

**FILE NOTATIONS**

Entered in MID File ..... ✓  
Information Pinned ..... ✓  
Card Indexed ..... ✓

Checked by Chief .....  
Approval Letter .....  
Disapproval Letter .....

**COMPLETION DATA:**

Date Well Completed .....  
..... TA.....  
..... OS..... PA.....

Location Inspected .....  
Bonded .....  
State or Fee Land .....

**LOGS FILED**

Driller's Log.....  
Electric Logs (No.) .....  
E..... I..... Dual I Lat..... GR-N..... Micro.....  
BHC Sonic GR..... Lat..... Mi-L.....  
CCLog..... CCLog..... Others.....

PALMER OIL & GAS COMPANY

P.O. Box 2564  
BILLINGS, MONTANA 59103  
(406) 248-3151

July 26, 1979



Division of Oil, Gas & Mining  
1588 West, North Temple  
Salt Lake City, Utah 84116

Gentlemen:

Enclosed please find Application to Drill covering our #29-1 Federal well in Grand County, Utah.

Your early approval will be appreciated.

Yours very truly,

PALMER OIL & GAS COMPANY

A handwritten signature in cursive script that reads "Grace E. Brown".

Grace E. Brown  
Drilling Department

gb

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  
 Palmer Oil & Gas Company

3. ADDRESS OF OPERATOR  
 P. O. Box 2564, Billings, Montana 59103

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)\*  
 At surface 501' FNL, 554' FEL  
 At proposed prod. zone Same

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE\*  
 Approximately 16 miles Northwest of Mack, Colorado

15. DISTANCE FROM PROPOSED\* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any)  
 501'

16. NO. OF ACRES IN LEASE  
 1916.04

17. NO. OF ACRES ASSIGNED TO THIS WELL  
 320

18. DISTANCE FROM PROPOSED LOCATION\* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.  
 None

19. PROPOSED DEPTH  
 3671 Morrison

20. ROTARY OR CABLE TOOLS  
 Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.)  
 5182 G.L., 5193' K.B.

22. APPROX. DATE WORK WILL START\*  
 March 20, 1979

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     | 20#, K-55       | 200'          | 150 sacks          |
| 7-7/8"       | 4 1/2" new     | 10.5#, K-55     | 3671'         | 225 sacks          |

- Surface formation is the Mancos Shale.
- Anticipated geologic markers are: Frontier - 2701, Dakota - 3091, Morrison - 3251.
- Gas is anticipated in the Dakota and Morrison. No water, oil, or other minerals are anticipated.
- Proposed casing program: See item No. 23 above.
- Pressure control equipment: See attached well control plan and schematic of drilling contractors BOP stack. BOP's will be tested before drilling out from under surface casing and will be checked daily.
- Air or mist drilling will be used to drill the surface hole unless water is encountered. If water is encountered approximately 300 bbls. of gel type mud will be used. The well will be air drilled from under surface casing to T.D.
- Auxiliary Equipment: See well control plan.
- The logging program will consist of an IES log from TD to the base of surface casing, and GR-FDC-SNP or CNL logs from TD to above the Frontier. No cores or DST's are planned.
- No abnormal pressures or temperatures anticipated. No poisonous gas anticipated.

(Continued on next 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 James G. Routson TITLE Petroleum Engineer DATE Dec 29, 1978  
 (This space for Federal or State office use)

PERMIT NO. \_\_\_\_\_ APPROVAL DATE \_\_\_\_\_

APPROVED BY (Orig. Sgd.) R. A. Henricks TITLE ACTING DISTRICT ENGINEER DATE JUL 31 1979  
 CONDITIONS OF APPROVAL, IF ANY:

CONDITIONS OF APPROVAL ATTACHED TO OPERATOR'S COPY

NECESSARY FLARING OF GAS DURING DRILLING AND COMPLETION APPROVED SUBJECT TO ROYALTY (NTL-4)

