

The Global Goldfields Grid

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1. Annotation

This article shows the correspondences of the longitudes and latitudes of some largest gold mines. So "Global Gold Grid" (GGG) was constructed, whose nodes are nearby other large goldfields. It raised the question about the reason of the discovered regularity (this is the scientific novelty) and it proposed the exploration directions. Also it supposed the new auriferous regions. Studies of the nature of this phenomenon will expand our knowledge about planets generally.

Keywords: Global goldfields grid, largest gold-mines localization, gold deposit exploration, new goldfield regions, gold-bearing area, auriferous zones regularities, gold vein coordinates, gold ore, GGG-nodes.

2. Facts and observations

While studying a map of the minerals in a general World Atlas (where the biggest and the most famous minerals are indicated), I noticed:

- 1) the goldfields in Southern Africa (SAR) and South-Western Australia (SWA) are spaced almost on the same latitude (30° South);
- 2) the goldfields in SWA and on Northern Philippines (Luzon island) are spaced almost on the same longitude (160° East);
- 3) the goldfields on island Luzon and on Southern Hindustan lie almost on the same latitude (15° North), and the longitude of the Indian goldfields is spaced almost in the middle of longitudes of South-African and South-West-Australian auriferous regions;

I assumed that on the Globe there is a network with a mesh size of 45° latitude and 40° longitude, the nodes of which can contain similar big gold-bearing regions as ones in SAR, India, Australia and Philippines. So, this "Global Goldfield Grid" (GGG) has 4 belts upon latitudes (60°N, 15°N, 30°S and 75°S) and 9 "lobules of orange" upon longitudes (0°, 4°E, 80°E, 120°E, 160°E, 160°W, 120°W, 80°W and 40°W). At the same time, from 36 of one's hypothetic nodes 10 are located in oceans and seas (№№ 14, 15, 16, 18, 19, 21, 24, 25, 27), 17 are available on land (although 4 from them are located in the sea: №№ 1, 17, 20, 26) and 9 are located under the ice shield of Antarctica (2 from them – in the area of seas under the ice: №№ 33, 36).

It can be expressed in a mathematical formula:

longitude $X = (60 - 45 \times N_x)^\circ$, latitude $Y = (0 + 40 \times N_y)^\circ$, where $N_x = 0 \dots 3$, $N_y = -4 \dots +4$ (negative values correspond to the southern latitude and eastern longitude).

I published these suppositions in 2001 on myself website [10] – (on Russian).

And in fact 16 from 17 land nodes of GGG (except the Antarctic ones) have near gold deposits [3, 7] and they are being developed. Some of them are very big. The deviations are small – from 0 to a few degrees. At

the end of this article you can find the table with data on these gold mines. The numbering of the GGG-nodes in the table goes from north to south and from east to west, first to embrace Eurasia. The closest towns [2] are shown for clarity.

3. Problems and research directions

Are these coincidences accidental or natural? If they are natural the following questions appear:

1. What is the reason of these common factors (circular magma convection, "power frame" of Earth, crystal-formed Earth's core, "directed" fall of meteorites...)?
2. What common features do the indicated goldfields have (time, origin, size, tenor, gradient...) [4, 6]? What other facts can be found while analyzing these auriferous regions (mineralization, metallogeny...)?
3. Is it possible to determine the coordinates of these nodes and nearby gold-bearing places (up to 0,5-1°) more accurately? For example:
 - a) some nodes or some real goldfields can be taken as basic;
 - b) this grid can be adapted so as to make the divergences between conditional nodes and real accumulations of mines minimal;
 - c) it is possible to define an unknown gold-bearing zone according to closely-spaced discovered zones (and it is possible to do this in a variety of ways)...
4. Is it possible to make the orientation more precise? (to confine 100-km square coordinates to 5-10 km square), for example taking into consideration the concomitant features (landscape, geologic, geochemistry...) [1, 4, 5]?
5. Is this "gold net" correct from geometric point of view: are GGG-lines parallel? Are the intervals between GGG-lines identical? Is the longitudes determined correctly (may be not 9 "lobules" of 40° but 8 ones of 45°)? Are there auriferous zones in the middle between the nodes?
6. Is this "auriferous net" tied with geographic or magnetic poles?
7. Why is the found Global gold-bearing net not symmetric to equator and shifted to 15° to the north? Maybe the reason is a gravity response of mainlands to the Earth's core? If you move GGG to 15 ° north – you will get 3 symmetrical belt along the Earth's axis, and if the south - 4.
8. The nodes in oceans are the same gold-bearing?
9. Being of an evident industrial and economic importance, what breakthrough thing does this discovery give to the development of science and in what directions (planetary synergetics, interaction between geospheres and core, geophysics of the terrestrial planets)?

