



DIVISION OF WILDLIFE RESOURCES
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Reply To SOUTHEASTERN REGIONAL OFFICE
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September 25, 1980

RECEIVED

Mr. David Hess, Vice-President and General Manager
Eureka Energy Company
215 Market Street, Room 258
San Francisco, California 94106

OCT 2 - '80

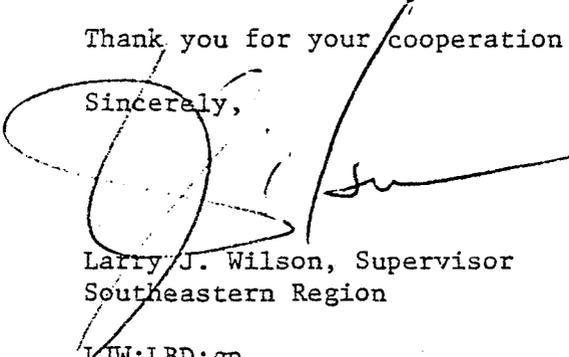
EUREKA ENERGY CO.
Salt Lake City

Attention: Bruce Benzler

Enclosed is the monthly progress report for August, 1980, on the study to determine the "Effects of Coal Development on Wildlife in Southeastern Utah." Work is proceeding as planned. Summer conditions represent a situation considered to be normal.

Thank you for your cooperation on this project.

Sincerely,


Larry J. Wilson, Supervisor
Southeastern Region

LJW:LBD:gp

cc: Paul Anderson
Darrell Nish
Clea Chedister

MONTHLY REPORT FOR
AUGUST 1980

During August, 1980, all experimental and control transects were monitored for post breeding Emlen transects and Reptile and Amphibian surveys. Also all transects were trapped for small mammals. The final report concerning deer migration and the coal conveyor was also completed along with other data requests made by the company.

Additionally, Davidse Buckwheat (*Eriogonum corymbosum* var. *Davidse*) was collected by The Utah Division of Wildlife Resources and positively identified by Arthur H. Holmgren. Mr. Holmgren is a professor of Botany at Utah State University.

In regards to the exploration road recently constructed (late July) in Dugout Canyon, 40 meters of transect No. 1 were destroyed. It is important to the integrity of the research effort that future surface work by Eureka Energy Company be discussed with the Utah Division of Wildlife Resources so that biological field surveys can be rescheduled. This will enable collection of baseline biological data from a relatively undisturbed environment which is the purpose of the study during this year.

Next months activities will include completion of post breeding Emlen transects and vegetation surveys.

Raw data sheets representing recent work on Herpetologic studies are attached with this report. Raw data sheets for post breeding Emlen transects and vegetation surveys, will be provided in the October monthly report.

It is recommended that company representatives and the Division's Resource Biologist meet during the week of September 22-26, 1980 to discuss the final report concerning mule deer and the conveyor system.

Transect Number: 1, Vegetation Type: BRUSH, Date Surveyed: 9-3-80, a.m. 600 M. COND: 1. 0.7.
p.m.

Herpetologic Species	Number of herpetologic specimens observed within the eight 100 meter increments of transect									Density per Hectare
	100	200	300	400	500	600	700	800	T.	
	NO ACTIVITY									
	CONDITIONS; SUNNY & HOT									
	Density per hectare = number of specimens per species ÷ [(2m)(800m) ÷ 10,000m ²] 600 M.									

Figure. Herpetologic observations along a permanent, two-meter wide by 800 meter long transect located at the Eureka Energy Company's project site in Carbon County, Utah.

Transect Number: 2, Vegetation Type: CONIFER ^{320 M.} FLUSH, Date Surveyed: 9-3-80, a.m. p.m.

Herpetologic Species	Number of herpetologic specimens observed within the eight 100 meter increments of transect									Density per Hectare
	100	200	300	400	500	600	700	800	T.	
										0
NO ACTIVITY										
CONDITIONS: SUNNY & WARM SHADE-1 AREAS										
Density per hectare = number of specimens per species ÷ $[(2m)(800m) \div 10,000m^2]$ 320 M										

Figure. Herpetologic observations along a permanent, two-meter wide by 800 meter long transect located at the Eureka Energy Company's project site in Carbon County, Utah.

