Задание 5. Расчленение и корреляция разрезов с использованием циклограмм.

Циклограммы используются для расчленения мощных флишевых толщ, в которых повторяются многие тысячи маломощных слоев немногочисленных литогенетических типов. Построение циклограмм сводится к выделению в разрезе циклитов и затем к изображению каждого циклита со всеми его компонентами в виде горизонтального отрезка. Циклограммы помогают более объективно выделять пачки, характеризующиеся определенным типом ритмичности, дают наглядное представление о динамике изменений мощности циклитов и соотношении отдельных компонентов внутри них, а также выявлять цикличность более высокого порядка. Путем сопоставления циклограмм проводится корреляция разрезов. Особое значение при этом имеет прослеживание маркирующих, обладающих хорошей выдержанностью маркирующих слоев.

**Исходный материал.** Два разреза терригенного флиша, расчленённых на циклиты.

**Порядок выполнения.** Студент получает фактический материал к двум разрезам в табличной форме. В разрезах уже выделены циклиты первого порядка (нижняя строка в каждой таблице отвечает самому древнему циклиту) и указаны мощности отдельных компонентов в сантиметрах. Студент должен рассчитать масштаб (рекомендуется уменьшить мощности в десять раз) и построить по традиционной методике циклограмму для каждого разреза, изобразив каждый циклит со всеми его компонентами в виде горизонтального отрезка. Соединение отрезками значений мощностей отдельных компонентов циклита позволит получить наглядные графики - циклограммы. Затем студент должен выделить в каждой циклограмме циклиты второго порядка (обозначив их слева от циклограмм буквами или цифрами), границы между которыми проводятся с использованием простой интерполяции – посередине между циклитами. Циклиты второго порядка используются для корреляции двух циклограмм. При корреляции одинаковые интервалы показывается одинаковыми буквами или цифрами.

Варианты заданий приведены ниже.

|  |  |  |  |
| --- | --- | --- | --- |
| Разрез 1 | | | |
| Гравелит | Песчаник | Алевролит | Аргиллит |
| 3 | 15 | 3 | 16 |
| 4 | 17 | 4 | 20 |
| 3 | 14 | 5 | 19 |
| 4 | 19 | 3 | 15 |
| 5 | 20 | 4 | 16 |
| 3 | 14 | 3 | 19 |
|  | 15 | 3 | 71 |
|  | 16 | 4 | 72 |
|  | 15 | 5 | 64 |
|  | 17 | 6 | 68 |
|  | 16 | 7 | 67 |
|  | 11 | 10 | 20 |
|  | 10 | 9 | 23 |
|  | 12 | 8 | 25 |
|  | 11 | 7 | 24 |
|  | 14 | 12 | 20 |
|  | 14 | 14 | 23 |
|  | 12 | 11 | 19 |
|  | 13 | 13 | 24 |
|  | 14 | 12 | 18 |
|  | 10 | 10 | 25 |
|  | 12 | 12 | 24 |
|  | 11 | 11 | 18 |
|  | 13 | 12 | 23 |
|  | 15 | 3 | 75 |
|  | 20 | 3 | 70 |
|  | 21 | 5 | 68 |
|  | 21 | 3 | 69 |
|  | 20 | 4 | 65 |
| 2 | 16 | 3 | 17 |
| 3 | 13 | 4 | 21 |
| 4 | 18 | 4 | 15 |
| 4 | 14 | 4 | 17 |
|  | 14 | 4 | 65 |
|  | 15 | 4 | 73 |
|  | 16 | 4 | 66 |
|  | 14 | 5 | 68 |
|  | 11 | 10 | 24 |
|  | 10 | 11 | 23 |
|  | 13 | 12 | 25 |
|  | 14 | 12 | 23 |
|  | 14 | 14 | 23 |
|  | 12 | 10 | 21 |
|  | 12 | 12 | 73 |
|  | 13 | 11 | 21 |
|  | 10 | 10 | 21 |
|  | 13 | 4 | 76 |
|  | 13 | 3 | 72 |
|  | 12 | 4 | 65 |
| Разрез 2 | | | |
| Гравелит | Песчаник | Алевролит | Аргиллит |
| 4 | 17 | 4 | 19 |
| 4 | 15 | 4 | 16 |
| 3 | 18 | 3 | 17 |
|  | 16 | 4 | 72 |
|  | 14 | 3 | 70 |
|  | 13 | 5 | 73 |
|  | 12 | 5 | 74 |
|  | 11 | 11 | 21 |
|  | 12 | 9 | 24 |
|  | 13 | 12 | 20 |
|  | 12 | 12 | 23 |
|  | 11 | 10 | 75 |
|  | 11 | 11 | 23 |
|  | 12 | 11 | 23 |
|  | 13 | 12 | 20 |
|  | 13 | 4 | 70 |
|  | 13 | 4 | 63 |
|  | 12 | 4 | 72 |
|  | 14 | 5 | 76 |
|  | 12 | 11 | 65 |

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| Разрез 3 | | | |
| Гравелит | Песчаник | Алевролит | Аргиллит |
|  | 20 | 4 | 72 |
|  | 21 | 4 | 72 |
|  | 19 | 5 | 64 |
|  | 22 | 6 | 68 |
|  | 23 | 7 | 67 |
|  | 10 | 10 | 20 |
|  | 10 | 9 | 23 |
|  | 12 | 8 | 26 |
|  | 11 | 7 | 24 |
|  | 14 | 12 | 20 |
|  | 14 | 14 | 23 |
|  | 12 | 11 | 19 |
|  | 14 | 13 | 25 |
|  | 14 | 12 | 18 |
|  | 10 | 10 | 25 |
|  | 12 | 12 | 24 |
|  | 10 | 11 | 18 |
|  | 13 | 12 | 23 |
|  | 15 | 3 | 75 |
|  | 20 | 3 | 70 |
|  | 21 | 7 | 68 |
|  | 21 | 3 | 69 |
|  | 20 | 4 | 65 |
| 4 | 17 | 3 | 15 |
| 3 | 17 | 4 | 20 |
| 4 | 14 | 5 | 19 |
| 3 | 19 | 3 | 15 |
| 4 | 20 | 4 | 16 |
| 4 | 14 | 3 | 19 |
|  | 14 | 4 | 65 |
|  | 15 | 4 | 73 |
|  | 16 | 4 | 66 |
|  | 14 | 5 | 68 |
|  | 12 | 10 | 24 |
|  | 10 | 11 | 23 |
|  | 13 | 12 | 25 |
|  | 14 | 12 | 23 |
|  | 14 | 14 | 23 |
|  | 12 | 10 | 21 |
|  | 13 | 12 | 72 |
|  | 13 | 11 | 21 |
|  | 10 | 10 | 21 |
|  | 13 | 4 | 76 |
|  | 12 | 3 | 72 |
|  | 12 | 4 | 66 |
| 3 | 16 | 3 | 17 |
| 4 | 13 | 4 | 21 |
| 3 | 18 | 3 | 15 |
| 3 | 14 | 4 | 17 |
| Разрез 4 | | | |
| Гравелит | Песчаник | Алевролит | Аргиллит |
|  | 23 | 4 | 73 |
|  | 24 | 3 | 70 |
|  | 23 | 5 | 73 |
|  | 20 | 5 | 74 |
|  | 11 | 11 | 21 |
|  | 12 | 9 | 24 |
|  | 13 | 12 | 20 |
|  | 12 | 13 | 23 |
|  | 11 | 10 | 75 |
|  | 11 | 11 | 23 |
|  | 12 | 11 | 24 |
|  | 13 | 12 | 20 |
|  | 13 | 4 | 70 |
|  | 13 | 4 | 63 |
|  | 12 | 4 | 72 |
|  | 13 | 5 | 76 |
|  | 12 | 11 | 65 |
| 3 | 17 | 4 | 19 |
| 5 | 15 | 4 | 17 |
| 3 | 17 | 3 | 17 |

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| Разрез 5 | | | |
| Гравелит | Песчаник | Алевролит | Аргиллит |
|  | 15 | 3 | 71 |
|  | 16 | 4 | 72 |
|  | 15 | 5 | 64 |
|  | 17 | 6 | 68 |
|  | 16 | 7 | 67 |
| 3 | 15 | 3 | 16 |
| 4 | 17 | 4 | 20 |
| 3 | 14 | 5 | 19 |
| 4 | 19 | 3 | 15 |
| 5 | 20 | 4 | 16 |
| 3 | 14 | 3 | 19 |
|  | 11 | 10 | 20 |
|  | 10 | 9 | 23 |
|  | 12 | 8 | 25 |
|  | 11 | 7 | 24 |
|  | 14 | 12 | 20 |
|  | 14 | 14 | 23 |
|  | 12 | 11 | 19 |
|  | 13 | 13 | 24 |
|  | 14 | 12 | 18 |
|  | 10 | 10 | 25 |
|  | 12 | 12 | 24 |
|  | 11 | 11 | 18 |
|  | 13 | 12 | 23 |
|  | 15 | 3 | 75 |
|  | 20 | 3 | 70 |
|  | 21 | 5 | 68 |
|  | 21 | 3 | 69 |
|  | 20 | 4 | 65 |
|  | 14 | 4 | 65 |
|  | 15 | 4 | 73 |
|  | 16 | 4 | 66 |
|  | 14 | 5 | 68 |
| 2 | 16 | 3 | 17 |
| 3 | 13 | 4 | 21 |
| 4 | 18 | 4 | 15 |
| 4 | 14 | 4 | 17 |
|  | 11 | 10 | 24 |
|  | 10 | 11 | 23 |
|  | 13 | 12 | 25 |
|  | 14 | 12 | 23 |
|  | 14 | 14 | 23 |
|  | 12 | 10 | 21 |
|  | 12 | 12 | 73 |
|  | 13 | 11 | 21 |
|  | 10 | 10 | 21 |
|  | 13 | 4 | 76 |
|  | 13 | 3 | 72 |
|  | 12 | 4 | 65 |
| Разрез 6 | | | |
| Гравелит | Песчаник | Алевролит | Аргиллит |
|  | 16 | 4 | 72 |
|  | 14 | 3 | 70 |
|  | 13 | 5 | 73 |
|  | 12 | 5 | 74 |
| 4 | 17 | 4 | 19 |
| 4 | 15 | 4 | 16 |
| 3 | 18 | 3 | 17 |
|  | 11 | 11 | 21 |
|  | 12 | 9 | 24 |
|  | 13 | 12 | 20 |
|  | 12 | 12 | 23 |
|  | 11 | 10 | 75 |
|  | 11 | 11 | 23 |
|  | 12 | 11 | 23 |
|  | 13 | 12 | 20 |
|  | 13 | 4 | 70 |
|  | 13 | 4 | 63 |
|  | 12 | 4 | 72 |
|  | 14 | 5 | 76 |
|  | 12 | 11 | 65 |

