

**New Mexico Oil Conservation Division, District I**  
**1625 N. French Drive**  
**UNITED STATES OF AMERICA**  
**DEPARTMENT OF THE INTERIOR**  
**BUREAU OF LAND MANAGEMENT**

SUBMIT IN TRIPLICATE  
(Other instructions on reverse side)

FORM APPROVED  
OMB NO. 1004-0136  
Expires: February 28, 1995

**APPLICATION FOR PERMIT TO DRILL OR DEEPEN**

**1a. TYPE OF WORK**

DRILL ☒

DEEPEN ☐

**b. TYPE OF WELL**

OIL WELL ☒

GAS WELL ☐

OTHER ☐

SINGLE ZONE ☒

MULTIPLE ZONE ☐

**2. NAME OF OPERATOR**

ARCH PETROLEUM, INC.

(RICHARD WRIGHT (432-685-8140))

**3. ADDRESS AND TELEPHONE NO.**

P.O. BOX 10340 MIDLAND, TEXAS 79702-7340 (432-685-8100)

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

At surface

1200' FSL & 1200' FEL SECTION 28 T23S-R37E LEA CO. NM

At proposed prod. zone SAME

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

Approximately 12 miles Southeast of Eunice New Mexico.

**15. DISTANCE FROM PROPOSED LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT.**

(Also to nearest drlg. unit line, if any)

1200'

**16. NO. OF ACRES IN LEASE**

320

**17. NO. OF ACRES ASSIGNED TO THIS WELL**

40

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

400'

**19. PROPOSED DEPTH**

6700'

**20. ROTARY OR CABLE TOOLS**

ROTARY

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

3309' GR.

**22. APPROX. DATE WORK WILL START\***

WHEN APPROVED

**23.**

**PROPOSED CASING AND CEMENTING PROGRAM**

**CAPITAN CONTROLLED WATER BASIN**

SIZE OF HOLE	GRADE SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
25"	Conductor	NA	40'	Redi-mix cement to surface
12 1/4"	J-55 8 5/8"	32	1100'	650 Sx. Circulate cement.
7 7/8"	J-55 4 1/2"	11.6	6700'	750 Sx. Top of cement 750'

1. Drill 25" hole to 40'. Set 40' of 20" conductor pipe and cement to surface with Redi-mix.
2. Drill 12 1/4" hole to 1100'. Run and set 1100' of 8 5/8" 32# J-55 ST&C casing. Cement with 650 Sx. of Class "C" cement + 1/4# Flocele/Sx, + 2% CaCl, circulate cement to surface.
3. Drill 7 7/8" hole to 6700'. Run and set 6700' of 4 1/2" 11.6# J-55 ST&C casing. Cement with 750 Sx. of Class "C" cement + additives, estimate top of cement 750' from surface.

APPROVAL SUBJECT TO  
GENERAL REQUIREMENTS  
AND SPECIAL STIPULATIONS  
ATTACHED

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen, 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

391-8503  
Agent

DATE 04/20/04

(This space for Federal or State office use)

PERMIT NO.

APPROVAL DATE

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.  
CONDITIONS OF APPROVAL, IF ANY:

ACTING FIELD MANAGER

/s/ Joe G. Lara

APPROVED BY

TITLE

DATE

4 JUN 2004

\*See Instructions On Reverse Side

APPROVAL FOR 1 YEAR

DISTRICT I  
P.O. Box 1980, Hobbs, NM 88241-1980

DISTRICT II  
P.O. Drawer DD, Artesia, NM 88211-0719

DISTRICT III  
1000 Rio Brazos Rd., Aztec, NM 87410

DISTRICT IV  
P.O. BOX 2088, SANTA FE, N.M. 87504-2088

State of New Mexico  
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION  
P.O. Box 2088  
Santa Fe, New Mexico 87504-2088

Form C-102  
Revised February 10, 1994  
Submit to Appropriate District Office  
State Lease - 4 Copies  
Fee Lease - 3 Copies

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number <b>30-025-36723</b>	Pool Code <b>33600</b>	Pool Name <i>Imperial;</i> <b>WILDCAT-TUBB, DRINKARD</b>
Property Code <b>14919</b>	Property Name <b>M.K. STEWART</b>	Well Number <b>11</b>
OGRID No. <b>962</b>	Operator Name <b>ARCH PETROLEUM, INC.</b>	Elevation <b>3309'</b>

Surface Location

UL or lot No. <b>P</b>	Section <b>28</b>	Township <b>23-S</b>	Range <b>37-E</b>	Lot Idn	Feet from the <b>1200</b>	North/South line <b>SOUTH</b>	Feet from the <b>1200</b>	East/West line <b>EAST</b>	County <b>LEA</b>
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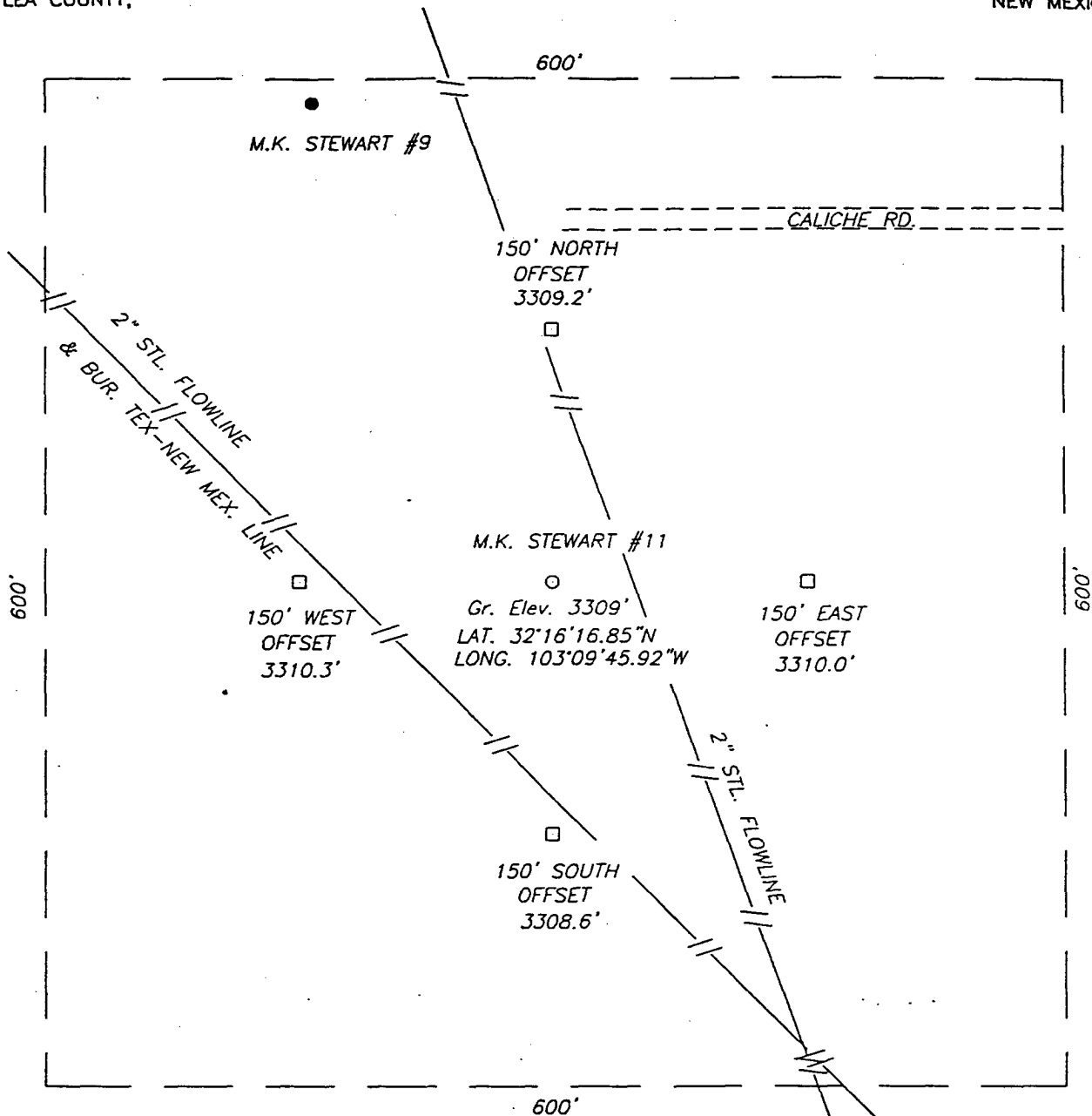
Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
Dedicated Acres <b>40</b>	Joint or Infill	Consolidation Code	Order No.						

