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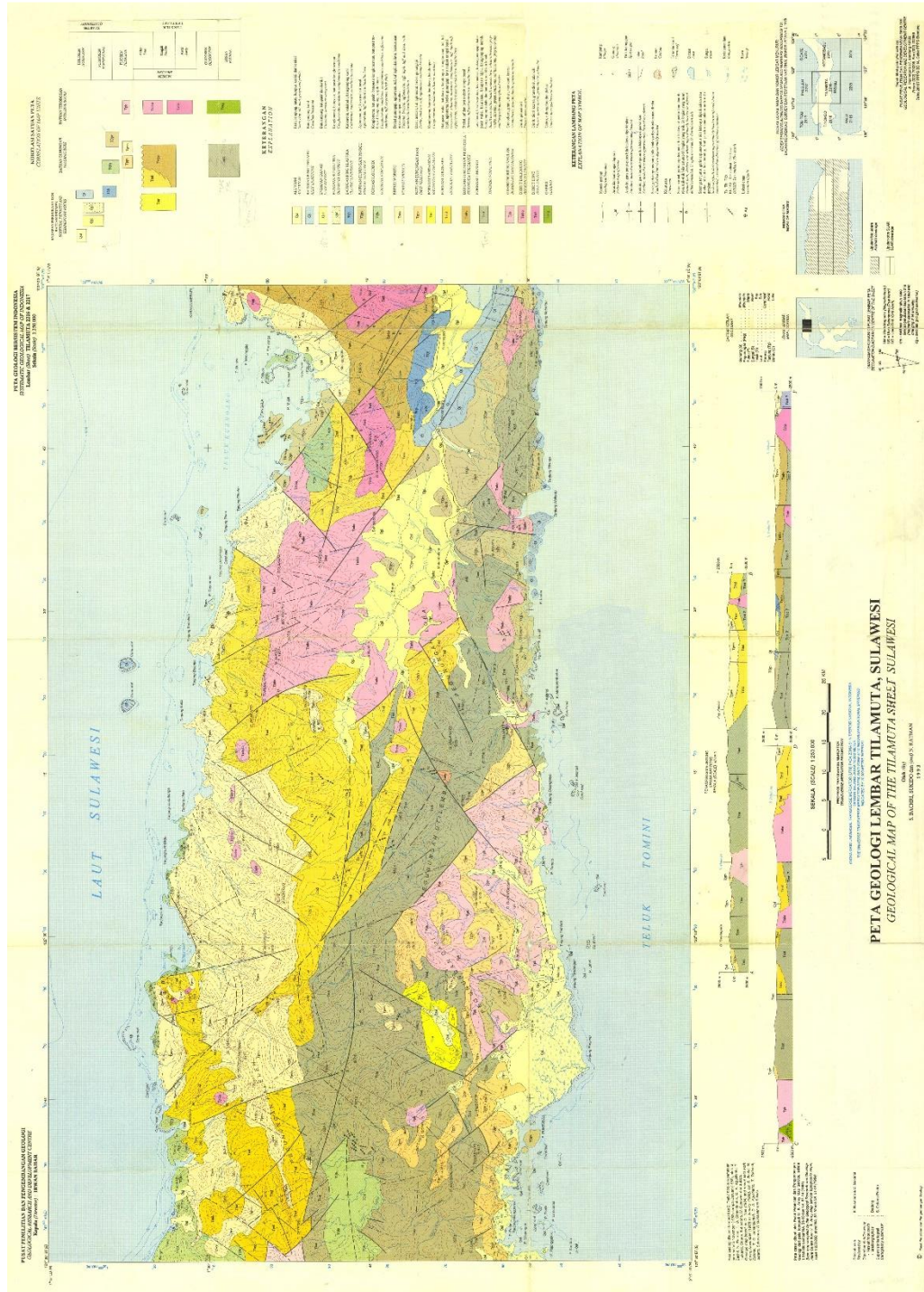
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LAMPIRAN

Lampiran 1. Peta Geologi Lembar Tilamuta



Lampiran 2. Data Geolistrik

A(C1)	B(C2)	M(P1)	N(P2)	K	I(mA)	V(mV)	R(Ohm)	R0
1	4	2	3	25.1327	735.6642	173.0113	0.235177	5.910635
1	7	3	5	50.2655	400.3592	66.28428	0.165562	8.322058
1	10	4	7	75.3982	506.5718	56.45976	0.111455	8.40348
1	13	5	9	100.531	354.2837	31.26318	0.088243	8.871199
1	16	6	11	125.6637	624.9476	47.87194	0.076602	9.626035
1	19	7	13	150.7964	784.6814	55.31755	0.070497	10.63067
1	22	8	15	175.9292	632.6448	41.23777	0.065183	11.46762
1	25	9	17	201.0619	378.0056	24.22578	0.064088	12.88574
1	28	10	19	226.1947	432.0958	25.2822	0.058511	13.2348
1	31	11	21	251.3274	768.936	43.69923	0.056831	14.28313
1	34	12	23	276.4602	107.0184	6.319532	0.059051	16.32487
1	37	13	25	301.5929	39.46739	2.35878	0.059765	18.02486
1	40	14	27	326.7256	33.37546	2.055753	0.061595	20.12421
1	43	15	29	351.8584	51.03039	3.150994	0.061747	21.72634
1	46	16	31	376.9911	71.16669	4.18607	0.058821	22.17481
1	49	17	33	402.124	47.70946	3.170439	0.066453	26.72239
1	52	18	35	427.2564	461.6054	25.68794	0.055649	23.77646
1	55	19	37	452.3892	107.3476	5.960909	0.055529	25.12086
1	58	20	39	477.522	276.9545	14.65858	0.052928	25.27417
2	5	3	4	25.1327	316.8198	116.6755	0.368271	9.255637
2	8	4	6	50.2655	361.3476	61.00948	0.168839	8.486764
2	11	5	8	75.3982	260.1626	29.62341	0.113865	8.585232
2	14	6	10	100.531	318.1689	28.47146	0.089485	8.996052
2	17	7	12	125.6637	459.2924	34.62758	0.075393	9.474212
2	20	8	14	150.7964	438.7349	31.25152	0.071231	10.74137
2	23	9	16	175.9292	295.3408	19.72802	0.066797	11.75163
2	26	10	18	201.0619	277.2	17.30891	0.062442	12.55467
2	29	11	20	226.1947	456.9814	27.25264	0.059636	13.4894
2	32	12	22	251.3274	218.5661	12.93497	0.059181	14.87382
2	35	13	24	276.4602	42.81792	2.581995	0.060302	16.67095
2	38	14	26	301.5929	28.88397	1.724428	0.059702	18.00576
2	41	15	28	326.7256	43.27686	2.663559	0.061547	20.10898
2	44	16	30	351.8584	49.82399	3.150681	0.063236	22.25032
2	47	17	32	376.9911	158.3741	9.26462	0.058498	22.05331
2	50	18	34	402.124	510.6838	29.18909	0.057157	22.98415