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| Разрез 7 | | | |
| Гравелит | Песчаник | Алевролит | Аргиллит |
| 23 | 14 | 2 | 15 |
| 24 | 16 | 3 | 20 |
| 23 | 13 | 4 | 19 |
| 24 | 18 | 2 | 15 |
| 25 | 20 | 3 | 16 |
| 23 | 13 | 2 | 19 |
|  | 15 | 3 | 71 |
|  | 16 | 4 | 72 |
|  | 15 | 5 | 64 |
|  | 17 | 6 | 68 |
|  | 16 | 7 | 67 |
|  | 12 | 10 | 20 |
|  | 10 | 9 | 23 |
|  | 12 | 8 | 25 |
|  | 11 | 7 | 24 |
|  | 14 | 12 | 20 |
|  | 14 | 14 | 23 |
|  | 11 | 11 | 19 |
|  | 13 | 13 | 24 |
|  | 14 | 12 | 18 |
|  | 10 | 10 | 25 |
|  | 11 | 13 | 24 |
|  | 11 | 11 | 18 |
|  | 13 | 12 | 23 |
|  | 14 | 3 | 75 |
|  | 20 | 3 | 70 |
|  | 21 | 5 | 68 |
|  | 21 | 3 | 69 |
|  | 20 | 4 | 65 |
| 22 | 16 | 3 | 17 |
| 23 | 13 | 4 | 21 |
| 24 | 18 | 4 | 15 |
| 24 | 14 | 4 | 17 |
|  | 14 | 4 | 65 |
|  | 15 | 4 | 73 |
|  | 15 | 4 | 66 |
|  | 14 | 5 | 69 |
|  | 11 | 10 | 24 |
|  | 10 | 11 | 23 |
|  | 13 | 12 | 25 |
|  | 13 | 12 | 23 |
|  | 14 | 14 | 23 |
|  | 11 | 10 | 21 |
|  | 12 | 12 | 73 |
|  | 13 | 11 | 21 |
|  | 10 | 10 | 21 |
|  | 13 | 4 | 76 |
|  | 13 | 3 | 72 |
|  | 12 | 4 | 65 |
| Разрез 8 | | | |
| Гравелит | Песчаник | Алевролит | Аргиллит |
| 24 | 17 | 4 | 19 |
| 24 | 15 | 4 | 16 |
| 23 | 18 | 3 | 17 |
|  | 16 | 4 | 72 |
|  | 14 | 3 | 70 |
|  | 13 | 5 | 73 |
|  | 12 | 5 | 74 |
|  | 11 | 11 | 21 |
|  | 12 | 9 | 24 |
|  | 13 | 12 | 20 |
|  | 12 | 12 | 23 |
|  | 11 | 10 | 75 |
|  | 11 | 11 | 23 |
|  | 12 | 11 | 23 |
|  | 13 | 12 | 20 |
|  | 13 | 4 | 70 |
|  | 13 | 4 | 63 |
|  | 11 | 4 | 73 |
|  | 14 | 5 | 76 |
|  | 12 | 11 | 65 |

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| Разрез 9 | | | |
| Гравелит | Песчаник | Алевролит | Аргиллит |
| 33 | 12 | 2 | 15 |
| 34 | 13 | 3 | 20 |
| 35 | 13 | 4 | 19 |
| 34 | 14 | 2 | 15 |
| 35 | 12 | 3 | 16 |
| 33 | 11 | 2 | 19 |
|  | 15 | 3 | 71 |
|  | 16 | 4 | 72 |
|  | 15 | 5 | 64 |
|  | 17 | 6 | 68 |
|  | 16 | 7 | 67 |
|  | 12 | 10 | 20 |
|  | 10 | 9 | 23 |
|  | 12 | 8 | 25 |
|  | 11 | 7 | 24 |
|  | 14 | 12 | 20 |
|  | 14 | 14 | 23 |
|  | 11 | 11 | 19 |
|  | 13 | 13 | 24 |
|  | 14 | 12 | 18 |
|  | 10 | 10 | 25 |
|  | 11 | 13 | 24 |
|  | 11 | 11 | 18 |
|  | 13 | 12 | 23 |
|  | 14 | 3 | 75 |
|  | 20 | 3 | 70 |
|  | 21 | 5 | 68 |
|  | 21 | 3 | 69 |
|  | 20 | 4 | 65 |
| 32 | 12 | 3 | 17 |
| 33 | 13 | 4 | 21 |
| 34 | 14 | 4 | 15 |
| 34 | 11 | 4 | 17 |
|  | 14 | 4 | 65 |
|  | 15 | 4 | 73 |
|  | 15 | 4 | 66 |
|  | 14 | 5 | 69 |
|  | 11 | 10 | 24 |
|  | 10 | 11 | 23 |
|  | 13 | 12 | 25 |
|  | 13 | 12 | 23 |
|  | 14 | 14 | 23 |
|  | 11 | 10 | 21 |
|  | 12 | 12 | 73 |
|  | 13 | 11 | 21 |
|  | 10 | 10 | 21 |
|  | 13 | 4 | 76 |
|  | 13 | 3 | 72 |
|  | 12 | 4 | 65 |
| Разрез 10 | | | |
| Гравелит | Песчаник | Алевролит | Аргиллит |
| 34 | 13 | 4 | 19 |
| 34 | 15 | 4 | 16 |
| 33 | 12 | 3 | 17 |
|  | 16 | 4 | 72 |
|  | 14 | 3 | 70 |
|  | 13 | 5 | 73 |
|  | 12 | 5 | 74 |
|  | 11 | 11 | 21 |
|  | 12 | 9 | 24 |
|  | 13 | 12 | 20 |
|  | 12 | 12 | 23 |
|  | 11 | 10 | 75 |
|  | 11 | 11 | 23 |
|  | 12 | 11 | 23 |
|  | 13 | 13 | 20 |
|  | 13 | 4 | 70 |
|  | 13 | 4 | 63 |
|  | 11 | 4 | 73 |
|  | 14 | 6 | 76 |
|  | 11 | 11 | 65 |

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| Разрез 11 | | | |
| Гравелит | Песчаник | Алевролит | Аргиллит |
|  | 19 | 4 | 72 |
|  | 23 | 4 | 72 |
|  | 18 | 5 | 64 |
|  | 20 | 6 | 68 |
|  | 20 | 7 | 67 |
|  | 10 | 10 | 20 |
|  | 10 | 9 | 23 |
|  | 12 | 8 | 26 |
|  | 11 | 7 | 24 |
|  | 14 | 12 | 20 |
|  | 14 | 14 | 23 |
|  | 12 | 11 | 19 |
|  | 14 | 13 | 25 |
|  | 14 | 12 | 18 |
|  | 10 | 10 | 25 |
|  | 12 | 12 | 24 |
|  | 10 | 11 | 18 |
|  | 13 | 12 | 23 |
|  | 15 | 3 | 75 |
|  | 20 | 3 | 70 |
|  | 21 | 7 | 68 |
|  | 21 | 3 | 69 |
|  | 20 | 4 | 65 |
| 4 | 17 | 3 | 15 |
| 3 | 17 | 4 | 20 |
| 4 | 14 | 5 | 19 |
| 3 | 19 | 3 | 15 |
| 4 | 20 | 4 | 16 |
| 4 | 14 | 3 | 19 |
|  | 18 | 4 | 65 |
|  | 17 | 4 | 73 |
|  | 19 | 4 | 66 |
|  | 20 | 5 | 68 |
|  | 12 | 10 | 24 |
|  | 10 | 11 | 23 |
|  | 13 | 12 | 25 |
|  | 14 | 12 | 23 |
|  | 14 | 14 | 23 |
|  | 12 | 10 | 21 |
|  | 13 | 12 | 72 |
|  | 13 | 11 | 21 |
|  | 10 | 10 | 21 |
|  | 13 | 4 | 76 |
|  | 12 | 3 | 72 |
|  | 12 | 4 | 66 |
| 3 | 16 | 3 | 17 |
| 4 | 13 | 4 | 21 |
| 3 | 18 | 3 | 15 |
| 3 | 14 | 4 | 17 |
| Разрез 12 | | | |
| Гравелит | Песчаник | Алевролит | Аргиллит |
|  | 20 | 4 | 73 |
|  | 20 | 3 | 70 |
|  | 20 | 5 | 73 |
|  | 19 | 5 | 74 |
|  | 11 | 11 | 21 |
|  | 12 | 9 | 24 |
|  | 13 | 12 | 20 |
|  | 12 | 13 | 23 |
|  | 11 | 10 | 75 |
|  | 11 | 11 | 23 |
|  | 12 | 11 | 24 |
|  | 13 | 12 | 20 |
|  | 13 | 4 | 70 |
|  | 13 | 4 | 63 |
|  | 12 | 4 | 72 |
|  | 13 | 5 | 76 |
|  | 12 | 11 | 65 |
| 3 | 17 | 4 | 19 |
| 5 | 15 | 4 | 17 |
| 3 | 17 | 3 | 17 |

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| Разрез 13 | | | |
| Гравелит | Песчаник | Алевролит | Аргиллит |
|  | 20 | 4 | 72 |
|  | 21 | 4 | 72 |
|  | 19 | 5 | 64 |
|  | 22 | 6 | 68 |
|  | 23 | 7 | 67 |
|  | 10 | 10 | 20 |
|  | 10 | 9 | 23 |
|  | 12 | 8 | 26 |
|  | 11 | 7 | 24 |
|  | 14 | 12 | 20 |
|  | 14 | 14 | 23 |
|  | 12 | 11 | 19 |
|  | 14 | 13 | 25 |
|  | 14 | 12 | 18 |
|  | 10 | 10 | 25 |
|  | 12 | 12 | 24 |
|  | 10 | 11 | 18 |
|  | 13 | 12 | 23 |
|  | 15 | 3 | 75 |
|  | 20 | 3 | 70 |
|  | 21 | 7 | 68 |
|  | 21 | 3 | 69 |
|  | 20 | 4 | 65 |
| 4 | 17 | 3 | 15 |
| 3 | 17 | 4 | 20 |
| 4 | 14 | 5 | 19 |
| 3 | 19 | 3 | 15 |
| 4 | 20 | 4 | 16 |
| 4 | 14 | 3 | 19 |
|  | 14 | 4 | 65 |
|  | 15 | 4 | 73 |
|  | 16 | 4 | 66 |
|  | 14 | 5 | 68 |
|  | 12 | 10 | 24 |
|  | 10 | 11 | 23 |
|  | 13 | 12 | 25 |
|  | 14 | 12 | 23 |
|  | 14 | 14 | 23 |
|  | 12 | 10 | 21 |
|  | 13 | 12 | 72 |
|  | 13 | 11 | 21 |
|  | 10 | 10 | 21 |
|  | 13 | 4 | 76 |
|  | 12 | 3 | 72 |
|  | 12 | 4 | 66 |
| 3 | 16 | 3 | 17 |
| 4 | 13 | 4 | 21 |
| 3 | 18 | 3 | 15 |
| 3 | 14 | 4 | 17 |
| Разрез 14 | | | |
| Гравелит | Песчаник | Алевролит | Аргиллит |
|  | 23 | 4 | 73 |
|  | 24 | 3 | 70 |
|  | 23 | 5 | 73 |
|  | 20 | 5 | 74 |
|  | 11 | 11 | 21 |
|  | 12 | 9 | 24 |
|  | 13 | 12 | 20 |
|  | 12 | 13 | 23 |
|  | 11 | 10 | 75 |
|  | 11 | 11 | 23 |
|  | 12 | 11 | 24 |
|  | 13 | 12 | 20 |
|  | 13 | 4 | 70 |
|  | 13 | 4 | 63 |
|  | 12 | 4 | 72 |
|  | 13 | 5 | 76 |
|  | 12 | 11 | 65 |
| 3 | 17 | 4 | 19 |
| 5 | 15 | 4 | 17 |
| 3 | 17 | 3 | 17 |

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| Разрез 15 | | | |
| Гравелит | Песчаник | Алевролит | Аргиллит |
|  | 21 | 4 | 72 |
|  | 20 | 4 | 72 |
|  | 18 | 5 | 64 |
|  | 23 | 6 | 68 |
|  | 23 | 7 | 67 |
|  | 11 | 10 | 20 |
|  | 10 | 9 | 23 |
|  | 12 | 8 | 26 |
|  | 11 | 7 | 24 |
|  | 14 | 12 | 20 |
|  | 14 | 14 | 23 |
|  | 12 | 11 | 19 |
|  | 14 | 13 | 25 |
|  | 14 | 12 | 18 |
|  | 10 | 10 | 25 |
|  | 12 | 12 | 24 |
|  | 10 | 11 | 18 |
|  | 13 | 12 | 23 |
|  | 15 | 3 | 75 |
|  | 20 | 3 | 70 |
|  | 21 | 7 | 68 |
|  | 21 | 3 | 69 |
|  | 20 | 4 | 65 |
| 6 | 17 | 3 | 15 |
| 8 | 17 | 4 | 20 |
| 5 | 14 | 5 | 19 |
| 8 | 19 | 4 | 15 |
| 9 | 20 | 4 | 16 |
| 8 | 14 | 3 | 19 |
|  | 14 | 4 | 65 |
|  | 15 | 4 | 73 |
|  | 17 | 5 | 66 |
|  | 14 | 5 | 68 |
|  | 12 | 10 | 24 |
|  | 10 | 11 | 23 |
|  | 14 | 12 | 25 |
|  | 14 | 12 | 22 |
|  | 15 | 14 | 22 |
|  | 12 | 10 | 21 |
|  | 13 | 12 | 70 |
|  | 13 | 11 | 21 |
|  | 10 | 10 | 21 |
|  | 12 | 4 | 76 |
|  | 12 | 3 | 72 |
|  | 12 | 4 | 66 |
| 10 | 16 | 3 | 17 |
| 7 | 13 | 4 | 21 |
| 8 | 18 | 3 | 15 |
| 7 | 14 | 4 | 17 |
| Разрез 16 | | | |
| Гравелит | Песчаник | Алевролит | Аргиллит |
|  | 23 | 4 | 73 |
|  | 24 | 3 | 70 |
|  | 23 | 5 | 73 |
|  | 20 | 5 | 74 |
|  | 11 | 11 | 21 |
|  | 12 | 9 | 24 |
|  | 13 | 12 | 20 |
|  | 12 | 13 | 23 |
|  | 11 | 10 | 75 |
|  | 11 | 11 | 23 |
|  | 12 | 11 | 24 |
|  | 13 | 12 | 20 |
|  | 13 | 4 | 70 |
|  | 13 | 4 | 63 |
|  | 12 | 4 | 72 |
|  | 13 | 5 | 76 |
|  | 12 | 11 | 65 |
| 9 | 17 | 4 | 19 |
| 8 | 15 | 4 | 17 |
| 6 | 17 | 3 | 17 |

