

ANNUAL REPORT

1989

PERMIT NO. PRT-719890

**CYPRUS PLATEAU MINING CORPORATION
P. O. DRAWER PMC
PRICE, UT 84501**

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Introduction

This is the annual report for Permit PRT-719890, as required by 50 CFR 21.27(c)(1) and conditions of the Permit.

The following areas of the monitoring plan, as approved by the U.S. Fish and Wildlife Service, will be addressed:

Cliff Subsidence Monitoring
Cliff Face Spalling
Eagle Activity
Monitoring Schedule

No mining beneath the two pre-existing nests, No. 20 and No. 21, was done in 1989. Mining during 1989 was conducted in Longwall Panels 3, 4, and 5, south of the cliff as shown on the Subsidence Monitoring Plan Map.

Longwall mining in the Third Coal Seam, beneath Nests 20, 21, and 189.006, will be started approximately in February, 1991. Subsidence near the nests has stopped, and will not begin again until after Third Coal Seam longwall mining begins.

Cliff Subsidence Monitoring

Four permanent monitoring points, U1 through U4, were established on top of the cliff, as shown on the Subsidence Monitoring Plan Map. During 1989, these points were surveyed four times.

Movement plots were made for each point, as shown on Figures 1 through 8. As can be seen on these plots, horizontal movement has been greatest at point U1, which is closest to longwall mining, and least at point U4, which is farthest from longwall mining. Point No. 1 is the location prior to mining. Vertical movement at each point is also shown on the plots. Horizontal and vertical movement graphs have been made of all four points, as shown on Figures 2, 4, 6, and 8. As can be seen on these plots, both horizontal and vertical movement have essentially stopped.

As can be seen on the Subsidence Monitoring Plan Map, surface cracks have occurred at the north edge of mining. The cracks near points U1 and U2 were approximately 30 inches wide each on August 28, 1989. The cracks between points U2 and U3 were approximately one-eighth of an inch wide on August 28, 1989.

Cliff Face Spalling

Photographs of the cliff were taken on January 19, June 9, August 23, and October 27. Color copies of the photographic composites are included in this report.

As can be seen on the photographs, the largest surface cracks are clearly visible. Except for the slab of rock that fell in 1988, there has been no cliff face failure near the nests.

Close-up photographs of Nests 20 and 21 were taken on November 9, and can be seen as Photographs 1 and 2. The nests have not been damaged in any way by subsidence. The chain link fencing is still in place, as can be seen in the photographs.

Eagle Activity

On February 21, 1989, Mr. Nelson Boschen from the Utah Division of Wildlife Resources (DWR) was flown by helicopter to the ridge top approximately 3000 feet east of Nests 20 and 21. He observed the pair of eagles, and indicated that his presence caused stress -- he left the area. He surmised from his observations that the eagle pair is occupying the territory, they had chosen Nest No. 22 as a brood nest, and that his presence was causing stress. Copies of Mr. Boschen's field notes are included in Exhibit A.

Because Mr. Boschen's presence disturbed the eagles, it was decided not to monitor again until the eagles were further along in the brooding season. Mr. Miles Moretti of DWR recommended after April 15 as the next monitoring effort.

On April 24, 1989, Mr. Boschen traveled by truck and by foot to the observation area. He observed an eagle in courtship behavior, and fresh conifer twigs with green needles in Nest No. 22. He surmised that the pair were in the last stages of courtship and would lay eggs any day.

On May 23, 1989, Mr. Boschen again observed the pair adding sticks to Nest No. 22. No fresh conifer twigs were observed. He surmised that the "pair is still strongly attached to the nest," and that "eggs may still be laid," although it may be getting too late.

On June 1, 1989, Mr. Boschen again observed the pair near the nests. No eggs or young were observed in Nest No. 22, and no new cliff nests were found. A previously unknown tree nest was found halfway between Nests No. 20 and 21, and Nest No. 22. This tree nest location is shown on the Subsidence Monitoring Plan Map, and has been assigned a DWR number of 189.002. He did not indicate he observed green twigs in the nest, but indicated it as "unused." He surmised that the pair are "still territorial, but, unless they have eggs in an unlocated nest nearby, it is probably too late for egg-laying to occur."

On June 5, 1989, Mr. Miles Moretti of DWR and Mr. Ben Grimes of Cyprus Plateau Mining Corporation (CPMC) (Permittee), observed the tree nest and found it to contain some green twigs with needles. A photograph of the nest can be seen as Photograph No. 4.

On October 13, 1989, a previously unknown cliff nest (No. 189.006) was located approximately 25 feet south and approximately 30 feet below Nest No. 20, as shown on the October 27, 1989, cliff photograph. This nest is small and appears to be new, although the sticks used are highly weathered. A photograph of the nest can be seen as Photograph No. 3. A close examination of the January 19, June 9, and August 23 cliff photographs does not resolve the question of whether the nest is new this year; not enough detail can be seen. Mr. Moretti and Mr. Grimes have observed the cliff in this vicinity very carefully, from a helicopter, each year since 1983. It is doubtful that this nest would have been overlooked.

The pair of eagles have been observed many times in the territory through November, but no young birds have been seen with them or in the area. It is assumed that the pair was unsuccessful in their nesting attempt in 1989.

Monitoring Schedule

Table 1 has been revised to show actual monitoring during 1989. Monitoring during 1989 was revised in accordance with DWR recommendations. Subsidence monitoring and cliff

photography were discontinued during the nesting season because it was feared the activity would disturb the birds. They were also discontinued late in the year because subsidence has essentially stopped. This schedule was discussed with both DWR personnel and Mr. Clark Johnson of the U.S. Fish and Wildlife Service, and both agreed on the schedule and the schedule shown for 1990.

Since subsidence has stopped, and since no mining will be conducted anywhere near the nests in 1990, it would not be productive to undertake an intensive monitoring program. Monitoring points U1 through U4 will be surveyed in August to see if any additional movement occurs. Cliff photographs will also be taken in August to look for cliff face changes. A thorough observation of the nests and area will be made by DWR and CPMC using a helicopter in late May. The nests and area will also be observed in June, July, August, and September to document activity of the pair.

