

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

Marathon Oil Company

3. ADDRESS OF OPERATOR

P. O. Box 2659, Casper, Wyoming 82602

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)*

At surface

1,450' FSL & 790' FEL, Sec. 28, T26N, R5W, Unit I

At proposed prod. zone

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*

15. DISTANCE FROM PROPOSED*

LOCATION TO NEAREST
PROPERTY OR LEASE LINE, FT.
(Also to nearest drlg. unit line, if any)

3,800'

16. NO. OF ACRES IN LEASE

2,560

17. NO. OF ACRES ASSIGNED
TO THIS WELL

160

18. DISTANCE FROM PROPOSED LOCATION*

TO NEAREST WELL, DRILLING, COMPLETED,
OR APPLIED FOR, ON THIS LEASE, FT.

2,300'

19. PROPOSED DEPTH

3,200'

20. ROTARY OR CABLE TOOLS

Rotary

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

6665 GL Surface Formation - Tertiary San Juan

22. APPROX. DATE WORK WILL START*

August 10, 1976

23.

PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
12-1/4"	8-5/8" (new)	24# J-55	235'	190 sacks Class "G", 2% CaCl ₂
7-7/8"	4-3/4" (used)	16# J-55	3,200'	150 sacks Class "G" and 600 sacks "LIGHT"

This well will be drilled to an approximate total depth of 3,200' and completed as a Pictured Cliffs Sand gas well. The Pictured Cliffs Sand will be perforated as indicated by logs and will be stimulated by a sand-water fracture treatment.

Estimated formation tops are: Kirtland Shale 2,644', Fruitland Formation 2,855' and Pictured Cliffs Sand 3,041'.

Water base gel-chem mud will be used. The weight will be 9 to 9-1/2 ppg and the water loss will be maintained at less than 10 cc's while the Pictured Cliffs Sand is being drilled. No drill stem tests will be conducted. No cores will be taken.

Deviation surveys will be conducted at 500', or shorter, intervals. Maximum deviation will not exceed 4-1/2°. (Continued on following page)

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

Paul Johnson

TITLE

District Operations Manager

DATE July 9, 1976

(This space for Federal or State office use)

PERMIT NO.

APPROVAL DATE

APPROVED BY

TITLE

DATE

CONDITIONS OF APPROVAL, IF ANY:

*See Instructions On Reverse Side

JUL 14 1976

30-039-21256

5. LEASE DESIGNATION AND SERIAL NO.

Tract 251

Contract 000154

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

Jicarilla Apache

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME

Jicarilla Apache

9. WELL NO.

18

10. FIELD AND POOL, OR WILDCAT

Blanco P.C. South

11. SEC., T., R., M., OR BLK.
AND SURVEY OR AREA

Sec. 28, T26N, R5W

12. COUNTY OR PARISH

Rio Arriba

13. STATE

New Mexico

NEW MEXICO OIL CONSERVATION COMMISSION
WELL LOCATION AND ACREAGE DEDICATION PLAT

Form C-102
Supersedes C-128
Effective 1-1-65

All distances must be from the outer boundaries of the Section.