NOTICE OF APPROVAL

STATE OF G

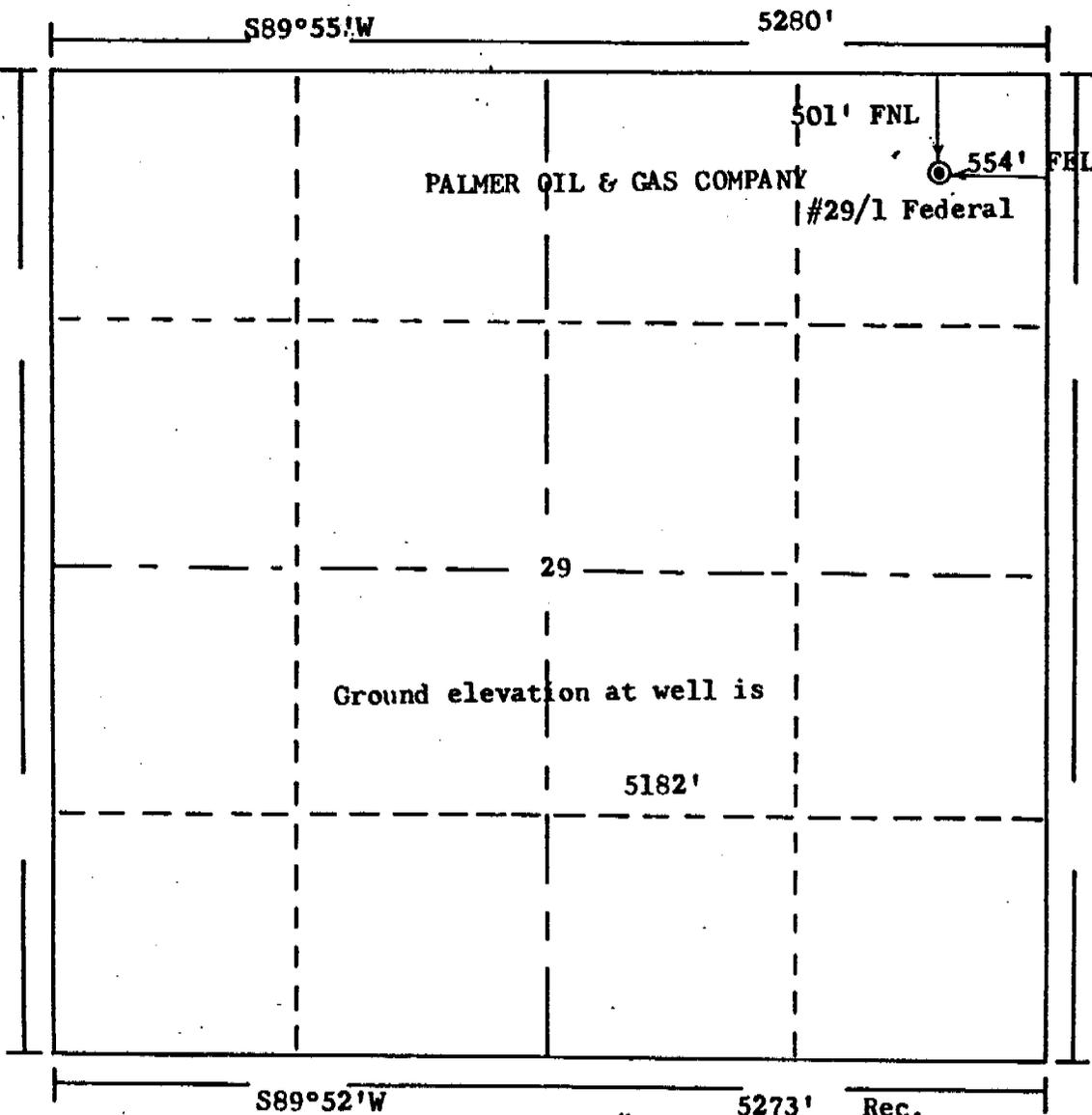
APPLICATION FOR PERMIT TO DRILL ( ) ( )

10. Anticipated spud date is ~~March~~<sup>AUGUST</sup> 20, 1979 depending on rig availability, and weather. Completion operations should commence within 30 days of rig release.
11. Survey plats enclosed.
12. The gas is dedicated to Southwest Gas Corporation.
13. The spacing unit is the east half of section 29.
14. Designation of operator forms enclosed.



PLAT #1

R. 25 E



T. 17 S

NO°03'W  
5280'  
Rec.

