

**SUMATRAN RHINO CONSERVATION CENTRE
DEPARTMENT OF WILDLIFE AND NATIONAL PARKS
SUNGAI DUSUN, SELANGOR
MALAYSIA**

MONTHLY REPORT

APRIL 2001

BY

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&

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INTRODUCTION

Ara bred Seputeh and Rima this month. However, Rima's estrus cycle was late about five days. She was expected to come into estrus on 6/4/01 but she is not ready when mixed with Ara on that day. On 11/4/01, she allowed the male mounted her and Ara bred her about 25 minutes. As for Seputeh, her progesterone level was high since her last breeding on 17/2/01. However, the blood result on 4/4/01 showed that her level has declined from 4.06 ng/ml (13/3/01) to 0.10ng/ml. Therefore she was mixed with the male and was bred on 8/4/01 for about 32 minutes.

The daily introduction between Shah and the two females; Mas Merah and Panjang is still continued. As for Minah, she has been confirmed for having a low-grade uterine infection. Her progesterone level is still low and Dr. Terri Roth is still preparing the status report on all females.

As for the bleeding procedure, it is still carried out twice weekly on all females for progesterone analysis. However, blood will be collected once a week on the bred females. The weighing procedure could not be carried out since the weighing machine is at the Zoo Melaka.

RHINO MANAGEMENT

A) Daily Management

i) Night stall

Daily work

Adam, Shariff and Umor managed the night stalls. Shariff and Umor will clean the night stalls while Adam and other rangers will mix Shah and the two females. Then, he will checked the food supply when it arrived around 9.30 a.m. The browse and fruits were weighed and cleaned before giving to the rhinos. About 40 to 50 kg of browses and 7kg of fruits including papaya, banana and sweet potatoes were given daily. The rhinos were also given horse pellet about 1.5kg every morning. On Monday and Thursday, Adam will help the veterinarian to collect the blood from all females.

The rhinos

The rhinos were let out first before cleaning the night stalls. After cleaning, the browses were put in the feed trough and the rhinos were let in for their morning meal. The drinking water was changed daily and stress vet (multi-mineral powder) was mixed inside it. Daily observation was made and recorded in the workbook for each rhino. The rhinos were fed twice daily: 9.00 a.m. and 3.00 p.m.

ii) Ten acres enclosure

Daily Work

Mohd Noor inspects the electric fencing every morning. The fencing was cleaned from any foreign objects such as spider web, dried leaves or creepers to avoid short circuit. Voltmeter was used to ensure that the voltage of the fencing is about 7.0 kV. They will also inspect the fencing for any damages.

During the inspection, the ranger will look for the rhino inside the enclosure and call the rhino for their morning meal. The rhino was confined in the quarter acre first before putting their browse in the feeding trough. The amount given was about 100kg for each rhino per day.

B) Breeding Program

i) Daily introduction

The daily introduction was carried out around 8.30 a.m. daily between Shah and two females: Mas Merah and Panjang. Panjang will be mixed with the male first followed by Mas Merah. The mixing will take about five to ten minutes depending on the behavior shown by the rhinos. The mixing period will be prolonged if breeding behavior was observed. However, no positive behaviour was observed throughout the month despite of the daily introduction of the rhinos.

ii) Breeding introduction

The breeding introduction was done based on the progesterone profile. The females were mixed with the male when their progesterone level is low. On 4/4/01, the blood profile showed that Rima (Day 19) and Seputeh had a low level of 0.12ng/ml and 0.10ng/ml respectively.

Rima was expected to be on estrus on 6/4/01. Therefore, she was mixed with Ara from 6/4/01 but no breeding was recorded. She seems not ready and did not allow the male to mount her. The pair was mixed on the following day without any breeding. It was decided that the pair will be mixed daily and on 11/4/01, Ara bred her for about 25 minutes.

