

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

MONTHLY REPORT

MARCH 2002

BY

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&

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INTRODUCTION

No breeding occurred during the month of March although the females were mixed with Ara based on the ultrasound and their progesterone results. The bleeding procedure was carried out as usual, twice weekly. As for the bred females, blood will be collected once a week.

From March 10 to 15, a Rhino Team consisting six people visited the center to evaluate the status of the rhinos especially the females. Their findings and early recommendation was summarized in Table 4.

Prior to the visit, Minah was undergone a hormone therapy for fourteen consecutive days starting from March 5 to 18. Minah was given 50µg/ml of GnRH and the therapy was summarized in Table 5.

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 daily while Adam will inspected 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 2.0kg every morning. Every Monday and Thursday morning, blood samples will be collected from all rhinos.

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) Breeding Introduction

The females were introduced to Ara but no breeding occurred. On March 5, Rima was paired with Ara but positive behaviour observed and the rhinos were separated after 10 minutes.

From March 8 to 9, Seputeh and Mas Merah were paired with Ara and there was positive behaviour observed between Ara and Mas Merah. However, on March 10, the rhinos were paired again but no breeding occurred.

Based on the ultrasound result on March 13, Mas Merah had a 23mm follicle and Seputeh had a 24 mm follicle but there was no breeding occurred when these two females were mixed with Ara. Instead, there was fighting occurred between Ara and Mas Merah and the female suffered minor injuries. As for Seputeh, no interest was observed from the female despite having an ovulatory follicle.

ii) Bleeding Program

a) Blood Collection

The bleeding was still carried out twice weekly. As for the bred females, the blood was collected once a week. The blood procedure was summarized in Table 1.

b) Progesterone Hormone Profile

The latest blood result was attached below.

B) HEALTH STATUS

Generally, all rhinos are in the good condition. Minah still recovering from the weight loss and she was monitored closely. Weighing was conducted monthly and the result is tabulated below.

Table 3: Rhinos' Body Weight (BW), February and March 2002

Rhino ID	Feb (BW, kg)	Mar (BW, kg)
Seputeh	738	752
Mas Merah	612	591
Panjang	532	In 100 acres
Minah	462	450
Rima	552	542
Ara	610	588

C) FEEDING

No changes were made for the feeding program. A contractor will supply the browses, which deliver them around 9.00 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 and 7.0g of fruits daily. All rhinos were given horse pellet to increase their body weight.

Table 1: Blood Collection from the Rhinos, March 2002

Date	Rhino ID	Area taken	Remarks
04/03/02	Minah Mas Merah Panjang Rima Seputeh Ara	Tail Tail Tail Tail Tail Tail	Samples were taken from these females for P4 analysis. Blood was taken from the males for testosterone analysis.
07/03/02	Rima Panjang Mas Merah Ara	Tail Tail Tail Tail	Samples were taken from the females for P4 analysis. Blood was taken from the males for testosterone analysis.
11/03/02	Rima Seputeh Minah Mas Merah Panjang Ara	Tail Tail Tail Tail Tail Tail	Blood was taken for the P4 and testosterone analysis
14/03/02	Minah Rima Seputeh Panjang Mas Merah Ara	Tail Tail Tail Tail Tail Tail	Samples were taken from all rhinos for P4 and testosterone analysis.
18/03/02	Rima Mas Merah Panjang Minah Seputeh Ara	Tail Tail Tail Tail Tail Tail	Get samples via tail from all females except Seputeh.
21/03/02	Minah Mas Merah Panjang Rima Seputeh Ara	Tail Tail Tail Tail Tail Tail	Blood was taken for the P4 and testosterone analysis
25/03/02	Minah Mas Merah Panjang Rima Ara	Tail Tail Tail Tail Tail	Blood was taken for the P4 and testosterone analysis
28/03/02	Seputeh	Tail	

