrence of gold is known, Table 2.

Gold shows four occurrences of diamonds along Lake Michigan in Wisconsin just north of the Illinois boundary and one vague unverified report of diamonds just south of the state line.

Six "authentic finds" of diamonds in Indiana are indicated by Gold (Figure 5). Blatchley (1903, p. 38) reports having seen 8 Indiana diamonds, four of which came from within the area of the Wisconsinan drift and four from the "older drift." A center for diamond finds seems to have been the Bloomington area which was also the area of the greatest gold mining activity. The finds in the area may be due to a greater scrutiny of the heavy minerals because of gold production there. The situation also suggests that

the general source areas and present mode of occurrence of diamonds and gold are roughly the same and hence, that the presence of one of the minerals may be a clue to the possible presence of the other.

The colors of the Indiana diamonds include pinkish, blue, pink, brownish yellow, yellow tinge, yellow, greenish yellow and between white and yellow (Blatchley 1903). They are hexoctrahedrons, rhombic dodecahedrons, dodecahedron or octohedrons. The larger diamonds range from 3 to 4 7/8 carats but smaller diamonds of less than 1 carat also are reported. The modern value of the diamonds as gem stones is not known, however, if diamonds are markedly colored, they are called "off-colored" and are less valuable than the colorless or blue white varieties (Weinstein, 1958). Flaws or imperfections in diamonds also influence their value.

Hardin County Possibilities

Hardin County is the site of a number of mica peridotite or lamprophyre dikes and sills and of bodies of intrusion breccia. Gold (1968) reports three occurrences of alnoites and related lamprophyres and two of kimberlite, Figure 5. The last is the kind of rock in which diamonds occur in South Africa. Whatever names are applied to the southern Illinois rocks some of them are of the lithologic type that could be diamond bearing. Despite the greater than normal scrutiny that the Hardin County igneous rocks have received by professional geologists, no diamonds have been reported nor have there been any reports of diamond discoveries on the part of the public.

In 1934, Lamar and Grim studied small samples of weathered "plug rock" from the Sparks Hill plug and of sill rock from a sill near Rosiclare. (Manuscript 72, Lamar, Ill. Geol. Sur. technical files). After crushing and

and acid treatment to remove carbonates, the material was examined with heavy liquids, index of refraction oils and the petrographic microscope but no diamonds were found. The amount of materials examined was too small to give conclusive results but the work does constitute an initial inspection.

Jerseyville Diamonds

About 3 years ago newspapers reported the occurrence of diamonds near Jerseyville. Examination of a sample of the diamonds, supplied by the person who supposedly owned the diamond property, showed that the diamonds were small, quite perfect, individual, octahedral crystals of pyrite (J. C. Bradbury, pers. comm.).

Rock Springs Diamonds

Locally in the bluffs and tributary valleys of Mississippi River between Thebes and Fayville near perfect, clear, shining quartz crystals occur in deposits of coarse "Lafayette" sand or in wash therefrom. The crystals reach an observed maximum of a little more than ½ inch. They are known locally as "Rock Springs diamonds" presumably because some of them occur, or occurred, in the vicinity of Rock Springs, about 2 miles south of Thebes, and along Rock Springs Creek.

Suggestions for Prospecting

The possible association of diamonds with gold in the glacial deposits of the state, previously pointed out, suggests the feasibility of a concommitant study of both and thus the prospecting plans mentioned under gold seem generally adequate with respect to diamonds with the following additional special features. If Gold's diamonds along Lake Michigan occur

in beach sands, as their location on his map suggests, the beach sands along or near the lake north of Chicago and any gravel deposits in the area may bear inspection for both diamonds and gold. Similarly his "reported" diamonds along the Rock River, and along Mississippi River may warrant looking for diamonds and gold along these streams, particularly in pockets of black sand if such can be found. The sand from sand or gravel dredging operations in the channel of the upper Mississippi River in Illinois and in sand and gravel producing operations in or near Rock River would seem further prime targets for any such investigations. In addition, the general Greenup area might be one where our initial study of the sands produced by commercial sand and gravel operations would be desirable in view of the "probable occurrence" of gold and diamonds in the area.

As stated earlier, gold because of its high specific gravity (15 to 19) tends to concentrate at the bottom of alluvial deposits. Diamonds with their gravity of 3.5 may not concentrate in the bottom of deposits to the same extent.

As indicated under the discussion of samples for gold studies, a sizable sample of sand or gravel is desirable, probably 100 pounds or more. The procedures suggested for concentrating gold also will separate diamonds, hence, the processing of samples of the size mentioned presents no problems. Or if diamonds only are being sought, a vaseline coated, sloping, corrugated or stepped, bronze or aluminum shaking table over which the sample is carried by water may be used. The diamonds adhere to the vaseline and are cleaned up by boiling with water (Weinstein, 1958 and Jahns, 1960). Further studies of the diamonds can be made by conventional petrologic methods.

