



G. L. Pine

From :

R. D. Whitman

Date:

March 21, 1978

Subject: Striped Hills Ground Mag

2) White

I have examined the 350+ gamma anomaly that lies immediately northeast of the common corner of sections 3, 4, 9 and 10. I have enclosed a ground mag map which shows the position of the causative body for this anomaly.

North-south profiles were plotted across the anomaly and four different types of depth estimates were made using these profiles. The depth estimates ranged from 450' to 550' deep. The body is a dike-like body that strikes roughly N80°W with possibly some dip to the southwest. The width of the body shown on the enclosed map should be considered a minimum width. The body could be as wide as 1000'. One crude rule of thumb estimate for the susceptibility was made. It yielded a value of .003 which could easily be a silicic intrusive rock with 1% to 2% magnetite.

The most reasonable explanation for this anomaly is an intrusive body. The mag data says it is 500' deep and the gravity data indicates that bedrock is less than 500' deep in this area. Therefore, a 750' to 1000' drill hole, centered on the causative body, should definitely test the anomaly.

D. Whitman

ska

CC: W. A. Petersen

3680 0032 8/9 SHERRI -Bo = 12° 25,40 50 = 3.17 7/mm So = 0.51 /mm BH = 21325,37 SH = 2.38 + 0,00153 \frac{h}{2} (\frac{x}{mm}) and the second of the second of the second Bz=51338.98 week of the way of the second Sz = 3.16 8/mm D.C. HOLTOG to realizable to the contract of the contract - And the state of the state of

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B. R. Berger - Reno

D. C. Davis - Reno

September 19, 1975

Striped Hills Ground Mag Survey

Dick Simmons says that correction data supplied from Tucson aren't good enough and it will be necessary to use a base station on the above work.

The station should be at an accessible site near the center of the project. It should have very little gradient, determined by reading with the staff vertical and then tilted at arms length in four directions.

The base station should be read at least every three hours and within fifteen minutes of the same times every dat. On Striped Hills it would appear that 8, 11, 2, and 5 would be the proper times.

Simmons has arranged with the Boulder observatory to receive daily magnetic storm forecasts. They open at 7 A.M. Mountain Time, so a call before leaving Winnemucca in the morning would get them. Call (303) 494-8101 or (303) 499-1000 ext. 3171 if the first number is busy, identify yourself as with Continental Oil Company, and ask for the maximum K factor for the day. It would also be a good idea to ask if there was any change the previous day, the amount and what time. The K factor is the magnetic storm intensity.

Gamma Fluc	ctuation	K Factor	Simmon's Remarks
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If the K factor is below 4, lets go ahead. If we have a period of several days with a higher K factor we may have to adjust in the interest of time.

Each station should be read three times and repeatibility should be three gammas. If not read every 30 seconds for five minutes. If a drift in one direction occurs a magnetic storm is in progress and you should shut down.

We hope to get a meaningful magnetic interpretation from Simmons so lets follow his instructions as faithfully as possible.

David C. Davis

136) PHK Item 32 Projak

Richard Simmons - Denver

Byron R. Berger - Reno

February 18, 1977

Magnetic Susceptibility - Striped Hills Core

Attached are magnetic susceptibility data from our recent diamond drilling program in the Striped Hills. The measurements were made on split core samples ranging from HQ to BQ in size. We would like to have you re-evaluate the aeromagnetic and ground magnetic data in light of the new information. Our ultimate objective is to define the main igneous source for the hydrothermal alteration. To aid your work, a location map and short form drill logs are also attached.

We would like to have your interpretation as soon as possible as we are currently putting together the final report.

Byron R. Berger Geologist

pb Enc.

(conoco)

Thom 32 HK

## Interoffice Communication

To

Barney Burger - Reno

From

R. G. Simmons

Date

October 22, 1976

Subject

Striped Hills Airmag Survey

Figure 1 shows the calculated versus observed response from modeling the recent 500' airborne data. Figure 2 shows the approximate location of the profile.