The author of this article already has some observations and assumptions as regards a number of these points. He found an additional number of patterns and features that allow to define a gold-bearing area more accurate. But as he is a professional analyst but not a geologist he would like to discuss these questions with a scientific community and develop a technology of finding goldfields together according to the described "net", if it is real of course.

4. Preliminary results

But even now it is possible to show the following perspective places for exploration works. This is not only an exploration of gold deposits in the new zones, but also more accurate definition of the probable gold-bearing areas on the well-known auriferous zones:

- 1) Shetland Islands (Great Britain) and, maybe, Faroe and Orkney islands;
- 2) the region of "Vologda-city - Lubim-town" (Russia);
- 3) the region around the river Ob southward of Nizhnevartovsk-city (Russia);
- 4) in Canada: a) northward of Fort Nelson; b) to the west of Hudson Bay on the Peninsula Ungava;
- 5) the region of the Caribbean Sea between Nicaragua (rich in gold) and Cuba (close by Jamaica) – it is possible on the all of the Caribbean countries;
- 6) in the east of Ethiopia, in Eritrea, Djibouti and on the shores of the Red Sea in Sudan (and, maybe, in Saudi Arabia and Yemen) – southward of the Nubian gold-mines which belong to Ancient Egypt;
- 7) to the east of the main gold-field places of South Africa, in the South of Mozambique, in Lesotho and Swaziland (and, maybe, in the South of Madagascar);
- 8) some other places (including nearby islands around an ocean node).

In 2001 I wasn't aware of the goldfields in Scotland and Greenland – I had only a guess-work.

Besides, I presumed the existence of a gold-field region in Northern-Western Russia (nearby Vologda-city approximately). The interesting point is that on April 1, 2004 website Bullion.ru (dedicated to prices for noble metals) published an article that fields of gold and diamonds are assumed to be spaced in Lubim district of Yaroslavl region [8].

Lubim-town {58°21' с.ш. 40°42' в.д.} is located near the Vologda-city {59°13' с.ш. 39°54' в.д.}. It could be the "1st-of-April joke" but this conjunction is amusing. Then I found the confirmation. The presence of alluvial gold in the Vologda region and surrounding areas (Kostroma, Kirov) is corroborated by other information from the Internet [9].

By the way, not far from this place within Buy-town area of the Kostroma region there is the Uglich Break (58°29'N 41°31'E). And at a small distance to the West but in any case geographically close to this place there is the source of the Great Russian river Volga (latitude 57°15' North and longitude 32°28' East).

As regards the Antarctic "gold nodes" I would like to say that their exploration is perspective too. First and foremost they are situated not far from the sea side that is melting. At least it would be better to place scientific exploration stations within these nodes regions or to move the nearest stations there. Some stations are very close to the nodes (deviation less than 5°): German "Kohnen" (node 28), Japanese "Dome Fuji" (node 29) and Italian-French "Concordia" (node 31). Our table shows the Antarctic operating station of the world (permanent and seasonal). The temporary closed-down stations have the abbreviation "cons." Collapsed stations are not shown, but they also collected interesting information. Overview of the Antarctic nodes, taking into account climate, thickness of ice, location of research stations of the world is the special article.

According to a preliminary hypothesis, which is verified by the author of this work, goldfields closer to the nodes are ore deposits and more distant ones are placer.

We hope that this article be interested in geological exploration institutes and mining companies.

5. Conclusions

1. With further study the discovered regularity will determine the location of unknown gold-bearing zones and discover new goldfields out of the well-known zones.
2. Search of the nature of this phenomenon will enhance our knowledge about the structure of the terrestrial planets and the emergence regular structures within them.
3. This, in turn, could help predict the location of other minerals.
4. Probably our knowledge in volcanology, seismology, geotectonics will also expand and deepen.
5. And the use of this knowledge in planetary science will help determine the location of space probes landings and exploring of minerals on the Moon, the terrestrial planets and satellites of the giant planets.

In conclusion I would like to add that this study began in the early 80s. Then, as a student, I became interested in an article in the magazine "Technique for Youth" about a possible crystalline form of the Earth core and phenomena on its vertices. Then I noticed gold deposits on some nodes of the dodecahedral network. My observation was a note in the article in the "TM" for January 1982 (№ 1). Subsequently I was revealed auriferous network of 36 nodes as described in this article.