2	53	19	36	427.2564	372.4346	20.80315	0.055857	23.86536
2	56	20	38	452.3892	127.9411	7.725411	0.060383	27.31637
2	59	21	40	477.522	101.4818	5.559477	0.054783	26.16028
3	6	4	5	25.1327	560.3084	177.0744	0.31603	7.942694
3	9	5	7	50.2655	476.7422	70.83198	0.148575	7.468194
3	12	6	9	75.3982	375.1817	40.12232	0.106941	8.063167
3	15	7	11	100.531	350.6335	31.38739	0.089516	8.999154
3	18	8	13	125.6637	545.2523	41.29258	0.075731	9.516656
3	21	9	15	150.7964	516.4826	36.4447	0.070563	10.64069
3	24	10	17	175.9292	280.7185	18.98794	0.06764	11.89994
3	27	11	19	201.0619	118.0475	7.148442	0.060556	12.17543
3	30	12	21	226.1947	220.1422	12.93861	0.058774	13.29434
3	33	13	23	251.3274	41.95695	2.509682	0.059816	15.03328
3	36	14	25	276.4602	33.88804	2.066552	0.060982	16.85908
3	39	15	27	301.5929	93.64707	5.793067	0.061861	18.65669
3	42	16	29	326.7256	68.23479	4.134202	0.060588	19.79561
3	45	17	31	351.8584	185.2172	11.04588	0.059637	20.98394
3	48	18	33	376.9911	276.4775	16.32625	0.059051	22.26167
3	51	19	35	402.124	550.0674	31.36637	0.057023	22.93023
3	54	20	37	427.2564	270.9259	15.03171	0.055483	23.70535
3	57	21	39	452.3892	175.888	9.659462	0.054918	24.84443
3	60	22	41	477.522	64.65791	3.480538	0.05383	25.70479
4	7	5	6	25.1327	378.6404	136.4063	0.360253	9.054134
4	10	6	8	50.2655	467.389	72.43545	0.154979	7.790092
4	13	7	10	75.3982	339.4599	38.55992	0.113592	8.564618
4	16	8	12	100.531	574.7731	51.25112	0.089168	8.964108
4	19	9	14	125.6637	706.3439	55.73399	0.078905	9.915482
4	22	10	16	150.7964	581.2146	41.23173	0.070941	10.69759
4	25	11	18	175.9292	358.7887	23.60971	0.065804	11.57683
4	28	12	20	201.0619	407.8286	25.33367	0.062118	12.48965
4	31	13	22	226.1947	694.1694	41.76684	0.060168	13.6097
4	34	14	24	251.3274	104.8683	6.560719	0.062561	15.72341
4	37	15	26	276.4602	39.25041	2.532557	0.064523	17.83817
4	40	16	28	301.5929	33.12838	2.081389	0.062828	18.94826
4	43	17	30	326.7256	50.58372	3.172023	0.062708	20.48845
4	46	18	32	351.8584	70.40216	4.27624	0.06074	21.37195
4	49	19	34	376.9911	47.35045	2.904166	0.061333	23.12219
4	52	20	36	402.124	433.601	24.51056	0.056528	22.73122

4	55	21	38	427.2564	105.3987	6.372441	0.06046	25.83206
4	58	22	40	452.3892	265.994	14.28231	0.053694	24.29061
5	8	6	7	25.1327	229.8976	78.69352	0.342298	8.602878
5	11	7	9	50.2655	181.9053	30.2485	0.166287	8.358489
5	14	8	11	75.3982	213.1408	23.91792	0.112217	8.460926
5	17	9	13	100.531	266.4338	23.63224	0.088698	8.91693
5	20	10	15	125.6637	259.8828	20.34049	0.078268	9.835436
5	23	11	17	150.7964	201.7229	15.28527	0.075774	11.42639
5	26	12	19	175.9292	191.4914	12.49711	0.065262	11.48145
5	29	13	21	201.0619	266.7037	16.35753	0.061332	12.33157
5	32	14	23	226.1947	162.2466	9.996716	0.061614	13.93684
5	35	15	25	251.3274	40.10226	2.536281	0.063245	15.89533
5	38	16	27	276.4602	27.65183	1.788682	0.064686	17.88263
5	41	17	29	301.5929	40.47593	2.555078	0.063126	19.03833
5	44	18	31	326.7256	46.84937	3.013956	0.064333	21.01923
5	47	19	33	351.8584	126.7749	7.860009	0.062	21.81513
5	50	20	35	376.9911	284.9402	16.50439	0.057922	21.83619
5	53	21	37	402.124	235.3438	13.20771	0.056121	22.56758
5	56	22	39	427.2564	106.5393	5.954879	0.055894	23.88095
5	59	23	41	452.3892	87.24053	4.779467	0.054785	24.78427
6	9	7	8	25.1327	473.5847	190.4253	0.402093	10.10569
6	12	8	10	50.2655	367.1506	64.1788	0.174802	8.786528
6	15	9	12	75.3982	348.1708	41.27589	0.118551	8.938368
6	18	10	14	100.531	539.0945	48.68235	0.090304	9.078344
6	21	11	16	125.6637	511.7167	41.13795	0.080392	10.10236
6	24	12	18	150.7964	278.9697	20.46853	0.073372	11.06421
6	27	13	20	175.9292	117.758	7.805739	0.066286	11.6617
6	30	14	22	201.0619	219.2376	13.55081	0.061809	12.42741
6	33	15	24	226.1947	41.84272	2.748574	0.065688	14.85795
6	36	16	26	251.3274	34.69014	2.261439	0.06519	16.38396
6	39	17	28	276.4602	93.43007	5.892619	0.06307	17.43629
6	42	18	30	301.5929	68.0897	4.312929	0.063342	19.10346
6	45	19	32	326.7256	184.428	11.30335	0.061289	20.02458
6	48	20	34	351.8584	274.4735	16.52622	0.060211	21.18561
6	51	21	36	376.9911	542.9397	31.2987	0.057647	21.7323
6	54	22	38	402.124	269.3555	15.70915	0.058321	23.45236
6	57	23	40	427.2564	175.0481	10.0558	0.057446	24.54414
6	60	24	42	452.3892	64.76715	3.671391	0.056686	25.64419

7	10	8	9	25.1327	305.2227	114.1551	0.374006	9.399782
7	13	9	11	50.2655	242.3229	40.65198	0.16776	8.432515
7	16	10	13	75.3982	353.1782	40.54298	0.114795	8.655332
7	19	11	15	100.531	393.2807	35.64415	0.090633	9.111407
7	22	12	17	125.6637	351.7369	30.01739	0.08534	10.72419
7	25	13	19	150.7964	255.1455	17.91737	0.070224	10.58954
7	28	14	21	175.9292	279.7372	18.18796	0.065018	11.43857
7	31	15	23	201.0619	390.1621	24.99741	0.064069	12.88189
7	34	16	25	226.1947	92.74444	6.249976	0.067389	15.24297
7	37	17	27	251.3274	37.59562	2.520487	0.067042	16.84961
7	40	18	29	276.4602	31.27947	1.997061	0.063846	17.65116
7	43	19	31	301.5929	47.70715	3.108202	0.065152	19.64927
7	46	20	33	326.7256	64.97501	4.802072	0.073906	24.14715
7	49	21	35	351.8584	44.87259	3.752402	0.083623	29.42364
7	52	22	37	376.9911	291.1684	16.67642	0.057274	21.59188
7	55	23	39	402.124	93.73718	5.520532	0.058894	23.6826
7	58	24	41	427.2564	204.1595	11.21059	0.054911	23.46106
8	11	9	10	25.1327	196.7366	87.46261	0.444567	11.17314
8	14	10	12	50.2655	230.6092	38.02714	0.164899	8.288713
8	17	11	14	75.3982	297.585	33.61088	0.112945	8.515807
8	20	12	16	100.531	289.3993	27.03453	0.093416	9.391205
8	23	13	18	125.6637	219.194	17.87555	0.081551	10.24803
8	26	14	20	150.7964	207.266	14.83048	0.071553	10.78986
8	29	15	22	175.9292	297.7278	20.09044	0.067479	11.87156
8	32	16	24	201.0619	173.286	11.58675	0.066865	13.44398
8	35	17	26	226.1947	40.74387	2.684448	0.065886	14.90305
8	38	18	28	251.3274	27.95609	1.862704	0.06663	16.74584
8	41	19	30	276.4602	41.14644	2.725122	0.06623	18.30992
8	44	20	32	301.5929	47.72657	3.220832	0.067485	20.35299
8	47	21	34	326.7256	133.5432	8.617494	0.06453	21.08351
8	50	22	36	351.8584	320.3669	18.8831	0.058942	20.73926
8	53	23	38	376.9911	259.1878	15.73835	0.060722	22.89157
8	56	24	40	402.124	111.241	7.189422	0.064629	25.98891
8	59	25	42	427.2564	90.48798	5.497348	0.060752	25.95672
9	12	10	11	25.1327	330.1208	144.0638	0.436397	10.96784
9	15	11	13	50.2655	313.8812	54.84598	0.174735	8.783128
9	18	12	15	75.3982	461.8497	53.57252	0.115996	8.74582
9	21	13	17	100.531	441.7934	45.41674	0.102801	10.33467