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| Разрез 17 | | | |
| Гравелит | Песчаник | Алевролит | Аргиллит |
| 4 | 14 | 2 | 17 |
| 4 | 17 | 4 | 20 |
| 3 | 14 | 5 | 19 |
| 4 | 19 | 3 | 15 |
| 5 | 20 | 4 | 16 |
| 3 | 14 | 3 | 19 |
|  | 15 | 3 | 71 |
|  | 16 | 4 | 72 |
|  | 15 | 5 | 64 |
|  | 17 | 6 | 68 |
|  | 16 | 7 | 67 |
|  | 11 | 10 | 20 |
|  | 10 | 9 | 23 |
|  | 12 | 8 | 25 |
|  | 11 | 7 | 24 |
|  | 14 | 12 | 20 |
|  | 14 | 14 | 23 |
|  | 12 | 11 | 19 |
|  | 13 | 13 | 24 |
|  | 14 | 12 | 18 |
|  | 10 | 10 | 25 |
|  | 12 | 12 | 24 |
|  | 11 | 11 | 18 |
|  | 13 | 12 | 23 |
|  | 15 | 3 | 75 |
|  | 20 | 3 | 70 |
|  | 21 | 5 | 68 |
|  | 21 | 3 | 69 |
|  | 20 | 4 | 65 |
| 2 | 16 | 3 | 17 |
| 3 | 13 | 4 | 21 |
| 4 | 18 | 4 | 15 |
| 4 | 14 | 4 | 17 |
|  | 14 | 4 | 65 |
|  | 15 | 4 | 73 |
|  | 16 | 4 | 66 |
|  | 14 | 5 | 68 |
|  | 11 | 10 | 24 |
|  | 10 | 11 | 23 |
|  | 13 | 12 | 25 |
|  | 14 | 12 | 23 |
|  | 14 | 14 | 23 |
|  | 12 | 10 | 21 |
|  | 12 | 12 | 73 |
|  | 13 | 11 | 21 |
|  | 10 | 10 | 21 |
|  | 13 | 4 | 76 |
|  | 13 | 3 | 72 |
|  | 12 | 4 | 65 |
| Разрез 18 | | | |
| Гравелит | Песчаник | Алевролит | Аргиллит |
| 4 | 17 | 4 | 19 |
| 4 | 15 | 4 | 16 |
| 3 | 18 | 3 | 17 |
| 3 | 16 | 4 | 16 |
|  | 14 | 3 | 70 |
|  | 13 | 5 | 73 |
|  | 12 | 5 | 74 |
|  | 11 | 11 | 21 |
|  | 12 | 9 | 24 |
|  | 13 | 12 | 20 |
|  | 12 | 12 | 23 |
|  | 11 | 10 | 75 |
|  | 11 | 11 | 23 |
|  | 12 | 11 | 23 |
|  | 13 | 12 | 20 |
|  | 13 | 4 | 70 |
|  | 13 | 4 | 63 |
|  | 12 | 4 | 72 |
|  | 14 | 5 | 76 |
|  | 12 | 11 | 65 |

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| Разрез 19 | | | |
| Гравелит | Песчаник | Алевролит | Аргиллит |
|  | 22 | 4 | 72 |
|  | 21 | 4 | 72 |
|  | 19 | 5 | 64 |
|  | 22 | 6 | 68 |
|  | 23 | 7 | 67 |
|  | 10 | 10 | 20 |
|  | 10 | 9 | 23 |
|  | 12 | 8 | 26 |
|  | 11 | 7 | 24 |
|  | 14 | 12 | 20 |
|  | 14 | 14 | 23 |
|  | 12 | 11 | 19 |
|  | 14 | 13 | 25 |
|  | 14 | 12 | 18 |
|  | 10 | 10 | 25 |
|  | 12 | 12 | 24 |
|  | 10 | 11 | 18 |
|  | 13 | 12 | 23 |
|  | 15 | 3 | 75 |
|  | 20 | 3 | 70 |
|  | 21 | 7 | 68 |
|  | 21 | 3 | 69 |
|  | 20 | 4 | 65 |
| 4 | 17 | 3 | 15 |
| 3 | 17 | 4 | 20 |
| 4 | 14 | 5 | 19 |
| 3 | 19 | 3 | 15 |
| 4 | 20 | 4 | 16 |
| 4 | 14 | 3 | 19 |
|  | 14 | 4 | 65 |
|  | 15 | 4 | 73 |
|  | 16 | 4 | 66 |
|  | 14 | 5 | 68 |
|  | 12 | 10 | 24 |
|  | 10 | 11 | 23 |
|  | 13 | 12 | 25 |
|  | 14 | 12 | 23 |
|  | 14 | 14 | 23 |
|  | 12 | 10 | 21 |
|  | 13 | 12 | 72 |
|  | 13 | 11 | 21 |
|  | 10 | 10 | 21 |
|  | 13 | 4 | 76 |
|  | 12 | 3 | 72 |
|  | 12 | 4 | 66 |
| 3 | 16 | 3 | 17 |
| 4 | 13 | 4 | 21 |
| 3 | 18 | 3 | 15 |
| 3 | 14 | 4 | 17 |
| Разрез 20 | | | |
| Гравелит | Песчаник | Алевролит | Аргиллит |
|  | 23 | 4 | 73 |
|  | 24 | 3 | 70 |
|  | 23 | 5 | 73 |
|  | 20 | 5 | 74 |
|  | 11 | 11 | 21 |
|  | 12 | 9 | 24 |
|  | 13 | 12 | 20 |
|  | 12 | 13 | 23 |
|  | 11 | 10 | 75 |
|  | 11 | 11 | 23 |
|  | 12 | 11 | 24 |
|  | 13 | 12 | 20 |
|  | 13 | 4 | 70 |
|  | 13 | 4 | 63 |
|  | 12 | 4 | 72 |
|  | 13 | 5 | 76 |
| 3 | 12 | 3 | 18 |
| 3 | 17 | 4 | 19 |
| 5 | 15 | 4 | 17 |
| 3 | 17 | 3 | 17 |

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| Разрез 21 | | | |
| Гравелит | Песчаник | Алевролит | Аргиллит |
|  | 15 | 3 | 71 |
|  | 16 | 4 | 72 |
|  | 15 | 5 | 64 |
|  | 17 | 6 | 68 |
| 4 | 16 | 3 | 16 |
| 3 | 15 | 3 | 16 |
| 4 | 17 | 4 | 20 |
| 3 | 14 | 5 | 19 |
| 4 | 19 | 3 | 15 |
| 5 | 20 | 4 | 16 |
| 3 | 14 | 3 | 19 |
|  | 11 | 10 | 20 |
|  | 10 | 9 | 23 |
|  | 12 | 8 | 25 |
|  | 11 | 7 | 24 |
|  | 14 | 12 | 20 |
|  | 14 | 14 | 23 |
|  | 12 | 11 | 19 |
|  | 13 | 13 | 24 |
|  | 14 | 12 | 18 |
|  | 10 | 10 | 25 |
|  | 12 | 12 | 24 |
|  | 11 | 11 | 18 |
|  | 13 | 12 | 23 |
|  | 15 | 3 | 75 |
|  | 20 | 3 | 70 |
|  | 21 | 5 | 68 |
|  | 21 | 3 | 69 |
|  | 20 | 4 | 65 |
|  | 14 | 4 | 65 |
|  | 15 | 4 | 73 |
|  | 16 | 4 | 66 |
|  | 14 | 5 | 68 |
| 2 | 16 | 3 | 17 |
| 3 | 13 | 4 | 21 |
| 4 | 18 | 4 | 15 |
| 4 | 14 | 4 | 17 |
|  | 11 | 10 | 24 |
|  | 10 | 11 | 23 |
|  | 13 | 12 | 25 |
|  | 14 | 12 | 23 |
|  | 14 | 14 | 23 |
|  | 12 | 10 | 21 |
|  | 12 | 12 | 73 |
|  | 13 | 11 | 21 |
|  | 10 | 10 | 21 |
|  | 13 | 4 | 76 |
|  | 13 | 3 | 72 |
|  | 12 | 4 | 65 |
| Разрез 22 | | | |
| Гравелит | Песчаник | Алевролит | Аргиллит |
|  | 17 | 3 | 72 |
|  | 14 | 3 | 70 |
|  | 13 | 5 | 73 |
|  | 12 | 5 | 74 |
| 4 | 17 | 4 | 19 |
| 4 | 15 | 4 | 16 |
| 3 | 18 | 3 | 17 |
|  | 11 | 11 | 21 |
|  | 12 | 9 | 24 |
|  | 13 | 12 | 20 |
|  | 12 | 12 | 23 |
|  | 11 | 10 | 75 |
|  | 11 | 11 | 23 |
|  | 12 | 11 | 23 |
|  | 13 | 12 | 20 |
|  | 13 | 4 | 70 |
|  | 13 | 4 | 63 |
|  | 12 | 4 | 72 |
|  | 14 | 5 | 76 |
|  | 11 | 11 | 65 |

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| Разрез 23 | | | |
| Гравелит | Песчаник | Алевролит | Аргиллит |
| 23 | 14 | 2 | 15 |
| 24 | 16 | 3 | 20 |
| 23 | 13 | 4 | 19 |
| 24 | 18 | 2 | 15 |
| 25 | 20 | 3 | 16 |
|  | 13 | 2 | 69 |
|  | 15 | 3 | 71 |
|  | 16 | 4 | 72 |
|  | 15 | 5 | 64 |
|  | 17 | 6 | 68 |
|  | 16 | 7 | 67 |
|  | 12 | 10 | 20 |
|  | 10 | 9 | 23 |
|  | 12 | 8 | 25 |
|  | 11 | 7 | 24 |
|  | 14 | 12 | 20 |
|  | 14 | 14 | 23 |
|  | 11 | 11 | 19 |
|  | 13 | 13 | 24 |
|  | 14 | 12 | 18 |
|  | 10 | 10 | 25 |
|  | 11 | 13 | 24 |
|  | 11 | 11 | 18 |
|  | 13 | 12 | 23 |
|  | 14 | 3 | 75 |
|  | 20 | 3 | 70 |
|  | 21 | 5 | 68 |
|  | 21 | 3 | 69 |
|  | 20 | 4 | 65 |
| 22 | 16 | 3 | 17 |
| 23 | 13 | 4 | 21 |
| 24 | 18 | 4 | 15 |
| 24 | 14 | 4 | 17 |
|  | 14 | 4 | 65 |
|  | 15 | 4 | 73 |
|  | 15 | 4 | 66 |
|  | 14 | 5 | 69 |
|  | 11 | 10 | 24 |
|  | 10 | 11 | 23 |
|  | 13 | 12 | 25 |
|  | 13 | 12 | 23 |
|  | 14 | 14 | 23 |
|  | 11 | 10 | 21 |
|  | 12 | 12 | 73 |
|  | 13 | 11 | 21 |
|  | 10 | 10 | 21 |
|  | 13 | 4 | 76 |
|  | 13 | 3 | 72 |
|  | 12 | 4 | 65 |
| Разрез 24 | | | |
| Гравелит | Песчаник | Алевролит | Аргиллит |
| 23 | 17 | 4 | 19 |
| 23 | 15 | 4 | 16 |
| 24 | 18 | 3 | 17 |
|  | 16 | 4 | 72 |
|  | 14 | 3 | 70 |
|  | 13 | 5 | 73 |
|  | 12 | 5 | 74 |
|  | 11 | 11 | 21 |
|  | 12 | 9 | 24 |
|  | 13 | 12 | 20 |
|  | 12 | 12 | 23 |
|  | 11 | 10 | 75 |
|  | 11 | 11 | 23 |
|  | 12 | 11 | 23 |
|  | 13 | 12 | 20 |
|  | 13 | 4 | 70 |
|  | 13 | 4 | 63 |
|  | 11 | 4 | 73 |
|  | 14 | 5 | 76 |
|  | 12 | 11 | 65 |

