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Monthly Report for April 1981

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Coal file AC7007/009

RECEIVED

"STUDY TO DETERMINE THE EFFECTS OF COAL DEVELOPMENT ON WILDLIFE IN SOUTHEASTERN UTAH"

JUN 15 1981

Monthly Report for April 1981

DIVISION OF OIL, GAS & MINING

During the month of April, all experimental and control transects monitored for big game tracks, medium sized mammal signs and Emlen transects. Additionally, the overland coal conveyor belt was monitored once during each week, for a total of four readings. Raptor surveys were also conducted, and revealed one active prairie falcon aerie, in addition to the three previously documented golden eagle aeries.

During the month of May all experimental and control transects will be monitored for big game tracks and Emlen transects. The overland coal conveyor belt will be monitored for deer tracks and raptor surveys will continue.

An index of mule deer activity documented during April, in relation to the proposed overland coal conveyor belt has been summed in Table 1.

Raw data forms and field notes for the month of April have been enclosed for Eureka Energy Company.

It is important to note the recent work conducted by UDWR at Plateau Mining Company's Star Point Mine dealing with mule deer crossing under a presently existing overland coal conveyor belt. Data has revealed deer crossings associated with permanent deer trails, but has also revealed randomized deer crossings (those crossings not associated with permanent deer trails). This phenomenon illustrates the need for numerous crossing structures along Eureka Energy Company's proposed overland coal conveyor, due to the limited number of permanent deer trails located proximal to Eureka's proposed conveyor, and the high number of documented randomized deer trails and tracks along the proposed conveyor.

twisted logic!

File in:
 Confidential
 Shelf
 Expandable
Refer to Record No. 0046 Date 6/5/81
In C/ 007, 009, Incoming
For additional information

4-1-81 STREAK OF MUTE ON
UPPER CLIFFS AT THE MOUTH OF
DUGOUT CANYON. (POSSIBLY A
KESTRAL)?

- OLD GOLDEN EAGLE STICK NEST
NEXT TO ANOTHER NEST FOUND
YESTERDAY BETWEEN CORBUCA
AND FISHCREEK CANYON.

- MUTE UP UNDER A CLIFF LEDGE
DIRECTLY ABOVE AND NORTH OF
THE DUGOUT CANYON PORTAL AREA.
(500 METERS ABOVE). (POSSIBLY
AN OWL)?

- AN OLD FINE STICKED NEST
ON CLIFF ABOVE TRANSECT # 1
(STAKE 25).

*
- GOLDEN EAGLE FLEW AROUND
AND FLEW INTO POCKET CAVITY
(LAST YEARS ALTERNATE NEST -
DALTON) MALE EAGLE DREW THE
FEMALE OFF THE NEST AND THEY
DID A COURTSHIP FLIGHT. AFTER
HIKING IN CLOSER TO THE CLIFF
I CAN DEFINATELY SEE A STICK
NEST IN THE POCKET CAVITY.

3:50 P.M. MALE EAGLE APPEARED
CIRCLING ABOVE THE NEST DOING
A COURTSHIP FLIGHT, THEN HE
DISAPPEARED OVER THE RIDGE.

- FOUND AN OLD BLUE ELK COLLAR
T. 135, R. 12E, SECTION 27, S.E. 1/4
POSSIBLE FROM ORIGINAL ELK
TRANSPLANT, 1976.

4-4-81 LEFT FORK OF PACE CANYON
AVIFAUNA - MOUNTAIN CHICKADEE
DARK-EYED JUNCO, BROWN
CREEPER, YELLOW BELLED SAP
SUCKER, TOWNSENDS SOLITAIRE,
COMMON BUSH TITS

MARACKUS RANCH IN CLARKS
VALLEY - 4 DEER IN THE FIELDS

- KESTRAL ON CLARKS VALLEY
ROAD (MIDDLE CATTLE GUARD)

3-8-81 RED-TAILED HAWK ABOVE TRAN. #2

3-8-81 PRAIRIE FALCON FLEW OVER
RIDGE ABOVE TRANSECT # 2

LIGHT DEER ACTIVITY ON SADDLE
ABOVE DALTONS EAGLE NEST.

3-9-81 4 DEER ON DUGOUT ROAD
1/2 MILE SOUTH OF DESERT
TRANSECT # 4.

GOLDEN EAGLE (MATURE) CIRCLING
AROUND DOUBLE POWER LINES

4-10-81 6 GREEN-WINGED TEAL
ON SMALL POND SOUTH OF
TRANSECT # 12.

- MATURE GOLDEN EAGLE
CIRCLING 1 MILE SOUTH
OF TRANSECT # 12, (9:00 AM)

- PAIR OF MARSH HAWKS CIRCLING
AROUND OLD SHACK ON TRAN. # 12

- MATURE GOLDEN CIRCLING LOW
3/4 MILE SOUTH OF OLD SHACK
ON TRANSECT # 12 (11:00 AM)

- IMMATURE GOLDEN EAGLE
SWOOPED DOWN ON PREY AT THE
END OF TRANSECT # 12 (12:00 PM)

TRILL

TRILL

LIKE A BUSHY LONG ROUNDED
TAIL SHORT NARROW BEAK
DULL GRAY-LIGHT BREAST

4-11-81 AN AMERICAN COOT
WAS HIDING UNDER A SANDSTONE
ROCK ON THE ROCKY CLIFFY
PART OF TRANSECT # 5
STAKE 103 - PINYON JUNIPER.
MUST HAVE BEEN GROUNDED
DURING A STORM.