9	24	14	19	125.6637	256.8809	20.24973	0.078829	9.905963
9	27	15	21	150.7964	113.088	8.143806	0.072013	10.8593
9	30	16	23	175.9292	204.0241	13.94421	0.068346	12.02403
9	33	17	25	201.0619	41.18766	2.80552	0.068116	13.69556
9	36	18	27	226.1947	33.62984	2.326455	0.069178	15.64771
9	39	19	29	251.3274	90.38702	6.110608	0.067605	16.99101
9	42	20	31	276.4602	66.46429	4.345326	0.065378	18.07451
9	45	21	33	301.5929	173.6641	12.25855	0.070588	21.28878
9	48	22	35	326.7256	252.3996	15.98623	0.063337	20.6938
9	51	23	37	351.8584	465.693	26.90433	0.057773	20.3278
9	54	24	39	376.9911	248.5896	14.08582	0.056663	21.36143
9	57	25	41	402.124	165.3521	9.794551	0.059235	23.81962
9	60	26	43	427.2564	63.54341	4.076608	0.064155	27.41096
10	13	11	12	25.1327	277.0325	119.569	0.431606	10.84742
10	16	12	14	50.2655	422.1839	76.9971	0.182378	9.167331
10	19	13	16	75.3982	496.7646	58.21526	0.117189	8.835835
10	22	14	18	100.531	426.924	42.04777	0.09849	9.901301
10	25	15	20	125.6637	292.7951	23.94904	0.081795	10.2786
10	28	16	22	150.7964	325.524	23.78252	0.073059	11.01706
10	31	17	24	175.9292	485.0987	32.99763	0.068023	11.96715
10	34	18	26	201.0619	97.51526	6.959668	0.07137	14.3498
10	37	19	28	226.1947	38.38538	2.728284	0.071076	16.07707
10	40	20	30	251.3274	32.42361	2.219228	0.068445	17.20217
10	43	21	32	276.4602	48.91406	3.60282	0.073656	20.36298
10	46	22	34	301.5929	67.35539	4.814353	0.071477	21.55692
10	49	23	36	326.7256	45.98372	3.942953	0.085747	28.01574
10	52	24	38	351.8584	341.0484	19.65278	0.057625	20.27573
10	55	25	40	376.9911	98.35269	6.303711	0.064093	24.16249
10	58	26	42	402.124	227.3265	11.99672	0.052773	21.22131
11	14	12	13	25.1327	181.0674	82.74946	0.457009	11.48598
11	17	13	15	50.2655	219.6932	33.89604	0.154288	7.755342
11	20	14	17	75.3982	216.0614	29.26909	0.135467	10.21394
11	23	15	19	100.531	175.1553	17.35424	0.099079	9.960528
11	26	16	21	125.6637	166.9013	13.54967	0.081184	10.20182
11	29	17	23	150.7964	222.2489	16.00354	0.072007	10.85835
11	32	18	25	175.9292	145.313	10.45126	0.071922	12.65326
11	35	19	27	201.0619	38.88089	2.805507	0.072156	14.50781
11	38	20	29	226.1947	27.04512	1.851669	0.068466	15.48679

11	41	21	31	251.3274	39.20602	2.688446	0.068572	17.23409
11	44	22	33	276.4602	45.01169	3.820941	0.084888	23.46778
11	47	23	35	301.5929	115.8904	7.438773	0.064188	19.35854
11	50	24	37	326.7256	233.9436	13.65042	0.058349	19.06402
11	53	25	39	351.8584	200.5522	11.26408	0.056165	19.76217
11	56	26	41	376.9911	99.28859	5.529381	0.05569	20.99464
11	59	27	43	402.124	82.22835	4.448256	0.054096	21.75356
12	15	13	14	25.1327	264.4564	111.7608	0.422606	10.62121
12	18	14	16	50.2655	360.8715	58.44493	0.161955	8.14075
12	21	15	18	75.3982	348.6373	47.09652	0.135087	10.18531
12	24	16	20	100.531	222.2916	21.59617	0.097152	9.76683
12	27	17	22	125.6637	105.4458	8.340531	0.079098	9.939719
12	30	18	24	150.7964	180.6692	13.65117	0.075559	11.39398
12	33	19	26	175.9292	40.1124	3.06307	0.076362	13.43382
12	36	20	28	201.0619	33.04252	2.364261	0.071552	14.3864
12	39	21	30	226.1947	85.5685	6.087378	0.07114	16.09159
12	42	22	32	251.3274	63.80952	4.631091	0.072577	18.24053
12	45	23	34	276.4602	156.9919	9.852583	0.062759	17.35027
12	48	24	36	301.5929	218.8377	13.09744	0.05985	18.05033
12	51	25	38	326.7256	363.3406	20.51531	0.056463	18.44794
12	54	26	40	351.8584	216.2742	11.94413	0.055227	19.43203
12	57	27	42	376.9911	150.0059	7.924561	0.052828	19.91581
12	60	28	44	402.124	61.32457	5.300201	0.086429	34.75449
13	16	14	15	25.1327	311.5515	120.2796	0.386067	9.702894
13	19	15	17	50.2655	347.9226	76.94734	0.221162	11.11677
13	22	16	19	75.3982	315.6965	39.54296	0.125256	9.444097
13	25	17	21	100.531	236.4905	20.80767	0.087985	8.845243
13	28	18	23	125.6637	257.2909	20.83333	0.080972	10.17523
13	31	19	25	150.7964	347.1862	27.63511	0.079597	12.00294
13	34	20	27	175.9292	90.14033	6.934452	0.07693	13.53408
13	37	21	29	201.0619	37.22278	2.758513	0.074108	14.90035
13	40	22	31	226.1947	31.55782	2.281905	0.072309	16.35585
13	43	23	33	251.3274	46.9481	4.643095	0.098898	24.8559
13	46	24	35	276.4602	63.77904	4.193068	0.065744	18.17551
13	49	25	37	301.5929	44.26228	2.852897	0.064454	19.43893
13	52	26	39	326.7256	266.538	14.80194	0.055534	18.14435
13	55	27	41	351.8584	91.13858	5.144884	0.056451	19.86285
13	58	28	43	376.9911	192.3906	9.867611	0.051289	19.33578

