

**O'ZBEKISTON RESPUBLIKASI OLIY VA O'RTA MAXSUS TA'LIM VAZIRLIGI  
ISLOM KARIMOV NOMIDAGI TOSHKENT DAVLAT TEXNIKA UNIVERSITETI**

# **O'QUV GEOLOGIK XARITALAR ATLASI**

**(TO'RTINCHI TO'LDIRILGAN NASHRI)**

**O'zbekiston Respublikasi Oliy va o'rta maxsus ta'lim  
vazirligi tomonidan geologiya, gidrogeologiya va neft - gaz  
yo'nalishi talabalariga o'quv qo'llanma sifatida tavsiya  
etiladi**

**TOSHKENT - 2020**

**Tuzuvchi-malliflar dotsentlar: B.T.Toshmuxamedov, N.Sh.Tulyaganova, B.I.Allayarov**

**UDK 5508:528**

Ushbu atlas “Strukturaviy geologiya va geologik xaritalsh” fani o’qitiladigan talabalar uchun mo’ljallangan bo’lib, 34 varaq ko’p turli maqsadli xaritalardan tashkil topgan bo’lib, asosiy maqsad talabalarni geologic xaritalarni tahlil qilish, turli xil geologik yotqiziqlarni o’rganish, geologiya qirqimlarni tuzish, stratigrafik ustunlarni, shuningdek ularning tektonik sxemalarini o’rgatishdan iboratdir.

Ilmiy muxarrir : R.T.Zakirov

Taqrizchilar: A.Z.Umarov,  
A.A.Abduraxmanov

**O’zbekiston Respublikasi Oliy va o’rta maxsus ta’lim vazirligi, 2020**

**O’QUV GEOLOGIK XARITALAR**  
**A T L A S I**  
(to’rtinchi to’ldirilgan nashri)

## O'quv geologik haritalar atlasini qo'llanmasi uchun uslubiy ko'rsatmalar

Strukturalarni tekshirish va geologik haritalash usullari Yer qobig'ini mukammal o'rganishda katta ahamiyatga ega. Geologik haritalar maydonning geologik tuzilishini aniq shaklda ko'rsata oladi va geologik fanlarni o'rganishda foydalaniladigan asosiy hujjat hisoblanadi.

Bu dasturni vazifasi talabalarni geologik xaritalarni o'qishga o'rgatish, ularning mazmunini tahlil qilish. Yerning ichki qismini ko'ra bilish, qatlamlarning yotish elementlarini, qalinligini hosil bo'lishda ketma-ketligini aniqlash, burmahan va uzilma strukturalarni turini ajrata bilish, geologik jinslarni shaklini va ularni yoshini aniqlashga o'rgatishdir.

Atlasda keltirilgan geologik haritalar tabiiy jismlarning barchasining xilma - xilligi va murakkabligini to'liq tasvirlamaganligiga qaramasdan talabaning ongida aniq bir maydonning geologik tuzilishi modulini ko'ra bilishga olib keladi.

Moskva Universitetining bir guruh mualliflari (1978y) tomonidan tayyorlangan o'quv geologik haritalar atlasidan taklif qilayotgan atlasning farqi shundaki, bu qo'llanma yirik masshtabli geologik haritalar geologik kesmasi stratigrafiya ustunsiz berilib, har bittasi uchta - to'rtta aniq vazifani bajarishga mo'ljallangan. Shu universitetning yana bir guruh mualliflari tomonidan tayyorlangan tasviriy geologik haritalarining atlasidagi bizning tayyorlagan ishimiz esa rangli ko'rinishda berilgan. Fikrimiz bo'yicha bunday xaritalar geologik jismlarni hajm jihatdan ko'rinishini talabalar yanada yaxshiroq tasavvur eta oladilar. Har bir haritada bajariladigan vazifa berilgan. Bundan tashqari talabalar haritada qatlamlarning yotish elementlari (qiyalik burchagi, yotish va yo'nalish azimuti) qatlamlarning qalinligi (yo'nalish azimutiga perpendikulyar kesmalar olib), burchak va uzilmalarni shakli va yoshini aniqlash, yo'nalish azimutiga perpendikulyar bo'lgan kesmalar olish (atlasni haritadagi berilgan nomogrammalardan foydalanib) kabi ishlarni bajaradilar.

Har bir geologik haritaga qisqacha tushintirish ko'rsatma berilgan

**1 - chizma.** Geologik haritada maydonning ikki qavatdan iborat bo'lgan geologik tuzilishi ko'rsatilgan. Kembriy-quyi devon tog' jinslaridan tashkil topgan pastki (ostki) kompleks burmalangan va tektonik uzilmalar bilan murakkablashgan. Yuqori toshko'mir davrida hosil bo'lgan intruziyalar va qiya tushirma uzilmaning shakllanishi gertsin burmahan davriga to'g'ri keladi. Yuqori (ustki) kompleks oligotsenda hosil bo'lgan gorizontol holatdagi kontinental cho'kindi yotqiziq-lari va miotsen - pliotsen davri andezit, datsit tarkibli qoplamalardan tuzilgan. Hozirgi zamon tektonik harakatlarining natijasida esa vertikal tushirma uzilma paydo bo'lgan va bu uzilma bo'yicha shimoli-g'arb blok ko'tarilgan.

**2,3 - chizma.** Harita maydonning geologik kesmalari yotqiziq-larining stratigrafik ustuni tuziladi..

**4 - chizma.** Harita maydonning tektonik tasviri ko'rsatilgan. Bu esa maydonni tektonik tuzilishi to'g'risida ma'lumot beradi. Haritada struktura - formatsiya komplekslari burmahan va uzilma strukturalar ajratilgan.

**5 - chizma.** Haritada chegaralari gorizontallarga parallel bo'lgan, gorizontol holatda joylashgan qatlamlar tasvirlangan. Janubda esa burmahan joylashgan tog' jinslari ostki qavatni tashkil etadi. **Vazifa:** geologik kesma chizish, stratigrafik ustun tuzish.

**6 - chizma.** Bu maydonning geologik tuzilishi 5-harita maydoni-ning ko'rinishiga o'xshaydi. Qatlamlarning joylashishi har xil yoshdagi uzilmalar bilan murakkablashgan. **Vazifa:** geologiya kesmalar chizib, uzilmalarni yoshini, siljish amplitudasini aniqlash, qaysi blok qancha masofaga va qaysi yo'nalishda siljigan. Stratigrafik ustun tuzish.

**7 - chizma.** Geologik haritada mezazoy va kaynazoy yotqiziq-larining monoklinal (bir tomonga qiya) yotgan ko'rinishi tasvirlantani. **Vazifa:** kursatmaning avvalida ko'rsatilgan ishlarni bajarish va nomuvofiqlikni chegarasi va yoshini aniqlash.

**8 - chizma.** Uzilmalar bilan murakkablashgan devon va karbon burmahan strukturalari tarqalgan maydonning geologik xaritasi. **Vazifa:** burmalarning qanotlarini yotish elementlarini aniqlash. uzilmani elementlari. gurini va vertikal amplitudasini aniqlash. Burmalarning o'qlarini va ularni qiyalik burchagini aniqlash.

**9 - chizma.** Yuqori trias, yura, bo'r davri qatlamlarining qiyalik burchaklari har xil bo'lgan to'ntarilgan holatda joylashganligi ko'rsatilgan. **Vazifa:** burmalarning qanotlarini yotish elementlarini aniqlash, kesmalar chizish, yotqiziq-larning haqiqiy qalinligini hisoblash, stratigrafik ustunlar chizish.

**10 - chizma.** Nomuvofiqlik bilan ajralgan ikkita har xil tog' jinslari tarqalgan maydonning geologik haritasi ko'rsatilgan. Ostki qatlamlar to'ntarilgan va uzilma bilan murakkablashgan. Ustki (yuqori) qatlamlar gorizontol joylashgan bo'lib, datsit va andezit - bazal't lavalaridan iborat. Shimolda har xil yoshdagi jerlo(tomir) jinslari ko'rinib turibdi. **Vazifa:** burmalarning qanotlarini. yotish elementlarni aniqlash. Uzilmani yotish elementlarini qaysi guruhga taalluqliligini va amplitudasini aniqlash, nomuvofiqlikni va cho'kindi hosil bo'lishda tanaffus bo'lganligini aniqlash.

**11,12 - chizma.** Trias, yura, bo'r davri yotqiziq-lari Burmalangan, paleogen va neogen qatlamlari gorizontol holatda ostki trias, yura, bo'r yotqiziq-larini nomuvofiq qoplagan holati tasvirlangan. **Vazifa:** burmalarni qanotlarini yotish elementlarini topib, kesmalar chizadi. Nomuvofiqlikni aniqlash va qaysi tipligini belgilash. Barcha tog' jinslarini qalinligini kesmalarda hisoblash.

**13 - chizma.** Geologik harita maydonida yura va bo'r yotqiziq-lari devon qatlamlari ustida nomuvofiq holatda joylashgan ko'rinish. Barcha yotqiziq-lar to'ntarilgan va uzilma bilan murakkablashgan. **Vazifa:** burmalarni qanotlarini va uzilmani yotish elementlarini aniqlash, uzilmani tipi va u bo'yicha siljish vaqtini aniqlash, kesmalarda shartli belgilar orqali tog' jinslarini tarkibini

qo'rsatish.

**14 - chizma.** Uzilma bilan murakkablashgan burmahan strukturalar ko'rsatilgan geologik harita. Uzilma maydonini ikki blokka ajratgan. **Vazifa:** burmalarning qanotlarini yotish elementlarini ikkala blokda alohida aniqlash, uzilma tekisligining yotish elementlarini, uning vertikal amplitudasi, yoshi va turini aniqlash. Nomuvofiqlikni stratigrafik ustunda ko'rsatish.

**15 - Chizma.** Geologik haritada uzilmalar bilan murakkablashgan. ikki qavatli geologik tuzilish ko'rsatilgan. **Vazifa:** ostki qavat burchaklarining qanotlarini yotish elementlarini, uzilmalarni elementlarini (azimuti yotish burchagi vertikal amplitudalari, yoshi va turlarini) aniqlash. Kesmalarda tog' jinslarining shartli belgilar orqali litologik tarkibini ko'rsatish, stratigrafik ustunda nomuvofiq-liklarni ko'rsatish.

**16-23 chizma.** Burmahan va monoklinal joylashgan yotqiziq-larni har xil uzilmalar bilan murakkablashgan geologik haritasini maydoni tasvirlangan. Bular tushirma va ko'tarilma uzilmalar, tushirma uzilma siljimalar, zinasimon uzilmalar, tektonik qoplamalar va ulardan siljima natijasida ajralgan bo'laklar, tektonik darzlar, gorst va grabenlar. **Vazifa:** bu haritalarda avval qatlamlarni uzilmalarini elementlarini aniqlash zarur, ularni turini, ko'tarilgan va tushgan qanotlarini aniqlash kerak. Oxirgi bosqichda kesmalar va stratigrafik ustunlar chiziladi.

**24-29 chizma.** Burmalangan va siljigan tog' jinslari orasida har xil intruziv jinslarni tarqalgan geologik haritalari maydonlari ko'rsatilgan. **Vazifa:** birinchi navbatda yotqiziq-larning yotish elementlarini, intruziv jinslarni, uzilmalarni yoshini aniqlash kerak. So'ngra intruziv jinslarni shakllari aniqlanadi. Ohirgi bosqich kesmalar va stratigrafik ustunlar chizish.

**24-28 chizmalarda** Yer qobig'ini ikki va uch qavatli tuzilishi ko'rsatilgan. Bu haritalarda yuqoridagi vazifalardan tashqari cho'kindi hosil bo'lishda qaysi davrlarda uzilishlar ro'y berganligi, nomuvofiqliklarni aniqlash va cho'kindi hosil bo'lishdagi uzilish davrlarida qanday jarayonlar ro'y berganini ko'rsatish kerak.

**30-32 chizma.** Bu geologik haritalar bir tomonida geologik tuzilishi ko'rsatilgan ma'lumotlar asosida ikkinchi bo'sh tomonda geologiyasi tushirish va to'ldirish uchun mo'ljallangan geologik ma'lumotlarni asosida haritani to'ldirib kesmalar va ustunlar chiziladi.

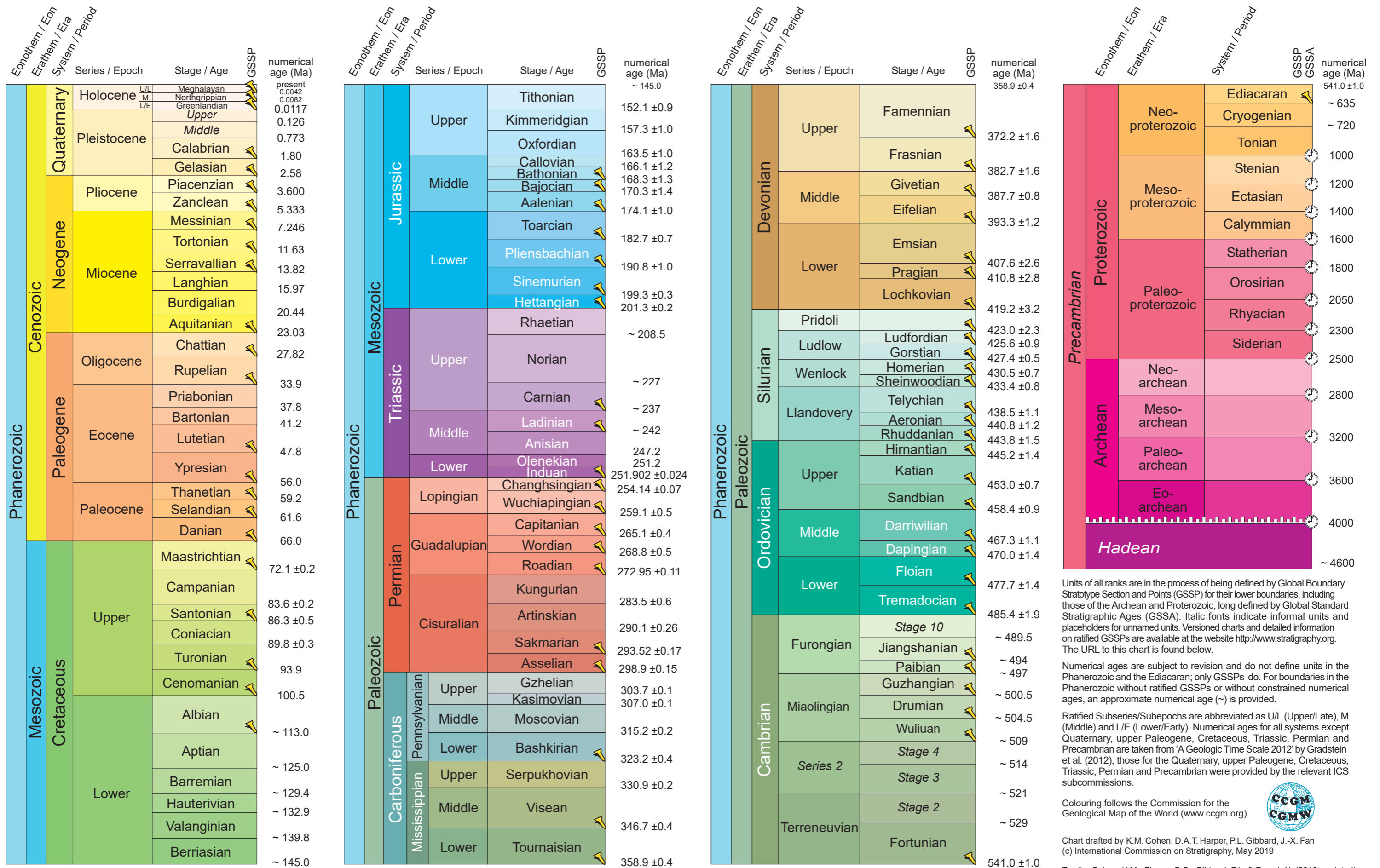
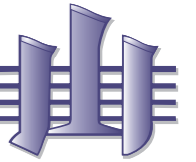


# INTERNATIONAL CHRONOSTRATIGRAPHIC CHART

www.stratigraphy.org

International Commission on Stratigraphy

v 2019/05



Units of all ranks are in the process of being defined by Global Boundary Stratotype Section and Points (GSSP) for their lower boundaries, including those of the Archean and Proterozoic, long defined by Global Standard Stratigraphic Ages (GSSA). Italic fonts indicate informal units and placeholders for unnamed units. Versioned charts and detailed information on ratified GSSPs are available at the website <http://www.stratigraphy.org>. The URL to this chart is found below.

Numerical ages are subject to revision and do not define units in the Phanerozoic and the Ediacaran; only GSSPs do. For boundaries in the Phanerozoic without ratified GSSPs or without constrained numerical ages, an approximate numerical age (~) is provided.

Ratified Subseries/Subepochs are abbreviated as U/L (Upper/Late), M (Middle) and L/E (Lower/Early). Numerical ages for all systems except Quaternary, upper Paleogene, Cretaceous, Triassic, Permian and Precambrian are taken from 'A Geologic Time Scale 2012' by Gradstein et al. (2012), those for the Quaternary, upper Paleogene, Cretaceous, Triassic, Permian and Precambrian were provided by the relevant ICS subcommissions.

Colouring follows the Commission for the Geological Map of the World (www.cgmw.org)

Chart drafted by K.M. Cohen, D.A.T. Harper, P.L. Gibbard, J.-X. Fan (c) International Commission on Stratigraphy, May 2019

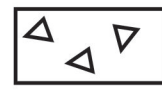
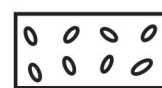

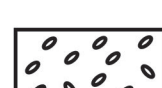


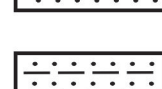

To cite: Cohen, K.M., Finney, S.C., Gibbard, P.L. & Fan, J.-X. (2013; updated) The ICS International Chronostratigraphic Chart. Episodes 36: 199-204.

URL: <http://www.stratigraphy.org/ICSchart/ChronostratChart2019-05.pdf>


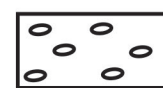



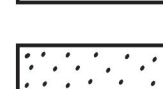
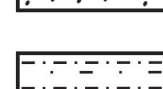

# CHOKINDI TOG' JINSLARINING SHARTLI BELGILARI

## Chaqiq va gilli

### Bo'shoq

	<i>Katta bo'lakli</i>
	<i>Shag'altosh</i>
	<i>Chaqiqtosh</i>
	<i>Graviy</i>
	<i>Dresva</i>
	<i>Qum</i>
	<i>Алеврит</i>
	<i>Gil</i>

### Sementlangan

	<i>Katta bo'lakli brekchiya</i>
	<i>Konglomerat</i>
	<i>Brekchiya</i>
	<i>Gravelit</i>
	<i>Mayda shag'al</i>
	<i>Qumtosh</i>
	<i>Alevrolit</i>
	<i>Argilit</i>

## Karbonatli

	<i>Ohaktosh</i>		<i>Dolomit</i>		<i>Mergel</i>
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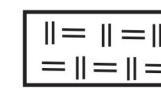

## Boksitlar va boksitli tog' jinslari

	<i>Boksitlar</i>		<i>Allitlar</i>
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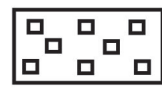
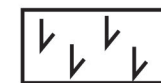

## Temirli va marganesli

	<i>Temirli (rudali)</i>		<i>Marganesli</i>		<i>Fosforitli</i>
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## Kremniyli

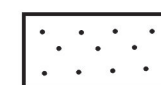
	<i>Trepel diatomit</i>		<i>Opoka, spongolit</i>		<i>Radiolyarit, yashma</i>
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## Sul'fat-galloidli

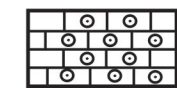
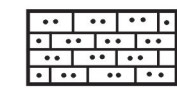
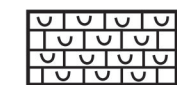
	<i>Gips</i>		<i>Galit (osh tuzi)</i>
	<i>Angidrit</i>		<i>Kaliy-magnezialli tuz</i>

## Cho'kindi tog' jinslarining turli xil namunalari



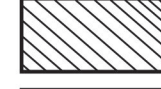


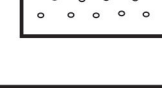
### Qumtosh

	<i>Yirik donali</i>
	<i>O'rta donali</i>
	<i>Mayda donali</i>

### Ohaktosh






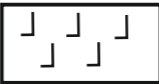
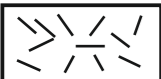
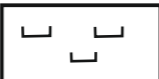
	<i>Oolitli</i>
	<i>Qumtoshli</i>
	<i>Organogenli</i>

## To'rtlamchi tog' jinslarining qo'shimcha shartli belgilar

	<i>Lyoss</i>		<i>Ohaktoshli tuf</i>
	<i>Lentasimon gilmoya</i>		<i>Kremniyli tuf</i>
	<i>Torf</i>		<i>Gletcherli muz</i>
	<i>Chig'anoqtosh</i>		<i>Firn va qor</i>

# MAGMATIK TOG' JINSLARINING SHARTLI BELGILARI

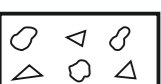
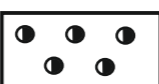
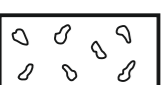
## Effuziv tog' jinslarining shartli belgilari

	<b>Basal't</b>		<b>Traxit</b>
	<b>Andezit</b>		<b>Fanolit</b>
	<b>Datsit</b>		<b>Effuziv ishqorli-o'ta asosli ishqorli-basal'toidli tarkib</b>
	<b>Liparit</b>		<b>Pikrit</b>