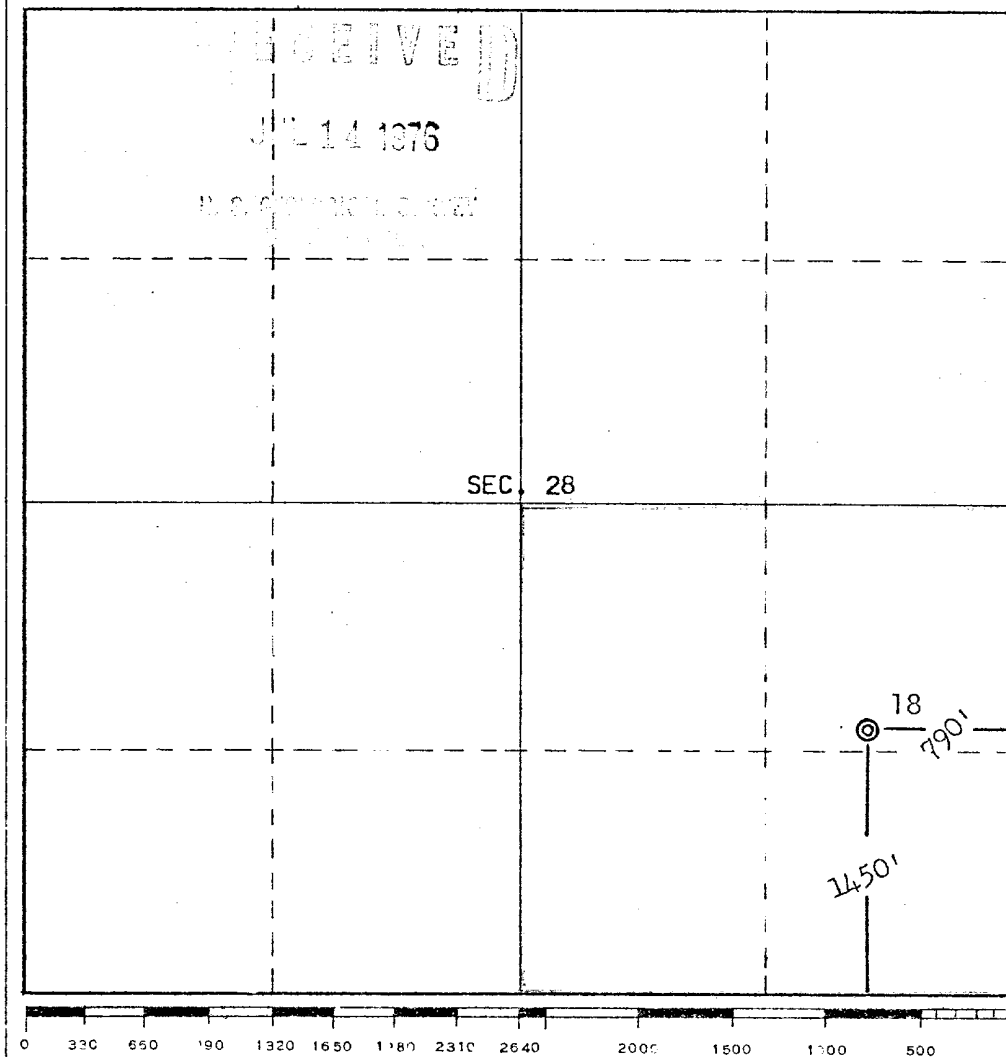
Operator Marathon Oil Company			Lease Contract 000154 Jicarilla Apache		Well No. 18
Unit Letter 1	Section 28	Township 26 North	Range 5 West	County Rio Arriba	
Actual Footage Location of Well: 1450 feet from the South line and 790 feet from the East line					
Ground Level Elev. 6665	Producing Formation Pictured Cliffs	Pool Blanco P.C. South	Dedicated Acreage: 160 Acres		

1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
3. If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force-pooling, etc?

☐ Yes ☐ No If answer is "yes," type of consolidation NA

If answer is "no," list the owners and tract descriptions which have actually been consolidated. Use reverse side of this form if necessary.) NA

No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Commission.

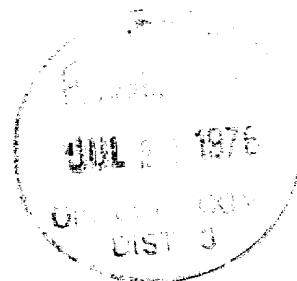


<p align="center">CERTIFICATION</p> <p>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.</p> <p><i>Paul F. Johnson</i> Name Paul F. Johnson Position District Operations Mngr. Company Marathon Oil Company Date June 29, 1976</p>	
<p align="center">REGISTERED LAND SURVEYOR STATE OF NEW MEXICO No. 3662 E. V. ECHOHAWK</p>	
<p>Date Surveyed June 23, 1976 Registered Professional Engineer and/or Land Survey <i>E. V. Echohawk</i> Certificate No. 3602 E. V. Echohawk LS</p>	

All BOP and wellhead equipment will have a minimum pressure rating of 2,000 psi.

Open hole logs to be run are the dual induction laterolog from TD to surface casing and the FDC-CNL GR log over the Pictured Cliffs Sand. A GR correlation log will be run in the casing prior to perforating.