14	17	15	16	25.1327	267.5626	92.12595	0.344316	8.65358
14	20	16	18	50.2655	260.6842	53.24732	0.20426	10.26722
14	23	17	20	75.3982	203.698	24.12207	0.118421	8.928709
14	26	18	22	100.531	191.4848	18.11965	0.094627	9.512924
14	29	19	24	125.6637	267.4481	22.89238	0.085596	10.75626
14	32	20	26	150.7964	162.4479	13.01987	0.080148	12.08602
14	35	21	28	175.9292	40.08067	3.115045	0.077719	13.67314
14	38	22	30	201.0619	27.6291	1.974619	0.071469	14.36991
14	41	23	32	226.1947	40.46236	2.88711	0.071353	16.13967
14	44	24	34	251.3274	46.65344	3.178949	0.06814	17.12558
14	47	25	36	276.4602	127.09	7.649907	0.060193	16.64095
14	50	26	38	301.5929	285.4242	16.33263	0.057222	17.25785
14	53	27	40	326.7256	235.713	13.03976	0.05532	18.07461
14	56	28	42	351.8584	106.8364	5.77078	0.054015	19.00567
14	59	29	44	376.9911	87.42201	4.681999	0.053556	20.19032
15	18	16	17	25.1327	341.9925	180.7782	0.528603	13.28523
15	21	17	19	50.2655	330.4534	58.24546	0.176259	8.859752
15	24	18	21	75.3982	216.6845	25.17647	0.11619	8.760484
15	27	19	23	100.531	104.2358	10.48367	0.100576	10.11106
15	30	20	25	125.6637	176.0212	15.60413	0.088649	11.13996
15	33	21	27	150.7964	40.07296	3.432679	0.085661	12.91733
15	36	22	29	175.9292	32.96079	2.556729	0.077569	13.64662
15	39	23	31	201.0619	84.8124	6.130934	0.072288	14.53441
15	42	24	33	226.1947	63.36901	4.504282	0.07108	16.07796
15	45	25	35	251.3274	153.7984	9.469757	0.061573	15.47487
15	48	26	37	276.4602	212.1663	12.53646	0.059088	16.33544
15	51	27	39	301.5929	343.8034	19.55779	0.056887	17.15654
15	54	28	41	326.7256	210.5937	11.47514	0.054489	17.80311
15	57	29	43	351.8584	147.5596	7.681036	0.052054	18.31557
15	60	30	45	376.9911	61.10086	3.356624	0.054936	20.71066
16	19	17	18	25.1327	610.0803	244.8197	0.401291	10.08553
16	22	18	20	50.2655	514.0128	104.6558	0.203606	10.23434
16	25	19	22	75.3982	335.6945	41.96823	0.125019	9.426228
16	28	20	24	100.531	374.0242	37.63807	0.10063	10.11644
16	31	21	26	125.6637	599.2191	54.32503	0.09066	11.39263
16	34	22	28	150.7964	101.6386	8.734543	0.085937	12.95909
16	37	23	30	175.9292	39.04451	3.045422	0.077999	13.72222
16	40	24	32	201.0619	32.77002	2.365868	0.072196	14.51608

16	43	25	34	226.1947	49.8974	3.360805	0.067354	15.23517
16	46	26	36	251.3274	69.416	4.380612	0.063107	15.86042
16	49	27	38	276.4602	46.8576	3.840924	0.08197	22.66149
16	52	28	40	301.5929	394.2655	21.50781	0.054552	16.45239
16	55	29	42	326.7256	102.0013	5.57926	0.054698	17.87127
16	58	30	44	351.8584	249.493	12.89591	0.051688	18.18706
17	20	18	19	25.1327	348.8243	200.9365	0.576039	14.47744
17	23	19	21	50.2655	251.3903	61.63767	0.245187	12.32446
17	26	20	23	75.3982	236.5389	31.99238	0.135252	10.19776
17	29	21	25	100.531	359.6975	40.48101	0.112542	11.31394
17	32	22	27	125.6637	193.2371	18.32471	0.09483	11.91671
17	35	23	29	150.7964	41.74048	3.616059	0.086632	13.06384
17	38	24	31	175.9292	28.16703	2.118369	0.075207	13.23104
17	41	25	33	201.0619	42.1716	3.213876	0.076209	15.32282
17	44	26	35	226.1947	48.94602	3.389643	0.069253	15.66471
17	47	27	37	251.3274	145.3636	8.954842	0.061603	15.4825
17	50	28	39	276.4602	391.7097	22.26491	0.05684	15.7141
17	53	29	41	301.5929	304.3466	16.53489	0.054329	16.38528
17	56	30	43	326.7256	119.5562	6.771418	0.056638	18.50508
17	59	31	45	351.8584	96.42748	5.067254	0.05255	18.49017
18	21	19	20	25.1327	499.5333	458.3139	0.917484	23.05887
18	24	20	22	50.2655	275.5959	65.78546	0.238703	11.9985
18	27	21	24	75.3982	116.287	16.75664	0.144097	10.86467
18	30	22	26	100.531	215.7067	23.50421	0.108964	10.95424
18	33	23	28	125.6637	41.73303	4.029482	0.096554	12.13322
18	36	24	30	150.7964	34.1596	2.821201	0.082589	12.45414
18	39	25	32	175.9292	92.90991	6.818115	0.073384	12.91041
18	42	26	34	201.0619	67.77944	4.645255	0.068535	13.77975
18	45	27	36	226.1947	182.2864	11.48599	0.063011	14.25268
18	48	28	38	251.3274	269.9635	16.09026	0.059602	14.97952
18	51	29	40	276.4602	529.7554	29.55119	0.055783	15.4217
18	54	30	42	301.5929	265.6155	14.50551	0.054611	16.47026
18	57	31	44	326.7256	172.4149	9.616866	0.055777	18.22396
18	60	32	46	351.8584	65.17745	3.580439	0.054934	19.32885
19	22	20	21	25.1327	618.3398	613.7229	0.992533	24.94505
19	25	21	23	50.2655	372.8202	82.37235	0.220944	11.10586
19	28	22	25	75.3982	425.5041	58.3882	0.137221	10.34619
19	31	23	27	100.531	746.6301	80.09325	0.107273	10.78426

19	34	24	29	125.6637	105.1157	9.872028	0.093916	11.80185
19	37	25	31	150.7964	39.80014	3.221317	0.080937	12.20508
19	40	26	33	175.9292	32.69183	2.523546	0.077192	13.58025
19	43	27	35	201.0619	50.6453	3.470037	0.068516	13.77605
19	46	28	37	226.1947	70.95953	4.517394	0.063662	14.39993
19	49	29	39	251.3274	47.51237	2.832899	0.059624	14.98524
19	52	30	41	276.4602	452.2147	25.03421	0.055359	15.30459
19	55	31	43	301.5929	105.558	5.835885	0.055286	16.6739
19	58	32	45	326.7256	272.0842	14.83559	0.054526	17.81496
20	23	21	22	25.1327	246.0309	547.2358	2.224256	55.90163
20	26	22	24	50.2655	230.8675	53.34226	0.231051	11.6139
20	29	23	26	75.3982	348.4143	48.66301	0.13967	10.53085
20	32	24	28	100.531	189.7629	20.7479	0.109336	10.99165
20	35	25	30	125.6637	41.57533	3.727366	0.089653	11.26617
20	38	26	32	150.7964	28.33629	2.269516	0.080092	12.07762
20	41	27	34	175.9292	42.03465	3.015799	0.071746	12.62213
20	44	28	36	201.0619	48.66723	3.308014	0.067972	13.66681
20	47	29	38	226.1947	143.3568	8.931621	0.062303	14.09271
20	50	30	40	251.3274	378.2042	22.07403	0.058365	14.66882
20	53	31	42	276.4602	295.9396	16.39128	0.055387	15.31237
20	56	32	44	301.5929	118.2641	6.664581	0.056353	16.99576
20	59	33	46	326.7256	95.13371	5.320726	0.055929	18.27351
21	24	22	23	25.1327	268.6466	484.0574	1.801837	45.28504
21	27	23	25	50.2655	114.9995	28.12015	0.244524	12.29112
21	30	24	27	75.3982	209.8072	27.8402	0.132694	10.00492
21	33	25	29	100.531	41.42836	4.398308	0.106167	10.673
21	36	26	31	125.6637	34.03912	2.980262	0.087554	11.00238
21	39	27	33	150.7964	91.91279	7.189461	0.07822	11.79537
21	42	28	35	175.9292	67.24899	4.688614	0.06972	12.26582
21	45	29	37	201.0619	178.8476	11.28129	0.063078	12.68251
21	48	30	39	226.1947	262.4542	15.81956	0.060276	13.634
21	51	31	41	251.3274	502.4849	28.49508	0.056708	14.25236
21	54	32	43	276.4602	258.5211	14.45192	0.055902	15.45475
21	57	33	45	301.5929	168.6844	9.314578	0.055219	16.65363
21	60	34	47	326.7256	64.43574	3.680951	0.057126	18.66411
22	25	23	24	25.1327	336.0215	712.335	2.119909	53.27906
22	28	24	26	50.2655	378.7167	85.65466	0.226171	11.36859
22	31	25	28	75.3982	608.3641	81.72519	0.134336	10.12856