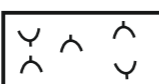
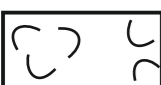
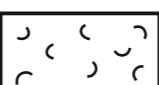
## Effuziv tog' jinslarining turli xil shartli belgilaridan namunalari

	<b>Olivinli basal't</b>		<b>Andezitli basal't</b>
	<b>Giperstenli basal't</b>		<b>Spilit</b>

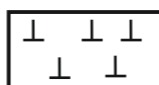
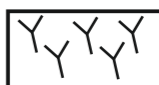
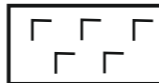
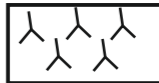
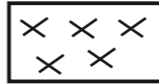
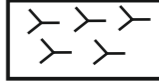
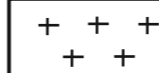

## Vulanoklastik va vulkanogen-cho'kindi tog' jinslarining shartli belgilari

	<b>Bo'shoq piroklastik vulqonli katta bo'lak va vulqon bombasi (aglomeratlar)</b>		<b>Vulqon changi</b>
	<b>Lapilla va vulqonli shag'al</b>		

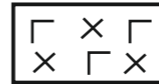



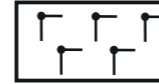
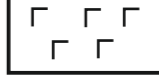
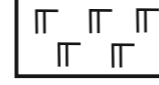
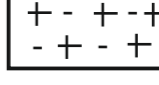
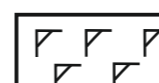
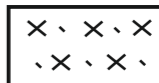
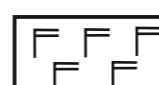
## Lavaklastik, litifitsirlangan piroklastik, cho'kindi-piroklastik va piroklastik-cho'kindi tog' jinslari

	<b>Brekchiyalı lava</b>		<b>Agglyutinat</b>
	<b>Tufli lava</b>		<b>Qaynagan va qizigan tuflar, ignimbritlar</b>
	<b>Katta bo'lakli aglomeratli tuf va vulqonli brekchiya</b>		<b>Tuffit</b>
	<b>Tuflar (yirik-, o'rta-, mayda-va yupqa bo'lakli)</b>		<b>Tufogenli cho'kindi tog' jinslari</b>

## Intruziv tog' jinslarining shartli belgilari

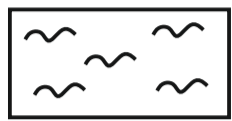
	<b>Ul'tramafitlar (dunit, peridotit, piroksenit va b.)</b>		<b>Siyenit</b>
	<b>Gabbro</b>		<b>Nefilinli siyenit</b>
	<b>Diorit</b>		<b>Iyolit-urtit</b>
	<b>Granit</b>		<b>Anortozit</b>

## Intruziv tog' jinslarining turli xil namunalari

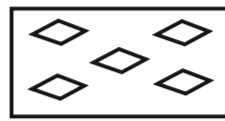
	<b>Gabbro-diorit</b>		<b>Yirik donali gabbro</b>
	<b>Gabbro-siyenit</b>		<b>O'rta donali gabbro</b>
	<b>Ishqorli gabbro</b>		<b>Mayda donali gabbro</b>
	<b>Troktolit</b>		<b>Granit-porfir</b>
	<b>Olivinli gabbro</b>		<b>Diorit porfirrit</b>
	<b>Shox aldamchi gabbro</b>		

# METAMORFIK TOG' JINSLARINING SHARTLI BELGILARI

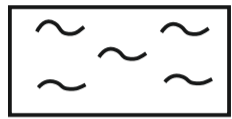
## Regional metamorfizm tog' jinslari



**Mikrokrystalik slanets**



**Eklogit**



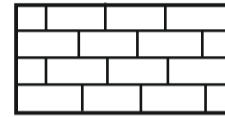
**Kristalli slanets**



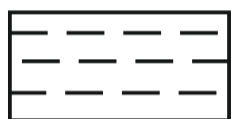
**Kvarsit**



**Amfibolit**

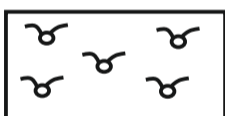


**Marmar**



**Gneys**

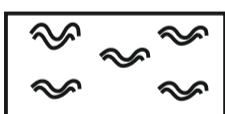
## Regional metamorfizm tog' jinslarining turli xil shartli belgilaridan namunalar



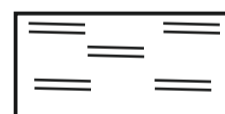
**Xlorit-seritsitli slanets**



**Granatli amfibolit**



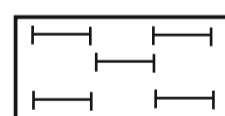
**Porfiroid**



**Granulit**



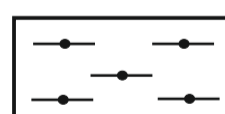
**Porfiritoid**



**Disten-muskovitli gneys**



**Biotit-sillimanitli slanets**



**Biotit-sillimanitli gneys**



**Ставролитли сланец**

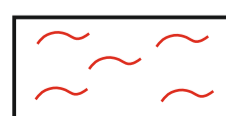


**Vollastonitli marmarlar**

## Ul`trametamorfik hodisa



**Granitlashgan**



**Migmatlashgan**

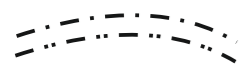
# Geologik xaritalardagi boshqa turli xil shartli belgilar

## Geologik chegaralar va uzilishlar

### Chegaralar



Turli davr oralig'ida hosil bo'lgan geologik chegaralar: a-haqiqiy, b-ixtiyoriy



Turli davr oralig'ida hosil bo'lgan, nisbatan yosh yotqiziqlar bilan qoplangan: a-haqiqiy, b-ixtiyoriy



Bir davrdagi litologik va fatsial bo'linmalar

### Uzilmalar



birlamchi: a-haqiqiy, b-ixtiyoriy



ikkilamchi: a-haqiqiy, b-ixtiyoriy



nisbatan yosh yotqiziqlar bilan qoplangan (misol uchun dastlabki uzilishlar) a-haqiqiy, b-ixtiyoriy

## Morfologik turli xil uzilishlar



Ko'tarilma va tushirma. Uzilma yo'nalishi strelkasi, og'ish burchagi son bilan belgilangan



Siljish, ko'tarilma- tashlama-siljish. Strela horizontal siljishni ko'rsatadi (kilometrlarda)



Tik yo'nalishdagi uzilishlar



Surilmagan darzlilar



Surilma



Tyektonik yotqiziqlar



Ko'chki

## Qatlamlarning yotishi

+ Vertikal

40 Qiya

70 Ag'darilgan

+ Gorizontal

## Strukturali elementlar

65

Klivaj va slanets yuzalar yotishi

70

Sharnirlarning mayda burma yo'nalishi

30

Metamorfik tog' jinslaridagi mineral chiziqli yo'nalishi



Darzlklar

## Prototektonik magmatik tog' jinslarining elementlari

20 Oqim yo'nalishi

Flyuidal yassi teksturlar

Traxitoid va yo'l-yo'l yassi teksturlar

30 Oqim yo'nalishi bilan yassi teksturalarni birikishi

## Xaritadagi burg'ilash quduqlari

D<sub>1</sub>  
95

Quduq tubidan to'rtlamchi davrgacha bo'lgan tog' jinslarini ochish ( ularning shiftidan ma'lum bir chuqurligigacha, m)

P<sub>1</sub>  
N  
K  
D<sub>1</sub>  
17  
120

Quduqdan chiqqan to'rtlamchi davr yotqiziqlarini xaritaga tushirish

## Qirqimdagi burg'ilash quduqlari

Qirqim yuzasidagi loyiha yotqiziqlari

Qirqim yuzasida yotgan yotqiziqlar

## Stratigrafik ustundagi geologik chegaralar

munosib yotishi

stratigrafik nomuvofiq yotishi

tekis bo'lmagan yuzada yotishi

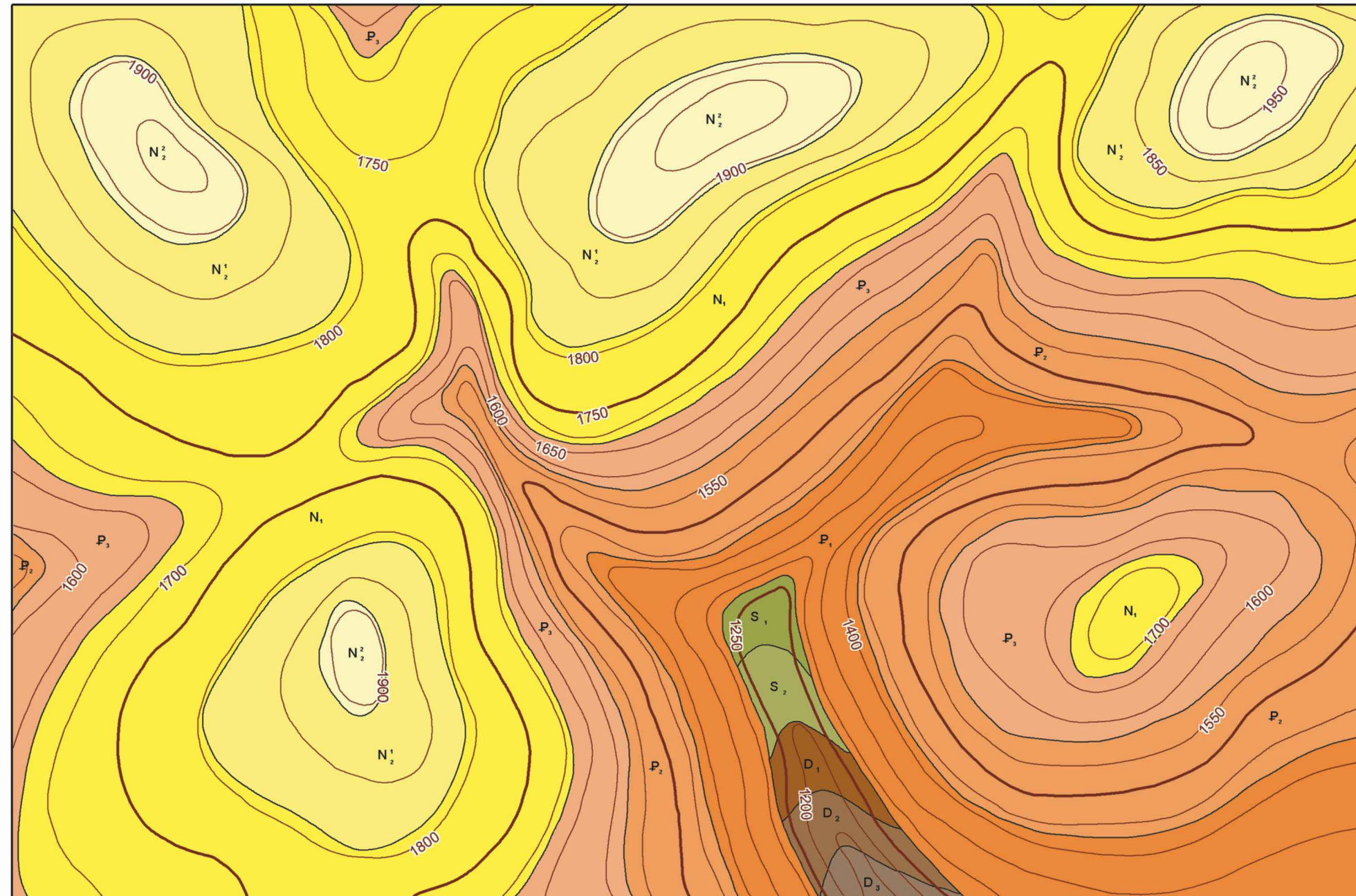
burchak ostidagi nomuvofiq yotish



# O'QUV GEOLOGIK XARITA

Mashtab 1:25000

5-varaq



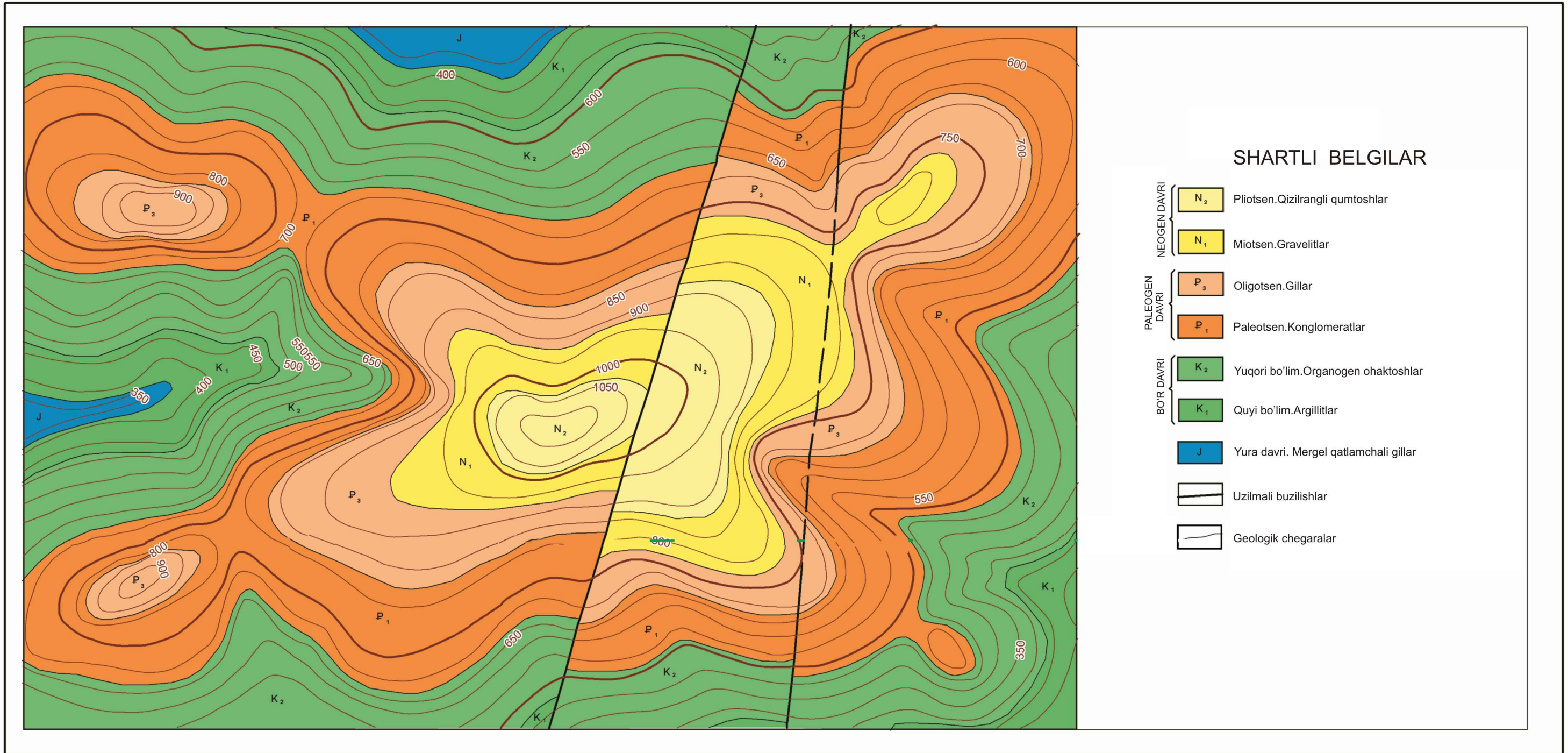
## SHARTLI BELGILAR

NEOGEN DAVRI	N <sub>2</sub>	Yuqori plitsen. Qizilrangli gillar
	N <sub>1</sub>	Quyi plitsen. Qumtoshlar
	N	Miotsen. Qumtosh qatlamchali gravelitlar
PALEOGEN DAVRI	P <sub>3</sub>	Oligotsen. Konglomeratlar va qumtoshlar
	P <sub>2</sub>	Eotsen. Mergellar
	P <sub>1</sub>	Paleotsen. Qumtoshlar
DEVON DAVRI	D <sub>3</sub>	Yuqori bo'lim. Gilli slaneslar
	D <sub>2</sub>	O'rt bo'lim. Ohaktoshlar
	D <sub>1</sub>	Quyi bo'lim. Dolomitlar
SILUR DAVRI	S <sub>2</sub>	Yuqori bo'lim. Alevrolitlar
	S <sub>1</sub>	Quyi bo'lim. Qumtoshlar
		Geologik chegaralar