MATURE GOLDEN EAGLE CIRCLING
ABOVE MAHLERS RANCH.

4-12-81
LIGHT PHASE OF RED-TAILED
HAWK FLYING AROUND THE
JUNCTION OF SOLDIER CREEK

AND DOUBT ROADS.

ROUGHSIDED TOWHEE CALLING
AROUND PRED PLANT

4-21-81 MATURE GOLDEN EAGLE
SPOOKED OUT OF PINYON 1/4
MILE SOUTH OF PREP. PLANT.

4-24-81 PINYON JAY NEST ALONG
TRANSECT # 11. LOCATED IN A
JUNIPER TREE 6 FEET UP. SPEC-
KEHD BLUE-GRAY EGGS.

4-30-81 RED-TAILED HAWK
CIRCLING AROUND WATTIS MINE.

5-1-81. 107815

1 MATURE GOLDEN EAGLE SITTING
ON DOUBLE POWER LINES 6:30 PM

| | |
|------------|---------------|
| DEER COUNT | SOLDIER CREEK |
| 36 DEER | 1 RED COLLAR |
| 9 " | 1 " " |

TOTAL 45 DEER (2 RED COLLARS)

5-2-81 BEAR TRACKS AT COOR'S
SADDLE. OVER-TURNED ROCK. MADE
WITHIN THE WEEK.

- MALE BLUE GROUSE STRUTTING
AND DISPLAYING AROUND COOR'S
SADDLE.

"STUDY TO DETERMINE THE EFFECTS OF COAL
DEVELOPMENT ON WILDLIFE IN SOUTHEASTERN UTAH"

Monthly Report for March 1981

By Utah Division of
Wildlife Resources

During the month of March, all experimental and control transects were monitored for big game tracks and Emlen transects. Additionally, the over-land coal conveyor belt was monitored once during each week, for a total of five readings. Raptor surveys were also conducted, and to date have revealed three active golden eagle aeries, and two alternate golden eagle aeries.

Breeding owl call inventories have revealed both the great horned owl and pygmy owl using the project area.

Locations of the active and alternate golden eagle aeries are plotted on the attached maps. Aerie locations are as follows:

1. NW 1/4 Sec. 26 T. 13 S., R. 12 E., Carbon County, Utah (this aerie was an alternate nest during 1980, but is active now, 1981)
2. SW 1/4 Sec. 16 T. 13 S., R. 12 E., Carbon County, Utah (this aerie is active now, 1981)
3. SE 1/4 Sec. 21 T. 13 S., R. 12 E., Carbon County, Utah (these two aeries are alternates this year, 1981)
4. SW 1/4 Sec. 18 T. 13 S., R. 12 E., Carbon County, Utah (this nest is active now, 1981 and shows evidence of having greenery taken to the nest in past years)

Because the golden eagle is of high federal interest pursuant to 43 CFR, 3461.1 (n-1) and are of high interest to the State of Utah, because they are extremely sensitive to disturbance, these active aerie sites need protection from significant or continual disturbance within one-half kilometer radius of the nest. This buffer zone is ranked as being of critical value to maintenance of the eagle population when the bird is actually utilizing the aerie; that period of time is normally between April 15 and June 15, but these aeries are presently active. The buffer zone would need to be increased to one kilometer if a disturbance were to originate from above and within direct line of sight to the eagle aerie.

This critical valued zone is of specific importance to aerie #2 due to the proximity of an existing exploration road and the proposed Fishcreek Mine Portal #1. The exploration road is located within 40 meters of the nest; thus indicating the importance of protecting this aerie from any disturbance until mid-June.