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED  
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

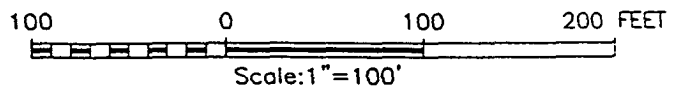
<div style="border: 1px dashed black; padding: 10px; margin: 10px;"><p>GEODETIC COORDINATES</p><p>NAD 27 NME</p><p>Y = 464407.8 N</p><p>X = 861811.0 E</p><p>LAT. 32°16'16.85"N</p><p>LONG. 103°09'45.92"W</p></div>	<div style="border: 1px dashed black; padding: 10px; margin: 10px;"><p>OPERATOR CERTIFICATION</p><p>I hereby certify the the information contained herein is true and complete to the best of my knowledge and belief.</p><p><i>Joe T. Janica</i></p><p>Signature</p><p>Joe T. Janica</p><p>Printed Name</p><p>Agent</p><p>Title</p><p>04/20/04</p><p>Date</p></div>			
			<div style="border: 1px dashed black; padding: 10px; margin: 10px;"><p>SURVEYOR CERTIFICATION</p><p>I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.</p><p>March 30, 2004</p><p>Date Surveyed</p><p>A.W.B</p><p>Signature &amp; Seal of Professional Surveyor</p><p><i>Gary R. Edson</i> 4/16/04</p><p>04.11.0379</p><p>Certificate No. GARY EDSON 12641</p></div>	
			<div style="border: 1px dashed black; padding: 10px; margin: 10px;"><p>1200'</p><p>1200'</p></div>	

**SECTION 28, TOWNSHIP 23 SOUTH, RANGE 37 EAST, N.M.P.M.,**  
LEA COUNTY, NEW MEXICO.



**DIRECTIONS TO LOCATION**

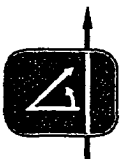
ON STATE HWY #18 AT MILEPOST #19. TURN EAST ON GOOD CALICHE RD. AND GO 1.5 MILES TO A CALICHE RD. ON LEFT. VEER (N-NE) AND GO 0.2 MILES TO A CALICHE RD. TO THE LEFT. TURN LEFT (N-NW) AND GO 0.1 MILES AND NORTH 0.1 MILES TO THIS LOCATION ON THE LEFT.



**ARCH PETROLEUM, INC.**

M.K. STEWART #11 LOCATED 1200' FROM THE SOUTH LINE AND 1200' FROM THE EAST LINE OF SECTION 28, TOWNSHIP 23 SOUTH, RANGE 37 EAST, LEA COUNTY, NEW MEXICO

Survey Date: 03/30/04	Sheet 1 of 1 Sheets
W.O. Number: 04.11.0379	DRAWN BY: A.W.B
Date: 04/05/04	DISK: CD#10
04.11.0379	Scale: 1"=100'



PROVIDING SURVEYING SERVICES  
SINCE 1948  
**JOHN WEST SURVEYING COMPANY**  
412 N. DAL PASO  
HOBBS, N.M. 88240  
(505) 393-3117

DISTRICT I  
P.O. Box 1980, Hobbs, NM 88241-1980

State of New Mexico  
Energy, Minerals and Natural Resources Department

Form C-102  
Revised February 10, 1994  
Submit to Appropriate District Office  
State Lease - 4 Copies  
Fee Lease - 3 Copies

DISTRICT II  
P.O. Drawer DD, Artesia, NM 88211-0719

OIL CONSERVATION DIVISION

P.O. Box 2088  
Santa Fe, New Mexico 87504-2088

DISTRICT III  
1000 Rio Brazos Rd., Aztec, NM 87410

DISTRICT IV  
P.O. BOX 2088, SANTA FE, N.M. 87504-2088

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number		Pool Code	Pool Name
Property Code	Property Name M.K. STEWART		Well Number 11
OGRID No.	Operator Name ARCH PETROLEUM, INC.		Elevation 3309'

Surface Location

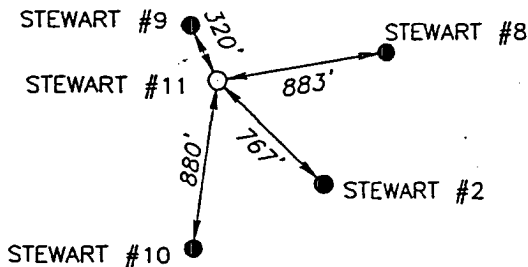
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
P	28	23-S	37-E		1200	SOUTH	1200	EAST	LEA

Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED  
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION



OPERATOR CERTIFICATION

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

Signature

Printed Name

Title

Date

SURVEYOR CERTIFICATION

I hereby certify that the well location shown  
on this plat was plotted from field notes of  
actual surveys made by me or under my  
supervision, and that the same is true and  
correct to the best of my belief.

March 30, 2004

Date Surveyed

A.W.B

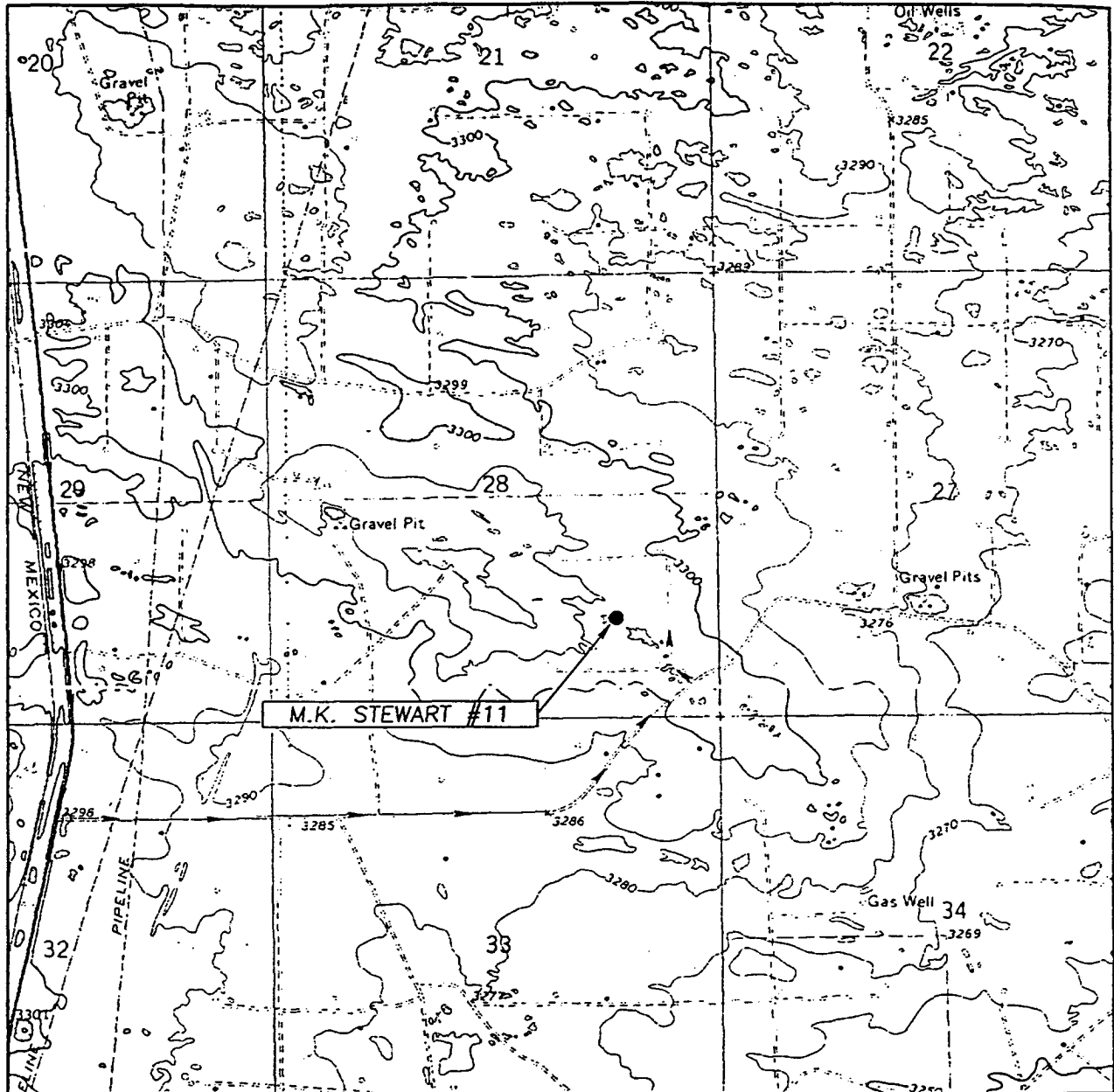
Signature & Seal of  
Professional Surveyor

04.11.0379

Certificate No. GARY EIDSON

12641

# LOCATION VERIFICATION MAP



SCALE: 1" = 2000'

CONTOUR INTERVAL: 10'  
RATTLESNAKE CANYON, N.M.

SEC. 28 TWP. 23-S RGE. 37-E

SURVEY N.M.P.M.