After the 1990 nesting season, a decision will have to be made concerning the newly located cliff nest No. 189.006, since mining will take place directly beneath it in early 1991, as shown on Table 1. Because of the stress caused by observers in the area, a decision on 1991 monitoring will also have to be made.



PHOTOGRAPH 1 - NEST NO. 20



PHOTOGRAPH 2 - NEST NO. 21

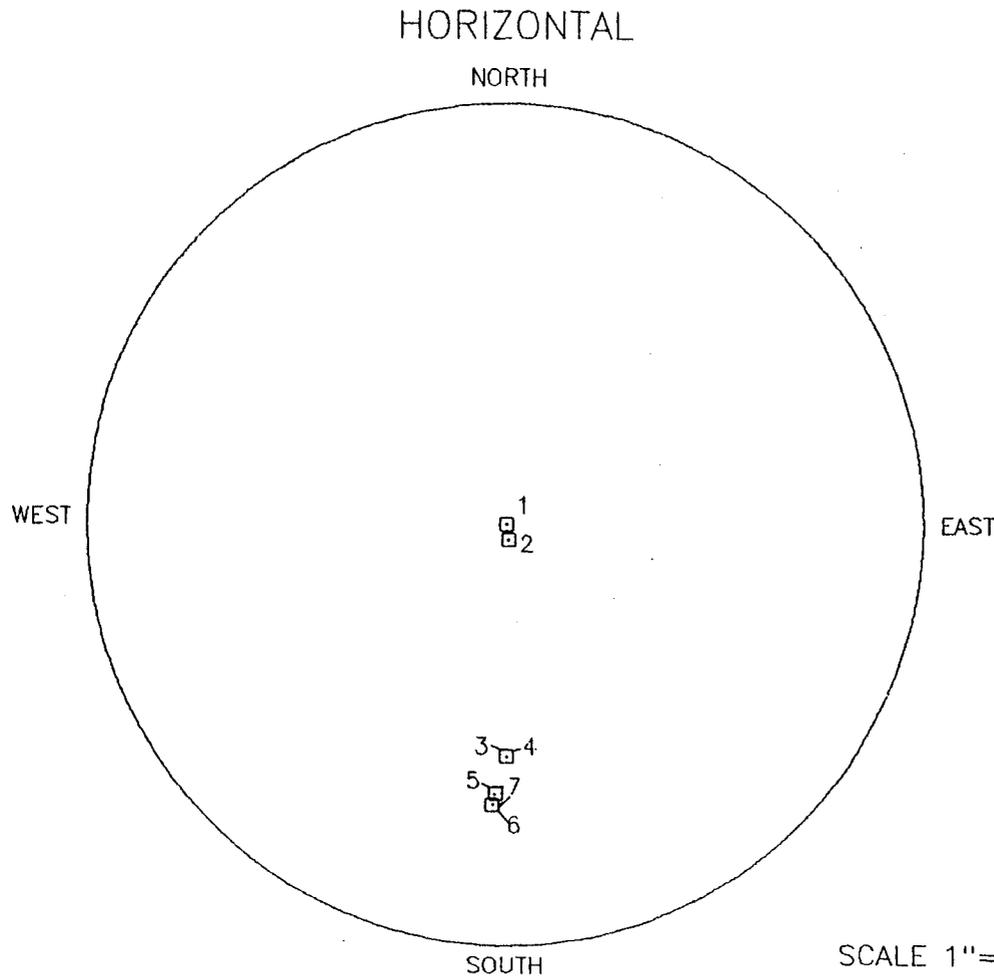


PHOTOGRAPH 3 - NEW NEST NO. 189.006



PHOTOGRAPH 4 - NEST NO. 189.002

FIGURE 1
 U-NORTH SUBSIDENCE MONITORING
 STATION U1
 MOVEMENT PLOT



VERTICAL

POINT	DATE	DROP TOTAL FT.
1	JULY 7, 1988	0
2	SEPT. 23, 1988	0.53
3	NOV. 1, 1988	1.20
4	JAN. 19, 1989	1.20
5	FEB. 21, 1989	1.25
6	JUNE 6, 1989	1.48
7	AUG. 28, 1989	1.47