As indicated in figure 1, 50° of northward dip supplied the best fit to the observed data. This is different from the ground data which implies more of a vertical body. Also depth of burial for the airborne data is 200' versus 350-400' for the ground data. Magnetic contrast remains similar ( 400 c.g.s.).

The pyyrotite mentioned in our phone conversation should definitly be considered as the cause of the anomaly if your susceptibility measurements show high values.

The magnetic low that lies to the NW of the high (See Figure 3) should definitly be considered as a possible location for a low susceptibility intrusive sill or dike in light of the recent drill hole information.

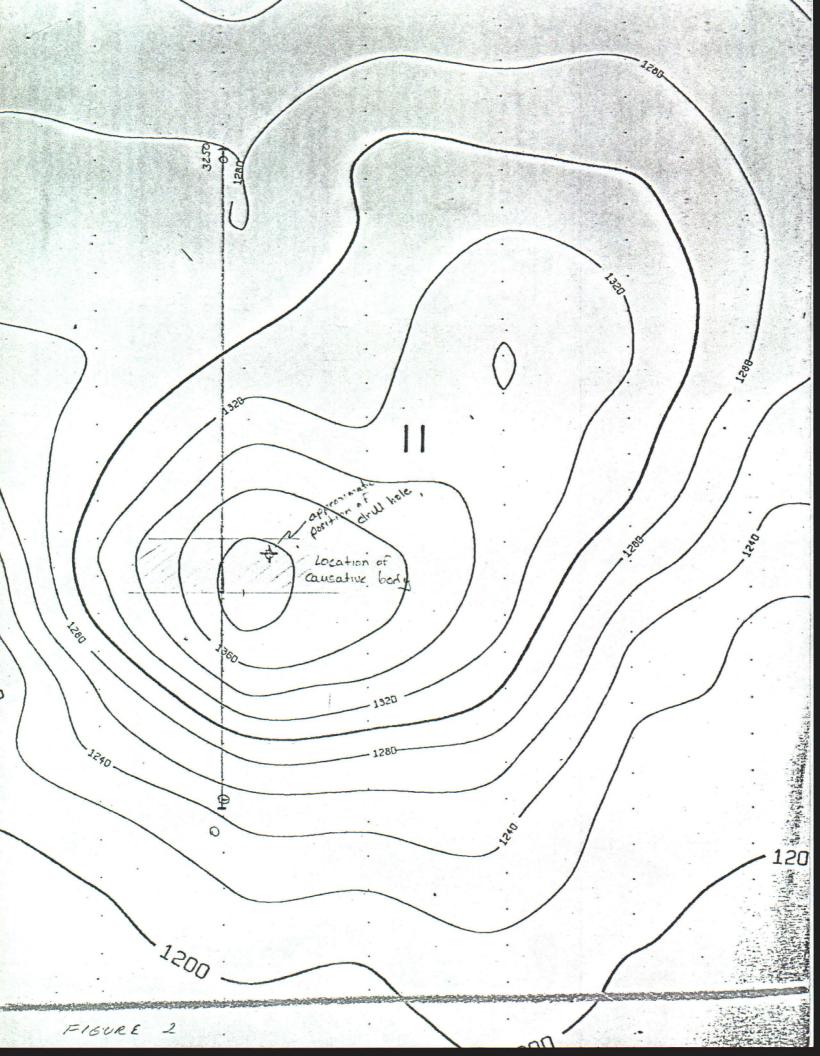
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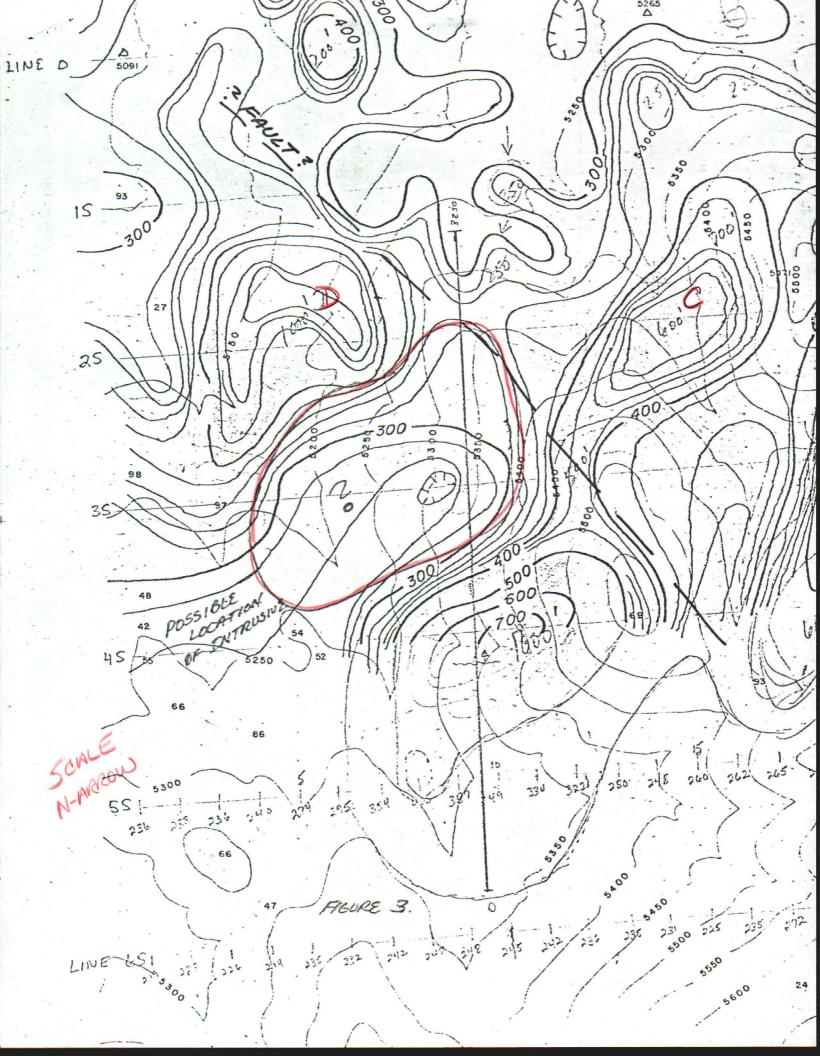
R. G. Simmons