COUNTY LEA

DESCRIPTION 1200' FSL & 1200' FEL

ELEVATION 3309

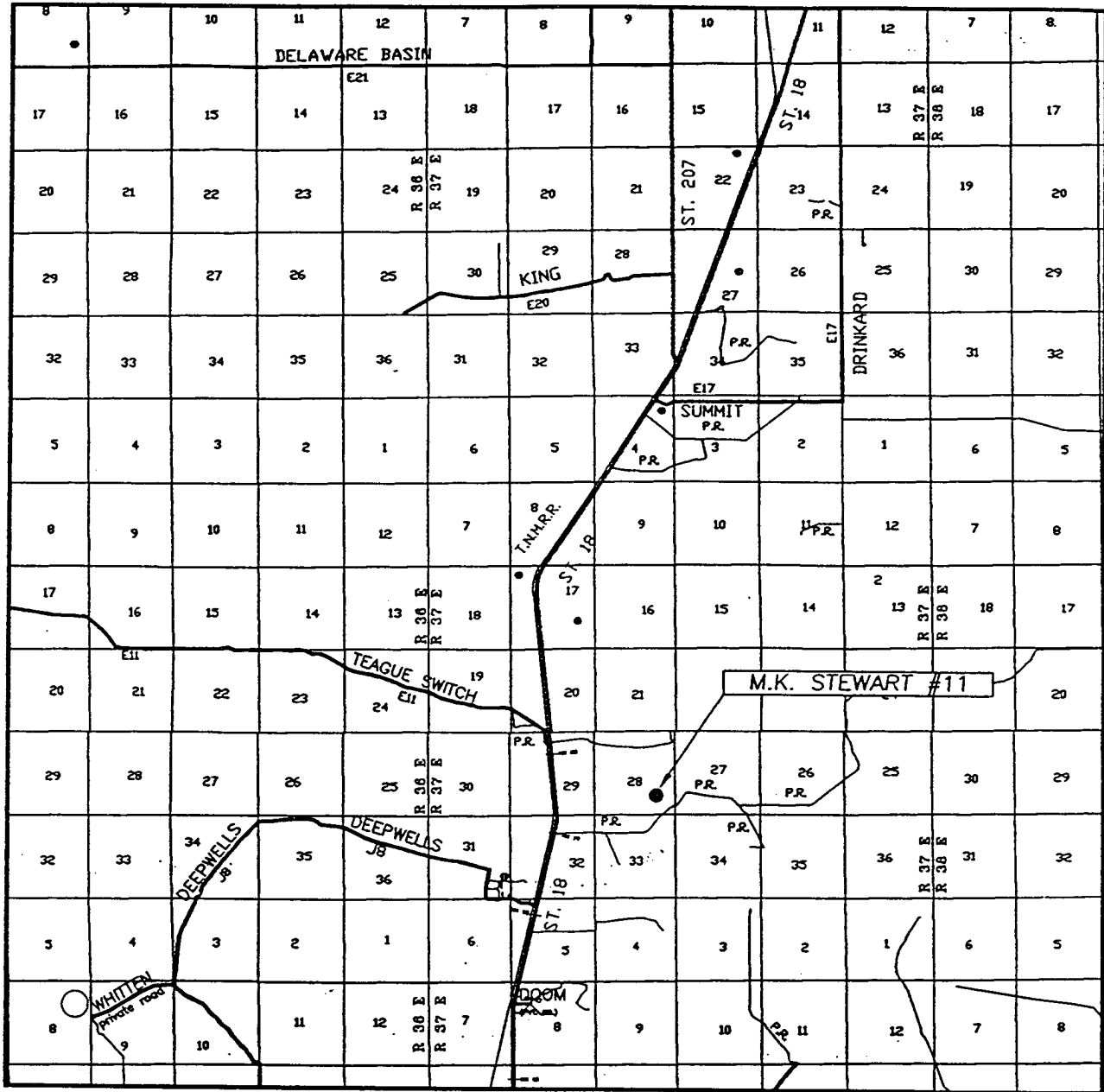
OPERATOR ARCH PETROLEUM, INC.

LEASE M.K. STEWART

U.S.G.S. TOPOGRAPHIC MAP  
RATTLESNAKE CANYON, N.M.

JOHN WEST SURVEYING  
HOBBS, NEW MEXICO  
(505) 393-3117

# VICINITY MAP



SCALE: 1" = 2 MILES

SEC. 28 TWP. 23-S RGE. 37-E

SURVEY N.M.P.M.

COUNTY LEA

DESCRIPTION 1200' FSL & 1200' FEL

ELEVATION 3309'

OPERATOR ARCH PETROLEUM, INC

LEASE M.K. STEWART

JOHN WEST SURVEYING  
HOBBS, NEW MEXICO  
(505) 393-3117

# APPLICATION TO DRILL

ARCH PETROLEUM, INC.

M. K. STEWART # 11

UNIT "P" SECTION 28

T23S-R37E LEA CO. NM

In response to questions asked under Section II of Bulletin NTL-6 the following information on the above well is provided for your consideration.

1. Location: 1200' FSL & 1200' FEL SECTION 28 T23S-R37E LEA CO. NM
2. Elevation above Sea Level: 3309' GR.
3. Geologic name of surface formation: Quaternary Aeolian Deposits.
4. Drilling tools and associated equipment: Conventional rotary drilling rig using drilling mud as a circulating medium for solids removal from hole.
5. Proposed drilling depth: 6700'
6. Estimated tops of geological markers:

Rustler Anhydrite	1078'	San Andres	3840'
Yates	2588'	Paddock	4940'
7 Rivers	2837'	Blainebry	5350'
Grayburg	3600'	Drinkard	6160'
7. Possible mineral bearing formations:

Queen	Oil	Blainebry	Oil
Grayburg	Oil	Drinkard	Oil
8. Casing program:

Hole size	Interval	OD of casing	Weight	Thread	Collar	Grade
25"	0-40	20"	NA	NA	NA	Conductor
12 1/4"	0-1100'	8 5/8"	32#	8-R	ST&C	J-55
7 7/8"	0-6700'	4 1/2"	11.6#	8-R	ST&C	J-55

# APPLICATION TO DRILL

ARCH PETROLEUM, INC.  
M. K. STEWART # 11  
UNIT "P" SECTION 28  
T23S-R37E LEA CO. NM

## 9. CASING CEMENTING & SETTING DEPTH:

20"	Conductor	Set 40' of 20" conductor pipe and cement to surface with Redi-mix.
8 5/8"	Surface	Set 1100' of 8 5/8" 32# J-55 ST&C casing. Cement with 650 Sx. of Class "C" cement + 1/4# Flocele/SX. + 2% CaCl, circulate cement to surface.
4 1/2"	Production	Set 6700' of 4 1/2" 11.6# J-55 ST&C casing. Cement with 750 Sx. of Class "C" cement + additives, estimate top of cement 750' from surface.

10. PRESSURE CONTROL EQUIPMENT: Exhibit "E" shows a 900 series 3000 PSI working pressure B.O.P. consisting of an annular bag type preventor, middle blind rams, and bottom pipe rams. The B.O.P. will be nipped up on the 8 5/8" casing and tested to API specifications. The B.O.P. will be operated at least once each 24 Hr. period and the blind rams will be operated when the drill pipe is out of on trips. Full opening stabbing valve and upper kelly cock will be available in case if needed. Exhibit "E-1" shows a hydraulically operated closing unit and a 3" 3000 PSI choke manifold with adjustable chokes. No abnormal pressures or temperatures are expected while drilling this well. No problems in offset wells.

## 11. PROPOSED MUD CIRCULATING SYSTEM:

DEPTH	MUD WT.	VISC.	FLUID LOSS	TYPE MUD SYSTEM
40-1100'	8.4-8.7	29-34	NC	Fresh water Spud Mud add paper to control seepage.
1100-6700'	10.0-10.2	29-38	NC*	Brine water add paper to control seepage and use high viscosity sweeps to clean hole.

\* If water loss is required go to a Polymer system prior to reaching TD. This may be required to run logs and casing.

Sufficient mud materials will be kept on location at all times in order to combat lost circulation, or unexpected kicks. In order to run DST's, open hole logs, and casing, viscosity, and water loss may have to be adjusted to meet these needs.



APPLICATION TO DRILL

ARCH PETROLEUM, INC.  
M. K. STEWART # 11  
UNIT "P" SECTION 28  
T23S-R37E LEA CO. NM

12. LOGGING, CORING, AND TESTING PROGRAM:

- A. Open hole logs: Dual Laterolog, SNP, LDT, Gamma Ray, Caliper from TD back to 8 5/8" casing shoe. Run Gamma Ray, Neutron from 8 5/8" casing shoe to surface.
- B. No DST's or cores are planned at this time. Mud logger may be placed on hole at the direction of Geologist.

13. POTENTIAL HAZARDS:

No abnormal pressures or temperatures are expected. There is no known presence of H<sup>2</sup>S in this area. If H<sup>2</sup>S is encountered the operator will comply with the provisions of Onshore Oil and Gas Order No. 6. No lost circulation is expected to occur. All personnel will be familiar with all aspects of safe operation of equipment being used to drill this well. Estimated BHP 3500 PSI, and Estimated BHT 135°.

14. ANTICIPATED STARTING DATE AND DURATION OF OPERATION:

Road and location construction will begin after the BLM has approved the APD. Anticipated spud date will be as soon after BLM approval and as soon as a rig will be available. Move in operation and drilling is expected to take 15 days. If production casing is run then an additional 30 days will be needed to complete well and construct surface facilities and/or lay flowlines in order to place well on production.

15. OTHER FACETS OF OPERATIONS:

After running casing, cased hole Gamma Ray, Neutron Collar logs will be run from TD back to all possible productive zones. The TUBB/DRINKARD formation will be perforated and stimulated in order to establish production. The well will be swab tested and potentialized as an oil well.