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| Разрез 25 | | | |
| Гравелит | Песчаник | Алевролит | Аргиллит |
| 33 | 12 | 2 | 15 |
| 34 | 13 | 3 | 20 |
| 35 | 13 | 4 | 19 |
| 34 | 14 | 2 | 15 |
| 35 | 12 | 3 | 16 |
|  | 11 | 2 | 69 |
|  | 15 | 3 | 71 |
|  | 16 | 4 | 72 |
|  | 15 | 5 | 64 |
|  | 17 | 6 | 68 |
|  | 16 | 7 | 67 |
|  | 12 | 10 | 20 |
|  | 10 | 9 | 23 |
|  | 12 | 8 | 25 |
|  | 11 | 7 | 24 |
|  | 14 | 12 | 20 |
|  | 14 | 14 | 23 |
|  | 11 | 11 | 19 |
|  | 13 | 13 | 24 |
|  | 14 | 12 | 18 |
|  | 10 | 10 | 25 |
|  | 11 | 13 | 24 |
|  | 11 | 11 | 18 |
|  | 13 | 12 | 23 |
|  | 14 | 3 | 75 |
|  | 20 | 3 | 70 |
|  | 21 | 5 | 68 |
|  | 21 | 3 | 69 |
|  | 20 | 4 | 65 |
| 32 | 12 | 3 | 17 |
| 33 | 13 | 4 | 21 |
| 34 | 14 | 4 | 15 |
| 34 | 11 | 4 | 17 |
|  | 14 | 4 | 65 |
|  | 15 | 4 | 73 |
|  | 15 | 4 | 66 |
|  | 14 | 5 | 69 |
|  | 11 | 10 | 24 |
|  | 10 | 11 | 23 |
|  | 13 | 12 | 25 |
|  | 13 | 12 | 23 |
|  | 14 | 14 | 23 |
|  | 11 | 10 | 21 |
|  | 12 | 12 | 73 |
|  | 13 | 11 | 21 |
|  | 10 | 10 | 21 |
|  | 13 | 4 | 76 |
|  | 13 | 3 | 72 |
|  | 12 | 4 | 65 |
| Разрез 26 | | | |
| Гравелит | Песчаник | Алевролит | Аргиллит |
| 33 | 12 | 3 | 18 |
| 34 | 15 | 4 | 16 |
| 33 | 12 | 3 | 17 |
|  | 16 | 4 | 72 |
|  | 14 | 3 | 70 |
|  | 13 | 5 | 73 |
|  | 12 | 5 | 74 |
|  | 11 | 11 | 21 |
|  | 12 | 9 | 24 |
|  | 13 | 12 | 20 |
|  | 12 | 12 | 23 |
|  | 11 | 10 | 75 |
|  | 11 | 11 | 23 |
|  | 12 | 11 | 23 |
|  | 13 | 13 | 20 |
|  | 13 | 4 | 70 |
|  | 13 | 4 | 63 |
|  | 11 | 4 | 73 |
|  | 14 | 6 | 76 |
|  | 11 | 11 | 65 |

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| Разрез 27 | | | |
| Гравелит | Песчаник | Алевролит | Аргиллит |
|  | 17 | 3 | 73 |
|  | 23 | 4 | 72 |
|  | 18 | 5 | 64 |
|  | 20 | 6 | 68 |
|  | 20 | 7 | 67 |
|  | 10 | 10 | 20 |
|  | 10 | 9 | 23 |
|  | 12 | 8 | 26 |
|  | 11 | 7 | 24 |
|  | 14 | 12 | 20 |
|  | 14 | 14 | 23 |
|  | 12 | 11 | 19 |
|  | 14 | 13 | 25 |
|  | 14 | 12 | 18 |
|  | 10 | 10 | 25 |
|  | 12 | 12 | 24 |
|  | 10 | 11 | 18 |
|  | 13 | 12 | 23 |
|  | 15 | 3 | 75 |
|  | 20 | 3 | 70 |
|  | 21 | 7 | 68 |
|  | 21 | 3 | 69 |
|  | 20 | 4 | 65 |
| 4 | 17 | 3 | 15 |
| 3 | 17 | 4 | 20 |
| 4 | 14 | 5 | 19 |
| 3 | 19 | 3 | 15 |
| 4 | 20 | 4 | 16 |
| 4 | 14 | 3 | 19 |
|  | 18 | 4 | 65 |
|  | 17 | 4 | 73 |
|  | 19 | 4 | 66 |
|  | 20 | 5 | 68 |
|  | 12 | 10 | 24 |
|  | 10 | 11 | 23 |
|  | 13 | 12 | 25 |
|  | 14 | 12 | 23 |
|  | 14 | 14 | 23 |
|  | 12 | 10 | 21 |
|  | 13 | 12 | 72 |
|  | 13 | 11 | 21 |
|  | 10 | 10 | 21 |
|  | 13 | 4 | 76 |
|  | 12 | 3 | 72 |
|  | 12 | 4 | 66 |
| 3 | 16 | 3 | 17 |
| 4 | 13 | 4 | 21 |
| 3 | 18 | 3 | 15 |
| 3 | 14 | 4 | 17 |
| Разрез 28 | | | |
| Гравелит | Песчаник | Алевролит | Аргиллит |
|  | 21 | 3 | 72 |
|  | 20 | 3 | 70 |
|  | 20 | 5 | 73 |
|  | 19 | 5 | 74 |
|  | 11 | 11 | 21 |
|  | 12 | 9 | 24 |
|  | 13 | 12 | 20 |
|  | 12 | 13 | 23 |
|  | 11 | 10 | 75 |
|  | 11 | 11 | 23 |
|  | 12 | 11 | 24 |
|  | 13 | 12 | 20 |
|  | 13 | 4 | 70 |
|  | 13 | 4 | 63 |
|  | 12 | 4 | 72 |
|  | 13 | 5 | 76 |
|  | 12 | 11 | 65 |
| 3 | 17 | 4 | 19 |
| 5 | 15 | 4 | 17 |
| 3 | 17 | 3 | 17 |

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| Разрез 29 | | | |
| Гравелит | Песчаник | Алевролит | Аргиллит |
|  | 22 | 3 | 71 |
|  | 22 | 4 | 72 |
|  | 19 | 5 | 64 |
|  | 22 | 6 | 68 |
|  | 23 | 7 | 67 |
|  | 10 | 10 | 20 |
|  | 10 | 9 | 23 |
|  | 12 | 8 | 26 |
|  | 11 | 7 | 24 |
|  | 14 | 12 | 20 |
|  | 14 | 14 | 23 |
|  | 12 | 11 | 19 |
|  | 14 | 13 | 25 |
|  | 14 | 12 | 18 |
|  | 10 | 10 | 25 |
|  | 12 | 12 | 24 |
|  | 10 | 11 | 18 |
|  | 13 | 12 | 23 |
|  | 15 | 3 | 75 |
|  | 20 | 3 | 70 |
|  | 21 | 7 | 68 |
|  | 21 | 3 | 69 |
|  | 20 | 4 | 65 |
| 4 | 17 | 3 | 15 |
| 3 | 17 | 4 | 20 |
| 4 | 14 | 5 | 19 |
| 3 | 19 | 3 | 15 |
| 4 | 20 | 4 | 16 |
| 4 | 14 | 3 | 19 |
|  | 14 | 4 | 65 |
|  | 15 | 4 | 73 |
|  | 16 | 4 | 66 |
|  | 14 | 5 | 68 |
|  | 12 | 10 | 24 |
|  | 10 | 11 | 23 |
|  | 13 | 12 | 25 |
|  | 14 | 12 | 23 |
|  | 14 | 14 | 23 |
|  | 12 | 10 | 21 |
|  | 13 | 12 | 72 |
|  | 13 | 11 | 21 |
|  | 10 | 10 | 21 |
|  | 13 | 4 | 76 |
|  | 12 | 3 | 72 |
|  | 12 | 4 | 66 |
| 3 | 16 | 3 | 17 |
| 4 | 13 | 4 | 21 |
| 3 | 18 | 3 | 15 |
| 3 | 14 | 4 | 17 |
| Разрез 30 | | | |
| Гравелит | Песчаник | Алевролит | Аргиллит |
|  | 22 | 4 | 73 |
|  | 22 | 3 | 70 |
|  | 22 | 5 | 73 |
|  | 22 | 5 | 74 |
|  | 11 | 11 | 21 |
|  | 12 | 9 | 24 |
|  | 13 | 12 | 20 |
|  | 12 | 13 | 23 |
|  | 11 | 10 | 75 |
|  | 11 | 11 | 23 |
|  | 12 | 11 | 24 |
|  | 13 | 12 | 20 |
|  | 13 | 4 | 70 |
|  | 13 | 4 | 63 |
|  | 12 | 4 | 72 |
|  | 13 | 5 | 76 |
|  | 12 | 11 | 65 |
| 3 | 17 | 4 | 19 |
| 5 | 15 | 4 | 17 |
| 3 | 17 | 3 | 17 |

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| Разрез 31 | | | |
| Гравелит | Песчаник | Алевролит | Аргиллит |
|  | 21 | 4 | 72 |
|  | 20 | 4 | 72 |
|  | 18 | 5 | 64 |
|  | 23 | 6 | 68 |
|  | 23 | 7 | 67 |
|  | 11 | 10 | 20 |
|  | 10 | 9 | 23 |
|  | 12 | 8 | 26 |
|  | 11 | 7 | 24 |
|  | 14 | 12 | 20 |
|  | 14 | 14 | 23 |
|  | 12 | 11 | 19 |
|  | 14 | 13 | 25 |
|  | 14 | 12 | 18 |
|  | 10 | 10 | 25 |
|  | 12 | 12 | 24 |
|  | 10 | 11 | 18 |
|  | 13 | 12 | 23 |
|  | 15 | 3 | 75 |
|  | 20 | 3 | 70 |
|  | 21 | 7 | 68 |
|  | 21 | 3 | 69 |
|  | 20 | 4 | 65 |
| 6 | 17 | 3 | 15 |
| 8 | 17 | 4 | 20 |
| 5 | 14 | 5 | 19 |
| 8 | 19 | 4 | 15 |
| 9 | 20 | 4 | 16 |
| 8 | 14 | 3 | 19 |
|  | 14 | 4 | 65 |
|  | 15 | 4 | 73 |
|  | 17 | 5 | 66 |
|  | 14 | 5 | 68 |
|  | 12 | 10 | 24 |
|  | 10 | 11 | 23 |
|  | 14 | 12 | 25 |
|  | 14 | 12 | 22 |
|  | 15 | 14 | 22 |
|  | 12 | 10 | 21 |
|  | 13 | 12 | 70 |
|  | 13 | 11 | 21 |
|  | 10 | 10 | 21 |
|  | 12 | 4 | 76 |
|  | 12 | 3 | 72 |
|  | 12 | 4 | 66 |
| 11 | 16 | 3 | 17 |
| 7 | 13 | 4 | 21 |
| 8 | 18 | 3 | 15 |
| 7 | 14 | 4 | 17 |
| Разрез 32 | | | |
| Гравелит | Песчаник | Алевролит | Аргиллит |
|  | 23 | 4 | 73 |
|  | 24 | 3 | 70 |
|  | 23 | 5 | 73 |
|  | 20 | 5 | 74 |
|  | 11 | 11 | 21 |
|  | 12 | 9 | 24 |
|  | 13 | 12 | 20 |
|  | 12 | 13 | 23 |
|  | 11 | 10 | 75 |
|  | 11 | 11 | 23 |
|  | 12 | 11 | 24 |
|  | 13 | 12 | 20 |
|  | 13 | 4 | 70 |
|  | 13 | 4 | 63 |
|  | 12 | 4 | 72 |
|  | 13 | 5 | 76 |
| 8 | 16 | 3 | 19 |
| 9 | 17 | 4 | 19 |
| 8 | 15 | 4 | 17 |
| 6 | 17 | 3 | 17 |

