THE BDM CORPORATION

January 11, 1979
BDM/TAC-79-016-WP

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WHITE PAPER

Proposed Investigation:

Cattle Mutilations In

The State of New Mexico

Submitted by

The BDM Corporation

5 January 1979

Background:

During the past three to four years approximately forty-five cattle mutilations have been discovered within the state of New Mexico. In all cases mutilations have involved removal of genital organs, rectums and a dime-size circle of flesh from the lower lip. In some instances the mammary bag has been removed, and in the case of the last four animals, a circle of flesh has been removed from the lower abdominal area. These mutilations are similar to those discovered in neighboring states over a period of years.

A number of facts have emerged from investigations in New Mexico:

(a) There is an apparent consistency in age of the cattle for the period over which the mutilations have occurred.

(b) The method of killing the animals has not been determined.

(c) Neither vehicle nor horse tracks have been found in the vicinity of the dead animals.

(d) There has been no blood found in the vicinity of the dead animals.

(e) The incisions for removal of the body parts appear to have been sealed at the instant of incision. Only one blood spot has been found on any animal, that one being on a rear hoof.

(f) It appears that all animals were killed at sites other than where they were found. In each instance it appears that they were lifted by a three-pronged claw device (which broke a rear leg) and subsequently dropped to their final location (which broke a shoulder).

(g) Many of the dead animals were visible under black light and one animal checked for radiation responded positively.

(h) The herds from which the animals were taken contain other animals visible under black light.

(i) Most kills have occurred in northern New Mexico, and most recently in the area of the town of Dulce. One was found adjacent to the town, one was found in a near but isolated area, and four were found in close proximity approximately twenty miles south of Dulce and ten miles to the east.

(j) Analysis of certain body parts by LASL yielded no conclusions.

(k) A retired LASL scientist, residing in Taos, conducted some analysis. Results are unknown.

(l) Recent analysis of one carcass revealed an abnormally high concentration of potassium and magnesium on the fur and in residue removed from a private vehicle parked near the location of the carcass.

(m) There have been no apparent witnesses.

The value of the destroyed cattle, not counting loss of future calves, is in excess of $21,000. But of greater potential loss is the reputation of the northern New Mexico cattle industry, and possibly land values in that area. Rumors are circulating that vary from the existence of a serious hazard to persons living in the areas to contamination of the area cattle by radiation or poisonous substances, and candidate perpetrators range from alien beings to the federal government secretly following up on radiation exposure. Clearly, circumstances exist which, if unchecked, can lead to a serious problem.

The Problem:

The basic problem is that illegal acts are being committed in the state of New Mexico, and these acts are detrimental, in the least, to a group of New Mexico citizens, the cattle owners. The problem is complicated in that the bizarre nature of the acts strongly indicates the possibility that advanced technology and engineering operations are being applied to the commission of these continuing crimes. The bizarre nature coupled with the mentioned possibilities give rise to growing public concern and considerable uncertainty regarding whether the entire operation constitutes a grave threat to either the cattle industry or the citizens themselves. Rumors are beginning to circulate which, if unchecked, could lead to economic set backs, fear and loss of state and federal government credibility.

To date, investigations of the mutilations have been pursued by a small group of concerned and dedicated law enforcement officers, working with minimal assistance. These officers are severely limited in their investigations by lack of strong technological backing in pursuing a problem with very strong technology/engineering aspects. Without such backing, their dedicated efforts are likely to constantly remain unfruitful and neither solution of the crimes nor their prevention in the future is likely to occur.

Solution:

In considering a proposed solution to the problem it must first be recognized that, as with many crimes, there is no guarantee that the crime will be solved and the guilty punished. What is proposed is an approach that will maximize the probability of finding the solution and of preventing recurrence.

The fundamental idea is that a scientific approach undertaken by an organization with a strong background in technology, engineering and data collection and analysis can address all aspects of these crimes,

and through appropriate information collection, organization, detailed analysis and feasibility determination, estimate what type(s) of organization must be involved and what reasonable purposes could be served by such acts. It should be possible to identify factors which further investigations should seek and to determine whether any paticular pattern of commission is being followed. It should be possible to determine safeguards against recurrence. Additionally, sceintific examination of the entire problem will sort fact from fantasy and provide a basis for dealing with rumor.

The approach (discussed in detail in the next section) consists of six steps, some of which can take place concurrently. These are:

1. Documentation, which includes:
   a) Acquisition of historical data relevant to the issue.
   b) Cataloguing of data into appropriate categories for examination and validation.

2. Data Analysis, both qualitative and quantitative to determine correlations, disparities and their significance.

3. Inference, which will indicate feasible means, methods and motives.

4. Bounding, which will define the requirements for such operations and the types of organizations needed to meet such requirements.

5. Impact on New Mexico if such activity continues; to include impact on cattle industry, land, public unrest and organizational credibility.

6. Recommended Actions; to address such aspects as further investigation, strike team formulation/conduct and government assistance.

Discussion of Approach:

1. Documentation:

A complete documentation of the history and related evidence of cattle mutilation in and around New Mexico must be compiled for detailed analysis. Unless the data base is complete with all relevent information, analysis could lead to faulty or no conclusions. Documentation will be undertaken through the following sources:

(a) Literature search of libraries, news media and government documentation centers.
(b) Government documents, to include investigator reports.
(c) Reports written by LASL and private laboratories.
(d) Contact with investigators and cattle owners.
(e) Contact with investigatory and scientific organizations in surrounding states.
(f) Site visits as required.