On 8/4/01, Seputeh was also paired with Ara in the morning and breeding behaviour was noted. About six mountings were recorded with one intromission. However it only lasted for three minutes. The pair was separated when Ara chased the female when he failed to penetrate her and slipped. In the afternoon, the pair was mixed again around 3.00 o'clock. Five mountings were noted with two intromissions and the last one lasted for about 32 minutes.

iii) Bleeding Program and Blood Profile

Blood collection was done twice weekly on all females. However, blood was collected once a week on bred female. Once a month, blood will be collected on all rhinos for health check and the result showed that all rhinos are in a good condition.

Based on the blood result on 30/4/01, Rima and Seputeh had a regular estrus cycle and they were bred on 21 days interval although her last cycle was about 25 days. Panjang had resumed her cycle back and hopefully she will be bred soon. As for Mas Merah, her cycle is still irregular and should be monitored closely. Minah level is still low and her uterine infection should be confirmed first before proceed with treatment.

B) HEALTH STATUS

Generally, all rhinos are in the good condition. Weighing program could not be carried out since the weighing machine is at Zoo Melaka. The rhino will be weighed in May. The result from Veterinary Research Institute (VRI) showed that all rhinos are in a good condition.

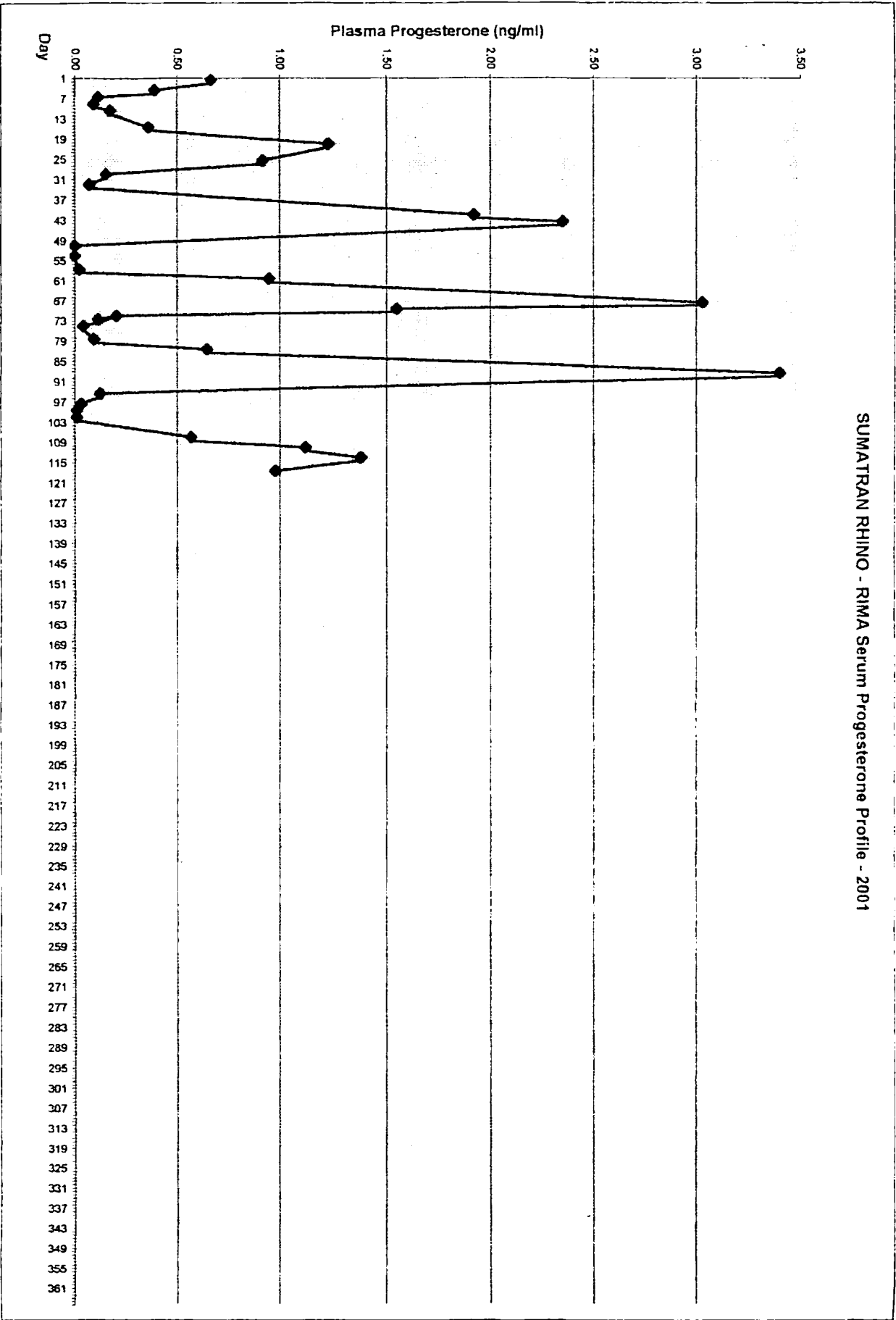
C) FEEDING

The feeding program had no changes. The browses and fruits were supplied by the contractor, which deliver them around 9.30 a.m. daily. The feed was checked to ensure their quantity and quality upon receiving them. They were cleaned and weighed before giving to the rhinos. The rhinos were given about 40 kg of browses, 3 kg of concentrates and 7 kg of fruits daily.

Table 1: Blood Collection from the Rhinos, April 2001