Table 4: Rhinos Evaluation and Recommendation – Sg. Dusun, 13 March 2002

Rhino ID	Pathology	Breed / Cycles	Remarks & Recommendation
Minah	No	No	<ol style="list-style-type: none"> 1) U/S (Day 10 GnRH treatment): follicular activity observed (15mm follicle). Reevaluate by U/S on 15/3 & 18/3 2) If follicle size is about 20mm or more, continue GnRH for a week and breed when ready or mix with the male to stimulate cycling when in better condition. 3) Reintroduce pellets ASAP to improve body weight: 500g per week and started increasing 500g each week until about 3 kg/day. Weighing once a week.
Mas Merah	Mass at the base of R & L ovary	3	<ol style="list-style-type: none"> 1) U/S on 13/3: 21mm follicle 2) U/S on 14/3: 26 mm follicle, no breeding when mixed with male; probably miss the cycle. 3) Continue to breed, still a good candidate
Rima	Lots of cysts (both types)	13	<ol style="list-style-type: none"> 1) U/S: multiple small follicles 2) Continue to breed (not top priority?) 3) Consider transvaginal biopsy / cervix
Panjang	Cervical mass, mineralized mass & cysts	2	<ol style="list-style-type: none"> 1) Endoscopy: cervical mass observed 2) Cervical mass need to be removed before breeding 3) Not cycling, possible mixing with male to stimulate cycling
Seputeh	Cysts & lots of mass	12	<ol style="list-style-type: none"> 1) Biopsy needed, U/S: 24mm follicle, no breeding when mixed with the male. 2) Do not breed for now unless for semen collection
Ara	-	-	<ol style="list-style-type: none"> 1) Priority: Needs semen evaluation (from female after breeding)

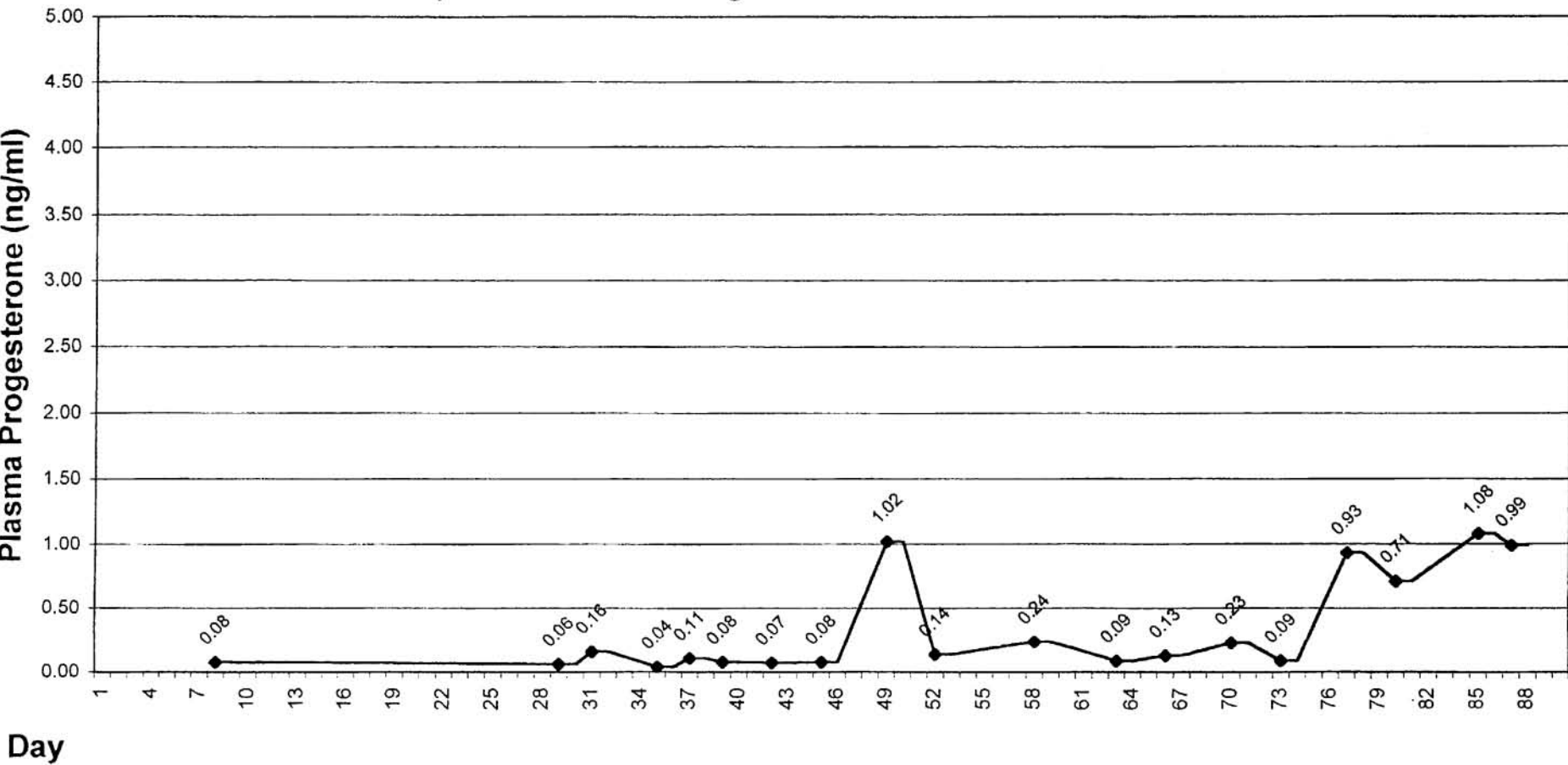
General:

- 1) Improved fencing
 - 2) Get animals into larger enclosure to avoid visual or auditory contact
- Access road should be built around the 100 acres enclosure.

Table 5: Minah Therapy Record Form: 50µg/ml Cystorelin (GnRH) BID

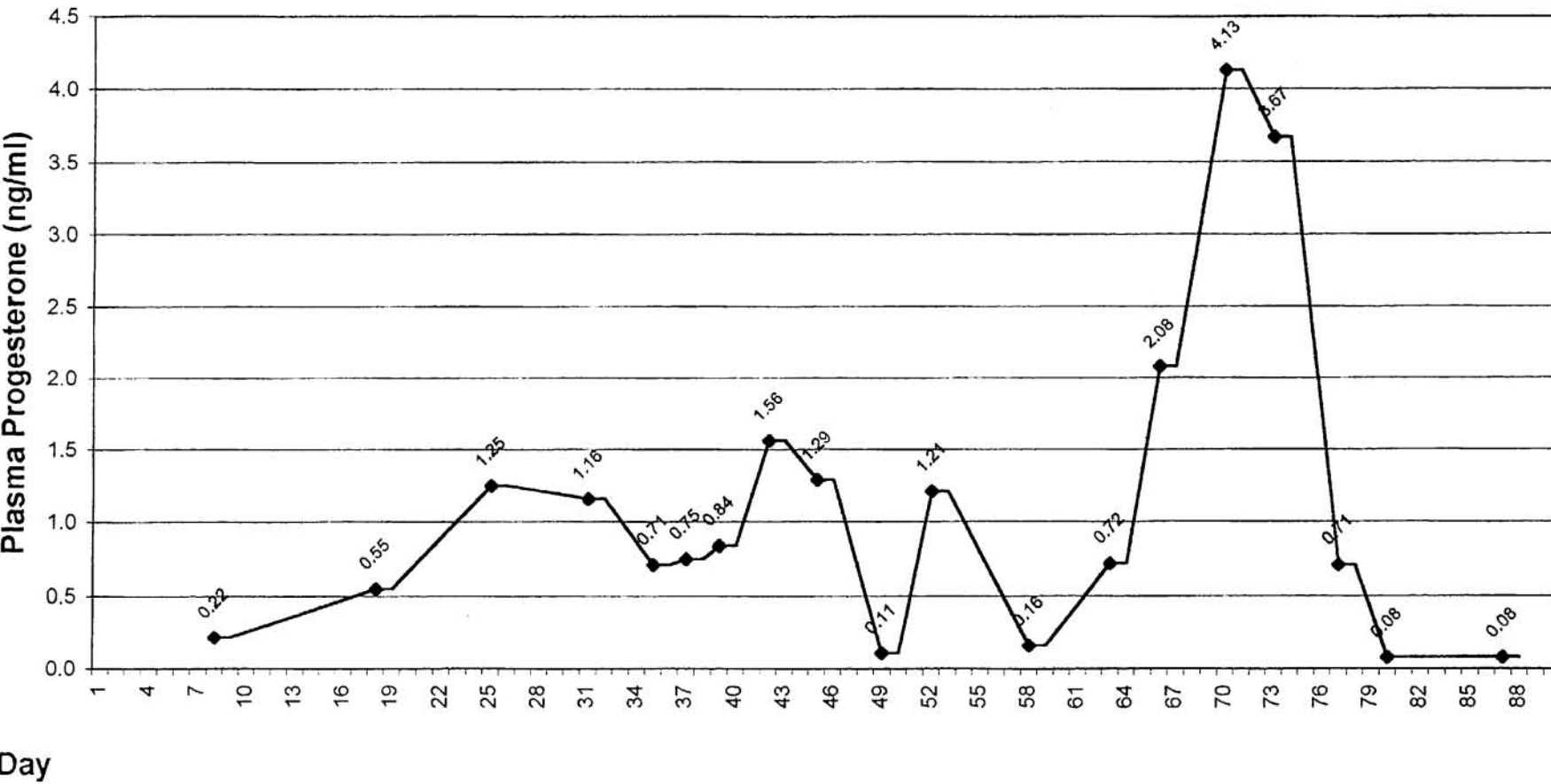
Rx Day	Date	GnRH Dose		Ultrasound Findings and Behavior	Serum Banked		Comments
1	5 March	AM	0.9 ml	U/S: Rhino jumping up & down, restless. MSF observed on right ovary.	0	√	
		PM	1.0ml		30	√	
2	6 March	AM	1.0ml				
		PM	1.0ml				
3	7 March	AM	1.0ml	U/S: Not cooperative, difficult to enter chute	Serum taken		
		PM	1.0ml				
4	8 March	AM	1.0ml				
		PM	1.0ml				
5	9 March	AM	1.0ml	U/S: Rhino vocalize a lot in the chute. Stop the U/S until the team arrived.	Serum taken		
		PM	1.0ml				
6	10 March	AM	1.0ml				
		PM	1.0ml				
7	11 March	AM	1.0ml	U/S exam: Right ovary: 13 mm Fo Left ovary: NSF	0	√	
		PM	1.0ml		30	√	
8	12 March	AM	1.0ml				
		PM	1.0ml				
9	13 March	AM	1.0ml	U/S exam: Right ovary: 13 & 15mm Fo Left ovary: Not examine (NE)	Serum taken		
		PM	1.0ml				
10	14 March	AM	1.0ml		Serum taken		
		PM	1.0ml				
11	15 March	AM	1.0ml	U/S exam: Right ovary: 15 mm Fo Left ovary: NE			
		PM	1.0ml				
12	16 March	AM	1.0ml		Serum taken		
		PM	1.0ml				
13	17 March	AM	1.0ml				
		PM	1.0ml				
14	18 March	AM	1.0ml	U/S exam: Right ovary: 15 mm Fo Left ovary: MSF	Serum taken		
		PM	1.0ml				