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U.S. DISTRICT COURT

MARATHON OIL COMPANY

Development Plan For Surface Use

Proposed Pictured Cliffs Gas Development Well

Jicarilla Apache #18

1450' FSL, 790' FEL, Sec. 28, T26N, R5W

Rio Arriba County, New Mexico

Ground Level Elevation - 6665'

1. The attached surface facility map shows the proposed well location and existing access roads which are located on Indian lands of the Jicarilla Apache Reservation. The existing roads will be used in their present state. No improvement or maintenance of existing roads is planned.
2. An access road approximately 50' in length and 30' wide will be constructed due north from the edge of the location to the existing access road. This road will cross no drainage channels and no fences will be crossed.
3. The attached map shows all existing wells within a one mile radius of the proposed development well, Jicarilla Apache #18, the location of which was surveyed and staked by E. V. Echohawk, registered land surveyor on June 23, 1976.
4. Marathon Oil Company does not own or operate any pipelines on their Tract 251, Contract 000154 (Sec. 27, 28, 33 and 34). Each Marathon-Dakota well (#8 and #10, Sec. 27; #9 and #11, Sec. 28; #12 and #13, Sec. 33 and #14 and #16 on Sec. 34) has one or two tanks and a gas-liquid separator and connecting lines located within 200' of each well. The Pictured Cliffs and Chacra wells have no surface equipment.

No tanks or production facilities will be required at the proposed well #18. The gathering line will be laid by the gas purchaser to the nearest existing line.
5. The location (NW $\frac{1}{4}$ of Sec. 28) of the source of water supply, Tapiato Creek, to be used for drilling is shown on the attached map. Water will be hauled by tank truck over the access road from the source to the drill site.
6. No construction materials (sand, gravel, stone, soil, etc) from other sites will be required at the proposed location.
7. All garbage and trash will be dumped in a trash pit and buried to a depth of five feet after completion of the well. Drill cuttings will be buried in the reserve pit after the well is completed.
8. There will be no camps, airstrips or permanent structures. A small trailer house will be on location during drilling and completion operations.

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DALLAS, TEXAS

9. The attached well site layout plat shows the approximate dimensions of the level location and reserve pit and the generalized location of the components of the drilling equipment to be used.

The location is essentially a naturally level ridge top, so a cut of only one or two feet on the north side is all that will be required.

The reserve pit will be located on the gently sloping south side of the location. It will not be necessary to line the reserve pit.

10. After drilling and completion operations are finished, the pit will be covered and restored to as near natural conditions as possible to the satisfaction of the BIA. The level location and road will be utilized for operation and maintenance of the well.

It is tentatively planned that well drilling and completion operations will be conducted during a two week period in August, 1976, with rehabilitation measures to be started as soon as the reserve pit dries sufficiently and finished before the end of 1976.

11. The attached archeological report covers all aspects of the surface characteristics and grants clearance to construct the location and short road, which will disturb no cultural resource.

Since location and road construction will be on the nearly level ridge top, a minimal cut will be required. No steep gullies or hillsides are near.

12. Operator's representative: Mr. E. A. Nelson, 1804 Brentwood Drive, Farmington, New Mexico 87401
Phone Nos: 1-505-325-1624 (Home)
1-505-325-5033 (Mobile) (Ute Communications) *6/22/76*

13. I hereby certify that I, or persons under my direct supervision, have inspected the proposed drillsite and access route; that I am familiar with the conditions which presently exist; that the statements made in this plan are, to the best of my knowledge, true and correct; and, that the work association with the operations proposed herein will be performed by Marathon Oil Company and its contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved.

7-13-76
Date

E. A. Nelson Supervisor
Name and Title

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6/23 7/8/76

Marathon Oil Company

Description of Drilling and Well Control Equipment

Jicarilla Apache #18

1. Surface casing: 235' of 8-5/8" OD, 24#, J-55, new casing to be cemented to surface.
2. Casinghead: 8-5/8" x 8", 2,000 psi.
3. No intermediate casing.
4. Blowout preventor. See attached diagram.