Scale... 1" = 1000'

Powers Elevation Company, Inc. of Denver, Colorado  
 has in accordance with a request from Bill Whitman  
 for PALMER OIL & GAS COMPANY  
 determined the location of #29/1 Federal  
 to be 554' FEL & 501' FNL Section 29 Township 17 S  
 Range 25 E of the Salt Lake Base & Meridian Utah  
 Grand County, Utah

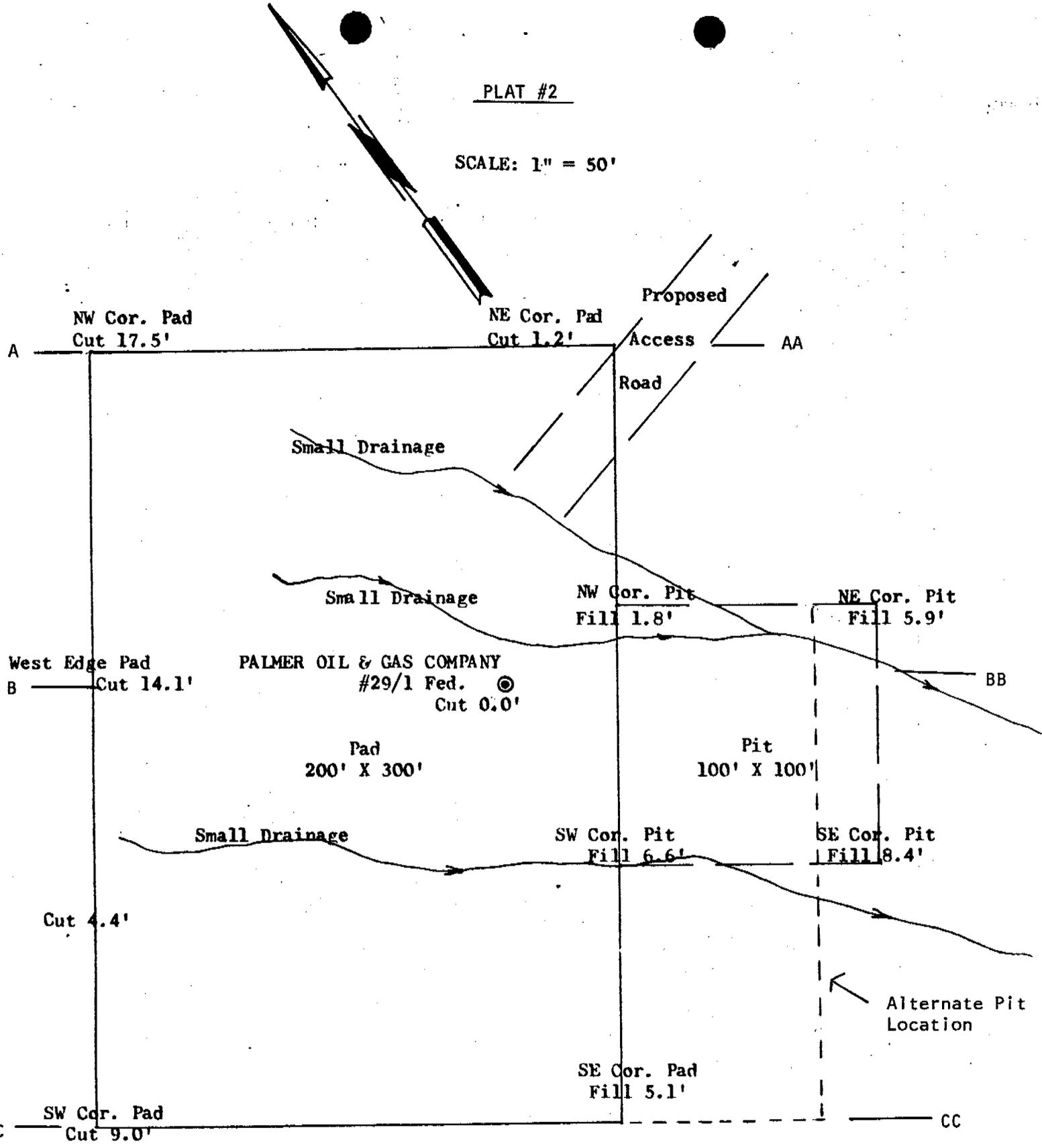
I hereby certify that this plat is an  
 accurate representation of a correct  
 survey showing the location of  
 #29/1 Federal

Date: 9/27/78

*T. Nelson*  
 Licensed Land Surveyor No. IS 2711  
 State of Utah

PLAT #2

SCALE: 1" = 50'



PALMER OIL & GAS COMPANY  
 #29/1 Federal  
 554' FEL & 501' FNL  
 Sec. 29, T17S, R25E  
 Grand, Utah

BY: Mike Zancanella  
 POWERS ELEVATION COMPANY, INC.  
 Grand Junction, Colorado  
 303/243/8988