FIGURE 2
U-NORTH SUBSIDENCE MONITORING
HORIZONTAL AND VERTICAL MOVEMENT GRAPH
STATION U1

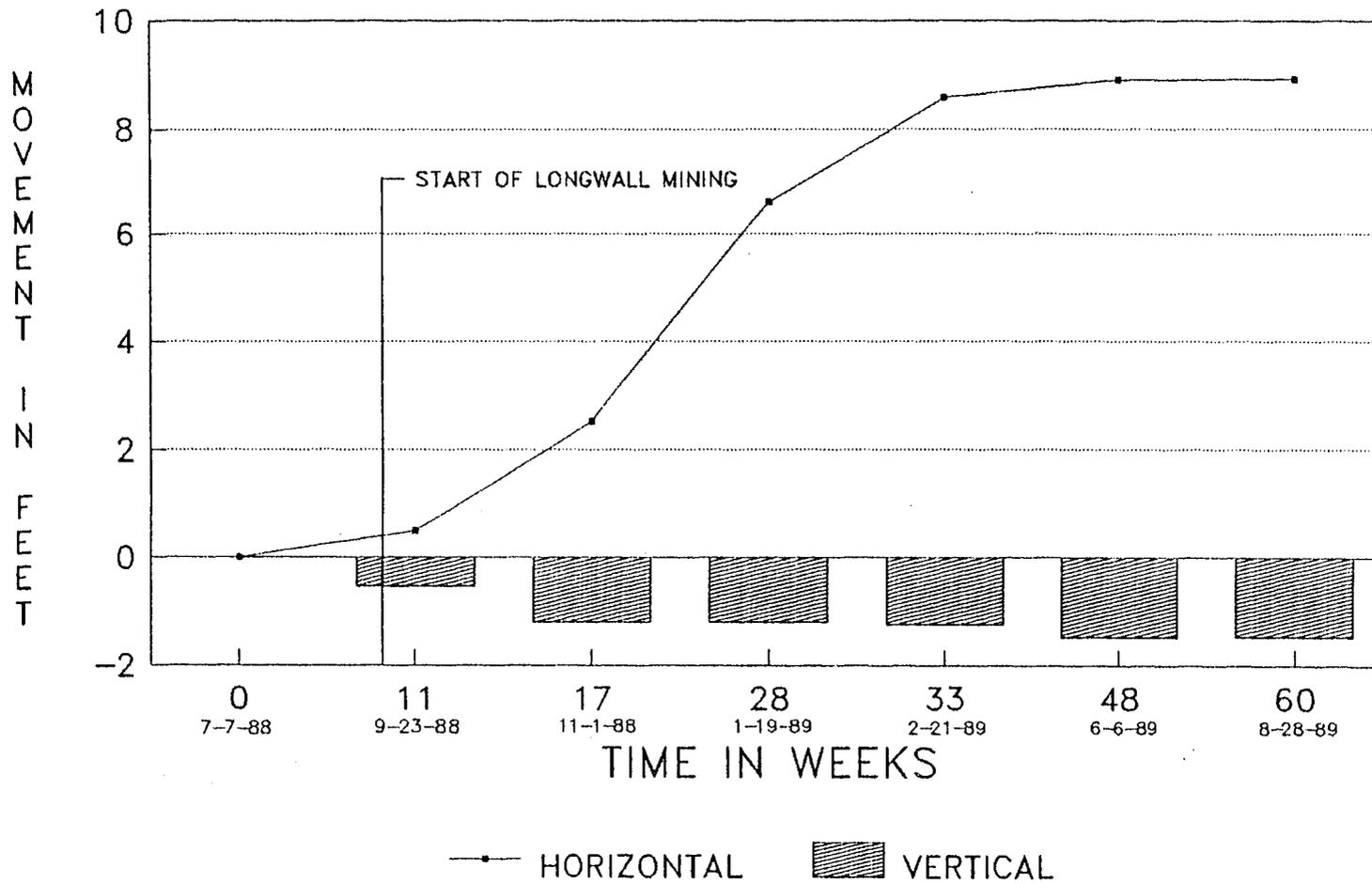
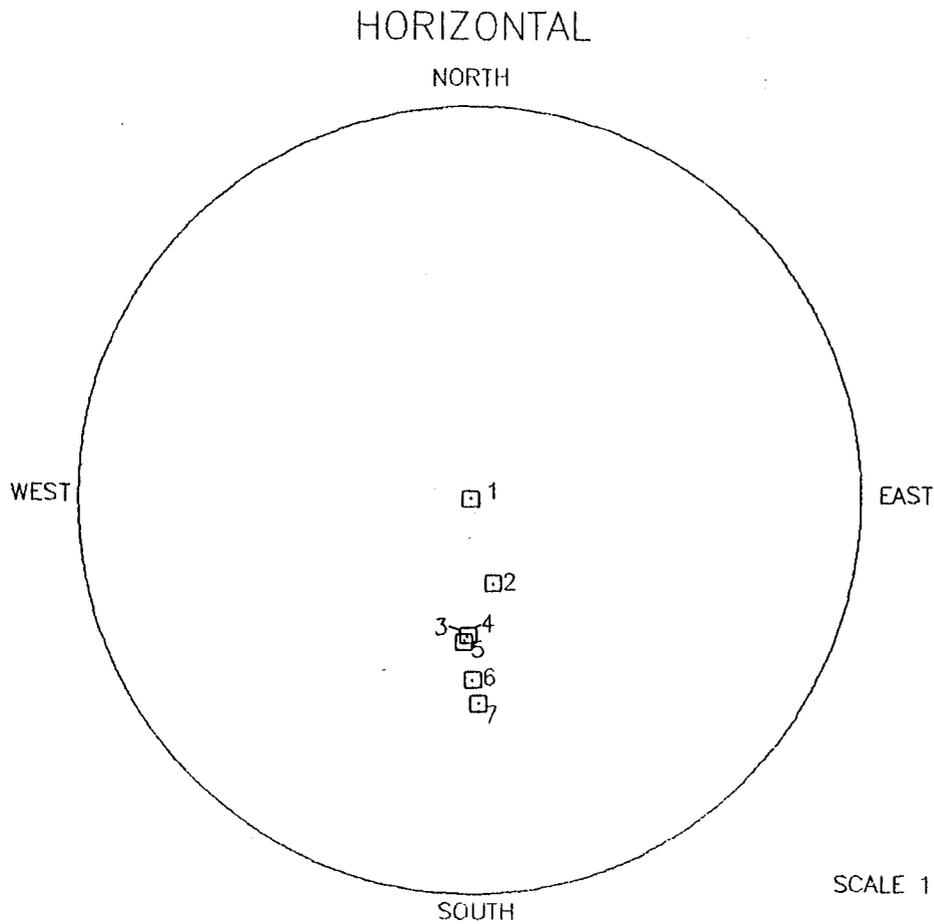


FIGURE 3
U-NORTH SUBSIDENCE MONITORING
STATION U2
MOVEMENT PLOT



VERTICAL

POINT	DATE	DROP TOTAL FT.
1	JULY 7, 1988	0
2	SEPT. 23, 1988	0.49
3	NOV. 1, 1988	0.50
4	JAN. 19, 1989	0.50
5	FEB. 21, 1989	0.43
6	JUNE 6, 1989	0.57
7	AUG. 28, 1989	0.56

SCALE 1"=1'