All BOP's and surface casing will be pressure tested to 1,000 psi before drilling out cement in surface casing.

Operation of BOP's to be checked daily.

5. Auxiliary equipment. A kelly cock will be used on top of the kelly and a float will be used at the bit. A full opening safety valve and sub for the drill pipe will be available at all times.
6. Maximum formation pressure will be encountered in the Pictured Cliffs Sand (gas), estimated to be 900 psi.
7. The drilling fluid will be a water base-gel-chemical mud, with a weight of 9 to 9-1/2 ppg. The mud level in the steel pit will be monitored visually.

No abnormal pressures or hazardous H₂S gas zones will be encountered.

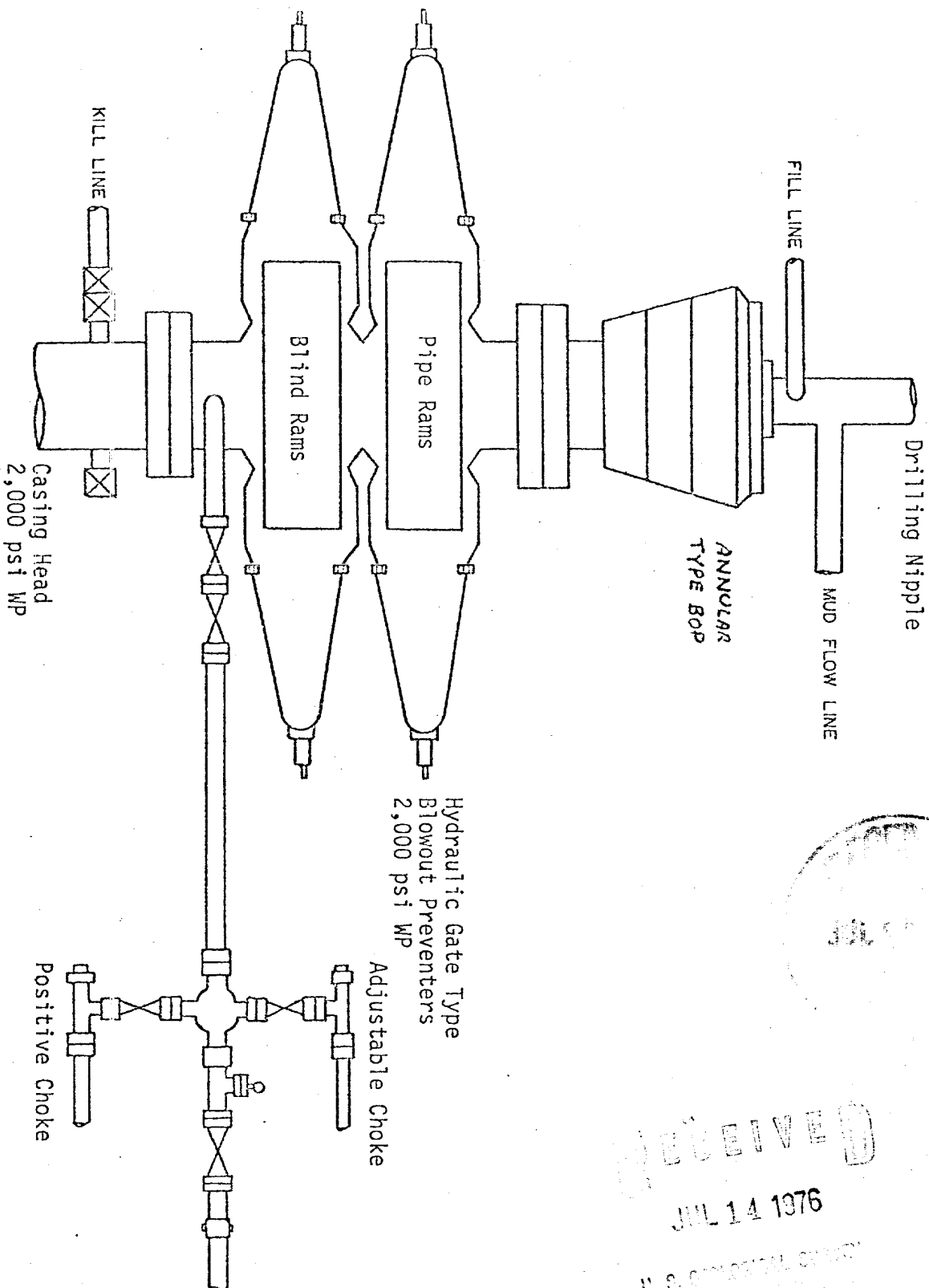
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W. C. C. COMPANY