## HYDROGEN SULFIDE DRILLING OPERATIONS PLAN

1. All Company and Contract personnel admitted on location must be trained by a qualified H<sub>2</sub>S safety instructor to the following:
  - A. Characteristics of H<sub>2</sub>S
  - B. Physical effects and hazards
  - C. Proper use of safety equipment and life support systems.
  - D. Principle and operation of H<sub>2</sub>S detectors, warning system and briefing areas.
  - E. Evacuation procedure, routes and first aid.
  - F. Proper use of 30 minute pressure demand air pack.
2. H<sub>2</sub>S Detection and Alarm Systems
  - A. H<sub>2</sub>S detectors and audio alarm system to be located at bell nipple, end of blooie line (mud pit) and on derrick floor or doghouse.
3. Windsock and/or wind streamers
  - A. Windsock at mudpit area should be high enough to be visible.
  - B. Windsock at briefing area should be high enough to be visible.
  - C. There should be a windsock at entrance to location.
4. Condition Flags and Signs
  - A. Warning sign on access road to location.
  - B. Flags to be displayed on sign at entrance to location. Green flag, normal safe condition. Yellow flag indicates potential pressure and danger. Red flag, danger, H<sub>2</sub>S present in dangerous concentration. Only emergency personnel admitted to location.
5. Well control equipment
  - A. See exhibit "E" & "E-1"
6. Communication
  - A. While working under masks chalkboards will be used for communication.
  - B. Hand signals will be used where chalk board is inappropriate.
  - C. Two way radio will be used to communicate off location in case of emergency help is required. In most cases cellular telephones will be available at most drilling foreman's trailer or living quarters.
7. Drillstem Testing
  - A. Exhausts will be watered.
  - B. Flare line will be equipped with an electric ignitor or a propane pilot light in case gas reaches the surface.
  - C. If the location is near to a dwelling a closed DST will be performed.

## SURFACE USE PLAN

ARCH PETROLEUM, INC.  
M. K. STEWART # 11  
UNIT "P" SECTION 28  
T23S-R37E LEA CO. NM

1. EXISTING ROADS & PROPOSED ROADS: Area maps; Exhibit "B" is a reproduction of a County General Hi-way Map. Exhibit "C" is a reproduction of a USGS Topographic Map, showing existing and proposed roads. All existing roads will be maintained in a condition equal to or better than current conditions. Any new roads will be constructed to BLM specifications.
  - A. Exhibit "A" shows the proposed well site as staked.
  - B. From the junction of State Hi-way 176 and State Hi-way 18 East of Eunice New Mexico go South 13 miles to the 19 mile marked, turn East follow caliche road 1 mile bear Left (Northeast) go .45 miles turn Left go 300'± bear Left go 400'± location is on the South side of road.
  - C. If flowlines and powerlines are required they will be constructed along existing R-O-W's.
2. PLANNED ACCESS ROADS: No additional roads will be required.
  - A. The access roads will be crowned and ditched to a 12' wide travel surface with a 40' Right-of-Way.
  - B. Gradient of all roads will be less than 5.00%.
  - C. If turn-outs are necessary they will be constructed.
  - D. If needed roads will be surfaced with a minimum of 4" of caliche. This material will be obtained from a local source.
  - E. Center-line for new roads will be flagged. Earth-work will be will be done as field conditions require.
  - F. Culverts will be placed in the access road if they are necessary. The roads will be constructed to utilize low water crossings for drainage as required by topography.
3. LOCATIONS OF EXISTING WELLS IN A ONE MILE RADIUS. EXHIBIT "A-1"
  - A. Water wells - none known
  - B. Disposal wells - None known
  - C. Drilling wells - None known
  - D. Producing wells - as shown on Exhibit "A-1"
  - E. Abandoned wells - As shown on Exhibit "A-1"

## SURFACE USE PLAN

ARCH PETROLEUM, INC.  
M. K. STEWART # 11  
UNIT "P" SECTION 28  
T23S-R37E LEA CO. NM

4. If on completion this well is a producer the operator will lay pipelines and construct powerlines along existing road R-O-W's or other existing R-O-W's. Possible routes of pipelines, flowlines and powerlines are shown on Exhibit "F".

5. LOCATION AND TYPE OF WATER SUPPLY:

Water will be purchased locally from a commercial source and trucked over the access roads or piped to location in flexible lines laid on top of the ground.

6. SOURCE OF CONSTRUCTION MATERIAL:

If possible construction material will be obtained from the excavation of drill site, if additional material is needed it will be obtained from a local source and transported over the access roads as shown on Exhibit "C".

7. METHODS OF HANDLING WASTE MATERIAL:

- A. Drill cuttings will be disposed of in the reserve pits.
- B. All trash, junk and other waste material will be contained in trash cages or trash bins to prevent scattering. When the job is completed all contents will be removed and disposed of in a approved sanitary land fill.
- C. Salts remaining after completion of well will be picked up by the supplier, including broken sacks.
- D. Waste water from living quarters will be drained into holes with a minium of 10'. These holes will be covered during drilling and will be back filled when the well is completed. A Porto-John will be provided for the rig crews. This equipment will be properly maintained during the drilling and completion operations and will be removed when all operations are complete.
- E. Remaining drilling fluids will be allowed to evaporate in the reserve pits until the pits are dry enough to be broken out for furthred drying. If the drilling fluids do not evaporate in a reasonable time they will be hauled off by transports to a state approve disposal site. Later pips will be broken out to speed drying. Water produced during completion will be put in reserve pits. Oil and condensate produced will be put in storage tanks and sold.

8. ANCILLARY FACILITIES:

- A. No camps or air strips will be constructed on location.

## SURFACE USE PLAN

ARCH PETROLEUM, INC.  
M. K. STEWART # 11  
UNIT "P" SECTION 28  
T23S-R37E LEA CO. NM

### 9. WELL SITE LAYOUT

- A. Exhibit "D" shows the proposed well site layout.
- B. This exhibit indicated proposed location of reserve and sump pits and living facilities.
- C. Mud pits in the active circulating system will be steel pits & the reserve pit is proposed to be unlined unless subsurface condition encountered during pit construction indicate that lining is needed for lateral containment of fluids.
- D. If needed, the reserve pit is to be lined with polyethelene. The pit liner will be 6 mils thick. Pit liner will extend a minimum 2'00" over the reserve pits dikes where the liner will be anchored down.
- E. The reserve pit will be fenced on three sides with four strands of barbed wire during drilling and completion phases. The fourth side will be fenced after all drilling operations have ceased. If the well is a producer, the reserve pit fence will be torn down. The reserve pit and those areas of the location not essential to production facilities will be reclaimed and seeded per BLM requirements.

### 10. PLANS FOR RESTORATION OF SURFACE

Rehabilitation of the location and reserve pit will start in a timely manner after all drilling operations cease. The type of reclamation will depend on whether the well is a producer or a dry hole.

However, in either event, the reserve pit will be allowed to dry properly, and fluid removed and disposed of in accordance with Article 7.B as previously noted. The pit area will then be leveled and contoured to conform to the original and surrounding area. Drainage systems, if any, will be reshaped to the original configuration with provisions made to alleviate erosion. These may need to be modified in certain circumstances to prevent inundation of the location's pad and surface facilities. After the area has been shaped and contoured, topsoil from the spoil pile will be placed over the disturbed area to the extent possible. Revegetation procedures will comply with BLM standards.

If the well is a dry hole, the pad and road area will be contoured to match the existing terrain. Topsoil will be spread to the extent possible. Revegetation will comply with BLM standards.

Should the well be a producer, the previously noted procedures will apply to those areas which are not required for production facilities.

SURFACE USE PLAN

ARCH PETROLEUM, INC.  
M. K. STEWART # 11  
UNIT "P" SECTION 28  
T23S-R37E LEA CO. NM

11. OTHER INFORMATION:

- A. Topography is relatively flat with low relief on a dunal plain with a few blowouts with loose sand. Vegetation consists of yucca, scattered shinary oak, mesquite and native grasses.
- B. The surface is used for the grazing of livestock, oil and gas production and is owned by Mr. Jimmy Doom, Stat Route, Jal, New Mexico. The minerals are owned by The U.S. Department of Interior and is administered by The Bureau of Land Management.
- C. An archaeological survey will be conducted and the results will be filed with The Bureau of Land Management Carlsbad Field office in Carlsbad NM.
- D. There are no domestic dwellings located within one mile of the location.

12. OPERATORS REPRESENTATIVE:

Before construction:

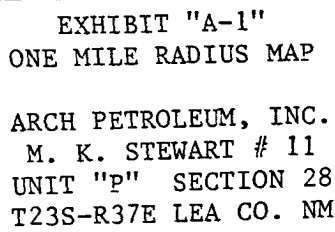
TIERRA EXPLORATION, INC.  
P.O. BOX 2188  
HOBBS, NEW MEXICO 88241  
JOE T. JANICA  
OFFICE PHONE 505-391-8503