7. Bibliography (on Russian)

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URL of this article: [http://www.garshin.ru/evolution/geology/geosphere/gold/auric-grid/ggg\(eng\).htm](http://www.garshin.ru/evolution/geology/geosphere/gold/auric-grid/ggg(eng).htm).

Table I. The Global Goldfield Grid nodes and the real goldfields

№	Condit. coord.	Real lat. / long.	Devia-tion	Country, region	Nearest objects	Goldfield names	Notes
1	60°N 0°E	56°N 5°W	4°S / 5°W	N.-S. Europe: Scotland	Glasgow {56°N 4°W}, Tyndrum {56°N 5°W}, Wick {58°45'N 3°09'W}.	Cononish {56°27'N 4°44'E}.	On the sea nearby Shetlands.
2	60°N 40°E	58°N 41°E ?	2°S / 1°E	N.-S. Russia	Vologda {59°N 40°E}; Lubim {58°N 41°E}	They are surmised to be located in Lubim district of Yaroslavl region.	It is not found yet.
3	60°N 80°E	54°N 89°E	6°S / 9°E	S. Siberia, river Ob	Nizhnevartovsk {60°57'S 78°33'E}, Tymk {59°23'N 80°16'E}.	Kommunarovskoe {54°20'N 89°15'E}, Saralinskoe {54°14'N 89°15'E}.	Find on N-W.
4	60°N 120°E	59°N 117°E	1°S / 3°W	E. Siberia (Yakutia, river Lena)	Yakutsk {62°02'N 129°44'E}, Olekminsk {60°23'N 120°26'E}.	Chertovo Koryto {59°28'N 116°49'E} and others.	
5	60°N 160°E	58-64°N 160-161°E	1°N / 0,5°E	E. Siberia (Kamchatka, r. Kolyma)	Magadan {59°34'N 150°48'E}, Evensk {61°55'N 159°14'E}, Korf {60°22'N 166°01'E}, Palana {59°05'N 159°57'E}.	Ametistovoye {60°30'N 160°00'E}, Kubaka {63°44'N 160°01'E}, Ozernovskoe {57°35'N 160°47'E}.	
6	60°N 160°W	62-64°N 158°W	3°N / 2°E	USA: Alaska	Anchorage {61°13'N 149°54'W}, Bethel {60°48'N 161°45'W}.	Donlin Creek {62°06'N 158°11'W}, Illinois Creek {64°25'N 157°38'W}, Chicken Mountain {62°20'N 158°05'W}.	
7	60°N 120°W	57°N 127°W	3°S / 7°W	Canada	Fort Nelson {58°48'N 121°42'W}, Fort Simpson {61°52'N 121°21'W}.	Kemess {57°04'N 126°44'W}, Lawyers {57°20'N 127°10'W}.	Find on N-E.
8	60°N 80°W	51-52°N 72-74°W	8,5°S / 7°E	Canada: Hudson Bay, Pen. Ungava	Inukjuak {58°27'N 78°06'W}, Ivujivik {62°25'N 77°55'W}.	Eastmain {52°18'N 72°05'W}, Troilus {51°01'N 74°28'W}.	In Hudson Bay. Find on N-S.
9	60°N 40°W	60°N 45°E	0° / 5°E	S. Greenland (Den.): Cape Farvel (Uummannarsuaq)	Julianehab (Qaqortoq) {+60°43'/+46°02'}	Nalunaq {60°21'N 44°50'W}	Node on the sea by c. Farvel.
10	15°N 0°E	13-14°N 1°E	1,5°S / 1°E	W. Africa: Niger	Niamey {13°31'N 2°07'E}; Gao {16°16'N 0°03'W}.	Koma Bangou {14°05'N 1°02'E}, Samira {13°41'N 1°12'E}, Sefa Nangue {13°14'N 1°00'E}.	
11	15°N	18-19°N	3,5°N /	E. Africa: Sudan, Ethiopia	Asmera {15°20'N 38°55'E};	Kamoeb {18°18'N 35°22'E},	Find on S-E.