22	34	26	30	100.531	101.7052	10.60734	0.104295	10.48492
22	37	27	32	125.6637	39.10938	3.362999	0.08599	10.80575
22	40	28	34	150.7964	32.77618	2.512177	0.076646	11.558
22	43	29	36	175.9292	49.87063	3.50637	0.070309	12.36947
22	46	30	38	201.0619	69.50149	4.923376	0.070838	14.2429
22	49	31	40	226.1947	46.84575	2.959474	0.063175	14.28981
22	52	32	42	251.3274	397.9466	22.83084	0.057372	14.41906
22	55	33	44	276.4602	102.3116	5.741436	0.056117	15.51416
22	58	34	46	301.5929	251.6803	14.30336	0.056831	17.13998
23	26	24	25	25.1327	183.2126	283.3987	1.54683	38.8759
23	29	25	27	50.2655	251.3487	49.41761	0.19661	9.882688
23	32	26	29	75.3982	157.8523	21.099	0.133663	10.07795
23	35	27	31	100.531	39.73048	4.018182	0.101136	10.16731
23	38	28	33	125.6637	27.42258	2.481515	0.090492	11.37149
23	41	29	35	150.7964	40.09525	3.072035	0.076618	11.55378
23	44	30	37	175.9292	46.04106	3.240261	0.070378	12.38141
23	47	31	39	201.0619	123.9509	7.724241	0.062317	12.52957
23	50	32	41	226.1947	266.8081	15.92594	0.059691	13.5017
23	53	33	43	251.3274	223.1266	12.92815	0.057941	14.56213
23	56	34	45	276.4602	104.8132	6.107316	0.058269	16.10895
23	59	35	47	301.5929	86.07534	4.656526	0.054098	16.31554
24	27	25	26	25.1327	96.48154	105.6265	1.094785	27.5149
24	30	26	28	50.2655	155.6784	34.31046	0.220393	11.07815
24	33	27	30	75.3982	38.6872	5.150458	0.133131	10.03779
24	36	28	32	100.531	32.31742	3.145095	0.097319	9.783582
24	39	29	34	125.6637	79.78325	6.50783	0.081569	10.25024
24	42	30	36	150.7964	60.47035	4.644197	0.076801	11.58135
24	45	31	38	175.9292	138.5525	9.226401	0.066591	11.71536
24	48	32	40	201.0619	184.2896	11.6051	0.062972	12.66129
24	51	33	42	226.1947	277.2612	16.66077	0.060091	13.59212
24	54	34	44	251.3274	183.5635	11.06561	0.060282	15.15056
24	57	35	46	276.4602	133.2882	7.792437	0.058463	16.1627
24	60	36	48	301.5929	59.30705	3.253413	0.054857	16.54434
25	28	26	27	25.1327	269.9842	257.0064	0.951931	23.92462
25	31	27	29	50.2655	368.9245	78.44106	0.212621	10.68749
25	34	28	31	75.3982	90.98122	11.71991	0.128817	9.712593
25	37	29	33	100.531	37.52936	4.082122	0.108771	10.93491
25	40	30	35	125.6637	31.54882	2.778715	0.088077	11.06789

25	43	31	37	150.7964	47.1447	3.605017	0.076467	11.531
25	46	32	39	175.9292	64.40044	4.401466	0.068345	12.02393
25	49	33	41	201.0619	44.5008	2.60956	0.058641	11.79043
25	52	34	43	226.1947	278.9574	16.79111	0.060192	13.6152
25	55	35	45	251.3274	92.11087	5.481105	0.059506	14.95535
25	58	36	47	276.4602	198.1325	11.58829	0.058488	16.16946
26	29	27	28	25.1327	235.003	246.2659	1.047927	26.33731
26	32	28	30	50.2655	149.4798	27.40015	0.183303	9.213818
26	35	29	32	75.3982	38.99849	4.686058	0.12016	9.05986
26	38	30	34	100.531	27.06405	2.634097	0.097328	9.784501
26	41	31	36	125.6637	39.38147	3.32215	0.084358	10.60077
26	44	32	38	150.7964	45.06057	3.701253	0.08214	12.38629
26	47	33	40	175.9292	118.8731	7.647928	0.064337	11.31863
26	50	34	42	201.0619	248.3505	15.78721	0.063568	12.78079
26	53	35	44	226.1947	211.2663	12.88231	0.060977	13.79258
26	56	36	46	251.3274	102.2845	6.502499	0.063573	15.9776
26	59	37	48	276.4602	83.99961	4.86171	0.057878	16.00093
27	30	28	29	25.1327	85.89278	107.6094	1.252834	31.48714
27	33	29	31	50.2655	32.20353	6.166142	0.191474	9.62451
27	36	30	33	75.3982	27.97509	3.560657	0.12728	9.596652
27	39	31	35	100.531	56.67478	5.364642	0.094657	9.51587
27	42	32	37	125.6637	46.24934	3.644676	0.078805	9.90293
27	45	33	39	150.7964	81.41988	5.23114	0.064249	9.688417
27	48	34	41	175.9292	95.88882	6.460336	0.067373	11.85262
27	51	35	43	201.0619	117.3431	7.49565	0.063878	12.84336
27	54	36	45	226.1947	97.34101	6.381018	0.065553	14.82782
27	57	37	47	251.3274	81.19772	4.990359	0.061459	15.44645
27	60	38	49	276.4602	45.35543	2.680508	0.0591	16.33891
28	31	29	30	25.1327	423.4287	285.9337	0.675282	16.97166
28	34	30	32	50.2655	94.07028	19.59337	0.208284	10.4695
28	37	31	34	75.3982	38.13472	4.698441	0.123206	9.289542
28	40	32	36	100.531	31.93098	3.204783	0.100366	10.08982
28	43	33	38	125.6637	48.02775	2.731464	0.056873	7.146823
28	46	34	40	150.7964	66.0497	4.327628	0.065521	9.880303
28	49	35	42	175.9292	45.28976	2.164696	0.047797	8.408754
28	52	36	44	201.0619	308.7431	19.32369	0.062588	12.58414
28	55	37	46	226.1947	95.05033	6.117647	0.064362	14.55838
28	58	38	48	251.3274	212.5385	12.96692	0.06101	15.33342