FIGURE 4
U-NORTH SUBSIDENCE MONITORING
HORIZONTAL AND VERTICAL MOVEMENT GRAPH
STATION U2

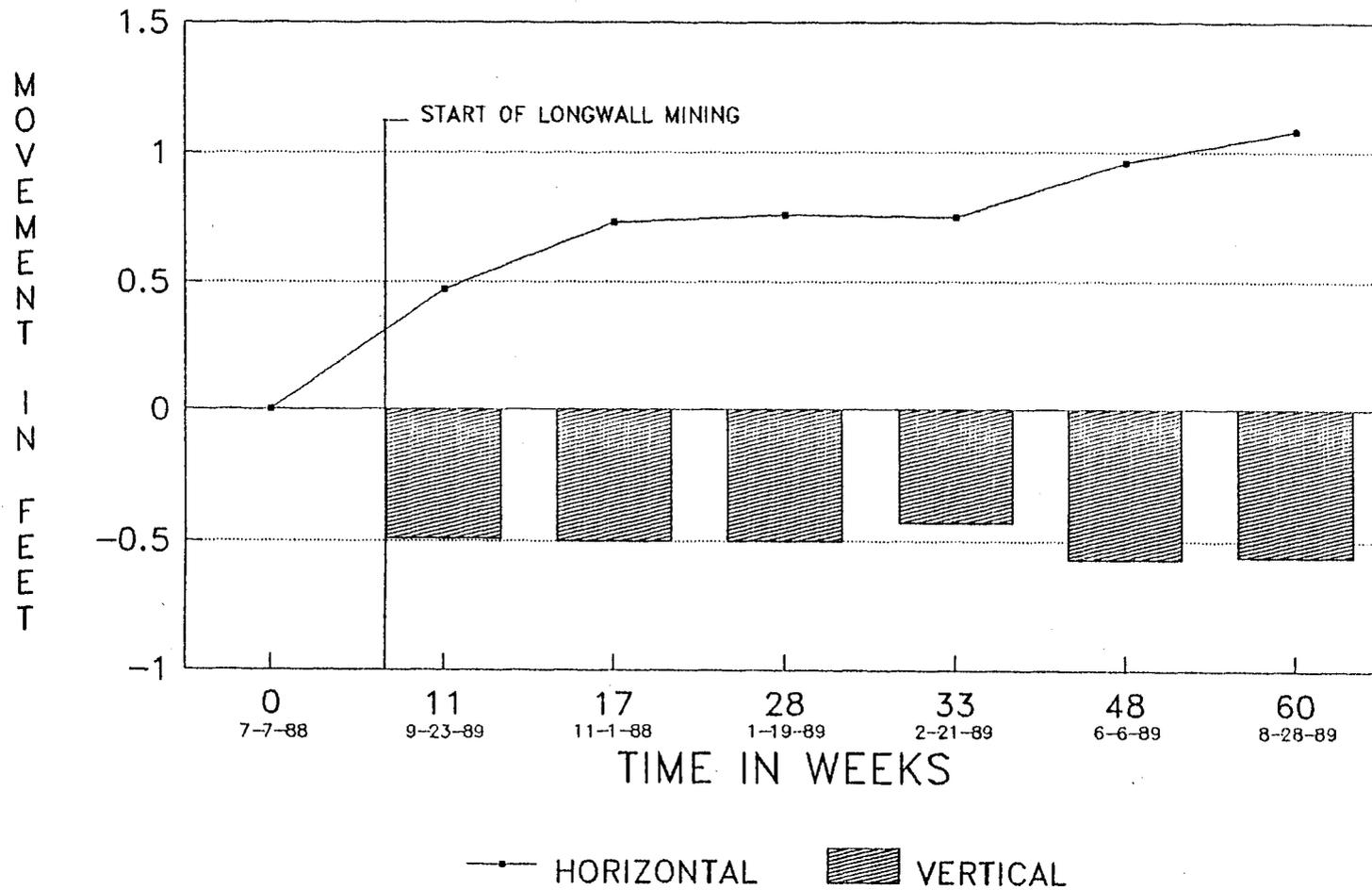
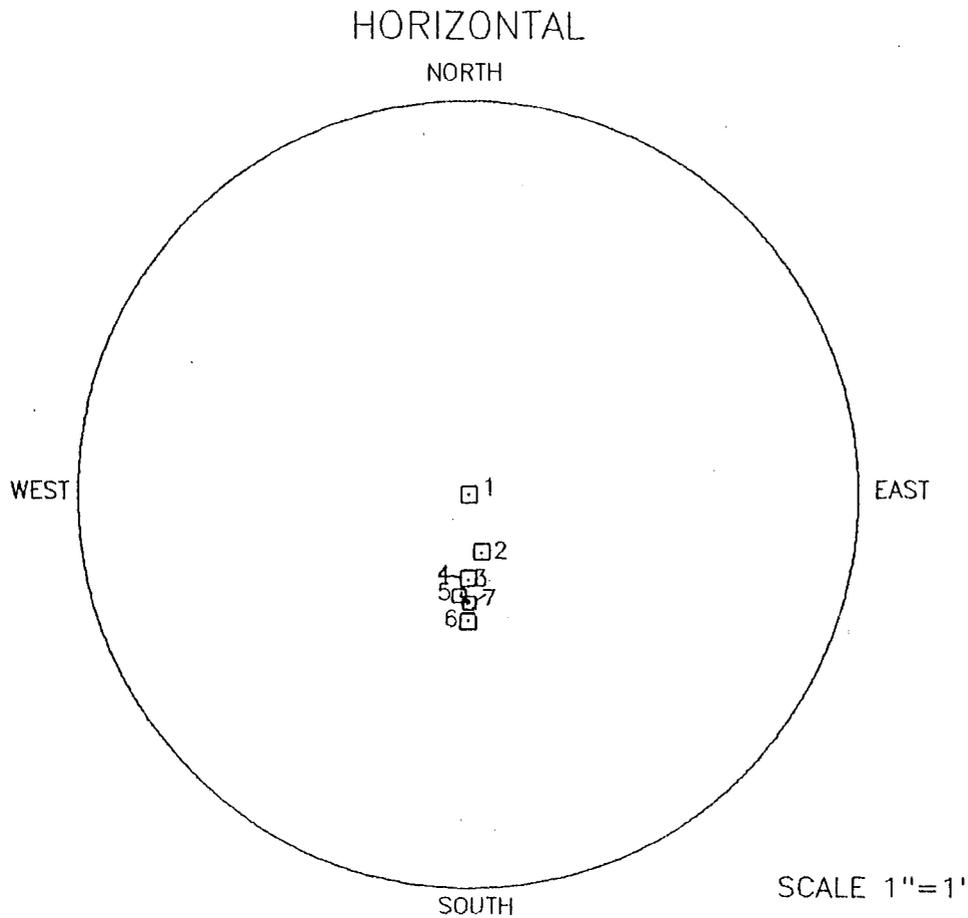