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To P. H. Kirwin - Reno

From D. G. Simmons - Denver

Date September 3, 1976

Subject Striped Hills Ground Mag

Further evaluation of the Striped Hills mag data was conducted with the following purposes in mind: (a) to determine which of the detected anomalies stood the best chance of being caused by an intrusive or skarn mineralization, and (b) determine the depth of burial, geometry, susceptibility, etc.

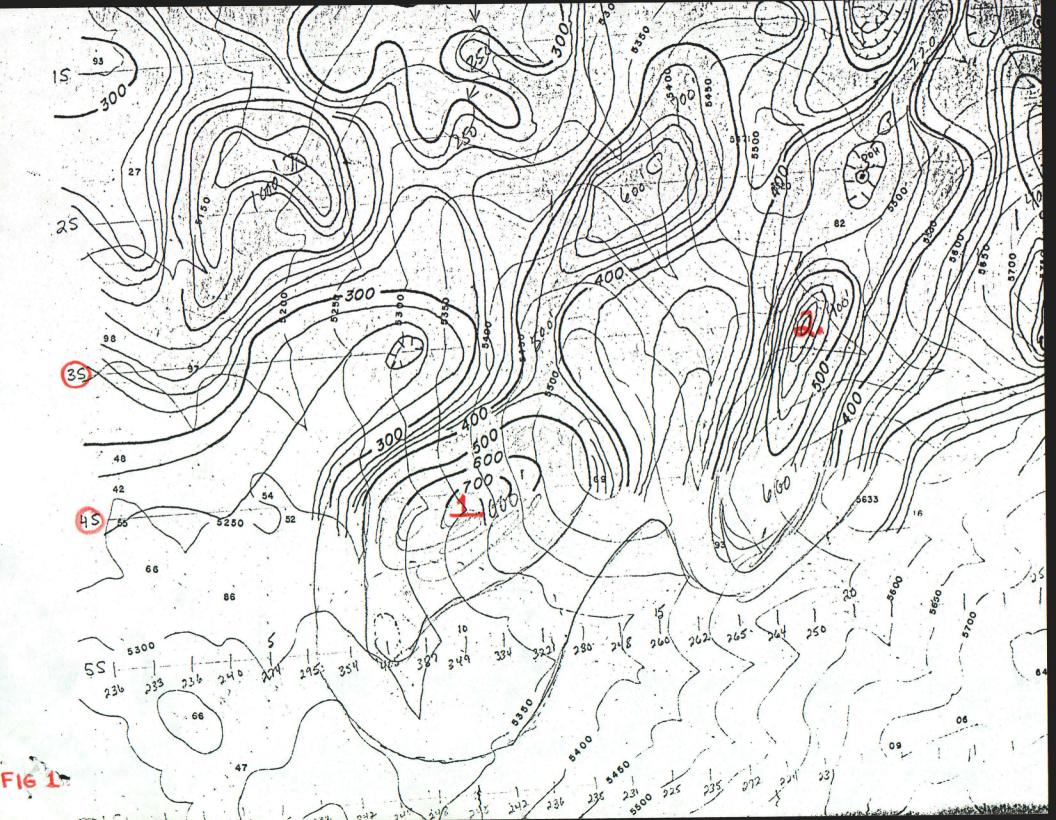
Figure 1 shows the first and second priority anomalies picked (Line 4S and Line 3S). Computer modeling indicates that the causative body of anomaly 1 would be buried 350-400', be a dike-like vertical body, and have a susceptibility of around 7,000 e.g.s. (A2½% magnetite by