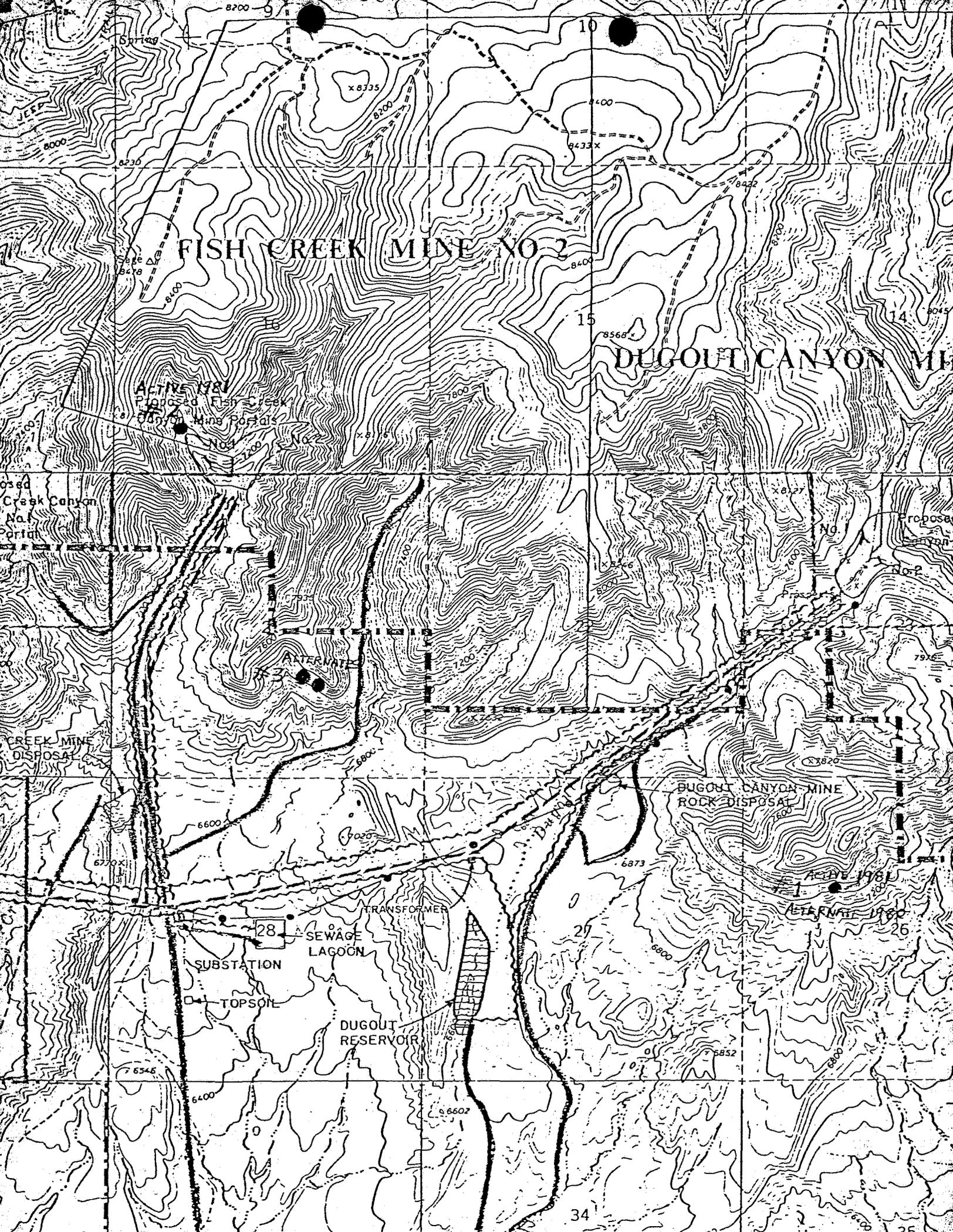
During the month of April all experimental and control transects will be monitored for big game tracks medium sized mammals and Emlen transects. The overland coal conveyor belt will be monitored for deer tracks and raptor surveys will continue.

An index of mule deer activity documented during March, in relation to the proposed overland coal conveyor belt has been summed in Table 1.

Raw data forms and field notes for the month of February have been enclosed for Eureka Energy Company.

One aerial survey was conducted during March. A copy of the survey report is enclosed. (It is important to note that when this aerial survey was conducted, deer use proximal to the proposed overland coal conveyor was light. But since that flight deer activity on the project area has greatly increased. An on-the-ground deer count conducted on March 25, documented 252 deer along Soldier Creek and the Mahlares fields.) Future aerial surveys will not be conducted due to warm ground conditions preventing snow accumulation.

* | It is also important to point out that in the monthly report for February, the index of deer activity data (Table 1) for February and the total are turned around. The February row is supposed to be the total row and visa-versa.