# O'QUV GEOLOGIK XARITA

Mashtab 1:10000

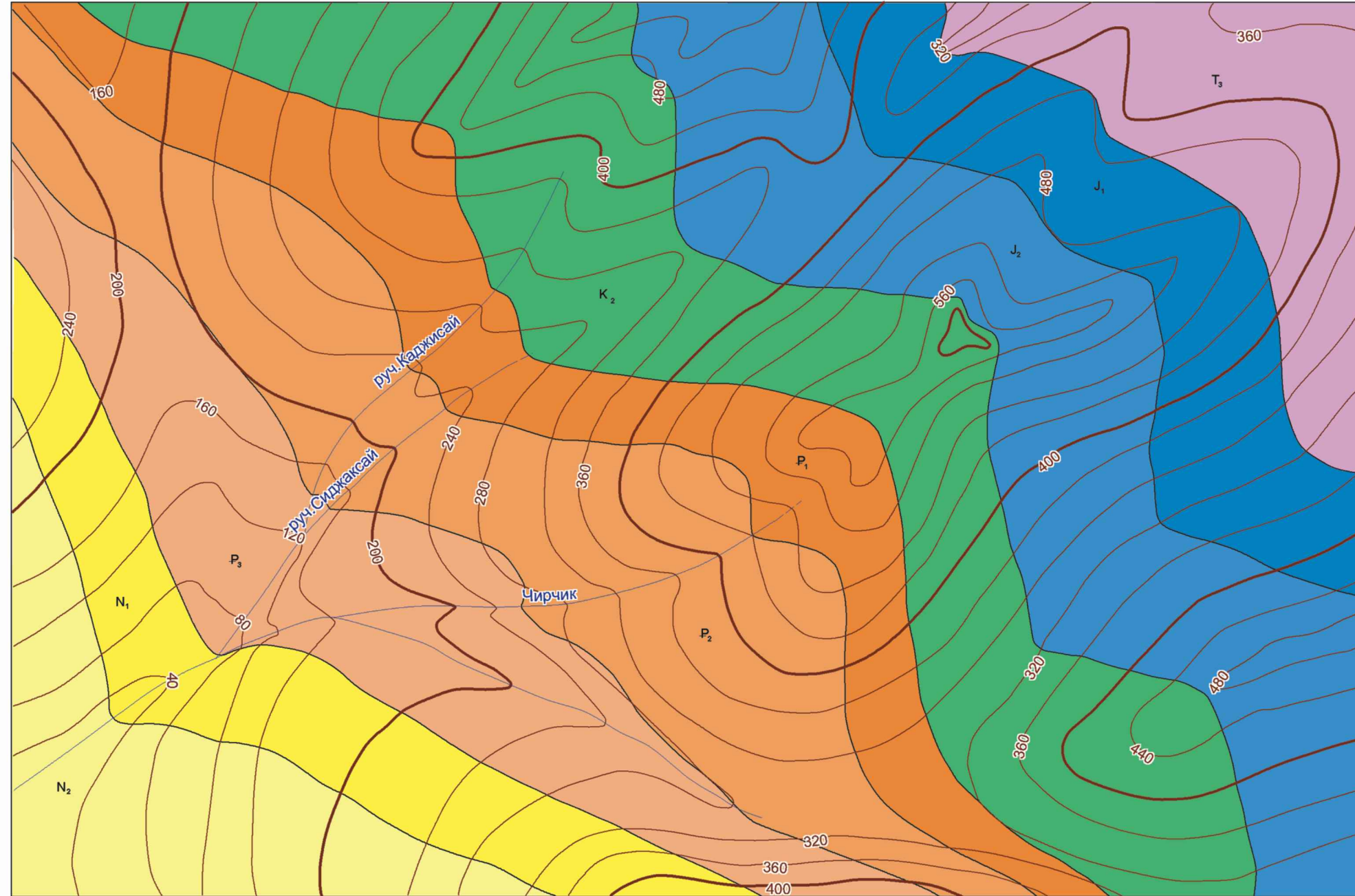
6-varaq













# O'QUV GEOLOGIK HARITA

Masshtab 1:5 000

7-varaq



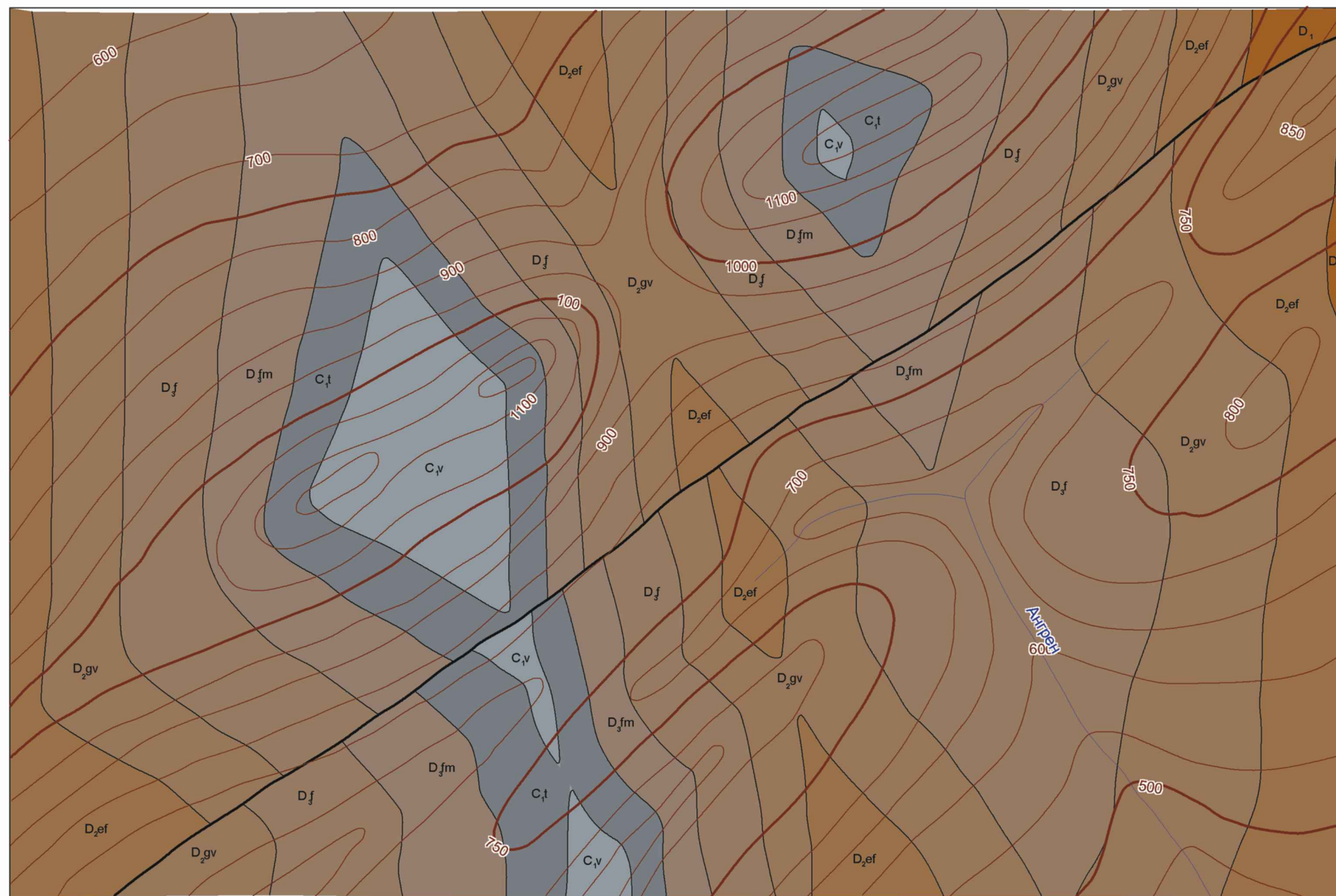
## SHARTLI BELGILAR

- |                |  |  |
|----------------|--|--|
| NEOGEN DAVRI   |  N <sub>2</sub>   | Pliotsen. Qumtoshlar, gillar                                   |
|                |  N <sub>1</sub>   | Miotsen. Mergellar   |
| PALEOGEN DAVRI |  P <sub>3</sub>   | Oligotsen. Chig'anoqli ohaktoshlar                             |
|                |  P <sub>2</sub>  | Eotsen. Gillar   |
|                |  P <sub>1</sub> | Paleotsen. Alevrolitlar  |
| YURA DAVRI     |  K <sub>2</sub> | Bo'r davri. Yuqori bo'lim.<br>Konglomeratlar, qumtoshlar       |
|                |  J <sub>2</sub> | O'rta bo'lim. Mergellar  |
|                |  J <sub>1</sub> | Quyi bo'lim. Gil qatlamchali alevrolitlar                      |
|                |  T <sub>3</sub> | Trias davri. Yuqori bo'lim.<br>Gravelit qatlamchali qumtoshlar |
|                |                 | Geologik chegaralar  |

# O'QUV GEOLOGIK XARITA



Mashtab 1:10 000

8-varaқ



## SHARTLI BELGILAR

TOSHKO'MIR  
DAVRI

-  C.v Vizey yarusi. Argillitlar
-  C.t Turne yarusi. Gillar

DEVON DAVRI

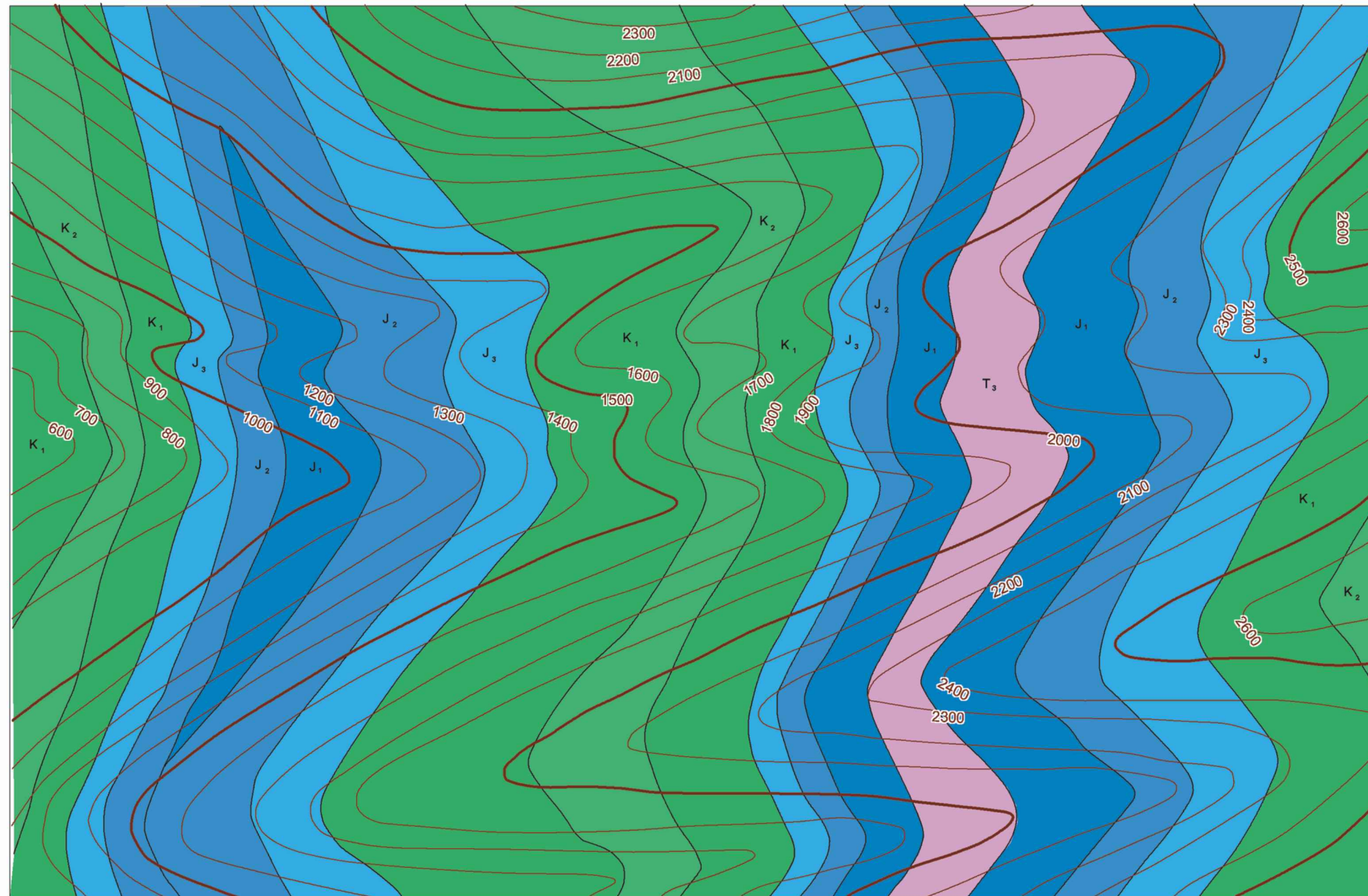
-  D<sub>3</sub>fm Famen yarusi. Qumtoshlar
-  D<sub>f</sub> Fran yarusi. Organogen ohaktoshlar
-  D<sub>2</sub>gv Jivet yarusi. Mergellar
-  D<sub>2</sub>ef Eyfel yarusi. Dolomitlar
-  D<sub>1</sub> Quyi bo'lim. Bitumlashgan ohaktoshlar

 Uzilmali buzilishlar








 Geologik chegaralar

# O'QUV GEOLOGIK XARITA

Mashtab 1:10 000

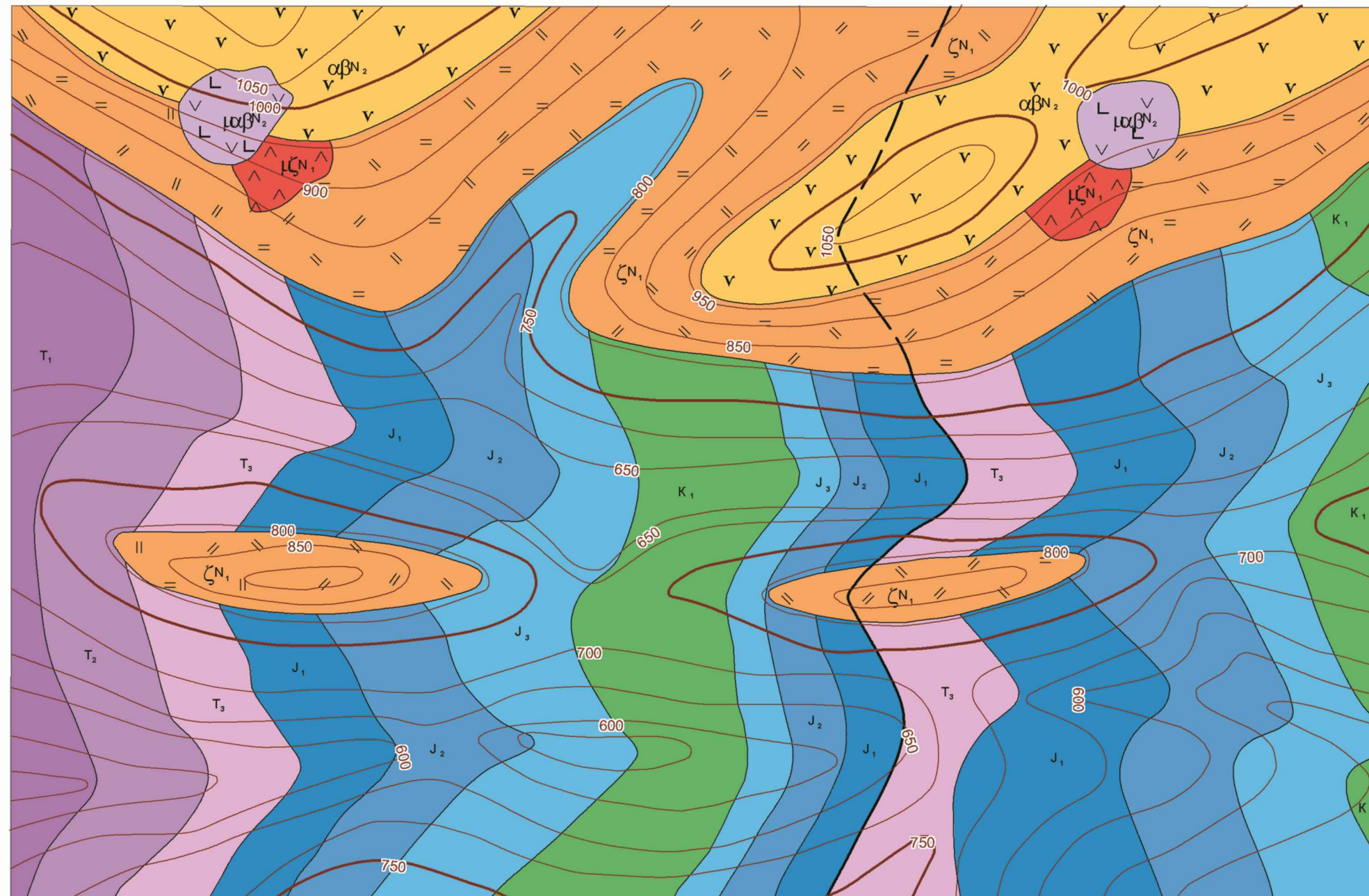


## SHARTLI BELGILAR

- |             |   |  |
|-------------|---|--|
| BO'IR DAVRI |    | K <sub>2</sub> Yuqori bo'lim. Konglomeratlar                     |
|             |    | K <sub>1</sub> Quyi bo'lim. Qumtosh qatlamchali gillar           |
| YURA DAVRI  |  | J <sub>3</sub> Yuqori bo'lim. Dolomitlar                         |
|             |  | J <sub>2</sub> O'rta bo'lim. Organogen ohaktoshlar               |
|             |  | J <sub>1</sub> Quyi bo'lim. Alevrolitlar va qumtoshlar           |
|             |  | T <sub>3</sub> Trias davri. Yuqori bo'lim. Ohaklashgan mergellar |
|             |  | Geologik chegaralar  |

# O'QUV GEOLOGIK XARITA

Mashtab 1:10000



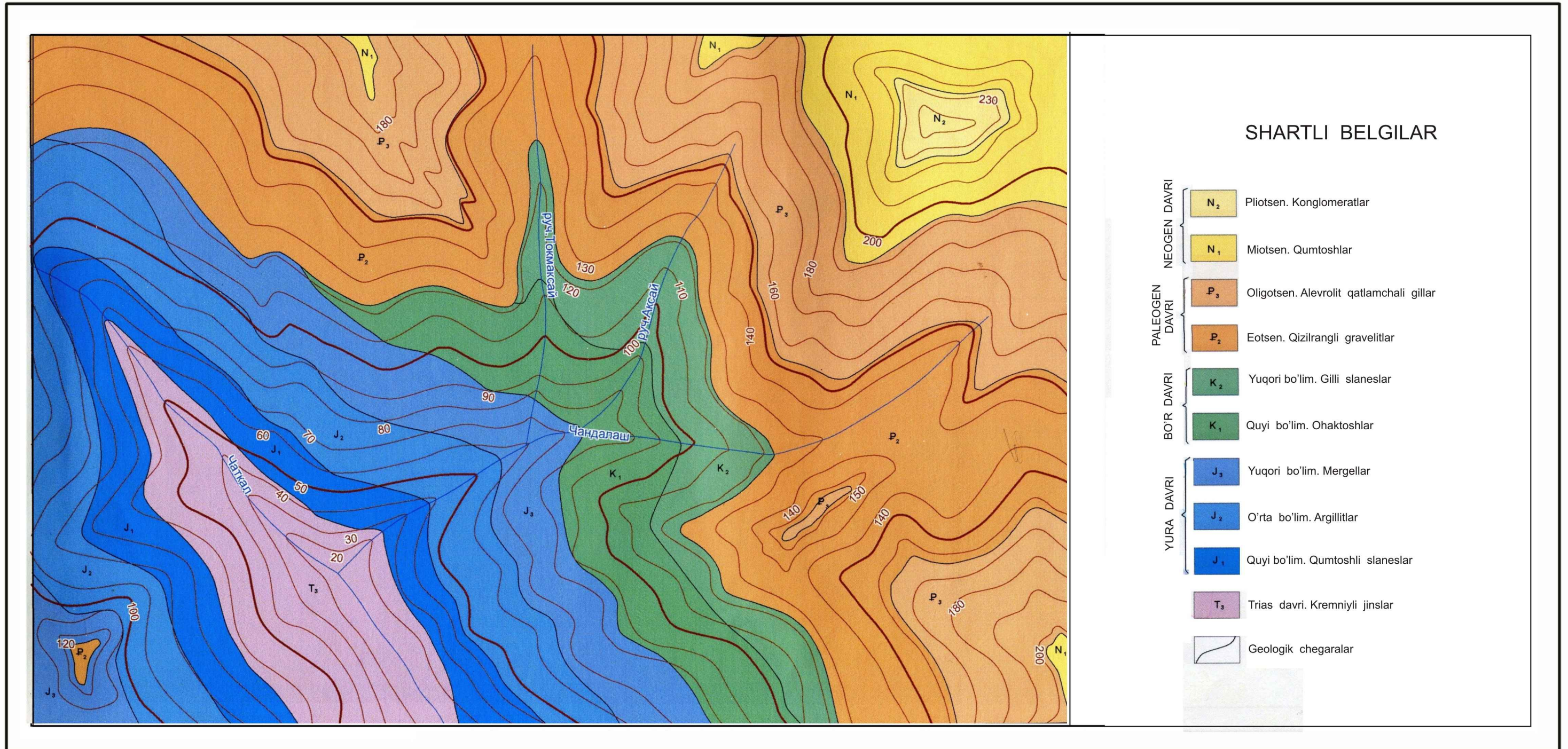
## SHARTLI BELGILAR

- |                                |                     |   |
|--------------------------------|---------------------|---|
| NEOGEN DAVRI                   |                     | Pliotsen. Andezit-bazal'tli lavalar             |
|                                |                     | Miotsen. Datsitli lavalar                       |
|                                |                     | Bo'r davri. Quyi bo'lim. Qizilrangli qumtoshlar |
| YURA DAVRI                     |                     | Yuqori bo'lim. Gillar                           |
|                                |                     | O'rta bo'lim. Mergellar                         |
|                                |                     | Quyi bo'lim. Qumtosh qatlamchali alevrolitlar   |
| TRIAS DAVRI                    |                     | Yuqori bo'lim. Ohaktoshlar                      |
|                                |                     | O'rta bo'lim. Qumtosdlar                        |
|                                |                     | Quyi bo'lim. Konglomeratlar                     |
| VULCON JINSLARI HOSIL BOLLISHI |                     | Andezitli bazal'tlar                            |
|                                |                     | Datsitlar                                       |
| <b>Uzilmali buzilishlar:</b>   |                     |   |
|                                | aniq                |   |
|                                | taxminiy            |   |
|                                | Geologik chegaralar |   |

# O'QUV GEOLOGIK XARITA

Mashtab 1:1000

11-varaq



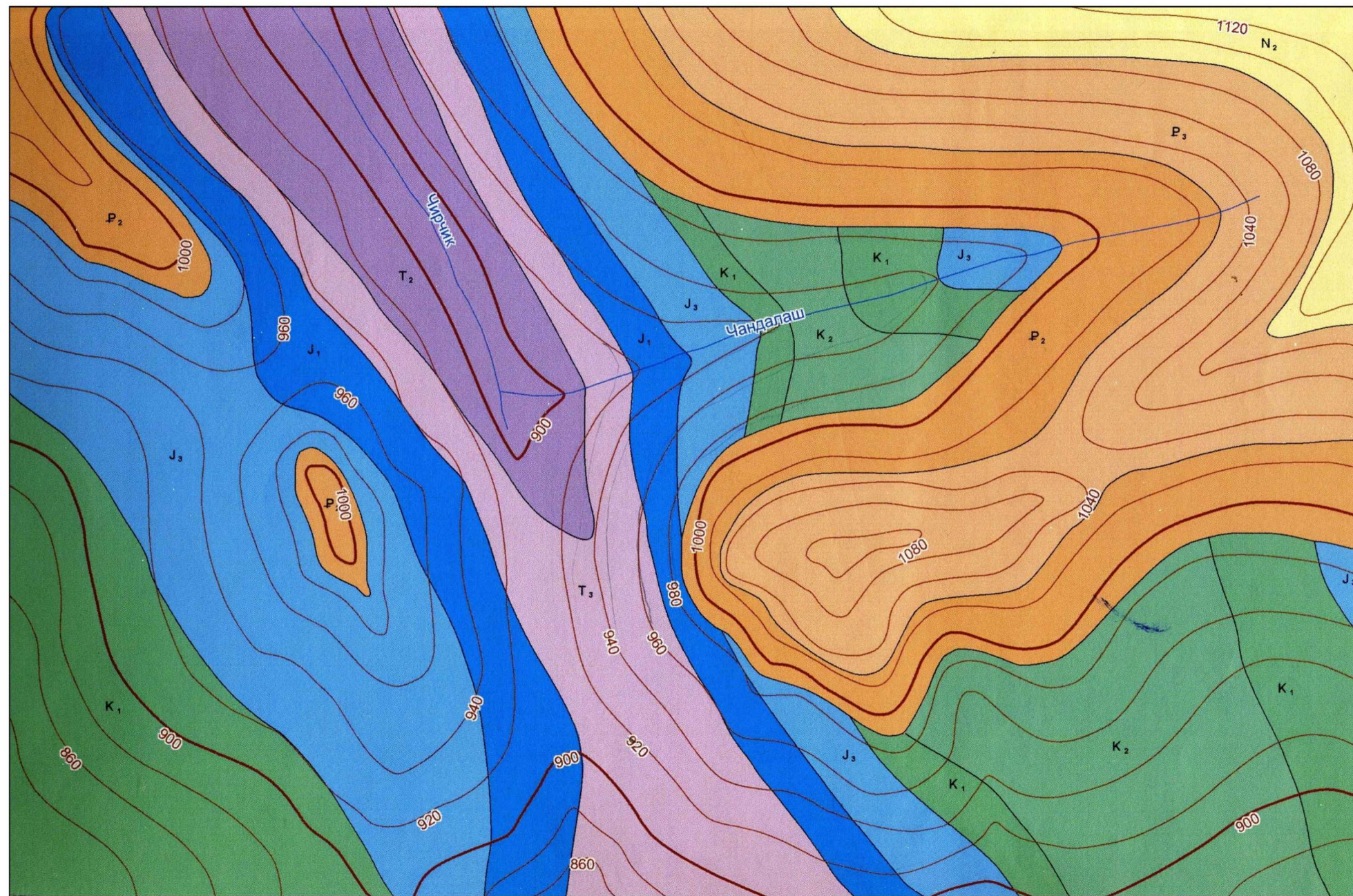
## SHARTLI BELGILAR

- |                |                      |   |
|----------------|----------------------|---|
| NEOGEN DAVRI   | <b>N<sub>2</sub></b> | Pliotsen. Konglomeratlar                |
|                | <b>N<sub>1</sub></b> | Miotsen. Qumtoshlar                     |
| PALEOGEN DAVRI | <b>P<sub>3</sub></b> | Oligotsen. Alevrolit qatlamchali gillar |
|                | <b>P<sub>2</sub></b> | Eotsen. Qizilrangli gravelitlar         |
| BO'R DAVRI     | <b>K<sub>2</sub></b> | Yuqori bo'lim. Gilli slaneslar          |
|                | <b>K<sub>1</sub></b> | Quyida bo'lim. Ohaktoshlar              |
| YURA DAVRI     | <b>J<sub>3</sub></b> | Yuqori bo'lim. Mergellar                |
|                | <b>J<sub>2</sub></b> | O'rta bo'lim. Argillitlar               |
|                | <b>J<sub>1</sub></b> | Quyida bo'lim. Qumtoshli slaneslar      |
|                | <b>T<sub>3</sub></b> | Trias davri. Kremniyli jinslar          |
|                |                      | Geologik chegaralar                     |