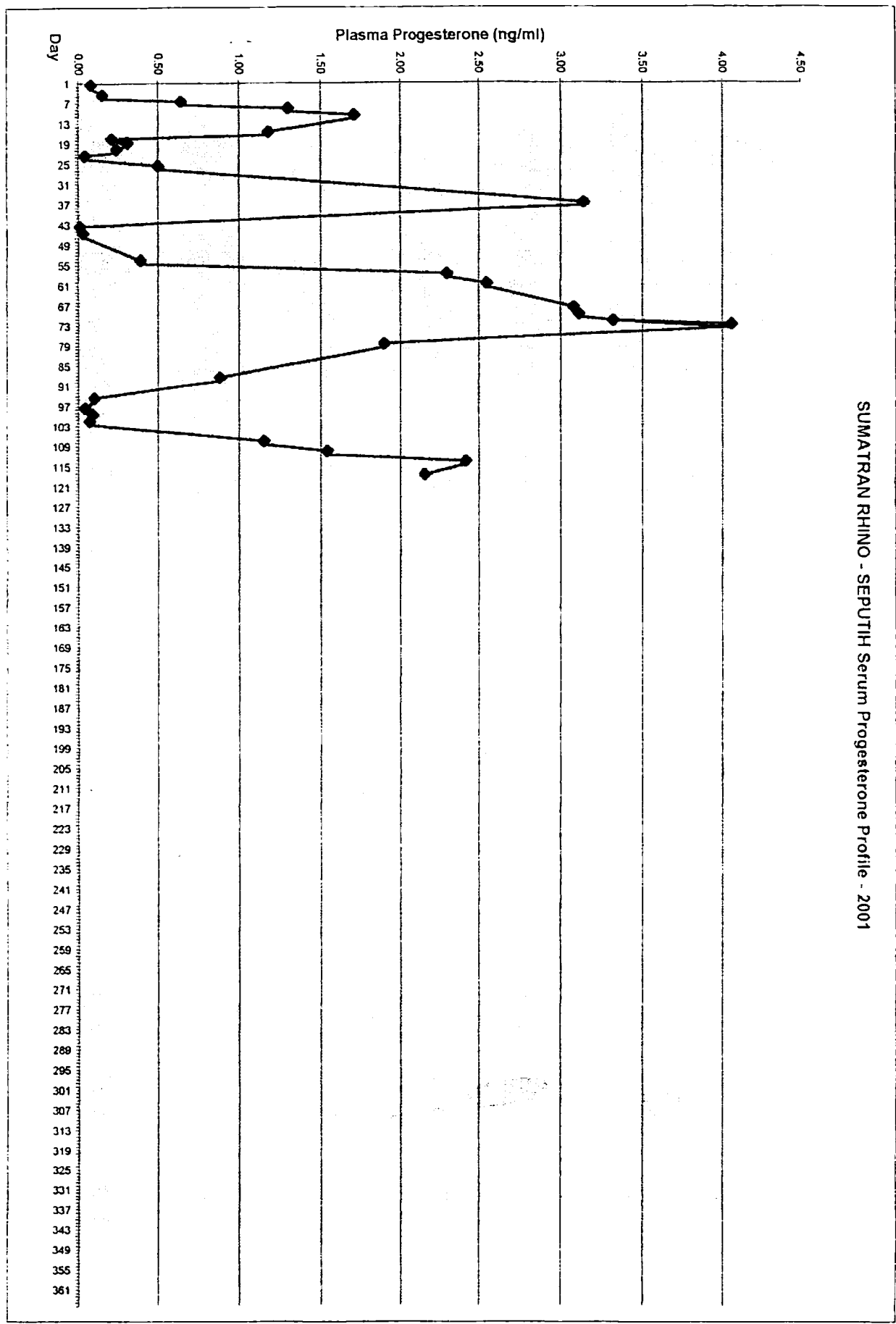
Date	Rhino ID	Area taken	Remarks
02/04/01	Mas Merah Panjang Minah	Tail Tail Tail	Samples were taken from three females for P4 analysis.
04/04/01	Seputeh Rima Panjang	Tail Tail Tail	Get blood samples from the three females. The rhinos seem very cooperative.
05/04/01	Mas Merah Minah	Tail Tail	Blood was taken from these two females.
07/04/01	Rima Seputeh	Tail Tail	Samples were taken for pregnancy test.
09/04/01	Rima Seputeh Mas Merah Panjang Minah	Tail Tail Tail Tail Tail	Get samples via tail from all females.
11/04/01	Rima Mas Merah Panjang Seputeh	Tail Tail Tail Tail	Get samples via tail from all females.
12/04/01	Minah	Tail	
17/04/01	Minah Mas Merah Panjang Rima Seputeh	Tail Tail Tail Tail Tail	Samples were taken from all females for P4 analysis.
20/04/01	Rima Mas Merah Panjang Seputeh Minah	Tail Tail Tail Tail Tail	Get samples via tail from all females. Sent some samples to VRI