One item mentioned earlier that could be helpful in studying sands for diamonds under the binocular microscope is their reported occurrence, evidently as discrete crystals, in Indiana. For quick, rough inspection, this may eliminate round grains and sharp irregular particles and affords the eye a distinctive object for search. It is not believed, however, that the possible presence of non-euhedral diamonds can be eliminated and hence, the procedure is of limited usefulness.

The size of diamonds is described in terms of carats, one carat being 1/5 gram. A 1 carat diamond, if it were a cube, would be a little less than 4 mm. on a side and would easily pass a Tyler 4 mesh sieve and be retained on a 6 mesh sieve.

Table 1. Occurrences of Gold in Indiana

(From "Gold in Indiana" 27th Annual Report,
Indiana Geological Survey, 1901, pages 18 et seq)

p. 19. Major occurrences are reported in stream beds in Morgan County (25 miles northeast of Bloomington), Jackson County (20 miles southeast of Bloomington) Brown County (20 miles east of Bloomington) and GreeneCounty (14 miles west of Bloomington).

p. 22. Brown County - Hamblin's Fork of Salt Creek 3/4 miles due west from Bartholomew near St. Moriah post office.

p. 23. Brown County - Gold in bed of and/or in bars of all the brooks that flow into Bean Blossom from Indian Ridge and on streams that flow from the foot of the "drift backbone" in the northeast corner of the county as South Bean Blossom, North Salt Creek, etc.

p. 24. Brown County - "It is the gravel next to the bedrock that is richest in gold."

p. 25. Brown County - 3 miles southeast of Spearsville in the northwest corner of Hamblin Township in a tributary to Salt Creek. Gold mining here.

p. 26. Cass County - Flakes of gold from a gravel deposit in the north part of Logansport.

p. 27. Clark County - 3½ miles northeast of Charleston; gold flakes in sand.

p. 28. Ohio County - Gold mining 1 mile west of Hartford.

p. 29. Franklin County - Gold in sand in northwest part of county on Sein Creek in Laurel and Posey Township and on Duck Creek.

p. 31. Jackson County - Small deposits near Freetown.

p. 31. Jefferson County - 6 miles north of Madison, gold bearing quartzite boulders.

p. 31. Jennings County - "South Fork of the Muscatatuck," small particles of gold.

p. 32. Montgomery County - 1 mile west of Crawfordsville on Sugar Creek, gold panned "by amatuers."

p. 32. Montgomery County - Sec. 6, T. 19 N., R. 3 W., near the junction of Lye and Sugar Creeks in the northeast part of the county. Flat scales of gold.

p. 34. Morgan County - Gold panned at the following places: - Gold Creek in the vicinity of Sycamore and Lambs Creek; Gold Creek, SW¼ sec. 27, T. 13 N., R. 1 E., 7 miles south of Martinsville; and 4 or 5 miles northwest of Paragon.

p. 37. Putnam County - Gold panned 2 miles east of Bainbridge.

p. 38. Warren County - Gold panned at Gold Creek Branch on Pine Creek, NW¼ sec. 23, T. 22 N., R. 8 W.

Table 2. Reported Gold Occurrences in Illinois

1. Driller in Lake County encountered nugget and had a ring made from it. Information from Ekblaw.

2. Near Peoria. A 16-inch thick layer of sand under 60 feet of till contained much yellow mica. An assay by the "Denver mint" showed "$60 per ton gold."*

3. A Rockford newspaper reported that a well in the city yielded sand that contained $15 per ton gold* based on an assay that seemed reliable.

4. A sample of gravel from near Channahon was examined by F. W. DeWolf and reported to contain gold. Amount not stated. (Survey correspondence).

5. One flake of gold was observed by Grogan in a sample of coarse sand that was submitted by mail. The material was obtained from the contact of the bedrock and creek gravel near Greenup.

6. Boulders collected from a field near Carbondale about 1925 by a jeweler of that city were said to have assayed $25 per ton gold.* A search for additional gold bearing boulders was fruitless.

7. Gold is reported to have been panned from gravel in Rock River. (R. S. Knappen, 1926, Ill. Geol. Survey, Bulletin 49, Geology and Mineral Resources of the Dixon Quadrangle, p. 135).

8. An occurrence of a small amount of bedrock gold is reported near Elroy in Stephenson County, Hershey, O. H., 1899, The Gold-Bearing Formation of Stephenson County, Illinois, Amer. Geol., October, 1899, pp. 240-244; also Heyl, A. O., Jr., et al, 1959, The Geology of the Upper Mississi Valley Zinc-Lead District, U.S.G.S., Prof. Paper 309, pp. 84, 95 and 96.

* From memory; subject to error.

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