GJG 7/8/76

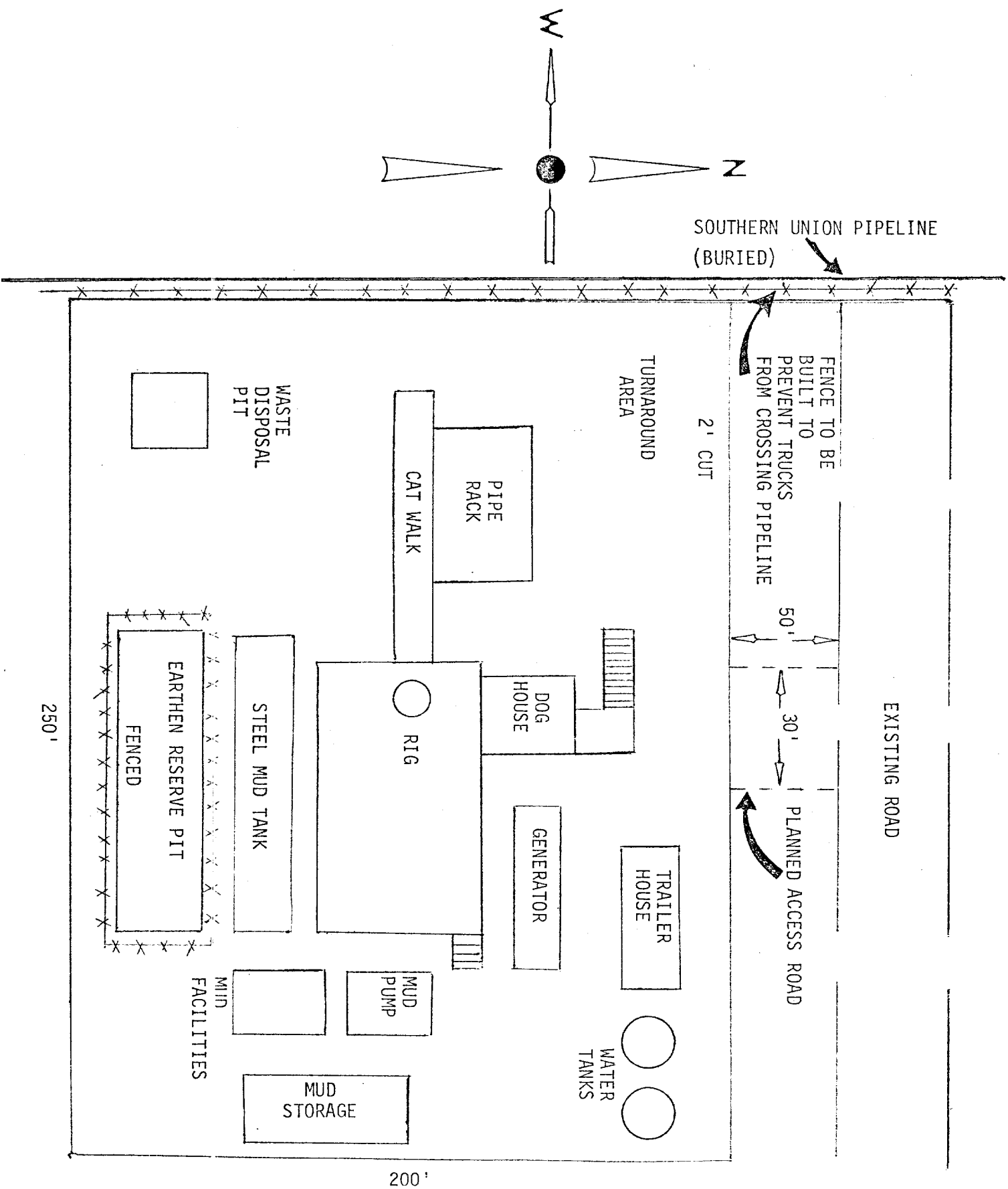
Jicarilla Apache #18
Proposed Blowout Preventer Installation