SUMATRAN RHINO
Seputih Plasma Progesterone Profile 1 - 2002

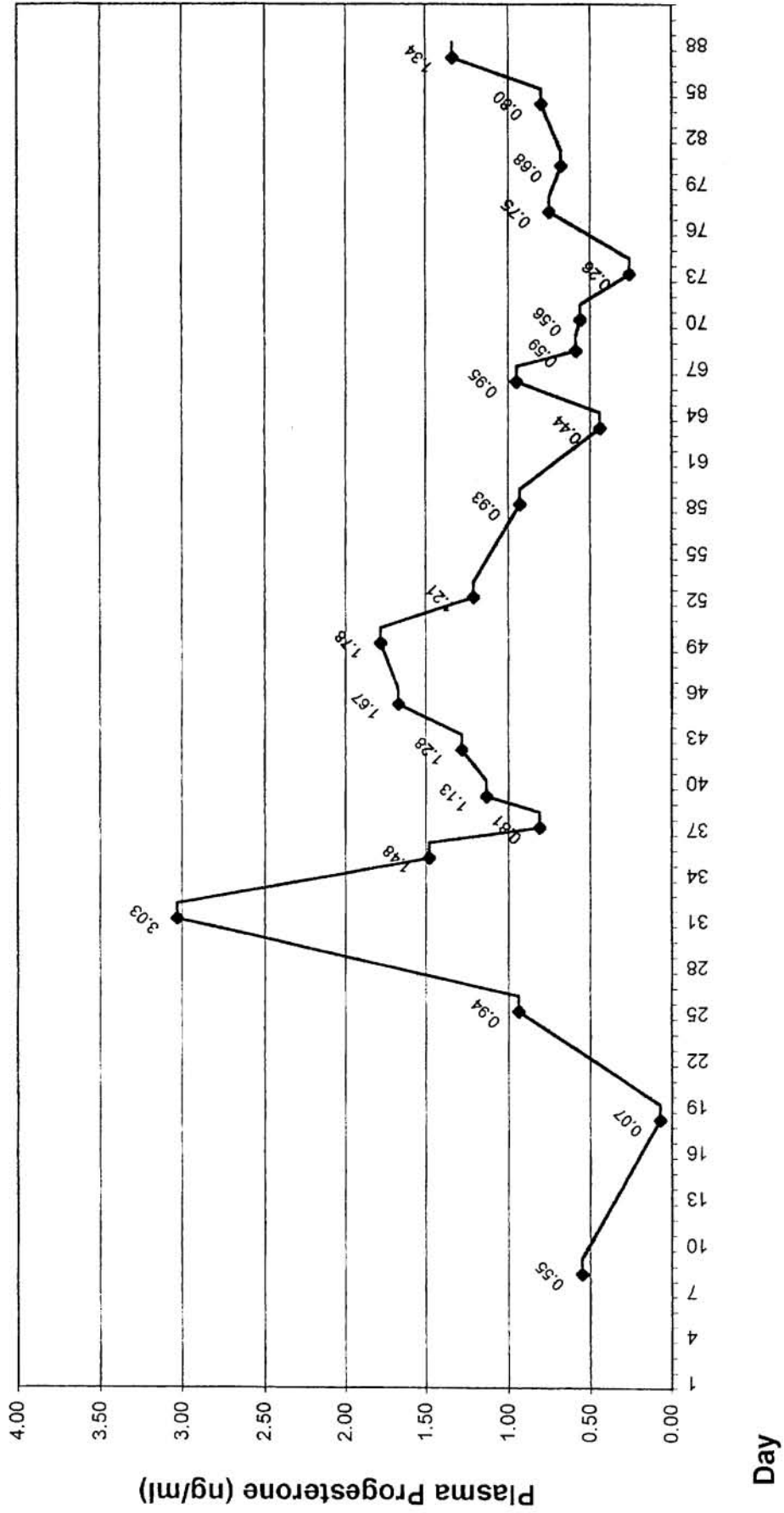


SUMATRAN RHINO

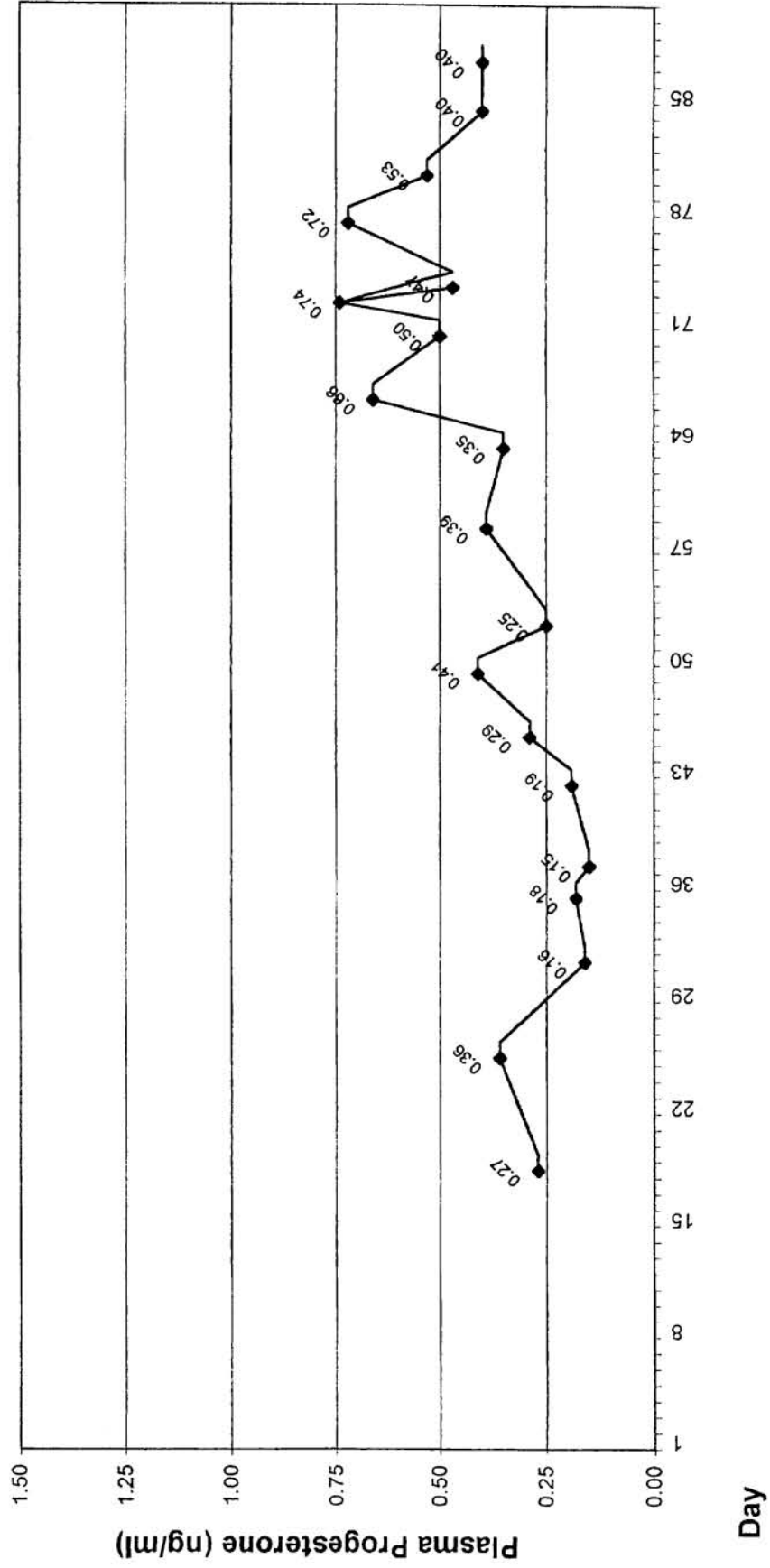
Rima Plasma Progesterone Profile 1 - 2002



**SUMATRAN RHINO
Mas Merah Plasma Progesterone Profile 1 - 2002**



**SUMATRAN RHINO
Minah Plasma Progesterone Profile 1 - 2002**



SUMATRAN RHINO
Panjang Plasma Progesterone Profile 1- 2002