29	32	30	31	25.1327	193.019	185.1098	0.959024	24.10288
29	35	31	33	50.2655	41.7408	7.888602	0.18899	9.499685
29	38	32	35	75.3982	28.06002	3.595016	0.128119	9.65991
29	41	33	37	100.531	42.09142	4.026	0.095649	9.615686
29	44	34	39	125.6637	48.67584	4.183197	0.08594	10.79946
29	47	35	41	150.7964	145.2404	10.22239	0.070383	10.6134
29	50	36	43	175.9292	391.6897	26.00977	0.066404	11.68242
29	53	37	45	201.0619	303.9808	20.45689	0.067297	13.53079
29	56	38	47	226.1947	119.7229	6.894375	0.057586	13.02567
29	59	39	49	251.3274	95.99834	6.075562	0.063288	15.90596
30	33	31	32	25.1327	36.46921	15.30455	0.419657	10.54701
30	36	32	34	50.2655	30.91066	5.485043	0.177448	8.919527
30	39	33	36	75.3982	72.87372	8.768049	0.120318	9.071793
30	42	34	38	100.531	56.17043	5.693754	0.101366	10.19039
30	45	35	40	125.6637	119.3701	9.464816	0.07929	9.963795
30	48	36	42	150.7964	153.2896	10.99215	0.071708	10.81319
30	51	37	44	175.9292	216.6284	14.04396	0.06483	11.40479
30	54	38	46	201.0619	155.7164	10.14787	0.065169	13.10294
30	57	39	48	226.1947	118.1175	7.584213	0.064209	14.52374
30	60	40	50	251.3274	55.89534	3.339136	0.059739	15.01431
31	34	32	33	25.1327	103.7668	46.23045	0.445523	11.19723
31	37	33	35	50.2655	39.48991	7.100357	0.179802	9.03782
31	40	34	37	75.3982	32.64985	4.136657	0.126698	9.552696
31	43	35	39	100.531	50.2957	4.780164	0.095041	9.554586
31	46	36	41	125.6637	70.56993	5.592207	0.079243	9.958028
31	49	37	43	150.7964	47.30557	3.359977	0.071027	10.71063
31	52	38	45	175.9292	446.2061	30.83223	0.069099	12.15647
31	55	39	47	201.0619	104.4255	6.637513	0.063562	12.77993
31	58	40	49	226.1947	268.5021	17.61222	0.065594	14.83711
32	35	33	34	25.1327	37.62794	14.47894	0.384792	9.670877
32	38	34	36	50.2655	26.39	4.875346	0.184742	9.286145
32	41	35	38	75.3982	38.17904	4.729693	0.123882	9.340472
32	44	36	40	100.531	43.23505	4.458591	0.103124	10.36721
32	47	37	42	125.6637	107.6895	8.350766	0.077545	9.74457
32	50	38	44	150.7964	201.9496	14.2452	0.070538	10.63694
32	53	39	46	175.9292	175.5021	12.25388	0.069822	12.2837
32	56	40	48	201.0619	93.00694	5.356251	0.05759	11.57911
32	59	41	50	226.1947	77.80237	4.960932	0.063763	14.42286

33	36	34	35	25.1327	19.32554	9.083614	0.470032	11.81312
33	39	35	37	50.2655	29.73895	5.273273	0.177319	8.912944
33	42	36	39	75.3982	26.81258	3.227187	0.120361	9.074597
33	45	37	41	100.531	35.69243	3.228024	0.09044	9.091276
33	48	38	43	125.6637	38.54812	2.262439	0.058691	7.375297
33	51	39	45	150.7964	41.86078	3.205935	0.076586	11.54861
33	54	40	47	175.9292	39.23588	2.80846	0.071579	12.59279
33	57	41	49	201.0619	36.45871	2.192369	0.060133	12.09013
33	60	42	51	226.1947	26.60958	1.561184	0.05867	13.27147
34	37	35	36	25.1327	29.32614	13.50459	0.460497	11.57354
34	40	36	38	50.2655	25.44675	4.761409	0.187113	9.405315
34	43	37	40	75.3982	34.77804	4.290195	0.123359	9.301031
34	46	38	42	100.531	43.77799	3.912124	0.089363	8.983648
34	49	39	44	125.6637	33.68874	2.771806	0.082277	10.33921
34	52	40	46	150.7964	93.77458	6.273829	0.066903	10.08668
34	55	41	48	175.9292	56.44724	3.879751	0.068732	12.09194
34	58	42	50	201.0619	83.96858	5.79363	0.068998	13.87237
35	38	36	37	25.1327	17.66477	8.940055	0.506095	12.71956
35	41	37	39	50.2655	22.16086	4.002897	0.180629	9.079414
35	44	38	41	75.3982	23.73301	2.971736	0.125215	9.441017
35	47	39	43	100.531	35.41782	3.328288	0.093972	9.447112
35	50	40	45	125.6637	41.99594	3.817989	0.090913	11.4245
35	53	41	47	150.7964	40.66652	3.108744	0.076445	11.52765
35	56	42	49	175.9292	33.81358	1.818523	0.053781	9.46162
35	59	43	51	201.0619	31.40242	2.195824	0.069925	14.05932
36	39	37	38	25.1327	26.29406	13.67942	0.520247	13.07523
36	42	38	40	50.2655	23.79421	4.463364	0.187582	9.428893
36	45	39	42	75.3982	30.49654	3.713999	0.121784	9.182315
36	48	40	44	100.531	32.26235	2.824326	0.087542	8.800738
36	51	41	46	125.6637	34.35945	2.909255	0.084671	10.64004
36	54	42	48	150.7964	32.39601	2.689114	0.083008	12.51724
36	57	43	50	175.9292	30.42027	2.360515	0.077597	13.65155
36	60	44	52	201.0619	23.7493	1.088508	0.045833	9.215363
37	40	38	39	25.1327	18.46921	10.0096	0.541961	13.62103
37	43	39	41	50.2655	22.80563	4.083367	0.179051	9.000085
37	46	40	43	75.3982	26.28556	3.158888	0.120176	9.061045
37	49	41	45	100.531	22.30138	2.279203	0.1022	10.27427
37	52	42	47	125.6637	38.12521	3.285732	0.086183	10.83004

37	55	43	49	150.7964	29.93518	2.364944	0.079002	11.91324
37	58	44	51	175.9292	36.20727	3.193627	0.088204	15.51767
38	41	39	40	25.1327	17.74823	9.275274	0.522603	13.13443
38	44	40	42	50.2655	18.55746	3.593546	0.193644	9.733616
38	47	41	44	75.3982	25.15817	2.761404	0.109762	8.275723
38	50	42	46	100.531	28.34235	2.707279	0.095521	9.602752
38	53	43	48	125.6637	27.77446	2.54155	0.091507	11.4991
38	56	44	50	150.7964	24.49409	2.15962	0.088169	13.29557
38	59	45	52	175.9292	24.50039	2.206516	0.09006	15.84435
39	42	40	41	25.1327	42.15976	22.9128	0.543476	13.65902
39	45	41	43	50.2655	69.53021	11.65436	0.167616	8.425287
39	48	42	45	75.3982	79.49314	11.00046	0.138382	10.4338
39	51	43	47	100.531	92.96691	9.801374	0.105429	10.59882
39	54	44	49	125.6637	79.55183	7.396717	0.09298	11.68418
39	57	45	51	150.7964	68.31128	5.046106	0.073869	11.13925
39	60	46	53	175.9292	41.78161	3.081187	0.073745	12.97385
40	43	41	42	25.1327	20.28852	10.98114	0.541249	13.60309
40	46	42	44	50.2655	22.95232	3.807958	0.165907	8.339412
40	49	43	46	75.3982	19.89947	2.630169	0.132173	9.965621
40	52	44	48	100.531	31.73534	3.733938	0.117659	11.82819
40	55	45	50	125.6637	25.73314	2.150742	0.083579	10.50276
40	58	46	52	150.7964	30.28141	2.486177	0.082102	12.381
41	44	42	43	25.1327	23.79385	14.28101	0.600198	15.08461
41	47	43	45	50.2655	35.80323	7.66148	0.213988	10.75624
41	50	44	47	75.3982	42.53178	6.115484	0.143786	10.8412
41	53	45	49	100.531	41.09358	3.766523	0.091657	9.21439
41	56	46	51	125.6637	34.13462	2.982762	0.087382	10.98081
41	59	47	53	150.7964	31.67107	2.386728	0.07536	11.36399
42	45	43	44	25.1327	54.30584	26.75251	0.492627	12.38105
42	48	44	46	50.2655	60.12346	12.96777	0.215686	10.84155
42	51	45	48	75.3982	67.75813	7.995499	0.118001	8.897034
42	54	46	50	100.531	60.30645	6.241449	0.103496	10.40451
42	57	47	52	125.6637	53.58221	4.737697	0.088419	11.1111
42	60	48	54	150.7964	35.49253	2.769816	0.078039	11.76805
43	46	44	45	25.1327	30.42673	23.97684	0.788019	19.80502
43	49	45	47	50.2655	25.17329	4.198459	0.166782	8.383397
43	52	46	49	75.3982	48.12008	5.893894	0.122483	9.235001
43	55	47	51	100.531	35.6348	3.690327	0.10356	10.41097