VICINITY MAP #3

GRAND

Grand Junction

MESA

GRAND MESA NATIONAL FOREST

DELTA

Delta

Montrose

MONTROSE

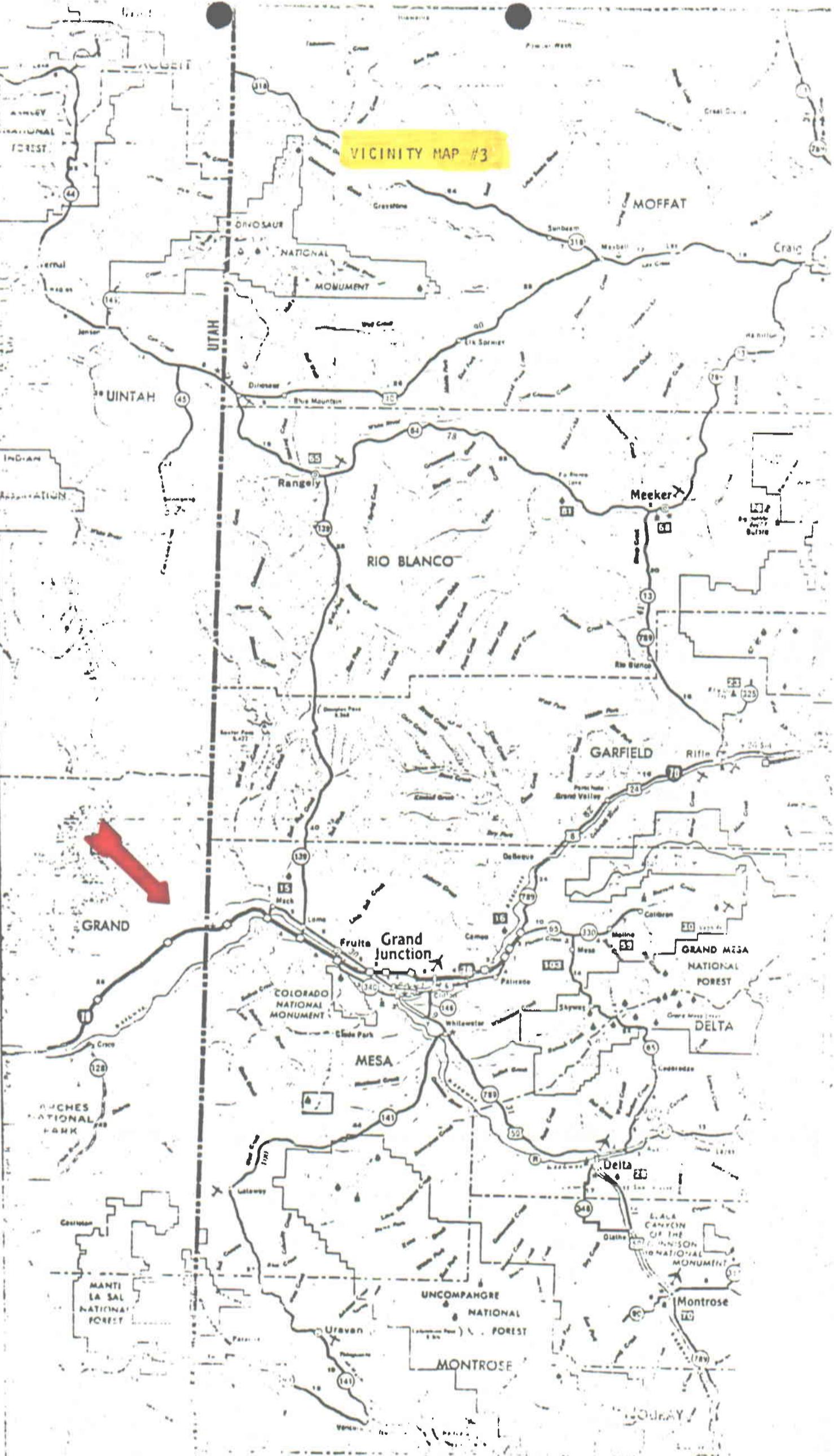
Ouray

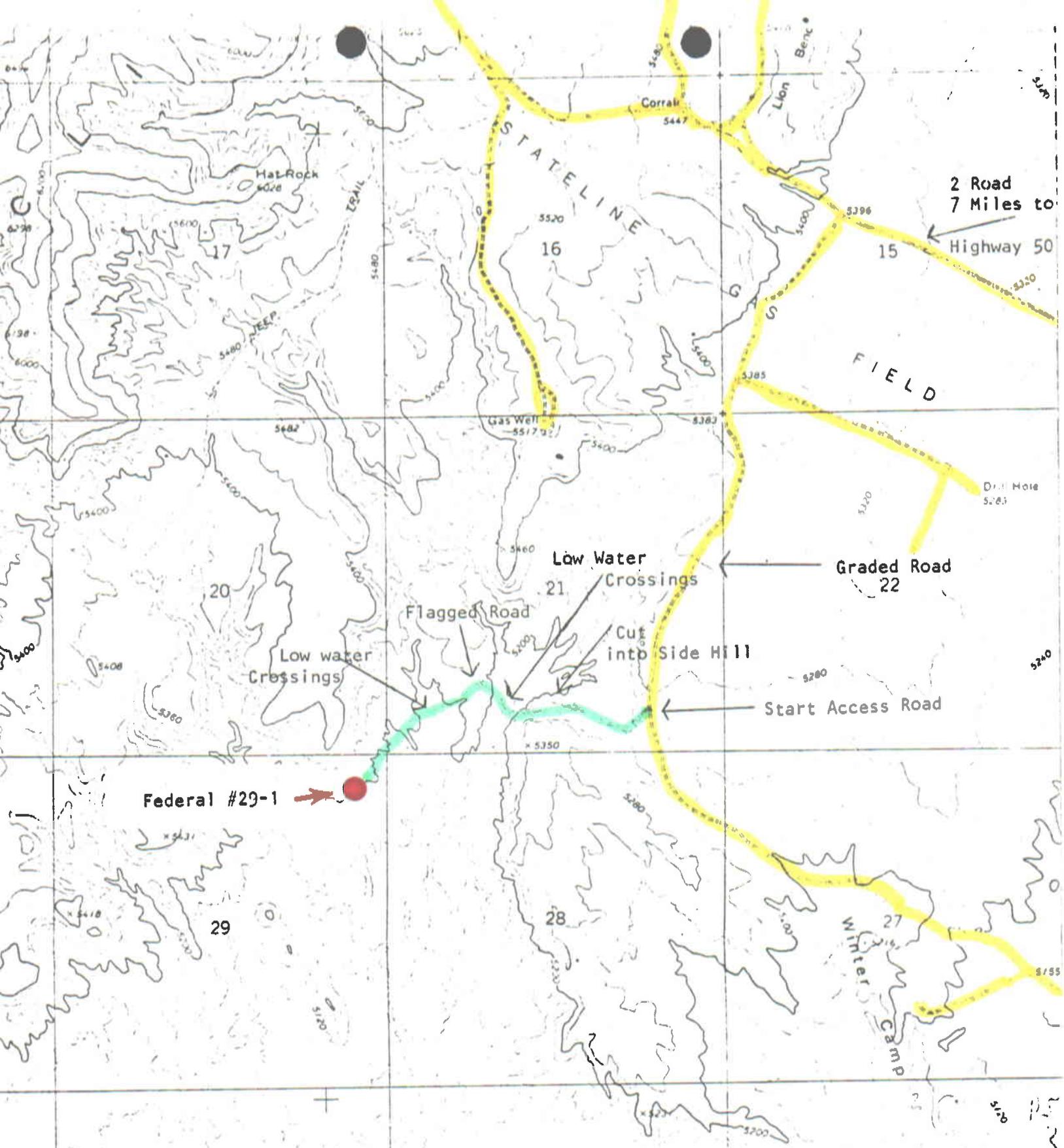
UINTAH

RIO BLANCO

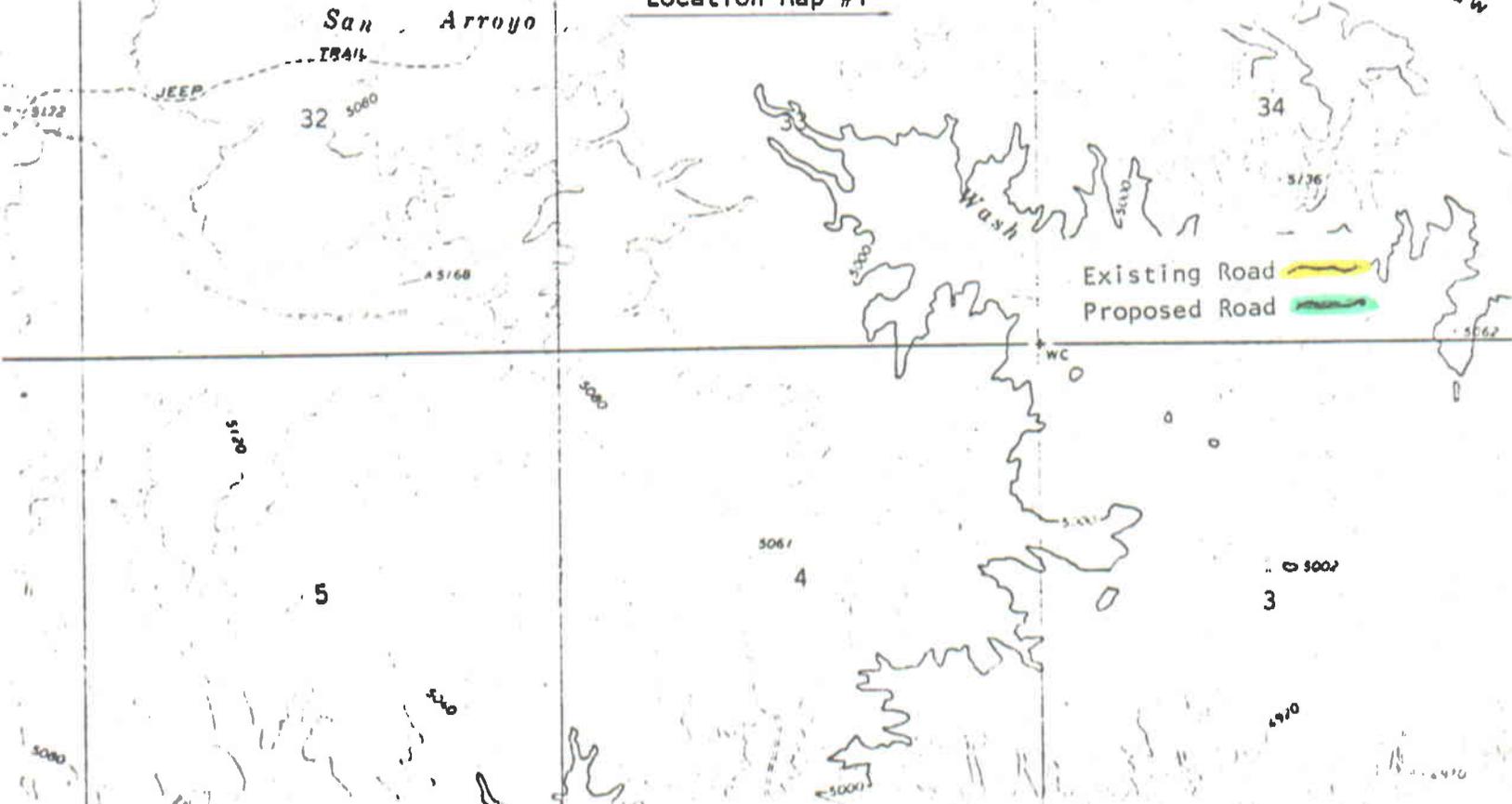
GARFIELD

MOFFAT



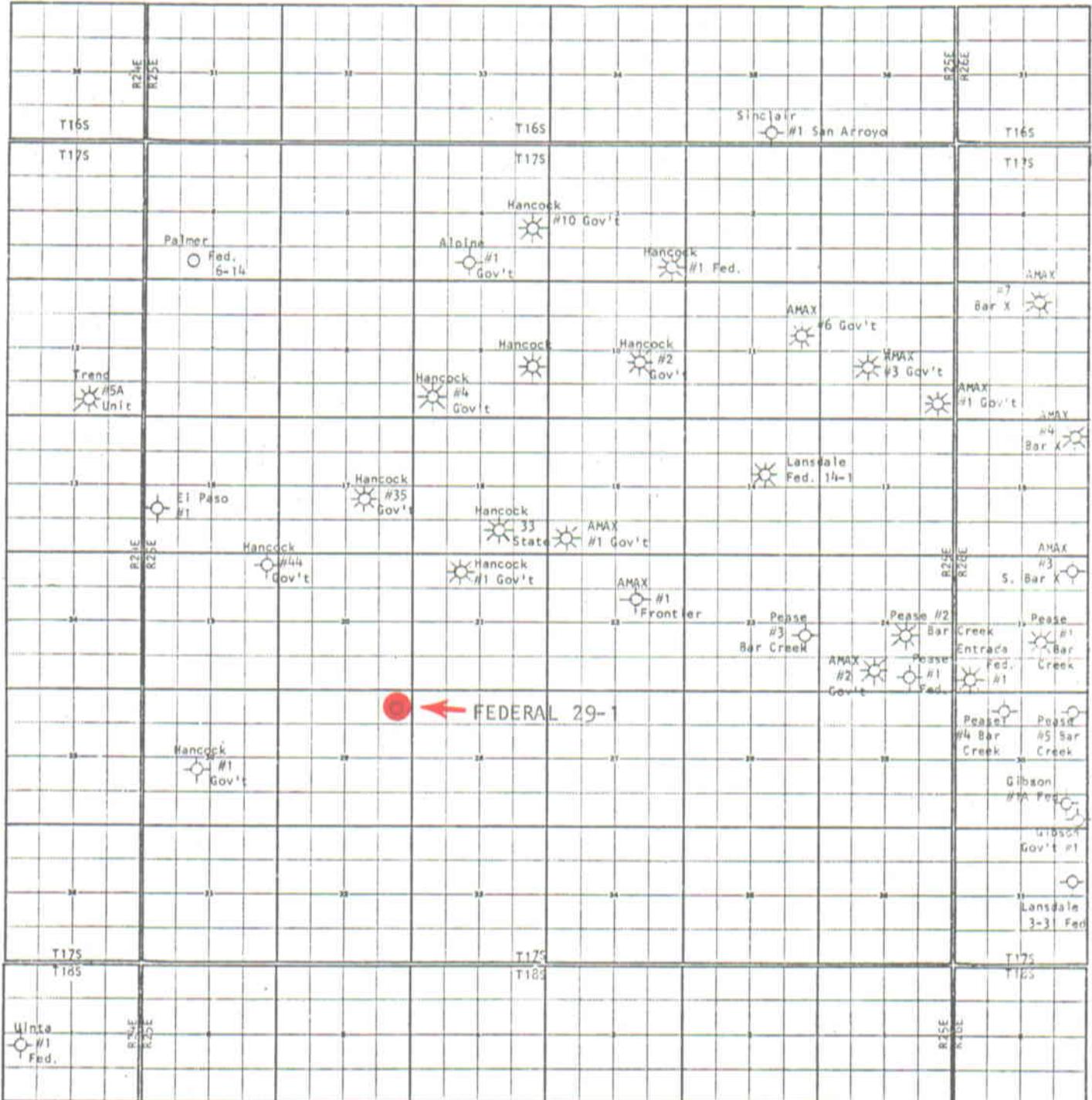


Location Map #1



WELL MAP NO. 2

Township 16, 17, 18S, Range 24, 25, 26E, County Grand, State Utah



