

### Document Information Form

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

MONTHLY REPORT FOR JANUARY 1980

During January 1980, deer migration patterns, along the proposed conveyor belt system were monitored. Additionally, big game tracks and medium-sized mammal signs were monitored along each transect, except for three canyon transects that were snowed out and had potential avalanche conditions.

During monitoring periods, the conveyor belt corridor is monitored from Sage Point to Fish Creek Ridge one day, then from Dugout Canyon road to Fish Creek Ridge the next day. Conveyor Section 8 experiences the greatest passage of deer followed in successive order by Sections 7, 5, 3, 6 and 4 (Table I).

Conveyor Section 9 is considered as a separate conveyor, but has equivalent activity to Section 8 (Table I).

Conveyor Section 11 is considered separate from the remainder of the conveyor since observations indicate a southwesterly migration movement by deer toward the crucial-critical area (Table I).

It is recommended that crossing structures be of two types: 1. "Underpasses" having a minimum height of 3 meters maintained across a span of at least 5 meters; 2. "Overpasses" or ramps having a minimum height of 5 meters wide at an angle 90 degrees to the conveyor and 5:1 at points 180 degrees to the conveyor. The conveyor should be concrete.

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Conveyor Section 9 is considered as a separate conveyor, but has equivalent activity to Section 8 (Table I).

Conveyor Section 11 is considered separate from the remainder of the conveyor since observations indicate a southwesterly migration movement by deer toward the crucial-critical area (Table I).

It is recommended that crossing structures be of two types: 1. "Underpasses" having a minimum height of 3 meters maintained across a span of at least 5 meters; 2. "Overpasses" or ramps having a slope no greater than 3:1 and 5 meters wide at an angle 90 degrees to the conveyor and tapering out to 5:1 at points 180 degrees to the conveyor. The slope should be of natural soil, vegetated and would not require guide fences. The platform over the conveyor should be concrete.

To date, recommendations for minimum numbers of crossing structures on the conveyor belt are as follows: In Section 8, proceeding east to west, the first three hundred meter length needs five crossing structures. A mixture of overpasses and underpasses should be used.

Conveyor Section 7, proceeding east to west, needs one crossing in each of the 100 meter lengths, except that three structures will be needed in the last 100 meter length of conveyor Section 7.

Conveyor Section 6, proceeding east to west, needs complete utilization of the top of Fish Creek Ridge for crossings and one crossing at the base of the ridge on the west side.

Conveyor Section 5, proceeding east to west, needs one crossing structure in each 100 meter length of conveyor.

Conveyor Section 4, proceeding east to west, needs one crossing at the base of the hill on west end of the section.

Conveyor Section 3, proceeding east to west, needs only two crossings in the last three hundred meter length of the conveyor section.

Conveyor Section 9, proceeding in a north to south direction, needs two crossings in every one hundred meter length of conveyor or the conveyor needs to be sufficiently elevated along its entire length to allow passage of deer.

Conveyor Section 11, proceeding in a south to north direction, needs one crossing in every one hundred meter length of conveyor.

A mixture of "overpasses and "underpasses" should be utilized in every conveyor section.

TABLE I: INDEX OF MULE DEER ACTIVITY IN RELATION TO THE PROPOSED  
COAL CONVEYOR AT THE SAGE POINT-DUGOUT CANYON MINING PROJECT,  
CARBON COUNTY, UTAH

Months		Conveyor Sections							
		Crucial-Critical Range				High-Priority Range			
		6	7	8	9	3	4	5	11
		Indices to Deer Use							
December 1979	Passage Index <sup>1</sup>	2	2	22	--	4	1	9	13
	% <sup>2</sup>	5%	5%	55%	NA <sup>4</sup>	10%	2%	23%	NA <sup>4</sup>
	Trials <sup>3</sup>	0	0	6	--	0	0	0	2
January 1980	Passage Index <sup>1</sup>	20	113	372	372	23	11	69	33
	% <sup>2</sup>	3%	19%	61%	NA <sup>4</sup>	4%	2%	11%	NA <sup>4</sup>
	Trials <sup>3</sup>	6	22	32	56	5	4	15	15
Total	Passage Index <sup>1</sup>	22	115	394	372	27	12	78	46
	% <sup>2</sup>	3%	18%	61%	NA <sup>4</sup>	4%	2%	12%	NA <sup>4</sup>
	Trials <sup>3</sup>	6	22	32	56	5	4	15	15

1. Number of individuals identifiable tracks crossing the conveyor corridor.
2. Number of tracks per section ÷ total summation of tracks from sections 3, 4, 5, 6, 7, and 8.
3. Number of trails formed by a multitude of tracks in addition to individual, identifiable tracks. Trails in the total column equal the greatest number observed during any one month.
4. Not applicable.