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| Разрез 33 | | | |
| Гравелит | Песчаник | Алевролит | Аргиллит |
| 4 | 16 | 4 | 17 |
| 4 | 17 | 4 | 20 |
| 3 | 14 | 5 | 19 |
| 4 | 19 | 3 | 15 |
| 5 | 20 | 4 | 16 |
| 3 | 14 | 3 | 19 |
|  | 15 | 3 | 71 |
|  | 16 | 4 | 72 |
|  | 15 | 5 | 64 |
|  | 17 | 6 | 68 |
|  | 16 | 7 | 67 |
|  | 11 | 10 | 20 |
|  | 10 | 9 | 23 |
|  | 12 | 8 | 25 |
|  | 11 | 7 | 24 |
|  | 14 | 12 | 20 |
|  | 14 | 14 | 23 |
|  | 12 | 11 | 19 |
|  | 13 | 13 | 24 |
|  | 14 | 12 | 18 |
|  | 10 | 10 | 25 |
|  | 12 | 12 | 24 |
|  | 11 | 11 | 18 |
|  | 13 | 12 | 23 |
|  | 15 | 3 | 75 |
|  | 20 | 3 | 70 |
|  | 21 | 5 | 68 |
|  | 21 | 3 | 69 |
|  | 20 | 4 | 65 |
| 3 | 16 | 3 | 17 |
| 3 | 13 | 4 | 21 |
| 3 | 18 | 4 | 15 |
| 3 | 14 | 4 | 17 |
|  | 14 | 4 | 65 |
|  | 15 | 4 | 73 |
|  | 16 | 4 | 66 |
|  | 14 | 5 | 68 |
|  | 11 | 10 | 24 |
|  | 10 | 11 | 23 |
|  | 13 | 12 | 25 |
|  | 14 | 12 | 23 |
|  | 14 | 14 | 23 |
|  | 12 | 10 | 21 |
|  | 12 | 12 | 73 |
|  | 13 | 11 | 21 |
|  | 10 | 10 | 21 |
|  | 13 | 4 | 76 |
|  | 13 | 3 | 72 |
|  | 12 | 4 | 65 |
| Разрез 34 | | | |
| Гравелит | Песчаник | Алевролит | Аргиллит |
| 4 | 17 | 4 | 19 |
| 4 | 15 | 4 | 16 |
| 3 | 18 | 3 | 17 |
| 4 | 16 | 4 | 17 |
|  | 14 | 3 | 70 |
|  | 13 | 5 | 73 |
|  | 12 | 5 | 74 |
|  | 11 | 11 | 21 |
|  | 12 | 9 | 24 |
|  | 13 | 12 | 20 |
|  | 12 | 12 | 23 |
|  | 11 | 10 | 75 |
|  | 11 | 11 | 23 |
|  | 12 | 11 | 23 |
|  | 13 | 12 | 20 |
|  | 13 | 4 | 70 |
|  | 13 | 4 | 63 |
|  | 12 | 4 | 72 |
|  | 14 | 5 | 76 |
|  | 12 | 11 | 65 |

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| Разрез 35 | | | |
| Гравелит | Песчаник | Алевролит | Аргиллит |
|  | 21 | 3 | 71 |
|  | 21 | 4 | 72 |
|  | 19 | 5 | 64 |
|  | 22 | 6 | 68 |
|  | 23 | 7 | 67 |
|  | 10 | 10 | 20 |
|  | 10 | 9 | 23 |
|  | 12 | 8 | 26 |
|  | 11 | 7 | 24 |
|  | 14 | 12 | 20 |
|  | 14 | 14 | 23 |
|  | 12 | 11 | 19 |
|  | 14 | 13 | 25 |
|  | 14 | 12 | 18 |
|  | 10 | 10 | 25 |
|  | 12 | 12 | 24 |
|  | 10 | 11 | 18 |
|  | 13 | 12 | 23 |
|  | 15 | 3 | 75 |
|  | 20 | 3 | 70 |
|  | 21 | 7 | 68 |
|  | 21 | 3 | 69 |
| 4 | 16 | 4 | 16 |
| 4 | 17 | 3 | 15 |
| 3 | 17 | 4 | 20 |
| 4 | 14 | 5 | 19 |
| 3 | 19 | 3 | 15 |
| 4 | 20 | 4 | 16 |
| 4 | 14 | 3 | 19 |
|  | 14 | 4 | 65 |
|  | 15 | 4 | 73 |
|  | 16 | 4 | 66 |
|  | 14 | 5 | 68 |
|  | 12 | 10 | 24 |
|  | 10 | 11 | 23 |
|  | 13 | 12 | 25 |
|  | 14 | 12 | 23 |
|  | 14 | 14 | 23 |
|  | 12 | 10 | 21 |
|  | 13 | 12 | 72 |
|  | 13 | 11 | 21 |
|  | 10 | 10 | 21 |
|  | 13 | 4 | 76 |
|  | 12 | 3 | 72 |
|  | 12 | 4 | 66 |
| 3 | 16 | 3 | 17 |
| 4 | 13 | 4 | 21 |
| 3 | 18 | 3 | 15 |
| 3 | 14 | 4 | 17 |
| Разрез 36 | | | |
| Гравелит | Песчаник | Алевролит | Аргиллит |
|  | 22 | 3 | 71 |
|  | 24 | 3 | 70 |
|  | 23 | 5 | 73 |
|  | 20 | 5 | 74 |
|  | 11 | 11 | 21 |
|  | 12 | 9 | 24 |
|  | 13 | 12 | 20 |
|  | 12 | 13 | 23 |
|  | 11 | 10 | 75 |
|  | 11 | 11 | 23 |
|  | 12 | 11 | 24 |
|  | 13 | 12 | 20 |
|  | 13 | 4 | 70 |
|  | 13 | 4 | 63 |
|  | 12 | 4 | 72 |
|  | 13 | 5 | 76 |
|  | 12 | 11 | 65 |
| 3 | 17 | 4 | 19 |
| 5 | 15 | 4 | 17 |
| 3 | 17 | 3 | 17 |

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| Разрез 37 | | | |
| Гравелит | Песчаник | Алевролит | Аргиллит |
|  | 14 | 2 | 72 |
|  | 16 | 4 | 72 |
|  | 15 | 5 | 64 |
|  | 17 | 6 | 68 |
|  | 16 | 7 | 67 |
|  | 15 | 3 | 66 |
| 4 | 17 | 4 | 20 |
| 3 | 14 | 5 | 19 |
| 4 | 19 | 3 | 15 |
| 5 | 20 | 4 | 16 |
| 3 | 14 | 3 | 19 |
|  | 11 | 10 | 20 |
|  | 10 | 9 | 23 |
|  | 12 | 8 | 25 |
|  | 11 | 7 | 24 |
|  | 14 | 12 | 20 |
|  | 14 | 14 | 23 |
|  | 12 | 11 | 19 |
|  | 13 | 13 | 24 |
|  | 14 | 12 | 18 |
|  | 10 | 10 | 25 |
|  | 12 | 12 | 24 |
|  | 11 | 11 | 18 |
|  | 13 | 12 | 23 |
|  | 15 | 3 | 75 |
|  | 20 | 3 | 70 |
|  | 21 | 5 | 68 |
|  | 21 | 3 | 69 |
|  | 20 | 4 | 65 |
|  | 14 | 4 | 65 |
|  | 15 | 4 | 73 |
|  | 16 | 4 | 66 |
|  | 14 | 5 | 68 |
| 3 | 16 | 3 | 17 |
| 3 | 13 | 4 | 21 |
| 4 | 18 | 4 | 15 |
| 4 | 14 | 4 | 17 |
|  | 11 | 10 | 24 |
|  | 10 | 11 | 23 |
|  | 13 | 12 | 25 |
|  | 14 | 12 | 23 |
|  | 14 | 14 | 23 |
|  | 12 | 10 | 21 |
|  | 12 | 12 | 73 |
|  | 13 | 11 | 21 |
|  | 10 | 10 | 21 |
|  | 13 | 4 | 76 |
|  | 13 | 3 | 72 |
|  | 12 | 4 | 65 |
| Разрез 38 | | | |
| Гравелит | Песчаник | Алевролит | Аргиллит |
|  | 16 | 4 | 72 |
|  | 14 | 3 | 70 |
|  | 13 | 5 | 73 |
| 4 | 16 | 5 | 19 |
| 4 | 17 | 4 | 19 |
| 4 | 15 | 4 | 16 |
| 3 | 18 | 3 | 17 |
|  | 11 | 11 | 21 |
|  | 12 | 9 | 24 |
|  | 13 | 12 | 20 |
|  | 12 | 12 | 23 |
|  | 11 | 10 | 75 |
|  | 11 | 11 | 23 |
|  | 12 | 11 | 23 |
|  | 13 | 12 | 20 |
|  | 13 | 4 | 70 |
|  | 13 | 4 | 63 |
|  | 12 | 4 | 72 |
|  | 14 | 5 | 76 |
|  | 12 | 11 | 65 |

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| Разрез 39 | | | |
| Гравелит | Песчаник | Алевролит | Аргиллит |
| 22 | 14 | 2 | 15 |
| 22 | 16 | 3 | 20 |
| 22 | 13 | 4 | 19 |
| 23 | 18 | 2 | 15 |
| 23 | 20 | 3 | 16 |
| 24 | 13 | 2 | 19 |
|  | 15 | 3 | 71 |
|  | 16 | 4 | 72 |
|  | 15 | 5 | 64 |
|  | 17 | 6 | 68 |
|  | 16 | 7 | 67 |
|  | 12 | 10 | 20 |
|  | 10 | 9 | 23 |
|  | 12 | 8 | 25 |
|  | 11 | 7 | 24 |
|  | 14 | 12 | 20 |
|  | 14 | 14 | 23 |
|  | 11 | 11 | 19 |
|  | 13 | 13 | 24 |
|  | 14 | 12 | 18 |
|  | 10 | 10 | 25 |
|  | 11 | 13 | 24 |
|  | 11 | 11 | 18 |
|  | 13 | 12 | 23 |
|  | 14 | 3 | 75 |
|  | 20 | 3 | 70 |
|  | 21 | 5 | 68 |
|  | 21 | 3 | 69 |
|  | 20 | 4 | 65 |
| 22 | 16 | 3 | 17 |
| 23 | 13 | 4 | 21 |
| 24 | 18 | 4 | 15 |
| 24 | 14 | 4 | 17 |
|  | 14 | 4 | 65 |
|  | 15 | 4 | 73 |
|  | 15 | 4 | 66 |
|  | 14 | 5 | 69 |
|  | 11 | 10 | 24 |
|  | 10 | 11 | 23 |
|  | 13 | 12 | 25 |
|  | 13 | 12 | 23 |
|  | 14 | 14 | 23 |
|  | 11 | 10 | 21 |
|  | 12 | 12 | 73 |
|  | 13 | 11 | 21 |
|  | 10 | 10 | 21 |
|  | 13 | 4 | 76 |
|  | 13 | 3 | 72 |
|  | 12 | 4 | 65 |
| Разрез 40 | | | |
| Гравелит | Песчаник | Алевролит | Аргиллит |
| 22 | 17 | 4 | 19 |
| 23 | 15 | 4 | 16 |
| 22 | 18 | 3 | 17 |
|  | 16 | 4 | 72 |
|  | 14 | 3 | 70 |
|  | 13 | 5 | 73 |
|  | 12 | 5 | 74 |
|  | 11 | 11 | 21 |
|  | 12 | 9 | 24 |
|  | 13 | 12 | 20 |
|  | 12 | 12 | 23 |
|  | 11 | 10 | 75 |
|  | 11 | 11 | 23 |
|  | 12 | 11 | 23 |
|  | 13 | 12 | 20 |
|  | 13 | 4 | 70 |
|  | 13 | 4 | 63 |
|  | 11 | 4 | 73 |
|  | 14 | 5 | 76 |
|  | 12 | 11 | 65 |