FIGURE 5
U-NORTH SUBSIDENCE MONITORING
STATION U3
MOVEMENT PLOT



VERTICAL

POINT	DATE	DROP TOTAL FT.
1	JULY 7, 1988	0
2	SEPT. 23, 1988	0.10
3	NOV. 1, 1988	0.09
4	JAN. 19, 1989	0.09
5	FEB. 21, 1989	0.07
6	JUNE 6, 1989	0.07
7	AUG. 28, 1989	0.08

FIGURE 6
U-NORTH SUBSIDENCE MONITORING
HORIZONTAL AND VERTICAL MOVEMENT GRAPH
STATION U3

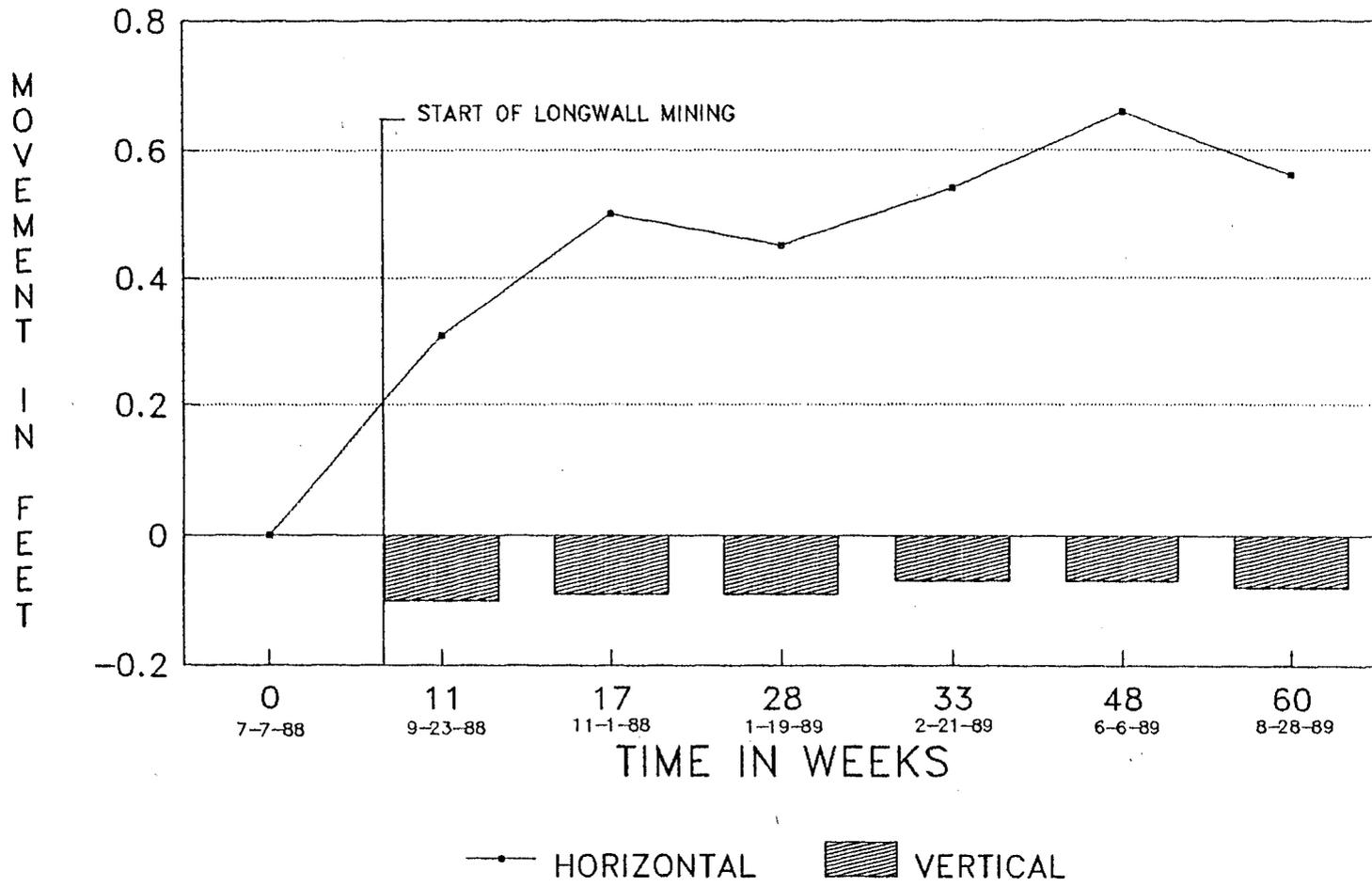
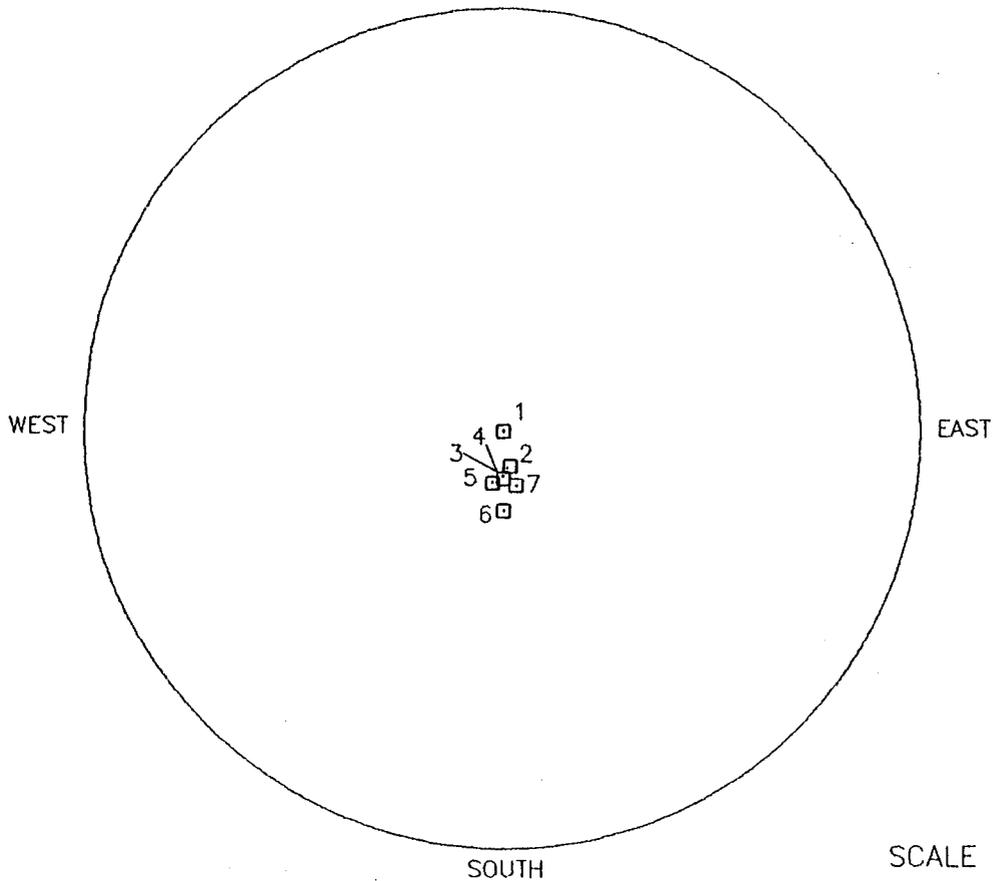