43	58	48	53	125.6637	45.12634	3.942608	0.087368	10.97913
44	47	45	46	25.1327	39.82417	19.22475	0.482741	12.13223
44	50	46	48	50.2655	49.03619	8.92009	0.181908	9.143377
44	53	47	50	75.3982	46.62623	5.699466	0.122237	9.21578
44	56	48	52	100.531	38.77446	4.018095	0.103627	10.41783
44	59	49	54	125.6637	35.72126	3.31516	0.092806	11.66249
45	48	46	47	25.1327	137.1596	88.55219	0.645614	16.22604
45	51	47	49	50.2655	182.9247	36.89328	0.201686	10.13783
45	54	48	51	75.3982	136.9353	18.46735	0.134862	10.16836
45	57	49	53	100.531	106.3919	11.39943	0.107146	10.77147
45	60	50	55	125.6637	53.2703	4.883684	0.091677	11.52059
46	49	47	48	25.1327	29.39462	14.22241	0.483844	12.16031
46	52	48	50	50.2655	66.49934	12.09365	0.181861	9.141348
46	55	49	52	75.3982	44.80723	6.027378	0.134518	10.14241
46	58	50	54	100.531	60.80588	6.311713	0.103801	10.43522
47	50	48	49	25.1327	150.7414	69.5881	0.461639	11.60223
47	53	49	51	50.2655	135.505	25.79738	0.19038	9.569518
47	56	50	53	75.3982	80.85135	10.67645	0.13205	9.956352
47	59	51	55	100.531	69.0402	7.430628	0.107628	10.81984
48	51	49	50	25.1327	270.903	122.7526	0.453124	11.38823
48	54	50	52	50.2655	180.3741	35.14209	0.194829	9.79317
48	57	51	54	75.3982	130.9742	17.45669	0.133283	10.04933
48	60	52	56	100.531	59.00444	6.215299	0.105336	10.5895
49	52	50	51	25.1327	45.31727	18.58999	0.410219	10.30991
49	55	51	53	50.2655	34.10519	6.560854	0.192371	9.669636
49	58	52	55	75.3982	42.67595	5.661046	0.132652	10.00172
50	53	51	52	25.1327	326.8523	157.0076	0.480363	12.07282
50	56	52	54	50.2655	123.3396	22.8061	0.184905	9.29434
50	59	53	56	75.3982	98.28458	13.07653	0.133048	10.03156
51	54	52	53	25.1327	267.8659	113.7357	0.424599	10.67133
51	57	53	55	50.2655	171.8638	33.98356	0.197735	9.939271
51	60	54	57	75.3982	65.93639	8.958113	0.13586	10.24366
52	55	53	54	25.1327	95.44737	43.48875	0.455631	11.45122
52	58	54	56	50.2655	218.0166	44.08379	0.202204	10.16388
53	56	54	55	25.1327	112.6187	55.47549	0.492596	12.38026
53	59	55	57	50.2655	91.29179	17.61877	0.192994	9.700967
54	57	55	56	25.1327	130.4973	60.32343	0.462258	11.61779
54	60	56	58	50.2655	58.93911	11.89534	0.201824	10.1448

55	58	56	57	25.1327	84.0704	43.60136	0.518629	13.03454
56	59	57	58	25.1327	62.6273	33.57674	0.536136	13.47453
57	60	58	59	25.1327	52.42067	29.66111	0.565829	14.2208