volume). A thickness of 400' with infinite depth extent was used for the model. Figure 2 shows the computed versus observed curves. The corners of the body are at 2,000 and 2,400.

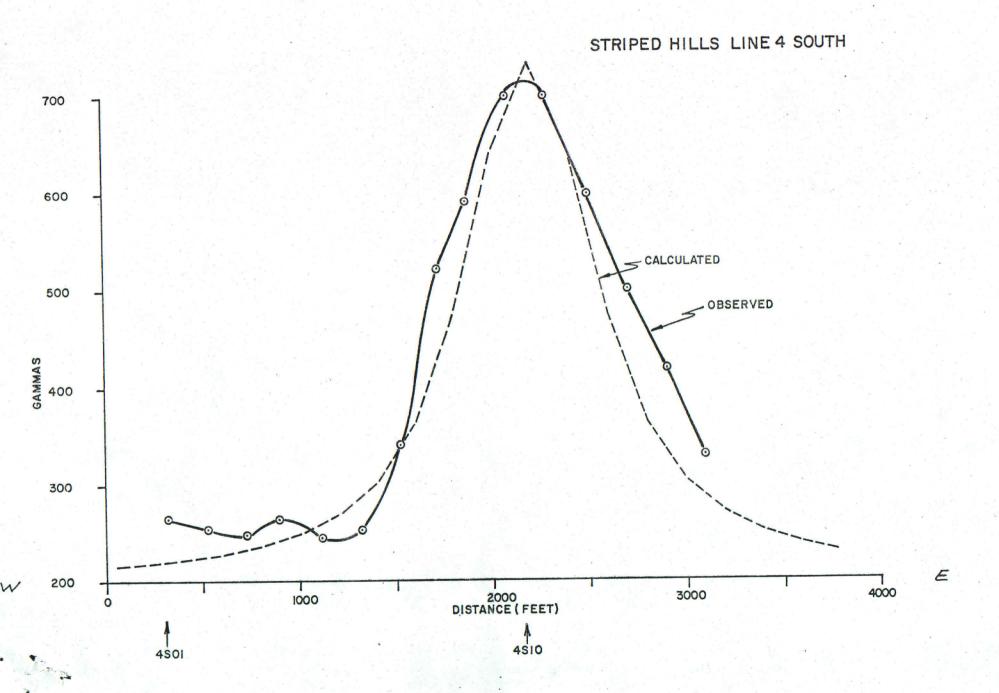
Note should be made that our modeling program assumes an infinite strike length which our observed anomaly definitely doesn't have. The effect of this is to cause the real susceptibility of the causative body to have to be much higher than the calculated 7,000 because a lesser volume of material is actually involved. A second effect is that the width of the anomaly decreases and, therefore, a deeper body is needed to match an observed curve. This might help with the thrust fault problem and the predicted 400' depth of burial you mentioned on the phone.