FIGURE 7
 U-NORTH SUBSIDENCE MONITORING
 STATION U4
 MOVEMENT PLOT

HORIZONTAL
 NORTH



VERTICAL

POINT	DATE	DROP TOTAL FT.
1	JULY 7, 1988	0
2	SEPT. 23, 1988	0.00
3	NOV. 1, 1988	+0.08
4	JAN. 19, 1989	+0.08
5	FEB. 21, 1989	0.05
6	JUNE 6, 1989	0.07
7	AUG. 28, 1989	0.05

SCALE 1"=1'

NOTE: A + VERTICAL MOVEMENT INDICATES A RISE IN ELEVATION

FIGURE 8
U-NORTH SUBSIDENCE MONITORING
HORIZONTAL AND VERTICAL MOVEMENT GRAPH
STATION U4

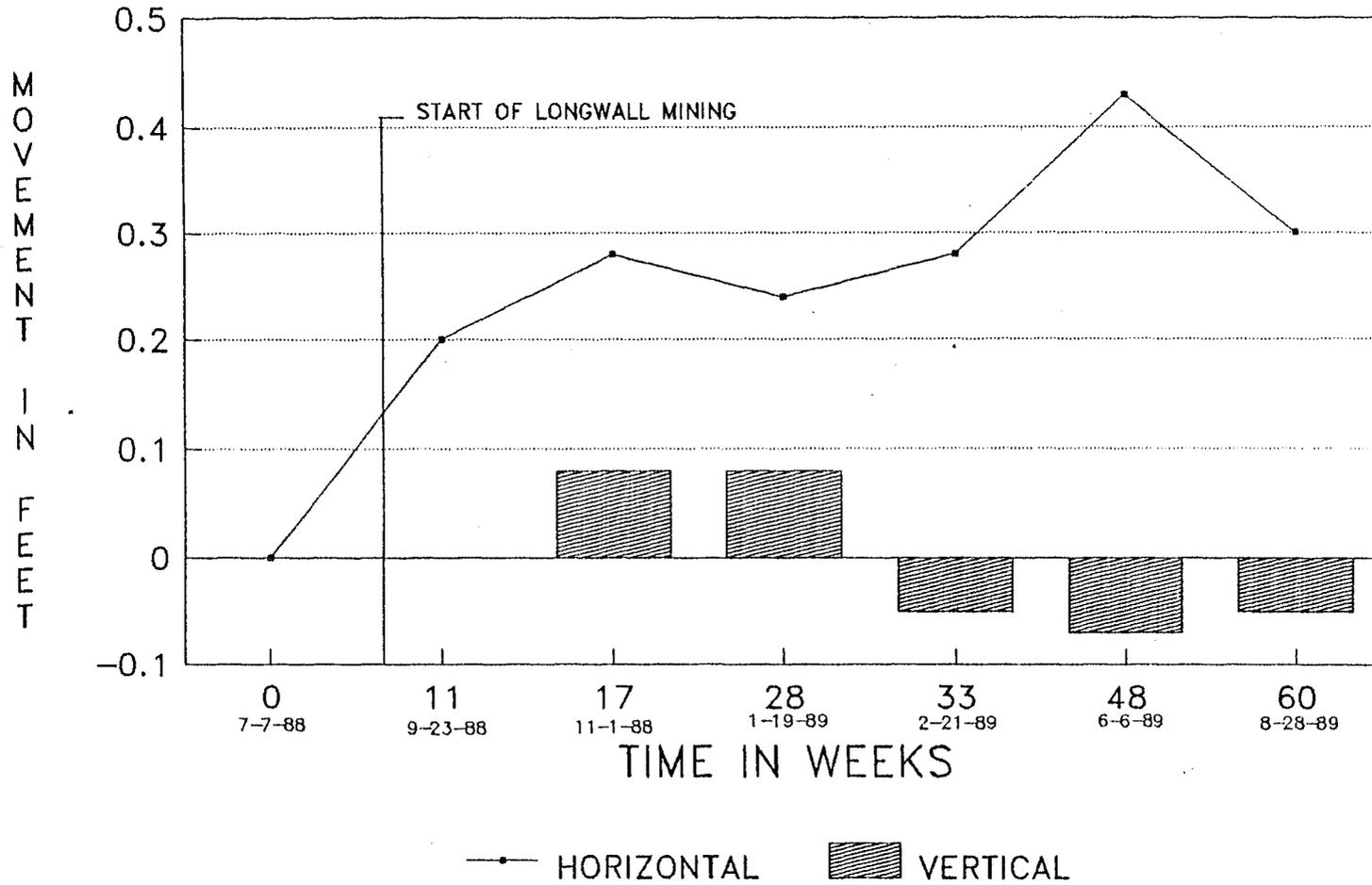


EXHIBIT A



State of Utah

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF WILDLIFE RESOURCESNorman H. Bangarter
Governor
Dee C. Hansen
Executive Director
William H. Geer
Division DirectorSoutheastern Region
455 West Railroad Avenue
Price, Utah 84501-2829
801-637-3310