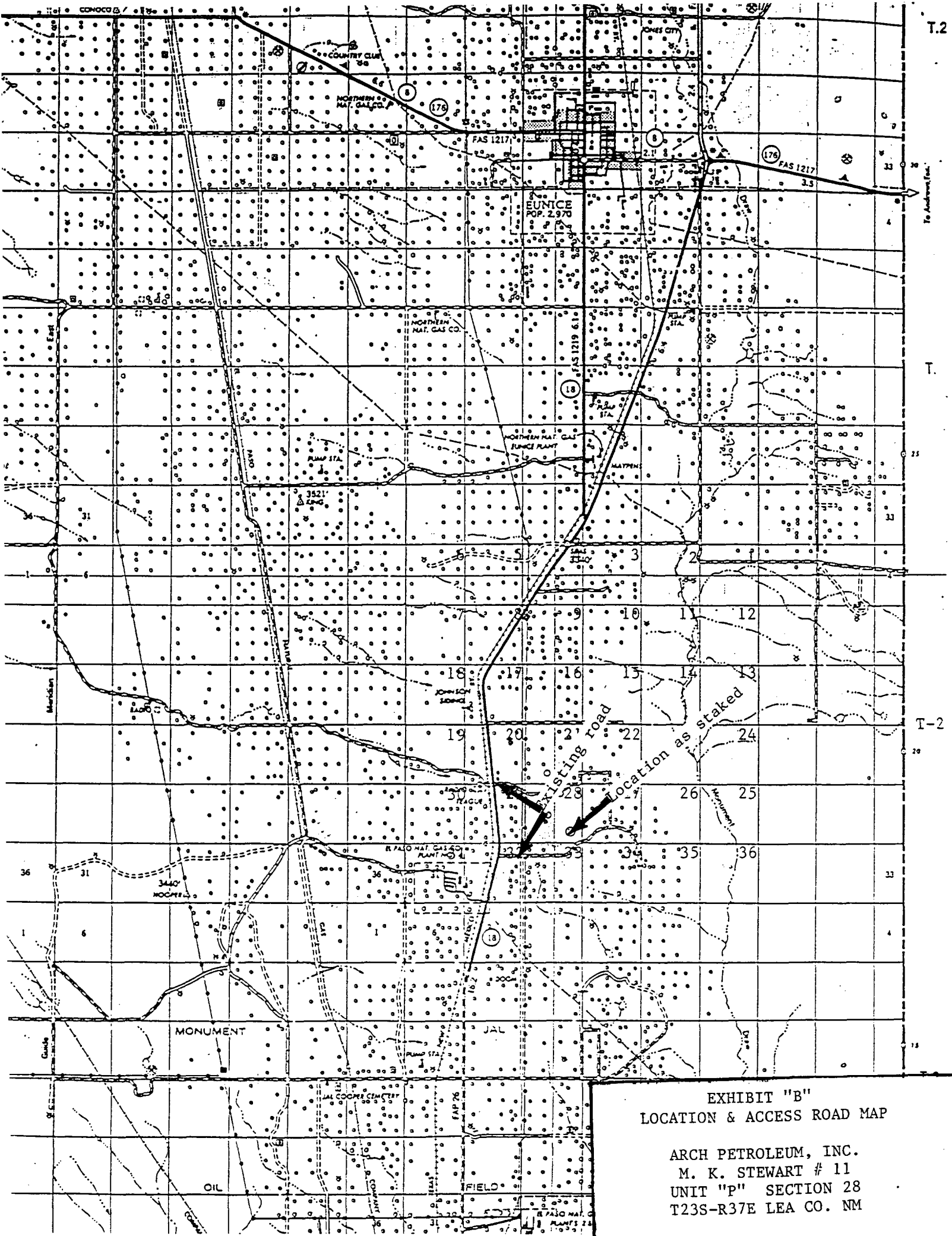
During and after construction:

ARCH PETROLEUM, INC.  
P.O. BOX 10340  
MIDLAND, TEXAS 79702-7340  
RICHARD WRIGHT  
OFFICE PHONE 915-685-8140

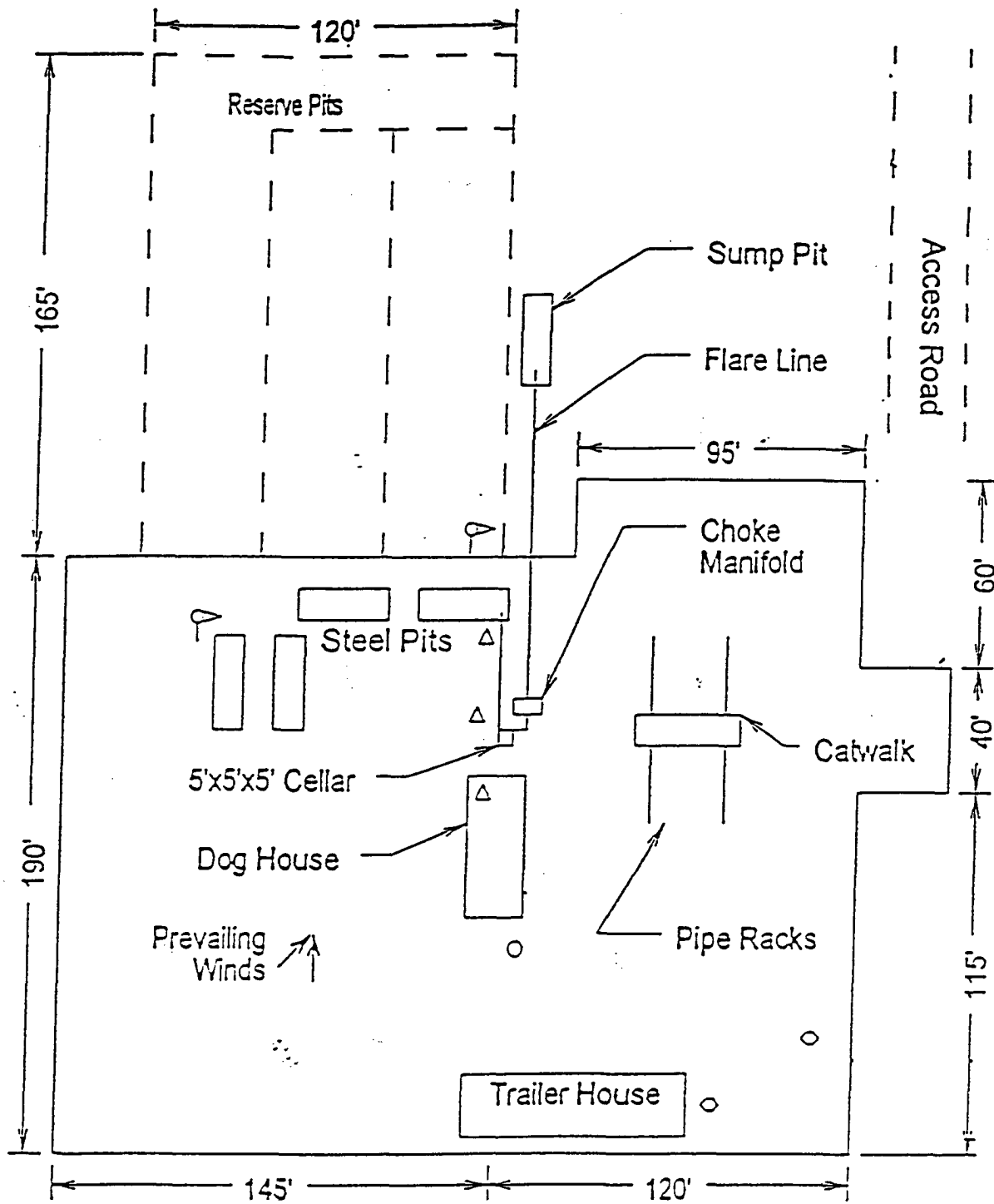
13. CERTIFICATION: I hereby certify that I or persons under my direct supervision have inspected the proposed drill site and access route, that I am familiar with the conditions which currently exist, that the statements made in this plan are to the best of my knowledge, are true and correct, and that the work associated with the operations proposed herein will be performed by ARCH PETROLEUM, INC. it's contractors/subcontractors is in the conformity with this plan and the terms and conditions under which it is approved. This statement is subject to the provision of U.S.C. 1001 for the filing of a false statement.