The second priority anomaly on Line 3 South should have a depth of burial around 200' and is modeled as a vertical dike-like body again (although thinner). Model susceptibility was computed at 4,500 e.g.s. The observed anomaly might have a small component of eastward dip (??). Again, the same cautions that applied to No. 1 apply here also.

Dick Simmons

ih Encs.









To Striped Hills File

From C. B. Nilson

September 16, 1977

Subject Striped Hills Project, Ground Magnetometer Survey - 1977

The ground magnetometer survey of the Striped Hills project was conducted in six field days in August, 1977. The survey area begins at the western edge of the current geologic map at 1" = 500', and extends 8000 feet west.

The survey area is 8000 feet in the E-W sirection and 6000 feet in the N-S direction. The N-S baseline was surveyed in with tape and compass 3000 feet north and 3000 feet south of the corner of Sections 2, 3, 10, and 11. Survey lines L4N, L3N, L2N, L1N, L00 (at the section corner), L1S, L2S, L3S, L4S (from north to south) are 750 feet apart, with intermediate lines at L2.5N, L1.5N, L.5N, L.5S, (375 foot spacing). Each survey line extends 8000 feet west of the base line. Sample interval is 200 feet and two readings were taken at each station. The time was noted at each station. All sample location distances were paced.

#### Data Reduction

Diurnal variations in the data were removed using magnetograms from Boulder. The appropriate number of gammas as a function of the time of day the reading was taken was subtracted from each value to eliminate the diurnal variations in the magnetic field strength. The number of gammas to be subtracted was determined using the vertical component (z) on the magnetograms and is the difference between the daily minimum gamma value and the gamma value at the time the reading was taken.

The base station, a claim post approximately 200 feet southwest of L00, was occupied each field day between 8:20 and 9:00 AM and a reading taken. An average gamma value of 54266 gammas was obtained and each day's diurnally corrected values were adjusted up or down by the difference between this average value and that day's base station value.

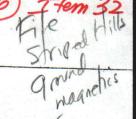
Profiles of each line of both corrected and uncorrected data were plotted. Geology noted during the survey was also plotted on these profiles. The corrected data were plotted in plan and contoured.

Christine nuon

Christine B. Nilson

pb





To

Barney Berger

From

R. G. Simmons

Date

March 8, 1977

Subject

Striped Hills Mag Interpretation - Addendum

As per our phone conversation the memo dated 2-24-77, does not include any additional modeling. Susceptibility values in holes SH-3 and SH-4 were of too low magnitude to be of use. Whether we had an equipment malfunction or the values are actually 0+100 c.g.s. will have to wait until I can do some tests on the core.

Therefore the memo only includes general impressions on the regional aspects of the aeromag and ground mag coverage.