Concurrently, data and information will be catalogued for future analysis. Cataloguing will be accomplished using data management methods proved effective on a wide variety of complex governmental data/information gathering, managing and analysis programs. Sorting by categories is expected to include:

(a) Time history and area history of events.
(b) Physical evidence.
(c) Investigator observation.
(d) Formal and informal reports.
(e) Herd histories.
(f) Body parts removed.
(g) Laboratory test results.
(h) Citizen observations.
(i) Any other relevent information.

The completion of this task will provide a complete historical data base for use in subsequent analysis.

2. Analysis:

Using the information from the data base, various qualitative and quantitative analyses will be conducted. Such analyses will include:

(a) Statistical correlation.
(b) Cyclic analysis.
(c) Significance of similarities.
(d) Significance of disparities.
(e) Identification of engineering/technology requirements.
(f) Information substantiation.

The goal of this analysis is to determine what is fact and to determine any strong relations that exist among the various facts. The existence of such relationships gives clear indication of areas for further analysis/investigation. The existence of cycles facilitates background investigation and prediction of future events. The engineering requirements, once identified may allow dismissal of entire candidate classes of perpetrators, methods, means, etc.

3. Inference:

Activity in this task will be purposed to identify the possibilities and to some extent rank order possibilities. This is a key task in that the results can provide a set of feasible explanations for why and how the events are being accomplished, based on thorough analysis of all available information. Such inference would include:

(a) Pathological and biological utility of the removed parts.
(b) Surgical techniques and/or equipment capable of the apparent surgery.
(c) Engineering equipment and means of operation (to include air vehicles) capable of seizing and transporting animals.

(d) Methods of tracking and disabling selected animals.

(e) Logistic and economic support required for feasible methods.

4. Bounding:

This task is intended to synthesize the feasible methods and motives previously developed into a description of the candidate type organizations which could and might conduct operations such as have been occuring. A number of descriptors can be expected to result from this effort, including:

(a) Size, organization and financial structure of the perpetrator.

(b) Equipment, technical and logistics support required by the organization.

(c) Methods of operation and means of maintaining secrecy.

(d) Possible indicators of such activity.

Analysis of these descriptors should allow a narrowing of the field of candidates and should provide indications concerning what investigators should seek now and in the future as evidence of such activity. It is not expected that this step will provide proof. Rather, this step will specify what can constitute proof.

5. Impact on New Mexico:

Collaterally with the other tasks, effort must be made to determine the short term and long term impact if such activity continues unchecked. The present and potential impact on the cattle industry, the land, public unrest and government credibility should be examined to determine what profit or gain could be derived from negative impacts in one or more of these areas. The determination of such potential profit or gain may

help to establish motives, that in conjunction with task area 4 provide indicators of the perpetrator. Additionally, the simplest method for detering future mutilization may be state or federal action to negate any such gain or profit. In any case, potential adverse impacts to the state and its citizens must be identified so that appropriate action to negate them can be defined.

6. Future Actions:

The effort in this task area will be a set of recommendations, based on investigatory results, which are essential either to final resolution of the case or to future deterrence. The nature of such recommendations is not predictable at this time, but they will probably include the establishment of a joint science-law enforcement strike team for on the spot investigation, government assistance in selected areas such as the instrumentation and monitoring of cattle and grazing areas, use of sensor and real time alerting systems and quick response support, information programs for cattle owners and concerned citizens, release of factual information and areas wherein detailed criminal investigation is required. It is expected that all tasks will consider relevant information from neighboring states with similar mutilizations experience and that results of this investigation will be provided to them.

Expertise Required:

A systematic investigation and analysis of this problem will require the timely application of key expertise and the judicious use of resource available within the state. The following list indicates those skills available within the BDM-TAC staff and the sources of other highly specialized skills required in this program. BDM has extensive experience in the organization and management of such project teams on many large government programs.

This list is intended to demonstrate the interdisciplinary team that will be required. It is not necessarily all inclusive nor are all skills required in equal proportion. Proper application of these skills and any others required will enhance the probability of a successful investigation.

SKILL	BDM TAC STAFF	OTHER SOURCES
Team Management	X	
Criminal Investigation	X	
Field Investigation	X	
Systems Analysis	X	
Airlift Operations	X	
Aero Vehicles	X	
Laser Systems	X	
Data Management	X	
Statistical Analysis	X	
Pattern Analysis	X	
Chemistry	X	
Economics	X	
Public Affairs	X	
Wildlife Management	X	
Biology	X	
Health Science	X	
Mechanical Engineering	X	
Aeroengineering	X	
Public Information	X	
Instrumentation	X	
Sensor Systems	X	
Intelligence Operations	X	
Security	X	
Veterinary Medicine		NM St. Univ.
Forensic Pathology		UNM

SKILL	BDM STAFF	OTHER SOURCES
Surgery		UNM/Lovelace
Radiology		UNM/Lovelace
Epidemiology		St. of N. M./UNM
Psychology		UNM
Criminal Laboratory		N.M. Police Acad.