

UTAH DIVISION OF OIL, GAS AND MINING

REMARKS: WELL LOG _____ ELECTRIC LOGS _____ FILE WATER SANDS _____ LOCATION INSPECTED _____ SUB. REPORT/ABD _____

* Location abandoned 7-30-81 7-29-81

DATE FILED 1-9-80

LAND: FEE & PATENTED STATE LEASE NO. PUBLIC LEASE NO. U-11373 INDIAN

DRILLING APPROVED: 1-18-80

SPUDED IN:

COMPLETED: PUT TO PRODUCING:

INITIAL PRODUCTION:

GRAVITY A.P.I.

GOR:

PRODUCING ZONES:

TOTAL DEPTH:

WELL ELEVATION:

DATE ABANDONED: * Location Abandoned 7-30-81 7-29-81

FIELD: Undesignated 3/86 Wildcat

UNIT:

COUNTY: Emery

WELL NO. Federal 14-9 API NO: 43-015-30073

LOCATION 757' FT. FROM ~~XX~~ (S) LINE. 1082' FT. FROM ~~XX~~ (W) LINE. SW SW 1/4-1/4 SEC.9

TWP.	RGE.	SEC.	OPERATOR	TWP.	RGE.	SEC.	OPERATOR
				26S	7E	9	TIGER OIL COMPANY

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1A. TYPE OF WORK
 DRILL DEEPEN PLUG BACK

B. TYPE OF WELL
 OIL WELL GAS WELL OTHER SINGLE ZONE MULTIPLE ZONE

2. NAME OF OPERATOR
 E. M. Davis d/b/a Tiger Oil Company

3. ADDRESS OF OPERATOR
 P. O. Box 113, Wheat Ridge, Colorado 80033

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)
 At surface: 1082' FWL 757' FSL (SW SW)
 At proposed prod. zone: Same

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*
 31.1 miles from Cainesville, Utah (Exhibit "E")

15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any)
 757'

16. NO. OF ACRES IN LEASE
 1,295.75

17. NO. OF ACRES ASSIGNED TO THIS WELL
 40-acres

18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.
 3550' *Torn well*

20. ROTARY OR CABLE TOOLS
 Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.)
 5618' ground

22. APPROX. DATE WORK WILL START*
 February 25, 1980

5. LEASE DESIGNATION AND SERIAL NO.
 U-11373

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT (NAME)

8. FARM OR LEASE NAME
 Federal

9. WELL NO.
 #14-9

10. FIELD AND POOL, OR WILDCAT
 Wildcat undesignated

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA
 Sec. 9-T263-R7E

12. COUNTY OR PARISH
 Emery

13. STATE
 Utah

PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
12 3/4"	9 5/8" K-55	36#	250'	250 sacks
8 3/4"	5 1/2" K-55	14#	3550'	300 sacks

1. Drill 12 3/4" hole to 250' and set surface casing.
2. Log BOP's daily while drilling 8 3/4" hole.
3. Run electric logs, test as needed, and run production casing.
4. Perforate and stimulate as in Exhibit "B".

EXHIBITS ATTACHED:

- | | |
|---|-------------------------------------|
| "A" Location and Elevation Plat. | "G" Production Facilities Layout. |
| "B" Ten-Point Compliance Program. | "H" Drill Pad Contours, Cut & Fill. |
| "C" The B. O. P. Diagram. | ----Letter of Fentress Agency. |
| "D" Multipoint Requirements. | ----AERC Archeological Report. |
| "E" Access from Cainesville, and from Fremont Junction. | Designation of Operator. |
| "F" Drilling Rig Layout. | BLM Plat of land |



JAN 9 1980

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24. SIGNED *[Signature]* TITLE *[Title]* DIVISION OF OIL, GAS & MINERALS DATE *January 2, 1980*

(This space for Federal or State office use)