March 6, 1989

Ben Grimes
Cyprus\Plateau Mine
P.O. Box PMC
Price, Utah 84501

Dear Ben:

Enclosed is a copy of Nelson Boschen's field report on the observations of the golden eagles. Nelson felt his presence was a disturbance to the birds and potentially could affect the status of the territory. Because of the potential to cause the cessation of breeding, or the birds to abandon their breeding territory, we believe that further monitoring of these birds should be stopped until they are further along in the breeding season. We will not monitor again until April 15, when they should be incubating eggs and the chance of abandonment is minimized.

We have consulted with all the federal agencies and DOGM and all agree about this course of action. In addition, monitoring of subsidence should be delayed until the April 15 date. The presence of any prolonged human activity or a helicopter could result in the failure breeding activity in of this territory.

The monitoring in April needs to be evaluated as to the amount of disturbance to the birds, also. If the presence of observers provokes a response from the birds, then it is recommended that the observer leave as quickly as possible and monitoring be delayed again until further into the breeding season. In future years a blind needs to be constructed during the inactive period and be in place when the birds return to the territory. I have reviewed the literature and one study stated that placing a blind within close proximity to the nest site after breeding had been initiated also caused the birds to remain away from the nest site. Thus, this option is not feasible at this time.

Ben Grimes
Page 2
March 7, 1989

We will get together before the April 15 date to work out the details of monitoring the nest.

Sincerely,

A handwritten signature in cursive script, appearing to read "Miles Moretti".

Miles Moretti
Nongame Manager

MM/dd

cc: Randy Radant, DWR
Darrell Nish, DWR
Brent Stettler, DOGM
Clark Johnson, USFWS

Date: 2-21-89

Observer: Nelson Boschen, Utah Div. of Wildlife Resources

0925: Reach observation point at X (see attached map). Weather clear, wind 0-15mph, est. 45°F, almost complete snow cover w/drifts to 3½ft but av. of 2½ft.

A = the south-most aerie on the west cliff, active in 1987.

B = the aerie about 50yds north of A on the same cliff.

C = the aerie on the east cliff, active in 1988.

1035: Bobcat on the point about 120yds south of A.

1039-1045: 2 adult golden eagles ½ mile east, soaring up & north over the main ridge.

1053: Adult female golden eagle glides by 30yds south & level with me, very fast from the west & glides straight to & lands on C, while the adult male, 100yds behind her, turns north along the cliff of C & heads over the main ridge. The female, after calling for 5 sec. at the nest edge, then flies south around the point of the nest C cliff & disappears behind it. I leave immediately via the route shown on the map in order to put distance, the ridge, & trees between me & the nest. When reaching the dirt road, I immediately head down to stop the helicopter from picking me up & creating an additional disturbance.

1201: Reaching point Y at the 9750ft contour line along the dirt road, one of the adults stooped over me at a fast speed, heading southeast where it joined the other adult soaring 150ft above my level.

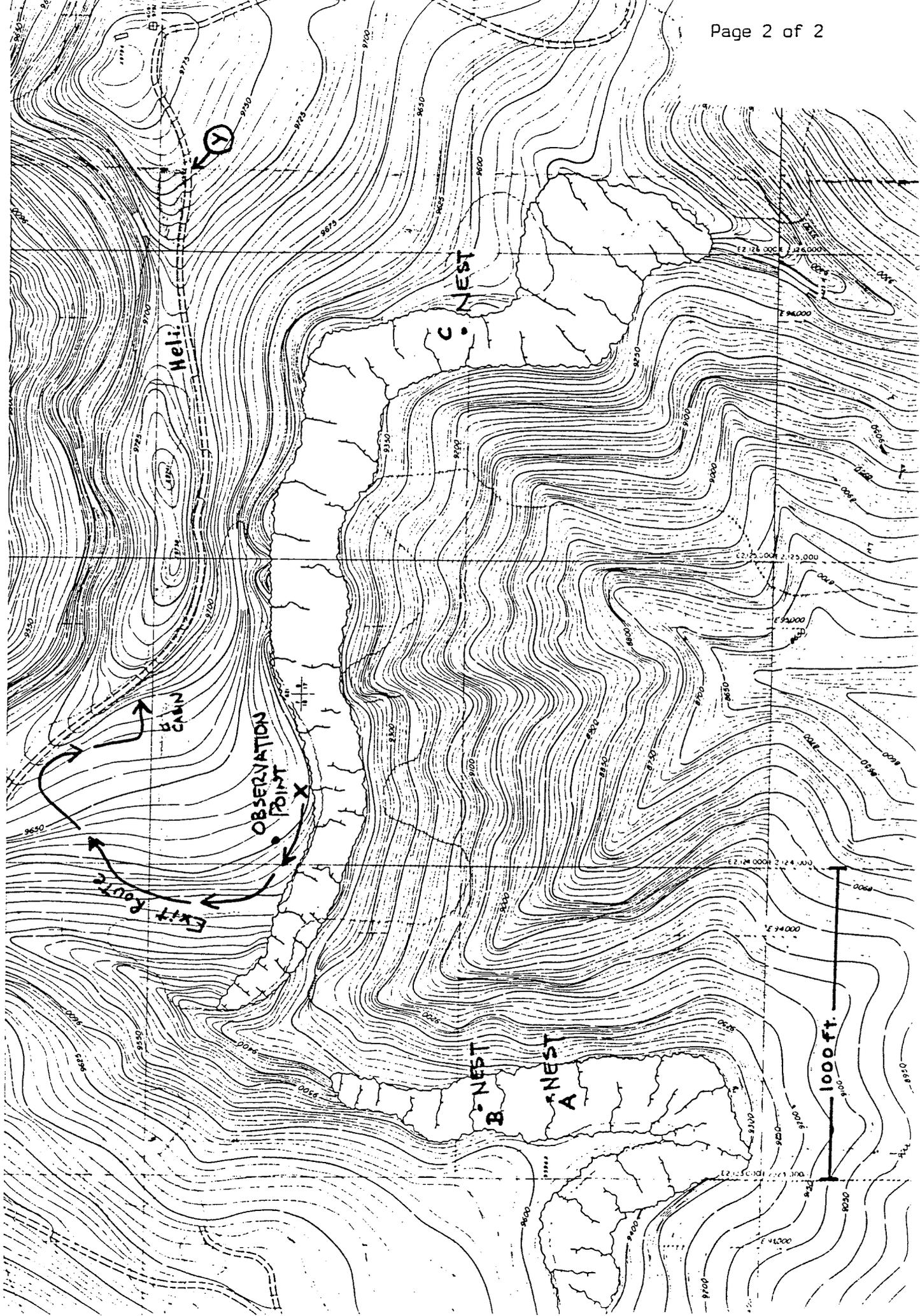
Comments: All visible cliff was checked for both fresh whitewash (only a couple possible new streaks at C) & construction of additional nests (none). Nests A or B had no twigs or branches deposited on or around the wire mesh covers. Nest C looked new & ready for use.