# O'QUV GEOLOGIK XARITA

Mashtab 1:1000

12-varaq



## SHARTLI BELGILAR

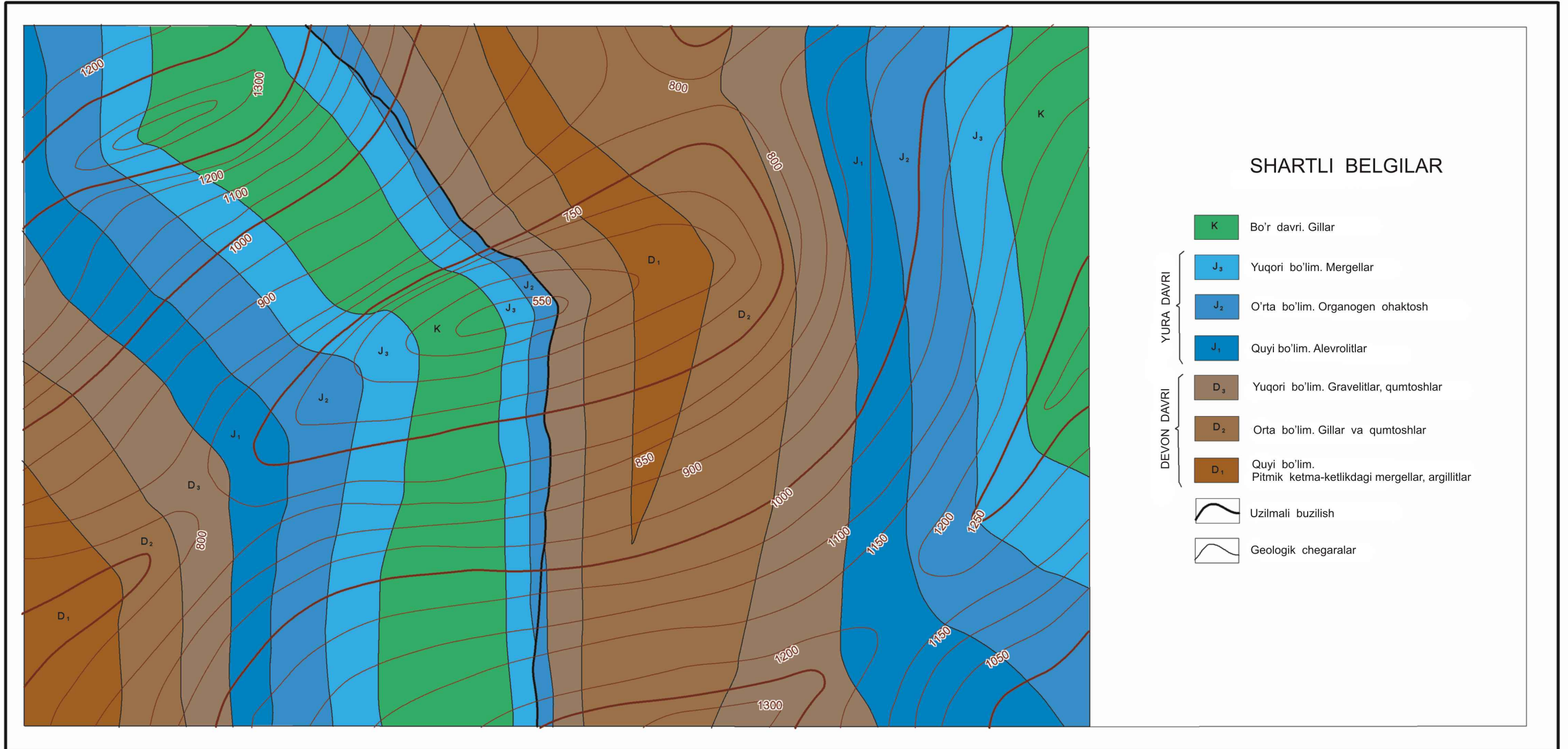
<b>N<sub>2</sub></b>	Pliotsen. Gil qatlamchali qumtoshlar
<b>P<sub>3</sub></b>	Oligotsen. Qumtosh qatlamchali argillitlar
	Eotsen. Qizilrangli qumtoshlar, gravelitlar, konglomeratlar
<b>K<sub>2</sub></b>	Yuqori bo'lim. Mergellar
	Quyida bo'lim. Gillar
<b>J<sub>3</sub></b>	Yuqori bo'lim. Qalinqatlamli ohaktoshlar
	Quyida bo'lim. Qumtoshlar va gillar
<b>T<sub>3</sub></b>	Yuqori bo'lim. Mergelli ohaktoshlar
	O'rta bo'lim. Dolomitlar
	Geologik chegaralar



# O'QUV GEOLOGIK XARITA

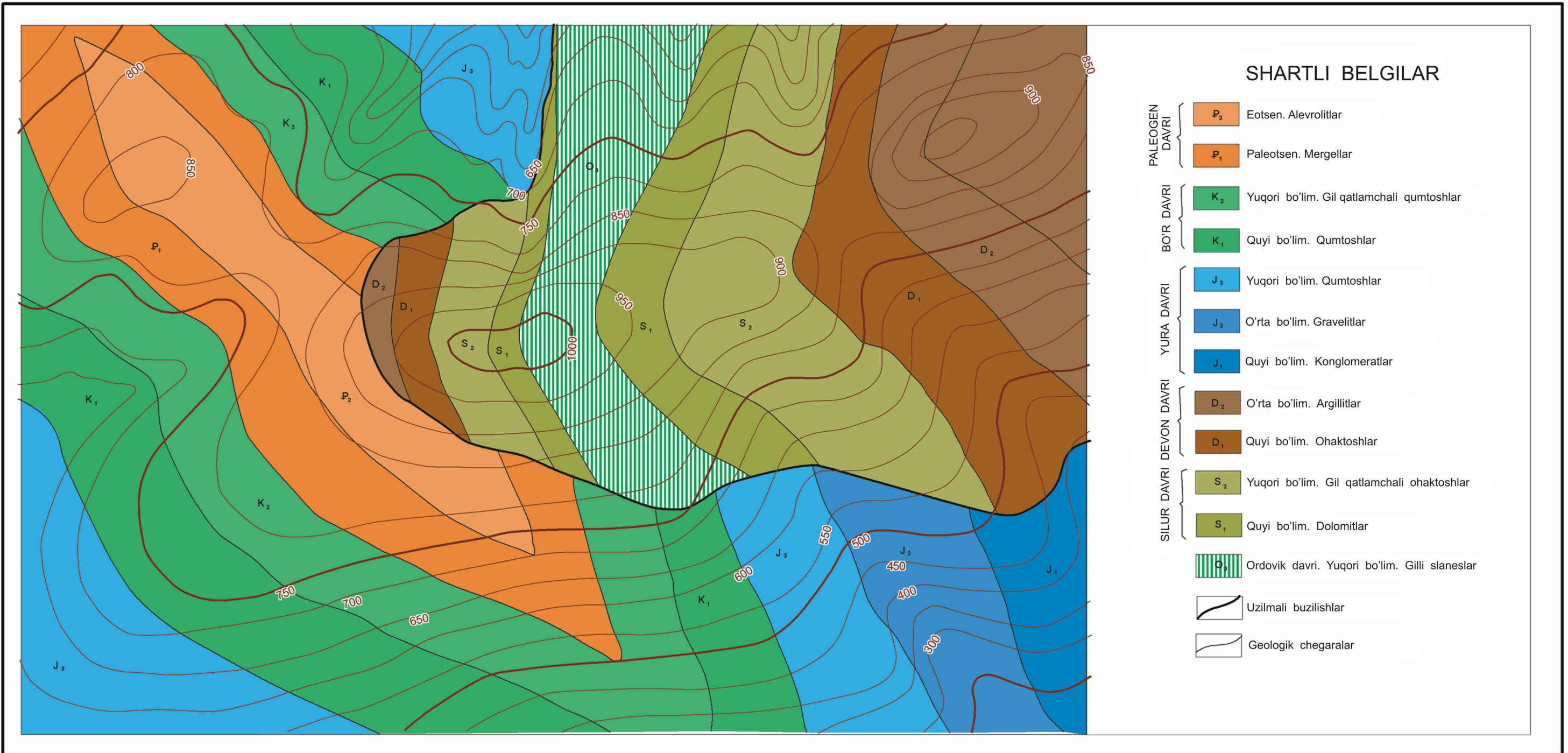
Mashtab 1:10 000

13-varaq



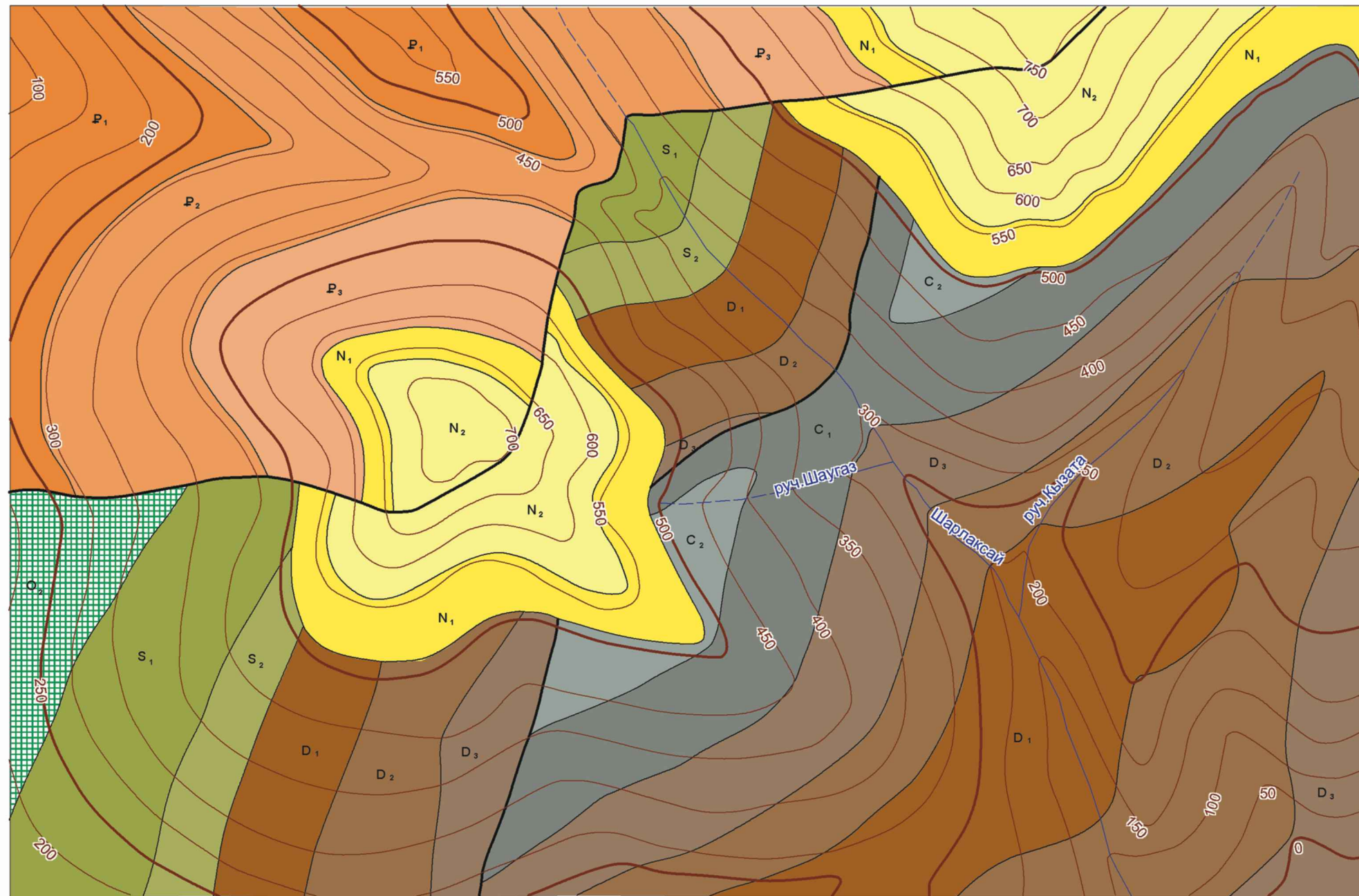
# O'QUV GEOLOGIK XARITA

Mashtab 1:10 000



# O'QUV GEOLOGIK XARITA

Mashtab 1:5 000

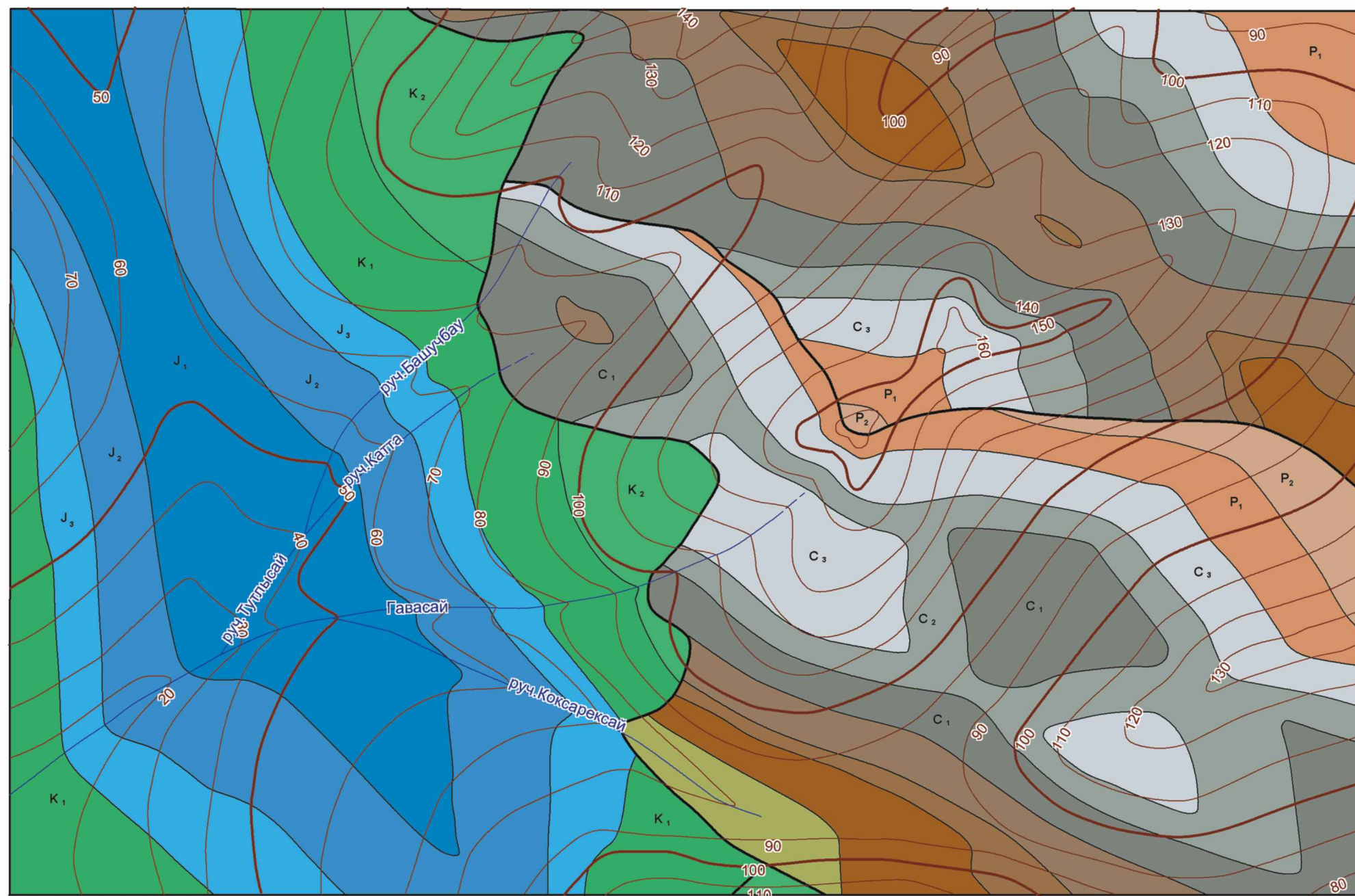


## SHARTLI BELGILAR

- |                  |                |   |
|------------------|----------------|---|
| NEOGEN DAVRI     | N <sub>2</sub> | Pliotsen. Qumtoshlar                            |
|                  | N <sub>1</sub> | Miotsen. Qumtosh qatlamchali gillar             |
| PALEOGEN DAVRI   | P <sub>3</sub> | Oligotsen. Alevrolitlar.                        |
|                  | P <sub>2</sub> | Eotsen. Bazalt tarkibli tufar, tufi qumtoshlar  |
|                  | P <sub>1</sub> | Paleotsen. Konglomeratlar, qumtoshlar           |
| TOSHKO'MIR DAVRI | C <sub>2</sub> | O'rta bo'lim. Gillar                            |
|                  | C <sub>1</sub> | Quyil bo'lim. Braxiopoda faunali ohaktoshlar    |
| DEVON DAVRI      | D <sub>3</sub> | Yuqori bo'lim. Ingichka qatlamchali ohaktoshlar |
|                  | D <sub>2</sub> | O'rta bo'lim. Alevrolitla slaneslar             |
|                  | D <sub>1</sub> | Quyil bo'lim. Marmarlar                         |
| SILUR DAVRI      | S <sub>2</sub> | Yuqori bo'lim. Yashmasimon jinslar              |
|                  | S <sub>1</sub> | Quyil bo'lim. Fillitli slaneslar                |
|                  | O <sub>2</sub> | Ordovik davri. O'rta bo'lim. Xloritli slaneslar |
|                  |                | Uzilmali buzilishlar                            |
|                  |                | Geologik chegaralar                             |

# O'QUV GEOLOGIK XARITA

Mashtab 1:10 000



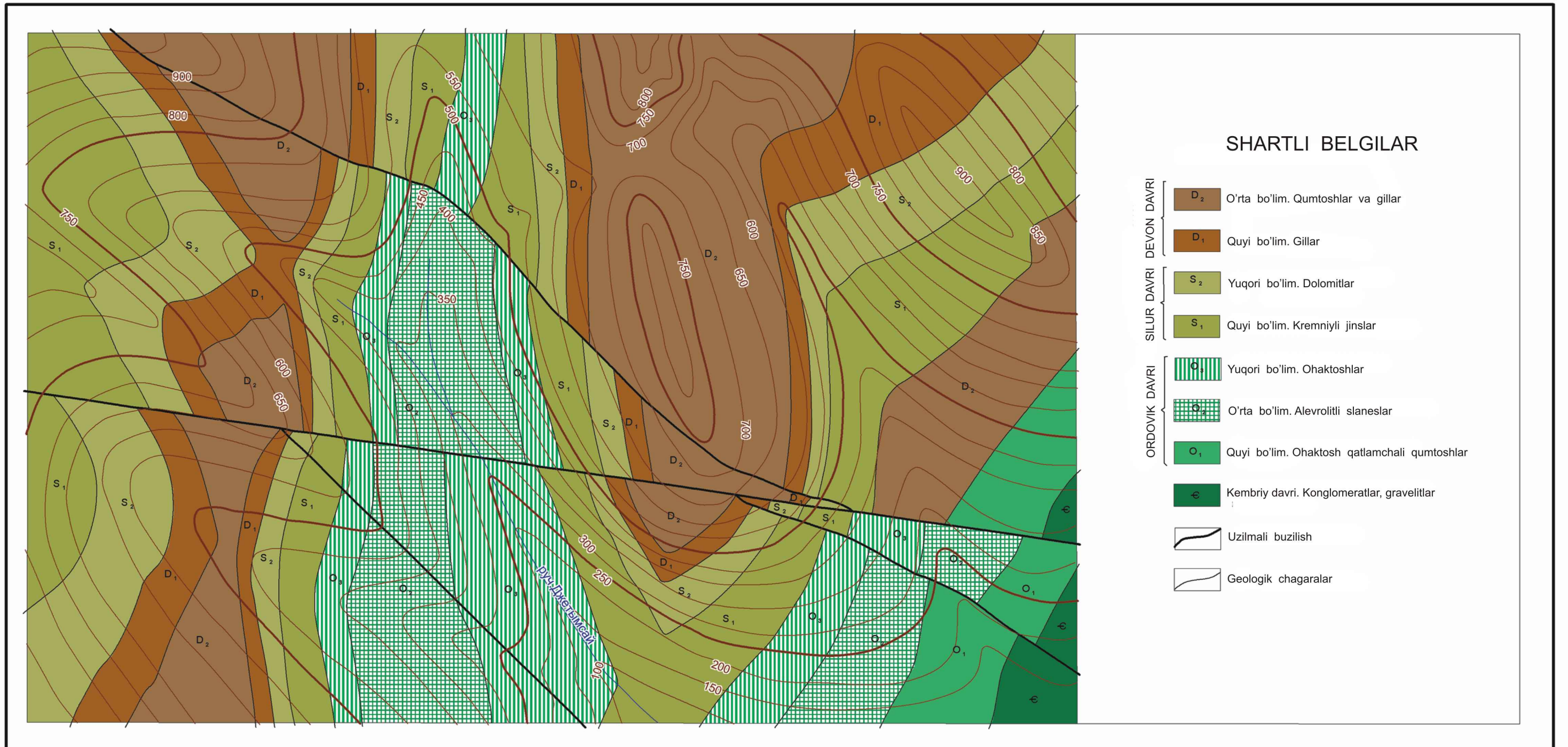
## SHARTLI BELGILAR

- |                 |                |                                  |
|-----------------|----------------|----------------------------------|
| BOR DAVRI       | K <sub>2</sub> | Yuqori bo'lim. Mergellar         |
|                 | K <sub>1</sub> | Quyi bo'lim. Gillar              |
| YURA DAVRI      | J <sub>3</sub> | Yuqori bo'lim. Ohaktoshlar       |
|                 | J <sub>2</sub> | O'rta bo'lim. Qumtoshli gillar   |
|                 | J <sub>1</sub> | Quyi bo'lim. Qumtoshlar          |
| PERM DAVRI      | P <sub>2</sub> | O'rta bo'lim. Konglomeratlar     |
|                 | P <sub>1</sub> | Quyi o'lim. Gravelitlar          |
| TOSHKOMIR DAVRI | C <sub>3</sub> | Yuqori bo'lim. Alevrolitlar      |
|                 | C <sub>2</sub> | O'rta bo'lim. Qumtoshlar         |
|                 | C <sub>1</sub> | Quyi bo'lim. Gillar              |
| DEVON DAVRI     | D <sub>3</sub> | Yuqori bo'lim. Dolomitlar        |
|                 | D <sub>2</sub> | O'rta bo'lim. Mergelli slaneslar |
|                 | D <sub>1</sub> | Quyi bo'lim. Marmarlar           |
|                 | S <sub>2</sub> | Silur davri. Qumtoshli slaneslar |
|                 |                | Uzilmali buzilishlar             |
|                 |                | Geologik chegaralar              |