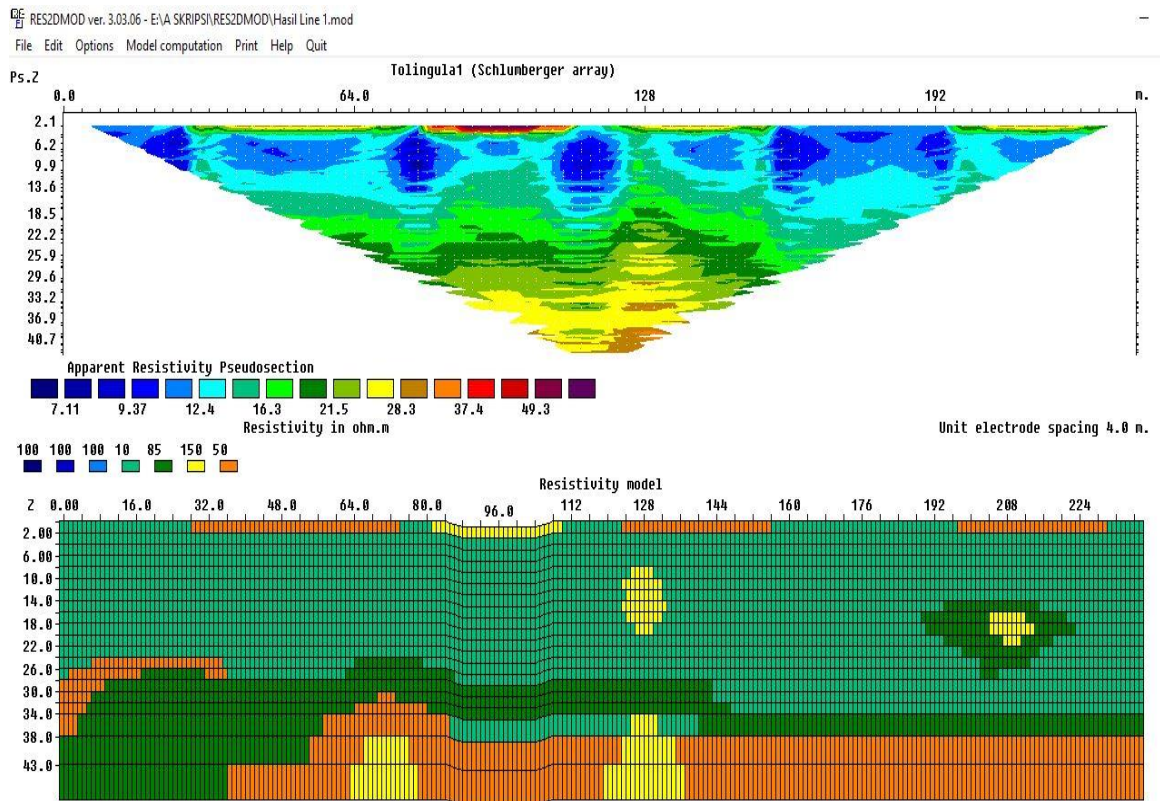
Lampiran 3. Data Core Box BH-01



Lampiran 4. Data Core Box BH-02



Lampiran 5. Pemodelan Data Sintetik pada Software Res2Dmod



Lampiran 6. Dokumentasi Lapangan



Lampiran 7. Persamaan-Persamaan

- Pembuktian Medan Listrik $E = -\nabla V$

- Energi Potensial Listrik

$$E_p = W = F \cdot r$$

$$dw = F \cdot r$$

$$F = - F_e$$

$$F = \text{Gaya Eksternal}$$

$$F_e = \text{Gaya Listrik}$$

- Potensial Listrik

$$V = \frac{E_p}{q}$$

$$dV = \frac{-F_e}{q} \cdot dr$$

$$dV = \frac{F \cdot dr}{q}$$

$$dV = -E \cdot dr$$

- Gaya Listrik

$$F = k \frac{Q \cdot q_1}{r^2}$$

- Medan Listrik

$$V = E = k \frac{Q}{r^2}$$

$$F = qE$$

$$\frac{F}{q} = E$$

- Medan Listrik Total

$$E = E_x \hat{i} + E_y \hat{j} + E_z \hat{k}$$

$$d\hat{r} = d_x \hat{i} + d_y \hat{j} + d_z \hat{k}$$

- Substitusi E dan $d\hat{r}$ ke dV :

$$dV = - (E_x \hat{i} + E_y \hat{j} + E_z \hat{k}) \cdot (d_x \hat{i} + d_y \hat{j} + d_z \hat{k})$$

$$= - (E_x d_x + E_y d_y + E_z d_z)$$

$$-dV = E_x d_x + E_y d_y + E_z d_z$$

- Menghasilkan:

$$1. E_x d_x = -dV$$

$$E_x = \frac{-dV}{dx}$$

$$2. E_y d_y = -dV$$

$$E_y = \frac{-dV}{d_y}$$

$$3. E_z d_z = -dV$$

$$E_z = \frac{-dV}{d_z}$$

Sehingga total medan listrik E :

$$E = E_x \hat{i} + E_y \hat{j} + E_z \hat{k}$$

$$E = -\frac{\partial V}{\partial x} \hat{i} - \frac{\partial V}{\partial y} \hat{j} - \frac{\partial V}{\partial z} \hat{k}$$

$$E = -\left(\frac{\partial V}{\partial x} \hat{i} - \frac{\partial V}{\partial y} \hat{j} - \frac{\partial V}{\partial z} \hat{k}\right)$$

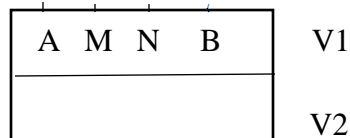
$$E = -\left(\frac{\partial}{\partial x} \hat{i} - \frac{\partial}{\partial y} \hat{j} - \frac{\partial}{\partial z} \hat{k}\right) V$$

$$E = -\nabla V \quad \longrightarrow \quad \text{Medan Listrik}$$

dengan,

$$\nabla = \frac{\partial}{\partial x} \hat{i} - \frac{\partial}{\partial y} \hat{j} - \frac{\partial}{\partial z} \hat{k}$$

- **Pembuktian Rapat Arus $J = E \cdot \sigma$**



$$I = \frac{dq}{dt}$$

$$E = \frac{\Delta V}{dl}$$

$$J = \frac{dl}{dA} \quad \text{muncul akibat adanya elemen arus terhadap luasan sebesar A}$$

$$dl = j \cdot dA$$

$$J = \frac{dq}{dA} \quad \text{atau} \quad J = \frac{\Delta V}{\rho \cdot l}$$

$$J = \frac{\Delta V}{\rho \cdot l}$$

$$J = \frac{E}{\rho}$$

$$J = E \cdot \sigma$$

$$E = -\nabla V$$

- Gradien Potensial Skalar (∇V)

$$\vec{E} = -grad.V$$

$$\vec{E} = -\frac{\partial V}{\partial x} \hat{i} - \frac{\partial V}{\partial y} \hat{j} - \frac{\partial V}{\partial z} \hat{k}$$

$$\vec{E} = -\left(\frac{\partial V}{\partial x} \hat{i} - \frac{\partial V}{\partial y} \hat{j} - \frac{\partial V}{\partial z} \hat{k}\right)$$

- Divergensi Rapat Arus Vektor ($\nabla \cdot J$)

$$\nabla \cdot \vec{J} = \frac{\partial \rho}{\partial t}$$

$$\vec{J} = \frac{I}{A} = \frac{q/t}{A}$$

$$\vec{J} \cdot A = I$$

Dari persamaan diatas diperoleh:

$$\nabla \cdot \vec{J} = \nabla \cdot (\sigma \cdot \vec{E})$$

$$= \nabla \cdot (\sigma \cdot \nabla V)$$

$$\begin{aligned} u(x, t) = g(x, t) &= \nabla \cdot \sigma - \left(\frac{\partial V}{\partial x} + \frac{\partial V}{\partial y} + \frac{\partial V}{\partial z}\right) \\ &= \nabla \cdot \left(-\left(\frac{\partial V}{\partial x} + \frac{\partial V}{\partial y} + \frac{\partial V}{\partial z}\right)\right) \\ &= \left(\frac{\partial}{\partial x} + \frac{\partial}{\partial y} + \frac{\partial}{\partial z}\right) \cdot \left(-\left(\frac{\partial V}{\partial x} + \frac{\partial V}{\partial y} + \frac{\partial V}{\partial z}\right)\right) \\ &= -\left(\sigma \frac{\partial^2 V}{\partial x^2} + \sigma \frac{\partial^2 V}{\partial y^2} + \sigma \frac{\partial^2 V}{\partial z^2}\right) \\ &= -\sigma \frac{\partial^2 V}{\partial x^2} - \sigma \frac{\partial^2 V}{\partial y^2} - \sigma \frac{\partial^2 V}{\partial z^2} \\ &= -\frac{\partial}{\partial x} \left(\sigma \frac{\partial V}{\partial x}\right) - \frac{\partial}{\partial y} \left(\sigma \frac{\partial V}{\partial y}\right) - \frac{\partial}{\partial z} \left(\sigma \frac{\partial V}{\partial z}\right) \\ &= -\delta(x)I - \delta(y)I - \delta(z)I \\ \nabla \cdot J &= -\delta(x)I - \delta(y)I - \delta(z)I \end{aligned}$$

Sehingga dapat ditulis: (Pers. 2.26)

$$\nabla \cdot (\sigma \cdot \nabla V) = -I \delta(x) \delta(y) \delta(z)$$

Dapat ditulis untuk bidang 3D:

$$\nabla [\sigma(x, y, z)] \cdot \nabla V(x, y, z) = -I \delta(x_s) \delta(x_y) \delta(x_z)$$

- **Pembuktian Faktor Geometri Konfigurasi Wenner-Schlumberger**

$$\begin{aligned} K &= 2\pi \left(\frac{1}{\left(\frac{1}{r_1} - \frac{1}{r_2}\right) - \left(\frac{1}{r_3} - \frac{1}{r_4}\right)} \right) \\ &= 2\pi \left(\frac{1}{\left(\frac{1}{na} - \frac{1}{(a+na)}\right) - \left(\frac{1}{(a+na)} - \frac{1}{na}\right)} \right) \\ &= 2\pi \left(\frac{1}{\frac{a}{na^2 + (na)^2} - \frac{a}{(na^2 + (na)^2)}} \right) \\ &= 2\pi \left(\frac{1}{\frac{2a}{(n+n)^2 a^2}} \right) \\ &= 2\pi \left(\frac{1}{\frac{2}{(n+n)^2 a}} \right) \\ &= 2\pi \left(\frac{2\pi}{2} \frac{1}{(n+n)^2 a} \right) \\ K &= \pi a (n+n)^2 \end{aligned}$$