Date	Rhino ID	Area taken	Remarks
23/04/01	Minah Mas Merah Panjang Rima Seputeh	Tail Tail Tail Tail Tail	Get blood samples from all females. The rhinos seem very cooperative.
27/04/01	Minah Mas Merah Panjang Rima Seputeh	Tail Tail Tail Tail Tail	Samples were taken from all females for P4 analysis.
29/04/01	Minah Mas Merah Panjang Rima Seputeh	Tail Tail Tail Tail Tail	Samples were taken from all females for P4 analysis.

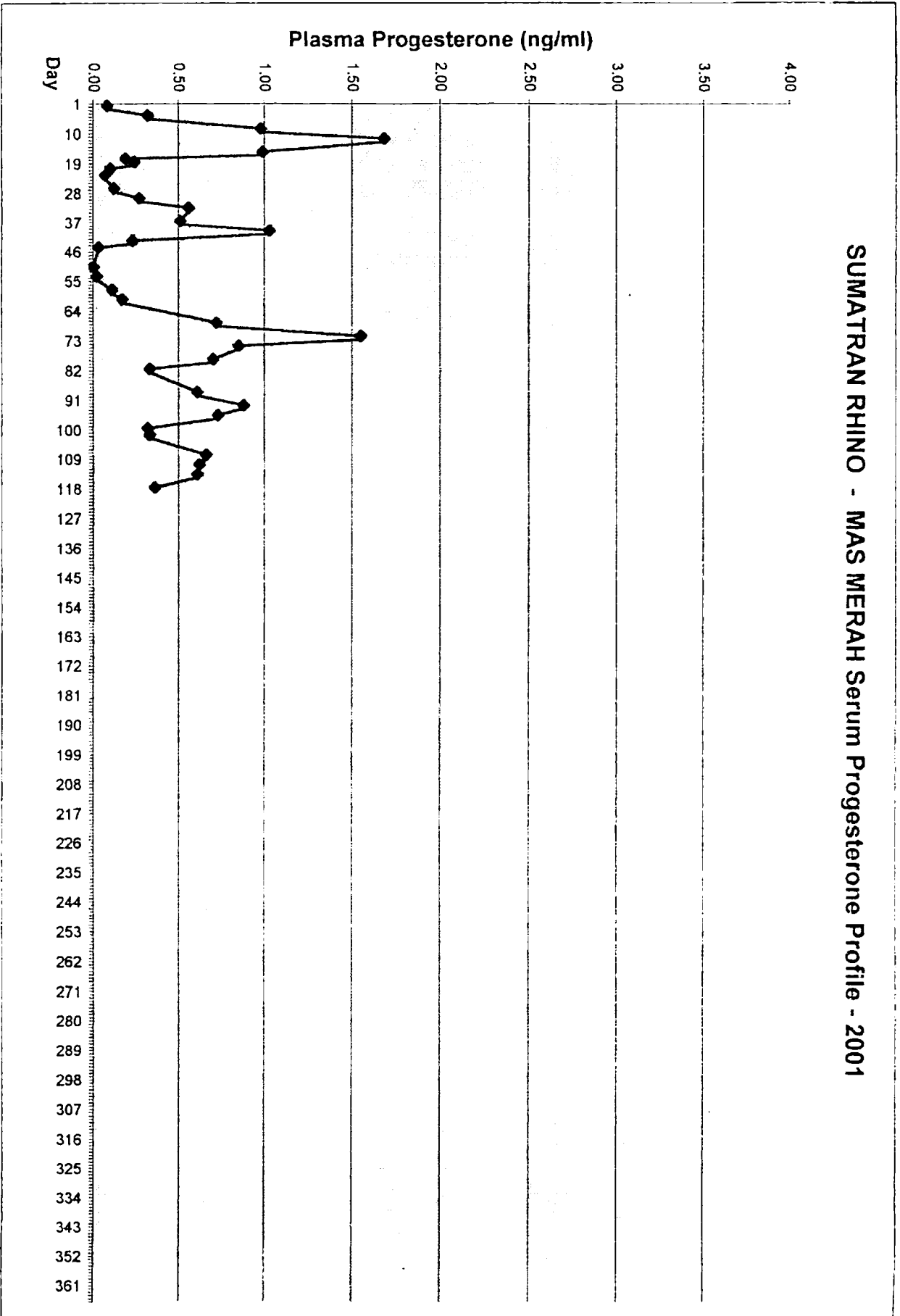


SUMATRAN RHINO - RIMA Serum Progesterone Profile - 2004

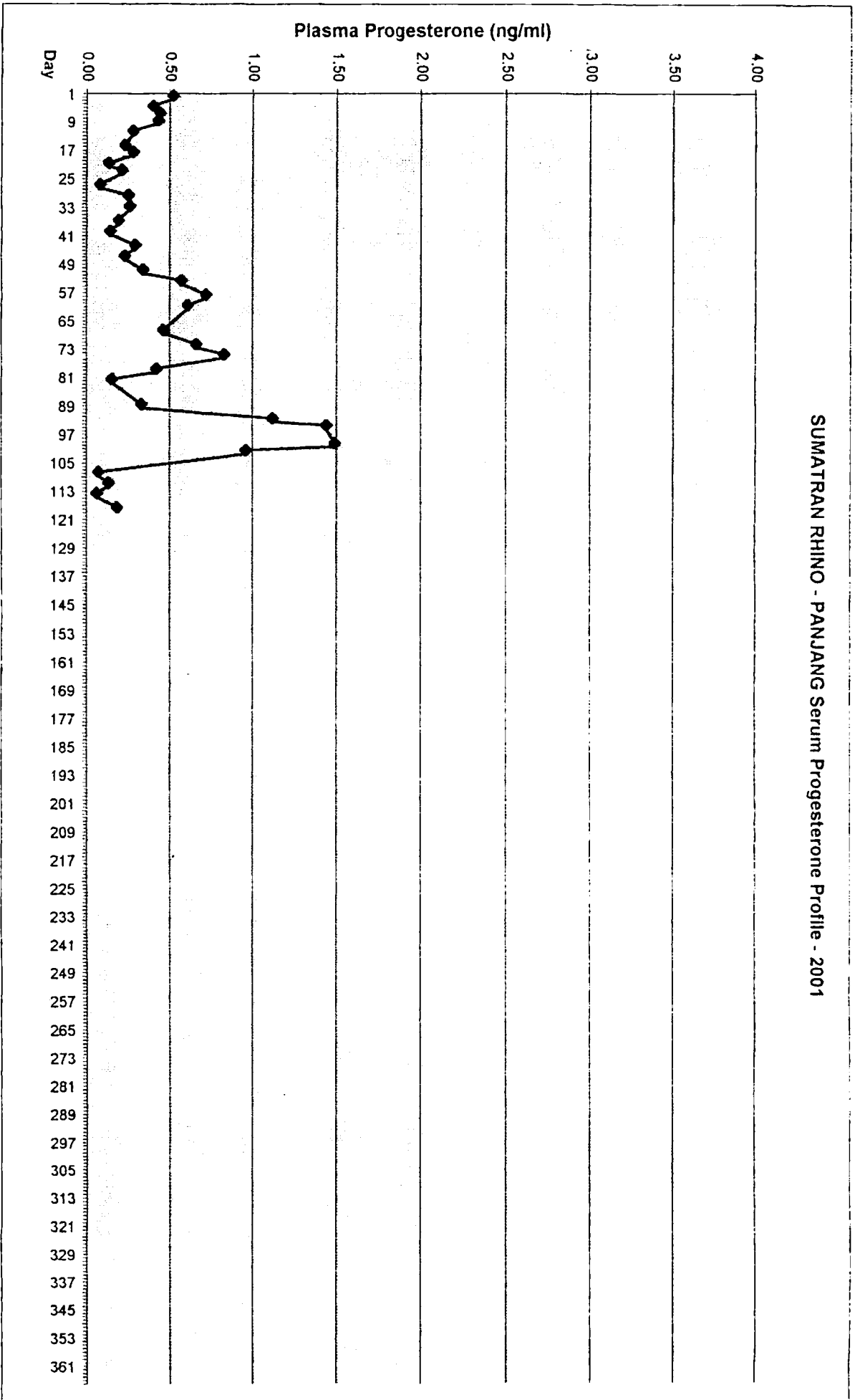
SUMATRAN RHINO - SEPUTIH Serum Progesterone Profile - 2001