NAME : Joe T Janica  
DATE : 04/20/04  
TITLE : Agent





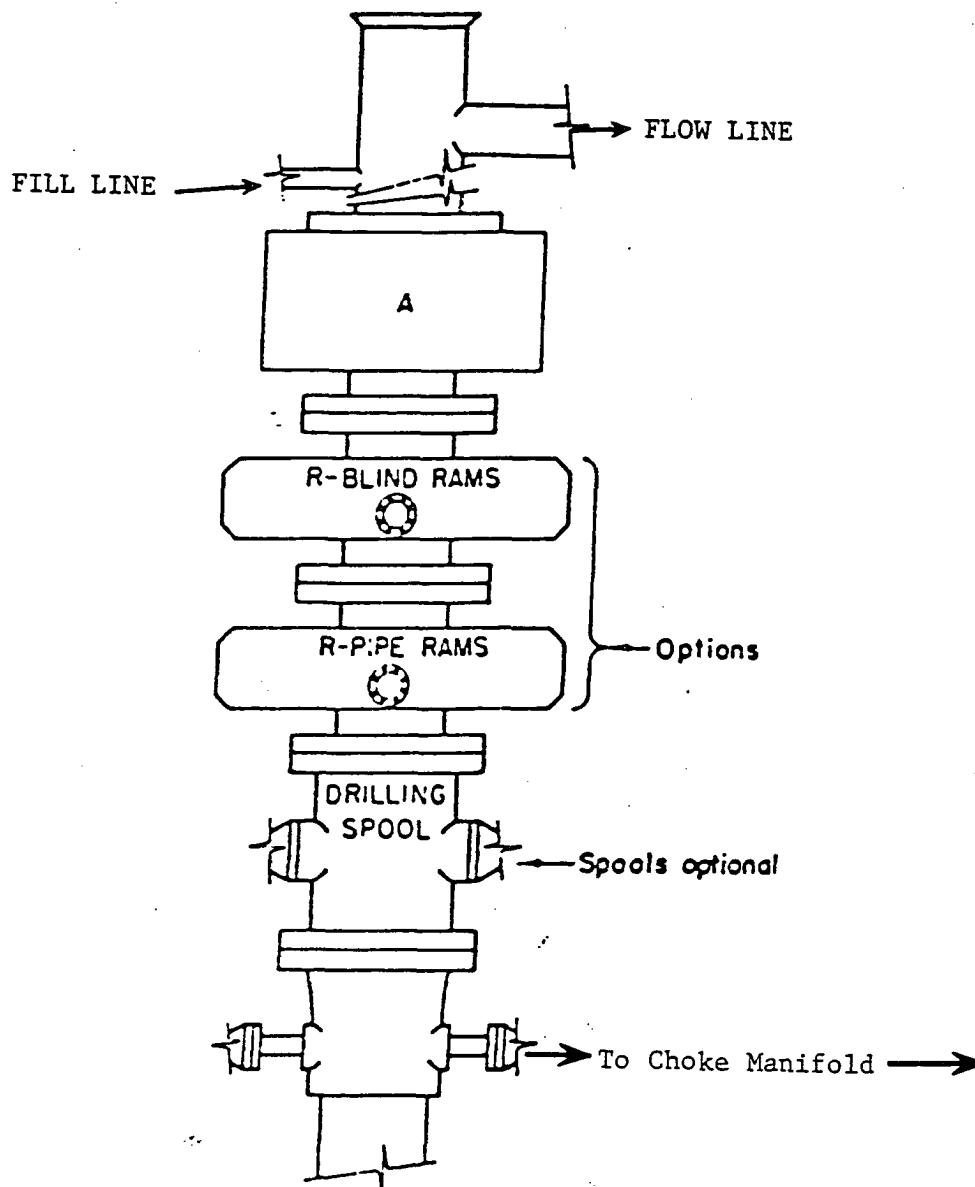




- Wind Direction Indicators (wind sock or streamers)
- △ H<sub>2</sub>S Monitors (alarms at bell nipple and shale shaker)
- Briefing Areas
- Remote BOP Closing Unit
- Sign and Condition Flags

