NUMBER OF REGISTRATION: 848

DATE OF REGISTRATION: 2014-12-12

PROTECTED DESIGNATION OF ORIGIN: ZVARE

NAME OF GOOD FOR WHICH PROTECTED DESIGNATION OF ORIGIN IS REQUIRED: Class 32 – Natural Mineral Water

NAME OF APPLICANT AND ADDRESS: Ministry of Agriculture of Georgia,

6, Marshal Gelovani Ave., 0159, Tbilisi (GE)

1.	GEOGRAPHICAL LOCATION
1.2	A name of deposit (spring, well) – Carbonic mineral deposit water of Zvare
1.3	The deposit (spring, well) location
1.4	A region – Imereti
1.5	A municipality – Kharagauli
1.6	The nearest settlement – Resort Zvare, 4 km from railway station Moliti
1.7	The distance from a significant point – 170 km from Tbilisi
1.8	The distance from the nearest highway axis the North-West from the road is 50-130 m (the shortest distance)
1.9	The distance from the state border and shoreline is 63-64 m from the North-East from the border (the shortest distance)
1.10	The distance from the nearest bridge –
1.11	River basin and mountain system – includes Rivers Zvarula and Vakhanura basins
1.12	The deposit (spring, well) nomenclature K-38-75-B-b and line coordinates –

No	X	Y	S
1	367573	4647270	0.07 ha
2	367585	4647261	0.07 ha
16	367601	4647258	0.07 ha
24	367582	4647257	0.07 ha
26	367612	4647247	0.07 ha
28	367569	4647270	0.07 ha
29	367842	4646965	0.07 ha
30	367758	4647113	0.07 ha
31	367566	4647273	0.07 ha
– 2	367822	4646881	0.07 ha
unknown – 1	367566	4647279	0.07 ha
3 – pp	367740	4647150	0.07 ha

1.13	The deposit (spring, well) absolute height from the sea level – 563-578 m

2	**CLIMATE CONDITIONS** Based on the climate conditions territory of deposit belongs to the West Georgia Subtropics region and is divided in following zones: a) humid zone with changeable cold winter and long warm summer, which includes the North low mountain territory and b) humid zone with cold winter and long cool summer, which includes the South low mountain part. Average annual temperature is approximately 11°C, temperature in January for first climate zone is 0-(-2)°C, for another zone (-2)-(-4) °C, in April is 9-10°C and 8-9°C, in July is 20-22°C and 18-20°C, in October is 12-14°C and 10-12°C.
3	**FOREST RESOURCES**
3.1	Resort zone forest – not found
3.2	Green zone of forest – not found
3.3	State protected forest trail – not found
3.4	Flood plain forest – not found
3.5	Forest area spread on 300 m nearby Subalpine zone – not found
3.6	Forest area spread on 100 m nearby Subalpine zone – not found
3.7	State forest fund territory – not found
3.8	Forest trail of 200 m width along snow slides and mud flow beds – not present
3.9	The forest district where wooden plants are presented and protected in "Red List", also the forest districts with special agricultural purposes (forest seeding, honey making plants, etc.) – not found
3.10	Forest area existed around resorts, guest houses and hospitals, also mineral springs within 1 km radius (limited with watershed) – not present
3.11	Coast protecting forest area of 300 m width existed along rivers, lakes, reservoirs and water channels (beds) – not found
3.12	Forest trail of 100 m width around precipices, landslide places, screes, caves, and rock ledges – not found

3.13	Forest trail of 100 m width along railways and highways – not found
3.14	Territory, where the forest is foreseen for recreational purposes – not found
3.15	Downhill slopes of more than 20^{o} – not found
3.16	State forest fund territory where wood resource reserve on 1 ha exceeds 30 m^3 – not found
3.17	State forest fund territory where forest natural renovation irreversible process takes place – not found
3.18	State forest fund territory covered with shrubs on 1 ha exceeds 30 m^3– not found
3.19	On the particular territory of state forest fund where a special license is granted for wood procurement and hunting, as well as general license is granted for forest use – not found
3.20	Regional forest administration – not found
3.21	Forest district (former forest) ranger No. – not found
3.22	Quarter(s) No. – not found
3.23	Travelling warrant(s) No. – not found
3.24	Travelling warrant(s) common area(s) – not found
3.25	covered by forest (ha) – not found
3.26	Not covered by forest (ha) – not found
3.27	Dominant species – not found
3.28	Standing timber size and varieties on sample area – not found
3.29	Additional data on forest resources – not found
4	**ORE (MINERAL WATER DEPOSIT) GEOLOGICAL POSITION**
4.1	Hydrogeological position of the deposit (spring, well) according to the hydrogeological regions of Georgia – The deposit enters in Georgia belt artesian basins region Argveti porous, gap and gap-karst waters spread area and Achara-Trialeti folded system water pressure system.