# O'QUV GEOLOGIK XARITA

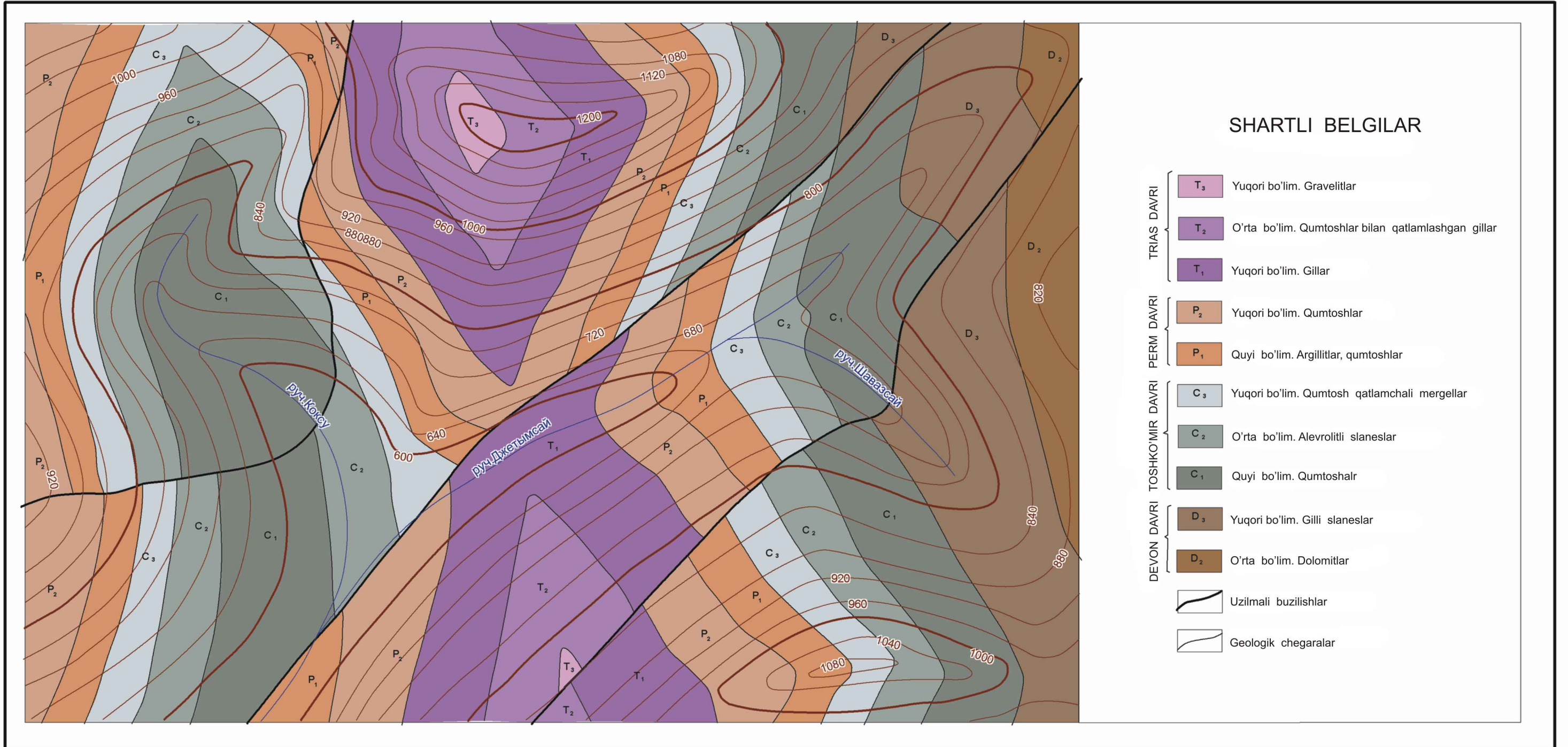
Mashtab 1:5 000

17-varaq



# O'QUV GEOLOGIK XARITA

Mashtab 1:5 000

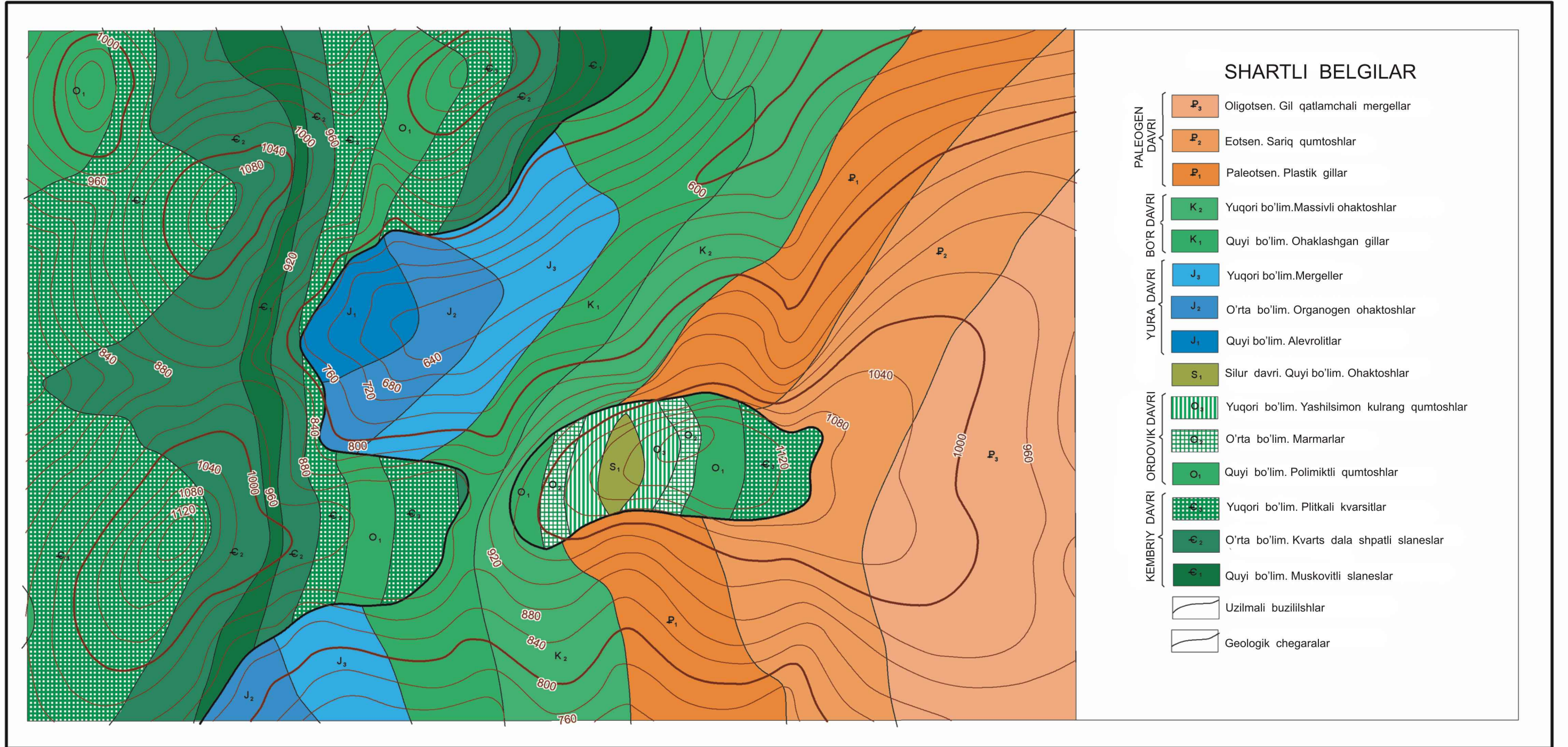


## SHARTLI BELGILAR

- |                 |  |  |
|-----------------|--|--|
| TRIAS DAVRI     | <span style="display: inline-block; width: 15px; height: 15px; background-color: #d8bfd8; border: 1px solid black;"></span> T <sub>3</sub> | Yuqori bo'lim. Gravelitlar                           |
|                 | <span style="display: inline-block; width: 15px; height: 15px; background-color: #9932cc; border: 1px solid black;"></span> T <sub>2</sub> | O'rtab bo'lim. Qumtoshlar bilan qatlamlashgan gillar |
|                 | <span style="display: inline-block; width: 15px; height: 15px; background-color: #800080; border: 1px solid black;"></span> T <sub>1</sub> | Yuqori bo'lim. Gillar                                |
| PERM DAVRI      | <span style="display: inline-block; width: 15px; height: 15px; background-color: #cd853f; border: 1px solid black;"></span> P <sub>2</sub> | Yuqori bo'lim. Qumtoshlar                            |
|                 | <span style="display: inline-block; width: 15px; height: 15px; background-color: #d2691e; border: 1px solid black;"></span> P <sub>1</sub> | Quyi bo'lim. Argillitlar, qumtoshlar                 |
| TOSHKOMIR DAVRI | <span style="display: inline-block; width: 15px; height: 15px; background-color: #add8e6; border: 1px solid black;"></span> C <sub>3</sub> | Yuqori bo'lim. Qumtosh qatlamchali mergellar         |
|                 | <span style="display: inline-block; width: 15px; height: 15px; background-color: #808080; border: 1px solid black;"></span> C <sub>2</sub> | O'rtab bo'lim. Alevrolitli slaneslar                 |
|                 | <span style="display: inline-block; width: 15px; height: 15px; background-color: #666666; border: 1px solid black;"></span> C <sub>1</sub> | Quyi bo'lim. Qumtoshlar                              |
| DEVON DAVRI     | <span style="display: inline-block; width: 15px; height: 15px; background-color: #a0522d; border: 1px solid black;"></span> D <sub>3</sub> | Yuqori bo'lim. Gilli slaneslar                       |
|                 | <span style="display: inline-block; width: 15px; height: 15px; background-color: #8b4513; border: 1px solid black;"></span> D <sub>2</sub> | O'rtab bo'lim. Dolomitlar                            |
|                 |  | Uzilimali buzilishlar                                |
|                 |  | Geologik chegaralar                                  |

# O'QUV GEOLOGIK XARITA

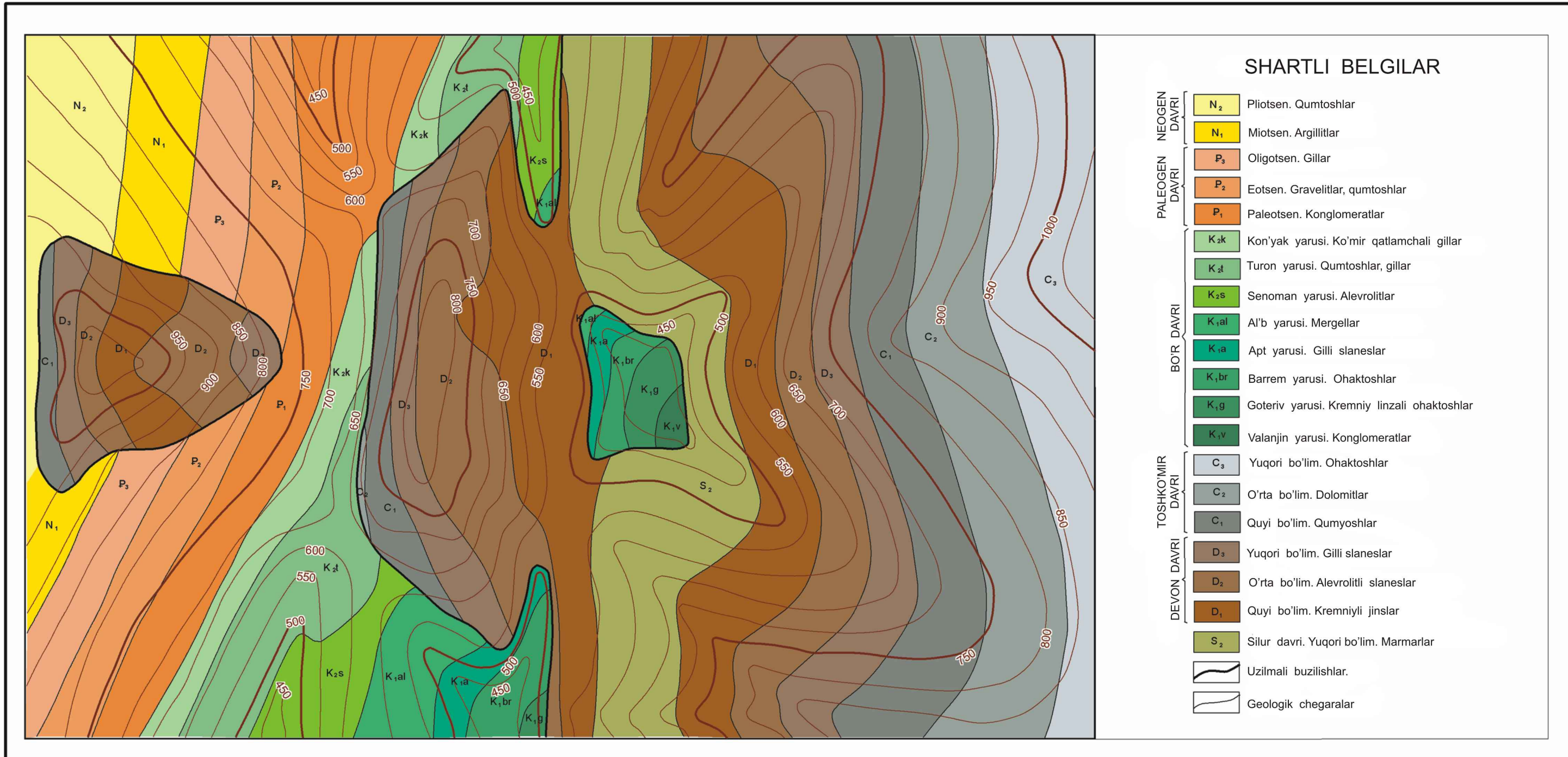
Mashtab 1:5 000



# O'QUV GEOLOGIK XARITA

Masshtab 1:5 000

20-varaq



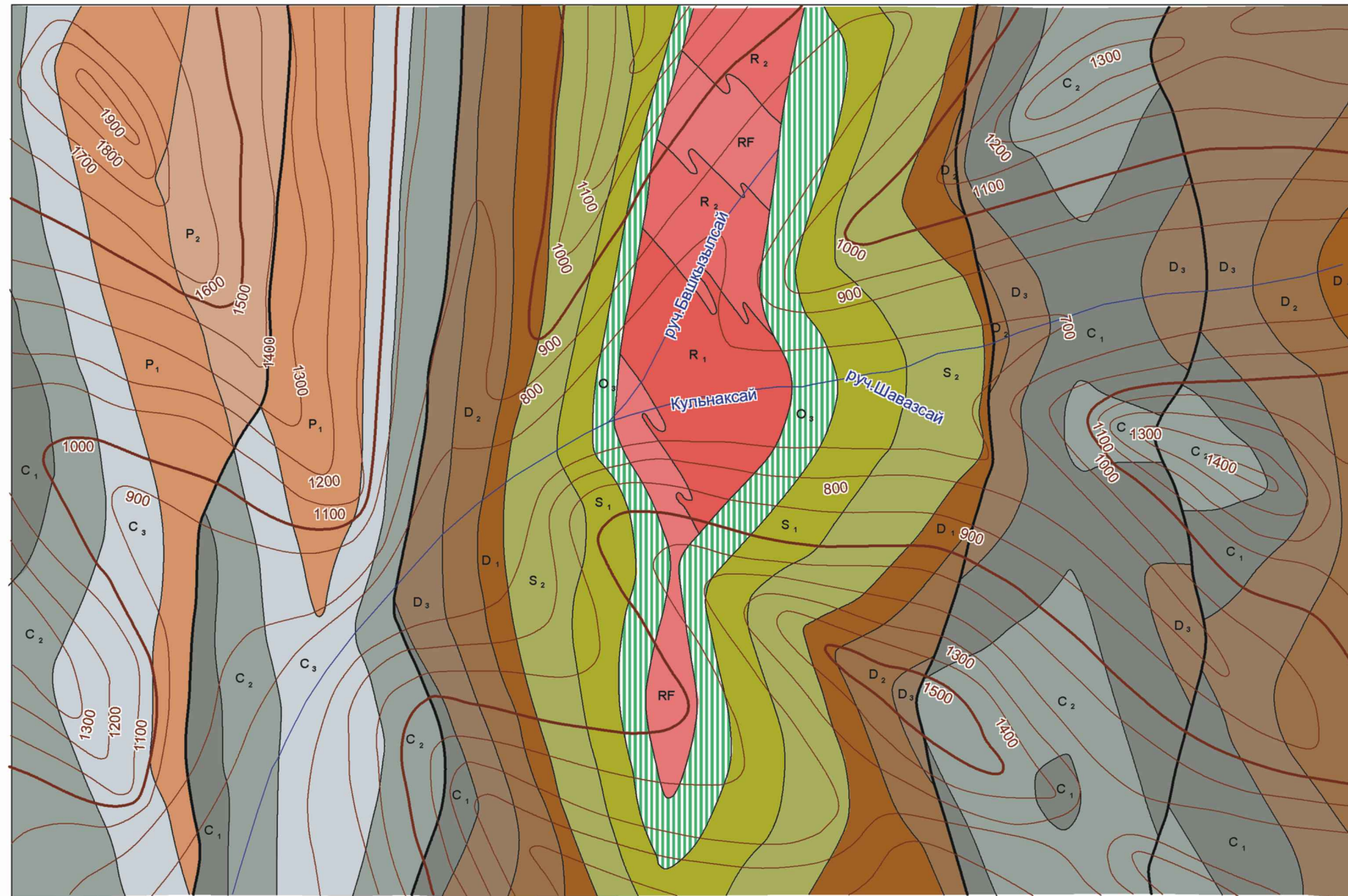
## SHARTLI BELGILAR

- |                 |                  |   |
|-----------------|------------------|---|
| NEOGEN DAVRI    | N <sub>2</sub>   | Plitsen. Qumtoshlar                         |
|                 | N <sub>1</sub>   | Miotsen. Argillitlar                        |
| PALEOGEN DAVRI  | P <sub>3</sub>   | Oligotsen. Gillar                           |
|                 | P <sub>2</sub>   | Eotsen. Gravelitlar, qumtoshlar             |
|                 | P <sub>1</sub>   | Paleotsen. Konglomeratlar                   |
| BOR DAVRI       | K <sub>2k</sub>  | Kon'yak yarusi. Ko'mir qatlamchali gillar   |
|                 | K <sub>2t</sub>  | Turon yarusi. Qumtoshlar, gillar            |
|                 | K <sub>2s</sub>  | Senoman yarusi. Alevrolitlar                |
|                 | K <sub>1al</sub> | Al'b yarusi. Mergellar                      |
|                 | K <sub>1ia</sub> | Apt yarusi. Gilli slaneslar                 |
|                 | K <sub>1br</sub> | Barrem yarusi. Ohaktoshlar                  |
| TOSHKOMIR DAVRI | K <sub>1g</sub>  | Goteriv yarusi. Kremniy linzali ohaktoshlar |
|                 | K <sub>1v</sub>  | Valanjin yarusi. Konglomeratlar             |
|                 | C <sub>3</sub>   | Yuqori bo'lim. Ohaktoshlar                  |
|                 | C <sub>2</sub>   | O'rta bo'lim. Dolomitlar                    |
| DEVON DAVRI     | C <sub>1</sub>   | Quyi bo'lim. Qumyoshlar                     |
|                 | D <sub>3</sub>   | Yuqori bo'lim. Gilli slaneslar              |
|                 | D <sub>2</sub>   | O'rta bo'lim. Alevrolitli slaneslar         |
|                 | D <sub>1</sub>   | Quyi bo'lim. Kremniyli jinslar              |
|                 | S <sub>2</sub>   | Silur davri. Yuqori bo'lim. Marmarlar       |
- Uzilmali buzilishlar.  
 Geologik chegaralar