TWELVE POINT PLAN OF DEVELOPMENT  
FOR SURFACE USE FOR PALMER OIL FEDERAL #29-1  
NE¼NE¼ Section 29-T17S-R25E  
Grand County, Utah

1. Existing Roads

- A. Proposed wellsite: Survey plat enclosed.
- B. Location is approximately 8 miles West of Mack, Colorado on State Highway 6 & 50, then approximately 7 miles Northwest on 2 Road, then approximately 1.5 miles Southwest to the Access Road, on an existing gravel road.
- C. Access roads: See Location Map #1.
- D. Not applicable, well is not exploratory.
- E. Existing roads within 1 mile of wellsite: See Location Map #1.
- F. No improvements of existing roads are planned except to blade any rough spots.

2. Planned Access Roads

- A. See Location Map #1 for necessary access road to be constructed. Length of access road is approximately 1 mile.
  1. Maximum width is 35'.
  2. Maximum grade of 4%.
  3. No turnouts needed.
  4. Natural drainage, road will follow contour of land.
  5. No culverts needed. Two low water crossings will be needed as shown on the access map. The only significant cut needed is to traverse down a side hill as shown on the access map.
  6. No surfacing material to be used.
  7. No gates, cattlequards, or fence cuts needed.
  8. Access road is center flagged.