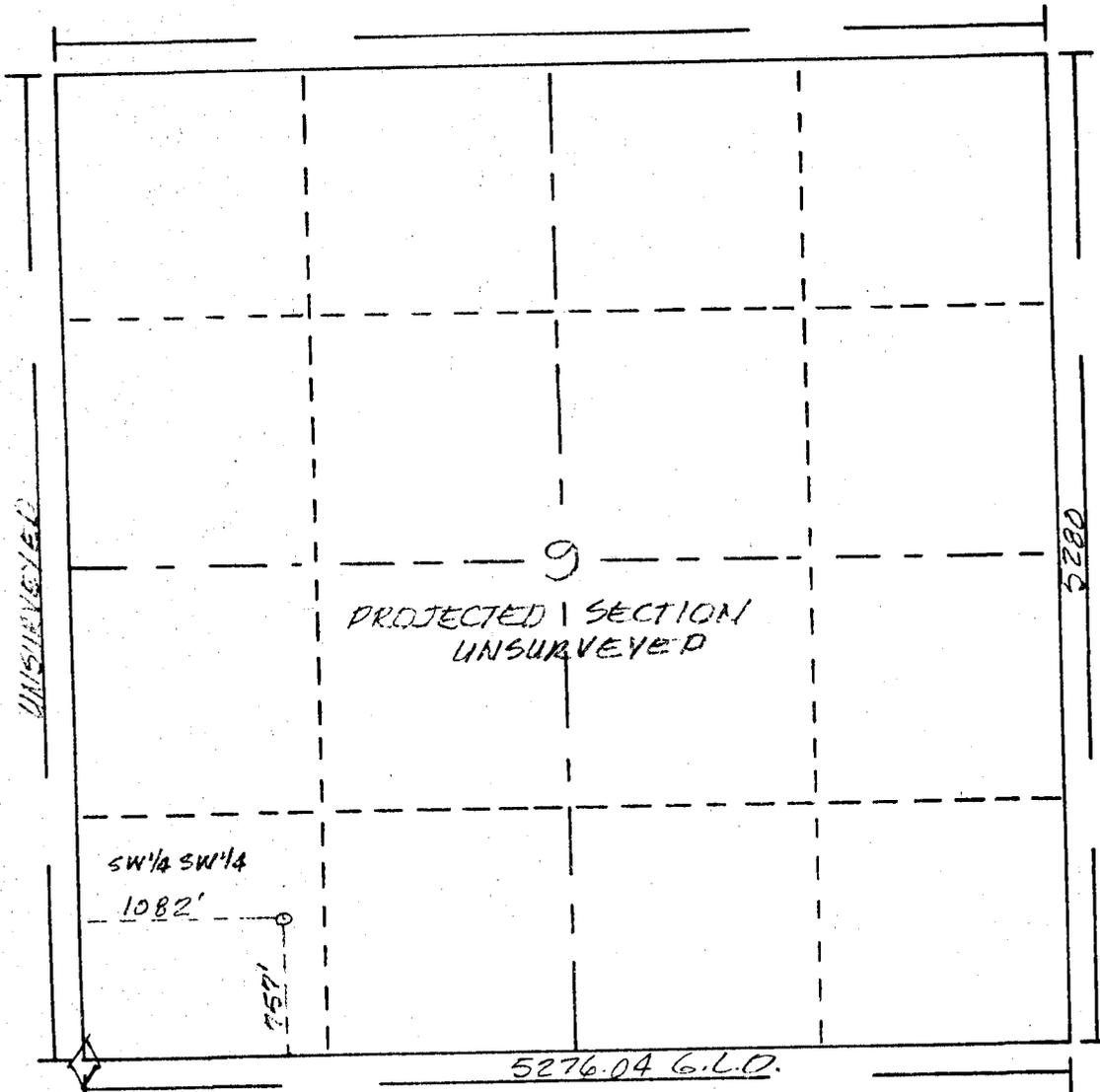
PERMIT NO. *43-D15-30073* APPROVAL DATE *January 18, 1980*

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:



R. 7E.



T. 26 S.

Scale... 1" = 1000'

Powers Elevation of Denver, Colorado
 has in accordance with a request from **GEO. FENTRESS**
 for **E.M. DAVIS dba TIGER OIL CO.**
 determined the location of **14-9 FEDERAL**
 to be **757' FSL, & 1082' FWL** Section 9 Township 26 S.
 Range 7 EAST, of the Salt Lake Base & Meridian
EMERY County, **UTAH**

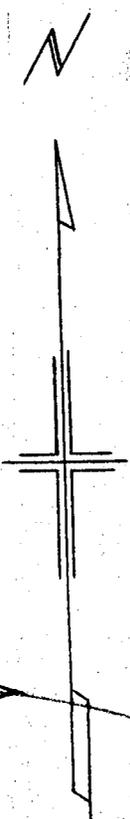
I hereby certify that this plat is an
 accurate representation of a correct
 survey showing the location of

Date: 12-6-79

Jerry M. Beckert
 Licensed Land Surveyor No. 4189
 State of **UTAH**

TOPOGRAPHIC MAP

EL. 5612.6'
REF. PT. 200' N.



SOIL IS GYPSUM
VARIETY, ERODES
EASILY.

5595'
REF. PT.

700' E.

Scale: 1" = 50'

REF. PT. 5621.6'
200' W.

EL. 5618'
Well site = CO. 0

WELL NO. 14-9 FEDERAL
SW 1/4 SW 1/4, SEC. 9, T. 26 S., R. 7 E.
EMERY COUNTY, UTAH

169' S. REF. PT.
5607

by: Jerry R. Service
Powers Elevation Company, Inc.

** FILE NOTATIONS **

DATE: January 9, 1980

Operator: Tiger Oil Company

Well No: Federal #149

Location: Sec. 9 T. 26S R. 7E County: Emery

File Prepared:

Entered on N.I.D.:

Card Indexed:

Completion Sheet:

API Number 43-015-30073

CHECKED BY:

Geological Engineer: _____

Petroleum Engineer: _____

Director: _____

APPROVAL LETTER:

Bond Required:

Survey Plat Required:

Order No. _____

O.K. Rule C-3

Rule C-3(c), Topographic Exception/company owns or controls acreage within a 660' radius of proposed site

Lease Designation Fed

Plotted on Map

Approval Letter Written

Wtm

#1

NE
PI

January 18, 1980

Tiger Oil Company
P.O. Box 113
Wheat Ridge, Colorado 80033

Re: Well No. Federal 11-4, Sec. 4, T. 27S, R. 7E., Wayne County, Utah
Well No. Federal 12-27, Sec. 27, T. 26S, R. 7E., Emery County, Utah
Well No. Federal 14-9, Sec. 9, T. 26S, R. 7E., Emery County, Utah
Well No. Federal 14-21, Sec. 21, T. 26S, R. 7E., Emery County, Utah
Well No. Federal 41-8, Sec. 8, T. 27S, R. 7E., Wayne County, Utah

Insofar as this office is concerned, approval to drill the above referred to oil wells is hereby granted in accordance with Rule C-3, G General Rules and Regulations and Rules of Practice and Procedure.