# O'QUV GEOLOGIK XARITA

Mashtab 1:10 000



## SHARTLI BELGILAR

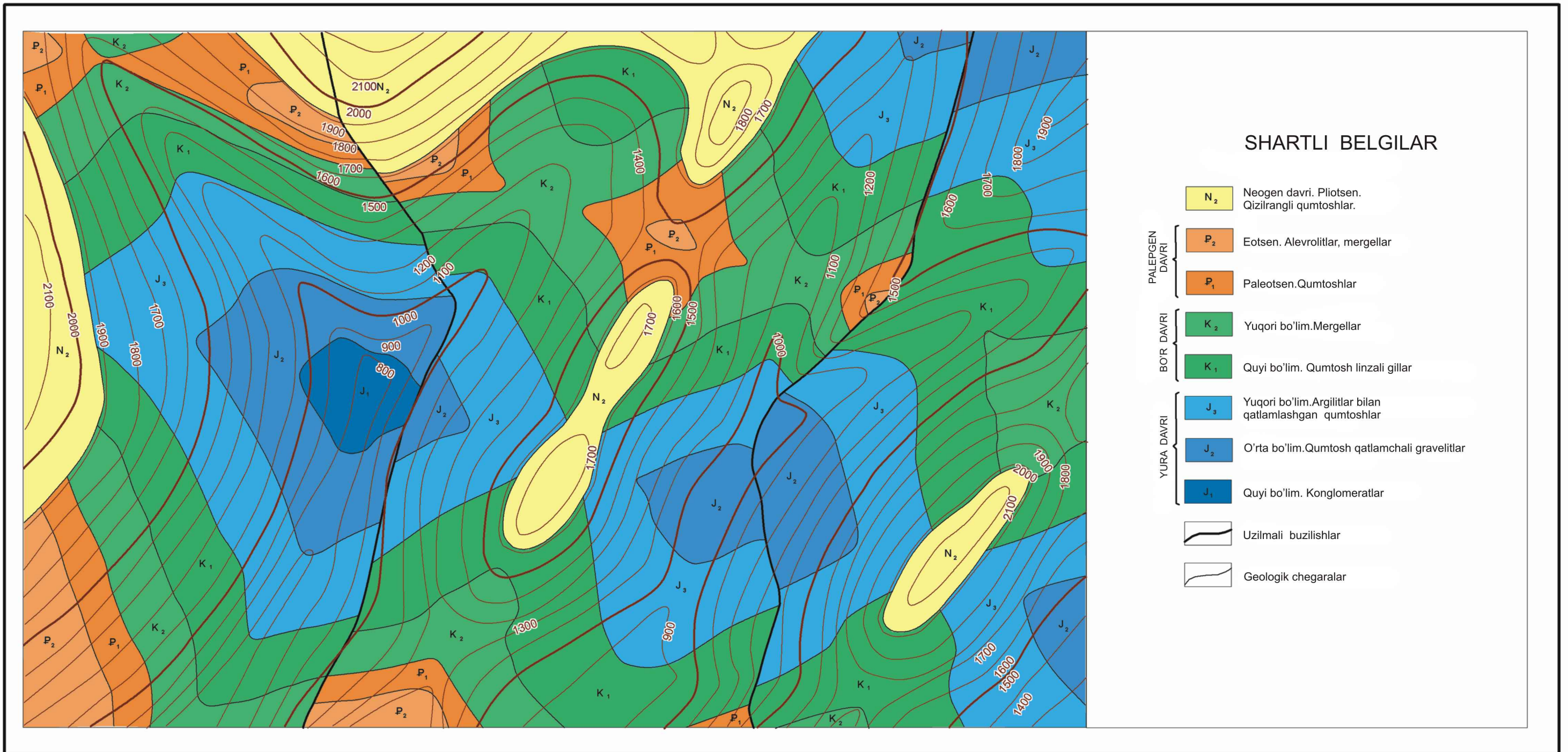
PERM DAVRI	
P <sub>2</sub>	Yuqori bo'lim. Qumtoshlar
P <sub>1</sub>	Quyi bo'lim. Gillar
TOSHKOMIR DAVRI	
C <sub>3</sub>	Yuqori bo'lim. Mergellar
C <sub>2</sub>	O'rta bo'lim. Konglomeratlar
C <sub>1</sub>	Quyi bo'lim. Qumtosh qatlamchali gravelitlar
DEVON DAVRI	
D <sub>3</sub>	Yuqori bo'lim. Qumtoshlar
D <sub>2</sub>	O'rta bo'lim. Dolomitlar
D <sub>1</sub>	Quyi bo'lim. Ohaktosh qatlamchali alevrolitlar
SILUR DAVRI	
S <sub>2</sub>	Yuqori bo'lim. Organogen ohaktoshlar
S <sub>1</sub>	Quyi bo'lim. Gilli slaneslar
O <sub>3</sub>	Ordovik davri. Yuqori bo'lim. Kremniyli jinslar
YUQORI PROTERAZOY	
RF	Yuqori rifey. Gneyslar
R <sub>2</sub>	O'rta rifey. Kvarts-xloritli slaneslar
R <sub>1</sub>	Quyi rifey. Kvarsitlar











	Uzilmali buzilishlar
	Geologik chegaralar

# O'QUV GEOLOGIK XARITA

Masshtab 1:10 000

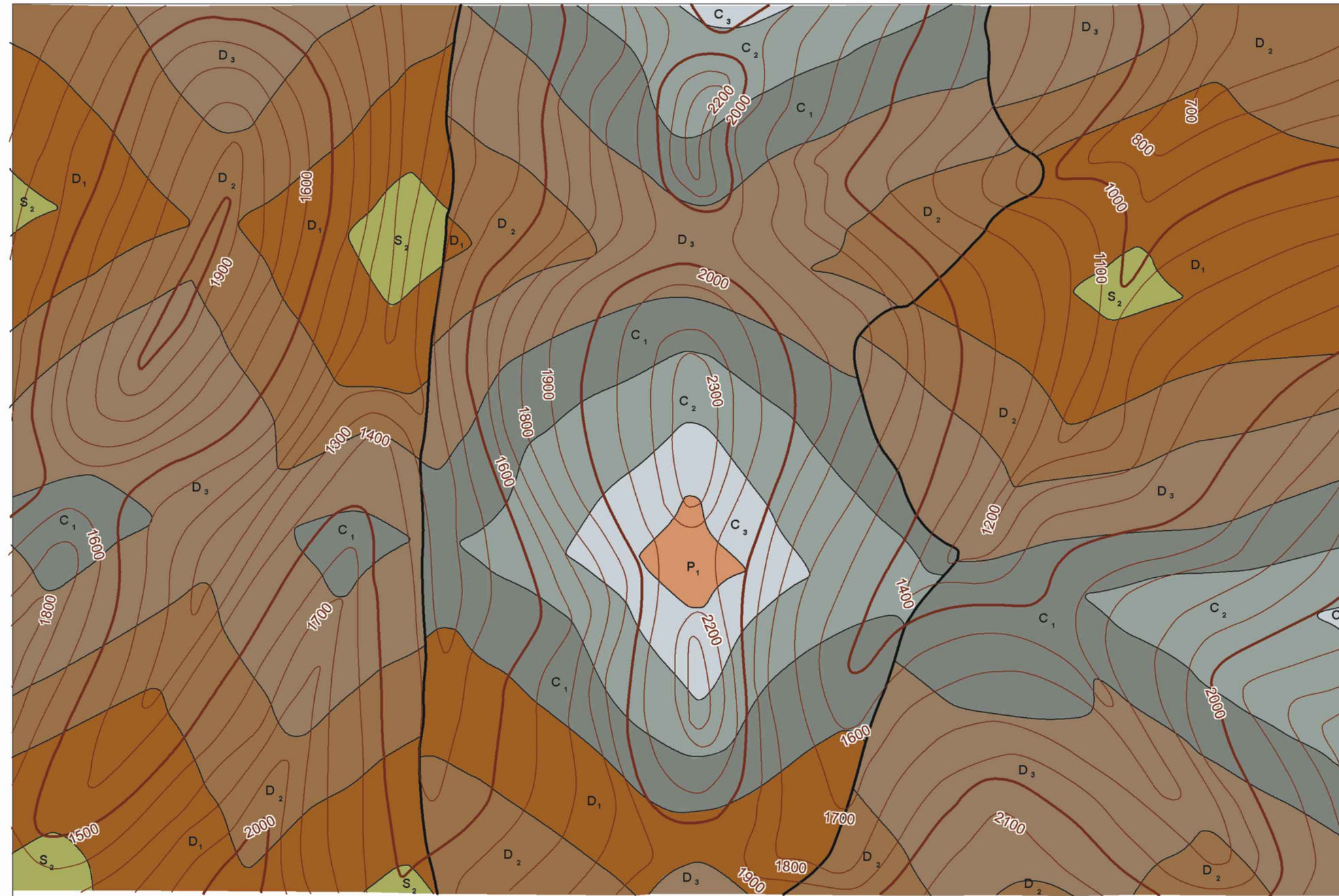


## SHARTLI BELGILAR






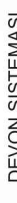






- |                |   |  |
|----------------|---|--|
|                |    | N <sub>2</sub> Neogen davri. Pliotsen. Qizilrangli qumtoshlar.           |
| PALEPGEN DAVRI |    | P <sub>2</sub> Eotsen. Alevrolitlar, mergellar                           |
|                |    | P <sub>1</sub> Paleotsen. Qumtoshlar                                     |
| BOR DAVRI      |   | K <sub>2</sub> Yuqori bo'lim. Mergellar                                  |
|                |  | K <sub>1</sub> Quyi bo'lim. Qumtosh linzali gillar                       |
| YURA DAVRI     |  | J <sub>3</sub> Yuqori bo'lim. Argillitlar bilan qatlamlashgan qumtoshlar |
|                |  | J <sub>2</sub> O'rt bo'lim. Qumtosh qatlamchali gravelitlar              |
|                |  | J <sub>1</sub> Quyi bo'lim. Konglomeratlar                               |
|                |  | Uzilmali buzilishlar   |
|                |  | Geologik chegaralar  |

# O'QUV GEOLOGIK HARITA

Mashtab 1:10 000

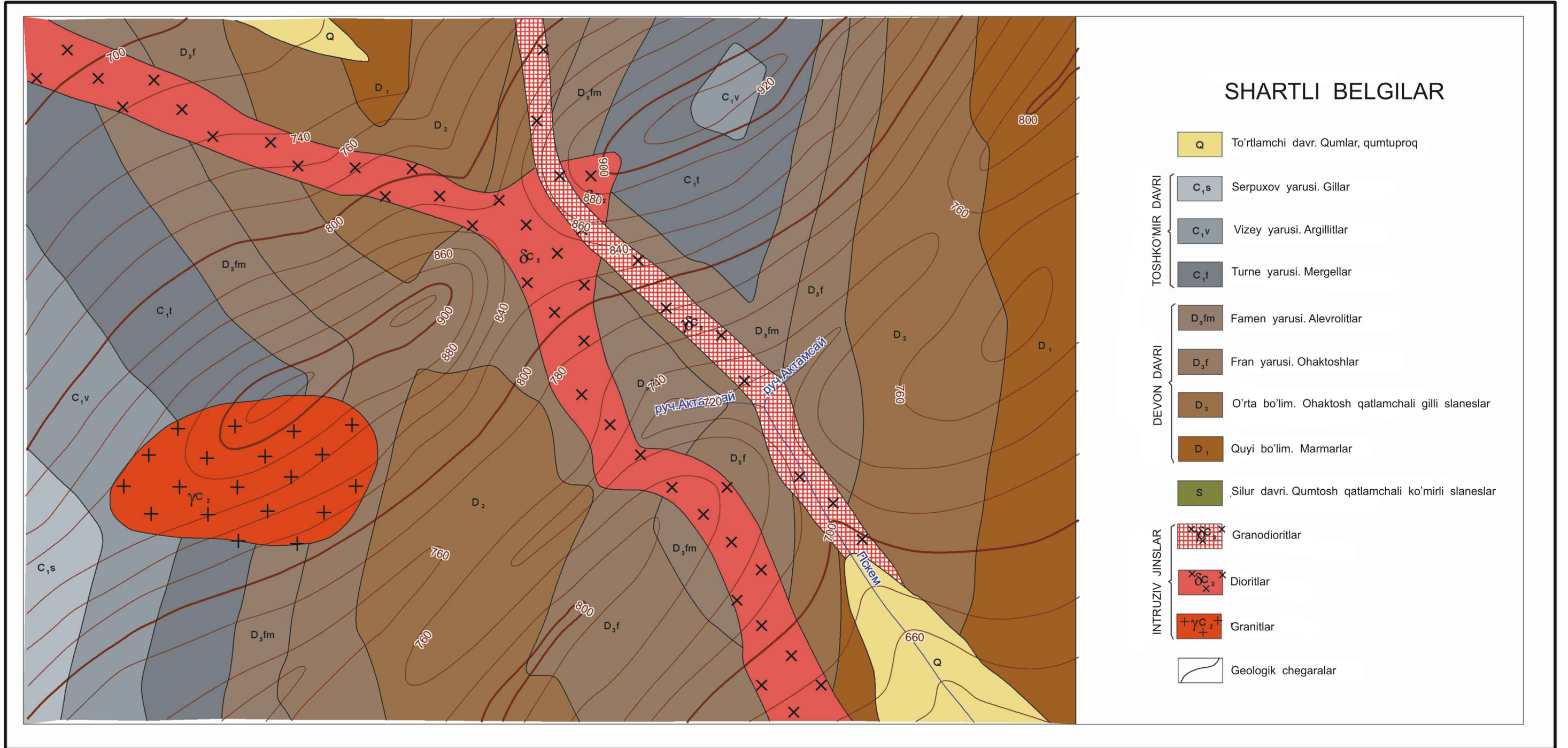


## SHARTLI BELGILAR

- |   |   |   |   |
|---|---|---|---|
|    | P <sub>1</sub>  | Perm sistemasi. Quyi bo'lim. Konglomeratlar             |   |
|   |    | C <sub>3</sub>  | Yuqori bo'lim. Gravelitlar              |
|   |    | C <sub>2</sub>  | O'rt bo'lim. Qumtoshlar, argillitlar    |
|   |   | C <sub>1</sub>  | Quyi bo'lim. Mergellar                  |
|  |  | D <sub>3</sub>  | Yuqori bo'lim. Alevrolitlar, qumtoshlar |
|   |  | D <sub>2</sub>  | O'rt bo'lim. Gillar                     |
|   |  | D <sub>1</sub>  | Quyi bo'lim. Ohaktoshlar                |
|  | S <sub>2</sub>  | Silur sistemasi. Yuqori bo'lim. Gil-qumtoshli slaneslar |   |
|  |   | Uzilmali buzilishlar                                    |   |
|  |   | Geologik chegaralar                                     |   |