Transsect Number: 3, Vegetation Type: PERMIT MATT Date Surveyed: 8-28-80 a.m.
 p.m.

600 METERS

Herpetologic Species	Number of herpetologic specimens observed within the eight 100 meter increments of transect									Density per Hectare
	100	200	300	400	500	600	700	800	T.	
SAGEBRUSH LIZARD			 (y)(y)		 (y)				5	41.67

(y) = YOUNG-NEWBORN

* STRIPED WHIPTAIL SNAKE WAS OBSERVED NORTH OF TRANSECT WHILE TRAPPING SMALL MAMMALS IN AUGUST. (PALTON & GREENWOOD)

Density per hectare = number of specimens per species ÷ [(2m)(800m) ÷ 10,000m²]
 600 m

Figure. Herpetologic observations along a permanent, two-meter wide by 800 meter long transect located at the Eureka Energy Company's project site in Carbon County, Utah.

DESERT MATE

Transect Number: 4, Vegetation Type: GREENWOOD, Date Surveyed: 8-28-80 a.m.
600 m. p.m.

Herpetologic Species	Number of herpetologic specimens observed within the eight 100 meter increments of transect									Density per Hectare
	100	200	300	400	500	600	700	800	T.	
SAGE CRUSH LIZARD				1 (Y)	*				1	8.33

(Y) = YOUNG - NEWBORN

* MIDGET FADED RATTLESNAKE CAUGHT ON AUGUST 22, 1980 IN SHERMAN TRAIL
 (GREENWOOD, WALLACE)

Density per hectare = number of specimens per species ÷
 $[(2m)(800m) \div 10,000m^2]$
 600 m

Figure. Herpetologic observations along a permanent, two-meter wide by 800 meter long transect located at the Eureka Energy Company's project site in Carbon County, Utah.

Transect Number: 5, Vegetation Type: PIÑON - JUNIPER, Date Surveyed: 8-27-80 a.m.
600 m. p.m.

Herpetologic Species	Number of herpetologic specimens observed within the eight 100 meter increments of transect								Density per Hectare	
	100	200	300	400	500	600	700	800		T.
SAGEBRUSH LIZARD	(Y)	(Y)		(Y)					4	33.33

(Y) = YOUNG - NEWBORN

Density per hectare = number of specimens per species \div $[(2m)(\del{800m}) \div 10,000m^2]$
 $600 m$

Figure. Herpetologic observations along a permanent, two-meter wide by 800 meter long transect located at the Eureka Energy Company's project site in Carbon County, Utah.

Transect Number: 6, Vegetation Type: P-3 SAGE, Date Surveyed: 8-28-80 a.m.
 p.m.

600 M,

Herpetologic Species	Number of herpetologic specimens observed within the eight 100 meter increments of transect								Density per Hectare	
	100	200	300	400	500	600	700	800		T.
SAGEBRUSH LIZARD :		1							1	8.33

* SHORT HORNED LIZARD SEEN WEST OF TRANSECT IN AUGUST WHILE TRAINING SMALL ANA

Density per hectare = number of specimens per species ÷ [(2m)(~~800m~~) ÷ 10,000m²]
 600 M

Figure. Herpetologic observations along a permanent, two-meter wide by 800 meter long transect located at the Eureka Energy Company's project site in Carbon County, Utah.

Transect Number: 7, Vegetation Type: ^{PINYON}JUNIPER, Date Surveyed: 8-27-80 a.m.
 600 METERS p.m.

Herpetologic Species	Number of herpetologic specimens observed within the eight 100 meter increments of transect								Density per Hectare	
	100	200	300	400	500	600	700	800		T.
SAGEBRUSH LIZARD		 (y)			 (y)	*	<hr/>		5	41.67

(y) = YOUNG - NEWBORN

* YOUNG MIDGET FADED RATTLESNAKE CAUGHT & TAKEN FOR A SPECIMEN IN AUGUST WHILE TRAPPING SMALL MAMMALS.
 (DALTON & GREENWOOD)

Density per hectare = number of specimens per species ÷
 $[(2m)(\cancel{800m}) \div 10,000m^2]$
 600 m

Figure. Herpetologic observations along a permanent, two-meter wide by 800 meter long transect located at the Eureka Energy Company's project site in Carbon County, Utah.