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NOTES

1. Blowout preventers, master valve, plug valve and all fittings must be in good condition. Use new API Seal Rings.
2. All fittings (gates, valves, etc.) to be of equivalent pressure rating as preventers. Valves to be flanged and at least 2" unless otherwise specified. Valves next to BOP to be plug type and nominal 3".
3. Equipment through which bit must pass shall be as large as the inside diameter of the casing that is being drilled through.
4. Safety valve (Omsco or equivalent) must be available on rig floor at all times and with proper connections. The I.D. of safety valves should be as great as I.D. of tool joints on drill pipe.
5. Kelly safety valve installed, same working pressure as BOP's.
6. All lines and controls to preventers must be connected and tested before drilling out of surface pipe.
7. BOP's must be fluid operated, complete with accumulator. Controls may be either on floor or ground near steps from rig floor.
8. Fillup line tied to drilling nipple, the connection must be below and approximately 90° to the flow line.
9. Gauge will be installed for testing but removed while drilling.
10. Snool not required, but when side cuttlat on BOP's is used, it must be below bottom ram.
11. Casinghead and casinghead fittings to be furnished by Marathon Oil Company.



JICARILLA APACHE #19
 SCHEMATIC
 LAYOUT OF
 DRILLING RIG

JUL 14 1976

038 7/8/76



San Juan County
Museum Association

AGENCY OF CONSERVATION ARCHAEOLOGY



Eastern New Mexico
University

July 1, 1976

Director

Dr. C. Irwin-Williams

Executive Director

Dr. G. A. Agogino

Operations Director

Dr. J. Loring Haskell

Services

Planning

Archaeological Survey

Excavation

Analysis

Reporting

Research

Laboratories

Laszlo Vertes Laboratory

Ceramic Analysis

Paleo-Botanical Analysis

Kay Irwin Laboratory

Lithic Analysis

Obsidian Hydration Dating

San Juan County Archaeological

Research Center

Ceramic Analysis

Lithic Analysis

Paleo-Botanical Analysis

Anthropological Computer Services

Center

Reporting and Publication Division

Eastern New Mexico University

Contributions in Anthropology-Series

Eric Nelson
Marathon Oil
1804 Brenwood Dr.
Farmington, New Mexico 87401

Dear Mr. Nelson:

You will find enclosed our archaeological report for your proposed well Jicarilla Apache No. 18. As you will note, archaeological clearance has been recommended. The final clearance for cultural resources will come from the Bureau of Indian Affairs in Albuquerque. Our bill for this service is also enclosed.

If you have any questions regarding any of this, please contact our office anytime. We appreciate your business and are looking forward to working with you in the future.

Very truly yours,

Pat Zarnowski

Pat Zarnowski
Agency of Conservation Archaeology

JEIV

JUL 14 1976

Enc.

cc: Harold Tecube, Bureau of Indian Affairs, Dulce.
Bill Allan, Bureau of Indian Affairs, Albuquerque.
Jerry Long, U.S.G.S., Durango.
Tom Merlan, State Planning Office, Santa Fe.
Stewart Peckham, State Archaeologist, Santa Fe.
J. Loring Haskell, A. C. A., Portales.
Charles McKinney, Dept. of the Interior, Washington, D.C.

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CASPER DISTRICT
OPERATIONS

Offices

San Juan County
Arch. Res. Center
Rte. 3, Box 169
Farmington, New Mexico 87401
(505) 632-2733

Eastern New Mexico University
Portales, New Mexico 88130
(505) 562-2915

233 Chama N. E.
Albuquerque, New Mexico 87108
(505) 265-7164

Archaeological Clearance Survey Report
for
Marathon Oil

Location

Jicarilla Apache No. 18

Submitted by

Dr. J. Loring Haskell
Operations Director and
Principal Investigator
Agency of Conservation Archaeology

Prepared by

Pat Zarnowski

July 1, 1976

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OSAGE COUNTY DISTRICT
OPERATIONS

Introduction

The Agency of Conservation Archaeology of the San Juan County Museum Association and Eastern New Mexico University recently completed an archaeological clearance survey on the Jicarilla Apache Indian Reservation to be impacted by the proposed construction of a well and access road by Marathon Oil.