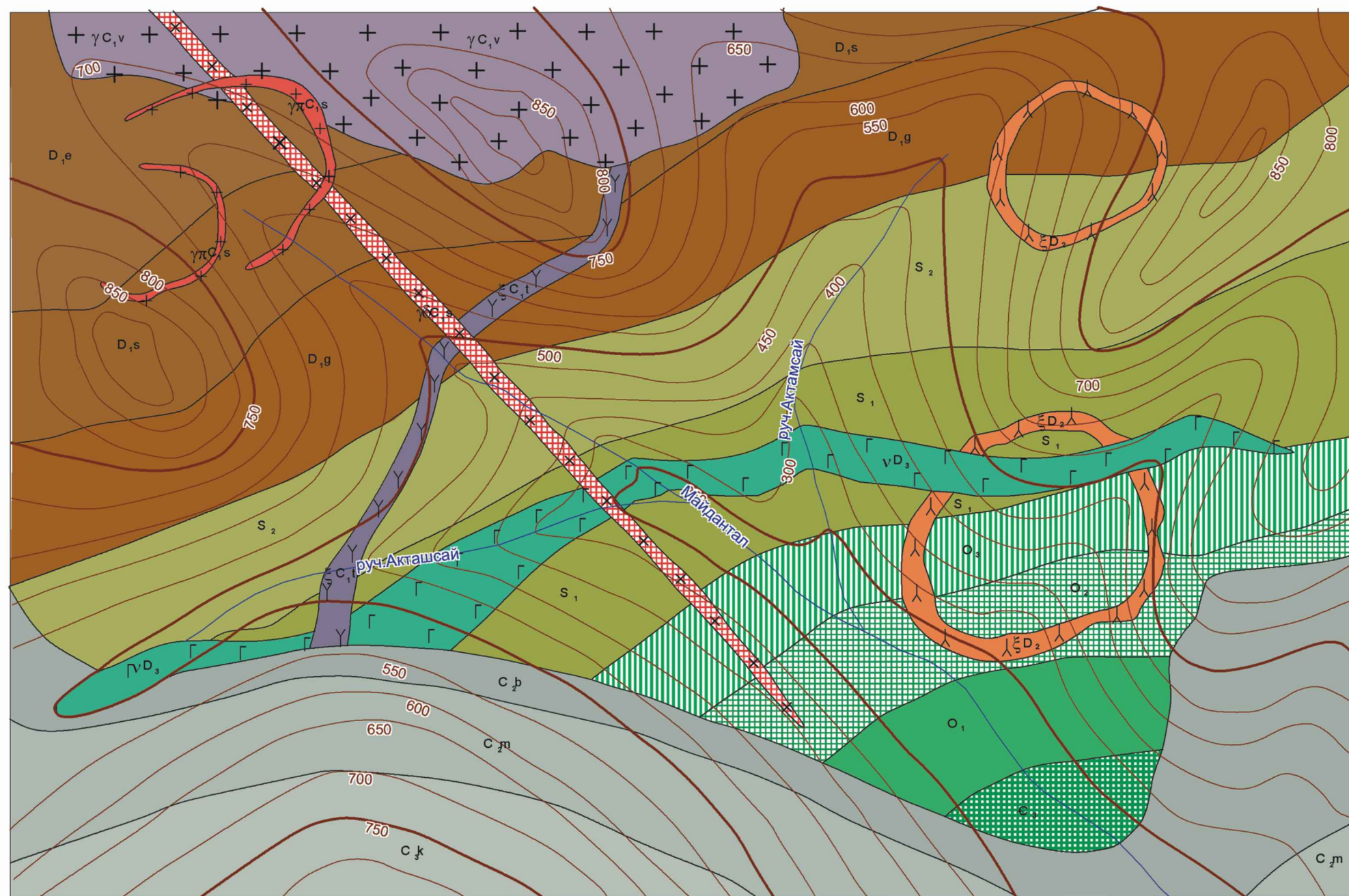
# O'QUV GEOLOGIK XARITA

Mashtab 1:1 000



# O'QUV GEOLOGIK XARITA

Mashtab 1:10 000

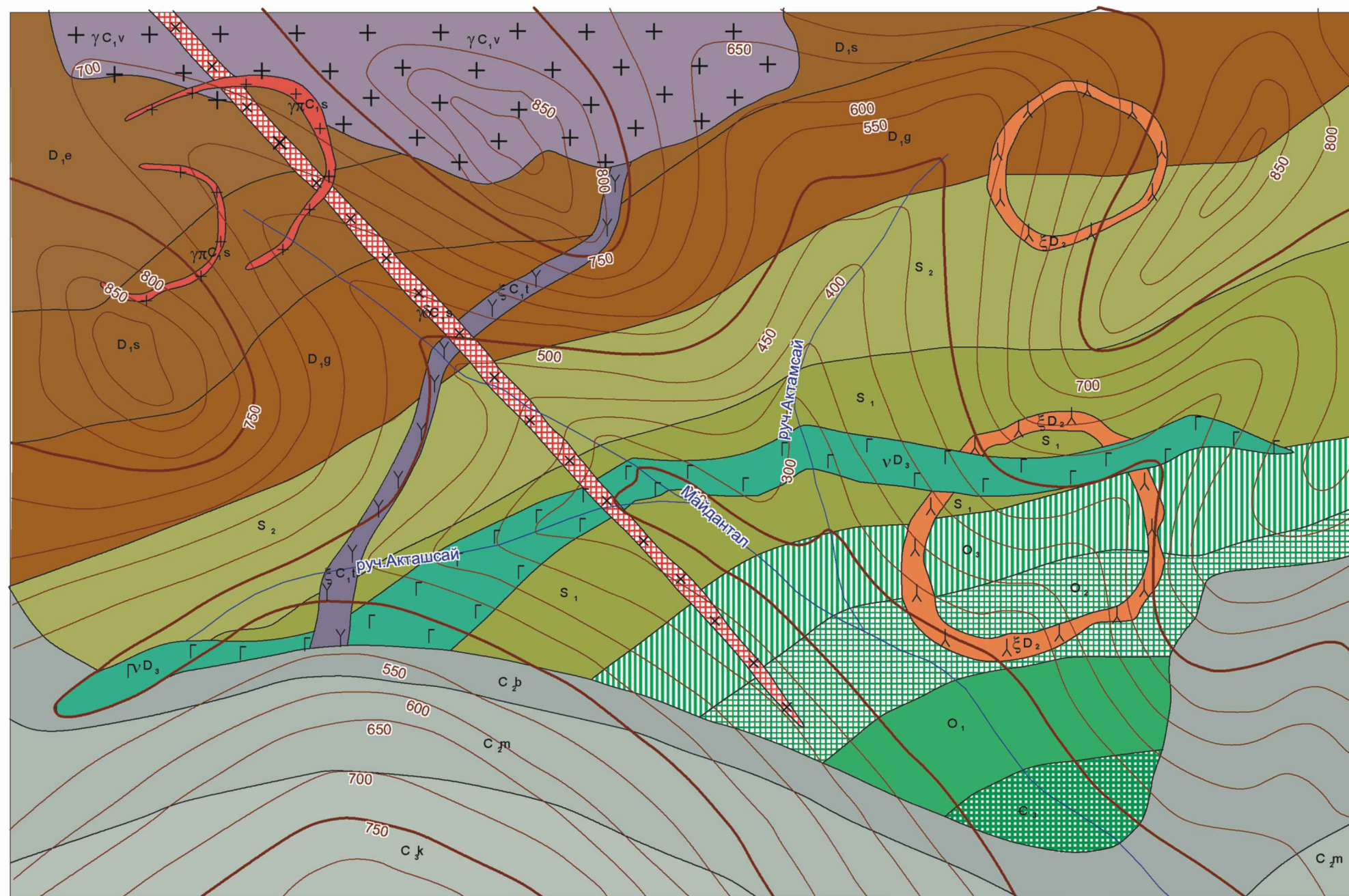


## SHARTLI BELGILAR

- |                                 |                  |  |
|---------------------------------|------------------|--|
| TOSHKOMIR<br>SISTEMASI          | $C_k$            | Qosimov yarusi. Gillar                                     |
|                                 | $C_m$            | Moskva yarusi. Qumtoshlar                                  |
|                                 | $C_p$            | Boshqird yarusi. Konglomeratlar                            |
| DEVON<br>SISTEMASI              | $D_e$            | Em yarusi. Alevrolitlar                                    |
|                                 | $D_s$            | Zigen yarusi. Mergellar.                                   |
|                                 | $D_g$            | Jedin yarusi. Ohaktosh qatlamchali gillar                  |
| SILUR<br>SISTEMASI              | $S_2$            | Yuqori bo'lim. Ohaktoshlar                                 |
|                                 | $S_1$            | Quyi bo'lim. Dolomitlar                                    |
| ORDOVIK<br>SISTEMASI            | $O_3$            | Yuqori bo'lim. Qumtoshlar                                  |
|                                 | $O_2$            | O'rta bo'lim. Alevrolitlar, argillitlar                    |
|                                 | $O_1$            | Quyi bo'lim. Qumtoshlar                                    |
|                                 | $O_0$            | Kembriy sistemasi. Yuqori bo'lim. Gill-qumtoshli slaneslar |
| YUQORI PALEOZOY<br>INTRUZIVLARI | $\gamma C_i s^+$ | Daykalar chegarasidagi mikrogranitlar                      |
|                                 | $\gamma C_s$     | Vertikal daykalardagi granodioritlar                       |
|                                 | $\gamma C_v$     | Markaziy intruzivlardagi granitlar                         |
|                                 | $\gamma C_t$     | Tik daykalardagi siyenitlar                                |
|                                 | $\gamma D_s$     | Nishab daykalardagi diabazlar                              |
|                                 | $\xi D_2$        | Halqasimon daykalardagi nefelinli siyenitlar               |
|                                 |                  | Geologik chegaralar  |

# O'QUV GEOLOGIK XARITA

Mashtab 1:10 000



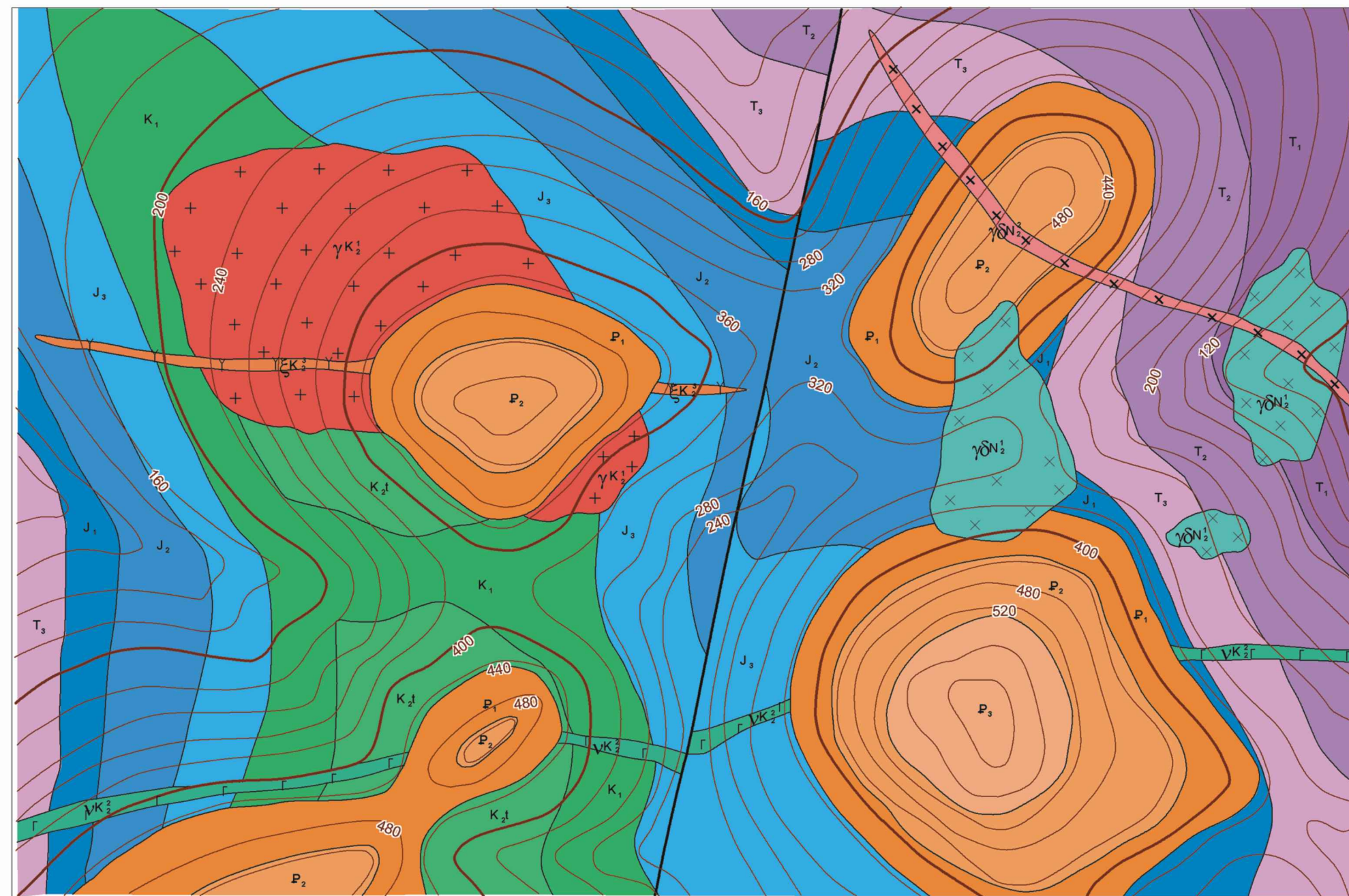
## SHARTLI BELGILAR

- |                              |                           |   |
|------------------------------|---------------------------|---|
| TOSHKOMIR<br>DAVRI           | $C_k$                     | Qosimov yarusi. Gillar                                      |
|                              | $C_m$                     | Moskva yarusi. Qumtoshlar                                   |
|                              | $C_p$                     | Boshqird yarusi. Konglomeratlar                             |
| DEVON DAVRI                  | $D_e$                     | Em yarusi. Alevrolitlar                                     |
|                              | $D_s$                     | Zigen yarusi. Mergellar.                                    |
|                              | $D_g$                     | Jedin yarusi. Ohaktosh qatlamchali gillar                   |
| SILUR DAVRI                  | $S_2$                     | Yuqori bo'lim. Ohaktoshlar                                  |
|                              | $S_1$                     | Quyi bo'lim. Dolomitlar                                     |
| ORDOVIK DAVRI                | $O_3$                     | Yuqori bo'lim. Qumtoshlar                                   |
|                              | $O_2$                     | O'rta bo'lim. Alevrolitlar, argillitlar                     |
|                              | $O_1$                     | Quyi bo'lim. Qumtoshlar                                     |
|                              | $O_0$                     | Kembriy sisitemasi. Yuqori bo'lim. Gill-qumtoshli slaneslar |
| YUQORI PALEOZOY INTRUZIVLARI | $\gamma\pi C_1 s^+$       | Daykalar chegarasidagi mikrogranitlar                       |
|                              | $\gamma\pi C_1 s^x$       | Vertikal daykalardagi granodioritlar                        |
|                              | $\gamma C_1 v^+$          | Markaziy intruzivlardagi granitlar                          |
|                              | $\gamma \xi C_1 t^Y$      | Tik daykalardagi siyenitlar                                 |
|                              | $\gamma v D_3$            | Nishab daykalardagi diabazlar                               |
|                              | $\lambda \xi D_2 \lambda$ | Halqasimon daykalardagi nefelinli siyenitlar                |
|                              |                           | Geologik chegaralar   |

# O'QUV GEOLOGIK XARITA

Mashtab 1:10000

26-varaq

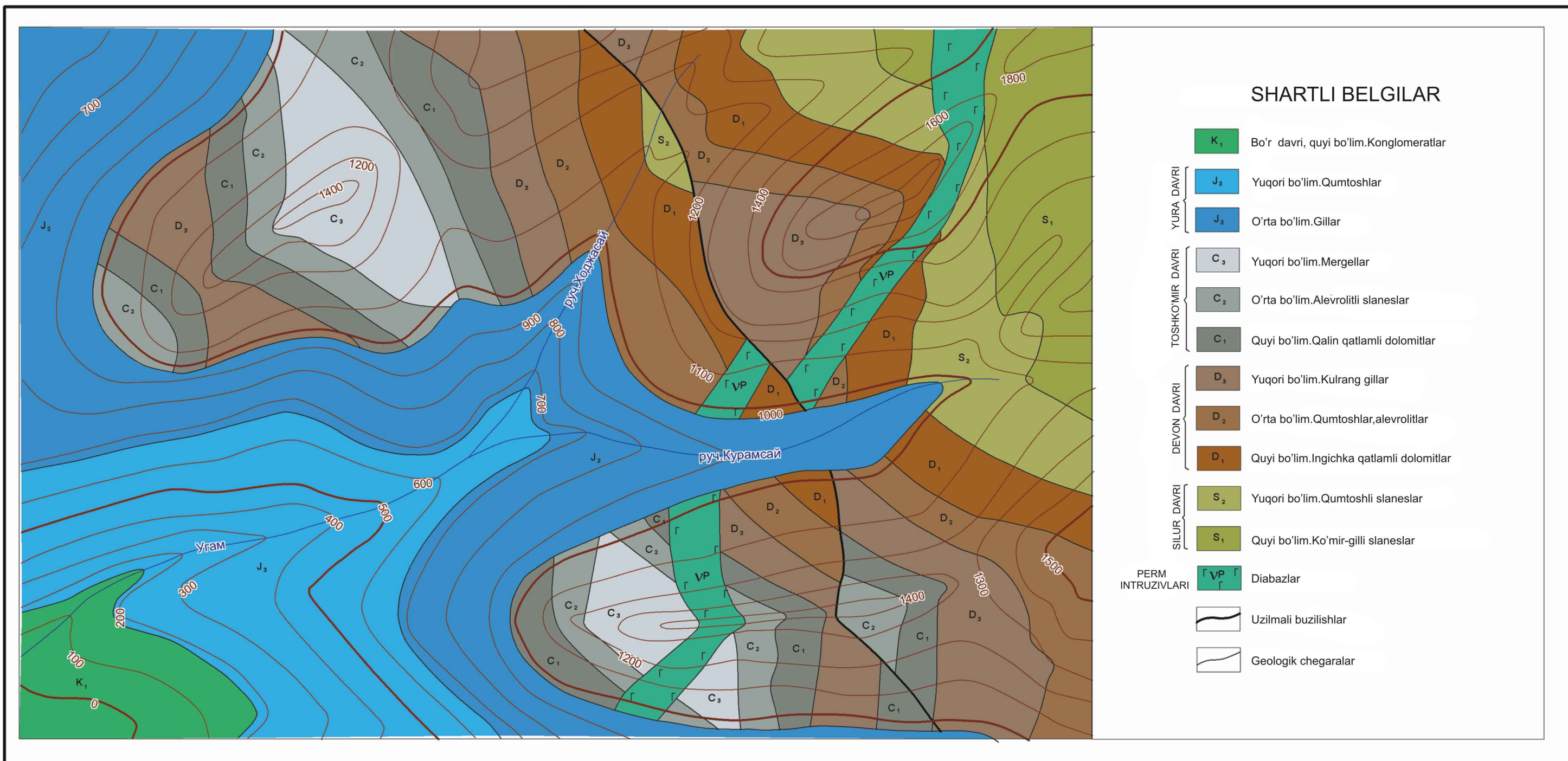


## SHARTLI BELGILAR















- |                         |                 |  |
|-------------------------|-----------------|--|
| PALEOGEN DAVRI          | $P_3$           | Oligotsen.Gillar, mergellar                      |
|                         | $P_2$           | Eotsen.Gil qatlamchali qumtoshlar                |
|                         | $P_1$           | Paleotsen.Qizilrangli konglomeratlar,gravelitlar |
| BOR DAVRI               | $K_{2t}$        | Turon yarusi.Konglomeratlar, qumtoshlar          |
|                         | $K_1$           | Quyi bo'lim.Qumtosh qatlamchali gillar           |
| YURA DAVRI              | $J_3$           | Yuqori bo'lim.Dolomitlar                         |
|                         | $J_2$           | O'rta bo'lim.Kremniyli ohaktoshlar               |
|                         | $J_1$           | Quyi bo'lim.Organogen ohaktoshlar                |
| TRIAS DAVRI             | $T_3$           | Yuqori bo'lim.Mergellar                          |
|                         | $T_2$           | O'rta bo'lim.Gillar, alevrolitlar                |
|                         | $T_1$           | Quyi bo'lim.Qumtoshlar                           |
| PALEOTSEN INTRUZIVLARI  | $\gamma ON_2^x$ | Granodiorit-porfir                               |
|                         | $\gamma ON_1^x$ | Kvartsli dioritlar                               |
| YUQORI BOR INTRUZIVLARI | $\gamma K_2^y$  | Siyenitlar                                       |
|                         | $\gamma K_2^t$  | Diabazlar  |
|                         | $\gamma K_2^+$  | Granitlar  |
|                         |                 | Uzilmali buzilishlar                             |
|                         |                 | Geologik chegaralar                              |

# O'QUV GEOLOGIK XARITA

Mashtab 1:10 000



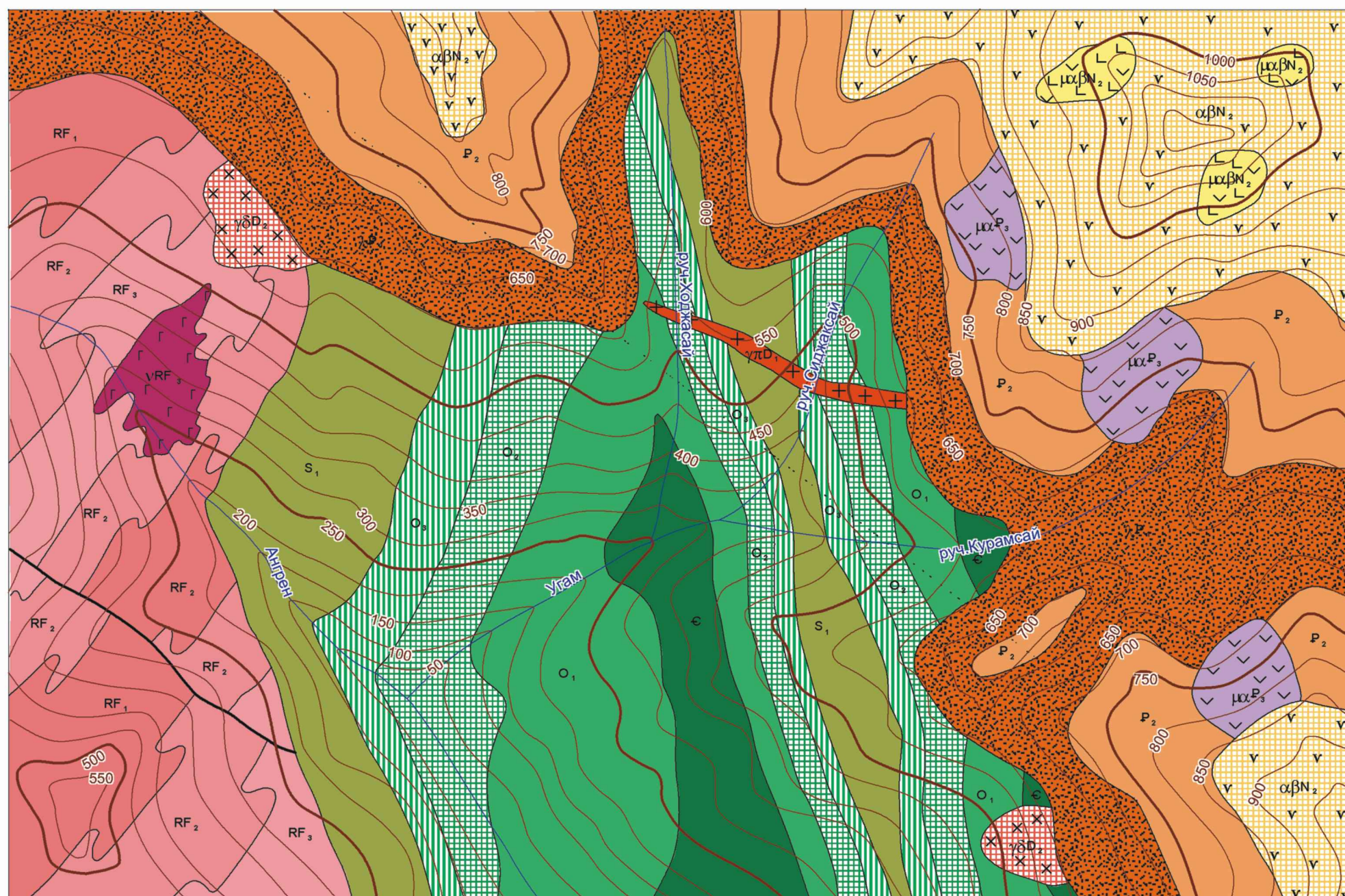
## SHARTLI BELGILAR

- |                   |   |   |
|-------------------|---|---|
|                   |    | K <sub>1</sub> Bo'r davri, quyi bo'lim.Konglomeratlar   |
| YURA DAVRI        |    | J <sub>3</sub> Yuqori bo'lim.Qumtoshlar                 |
|                   |    | J <sub>2</sub> O'rta bo'lim.Gillar                      |
| TOSHKO'MIR DAVRI  |    | C <sub>3</sub> Yuqori bo'lim.Mergellar                  |
|                   |    | C <sub>2</sub> O'rta bo'lim.Alevrolitti slaneslar       |
|                   |  | C <sub>1</sub> Quyi bo'lim.Qalin qatlamli dolomitlar    |
| DEVON DAVRI       |  | D <sub>3</sub> Yuqori bo'lim.Kulrang gillar             |
|                   |  | D <sub>2</sub> O'rta bo'lim.Qumtoshlar,alevrolitlar     |
|                   |  | D <sub>1</sub> Quyi bo'lim.Ingichka qatlamli dolomitlar |
| SILUR DAVRI       |  | S <sub>2</sub> Yuqori bo'lim.Qumtoshli slaneslar        |
|                   |  | S <sub>1</sub> Quyi bo'lim.Ko'mir-gilli slaneslar       |
| PERM INTRUZIVLARI |  | Diabazlar   |
|                   |  | Uzilmali buzilishlar                                    |
|                   |  | Geologik chegaralar                                     |