Transect Number: 8, Vegetation Type: PIÑON-JUNIPER, Date Surveyed: 8-27-80, a.m. (p.m.)
 600 M.

Herpetologic Species	Number of herpetologic specimens observed within the eight 100 meter increments of transect										Density per Hectare
	100	200	300	400	500	600	700	800	T.		
SAGEBRUSH LIZARD :	1			1 (y)	1					3	25.00

(y) = YOUNG NEWBORN

Density per hectare = number of specimens per species ÷ [(2m)(800m) ÷ 10,000m²]
 600 M

Figure. Herpetologic observations along a permanent, two-meter wide by 800 meter long transect located at the Eureka Energy Company's project site in Carbon County, Utah.

Transect Number: 9, Vegetation Type: BRUSH, Date Surveyed: 8-28-80, a.m. p.m.
600 M.

CANYON, UT.

Herpetologic Species	Number of herpetologic specimens observed within the eight 100 meter increments of transect										Density per Hectare
	100	200	300	400	500	600	700	800	T.		
SAGE-BUSH LIZARD	1									1	8.33
TREE LIZARD (LIZARD FOR I.D.)			1							1	8.33
LARGE GOPHER SNAKE ON LOWER DUGOUT ROAD											
Density per hectare = number of specimens per species ÷ [(2m)(800m) ÷ 10,000m ²] <i>600 M.</i>											

Figure. Herpetologic observations along a permanent, two-meter wide by 800 meter long transect located at the Eureka Energy Company's project site in Carbon County, Utah.

CONIFER, MT.

Transect Number: 10, Vegetation Type: BRUSH, Date Surveyed: 8-28-80, a.m.
p.m.

340 METERS

Herpetologic Species	Number of herpetologic specimens observed within the eight 100 meter increments of transect	Density per Hectare
	100 200 300 400 500 600 700 800 T.	
	NO ACTIVITY	
Density per hectare = number of specimens per species \div $[(2m)(340m) \div 10,000m^2]$ $340m$		

Figure. Herpetologic observations along a permanent, two-meter wide by 800 meter long transect located at the Eureka Energy Company's project site in Carbon County, Utah.

Transect Number: 11, Vegetation Type: ^{PINYON - JUNIPER}SAGE, Date Surveyed: 8-27-80, a.m. p.m.

600 m.

Herpetologic Species	Number of herpetologic specimens observed within the eight 100 meter increments of transect									Density per Hectare
	100	200	300	400	500	600	700	800	T.	
SAGEBRUSH LIZARD				1					1	8.33

Density per hectare = number of specimens per species \div [(2m)(~~800m~~) \div 10,000m²]
_{600 m}

Figure. Herpetologic observations along a permanent, two-meter wide by 800 meter long transect located at the Eureka Energy Company's project site in Carbon County, Utah.

DESERT MOUNTAIN
 Transect Number: 12, Vegetation Type: GREASWOOD Date Surveyed: 9-3-80 a.m.
 600 m. p.m.

Herpetologic Species	Number of herpetologic specimens observed within the eight 100 meter increments of transect									Density per Hectare
	100	200	300	400	500	600	700	800	T.	
SHORT-HORNED LIZARD	11			1					3	25.00
	(y)			(y)						

(y) = YOUNG - REPRODUCING

STRIPED WHITAIL STAKE - SEEN 1/2 MILE BELOW TRANSECT # 3 ON DUGOUT ROAD

Density per hectare = number of specimens per species ÷ [(2m)(800m) ÷ 10,000m²]
 600 r.t.

Figure. Herpetologic observations along a permanent, two-meter wide by 800 meter long transect located at the Eureka Energy Company's project site in Carbon County, Utah.