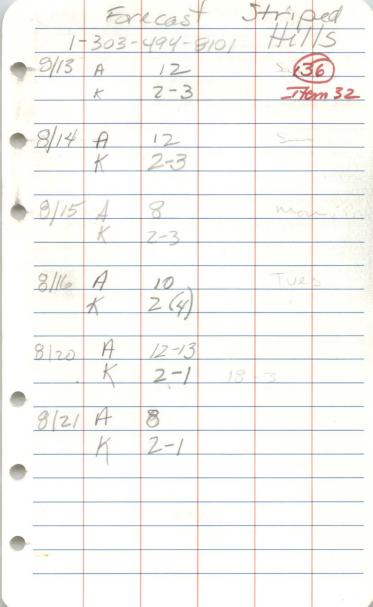
Quek Simmons
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P. H. Kirwin

D. E. Dunster

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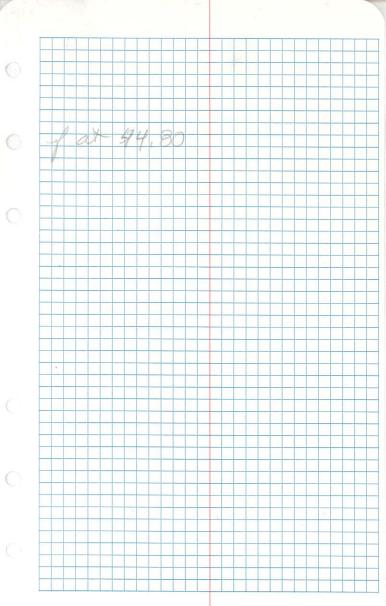


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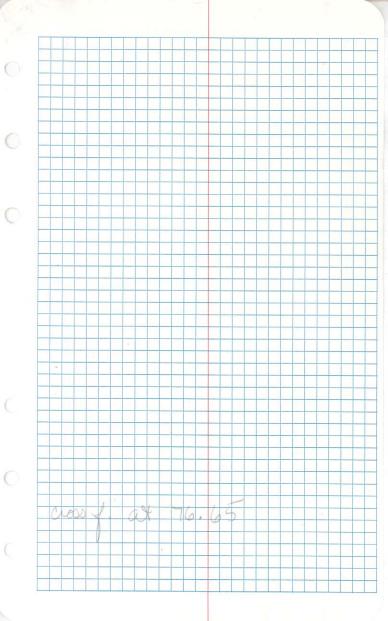
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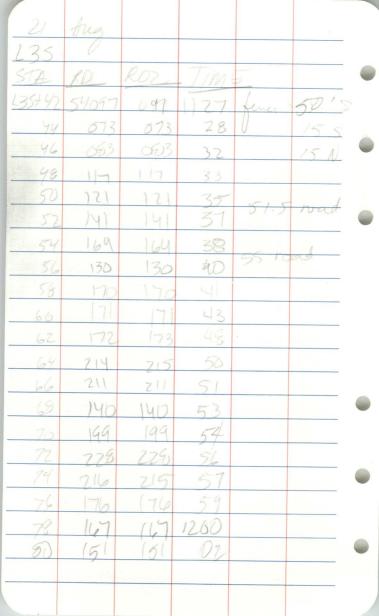
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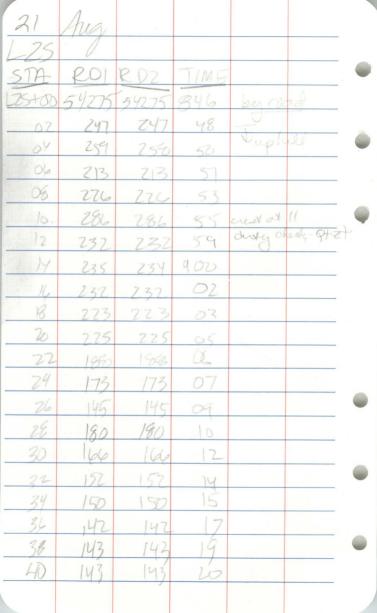
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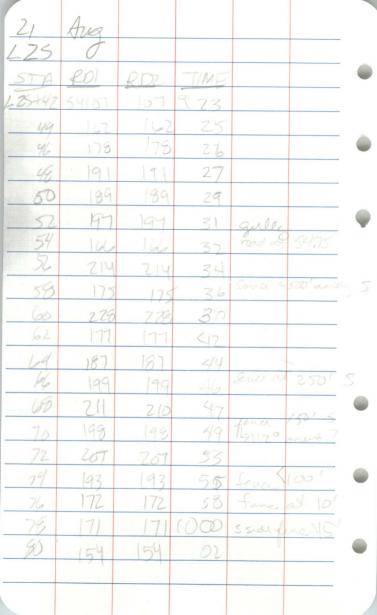