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| Разрез 41 | | | |
| Гравелит | Песчаник | Алевролит | Аргиллит |
| 32 | 11 | 3 | 16 |
| 34 | 13 | 3 | 20 |
| 35 | 13 | 4 | 19 |
| 34 | 14 | 2 | 15 |
| 34 | 12 | 3 | 16 |
| 32 | 11 | 2 | 19 |
|  | 15 | 3 | 71 |
|  | 16 | 4 | 72 |
|  | 15 | 5 | 64 |
|  | 17 | 6 | 68 |
|  | 16 | 7 | 67 |
|  | 12 | 10 | 20 |
|  | 10 | 9 | 23 |
|  | 12 | 8 | 25 |
|  | 11 | 7 | 24 |
|  | 14 | 12 | 20 |
|  | 14 | 14 | 23 |
|  | 11 | 11 | 19 |
|  | 13 | 13 | 24 |
|  | 14 | 12 | 18 |
|  | 10 | 10 | 25 |
|  | 11 | 13 | 24 |
|  | 11 | 11 | 18 |
|  | 13 | 12 | 23 |
|  | 14 | 3 | 75 |
|  | 20 | 3 | 70 |
|  | 21 | 5 | 68 |
|  | 21 | 3 | 69 |
|  | 20 | 4 | 65 |
| 31 | 12 | 3 | 17 |
| 32 | 13 | 4 | 21 |
| 33 | 14 | 4 | 15 |
| 34 | 11 | 4 | 17 |
|  | 14 | 4 | 65 |
|  | 15 | 4 | 73 |
|  | 15 | 4 | 66 |
|  | 14 | 5 | 69 |
|  | 11 | 10 | 24 |
|  | 10 | 11 | 23 |
|  | 13 | 12 | 25 |
|  | 13 | 12 | 23 |
|  | 14 | 14 | 23 |
|  | 11 | 10 | 21 |
|  | 12 | 12 | 73 |
|  | 13 | 11 | 21 |
|  | 10 | 10 | 21 |
|  | 13 | 4 | 76 |
|  | 13 | 3 | 72 |
|  | 12 | 4 | 65 |
| Разрез 42 | | | |
| Гравелит | Песчаник | Алевролит | Аргиллит |
| 33 | 12 | 3 | 18 |
| 34 | 15 | 4 | 16 |
| 33 | 12 | 3 | 17 |
|  | 16 | 4 | 72 |
|  | 14 | 3 | 70 |
|  | 13 | 5 | 73 |
|  | 12 | 5 | 74 |
|  | 11 | 11 | 21 |
|  | 12 | 9 | 24 |
|  | 13 | 12 | 20 |
|  | 12 | 12 | 23 |
|  | 11 | 10 | 75 |
|  | 11 | 11 | 23 |
|  | 12 | 11 | 23 |
|  | 13 | 13 | 20 |
|  | 13 | 4 | 70 |
|  | 13 | 4 | 63 |
|  | 11 | 4 | 73 |
|  | 14 | 6 | 76 |
|  | 11 | 11 | 65 |

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| Разрез 43 | | | |
| Гравелит | Песчаник | Алевролит | Аргиллит |
|  | 18 | 3 | 71 |
|  | 23 | 4 | 72 |
|  | 18 | 5 | 64 |
|  | 20 | 6 | 68 |
|  | 20 | 7 | 67 |
|  | 10 | 10 | 20 |
|  | 10 | 9 | 23 |
|  | 11 | 8 | 26 |
|  | 11 | 7 | 24 |
|  | 14 | 12 | 20 |
|  | 14 | 14 | 23 |
|  | 12 | 11 | 19 |
|  | 14 | 13 | 25 |
|  | 14 | 12 | 18 |
|  | 10 | 10 | 25 |
|  | 12 | 12 | 24 |
|  | 10 | 11 | 18 |
|  | 13 | 12 | 23 |
|  | 15 | 3 | 75 |
|  | 20 | 3 | 70 |
|  | 21 | 7 | 68 |
|  | 21 | 3 | 69 |
|  | 20 | 4 | 65 |
| 3 | 17 | 3 | 15 |
| 4 | 17 | 4 | 20 |
| 3 | 14 | 5 | 19 |
| 4 | 19 | 3 | 15 |
| 3 | 20 | 4 | 16 |
| 3 | 14 | 3 | 19 |
|  | 18 | 4 | 65 |
|  | 17 | 4 | 73 |
|  | 19 | 4 | 66 |
|  | 20 | 5 | 68 |
|  | 12 | 10 | 24 |
|  | 10 | 11 | 23 |
|  | 13 | 12 | 25 |
|  | 14 | 12 | 23 |
|  | 14 | 14 | 23 |
|  | 12 | 10 | 21 |
|  | 13 | 12 | 72 |
|  | 13 | 11 | 21 |
|  | 10 | 10 | 21 |
|  | 13 | 4 | 76 |
|  | 12 | 3 | 72 |
|  | 12 | 4 | 66 |
| 3 | 16 | 3 | 17 |
| 4 | 13 | 4 | 21 |
| 3 | 18 | 3 | 15 |
| 3 | 14 | 4 | 17 |
| Разрез 44 | | | |
| Гравелит | Песчаник | Алевролит | Аргиллит |
|  | 21 | 3 | 74 |
|  | 20 | 3 | 70 |
|  | 20 | 5 | 73 |
|  | 19 | 5 | 74 |
|  | 11 | 11 | 21 |
|  | 12 | 9 | 24 |
|  | 13 | 12 | 20 |
|  | 12 | 13 | 23 |
|  | 11 | 10 | 75 |
|  | 11 | 11 | 23 |
|  | 12 | 11 | 24 |
|  | 13 | 12 | 20 |
|  | 13 | 4 | 70 |
|  | 13 | 4 | 63 |
|  | 12 | 4 | 72 |
|  | 13 | 5 | 76 |
|  | 12 | 11 | 65 |
| 4 | 17 | 4 | 19 |
| 5 | 15 | 4 | 17 |
| 3 | 17 | 3 | 17 |

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| Разрез 45 | | | |
| Гравелит | Песчаник | Алевролит | Аргиллит |
|  | 21 | 3 | 72 |
|  | 21 | 4 | 72 |
|  | 19 | 5 | 64 |
|  | 22 | 6 | 68 |
|  | 23 | 7 | 67 |
|  | 10 | 10 | 20 |
|  | 10 | 9 | 23 |
|  | 12 | 8 | 26 |
|  | 11 | 7 | 24 |
|  | 14 | 12 | 20 |
|  | 14 | 14 | 23 |
|  | 12 | 11 | 19 |
|  | 14 | 13 | 25 |
|  | 14 | 12 | 18 |
|  | 10 | 10 | 25 |
|  | 12 | 12 | 24 |
|  | 10 | 11 | 18 |
|  | 13 | 12 | 23 |
|  | 15 | 3 | 75 |
|  | 20 | 3 | 70 |
|  | 21 | 7 | 68 |
|  | 21 | 3 | 69 |
|  | 20 | 4 | 65 |
| 3 | 17 | 3 | 15 |
| 3 | 17 | 4 | 20 |
| 5 | 14 | 5 | 19 |
| 2 | 19 | 3 | 15 |
| 2 | 20 | 4 | 16 |
| 4 | 14 | 3 | 19 |
|  | 14 | 4 | 65 |
|  | 15 | 4 | 73 |
|  | 16 | 4 | 66 |
|  | 14 | 5 | 68 |
|  | 12 | 10 | 24 |
|  | 10 | 11 | 23 |
|  | 13 | 12 | 25 |
|  | 14 | 12 | 23 |
|  | 14 | 14 | 23 |
|  | 12 | 10 | 21 |
|  | 13 | 12 | 72 |
|  | 13 | 11 | 21 |
|  | 10 | 10 | 21 |
|  | 13 | 4 | 76 |
|  | 12 | 3 | 72 |
|  | 12 | 4 | 66 |
| 3 | 16 | 3 | 17 |
| 4 | 13 | 4 | 21 |
| 3 | 18 | 3 | 15 |
| 3 | 14 | 4 | 17 |
| Разрез 46 | | | |
| Гравелит | Песчаник | Алевролит | Аргиллит |
|  | 22 | 4 | 73 |
|  | 24 | 3 | 70 |
|  | 23 | 5 | 73 |
|  | 20 | 5 | 74 |
|  | 11 | 11 | 21 |
|  | 12 | 9 | 24 |
|  | 13 | 12 | 20 |
|  | 12 | 13 | 23 |
|  | 11 | 10 | 75 |
|  | 11 | 11 | 23 |
|  | 12 | 11 | 24 |
|  | 13 | 12 | 20 |
|  | 13 | 4 | 70 |
|  | 13 | 4 | 63 |
|  | 12 | 4 | 72 |
|  | 13 | 5 | 76 |
|  | 12 | 11 | 65 |
| 2 | 17 | 4 | 19 |
| 5 | 15 | 4 | 17 |
| 3 | 17 | 3 | 17 |

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| Разрез 47 | | | |
| Гравелит | Песчаник | Алевролит | Аргиллит |
|  | 23 | 3 | 71 |
|  | 20 | 4 | 72 |
|  | 18 | 5 | 64 |
|  | 23 | 6 | 68 |
|  | 23 | 7 | 67 |
|  | 11 | 10 | 20 |
|  | 10 | 9 | 23 |
|  | 12 | 8 | 26 |
|  | 11 | 7 | 24 |
|  | 14 | 12 | 20 |
|  | 14 | 14 | 23 |
|  | 12 | 11 | 19 |
|  | 14 | 13 | 25 |
|  | 14 | 12 | 18 |
|  | 10 | 10 | 25 |
|  | 12 | 12 | 24 |
|  | 10 | 11 | 18 |
|  | 13 | 12 | 23 |
|  | 15 | 3 | 75 |
|  | 20 | 3 | 70 |
|  | 21 | 7 | 68 |
|  | 21 | 3 | 69 |
|  | 20 | 4 | 65 |
| 7 | 17 | 3 | 15 |
| 7 | 17 | 4 | 20 |
| 6 | 14 | 5 | 19 |
| 8 | 19 | 4 | 15 |
| 9 | 20 | 4 | 16 |
| 8 | 14 | 3 | 19 |
|  | 14 | 4 | 65 |
|  | 15 | 4 | 73 |
|  | 17 | 5 | 66 |
|  | 14 | 5 | 68 |
|  | 12 | 10 | 24 |
|  | 10 | 11 | 23 |
|  | 14 | 12 | 25 |
|  | 14 | 12 | 22 |
|  | 15 | 14 | 22 |
|  | 12 | 10 | 21 |
|  | 13 | 12 | 70 |
|  | 13 | 11 | 21 |
|  | 10 | 10 | 21 |
|  | 12 | 4 | 76 |
|  | 12 | 3 | 72 |
|  | 12 | 4 | 66 |
| 10 | 16 | 3 | 17 |
| 7 | 13 | 4 | 21 |
| 8 | 18 | 3 | 15 |
| 7 | 14 | 4 | 17 |
| Разрез 48 | | | |
| Гравелит | Песчаник | Алевролит | Аргиллит |
|  | 22 | 3 | 74 |
|  | 24 | 3 | 70 |
|  | 23 | 5 | 73 |
|  | 20 | 5 | 74 |
|  | 11 | 11 | 21 |
|  | 12 | 9 | 24 |
|  | 13 | 12 | 20 |
|  | 12 | 13 | 23 |
|  | 11 | 10 | 75 |
|  | 11 | 11 | 23 |
|  | 12 | 11 | 24 |
|  | 13 | 12 | 20 |
|  | 13 | 4 | 70 |
|  | 13 | 4 | 63 |
|  | 12 | 4 | 72 |
|  | 13 | 5 | 76 |
|  | 12 | 11 | 65 |
| 8 | 17 | 4 | 19 |
| 8 | 15 | 4 | 17 |
| 6 | 17 | 3 | 17 |