Should you determine that it will be necessary to plug and abandon these wells, you are hereby requested to immediately notify the following:

MICHAEL T. MINDER
Geological Engineer
Office: 533-5771
Home: 876-3001

Enclosed please find Form OGC-8-X, which is to be completed whether or not water sands (aquifers) are encountered during drilling. Your cooperation in completing this form will be appreciated.

Further, it is requested that this Division be notified within 24 hours after drilling operations commence, and that the drilling contractor and rig number be identified.

The API number assigned to this well is #11-4 - 43-055-30027; #12-27 - 43-015-30072; #14-9 - 43-015-30073; #14-21 - 43-015-30074; #41-8 - 43-055-30028.

Sincerely,

DIVISION OF OIL, GAS AND MINING

Michael T. Minder
Geological Engineer

/btm
cc: USGS

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

DUPLICATE COPY

5. LEASE DESIGNATION AND SERIAL NO. U-11373
6. IF INDIAN, ALLOTTEE OR TRIBE NAME
7. UNIT AGREEMENT NAME
8. FARM OR LEASE NAME Federal
9. WELL NO. #14-9
10. FIELD AND POOL, OR WILDCAT Wildcat
11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA Sec. 9-T26S-R7E
12. COUNTY OR PARISH Emery
13. STATE Utah

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK DRILL DEEPEN PLUG BACK
b. TYPE OF WELL OIL WELL GAS WELL OTHER SINGLE ZONE MULTIPLE ZONE
2. NAME OF OPERATOR E. M. Davis d/b/a Tiger Oil Company
3. ADDRESS OF OPERATOR P. O. Box 113, Wheat Ridge, Colorado 80033
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At proposed prod. zone Same
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EXHIBITS ATTACHED:

- "A" Location and Elevation Plat.
- "B" Ten-Point Compliance Program.
- "C" The B. O. P. Diagram.
- "D" Multipoint Requirements.
- "E" Access from Cainesville, and from Fremont Junction.
- "F" Drilling Rig Layout.
- "G" Production Facilities Layout.
- "H" Drill Pad Contours, Cut & Fill.
- Letter of Federal Agency.
- AERC Archeology Report.
- Designation of Operator.
- DEM Plat of leases

RECEIVED
MAR 14 1980

State of Utah, Department of Natural Resources
Division of Oil, Gas, and Mining

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, include depth, present production zone, and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

1550 West North Temple, Salt Lake City, Utah 84116

24. SIGNED: [Signature] TITLE: Chief Engr. DATE: January 2, 1980

(This space for Federal or State office use)

PERMIT NO. _____ APPROVAL DATE _____
APPROVED BY: [Signature] FOR: E. W. GUYNN DISTRICT ENGINEER DATE: MAR 11 1980
CONDITIONS OF APPROVAL, IF ANY:

CONDITIONS OF APPROVAL ATTACHED TO OPERATOR'S COPY

NOTICE OF APPROVAL

FLARING OR VENTING OF GAS IS SUBJECT TO NTL 4-A DATED 1/1/80

Utah State oil - Gas

U. S. GEOLOGICAL SURVEY - CONSERVATION DIVISION

FROM : DISTRICT GEOLOGIST, ME, SALT LAKE CITY, UTAH

TO : DISTRICT ENGINEER, O&G, SALT LAKE CITY, UTAH

SUBJECT: APD MINERAL EVALUATION REPORT

LEASE NO. 11-11373

OPERATOR: Tiger Oil Co

WELL NO. 14-9

LOCATION: 1/2 SW 1/4 SW 1/4 sec. 9, T. 26S, R. 7E, 5LM

Emery County, Utah

- 1. Stratigraphy:
 - Cornel - surface
 - Navajo ss - 450
 - Kayenta - 1450
 - Wingate - 1590
 - Chinle - 2020
 - Moenkopi 2400
 - Sinbad LS 3060

Kaibab ls - 3310
 Toroweap ls - 3460

2. Fresh Water:

Surface casing should extend to Navajo SS. See WRD report for Tiger Oil Co well #11-4 NWNW 47 27S-7E

3. Leasable Minerals:

possible gas in Moenkopi, oil in sinbad, kaibab, Toroweap

4. Additional Logs Needed:

adequate

5. Potential Geologic Hazards:

none expected

6. References and Remarks:

Signature: [Signature]

Date: 1 - 30 - 80

Oil and Gas Drilling

EA #214-80

United States Department of the Interior
Geological Survey
2000 Administration Building
1745 West 1700 South
Salt Lake City, Utah 84104

USUAL ENVIRONMENTAL ASSESSMENT

Date: March 6, 1980

Operator: E.M. Davis dba Tiger Oil Co., Well Name & No. 14-9

Location: ^{1082'}~~1002'~~ FWL & 757' FSL (SW SW) Section: 9 Township: 26S Range: 7E SLB & M

County: Emery State: Utah Field/Unit: Wildcat

Lease No.: U-11373 Prepared by: George Diwachak
Environmental Scientist

Joint Field Inspection Date: February 12, 1980

Field Inspection Participants, Titles and Organizations:

George Diwachak	Environmental Scientist	USGS, Salt Lake City, Utah
George Fentress	Agent/Consultant	Tiger Oil Company
Gene Lawson	Construction Foreman	Tiger Oil Company
Laurelle Hughes	Realty Specialist	Bureau of Land Management
Bob Dalla	District Engineer	Bureau of Land Management

lj

1-14

1082' - 9

Pad 200' x 300'
Includes pit
3/10 mi x 1/4' access road
1/10 mi x 1/2' improve trail
Begin 2 1/2 a.c
so edge of loc
Will well for 1/4
Caution w/pite
pg 5

Noted - G. Diwachak

6. Nearby pending actions which may affect or be affected by the proposed action:

The BLM is presently preparing an Environmental Impact Statement for the proposed leasing of Federal coal in the Uinta-Southwestern Coal Production Region. The proposed Castle Valley leasing area is west of the proposed wellsite, and access to the well location crosses the proposed coal lease lands.