The survey project was initiated at the request of Mr. Eric Nelson of Marathon Oil on June 24, 1976. It was administered by Mr. Nelson and by Dr. J. Loring Haskell, who serves as the principal investigator for the Agency of Conservation Archaeology.

The field work was conducted by Pat Zarnowski of the Agency of Conservation Archaeology on June 30, 1976 under provisions of permit number 76-NM-C32. Other representatives in the field were Mr. Nelson of Marathon Oil and John Keller of the United States Geological Survey, the Durango Office.

Survey

The requested archaeological survey involved the one well location described below. It is located on the Jicarilla Apache Indian Reservation. For specific details as to location, please refer to the attached copies of maps and plats and the recommendations section of this report.

The general survey procedure employed in each location was to walk the area of proposed construction and to visually inspect the surface for archaeological material. Any artifact found initiated a further search to determine whether it was an isolated find or was associated with an architectural feature or group of artifacts. Erosional gullies and arroyos were also inspected for evidence of subsurface cultural remains. Floral, faunal and geological observations were made to briefly describe the environmental situation.

Jicarilla Apache No. 18: The location for this proposed well is on top of a ridge, approximately 1,000 feet wide on the south side of Tapicito Creek. The predominant vegetation is sagebrush, Artemisia tridentata, and various herbs and grasses. Junipers, Juniperus sp., and pinyon pines, Pinus edulis, are present on the slopes of both sides of the ridge, but none are present in the area where construction is to take place. The soil is unconsolidated sandy loam. Sandstone bedrock is exposed on the edges of the ridge.

Cultural resources: No archaeological material located.

Recommendations

Due to the lack of cultural resources located on the proposed well site or access road, it is recommended that archaeological clearance be granted.

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OPERATIONS

July 1, 1976

<u>Well</u>	<u>Area</u>	<u>Location</u>	<u>Clearance Status</u>
Jicarilla Apache No. 18	Pad: Approximately 260 feet by 150 feet. Road: 30 feet by approximately 50 feet.	1,450 feet from the South line and 790 feet from the East line in the Northeast $\frac{1}{4}$ of the Southeast $\frac{1}{4}$ of Sec- tion 28, Township 26 North, Range 5 West, Rio Arriba County, New Mexico. Map source: U.S.G.S. Lapis Point 7.5 minute quadrangle.	Recommended

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UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
WELL LOCATION AND ACREAGE DEDICATION PLAT

Form G-1
Supersedes G-1, B
1-70 1172-1-55

All distances must be from the outer boundaries of the Section

Operator Marathon Oil Company		Lease Jicarilla Apache Tract 251		Well No. 1
Unit Letter 1	Section 28	Township 26 North	Range 5 West	County Rio Arriba
Actual Footage Location of Well:				
1450	feet from the	South	790	feet from the
Ground Level Elev. 6665	Producing Formation	Pool	Dedicated Acreage	Acres

1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
3. If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force-pooling, etc?

☐ Yes ☐ No If answer is "yes," type of consolidation _____

If answer is "no," list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.) _____

No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Commission.

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<p>RECEIVED</p> <p>JUL 14 1976</p> <p>U. S. DEPARTMENT OF THE INTERIOR</p>		<p>SEC. 28</p>	
<p>1450'</p>		<p>790'</p>	

CASPER DISTRICT
OPERATIONS

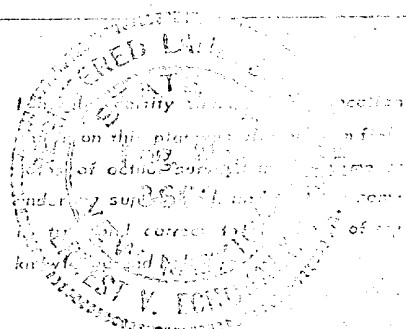
I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.