FISH CREEK MINE NO. 2

DUGOUT CANYON MINE

ACTIVE 1981
Proposed Fish Creek
Dugout Canyon Mine Portals

ETERNAL 1960

DUGOUT CANYON MINE
ROCK DISPOSAL

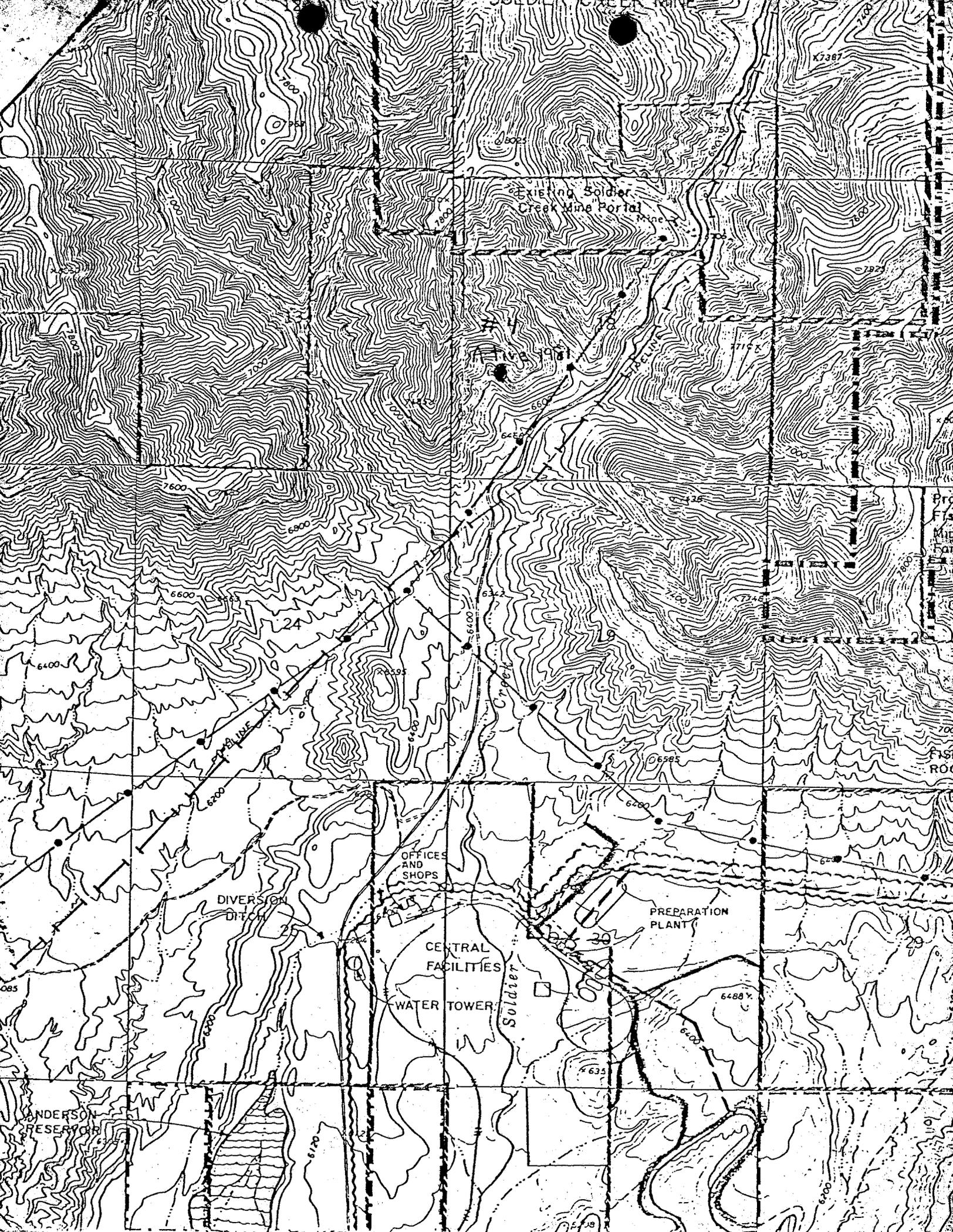
ACTIVE 1961
ETERNAL 1960

SUBSTATION
TOPSON

SEWAGE LAGOON
DUGOUT RESERVOIR

TRANSFORMER

34



from DWR's monthly
progress Report
for March 1981

field notes for the month of Feb.

♂ MARSH HAWK FLYING
AROUND SOLDIER CREEK &
DUGOUT ROAD JUNCTION.

2-24-81

4 DEER AROUND CORRALS
WEST OF PREP PLANT

WEST OF TRANSECT # 8

MOUNTAIN BLUEBIRD

AMERICAN GOLDFINCH

FOX SPARROW ?

DARK-EYED JUNCOS

PLAIN TITMOUSE

2-27-81

Common BUSHY TITS ALONG
SECTION 5 + 9 OF CONVEYER

3-1-81

PREDATOR KILLED DEER

8-100 OF CONVEYER

3-5-81

42359

#1274

3-9-81

♂ MARSH HAWK FLYING
AROUND BY JUNCTIONS OF
DUGOUT + SOLDIER CREEK
ROADS.

CONVEYER SECTIONS 3,465

COMMON BUSHY TIT +11

PLAIN TITMOUSE DATION
truck

SCRUB JAY

DARK EYED JUNCOS 42,512

GRAY HEADED JUNCOS

ROCK WREN

DUGOUT ROAD

RUFOUS-SIDED TOWHEE-CANINE

BLACK-BILLED MAGPIE

(WILLIS BEAUFORT SHOWED ME
A CALF ELK LEG HE FOUND
1 MILE NORTH OF TRANSECT
3. KILLED THIS WINTER.)

1 MATURE GOLDEN EAGLE
FLYING ABOVE PREP. PLANT
(11:00 AM)

3-10-81 DALTONS TRUCK

42552

42587

3-11-81

42605

42641

1 MATURE GOLDEN EAGLE

FLYING + CALLING AROUND

CORBULA CANYON (11:00 AM)

2 DEER AT THE MOUTH OF
CORBULA CANYON 1- RED COLLAR

3-12-81

1 GOLDEN EAGLE 1 MILE

SOUTH OF TRANSECT # 4

9:00 A.M.

1 MATURE GOLDEN FLEW

OVER TRANSECT # 4

(1:00 P.M.)

1 GOLDEN EAGLE SITTING

ON DOUBLE POWER LINES

(6:00 P.M.)

1 CANADIAN GOOSE FLEW
OVER PREP. PLANT AT
DUSK. (7:00 P.M.), HEADING
EAST.

1 GREAT HORNED OWL

5 REPETITIONS OF CALL

10-15 SECONDS APART

7:30-7:45 P.M. 1000-1500 METERS
SOUTHEAST OF PREP. PLANT.

PYGMY OWL 6-24 SEC.

CONSTANT BEEP 8 REPETITIONS

8:00 P.M. 300-500 METERS
EAST OF PREP. PLANT.

COYOTES HOWLING BETWEEN
THE TWO DIFFERENT OWL
CALLS. ONE COYOTE WAS
500-1000 METERS SOUTH OF
PREP. PLANT, OTHER COYOTES
WERE HOWLING BACK WEST
OF SOLDIER CREEK.

SPOT LIGHTED DEER IN
MAHLARS UPPER FIELDS

28 DEER 3 RED COLLARS

BOT FLY LARVAE

CUTEREBRIDAE

EGGS ARE DEPOSITED IN THE ENVIRONMENT OF THE HOST ALONG RUNWAYS OR BURROW ENTRANCES.

DEER MOUSE - CUTEREBRA
BOT FLY FONTINELLA

LARVAE ESTABLISH WARBLER UNDER THE SKIN AND THEN MOLT AND GROW IN THE CYSTS

3-16-81

MAJOR DEER TRAIL ON THE MANGUS CLAY HOLE BY SECTION 3 + 4 OF THE CONVEYER BELT. DEER MOVING NORTH-EAST TOWARD DUBOIS CANYON.