7. Status of variance requests: None known.

The following elements of the proposed action would/could result in environmental impacts:

1. A drill pad about 200' wide x 300' long including a reserve pit conforming to topography would be constructed.. Approximately, 0.3 mile of new access road, averaging 16' in width, would be constructed and approximately 1.1 miles of existing trail would be improved to 16' wide from a maintained road. 2.1 acres of disturbed surface would be associated with the project. A small portion of the access road, near the wellsite would approach grades of about 12%.
2. Drilling.
3. Waste disposal.
4. Traffic.
5. Water requirements.
6. Completion.
7. Production
8. Transportation of hydrocarbons.

Details of the proposed action are described in the Application for Permit to Drill.

To reduce potential impacts, an alternative location was recommended at the onsite inspection. The operator objected to relocation due to lease expiration dates and a necessary resurvey.

Environmental Considerations of the Proposed Action:

Regional Setting/Topography: Local topography consists of moderately sloping, highly eroded mudstones, remnants of the Carmel Formation. Numerous intermittent washes and erosional gulleys dissect the area. Pad construction would be constricted by the topographic characteristics of the area since a large erosional gully and a deep wash flank the north and south sides of the location, joining together near the east edge. Access would enter from the west and would not be impaired by washes or gulleys.

PARAMETER

A. Geology Anticipated formation tops are filed in the APD and verified by the enclosed Mineral Evaluation Report. The location is near the axis of the Last Chance Anticline indicating that anticipated hydrocarbon zones are enclosed in a structural trap. Due to the possibility of fractures in the Carmel and Navajo Formations, lost circulation would be possible.

Information Source: Mineral Evaluation Report, APD, WRD Report, USGS Geological Map I-591.

1. Other Local Mineral Resources to be Protected:

None.

Information Source:

2. Hazards:

Information Source:

a. Land Stability: The area is highly eroded with a large erosional gully and a deep wash flanking two sides of the location. During periods of heavy rainfall, it is conceivable that rig stability could be altered, but none is anticipated. The unstable soils could also hamper reserve pit integrity. Lining the pit would reduce the chances of failure. The operator is responsible for insuring a tight, stable pit.

Information Source: Field observation.

b. Subsidence: Withdrawal of fluids could cause subsidence, however, none is expected.

Information Source: "Environmental Geology," E.A. Keller.

c. Seismicity: The wellsite is in an area of minor to moderate seismic risk. The project design does not account for local seismic hazards.

Information Source: "Geologic Atlas of the Rocky Mt. Region"

d. High Pressure Zones/Blowout Prevention: No high pressure zones are expected by the operator, nor have any been discovered in the Last Chance Gas Field to the north of the test site. A blowout preventor with blind and pipe rams rated a 3000# working pressure would be installed for drilling.

Information Source: APD.

B. Soils:

1. Soil Character: Soils are gypsiferous shaley sands and platey mudstones. Nutrient content and fertility are low as evidenced by sparse vegetation. Topsoil would not be stockpiled.

Information Source: Field observation, "Soils of Utah" - Wilson et.al.

2. Erosion/Sedimentation: Soils are highly erodible with high sediment yields. Erosion and sedimentation would increase. Rehabilitation of pad or areas not needed for production immediately after drilling or completion would reduce impacts.

Information Source: "Soils of Utah", Wilson et.al, Field observation.

C. Air Quality: The wellsite is in a Class II attainment area. Capitol Reef National Park, a Class I attainment area, is about 5 miles southwest of the location. Due to prevailing westerly winds, drilling should have no effect on the Park's air quality. Hauling trash to a disposal site would eliminate pollution from burning.

Information Source: Field observation, R. Dalley, Utah State Health Dept. Pers. Comm.

D. Noise Levels: Noise levels would increase temporarily due to machinery and traffic, however, considering the remoteness of the area, impacts would be minimal except for safety hazards associated with excessive noise.

Information Source: Field observation.

E. Water Resources

1. Hydrologic Character

a. Surface Waters: There are numerous drainages in area which are non-perennial. Due to the highly erodible soils in the region, siltation could be heavy during heavy rainstorms. A large erosional gulley and a deep wide wash flank two sides of the location. The head of the gulley would be leveled by pad construction. The operator has proposed a berm paralleling the wash at the south edge of the location to reduce erosion/siltation.

Information Source: APD, Field observation.

b. Ground Waters: A water well would be drilled for use during operations. Appropriate Permits are necessary. Fresh water could be encountered in the Navajo, Wingate and Coconino Formations. Production of large amounts of water from Navajo is possible particularly if air drilling is employed. This could provide for full reserve pit.

Information Source: APD, WRD Report, Field observation.

2. Water Quality

a. Surface Waters: Reserve pits would be constructed adjacent to large erosional gulley. Pit failure would cause total loss of contained fluids with recovery impossible. Lining pit and construction of check dams in gulley would reduce pollution potential.