# O'QUV GEOLOGIK XARITA

Mashtab 1:10 000



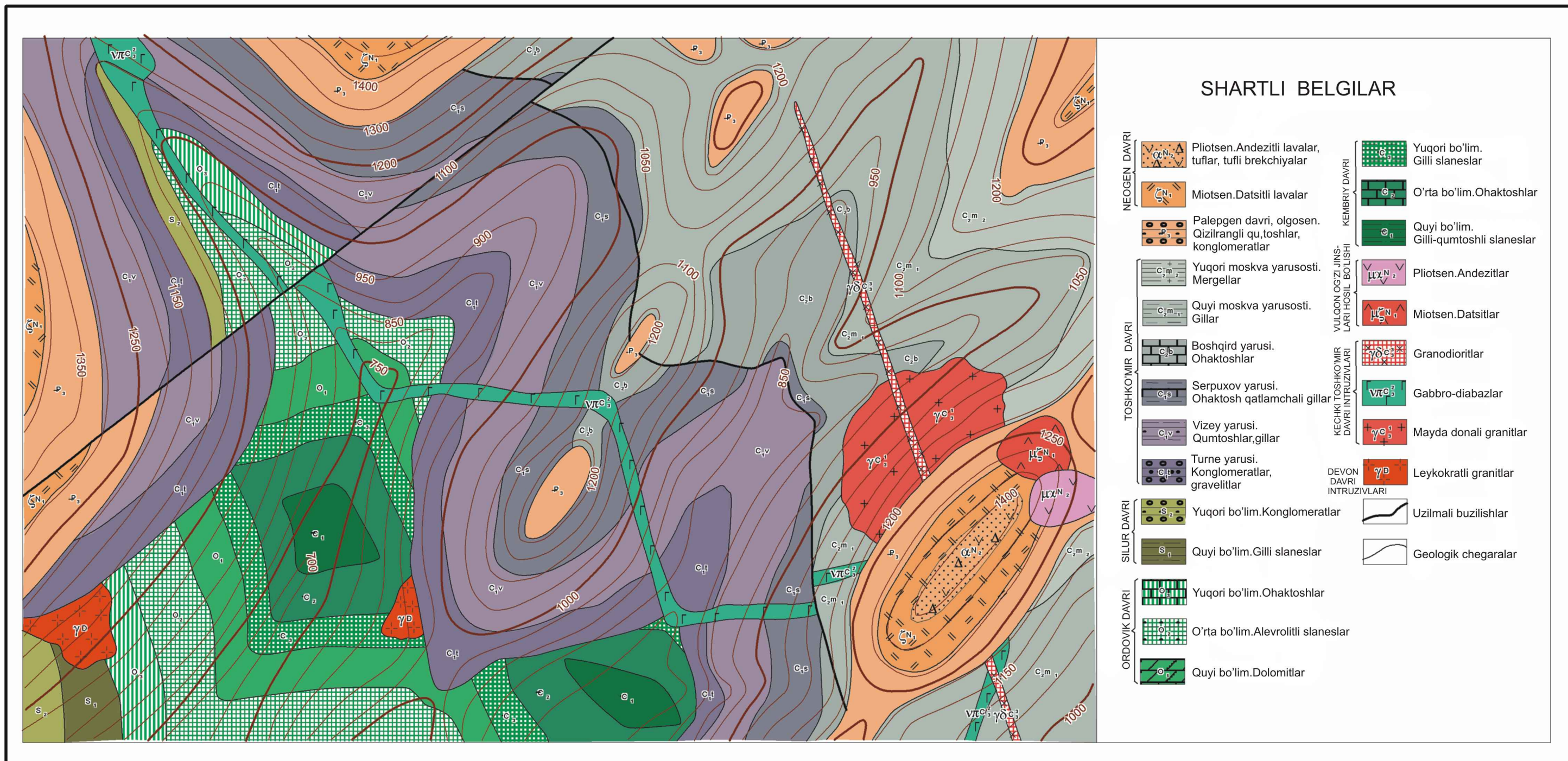
## SHARTLI BELGILAR

- |  |  |
|--|--|
|  | Pliotsen. Andezit-bazal'tli lavalar                              |
|  | Eotsen. Alevrolitlar, qumtoshlar                                 |
|  | Paleotsen. Liparitli tufflar                                     |
|  | Silur davri. Quyi bo'lim. Qatqatlangan qumtoshlar va argillitlar |
|  | ORDOVIK DAVRI<br>Yuqori bo'lim. Organogen ohaktoshlar            |
|  | Quyi bo'lim. Gil qatlamchali ohaktoshlar                         |
|  | Quyi bo'lim. Qalin qatlamli dolomitlar                           |
|  | Kembriy davri. Ohaktosh qatlamchali kremniyli jinslar            |
|  | Yuqori rifey. Biotitli slaneslar                                 |
|  | O'rta rifey. Gneyslar va amfibolitlar                            |
|  | Quyi rifey. Marmarlar  |
|  | Pliotsen. Andezitli bazal'tlar                                   |
|  | Oligotsen. Andezitlar  |
|  | DEVON DAVRI INTRUZIVLARI   |
|  | Granodioritlar   |
|  | Granit-porfirlar   |
|  | KECHKI RIFEY INTRUZIVLARI  |
|  | Gabbro-noritlar  |
|  | Uzilmali buzilishlar   |
|  | Geologik chegaralar  |

VULQON OG'ZI JINSLARINING HOSIL BO'LISHI

# O'QUV GEOLOGIK XARITA

Mashtab 1:5000

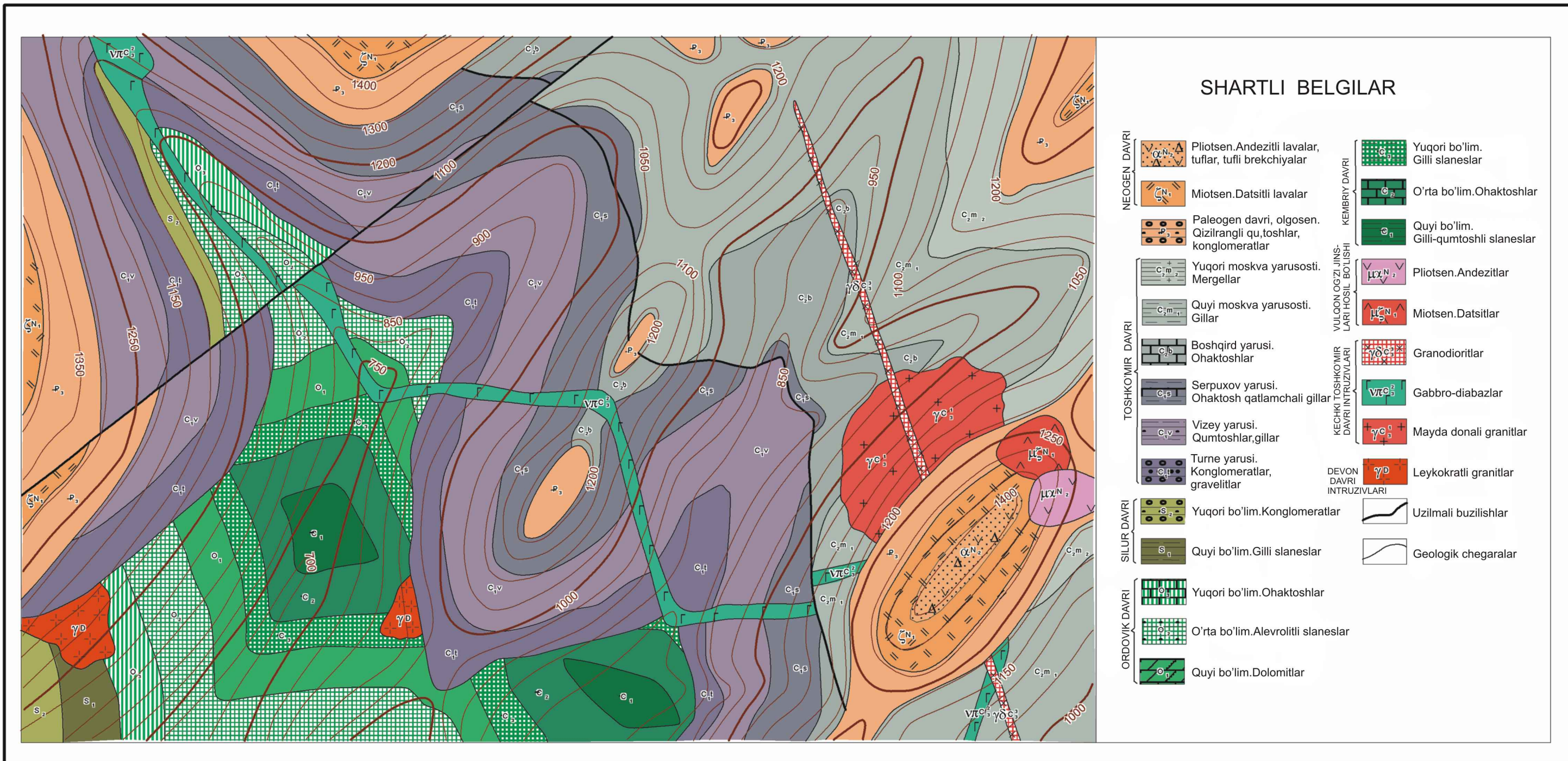


## SHARTLI BELGILAR

- |                        |   |  |
|------------------------|---|--|
| <b>NEOGEN DAVRI</b>    | Pliotsen. Andezitli lavalar, tufar, tufi brekchiyalar             | Yuqori bo'lim. Gilli slaneslar         |
|                        | Miotsen. Datsitli lavalar   | O'rt bo'lim. Ohaktoshlar               |
|                        | Paleogen davri, oligosen. Qizilrangli qu, toshlar, konglomeratlar | Quyi bo'lim. Gilli-qumtoshli slaneslar |
|                        | Yuqori moskva yarusosti. Mergellar                                | Pliotsen. Andezitlar                   |
|                        | Quyi moskva yarusosti. Gillar                                     | Miotsen. Datsitlar                     |
| <b>TOSHKOMIR DAVRI</b> | Boshqird yarusi. Ohaktoshlar                                      | Granodioritlar                         |
|                        | Serpuxov yarusi. Ohaktosh qattamchali gillar                      | Gabbro-diabazlar                       |
|                        | Vizey yarusi. Qumtoshlar, gillar                                  | Mayda donali granitlar                 |
|                        | Turne yarusi. Konglomeratlar, gravelitlar                         | Leykokratli granitlar                  |
| <b>SILUR DAVRI</b>     | Yuqori bo'lim. Konglomeratlar                                     | Uzilmali buzilishlar                   |
|                        | Quyi bo'lim. Gilli slaneslar                                      | Geologik chegaralar                    |
| <b>ORDOVIK DAVRI</b>   | Yuqori bo'lim. Ohaktoshlar  |  |
|                        | O'rt bo'lim. Alevrolitli slaneslar                                |  |
|                        | Quyi bo'lim. Dolomitlar   |  |

# O'QUV GEOLOGIK XARITA

Mashtab 1:5000

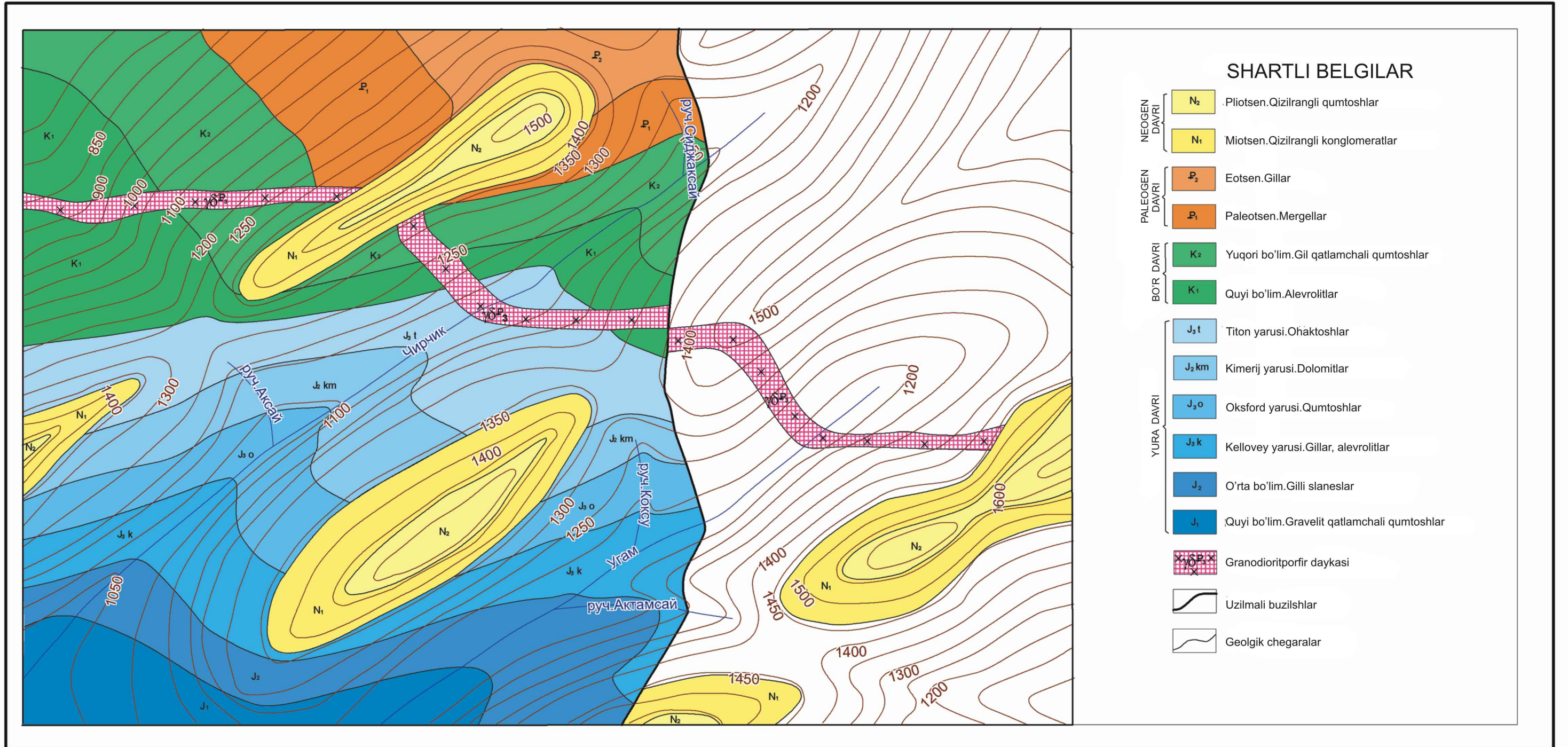


## SHARTLI BELGILAR

- |                 |   |  |
|-----------------|---|--|
| NEOGEN DAVRI    | Pliotsen. Andezitli lavalar, tuf, tufi brekchiyalar               | Yuqori bo'lim. Gilli slaneslar         |
|                 | Miotsen. Datsitli lavalar   | O'rta bo'lim. Ohaktoshlar              |
|                 | Paleogen davri, oligosen. Qizilrangli qu, toshlar, konglomeratlar | Quyi bo'lim. Gilli-qumtoshli slaneslar |
|                 | Yuqori moskva yarusosti. Mergellar                                | Pliotsen. Andezitlar                   |
|                 | Quyi moskva yarusosti. Gillar                                     | Miotsen. Datsitlar                     |
| TOSHKOMIR DAVRI | Boshqird yarusi. Ohaktoshlar                                      | Granodioritlar                         |
|                 | Serpuxov yarusi. Ohaktosh qattamchali gillar                      | Gabbro-diabazlar                       |
|                 | Vizey yarusi. Qumtoshlar, gillar                                  | Mayda donali granitlar                 |
|                 | Turne yarusi. Konglomeratlar, gravelitlar                         | Leykokratli granitlar                  |
| SILUR DAVRI     | Yuqori bo'lim. Konglomeratlar                                     | Uzilmali buzilishlar                   |
|                 | Quyi bo'lim. Gilli slaneslar                                      | Geologik chegaralar                    |
| ORDOVIK DAVRI   | Yuqori bo'lim. Ohaktoshlar  |  |
|                 | O'rta bo'lim. Alevrolitli slaneslar                               |  |
|                 | Quyi bo'lim. Dolomitlar   |  |

# O'QUV GEOLOGIK XARITA

Mashtab 1:10000



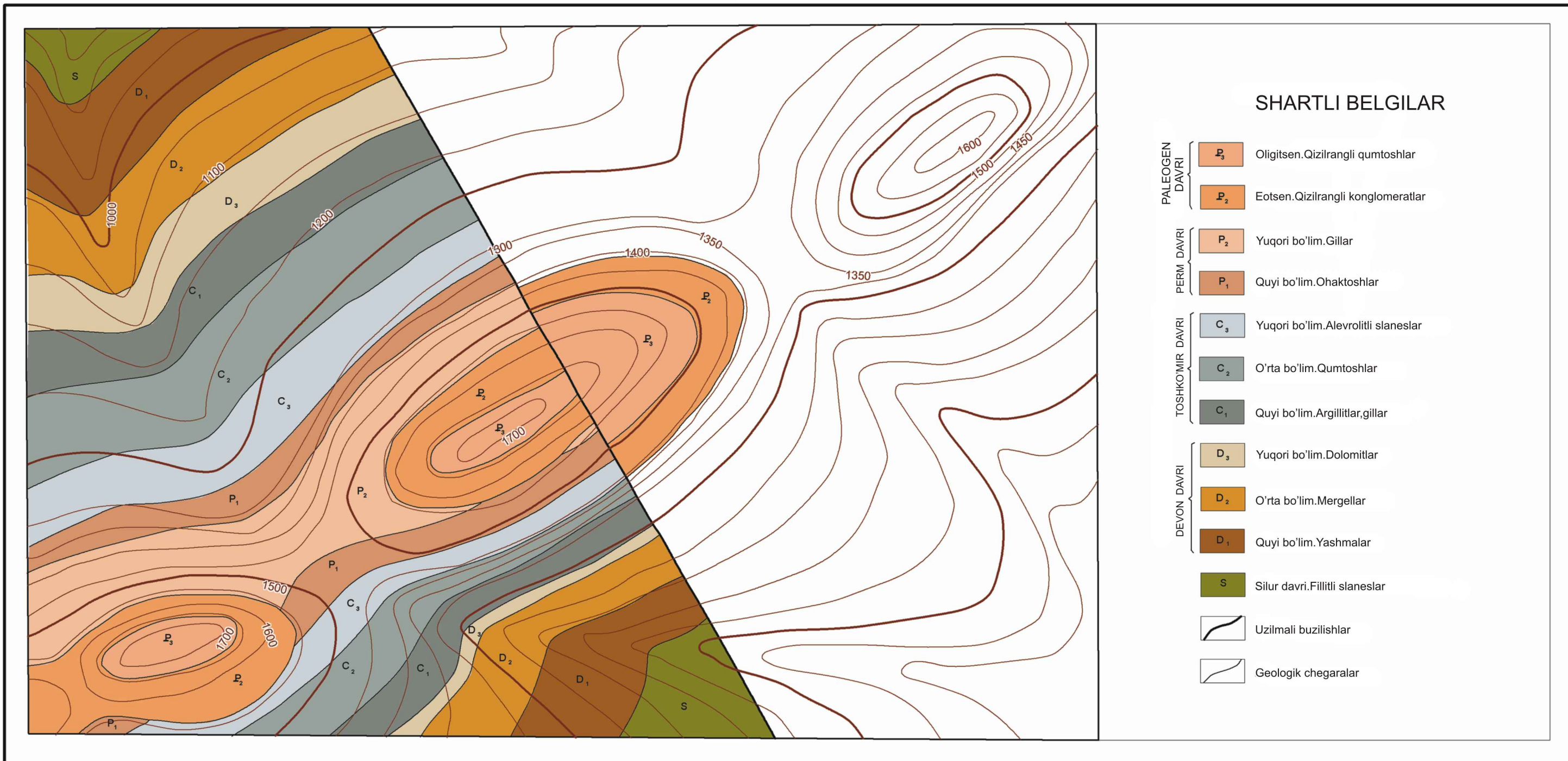
## SHARTLI BELGILAR

- |                    |  |
|--------------------|--|
| NEOGEN DAVRI       | <span style="background-color: #ffff00; border: 1px solid black; padding: 2px;">N<sub>2</sub></span> Plotsen.Qizilrangli qumtoshlar              |
|                    | <span style="background-color: #ffff00; border: 1px solid black; padding: 2px;">N<sub>1</sub></span> Miotsen.Qizilrangli konglomeratlar          |
| PALEOGEN DAVRI     | <span style="background-color: #ff8c00; border: 1px solid black; padding: 2px;">P<sub>2</sub></span> Eotsen.Gillar                               |
|                    | <span style="background-color: #ff8c00; border: 1px solid black; padding: 2px;">P<sub>1</sub></span> Paleotsen.Mergellar                         |
| BO'R DAVRI         | <span style="background-color: #008000; border: 1px solid black; padding: 2px;">K<sub>2</sub></span> Yuqori bo'lim.Gil qatlamchali qumtoshlar    |
|                    | <span style="background-color: #008000; border: 1px solid black; padding: 2px;">K<sub>1</sub></span> Quyi bo'lim.Alevrolitlar                    |
| YURA DAVRI         | <span style="background-color: #add8e6; border: 1px solid black; padding: 2px;">J<sub>3t</sub></span> Titon yarusi.Ohaktoshlar                   |
|                    | <span style="background-color: #add8e6; border: 1px solid black; padding: 2px;">J<sub>2km</sub></span> Kimerij yarusi.Dolomitlar                 |
|                    | <span style="background-color: #add8e6; border: 1px solid black; padding: 2px;">J<sub>3o</sub></span> Oksford yarusi.Qumtoshlar                  |
|                    | <span style="background-color: #add8e6; border: 1px solid black; padding: 2px;">J<sub>3k</sub></span> Kellovey yarusi.Gillar, alevrolitlar       |
|                    | <span style="background-color: #0000ff; border: 1px solid black; padding: 2px;">J<sub>2</sub></span> O'rtab bo'lim.Gilli slaneslar               |
|                    | <span style="background-color: #0000ff; border: 1px solid black; padding: 2px;">J<sub>1</sub></span> Quyi bo'lim.Gravelit qatlamchali qumtoshlar |
|                    | <span style="background-color: #ff00ff; border: 1px solid black; padding: 2px;">SP</span> Granodioritporfir daykasi                              |
|                    | Uzilmali buzilishlar   |
| Geolgik chegaralar |  |

# O'QUV GEOLOGIK XARITA

Mashtab 1:5000

31-varaq



# O'QUV GEOLOGIK XARITA

Mashtab 1:5000

32-varaq