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| Разрез 49 | | | |
| Гравелит | Песчаник | Алевролит | Аргиллит |
| 2 | 15 | 3 | 16 |
| 2 | 17 | 4 | 20 |
| 3 | 14 | 5 | 19 |
| 3 | 19 | 3 | 15 |
| 4 | 20 | 4 | 16 |
| 3 | 14 | 3 | 19 |
|  | 15 | 3 | 71 |
|  | 16 | 4 | 72 |
|  | 15 | 5 | 64 |
|  | 17 | 6 | 68 |
|  | 16 | 7 | 67 |
|  | 11 | 10 | 20 |
|  | 10 | 9 | 23 |
|  | 12 | 8 | 25 |
|  | 11 | 7 | 24 |
|  | 14 | 12 | 20 |
|  | 14 | 14 | 23 |
|  | 12 | 11 | 19 |
|  | 13 | 13 | 24 |
|  | 14 | 12 | 18 |
|  | 10 | 10 | 25 |
|  | 12 | 12 | 24 |
|  | 11 | 11 | 18 |
|  | 13 | 12 | 23 |
|  | 15 | 3 | 75 |
|  | 20 | 3 | 70 |
|  | 21 | 5 | 68 |
|  | 21 | 3 | 69 |
|  | 20 | 4 | 65 |
| 1 | 16 | 3 | 17 |
| 3 | 13 | 4 | 21 |
| 4 | 18 | 4 | 15 |
| 4 | 14 | 4 | 17 |
|  | 14 | 4 | 65 |
|  | 15 | 4 | 73 |
|  | 16 | 4 | 66 |
|  | 14 | 5 | 68 |
|  | 11 | 10 | 24 |
|  | 10 | 11 | 23 |
|  | 13 | 12 | 25 |
|  | 14 | 12 | 23 |
|  | 14 | 14 | 23 |
|  | 12 | 10 | 21 |
|  | 12 | 12 | 73 |
|  | 13 | 11 | 21 |
|  | 10 | 10 | 21 |
|  | 13 | 4 | 76 |
|  | 13 | 3 | 72 |
|  | 12 | 4 | 65 |
| Разрез 50 | | | |
| Гравелит | Песчаник | Алевролит | Аргиллит |
| 3 | 17 | 4 | 19 |
| 3 | 15 | 4 | 16 |
| 2 | 18 | 3 | 17 |
|  | 16 | 4 | 72 |
|  | 14 | 3 | 70 |
|  | 13 | 5 | 73 |
|  | 12 | 5 | 74 |
|  | 11 | 11 | 21 |
|  | 12 | 9 | 24 |
|  | 13 | 12 | 20 |
|  | 12 | 12 | 23 |
|  | 11 | 10 | 75 |
|  | 11 | 11 | 23 |
|  | 12 | 11 | 23 |
|  | 13 | 12 | 20 |
|  | 13 | 4 | 70 |
|  | 13 | 4 | 63 |
|  | 12 | 4 | 72 |
|  | 14 | 5 | 76 |
|  | 12 | 11 | 65 |

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| Разрез 51 | | | |
| Гравелит | Песчаник | Алевролит | Аргиллит |
|  | 21 | 4 | 72 |
|  | 22 | 4 | 72 |
|  | 18 | 5 | 64 |
|  | 22 | 6 | 68 |
|  | 23 | 7 | 67 |
|  | 10 | 10 | 20 |
|  | 10 | 9 | 23 |
|  | 12 | 8 | 26 |
|  | 11 | 7 | 24 |
|  | 14 | 12 | 20 |
|  | 14 | 14 | 23 |
|  | 12 | 11 | 19 |
|  | 14 | 13 | 25 |
|  | 14 | 12 | 18 |
|  | 10 | 10 | 25 |
|  | 12 | 12 | 24 |
|  | 10 | 11 | 18 |
|  | 13 | 12 | 23 |
|  | 15 | 3 | 75 |
|  | 20 | 3 | 70 |
|  | 21 | 7 | 68 |
|  | 21 | 3 | 69 |
|  | 20 | 4 | 65 |
| 3 | 17 | 3 | 15 |
| 4 | 17 | 4 | 20 |
| 4 | 14 | 5 | 19 |
| 3 | 19 | 3 | 15 |
| 4 | 20 | 4 | 16 |
| 4 | 14 | 3 | 19 |
|  | 14 | 4 | 65 |
|  | 15 | 4 | 73 |
|  | 16 | 4 | 66 |
|  | 14 | 5 | 68 |
|  | 12 | 10 | 24 |
|  | 10 | 11 | 23 |
|  | 13 | 12 | 25 |
|  | 14 | 12 | 23 |
|  | 14 | 14 | 23 |
|  | 12 | 10 | 21 |
|  | 13 | 12 | 72 |
|  | 13 | 11 | 21 |
|  | 10 | 10 | 21 |
|  | 13 | 4 | 76 |
|  | 12 | 3 | 72 |
|  | 12 | 4 | 66 |
| 3 | 16 | 3 | 17 |
| 4 | 13 | 4 | 21 |
| 3 | 18 | 3 | 15 |
| 3 | 14 | 4 | 17 |
| Разрез 52 | | | |
| Гравелит | Песчаник | Алевролит | Аргиллит |
|  | 22 | 5 | 72 |
|  | 23 | 3 | 70 |
|  | 23 | 5 | 73 |
|  | 20 | 5 | 74 |
|  | 11 | 11 | 21 |
|  | 12 | 9 | 24 |
|  | 13 | 12 | 20 |
|  | 12 | 13 | 23 |
|  | 11 | 10 | 75 |
|  | 11 | 11 | 23 |
|  | 12 | 11 | 24 |
|  | 13 | 12 | 20 |
|  | 13 | 4 | 70 |
|  | 13 | 4 | 63 |
|  | 12 | 4 | 72 |
|  | 13 | 5 | 76 |
|  | 12 | 11 | 65 |
| 4 | 17 | 4 | 19 |
| 5 | 15 | 4 | 17 |
| 3 | 17 | 3 | 17 |

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| Разрез 53 | | | |
| Гравелит | Песчаник | Алевролит | Аргиллит |
|  | 16 | 4 | 71 |
|  | 16 | 4 | 72 |
|  | 15 | 5 | 64 |
|  | 17 | 6 | 68 |
|  | 16 | 7 | 67 |
| 2 | 15 | 3 | 16 |
| 3 | 17 | 4 | 20 |
| 4 | 14 | 5 | 19 |
| 4 | 19 | 3 | 15 |
| 5 | 20 | 4 | 16 |
| 3 | 14 | 3 | 19 |
|  | 11 | 10 | 20 |
|  | 10 | 9 | 23 |
|  | 12 | 8 | 25 |
|  | 11 | 7 | 24 |
|  | 14 | 12 | 20 |
|  | 14 | 14 | 23 |
|  | 12 | 11 | 19 |
|  | 13 | 13 | 24 |
|  | 14 | 12 | 18 |
|  | 10 | 10 | 25 |
|  | 12 | 12 | 24 |
|  | 11 | 11 | 18 |
|  | 13 | 12 | 23 |
|  | 15 | 3 | 75 |
|  | 20 | 3 | 70 |
|  | 21 | 5 | 68 |
|  | 21 | 3 | 69 |
|  | 20 | 4 | 65 |
|  | 14 | 4 | 65 |
|  | 15 | 4 | 73 |
|  | 16 | 4 | 66 |
|  | 14 | 5 | 68 |
| 2 | 16 | 3 | 17 |
| 3 | 13 | 4 | 21 |
| 4 | 18 | 4 | 15 |
| 4 | 14 | 4 | 17 |
|  | 11 | 10 | 24 |
|  | 10 | 11 | 23 |
|  | 13 | 12 | 25 |
|  | 14 | 12 | 23 |
|  | 14 | 14 | 23 |
|  | 12 | 10 | 21 |
|  | 12 | 12 | 73 |
|  | 13 | 11 | 21 |
|  | 10 | 10 | 21 |
|  | 13 | 4 | 76 |
|  | 13 | 3 | 72 |
|  | 12 | 4 | 65 |
| Разрез 54 | | | |
| Гравелит | Песчаник | Алевролит | Аргиллит |
|  | 17 | 4 | 72 |
|  | 14 | 3 | 70 |
|  | 13 | 5 | 73 |
|  | 12 | 5 | 74 |
| 3 | 17 | 4 | 19 |
| 3 | 15 | 4 | 16 |
| 4 | 18 | 3 | 17 |
|  | 11 | 11 | 21 |
|  | 12 | 9 | 24 |
|  | 13 | 12 | 20 |
|  | 12 | 12 | 23 |
|  | 11 | 10 | 75 |
|  | 11 | 11 | 23 |
|  | 12 | 11 | 23 |
|  | 13 | 12 | 20 |
|  | 13 | 4 | 70 |
|  | 13 | 4 | 63 |
|  | 12 | 4 | 72 |
|  | 14 | 5 | 76 |
|  | 12 | 11 | 65 |

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| Разрез 55 | | | |
| Гравелит | Песчаник | Алевролит | Аргиллит |
| 22 | 13 | 2 | 15 |
| 23 | 16 | 3 | 20 |
| 24 | 13 | 4 | 19 |
| 25 | 18 | 2 | 15 |
| 23 | 20 | 3 | 16 |
| 22 | 13 | 2 | 19 |
|  | 15 | 3 | 71 |
|  | 16 | 4 | 72 |
|  | 15 | 5 | 64 |
|  | 17 | 6 | 68 |
|  | 16 | 7 | 67 |
|  | 12 | 10 | 20 |
|  | 10 | 9 | 23 |
|  | 12 | 8 | 25 |
|  | 11 | 7 | 24 |
|  | 14 | 12 | 20 |
|  | 14 | 14 | 23 |
|  | 11 | 11 | 19 |
|  | 13 | 13 | 24 |
|  | 14 | 12 | 18 |
|  | 10 | 10 | 25 |
|  | 11 | 13 | 24 |
|  | 11 | 11 | 18 |
|  | 13 | 12 | 23 |
|  | 14 | 3 | 75 |
|  | 20 | 3 | 70 |
|  | 21 | 5 | 68 |
|  | 21 | 3 | 69 |
|  | 20 | 4 | 65 |
| 22 | 16 | 3 | 17 |
| 23 | 13 | 4 | 21 |
| 24 | 18 | 4 | 15 |
| 24 | 14 | 4 | 17 |
|  | 14 | 4 | 65 |
|  | 15 | 4 | 73 |
|  | 15 | 4 | 66 |
|  | 14 | 5 | 69 |
|  | 11 | 10 | 24 |
|  | 10 | 11 | 23 |
|  | 13 | 12 | 25 |
|  | 13 | 12 | 23 |
|  | 14 | 14 | 23 |
|  | 11 | 10 | 21 |
|  | 12 | 12 | 73 |
|  | 13 | 11 | 21 |
|  | 10 | 10 | 21 |
|  | 13 | 4 | 76 |
|  | 13 | 3 | 72 |
|  | 12 | 4 | 65 |
| Разрез 56 | | | |
| Гравелит | Песчаник | Алевролит | Аргиллит |
| 22 | 18 | 4 | 19 |
| 22 | 15 | 4 | 16 |
| 23 | 18 | 3 | 17 |
|  | 16 | 4 | 72 |
|  | 14 | 3 | 70 |
|  | 13 | 5 | 73 |
|  | 12 | 5 | 74 |
|  | 11 | 11 | 21 |
|  | 12 | 9 | 24 |
|  | 13 | 12 | 20 |
|  | 12 | 12 | 23 |
|  | 11 | 10 | 75 |
|  | 11 | 11 | 23 |
|  | 12 | 11 | 23 |
|  | 13 | 12 | 20 |
|  | 13 | 4 | 70 |
|  | 13 | 4 | 63 |
|  | 11 | 4 | 73 |
|  | 14 | 5 | 76 |
|  | 12 | 11 | 65 |