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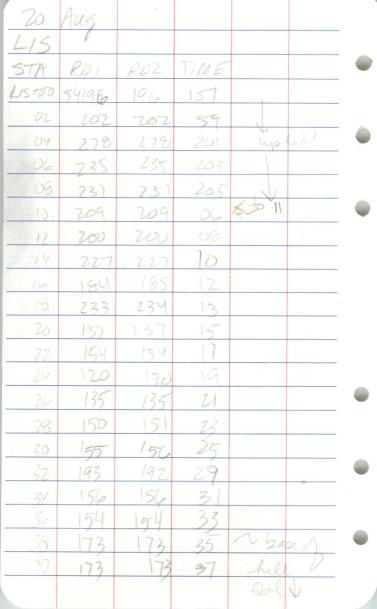




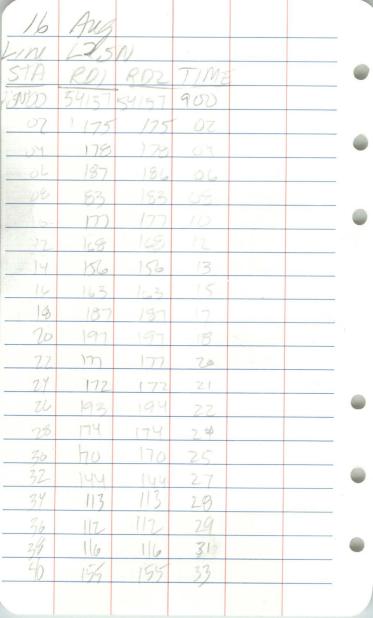


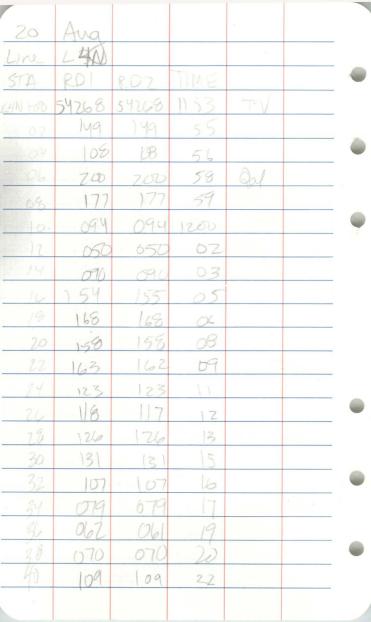


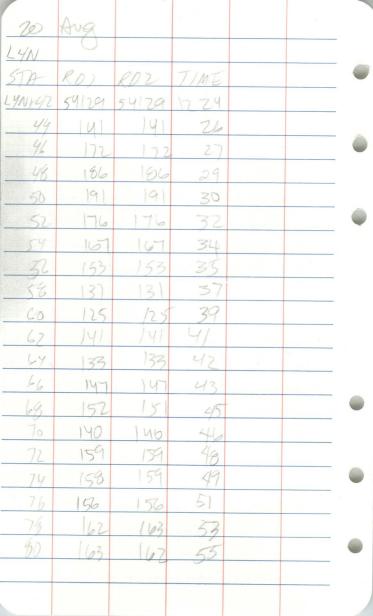
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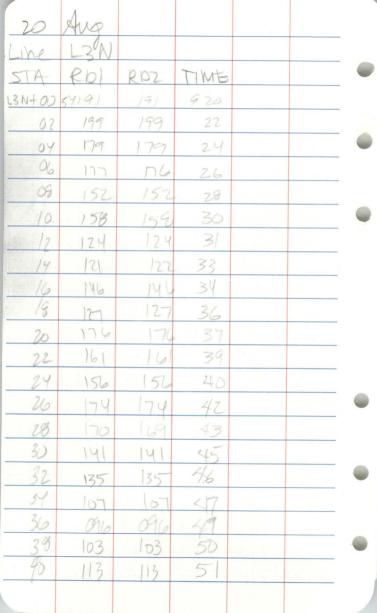