Information Source: Field observation, APD.

b. Ground Waters: Contamination of ground waters due to introduction of drilling fluids is possible. Potential freshwater aquifers in Navajo, Wingate and Coconino Formations could be contaminated by upper saline (Carmel) aquifers. Extending surface casing to Navajo Formation would provide protection of potential Navajo fresh water. Upon abandonment or completion, plugs or seals placed across formations as outline in the enclosed WRD Report would reduce the potential for interaquifer leakage.

Information Source: WRD Report, Field observation.

F. Flora and Fauna

1. Endangered and Threatened Species Determination

Based on the formal comments received from BLM on February 25, 1980, we determine that there would be no effect on endangered and threatened species and their critical habitat.

2. Flora: Vegetation is sparse, about 1% or less ground cover, and consists predominantly of Mormon tea and fourwing saltbush. Pad construction would remove vegetation necessitating revegetation.

Information Source: BLM, Field observation, "Desert Plants of Utah" - Anderson.

3. Fauna: Due to sparse vegetation, wildlife is limited in area. Rodents, songbirds raptors and reptiles are present. Utah Division of Wildlife Resources has classified region as low value wildlife area. No impact to fauna expected.

Information Source: BLM, Field observation, APD.

G. Land Uses

1. General: Oil and gas operations have occurred to north in Last Chance gas field, however; due to lack of transport facilities, activity has ceased. Limited grazing occurs in the area.

Information Source: APD, Field observation.

2. Affected Floodplains and/or Wetlands: N/A.

3. Roadless/Wilderness Area: See Proposed Action Item No 5. Related Actions of other Federal or State Agencies and Indian Tribes.

H. Aesthetics: The operation does not blend in with natural surroundings and could present a visual impact to recreationists. Drilling would be temporary and last about 2 weeks. Painting any permanent equipment a color to blend with the surrounding environment would lessen visual impacts.

Information Source: Field observation.

I. Socioeconomics: The effects of one well on local and regional population and economy would be negligible. However, should this well result in a major discovery an increase in economic activity would be expected. No direct impact to populations would be anticipated as most services would be provided from Grand Junction, Colorado. Present transportation routes would need to be expanded. Pipeline routes, presently absent in the area, would be necessary to further develop the area.

Information Source: Field observation.

J. Cultural Resources Determination: Based on the formal comments received from BLM on February 25, 1980, we determine that there would be no effect on cultural resources subject to the enclosed BLM cultural resource stipulations pertaining to traffic restrictions, artifact collection and the discovery of subsurface cultural resources during construction.

Information Source: BLM.

K. Other: None.

Information Source:

L. Adequacy of Restoration Plans: The rehabilitation plan meets the minimum standards of NTL-6. The erodibility of area soils could hamper restoration which should commence immediately after drilling or completion. Restoration to pre-drilling conditions could be difficult. The area's short growing season and limited precipitation govern restoration success.

Information Source: Field observation.

Alternatives to the Proposed Action:

1. Disapproving the proposed action or no action - If the proposed action is denied, no action would occur, the existing environment would remain in its present state, the lessee/operator would not realize any return on investments and the public would be denied a potential energy source.

2. Approving the project with the recommended stipulations - Under federal oil and gas leasing provisions, the Geological Survey has a responsibility to approve mineral development if the environmental consequences are not too severe or irreversible. Permanent damage to the surface and subsurface would be prevented as much as possible under USGS and Surface Management Agency supervision. Environmental impacts would be significantly mitigated.

3. Other.

Adverse Environmental Effects:

1. If approved as proposed:

a. About 2.1 acres of vegetation would be removed, increasing and accelerating erosion potential.

b. Pollution of groundwater systems would occur with the introduction of drilling fluids into the aquifer(s). The potential for interaquifer leakage and lost circulation is ever-present, depending on the casing program.

c. Minor air pollution would be induced on a temporary basis due to exhaust emissions from rig engines and support traffic.

d. The potential for fires, leaks, spills of gas and oil or water exists.

e. During construction and drilling phases of the operation, noise and dust levels would increase.

f. Distractions from aesthetics during the lifetime of the project would exist.

g. Erosion from the site would eventually be carried as sediment in the Colorado River. The potential for pollution to Last Chance Wash would exist through leaks and spills.

h. If hydrocarbons would be discovered and produced, further development of the area could be expected to occur, which would result in the extraction of irreplaceable resource, and further negative environmental impacts. These impacts include the cumulative loss of wildlife habitat due to the areas necessary for roads, pipelines, drillsites, and transmission lines. These actions may disrupt wildlife social behavior and force habitat relocation over an extended period of time. In addition, the cumulative effects of non-point erosion become substantial in a developing field.

2. Conditional Approval:

- a. All adverse impacts described in section one above would occur, to some degree; however:
- b. Lining the reserve pit and the construction of two check dams in the erosional gully immediately north of the pad would reduce the hazard of fluid spills.
- c. Dewatering of the reserve pit if any large amounts of water are produced would lessen the chance of reserve pit failure and fluid spills.
- d. Painting permanent equipment a color to blend with the surrounding environment would reduce visual impacts.
- e. Extension of surface casing to the Navajo Formation and plugs or seals placed across the (1) Coconino - Kaibab - Moenkopi contacts, (2) Wingate - Chinle, (3) Wingate - Kayenta, (4) Kayenta - Navajo and (5) Navajo - Carmel contacts would reduce if not eliminate the potential for interaquifer leakage.
- f. Adequate cementing of any encountered mineable coal zones would eliminate impacts to the coal.