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	40°E	35°E	5°W		Kassala {15°27'N 36°24'E}.	Hassai {18°42'N 35°23'E}.	
12	15°N 80°E	14-16°N 77°E	0° / 3°W	S. India	Madras (Chennai) {13°05'N 80°16'E}, Nellore {14°26'N 79°58'E}.	Ramagiri {14°30'N 76°40'E}, Hutti {16°12'N 76°43'E}.	
13	15°N 120°E	16-17°N 121°E	1,5°N / 1°E	N.Philippines (isl. Luzon)	Manila {14°35'N 121°00'E}, Baguio {16°25'N 120°36'E}.	Baguio {16°24'N 120°39'E}, Dinkidi {16°20'N 121°26'E}, Lepanto {16°51'N 120°48'E}, Marian {16°51'N 120°48'E}.	
14	15°N 160°E			(Pacific Ocean)			
15	15°N 160° 3.д.			(Pacific Ocean)			
16	15°N 120°W			(Pacific Ocean)			
17	15°N 80°W	12°N 85°W	3°S / 5°W	C. America: Cuba, Nicaragua, Panama	Puerto Cabezas {14°01'N 83°22'W}; Kingston {17°59'N 76°48'W}; Holguin {20°53'N 76°15'W}.	La Libertad {12°17'N 85°09'W} and others.	On the sea between Jamaica and Nicaragua.
18	15°N 40°W			(Atlantic Ocean)			
19	30°S 0°E			(Atlantic Ocean)			
20	30°S 40°E	25°S 31°E	4°S / 9°W	S. Africa: SAR	Pretoria {25°44'S 28°15'E}, Durban {29°51'S 31°01'E}; Maputu {25°55'S 32°35'E}.	Agnes {25°50'S 31°04'E}, Barberton {25°43'S 31°07'E}, East Rand {25°43'S 31°07'E}, New Consort {25°39'S 31°05'E}, Pioneer {25°50'S 30°58'E}, Fortuna {25°48'S 31°03'E}, Fairview {25°43'S 31°07'E}, Sheba {25°43'S 31°08'E}.	On ocean. Find on N.-E. from the gold mines.
21	30°S 80°E			(Indian Ocean)			

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22	30°S 120°E	28-30°S 117-119°E	1°N / 2°W	S.-W. Australia	Perth {31°57'S 115°52'E}, Kalgoorlie {30°45'S 121°28'E}.	Gibson {29°45'S 117°10'E}, Star Mining {28°05'S 117°50'E}, Youanmi {28°36'S 118°49'E}, Saint George {28°04'S 117°50'E}, Hill 50 {28°02'S 117°47'E}.	
23	30°S 160°E			(Pacific Ocean)	isl. Lord Howe (Austral.) {31°45'S 158°15'E}.		
24	30°S 160°W			(Pacific Ocean)			
25	30°S 120°W			(Pacific Ocean)			
26	30°S 80°W	30-31°S 71°W	0,5°S / 9°E	S. America: Chile	Antofagasta {23°38'S 70°24'W}.	Andacollo {30°14'S 71°06'W}, Punitaqui {30°47'S 71°29'W}.	An ocean node.
27	30°S 40°W			(Atlantic Ocean)			
28	75°S 0°E			Antarctica	Novolazarevskaya (RF) {70°S 11°E}; Kohnen (Germ.) {75°S 00°}; Мэйтри (Ind.) {71°S 12°E}; SANAE IV (SAR) {72°S 03°W} Tor, Troll (Norw.) {72°S 5°E}.		
29	75°S 40°E			Antarctica	Molodezhnaya (RF, cons.) {67°S 45°E}; Dome Fuji (Jap.) {77°S 40°E}, Mizuho (Jap.) {71°S 44°E}, Showa (Jap.) {69°S 40°E}.		
30	75°S 80°E			Antarctica	Progress (RF) {69°S 76°E}, Soyuz (RF, cons.) {70°S 68°E}; Law-Racovita (Rom.) {69°S 76°E}.		
31	75°S 120°E			Antarctica	Concordia (It., Fr.) {75°S 123°E}.		
32	75°S 160°E			Antarctica	Leningradskaya (RF, cons.) {69°S 159°E}; McMurdo (USA) {78°S 167°E};		

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					Scott (N. Zel.) {78°S 167°E}.		
33	75°S 160°W			Antarctica			The Ross Sea.
34	75°S 120°W			Antarctica	Vostok (RF) {78°S 106°W}, Russkaya (RF, cons.) {74°S 136°W}.		
35	75°S 80°W			Antarctica	Mirny (RF) {66°S 93°W}; Davis (Australia) {68°S 77°W}; Parodi (Chile) {80°S 81°W}.		
36	75°S 40°W			Antarctica	Bellingshausen (RF) {62°S 58°W}; Belgrano II (Arg.) {78°S 35°W}; Frei (Chile) {62°S 58°W}.		The Weddell Sea.