EXHIBIT "D"  
RIG LAYOUT PLAT

ARCH PETROLEUM, INC.  
M. K. STEWART # 11  
UNIT "P" SECTION 28  
T23S-R37E LEA CO. NM

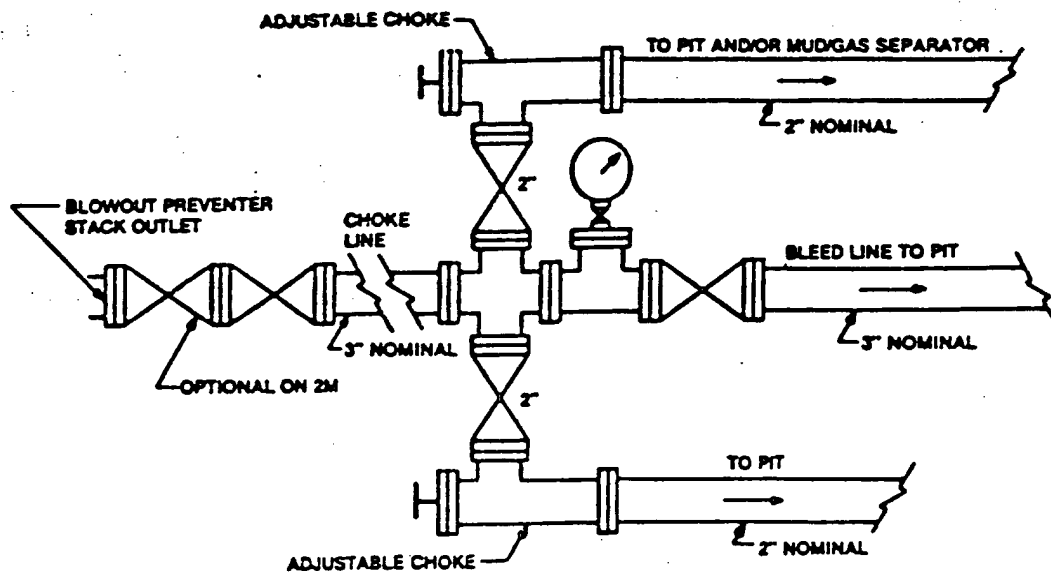


# **ARRANGEMENT SRRA**

900 Series  
3000 PSI WP

EXHIBIT "E"  
SKETCH OF B.O.P. TO BE USED ON

ARCH PERTOLEUM, INC.  
M. K. STEWART # 11  
UNIT "P" SECTION 28  
T23S-R37E LEA CO. NM



Typical choke manifold assembly for 3M WP system

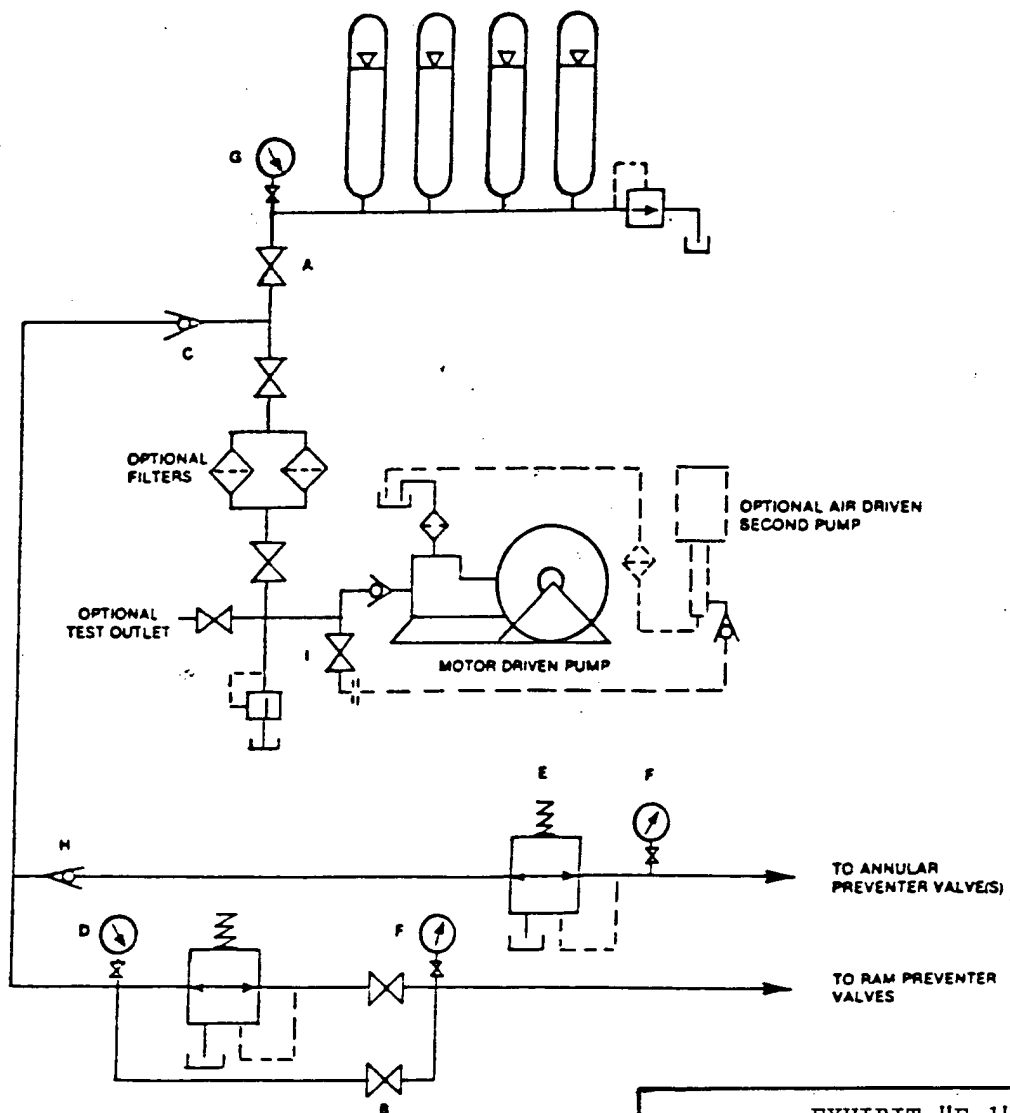


EXHIBIT "E-1"  
CHOKE MANIFOLD & CLOSING UNIT

ARCH PETROLEUM, INC.  
M. K. STEWART # 11  
UNIT "P" SECTION 28  
T23S-R37E LEA CO. NM

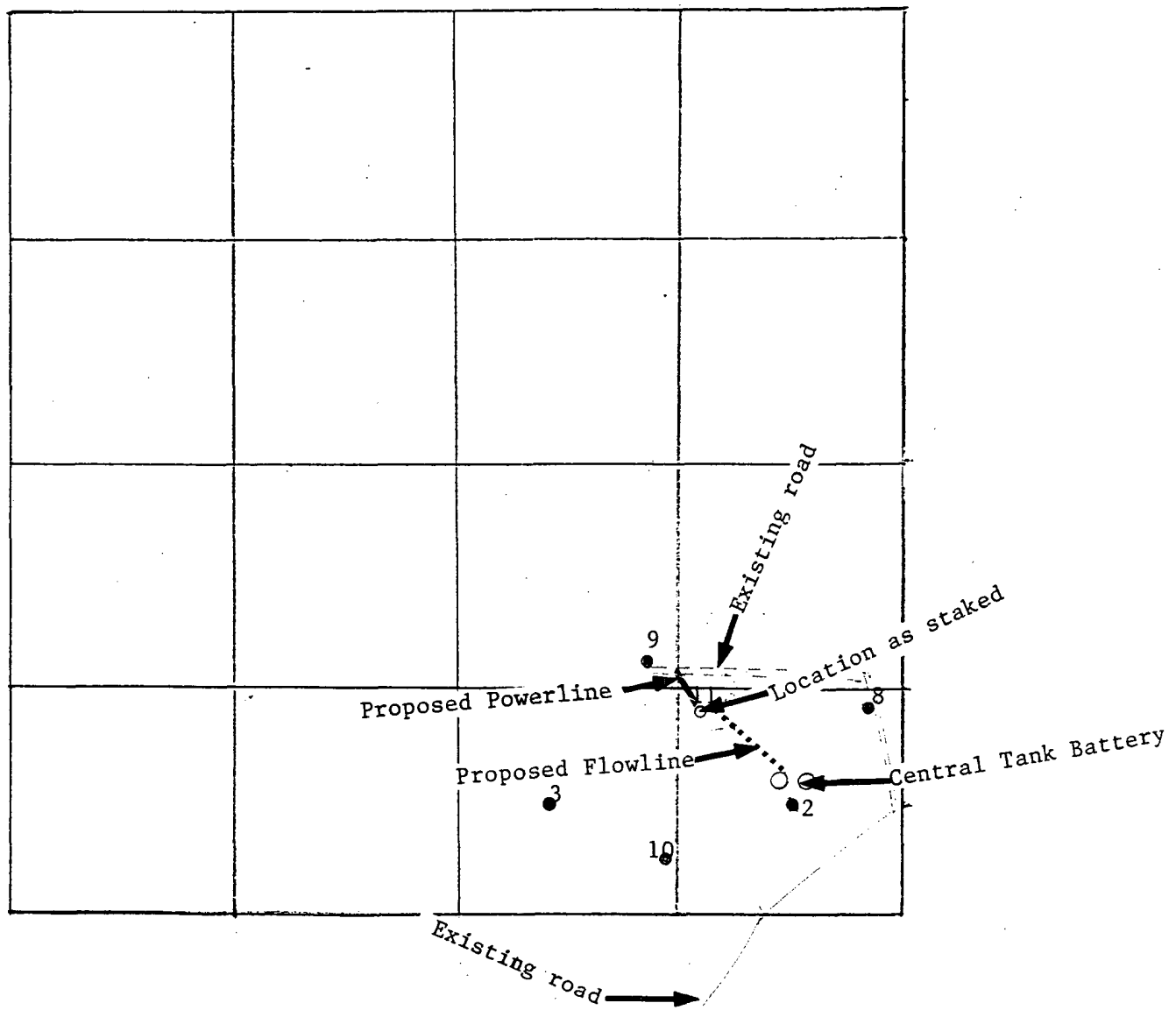


EXHIBIT "F"  
POSSIBLE ROUTE OF  
FLOWLINE & POWERLINE

ARCH PETROLEUM, INC.  
M. K. STEWART # 11  
UNIT "P" SECTION 28  
T23S-R37E LEA CO. NM

District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
1301 W. Grand Avenue, Artesia, NM 88210  
District III  
1000 Rio Brazos Road, Aztec, NM 87410  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy Minerals and Natural Resources

Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

Form C-14  
March 12, 2004

For drilling and production facilities, submit to appropriate NMOCD District Office.  
For downstream facilities, submit to Santa Fe office

### Pit or Below-Grade Tank Registration or Closure

Is pit or below-grade tank covered by a "general plan"? Yes ☐ No ☐

Type of action: Registration of a pit or below-grade tank ☐ Closure of a pit or below-grade tank ☐

Operator: Arch Petroleum Inc Telephone: 432-685-8100 e-mail address: wrightc@pogoproducing.com  
Address: P. O. Box 10340, Midland, TX 79702-7340  
Facility or well name: M. K. Stewart #11 API #: 30-025-36923 U/L or Q/L or Q/L NE/SE Sec 28 T23 R 37  
County: Lea Latitude 32 16 16.85N Longitude 103 09 45.92W RAD: 1927 ☐ 1983 ☐ Surface Owner Federal ☒ State ☐ Private ☐ Indian ☐

<b>Pit</b> Type: Drilling <input checked="" type="checkbox"/> Production <input type="checkbox"/> Disposal <input type="checkbox"/> Workover <input type="checkbox"/> Emergency <input type="checkbox"/> Lined <input checked="" type="checkbox"/> Unlined <input type="checkbox"/> Liner type: Synthetic <input type="checkbox"/> Thickness 12 mil Clay <input type="checkbox"/> Volume 8400 bbl		<b>Below-grade tank</b> Volume: _____ bbl Type of fluid: _____ Construction material: _____ Double-walled, with leak detection? Yes <input type="checkbox"/> If not, explain why not. _____	
Depth to ground water (vertical distance from bottom of pit to seasonal high water elevation of ground water.)	Less than 50 feet 50 feet or more, but less than 100 feet 100 feet or more	X   	(20 points) (10 points) 10 ( 0 points)
Wellhead protection area: (Less than 200 feet from a private domestic water source, or less than 1000 feet from all other water sources.)	Yes No	X  	(20 points) ( 0 points) 0
Distance to surface water: (horizontal distance to all wetlands, playas, irrigation canals, ditches, and perennial and ephemeral watercourses.)	Less than 200 feet 200 feet or more, but less than 1000 feet 1000 feet or more	X  	(20 points) (10 points) 0 ( 0 points)
Ranking Score (Total Points)			

If this is a pit closure: (1) attach a diagram of the facility showing the pit's relationship to other equipment and tanks. (2) Indicate disposal location:

onsite ☐ offsite ☐ If offsite, name of facility \_\_\_\_\_ (3) Attach a general description of remedial action taken including remediation start date and end date. (4) Groundwater encountered: No ☐ Yes ☐ If yes, show depth below ground surface \_\_\_\_\_ ft. and attach sample results. (5) Attach soil sample results and a diagram of sample locations and excavations.

I hereby certify that the information above is true and complete to the best of my knowledge and belief. I further certify that the above-described pit or below-grade tank has been/will be constructed or closed according to NMOCD guidelines ☒, a general permit ☐, or an (attached) alternative OCD-approved plan ☐.

Date: 05/18/04

Printed Name/Title Cathy Wright, Sr Oper Tech

Signature

*Cathy Wright*

Your certification and NMOCD approval of this application/closure does not relieve the operator of liability should the contents of the pit or tank contaminate ground water or otherwise endanger public health or the environment. Nor does it relieve the operator of its responsibility for compliance with any other federal, state, or local laws and/or regulations.

Approval:

Date:

6/9/04

Printed Name/Title

Signature

*Paul J. [Signature]*

Water Resources

Data Category:

Site Information

Geographic Area:

New Mexico

go

# Site Map for New Mexico

USGS 321513103101501 23S.37E.33.323241

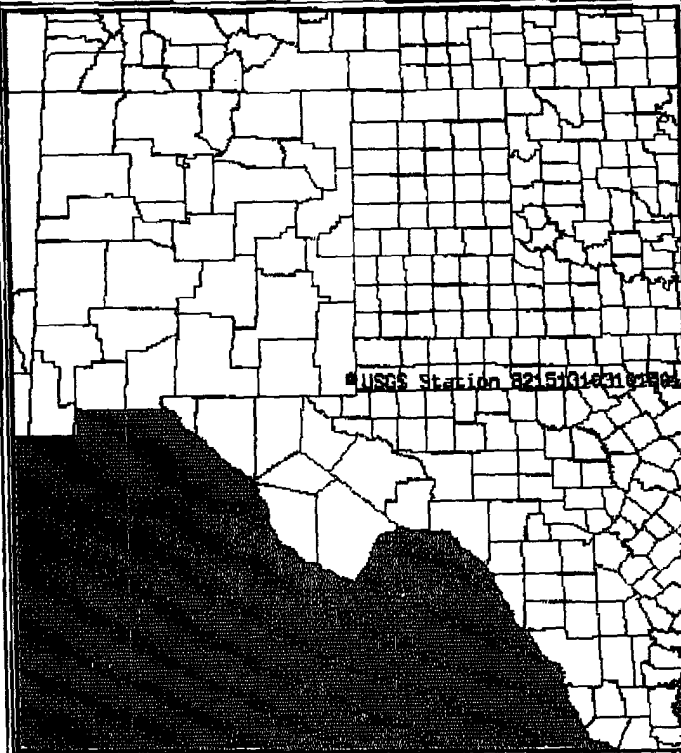
Available data for this site

Station site map

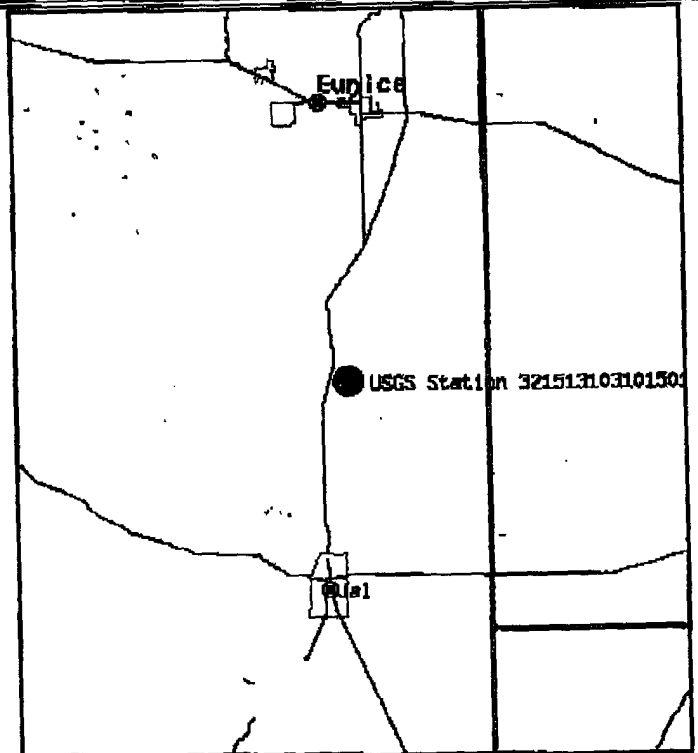
GO

Lea County, New Mexico  
 Hydrologic Unit Code 13070007  
 Latitude 32°15'13", Longitude 103°10'15" NAD27  
 Gage datum 3,275.20 feet above sea level NGVD29

Location of the site in New Mexico.