Recommended Approval Conditions:

Drilling should be allowed, provided the following mitigative measures are incorporated into the proposed APD and adhered to by the operator:

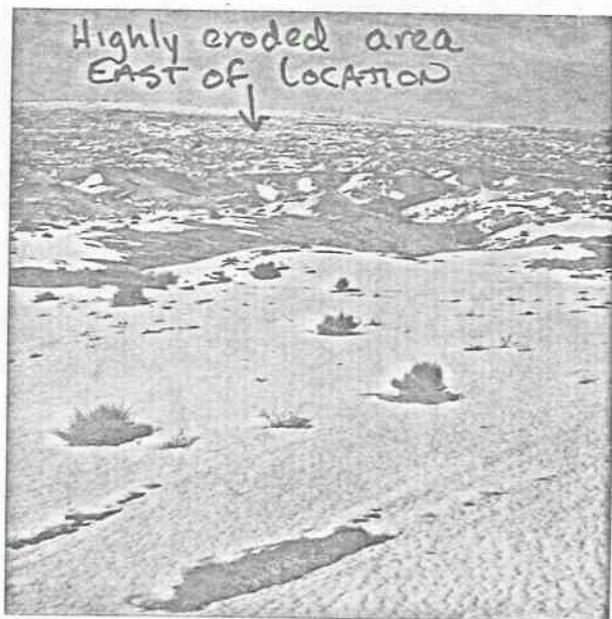
1. See attached Lease Stipulations.
2. See attached BLM Stipulations.
3. The reserve pit must be lined with an impervious material to insure pit integrity.
4. Two check dams will be constructed in the erosional gully immediately north of the location. The first shall be installed slightly downstream from the east edge of the pit and the second about 150 feet downstream from the first.
5. An erosion control berm will be constructed along the edge of the deep, wide wash paralleling the south edge of the reserve pit.
6. Surface casing must be extended to the top of the Navajo Formation (+ 450 feet).
7. Any excessive amounts of water in the reserve pit must be removed. Disposal may occur in reserve pits of other Tiger Oil locations currently being drilled in the area. Furthermore upon completion of drilling and completion operations, the reserve pit must be dewatered.



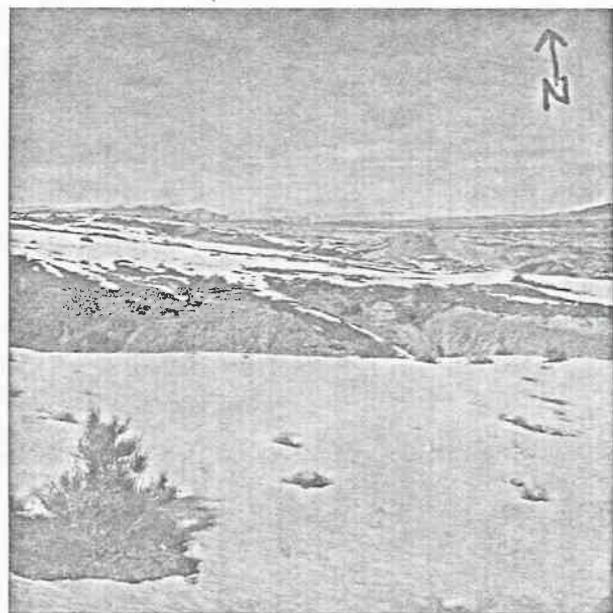
facing
EAST



facing
EAST



EAST FROM CENTER
STAKE



North from hole location

8. Upon abandonment or completion cement plugs must be placed across
1) Coconino - Kaibab - Moenkope contacts, 2) Wingate - Chinle,
3) Wingate - Kayenta, 4) Kayenta - Navajo, and 5) Navajo - Carmel
contacts.
9. All permanent equipment will be painted a color to blend with the
surrounding environment.
10. Restoration of the pad area and/or areas not needed for production
must commence immediately after completion operations or abandonment.
Reseeding shall follow recommended BLM Stipulations.
11. ~~All logs run on the hole will be furnished to the USGS Area Mining
Supervisor, Salt Lake City, Utah.~~
12. Pad construction must conform to topography. Disturbances to the
drainages flanking the north and south edges of the location must be
avoided.
13. Appropriate permits must be obtained for the water well.

Controversial Issues and Conservation Division Response:

The lawsuit of the Sierra Club against the BLM concerning the wilderness characteristics of the area is the only controversial issue discovered during the preparation of this analysis.

We have considered the proposed action in the preceding pages of this EA and find, based on the analysis of environmental considerations provided therein, no evidence to indicate that it will significantly (40 CFR 1508.27) impact the quality of the human environment.



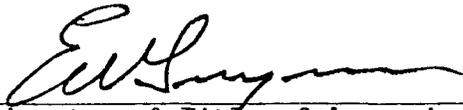
South from hole location



WEST FROM HOLE LOCATION

Determination

I determine that the proposed action (as modified by the recommended approval conditions) does not constitute a major Federal action significantly affecting the quality of the human environment in the sense of NEPA, Section 102 (2)(C).

 DISTRICT ENGINEER

Signature & Title of Approving Official

MAR 07 1980

Date

Memorandum

DEPARTMENT OF THE INTERIOR
 BUREAU OF LAND MANAGEMENT
 Moab District
 San Rafael Resource Area

IN REPLY REFER TO:
 3100
 U-11373
 (U-602)

TO : District Engineer, USGS
 Through Oil & Gas Office, Grand Junction, Co.
 FROM : Area Manager, San Rafael
 SUBJECT : Additional Surface Management Requirement for APD's
 Tiger Oil Co.