4.2	Geologic structure – the deposit is situated in two big geotectonic unit – Georgia belt and Achara-Trialeti folded mountain system contiguity zone and is built with facial-lithologic complexes from Paleolith to Mesozoic.
4.3	Aquifer horizon – several aquifer complexes are spread on the deposit territory, which are different from each other with nutrition conditions, underground waters disposition and dump conditions: 1. Georgia belt Miocene sediments few aquifer complex – N^2 2. Middle Eocene volcanogenic sediment aquifer complex – $Pg^2{}_2$ 2^{I}. Middle Eocene upper series aquifer complex – $Pg^{2b}{}_2$ 2^{II}. Middle Eocene lower series aquifer complex – $Pg^{2a}{}_2$ 3. Palaeocene-lower Eocene Borjomi flysch few aquifer complex – Pg_1 – Pg_2 4. Achara-Trialeti folded system upper Cretaceous carbonate sediment aquifer complex – Cr_2 (A) 5. Georgia belt upper Cretaceous sediment few aquifer complex – Cr_2 (g) 6. Georgia belt volcanogenic sediment and volcanogenic sediment aquifer complex – Cr_1 7. Georgia belt Jurassic sediment aquifer complex – J 8. Before Cambric-lower Palaeozoic sediment sparoid are spread underground waters – Pz.
4.4	Technical data (depth, captation) of each object (spring, well) – the well No.24 was drilled in 1965. Projection depth is 200m, actual is 208 m; the well No.25 projection depth 150m, actual 149.5m, 1967; the well No. 29 projection depth 1000m, actual 380 m, 1968; the well No. 29^a projection depth 1000m, actual 1011m, 1969; the well No.30 projection depth 400m, actual 149m, 1968; the well No.31 projection depth 100m, actual 105m, 1970; the well No.1-П projection depth 200m, actual 201m, 1969; the well No.2-П projection depth 400m, actual 395m, 1970.

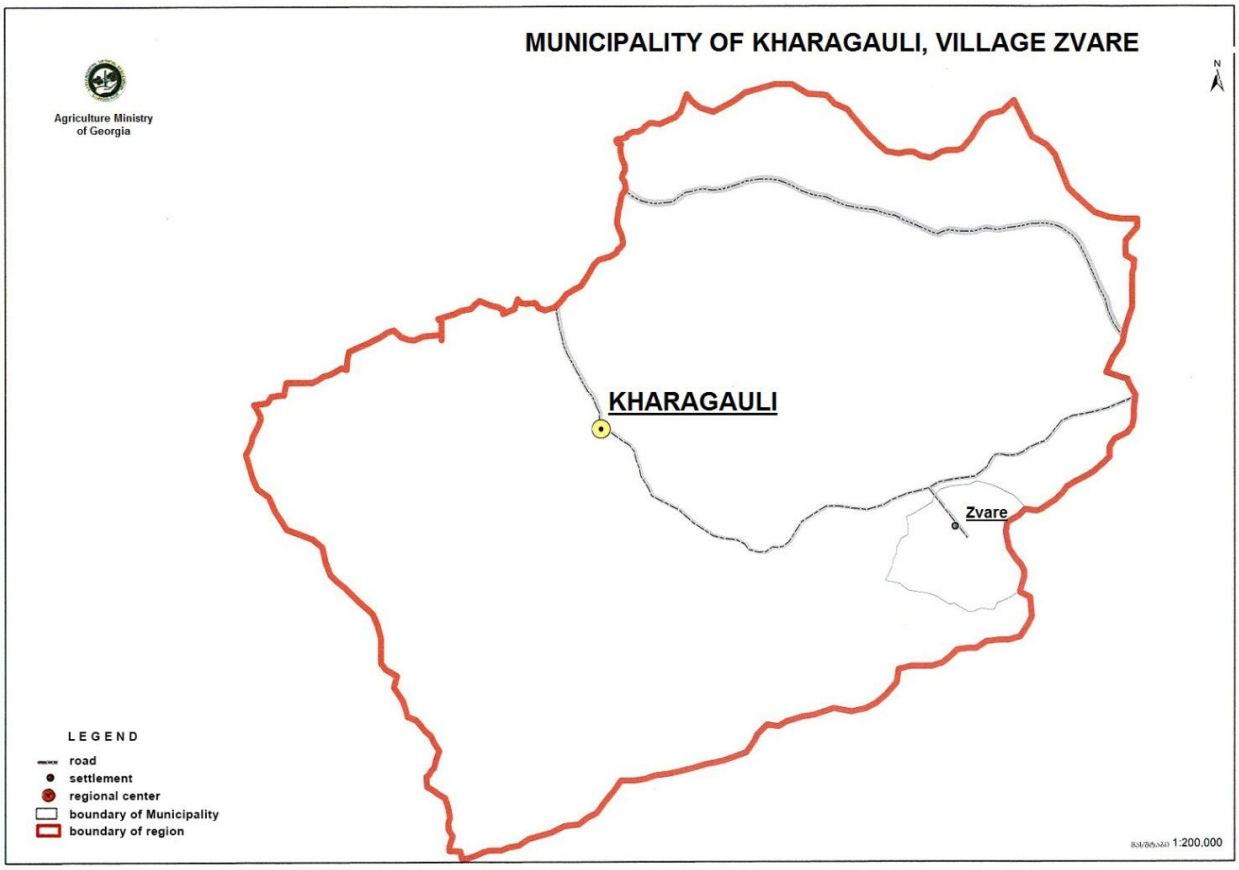
4.5	Additional data – after drilling of well No.13 1936 ZVARE bottling was started by Kharagauli local industry, and afterwards continued from No. 15 well, which was called as well No.1.
5	**CHARACTERISTICS OF NATURAL MINERAL WATER ZVARE**
5.1	Chemical content – 3 main type mineral waters were open on deposit of ZVARE by means of detected, detected-structural and observed-exploited wells: 1) With hydro carbonate-chlorine-sodium carbonic acid gas and methane. 2) With hydro carbonate-sodium carbonate content 20 mg equivalent % mostly with hydrogen sulphide gas. 3) Hydro carbonate-sodium waters with methane and nitrogen gas, with free carbonic acid content in several mg/l.