SECTION 3, 4 + 5 OF CONVEYER
COMMON BUSH TIT
DARK-EYED JUNCO
GRAY-HEADED JUNCO
PLAIN TITMOUSE

4

* LION TRACKS ON TRANSECT # 6 (STAKE 23) HEADING NORTHEAST
14" STRIDE 3" WIDE PAW
ALSO

LION TRACKS AT STAKE 73 11 INCH STRIDE 3" WIDE PAW

MAJOR DEER TRAIL FOLLOWING SECTION 11 OF CONVEYER. A FEW DEER SEEM TO HAVE MOVED DOWN OFF THE TOP

INTO THE HIGH-PRIORITY WINTER RANGE.

3-19-81

23 DEER FEEDING AROUND THE CORRALS WEST OF THE PREP PLANT. NO COLLARS

1 IMMATURE GOLDEN EAGLE FLEW OVER TRANSECT # 8 (1:00 P.M.)

6 DEER SPOOKED OFF TRAN. # 8

7 DEER SOUTH OF TRAN-
SECT # 8. NO COLLARS
8 DEER GRAZING IN
MAHLARES UPPER EAST
FIELDS. 2 RED COLLARS.

1 IMMATURE GOLDEN EAGLE
FLYING AROUND EAST MAH-
LARES FIELDS. (2:00 P.M.)

1 MATURE GOLDEN EAGLE
FLYING AROUND EAST

MAHLARES FIELDS (2:30 PM)

44 TOTAL DEER
2 RED COLLARS.
DAY COUNT

3-23-81

MAHLARES FIELDS

19 DEER 1 RED COLLAR
1 BUCK HAD ONE
ANTLER STILL.

MATURE GOLDEN EAGLE FLYING
ABOVE FISHER CREEK CANYON (11:30 AM)

L

3-24-81
KESTRALS - PAIR MATING
 $\frac{1}{2}$ MILE SOUTH OF DUGOUT
AND SOLDIER CREEK ROAD
JUNCTIONS. COAL TRUCKS
AND OTHER TRAFFIC DO NOT
SEEM TO BOTHER THE COURSHIP
RITUAL (MALE FLYS OVER AND
WHILE HUFFLING COPULATES
WITH THE FEMALE; MATING OCCURS
ONLY 40 YARDS WEST OF SOLDIER
CREEK ROAD; THEY COPULATED
TWICE - BETWEEN TRUCK TRAFFIC.)

SINGLE DEER ON TRANSECT
3 STAKE 75

OWLING - DUGOUT PORTAL

Pigmy Owl CALLING
7:15 P.M. - 7:30 P.M.

OWE LOCATED $\frac{1}{4}$ MILE NORTH
OF THE FORKS OF DUGOUT
CANYON.

3-25-81

14 DEER ON ROAD TO TRANSECT
11. (1:00 P.M.)

GOLDEN EAGLE WEST OF

TRANSECT # 11
5 DEER ON TRANSECT # 11



MATURE GOLDEN EAGLE FLEW INTO CLIFF POCKET (3:45 PM.) THE POCKET HAS A STICK NEST WITH FRESH GREENERY IN IT. NO VISABLE MUTE. NEST HAS BROWN VEGETATION IN IT, SO IT MUST HAVE BEEN WORKED

ON LAST YEAR TOO.

5:00 P.M. ONE LARK CIRCLED ABOVE THE NEST, THEN ITS MATE APPEARED AND FLEW INTO THE NEST. BIRD SETTLED DOWN INTO THE NEST. MUST BE ACTIVE.

5:30 MALE BIRD FLEW INTO NEST. THEN BOTH BIRDS FLEW OFF THE NEST AND MADE A 1-2 MINUTE COURTSHIP FLIGHT. THEN THE MALE FLEW BACK TO THE NEST AND SETTLED IN.

EVENING
DEER COUNT 3-25-81

| | | | |
|-----------|-----|----|---------|
| S+V PREP. | 86 | 5 | COLLARS |
| U. M. F. | 74 | 3 | " |
| L. M. F. | 17 | 0 | " |
| " | 60 | 3 | " |
| " | 15 | 0 | " |
| TOTAL | 252 | 11 | |

IT APPEARS THAT MOST THE DEER HAVE MOVED BACK DOWN - GREEN VEGETATION.
- SINGLE EAGLE WEST OF SOLDIER CREEK AERIE.
- PAIR EAGLES FLYING ABOVE

CLIFFS NORTH OF PREP. PLANT.

* FRESH MUTE ON CLIFFS 1/4 MILE SOUTH WEST OF SOLDIER CREEK EAGLE AERIE. POSSIBLE EAGLE ROOST.

* MUTE ON LOWER GRAY CLIFFS NORTH OF PREP. PLANT - LOOKS LIKE A FALCON SCRAPE FROM PAST YEARS.

LION-KILLED DEER 1/2 MILE NORTH OF KORRAIS - RED COLLAR LYING NEXT TO THE CARCASS PILE.

PRARIE FALCON - MOUTH OF
SOLDIER CREEK CANYON.

3-30-81

9:00 A.M. 3 DEER IN MANLARES
UPPER FIELDS. 1 DEER (RED COLLAR)
ON CONVEYER 9-100.

4:30 P.M. 17 DEER IN MANLARES
UPPER FIELDS.

~~PAIR OF KESTRALS NEXT
TO SAVAGE TRUCK YARD,
SOLDIER CREEK ROAD~~
PAIR OF KESTRALS NEXT
TO SAVAGE TRUCK YARD,
SOLDIER CREEK ROAD

3-31-81 RAINA SURVEY

FRESH MUTE ON WEST CLIFFS
OF THE LEFT FORK OF FISHCREEK
CANYON. LONG STREAK
3 FEET LONG.