Site map.



ZOOM IN 2X, 4X, 6X, 8X, or ZOOM OUT 2X, 4X, 6X, 8X.

Maps are generated by US Census Bureau TIGER Mapping Service.

Questions about data [gs-w-nm\\_NWISWeb\\_Data\\_Inquiries@usgs.gov](mailto:gs-w-nm_NWISWeb_Data_Inquiries@usgs.gov)Feedback on this website [gs-w-nm\\_NWISWeb\\_Maintainer@usgs.gov](mailto:gs-w-nm_NWISWeb_Maintainer@usgs.gov)

NWIS Site Inventory for New Mexico: Site Map

<http://waterdata.usgs.gov/nm/nwis/nwismap?>

[Top](#)  
[Explanation of terms](#)

Retrieved on 2004-05-18 15:10:18 EDT

Department of the Interior, U.S. Geological Survey

USGS Water Resources of New Mexico

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0.66 0.66 nadww01

Water Resources

Data Category:

Ground Water

Geographic Area:

New Mexico

go

# Ground-water levels for New Mexico

Search Results -- 1 sites found

Search Criteria

site\_no list = • 321513103101501

Save file of selected sites to local disk for future upload

USGS 321513103101501 23S.37E.33.323241

Available data for this site

Ground-water: Levels

GO

Lea County, New Mexico

Hydrologic Unit Code 13070007

Latitude 32°15'13", Longitude 103°10'15" NAD27

Gage datum 3,275.20 feet above sea level NGVD29

The depth of the well is 140 feet below land surface.

This well is completed in ALLUVIUM, BOLSON DEPOSITS AND OTHER SURFACE DEPOSITS (110AVMB)

Output formats

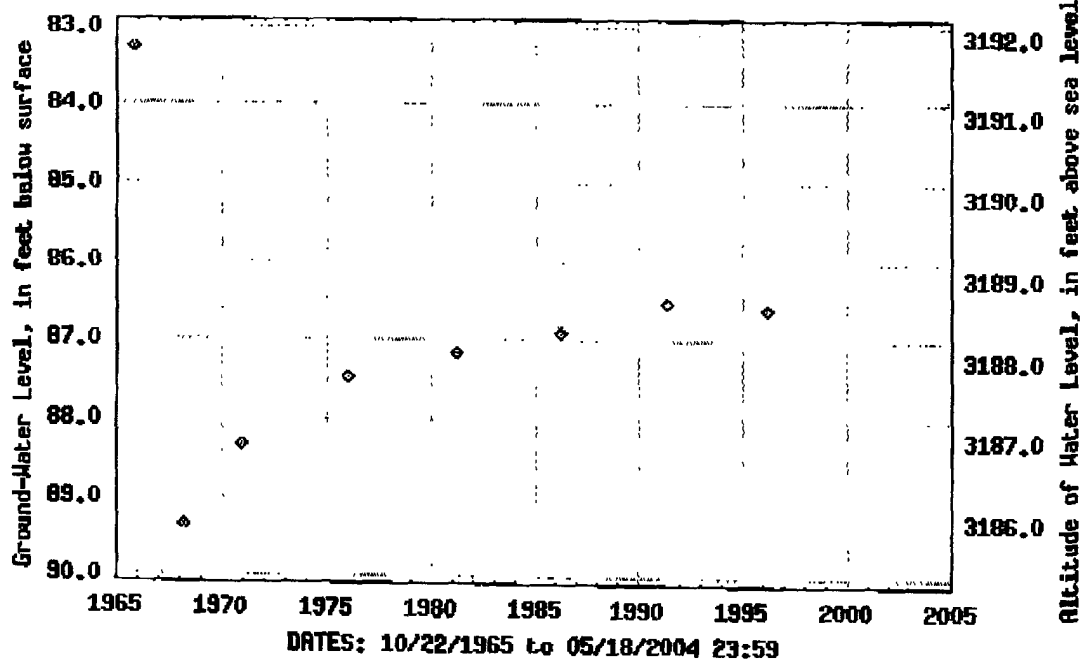
Table of data

Tab-separated data

Graph of data

Reselect period

USGS 321513103101501 23S.37E.33.323241



Breaks in the plot represent a gap of at least one calendar year between two consecutive points.

Download a presentation-quality graph

Questions about data [gs-w-nm\\_NWISWeb\\_Data\\_Inquiries@usgs.gov](mailto:gs-w-nm_NWISWeb_Data_Inquiries@usgs.gov)Feedback on this website [gs-w-nm\\_NWISWeb\\_Maintainer@usgs.gov](mailto:gs-w-nm_NWISWeb_Maintainer@usgs.gov)

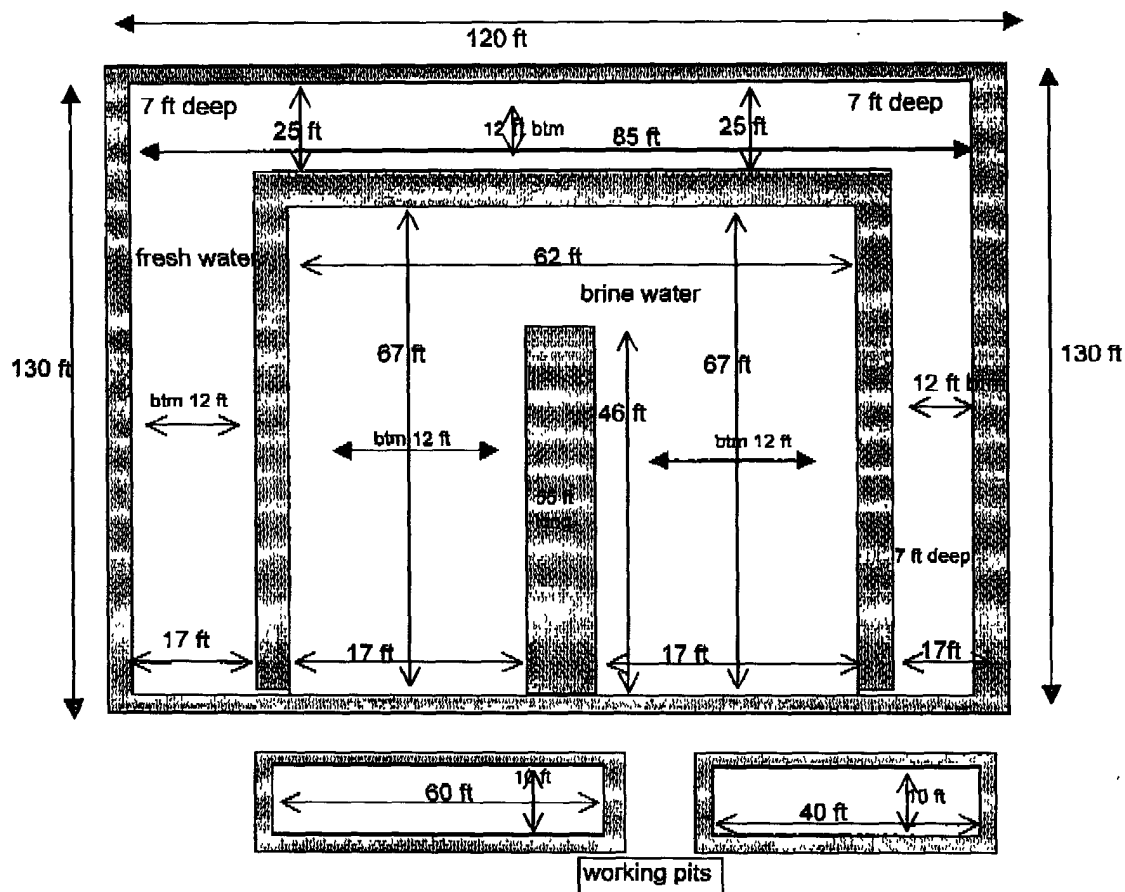
Ground water for New Mexico: Water Levels

<http://waterdata.usgs.gov/nm/nwis/gwlevels?>
[Top](#)  
[Explanation of terms](#)

# ARCH PETROLEUM

## M. K. Stewart #11

1200 FSL & 1200 FEL, SEC 28, T23S, R37E, LEA COUNTY, NEW MEXICO  
NAD 27 LAT 32° 16' 16.85" & LONG 103° 09' 45.92"



### PIT NOTES:

Fresh Water portioned lined with 12 mil re-enforced plastic

Brine Water portion lined with 12 mil re-enforced plastic

PIT WALLS ARE 6' TO 8' WIDE

PIT IS 7' DEEP FROM SURFACE

PIT WALLS ARE AT GRD LEVEL

CALICHE FROM PITS USED TO MAKE PAD

Fresh Water volume at 2' below ground level =  $\pm$  4600 bbls

Brine Water volume at 2' below ground level =  $\pm$  2900 bbls

Nearest fresh water well is more than 1/2 mile away

Nearest body of water is more than 1/2 mile away

Ground water depth is in excess of 50 ft.

7500 bbls plus working pits equals approx 8400 bbls