Date: February 19, 1980

On February 13, Laurelle Hughes of my staff met with George Diwachak, USGS, and George Fentress and Gene Lawson for Tiger Oil for an onsite inspection of a proposed drill location. We would like to have the following additions and changes made to the 13-Point Surface Use Plan:

1. No burning of trash will be allowed. Trash will be contained in a wire cage or drum and hauled to an approved dump site.
2. A chemical toilet will be provided at each drill site.
3. BLM will be notified 48 hours before beginning any construction phase.
4. Seeding will take place from mid-October through December. Seeding method will be by broadcasting and lightly harrowing. The following seed mixture has been developed for the site:

<u>Grasses</u>	<u>Rate</u> <u>(lb/acre)</u>
Oryzopsis hymenoides	Indian Rice grass 3
 <u>Shrubs</u>	
Atriplex confertifolia	Shadscale 1
Ephedra nevadensis	Mormon Tea 2
	<hr style="width: 50px; margin-left: auto; margin-right: 0;"/> 6

5. Construction and maintenance for surface use approved under this plan should be in accordance with the surface use standards as set forth in the BLM/GS Oil and Gas brochure entitled, "Surface Operating Standards for Oil and Gas Exploration and Development." This includes, but is not limited to, such items as road construction and maintenance, handling of topsoil, and rehabilitation.

An archeological evaluation was done by Archeological-Environmental Research Corporation for Tiger Oil (copy enclosed). No cultural resources of any

Grand Junction CO 81201
 B O Box 2108
 Oil & Gas Office
 U S Geological Survey

SELECTED REFERENCES

Anderson, B.A. 1979, Desert Plants of Utah, Cooperative Extension Service, Utah State Univeristy, Logan, Utah 146 p.

Bureau of Land Management, 1979, Interim Management Policy and Guidelines for Lands Under Wilderness Review: U.S. Department of the Interior, BLM, Washington, D.C., 32 p.

Keller, E.A., 1976, Environmental Geology: C.E. Merril Publishing Company, Columbus, Ohio, 488 p.

Rocky Mountain Association of Geologists, 1972, Geologic Atlas of the Rocky Mountain Region: Denver, Colorado 331 p.

Willians, P.L., and Hackman, R.J., 1971, Geology, Structure and Uranium Deposits of the Salina Quadrangel, Utah: U.S. Geological Survey Misc. Geol. Inv. Map I-591.

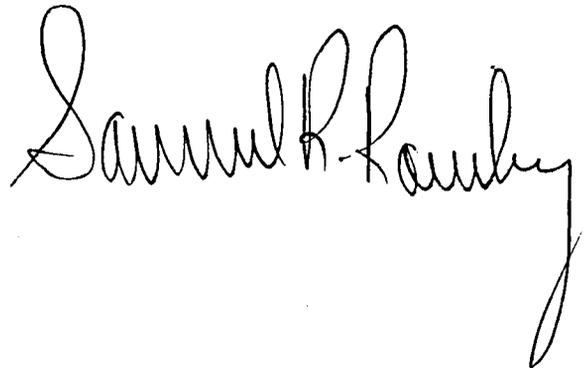
Wilson, LeMoynes, et.al, 1975, Soils of Utah: Agricultural Experiment Station, Bulletin 492, Utah State University, Logan Utah, 94 p.

prehistoric or historic period were observed or recorded in the field and no National Register status sites will be affected by the drilling program. The cultural clearance is granted with the following stipulations:

1. All vehicular traffic, personnel movement, and construction be confined the locations examined and to access roads leading into these locations.
2. All personnel refrain from collecting individual artifacts or from disturbing any cultural resources in the area.
3. Should cultural remains from subsurface deposits be exposed during construction work or if the need arises to relocate or otherwise alter the construction area, the BLM will be notified immediately.

There are no threatened and endangered plant species nor animal species which would be impacted by the drilling program. The Utah Division of Wildlife Resources indicates that this is a low value wildlife area and sees no impact on wildlife.

The attached stipulation pertaining to wilderness protection should be made part of the APD.

A handwritten signature in black ink, appearing to read "Samuel H. Raub". The signature is written in a cursive style with a long, sweeping tail on the final letter.

Enclosure:
Wilderness Stipulation

WILDERNESS PROTECTION STIPULATION

By accepting this lease, the lessee acknowledges that the lands contained in this lease are being inventoried or evaluated for their wilderness potential by the Bureau of Land Management (BLM) under section 603 of the Federal Land Policy and Management Act of 1976, 90 Stat. 2743 (43 USC Sec. 1782), and that exploration or production activities which are not in conformity with section 603 may never be permitted. Expenditures in leases on which exploration drilling or production are not allowed will create no additional rights in the lease, and such leases will expire in accordance with law.

Activities will be permitted under the lease so long as BLM determines they will not impair wilderness suitability. This will be the case either until the BLM wilderness inventory process has resulted in a final wilderness inventory decision that an area lacks wilderness characteristics, or in the case of a wilderness study area until Congress has decided not to designate the lands included within this lease as wilderness. Activities will be considered nonimpairing if the BLM determines that they meet each of the following three criteria:

(a) It is temporary. This means that the use or activity may continue until the time when it must be terminated in order to meet the reclamation requirement of paragraphs (b) and (c) below. A temporary use that creates no new surface disturbance may continue unless Congress designates the area as wilderness, so long as it can easily and immediately be terminated at that time, if necessary to management of the area as wilderness.