FRESH MUTE ON UPPER CLIFFS
BETWEEN CEBUJA AND FISHCREEK
CANYONS. 4 LONG STREAMS OF
FRESH MUTE

OLD EAGLE STICK NEST ON
CLIFFS BELOW FRESH MUTE. OLD
BROWN VEGETATION FROM PAST YEARS

ROCKS HAVE CAVED IN ON THE
OLD NEST.

AVIARY IN FISHCREEK CANYON

PAIR OF DOWNY WOODPECKERS

BLUE-GRAY Gnatcatcher

RED-BREASTED NUT HATCH

TOWNSEND'S SOLITAIRE

CANYON WREN

DARK-EYED JUNCOS

MOUNTAIN CHILKADEE

AMERICAN ROBIN

GOLDEN EAGLE

STEELY JAY

FISHCREEK CANYON 3-31-81

* (11:45 AM) GOLDEN EAGLE

FLEW OFF CLIFF IN THE UPPER LEFT
HAND FORK OF FISHCREEK CANYON -
ABOVE THE PROPOSED PORTAL AREA.
LOCATED AN GOLDEN EAGLE STICK
NEST 40 METERS ABOVE AN EXPLOR-
ATION ROAD AND \approx 1500 METERS
ABOVE THE PROPOSED FISHCREEK MINE
PORTAL AREA. THE NEST IS IN A CLIFF
CAVITY IN ROUGH GRAY CLIFF FACING
EAST. NO VISABLE MITE ON THE OUT-
SIDE, BUT SPLATTERED MITE ON
THE INSIDE OF THE NEST. NEST IS

COMPLETELY COVERED BY THE CLIFF
OVERHANG. FRESH GREENERY HAS
BEEN BROUGHT INTO THE NEST
THIS YEAR. 12:15 P.M. SINGLE
GOLDEN CIRCLED OVER FISHCREEK
CANYON AND THEN FLEW INTO THE
NEST, FOR ABOUT 5 SECONDS, THEN
TOOK OFF AGAIN. 12:50 P.M.

SINGLE GOLDEN DIVED RIGHT INTO
THE NEST - NO CIRCLING - APPEARS
TO BE FEEDING YOUNG. THEN THE
EAGLE SETTLED INTO THE NEST.

1:15 P.M. MALE EAGLE CIRCLED
OVER THE NEST AND DREW THE
HEN OFF THE NEST, THEN THEY

CIRCLED AROUND AND DID A COURT-
SHIP FLIGHT.

SOLDIER CREEK EAGLE AERIE.

MALE EAGLE FLEW INTO THE NEST
AND DREW THE HEN OFF. THEY
CIRCLED AROUND FIVE MINUTES
THEN THE HEN FLEW BACK INTO THE
NEST AND SETTLED IN.

- FRESH MITE ON LOWER CLIFFS
ONE CANYON UP FROM THE
SOLDIER CREEK EAGLE AERIE.

REPORT ON GOLDEN EAGLE NEST SITES FOR EUREKA ENERGY COMPANY

JANET LEE YOUNG, Ph.D.

MAY 1981

| | | | |
|------|------------|--------|-------|
| JAS | EFK | SALS | FS |
| PBB | JUN 4 1981 | ATS | JPI |
| RFG | | PCW | |
| EP | DWH | UKT | |
| CIRC | FILE | HANDLE | REPLY |

ey
11
CAS

In Utah the Golden Eagle lays one to three eggs in late February or March, incubation lasts an average of 42 days, and the young are fledged in 60 to 70 days (Eyre and Paul 1973). According to Call (1978) the average nesting sequence is as follows: Nest Building (2-2 to 2-26); Egg Laying (3-6 to 3-30); Incubation (3-10 to 5-14); Hatching (4-2 to 5-14); Fledging (6-7 to 6-21). In Utah young hatched in late April or early May would be fledged in late June or early July. After leaving the nest the eaglet is dependent on its parents for another 30 days or more (Terres 1980).

On 4 May and 5 May 1981 I attempted to locate, verify, and determine the nesting stage of the five Golden Eagle nests observed this year by UDWR personnel.

Methods

The survey was conducted on the ground. Field equipment included Trinovid Leitz 10 x 40 binoculars, The Discoverer Bausch & Lomb Zoom 60 mm telescope, Minolta camera, topographic map, compass, watch, field notebook, and UDWR field notes and two pages from UDWR Monthly Report for March 1981. Care was taken not to disturb the birds for fear of nest abandonment since it was not known if hatching had occurred. There is less chance of nest abandonment after the young appear in the nest and closer approaches may be made at that time.

Results

Nest Site #2--Fish Creek Canyon

A stick nest with vegetation that had turned red-brown was located above the exploration road above the proposed portal area. There was adult Golden Eagle activity in the canyon. There appeared to be two adult birds although they were not both visible at the same time. I stayed on the road, made a quick sketch of the nest site, took a picture

of the nest site and another picture with my back to the nest giving a view fairly comparable to what would be visible from the nest.

Nest Site #1--Dugout Canyon

There was one adult bird circling above the approximate nest site (determined from the topographic map). However, I did not locate the stick nest. I did not find a nest description in the UDWR field notes. I believe I did not hike far enough to the east. The nest was not visible from the road.

Nest Site #4--Soldier Creek

I found a stick nest in a pocket in the cliffs which contained greenery and brown vegetation. This corresponded to a scanty nest description in the UDWR field notes of 3-25-81. There was a pair of adult Golden Eagles circling above this nest site at 11:10-11:16 a.m. I did not observe any attentiveness to the nest by the birds. I photographed the nest site from the paved road.