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| --- | --- | --- | --- |
| Разрез 57 | | | |
| Гравелит | Песчаник | Алевролит | Аргиллит |
| 32 | 11 | 3 | 15 |
| 33 | 13 | 3 | 20 |
| 33 | 13 | 4 | 19 |
| 32 | 14 | 2 | 15 |
| 32 | 12 | 3 | 16 |
| 33 | 11 | 2 | 19 |
|  | 15 | 3 | 71 |
|  | 16 | 4 | 72 |
|  | 15 | 5 | 64 |
|  | 17 | 6 | 68 |
|  | 16 | 7 | 67 |
|  | 12 | 10 | 20 |
|  | 10 | 9 | 23 |
|  | 12 | 8 | 25 |
|  | 11 | 7 | 24 |
|  | 14 | 12 | 20 |
|  | 14 | 14 | 23 |
|  | 11 | 11 | 19 |
|  | 13 | 13 | 24 |
|  | 14 | 12 | 18 |
|  | 10 | 10 | 25 |
|  | 11 | 13 | 24 |
|  | 11 | 11 | 18 |
|  | 13 | 12 | 23 |
|  | 14 | 3 | 75 |
|  | 20 | 3 | 70 |
|  | 21 | 5 | 68 |
|  | 21 | 3 | 69 |
|  | 20 | 4 | 65 |
| 30 | 12 | 3 | 17 |
| 30 | 13 | 4 | 21 |
| 34 | 14 | 4 | 15 |
| 34 | 11 | 4 | 17 |
|  | 14 | 4 | 65 |
|  | 15 | 4 | 73 |
|  | 15 | 4 | 66 |
|  | 14 | 5 | 69 |
|  | 11 | 10 | 24 |
|  | 10 | 11 | 23 |
|  | 13 | 12 | 25 |
|  | 13 | 12 | 23 |
|  | 14 | 14 | 23 |
|  | 11 | 10 | 21 |
|  | 12 | 12 | 73 |
|  | 13 | 11 | 21 |
|  | 10 | 10 | 21 |
|  | 13 | 4 | 76 |
|  | 13 | 3 | 72 |
|  | 12 | 4 | 65 |
| Разрез 58 | | | |
| Гравелит | Песчаник | Алевролит | Аргиллит |
| 33 | 13 | 4 | 19 |
| 33 | 15 | 4 | 16 |
| 34 | 12 | 3 | 17 |
|  | 16 | 4 | 72 |
|  | 14 | 3 | 70 |
|  | 13 | 5 | 73 |
|  | 12 | 5 | 74 |
|  | 11 | 11 | 21 |
|  | 12 | 9 | 24 |
|  | 13 | 12 | 20 |
|  | 12 | 12 | 23 |
|  | 11 | 10 | 75 |
|  | 11 | 11 | 23 |
|  | 12 | 11 | 23 |
|  | 13 | 13 | 20 |
|  | 13 | 4 | 70 |
|  | 13 | 4 | 63 |
|  | 11 | 4 | 73 |
|  | 14 | 6 | 76 |
|  | 10 | 11 | 65 |

|  |  |  |  |
| --- | --- | --- | --- |
| Разрез 59 | | | |
| Гравелит | Песчаник | Алевролит | Аргиллит |
|  | 18 | 5 | 72 |
|  | 22 | 4 | 72 |
|  | 18 | 5 | 64 |
|  | 20 | 6 | 68 |
|  | 20 | 7 | 67 |
|  | 10 | 10 | 20 |
|  | 10 | 9 | 23 |
|  | 12 | 8 | 26 |
|  | 11 | 7 | 24 |
|  | 14 | 12 | 20 |
|  | 14 | 14 | 23 |
|  | 12 | 11 | 19 |
|  | 14 | 13 | 25 |
|  | 14 | 12 | 18 |
|  | 10 | 10 | 25 |
|  | 12 | 12 | 24 |
|  | 10 | 11 | 18 |
|  | 13 | 12 | 23 |
|  | 15 | 3 | 75 |
|  | 20 | 3 | 70 |
|  | 21 | 7 | 68 |
|  | 21 | 3 | 69 |
|  | 20 | 4 | 65 |
| 3 | 17 | 3 | 15 |
| 4 | 17 | 4 | 20 |
| 3 | 14 | 5 | 19 |
| 3 | 19 | 3 | 15 |
| 4 | 20 | 4 | 16 |
| 4 | 14 | 3 | 19 |
|  | 18 | 4 | 65 |
|  | 17 | 4 | 73 |
|  | 19 | 4 | 66 |
|  | 20 | 5 | 68 |
|  | 12 | 10 | 24 |
|  | 10 | 11 | 23 |
|  | 13 | 12 | 25 |
|  | 14 | 12 | 23 |
|  | 14 | 14 | 23 |
|  | 12 | 10 | 21 |
|  | 13 | 12 | 72 |
|  | 13 | 11 | 21 |
|  | 10 | 10 | 21 |
|  | 13 | 4 | 76 |
|  | 12 | 3 | 72 |
|  | 12 | 4 | 66 |
| 3 | 16 | 3 | 17 |
| 4 | 13 | 4 | 21 |
| 3 | 18 | 3 | 15 |
| 3 | 14 | 4 | 17 |
| Разрез 60 | | | |
| Гравелит | Песчаник | Алевролит | Аргиллит |
|  | 21 | 3 | 73 |
|  | 20 | 3 | 70 |
|  | 20 | 5 | 73 |
|  | 19 | 5 | 74 |
|  | 11 | 11 | 21 |
|  | 12 | 9 | 24 |
|  | 13 | 12 | 20 |
|  | 12 | 13 | 23 |
|  | 11 | 10 | 75 |
|  | 11 | 11 | 23 |
|  | 12 | 11 | 24 |
|  | 13 | 12 | 20 |
|  | 13 | 4 | 70 |
|  | 13 | 4 | 63 |
|  | 12 | 4 | 72 |
|  | 13 | 5 | 76 |
|  | 12 | 11 | 65 |
| 2 | 17 | 4 | 19 |
| 5 | 15 | 4 | 17 |
| 3 | 17 | 3 | 17 |

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| --- | --- | --- | --- |
| Разрез 61 | | | |
| Гравелит | Песчаник | Алевролит | Аргиллит |
|  | 21 | 3 | 71 |
|  | 21 | 4 | 72 |
|  | 19 | 5 | 64 |
|  | 22 | 6 | 68 |
|  | 23 | 7 | 67 |
|  | 10 | 10 | 20 |
|  | 10 | 9 | 23 |
|  | 12 | 8 | 26 |
|  | 11 | 7 | 24 |
|  | 14 | 12 | 20 |
|  | 14 | 14 | 23 |
|  | 12 | 11 | 19 |
|  | 14 | 13 | 25 |
|  | 14 | 12 | 18 |
|  | 10 | 10 | 25 |
|  | 12 | 12 | 24 |
|  | 10 | 11 | 18 |
|  | 13 | 12 | 23 |
|  | 15 | 3 | 75 |
|  | 20 | 3 | 70 |
|  | 21 | 7 | 68 |
|  | 21 | 3 | 69 |
|  | 20 | 4 | 65 |
| 3 | 17 | 3 | 15 |
| 3 | 17 | 4 | 20 |
| 3 | 14 | 5 | 19 |
| 3 | 19 | 3 | 15 |
| 5 | 20 | 4 | 16 |
| 4 | 14 | 3 | 19 |
|  | 14 | 4 | 65 |
|  | 15 | 4 | 73 |
|  | 16 | 4 | 66 |
|  | 14 | 5 | 68 |
|  | 12 | 10 | 24 |
|  | 10 | 11 | 23 |
|  | 13 | 12 | 25 |
|  | 14 | 12 | 23 |
|  | 14 | 14 | 23 |
|  | 12 | 10 | 21 |
|  | 13 | 12 | 72 |
|  | 13 | 11 | 21 |
|  | 10 | 10 | 21 |
|  | 13 | 4 | 76 |
|  | 12 | 3 | 72 |
|  | 12 | 4 | 66 |
| 3 | 16 | 3 | 17 |
| 4 | 13 | 4 | 21 |
| 3 | 18 | 3 | 15 |
| 3 | 14 | 4 | 17 |
| Разрез 62 | | | |
| Гравелит | Песчаник | Алевролит | Аргиллит |
|  | 22 | 5 | 73 |
|  | 23 | 3 | 70 |
|  | 23 | 5 | 73 |
|  | 20 | 5 | 74 |
|  | 11 | 11 | 21 |
|  | 12 | 9 | 24 |
|  | 13 | 12 | 20 |
|  | 12 | 13 | 23 |
|  | 11 | 10 | 75 |
|  | 11 | 11 | 23 |
|  | 12 | 11 | 24 |
|  | 13 | 12 | 20 |
|  | 13 | 4 | 70 |
|  | 13 | 4 | 63 |
|  | 12 | 4 | 72 |
|  | 13 | 5 | 76 |
|  | 12 | 11 | 65 |
| 2 | 17 | 4 | 19 |
| 4 | 15 | 4 | 17 |
| 3 | 17 | 3 | 17 |

|  |  |  |  |
| --- | --- | --- | --- |
| Разрез 63 | | | |
| Гравелит | Песчаник | Алевролит | Аргиллит |
|  | 23 | 4 | 71 |
|  | 20 | 4 | 72 |
|  | 18 | 5 | 64 |
|  | 23 | 6 | 68 |
|  | 23 | 7 | 67 |
|  | 11 | 10 | 20 |
|  | 10 | 9 | 23 |
|  | 12 | 8 | 26 |
|  | 11 | 7 | 24 |
|  | 14 | 12 | 20 |
|  | 14 | 14 | 23 |
|  | 12 | 11 | 19 |
|  | 14 | 13 | 25 |
|  | 14 | 12 | 18 |
|  | 10 | 10 | 25 |
|  | 12 | 12 | 24 |
|  | 10 | 11 | 18 |
|  | 13 | 12 | 23 |
|  | 15 | 3 | 75 |
|  | 20 | 3 | 70 |
|  | 21 | 7 | 68 |
|  | 21 | 3 | 69 |
|  | 20 | 4 | 65 |
| 7 | 17 | 3 | 15 |
| 5 | 17 | 4 | 20 |
| 4 | 14 | 5 | 19 |
| 6 | 19 | 4 | 15 |
| 8 | 20 | 4 | 16 |
| 7 | 14 | 3 | 19 |
|  | 14 | 4 | 65 |
|  | 15 | 4 | 73 |
|  | 17 | 5 | 66 |
|  | 14 | 5 | 68 |
|  | 12 | 10 | 24 |
|  | 10 | 11 | 23 |
|  | 14 | 12 | 25 |
|  | 14 | 12 | 22 |
|  | 15 | 14 | 22 |
|  | 12 | 10 | 21 |
|  | 13 | 12 | 70 |
|  | 13 | 11 | 21 |
|  | 10 | 10 | 21 |
|  | 12 | 4 | 76 |
|  | 12 | 3 | 72 |
|  | 12 | 4 | 66 |
| 10 | 16 | 3 | 17 |
| 7 | 13 | 4 | 21 |
| 8 | 18 | 3 | 15 |
| 7 | 14 | 4 | 17 |
| Разрез 64 | | | |
| Гравелит | Песчаник | Алевролит | Аргиллит |
|  | 24 | 3 | 73 |
|  | 23 | 3 | 70 |
|  | 23 | 5 | 73 |
|  | 20 | 5 | 74 |
|  | 11 | 11 | 21 |
|  | 12 | 9 | 24 |
|  | 13 | 12 | 20 |
|  | 12 | 13 | 23 |
|  | 11 | 10 | 75 |
|  | 11 | 11 | 23 |
|  | 12 | 11 | 24 |
|  | 13 | 12 | 20 |
|  | 13 | 4 | 70 |
|  | 13 | 4 | 63 |
|  | 12 | 4 | 72 |
|  | 13 | 5 | 76 |
|  | 12 | 11 | 65 |
| 7 | 17 | 4 | 19 |
| 5 | 15 | 4 | 17 |
| 7 | 17 | 3 | 17 |