(b) Any temporary impacts caused by the activity must, at a minimum, be capable of being reclaimed to a condition of being substantially unnoticeable in the wilderness study area (or inventory unit) as a whole by the time the Secretary of the Interior is scheduled to send his recommendations on that area to the President, and the operator will be required to reclaim the impacts to that standard by that date. If the wilderness study is postponed, the reclamation deadline will be extended accordingly. If the wilderness study is accelerated, the reclamation deadline will not be changed. A full schedule of wilderness studies will be developed by the Department upon completion of the intensive wilderness inventory. In the meantime, in areas not yet scheduled for wilderness study, the reclamation will be scheduled for completion within 4 years after approval of the activity. (Obviously, if and when the Interim Management Policy ceases to apply to an inventory unit dropped from wilderness review following a final wilderness inventory decision of the

BLM State Director, the reclamation deadline previously specified will cease to apply.) The Secretary's schedule for transmitting his recommendations to the President will not be changed as a result of any unexpected inability to complete the reclamation by the specified date, and such inability will not constrain the Secretary's recommendation with respect to the area's suitability or nonsuitability for preservation as wilderness.

The reclamation will, to the extent practicable, be done while the activity is in progress. Reclamation will include the complete recontouring of all cuts and fills to blend with the natural topography, the replacement of topsoil, and the restoration of plant cover at least to the point where natural succession is occurring. Plant cover will be restored by means of reseedling or replanting, using species previously occurring in the area. If necessary, irrigation will be required. The reclamation schedule will be based on conservative assumptions with regard to growing conditions, so as to ensure that the reclamation will be complete, and the impacts will be substantially unnoticeable in the area as a whole, by the time the Secretary is scheduled to send his recommendations to the President. ("Substantially unnoticeable" is defined in Appendix F of the *Interim Management Policy and Guidelines for Lands under Wilderness Review*.)

(c) When the activity is terminated, and after any needed reclamation is complete, the area's wilderness values must not have been degraded so far, compared with the area's values for other purposes, as to significantly constrain the Secretary's recommendation with respect to the area's suitability or nonsuitability for preservation as wilderness. The wilderness values to be considered are those mentioned in section 2(c) of the Wilderness Act, including naturalness, outstanding opportunities for solitude or for primitive and unconfined recreation, and ecological, geological or other features of scientific, educational, scenic, or historical value.

If all or any part of the area included within the leasehold estate is formally designated by Congress as wilderness, exploration and development operations taking place or to take place on that part of the lease will remain subject to the requirements of this stipulation, except as modified by the Act of Congress designating the land as wilderness. If Congress does not specify in such act how existing leases like this one will be managed, then the provisions of the Wilderness Act of 1964 will apply, as implemented by rules and regulations promulgated by the Department of the Interior.

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U- 11373

STIPULATION

As to lands administered by the Bureau of Land Management under the above oil and gas lease, the lessee hereby agrees that the following stipulations are by this reference incorporated as terms and conditions of said lease:

Before undertaking any exploratory operations involving use of bulldozers, earth-moving, or similar mobile equipment which may result in scarring of public lands, damaging surface resources, or inducing erosion thereon, he or his designee shall submit in writing to the Bureau of Land Management District Manager in the District in which the land is located, advance notice of such operation. Said operations include but are not limited to exploratory drilling, construction of access roads or airstrips, and the conduct of seismic operations.

Lessee

July 10, 1981

Tiger Oil Company
Suite 1500 Five Greenway Plaza East
Houston, Texas 77046

Re: See Attached Sheet

Gentlemen:

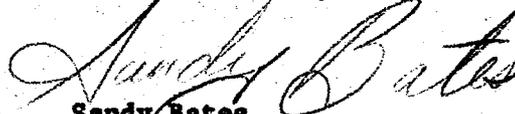
In reference to above mentioned wells, considerable time has gone by since approval was obtained from this office.

This office has not received any notification of spudding. If you do not intend to drill these wells, please notify this Division. If spudding or any other activity has taken place, please send necessary forms.

Your prompt attention to the above will be greatly appreciated.

Very truly yours,

DIVISION OF OIL, GAS, AND MINING



Sandy Bates
Clerk-Typist

/lm
Attachment

1. Well No. Federal 14-21
Sec. 21, T. 26S, R. 7E
Emery County, Utah
2. Well No. Federal 14-9
Sec. 9, T. 26S, R. 7E
Emery County, Utah
3. Well No. Federal 12-27
Sec. 27, T. 26S, R. 7E
Emery County, Utah



July 29, 1981

RECEIVED

JUL 30 1981

Ms. Sandy Bates
State of Utah
Dept. of Natural Resources
Division of Oil, Gas and Mining
1588 West North Temple
Salt Lake City, Utah 84116

DIVISION OF
OIL, GAS & MINING

Re: Well No. Federal 14-21 L.A.
Sec 21, T26S, R7E
Emery County, Utah
Well No. Federal 14-9 L.A.
Sec 9, T26S, R7E
Emery County, Utah
Well No. Federal 12-27 L.A.
Sec 27, T26S, R7E
Emery County, Utah

Dear Ms. Bates:

Tiger Oil Company does not intend to drill the above locations. Conductor casings were set at the surface on two of the locations, being Well No. Federal 14-21 and Well No. Federal 12-27, and copies of the required Federal plugging forms are attached. No activity was conducted on Well No. Federal 14-9.

Yours very truly,

V. W. Sponseller
V. W. Sponseller

VWS/kh
Enc.