5.2	First type waters were open with the wells No-s 28, 29, 30, 1-П and 5-П. Water common mineralization at its gravity flow is 5.0-5.4 g/l, for deep samples 6.2-6.3 g/l salts content is: $\underline{HCO_3\ 55\text{-}58\ CL\ 41\text{-}44}$ Na 81-87 Second type waters were open with the wells No-s 29, 29 A in 18-78 m depth, salts content formula is: H_2S 4,0 mg $\underline{0{,}7\ HCO_3\ 65\text{-}74}$ Na 76-83 Third type waters were open with the wells No-s 27 and 3-П in 60-70 m depth. The waters are low mineralized 1.8-1.9 $\underline{HCO_3\ 93\text{-}94}$

	Na 95-97
5.3	Sanitary condition – unaccomplished capping of some wells in central region, absence of sanitary protected zone, reservoir conduits corrosion causes some periodical bacteriological contamination of well.
5.4	Temperature – central area wells temperature regime strongly varies and wholly depends on underground water regime, the South and the North areas well waters are characterized with relatively sustainable temperature regime. Aquifer complexes temperature varies within 6-15°C.
5.5	Deposit detection rate (stage) – the deposit is studied on detection-observation working level.
5.6	Deposit study rate – sum debit of central area wells is 13.4 m^3/daily. These reservations belong to B category by the authors. The wells No-s 1-П, 5-П and 29 minimum sum debit is 4.2 13.4 m^3/daily and belong to C_1 category. To the category C_1 belongs the well No 30 water as well, with daily amount 21.6 m^3/daily. Deposit sum debit is 39.2 m^3/daily. Zvare deposit exploitation reservations are not approved by MSK and it is represented as P (prognoses) reservations.
5.7	Underground waters usage field (factual and possible) – Zvare carbonic acid mineral water bottling started in 1936. In future it will be used for the same purposes.
5.8	License conditions for deposit (water) usage –
6	**EVALUATION OF DEPOSIT ENGENEERING-GEOECOLOGICAL CONDITIONS**
6.1	Evaluation and Morphological disposition of deposit – from the morphological standpoint of view village Zvare and the territory where the deposit is located (12 well)

	belong to the River Zvarula deep gorge floodplain terrace. 8 wells are disposed on the River Zvarula left bank, and 4 – on the right bank.
6.2	Engineering-geologic characteristics of deposit and neighboring building rocks area – Deposit and nearby territory are built with Cretaceous aged rock limestones, basalts and semi-rock marl limestones, glauconitic sandstones and marls, which are very gapped on the surface.

6.3	Condition of deposit and neighboring geodynamic area – all 12 wells disposed on the territory of deposit and situated on the River Zvarula floodplain terrace areas, are not threatened with Geological processes.
6.4	Expected geoecological complications of the deposit while exploitation process – all 12 wells are capping, arranged and provided with sanitary conditions. During the exploitation process of the deposit geological complications are not expected.
6.5	Planning of recovery in case of geodynamical complications – As geo ecological complications are not expected during the exploitation process of the deposit, recovering activities consequently are not needed.


MUNICIPALITY OF KHARAGAULI, VILLAGE ZVARE
Agriculture Ministry of Georgia
N
KHARAGAULI
Zvare
LEGEND
road
settlement
regional center
boundary of Municipality
boundary of region
1:200,000