Nest Site #3--Alternatives

I found one stick nest at this site. There was no indication that the nest was being used by any raptor species. There were no eagles in the area. I photographed the site.

Discussion

Golden Eagle nests generally can be seen from some distances, appearing as large dark objects (eight to ten feet across and three to four feet thick) on shelves or ledges on cliff faces. The large size of an eagle nest is usually an important clue in identifying it from the smaller Buteo nests. Usually a patch of whitewash from excretion is visible and the rock surrounding an eagle nest may be covered with an orange foliose lichen (Call 1978).

Some Golden Eagles commonly use alternate nests in successive years whereas other pairs may never use alternatives even though they may spend time repairing all or some of their nests. Each pair has up to 10 nests but only 2 or 3 are used in rotation (Brown and Amadon 1968). The nest may

be huge if the site permits with a foundation of sticks 1/2 to 2 inches in diameter and twigs, and is lined loosely with available greenery. The other nests may be mere scrapes on a shelf in a cliff with a circle of branches surrounding them.

Nest Site #2--Fish Creek Canyon

From the behavior of the adult bird or birds in the area I could not determine if this nest is active. Golden Eagles are generally unaggressive at the nest site and frequently fly off to a distance when an intruder approaches on foot. The inattentiveness to the nest at this time, either late incubation or early hatching, cannot be used to conclusively say the nest is inactive. The nest should be watched for the appearance of white downy young which will be visible from a considerable distance. The young birds will develop their dark wing and body feathers from two to four weeks prior to fledging. Observations of these events will allow for the reconstruction of an activity time schedule back to egg laying for the nest.

From the UDWR field notes taken on 3-31-81 it is obvious the observer (unidentified) is not familiar with the natural history of the bird. In the early part of the year eagles actively engage in aerial acrobatics as part of their pair bonding behavior in courtship. Young are not present on the nest at this time, the nest is either empty or eggs are being laid. Activity of an adult at the nest at this time would either be arranging nest material or rolling eggs, not feeding young as indicated in the field notes. Although most of the incubation is done by the female, the male parent does participate. I got the impression the observer was terming one bird, the female, because it was on the nest which is not necessarily true. The sexes look alike with the female being larger than the male.

This nest should be observed in June for the presence of young. If young are not present the active nest of the birds should be found so the impact of development at the portal site can be properly evaluated.

The pertinent data for each raptor nest located should be recorded on a raptor data form, such as the attached Raptor Inventory Data Sheet. When young are in the nest, a photographic record of the number of young in the nest and their relative condition and/or age should be made.

Disturbance to the adults must be kept to a minimum. Much information can be gained from a distance with binoculars or a spotting scope without disturbing the birds. There is less chance of nest abandonment after young are present. When the young have their black feathers one must be careful not to cause premature fledging which can result in injury to the young birds.

A nest card should be kept on the nest listing the date, time of day, observer, behavior of adult birds, number of young, appearance of young, behavior of young, prey items visible at nest, flight path of adults to and from nest, and space for other remarks. The information should be recorded each time the nest is observed. Once young are observed observations should be made at least weekly to document fledging and nest success.

Nest Site #1--Dugout Canyon

A Raptor Inventory Data Sheet and nest card need to be provided for this nest. Compass directions from which the nest is visible and distance from the road are needed to evaluate the impact of improving the road.

Data sheets should also be provided on the Cooper's Hawk nest to have the data on file for comparison after disturbance. It is a bird of high federal interest.

Nest Site #4--Soldier Creek

This nest could be of critical interest in the event that it is active. It can be viewed easily with a spotting scope from the paved road. It could provide a lot of insight into proposing practical mitigation measures to ameliorate any significant impacts upon the other Golden Eagle nests. Behavior of the adult eagles in the vicinity of this nest could not be used to conclusively call the nest active or inactive. Further observation and the proper data sheets are needed. If young do not appear, the active nest of the pair in the area should be determined for the valuable information which would be gained because of the close proximity of the existing Soldier Creek Mine Portal.

Nest Site #3--Alternatives

Old stick nests may be alternate Golden Eagle nest sites or they may be nests used by other species. The small size of the nest I located

would indicate it has not been a primary nest site. Better nest descriptions need to be provided and the nests should be observed in subsequent years for eagle activity. Several other raptor species use stick nests on cliffs and not all available nest sites are used each year. The presence of a bird at a nest is needed to determine that the nest is at some time used by that species in some capacity.

Conclusions

It is quite a responsibility to designate a stick nest as an active Golden Eagle aerie. Especially when each eagle pair may require 20 to 30 square miles of territory containing up to 10 nests of which seven or eight may never be used. The presence of greenery is not restricted to Golden Eagles and old nests cannot be identified as to former occupants after the birds have left. The UDWR should have stated there was adult Golden Eagle activity in the vicinity of some of the nests with courtship flights and possible nest repair or building activity observed. Then they should have maintained data sheets on the nests. They should have indicated more observations were necessary to determine if the nest sites were active. The presence of young in June will document nest activity (a photographic record should be made) and fledging will determine nest success.

In the monthly Report for March 1981 the UDWR stated that the birds utilize the nest between April 15 and June 15. This is false in that the nest is used from February to July in Utah.

Buffer zones around active eagle nests need individual consideration. More information is needed on the three nest sites designated as active by the UDWR before recommendations can be made.