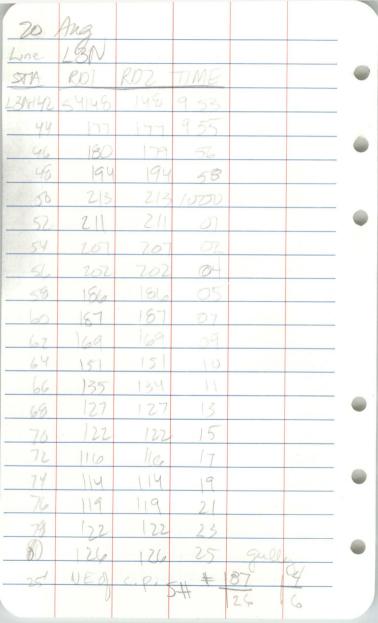
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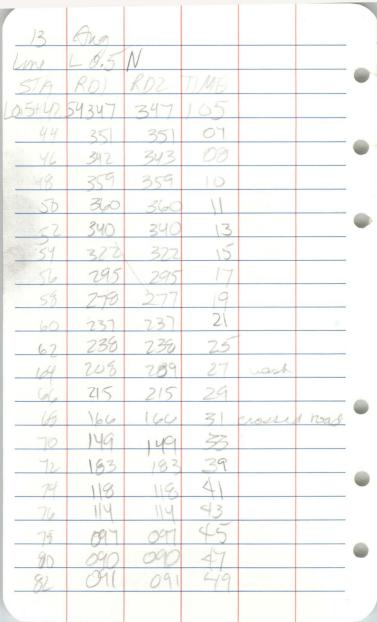








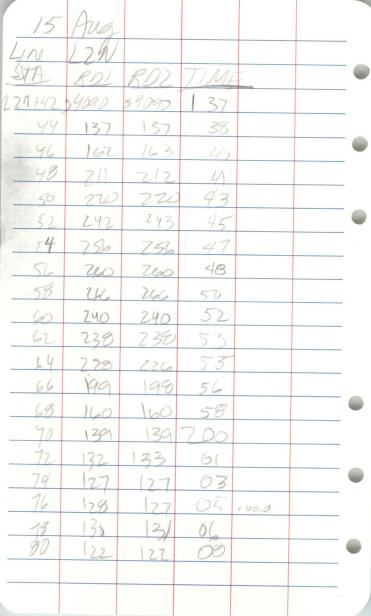
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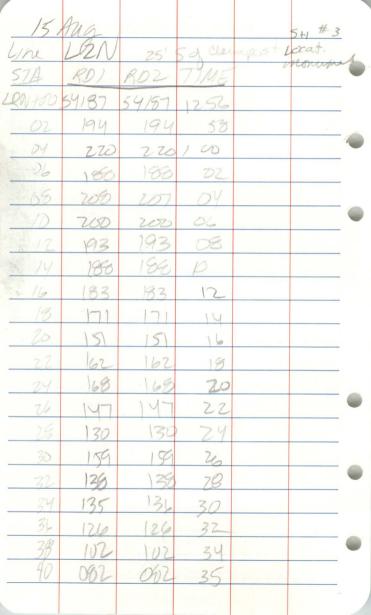


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