The actions of the adults at 1053 & 1201 indicate:

- (1). They are definitely occupying the territory,
- (2). They have likely chosen nest C for a brood nest this season, &
- (3). That at both points X & Y I was too close & causing stress.

It is also probable that any aircraft presence above or south of the main ridgetop, including where we had landed at "Heli." on the map, produces the same effect. Therefore, unless absolutely necessary, I recommend that observers & helicopters approach no closer than well up on the ridge above & to the west of nests A & B, preferably no lower on that ridge than is necessary to perform additional required observations of nest C. Even here may not be an adequate distance, so be prepared to leave; though nests A & B are now unuseable, the eagles almost undoubtedly still consider them within their nest territory, & approaching near them may still cause abandonment of nest C, especially before hatching occurs.

Nelson Boschen



Helipad

OBSERVATION POINT X

Exit Route

CANN

C NEST

B NEST

A NEST

1000 ft.

Date: 4-24-89

Observer: Nelson Boschen, Utah Div. of Wildlife Resources

1255: Driving along the road about 1000' east of the cabin, I saw an adult golden eagle doing fast deep V-dives along the cliff top before nests A & B, in wind 40-50mph, after five of which it glided to & landed on the ledge of nest C, which was out of view; about 10 sec. later a bird with the same mottled feather pattern flew off & began soaring up.

1330-1400: From somewhere nw of nest B & about 50yds from that west cliff's edge, I could see that nest C was empty but I could not tell whether or not any reconstruction had taken place on it due to the broken lighting pattern on its edge. No other nest visible on the e. or n. cliffs.

1347 Weather: 50% clouds, wind var./40-60mph, 55°F.

1435-1450: Taking the ridge below the cabin on the blind (w.) side away from nest C to a point near the n. cliff where I can view the w. cliff for new nests, I observe no new nests & no change to nests A & B.

1510: From one point along the road about 800' e. of the cabin, it is possible to see 1/2 to 2/3 of the nestcup's inside. At this point I stopped & quickly scoped the nest C; its inside was lined with many fresh conifer twigs with green needles.

Comments: The only eagle sighting was the one at 1255; its behavior was courtship behavior, indicating that the pair still intend to nest. The addition of fresh twigs to line a nest is the last stage to nest building & indicates that it is the chosen nest for egg-laying, which will likely begin any day now.

Nelson Boschen

Monitor of Golden Eagle Aeries on Gentry Mountain

Date: 5-23-89

Observer: Nelson Boschen, Utah Div. of Wildlife Resources

1105: I scope nest C from nearest road view; nothing. Adult Red-tailed Hawk hunting within 200' above the nest's clifftop.

1125-1158: I scope the nest from the north cliff (s. of cabin) to assure it is empty all the way back; it is.

1200: Both adults arrive from nw. Female lands on nest, calls, moves some twigs, then flies off just before male lands w/branch which he places, then he also flies off. Both fly over the ridge to north.

1212: One adult flies between me & nest heading s.; about 200yds s. of nest it turns e. & glides over & down behind the nest ridge.

1215: I leave. WX: overcast, V/10-50, 60°F, rare snow patches.

Comments: No fresh conifer twigs in nest, but the pair is still strongly attached to the nest, & another branch added suggests egg(s) may still be laid here, though it may be getting too late.

Date: 6-1-89

1114: Scoping nest C from the road view, I see no adults, eggs or fresh conifer twigs.

1130: Nothing in nest C from w. slope nw of nest B.

1140 WX: 60% clouds, V/10-30, 55°F.

1144: An adult eagle glides upcanyon 40' over my head (no calls). After 2 min., it comes back & perches in an aspen about 22yds beside me. After 1 min., it flies downcanyon along this w. cliff.

1205: I move down to near the point s. of nest A to look for any tree nest.

1225: I reach near the point.

1313-1320: An adult gliding s. over nest C ridge is joined by mate across the valley to the s. of my viewpoint. Both glide over me to the nest C cliff, & become hidden from view by foreground trees as they go along the north cliff, where one calls about 12 times at 1324.

1335: After moving to see around the trees, I see no eagles, but I find an unused tree nest just below the n. cliff base adjacent to about midpoint along its length, about 120°/450' from my "X" viewpoint on the map of 2-21-89; it is ½-way up the lowermost conifer of a small cluster of about 15 trees; nest tree about 80' tall w/ nest against trunk on east side; nest flat-topped, large (about 3' thick), & empty, though probably a historical golden eagle nest. Nest may not be visible from the north cliff or above it.

1405: Observation discontinued.

1415 WX: 80%, V/10-25, 45°F, very rare snow patches, but it feels like snow.

Comments: The adults are still territorial, but, unless they have eggs in an unlocated nest nearby, it is probably too late for egg-laying to occur now & their nesting attempt has failed for some unknown reason.

Nelson Boschen