Literature Cited

- Brown, L. and Amadon, D. 1968. Eagles, Hawks, and Falcons of the World. 2 vols. New York: McGraw-Hill Book Company.
- Call, Mayo W. 1978. Nesting Habitats and Surveying Techniques for Common Western Raptors. Technical Note TN-316, Bureau of Land Management, Denver Service Center.
- Eyre, L. and D. Paul. 1973. Raptors of Utah. Utah Division of Wildlife Resources Publication No. 73-7.
- Terres, John K. 1980. The Audubon Society Encyclopedia of North American Birds. Alfred A. Knoph, New York.

Submitted by:

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RAPTOR INVENTORY DATA SHEET
[for field notebook (looseleaf)]

Observer _____ Nest Number _____

Date of Observation _____ Species _____

Land Ownership: P S BLM Location: T _____ R _____ Sec. _____

Description of Nest Site:

Nest Substrate _____

Height of Substrate _____

Height of Nest Above Ground _____

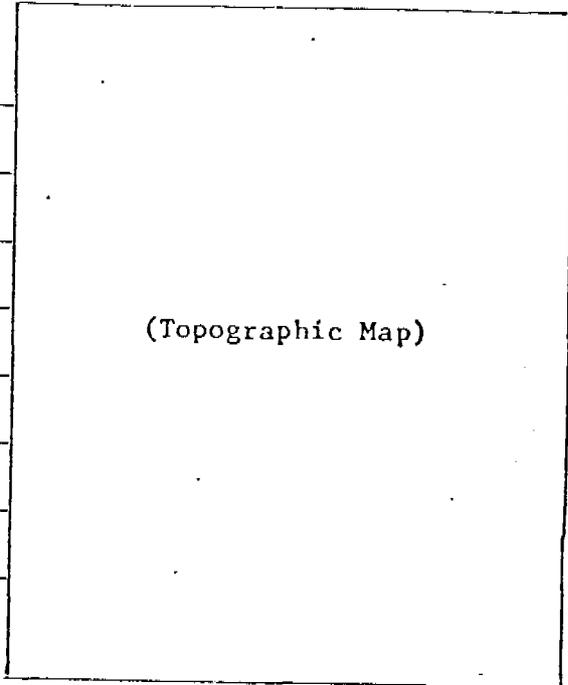
Active _____ Inactive _____

No. of Eggs or Young _____

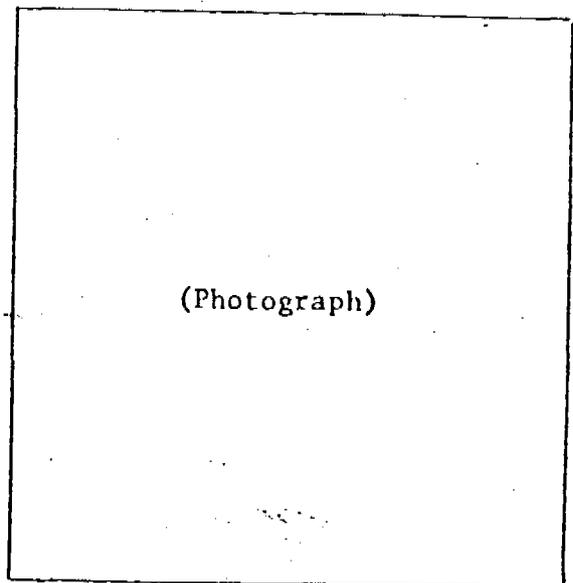
Exposure _____

Elevation _____

Vegetative Type _____



Remarks:





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OBJECTIVE

Field Ornithology--preferably bird surveys, raptor and migratory bird inventories, breeding bird censuses, and avian-habitat interaction studies.

EDUCATION

Doctor of Philosophy from Utah State University, 1977. Dissertation: Density and Diversity Responses of Summer Bird Populations to the Structure of Aspen and Spruce-Fir Communities on the Wasatch Plateau, Utah. Master of Science in Zoology from Utah State University, 1973, and Bachelor of Arts, Hiram College, with a Major in Biology, 1969. Additional field ornithology classes taken at the University of Michigan Biological Station and Arizona State University.

PAPERS PRESENTED

"Breeding Bird Populations and Habitat Utilization in Aspen Stands," Cooper Ornithological Society Meeting, San Francisco, 1973; "Aspen and Spruce-Fir Forest Heterogeneity and Bird Species Diversity," Cooper Ornithological Society Meeting, Pocatello, Idaho, 1977.

EXPERIENCE

Ornithological consulting contracts, Spring 1981: Price River Coal Co., Science Applications, Inc., and Eureka Energy Company.
Raptor and migratory bird surveys conducted in compliance with State and Federal regulations for mining, Spring 1980:
Sanders Exploration Limited--Shakespear Mine and C&W Mine Sites.
Price River Coal Company--Crandall Canyon Site.
Northwest Carbon, Inc.--Tie Fork Canyon, Rilda Canyon, and the Mohrland Sites.
Bird censuses for the Forest Service, Summers 1973-1977.
Teaching field ornithology for Logan City Community Education Program, 1980-1981.
Teaching assistantships including Ornithology, 1969-1974.

PROFESSIONAL AFFILIATIONS

The American Ornithologists' Union, Cooper Ornithological Society, Wilson Ornithological Society, Sigma Xi.

OTHER FACTS

Born March, 1948--Enjoy cross-country skiing, back-packing, and fishing--Active member and officer in the Bridgerland Audubon Society, group leader for the Christmas Bird Counts and field trip leader for the Regional Conference, May 1980.