Name _____

Position _____

Company _____

Date _____



Date Surveyed _____

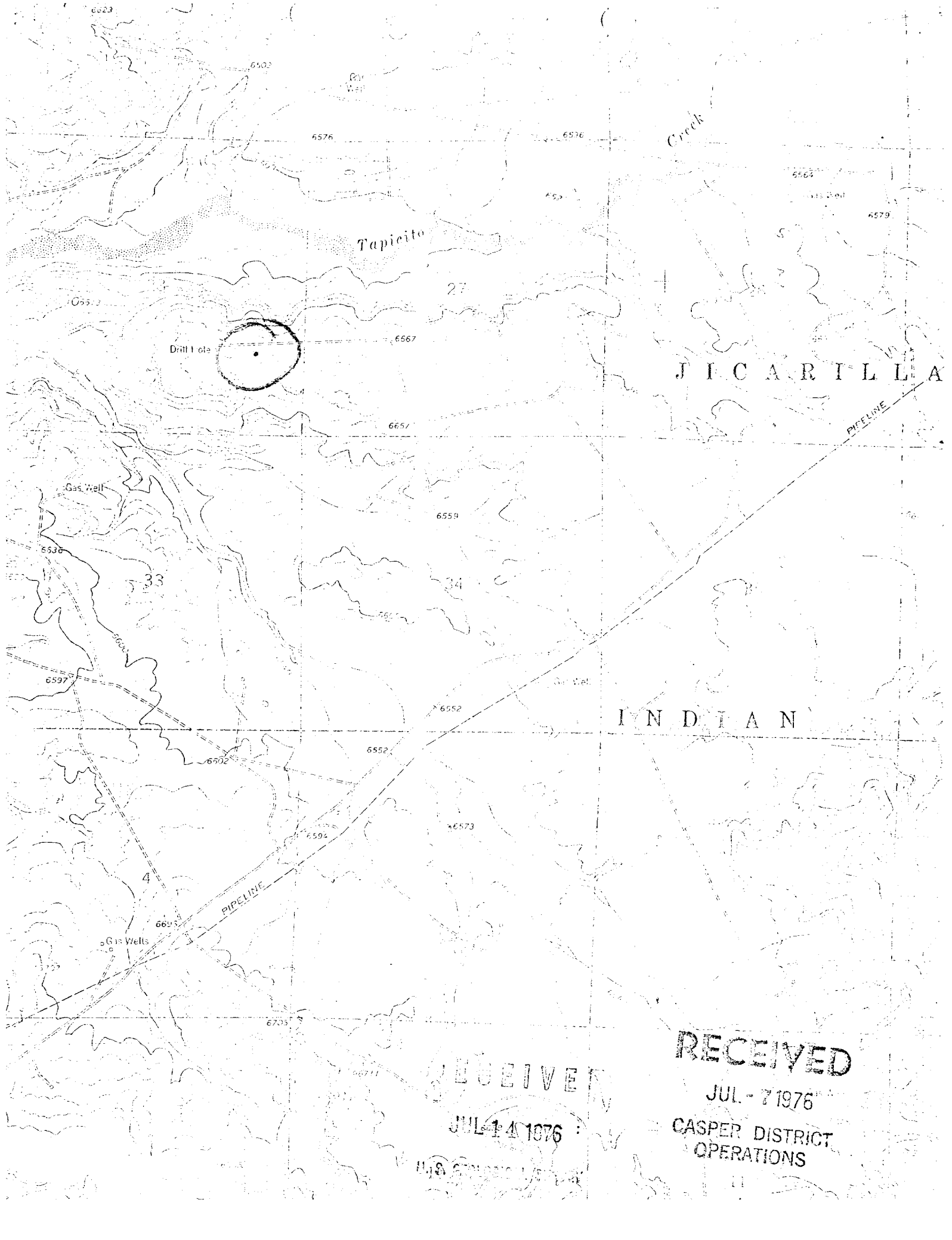
June 23, 1976
Registered Professional Engineer and/or Land Surveyor

E. J. E. L.

Certificate No. 3501

FILED

0 375 750 1125 1500 1875 2250 2625 3000 3375 3750 4125 4500 4875 5250 5625 6000



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