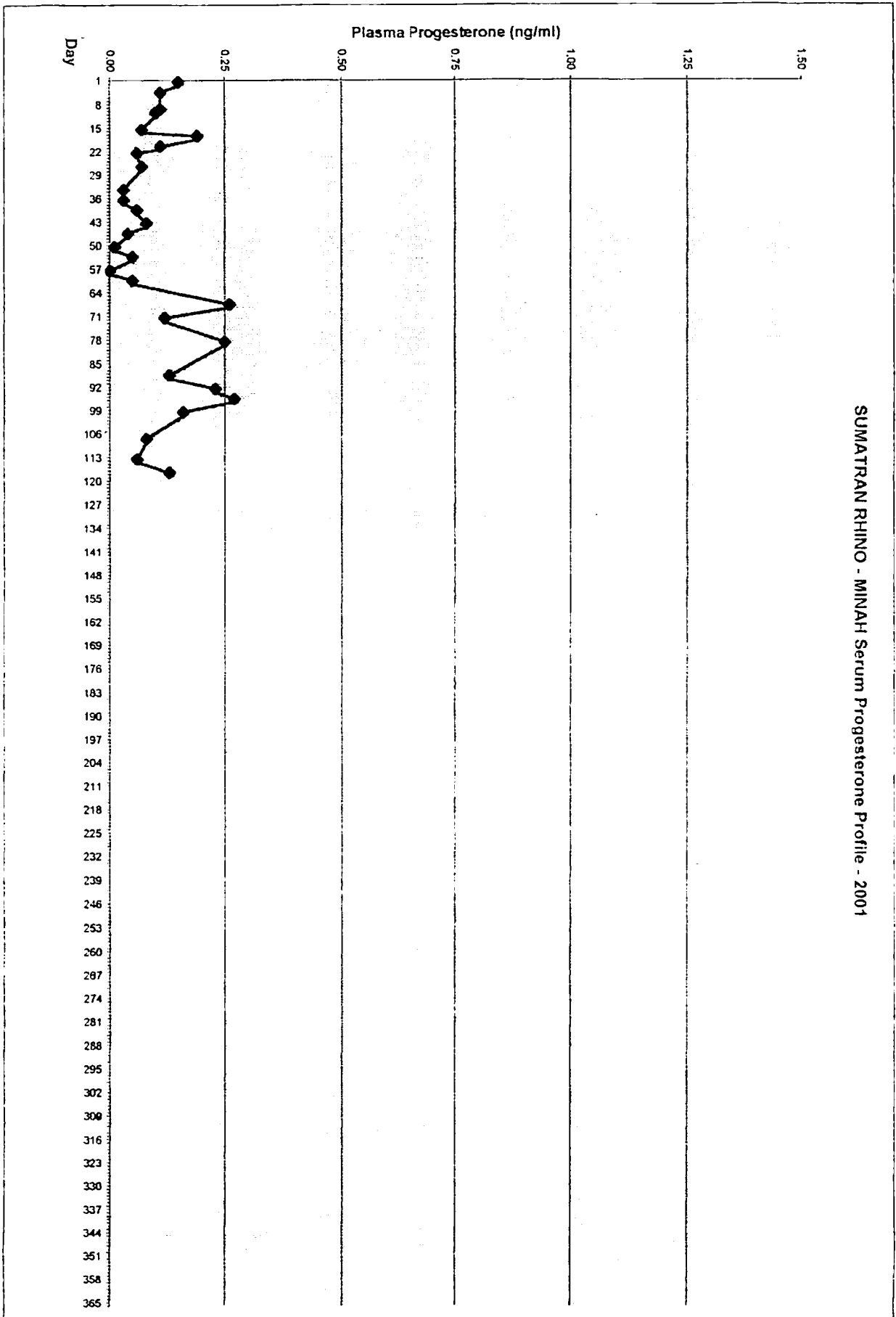
SUMATRAN RHINO - MAS MERAH Serum Progesterone Profile - 2001



SUMATRAN RHINO - PANJANG Serum Progesterone Profile - 2001



SUMATRAN RHINO - MINAH Serum Progesterone Profile - 2001



Panjang's Condition – Bleeding from Vagina

On 7/6/01 morning, blood clot was found on the floor inside Panjang's night stall. Upon investigation, bloody discharge was observed from the vulva and the rhino was put inside the chute for physical examination. Her backside was cleaned and blood clots were removed from the vulva. Some blood was also collected and sent to Veterinary Research Institute for bacteriology investigation. The rhino was kept inside the barn for monitoring. Later, some aborted material containing some tissue and blood clot was found on the floor. The samples were stored in the freezer and will be sent to the lab for confirmation.

The problem occurred again on 9/6/01, 11/6/01 and 12/6/01. Blood clot was observed on the floor and the backside of the female was stained with dry blood. Despite of the problem, the rhino appeared normal with good appetite and active behavior. The problem occurred 7 days after breeding. The same problem was also noted on November last year, 18 days after breeding with the same clinical signs. However, it only occurred one day.

On 11/6/01, a meeting with Dr. Wahid (UPM) is conducted to discuss the female's condition. According to Dr. Wahid, the problem could be due to some injury inside the reproductive tract during the breeding activity. This is also based on the fact that the same problem occurred on November last year, 18 days after breeding. The blood has been clotted before being expelled out. However, the problem could be localized based on the animal condition. He suggested that the aborted material should be sent to the lab for histology and also samples should be sent for bacteriology to confirm infection.