3. Location of existing wells (See Map No. 2)

1. There are no existing water wells within a 1 mile radius.
2. See Map #2 for location of abandoned wells.
3. No temporary abandoned wells are located within a 1 mile radius.
4. No disposal wells in the area.
5. No drilling wells in the area.
6. Producing wells shown on Map No. 2.
7. Shut in wells shown on Map No. 2.
8. No injection wells in the area.
9. No monitoring or observation wells in the area.

4. Location of existing and proposed production facilities

- A.
  1. No tank batteries within a 1 mile radius.
  2. No production facilities within a 1 mile radius.
  3. No oil gathering lines in the area.
  4. No gas pipelines within a 1 mile radius.
  5. No injection lines in the area.
  6. No disposal lines in the area.
- B.
  1. A gathering system location for this well has not been determined at this time.
  2. A separator, approximately 5' x 10', and a meter run, approximately 6' x 8', will be on the drillsite pad, and will be painted to blend with the desert environment.
  3. No construction materials are necessary. All lines will be coated, wrapped, and buried.
  4. A 10' x 10' water disposal pit will be dug within 50' of the separator and will be enclosed by a wire fence. A 6' x 6' x 3½' metal guard will be placed around the wellhead.
- C. Plans for restoration of the surface.

On completion of the drilling of this well, all pits will be backfilled and top soil replaced and re-contoured back to original terrain. The area necessary for production is a square approximately 180' x 180' with the wellhead in the center and a deadman set at each corner. The deadman will be marked with a metal fence post. Upon abandonment all disturbed area, including the location and access road, will be recontoured, ripped or scarified as needed, and revegetated using a seed formula stipulated by the BLM.

5. Location and type of water supply

- A. Very little water is needed to drill this well because it will be air drilled. Water will be purchased from Grand Valley Water Users and hauled from a ditch near Mack, Colorado, or from West Salt Creek drain ditch near Mack, Colorado.
- B. Water will be transported by truck. The truck will use the access road.
- C. No water well is to be drilled.

6. Source of construction materials

- A. No construction materials are to be used.

7. Methods for handling waste disposal

1. Cuttings will be buried 3' under top soil.
2. Drilling fluids (if any) will be left in open pit to evaporate. Pit will be fenced on 3 sides during drilling, 4 sides after rig is moved off.
3. Produced oil or condensate (if any) will be stored in a tank and sold. Produced water will be disposed of in compliance with rules and regulations of the USGS and the State of Utah.
4. Portable chemical toilet will be provided.
5. Trash will be burned in burn pit. The burn pit will be fenced with wire mesh or expanded metal.
6. Drilling fluid in pit, which will be very minimal due to air drilling, will be left to dry, if necessary. After pit area is sufficiently dry, cuttings will be pushed into pit and sub-soil to be placed on top of any remaining fluid and cuttings; then top soil will be used to cover both pit and location area. The area will be policed for all trash when the well is completed and the location will be left as much like the natural environment as possible.

8. Ancillary facilities

No camps or airstrips proposed.

9. Wellsite layout

1. See Plat No. 2 showing location pad. All necessary cuts and fills are shown on this plat, and three cross sections are shown on Plat No. 2-B.
2. Location of pits, etc.: See plan of drillsite layout diagram, Plat No. 2-A.
3. Rig orientation: See plan of drillsite layout diagram, Plat No. 2-A.
4. Pits will be unlined.

10. Plans for restoration of surface

1. Backfilling, leveling, etc.: See 7-1 and 4-C.
2. Rehabilitation, etc.: See 4-C.
3. Fencing of pits: See 7-2. This will be done as soon as drilling is completed.
4. Oil on pits: Occurance is improbable. If it does occur, the pits will be flagged to prevent an influx of wild fowl. Any oil which does occur will be trucked off for disposal.
5. Rehabilitation timetable: See 4-C. Contouring will be done as soon as the pits are dry. Barring any unforeseen problems, rehabilitation should be completed within 90 days of completing the well.

11. Other information

1. Topography: Immediate wellsite is basically flat, surrounding area has very low relief. Book Cliffs are located about 2 miles North of the location. Vegetation: Sparse grassland with greasewood and sagebrush. Land is used for grazing. Fauna: Occasional use by deer, antelope, rabbits, lizzards, hawks, and miscellaneous small birds. Geologic features: Nothing significant in immediate area.
2. A. Surface Ownership: Public lands administered by the BLM.  
B. Surface Activities: Rabbit and bird hunting, sheep and cattle grazing.
3. No water or dwellings are on the lease. An archaeologic study was done by Centuries Research of Montrose, Colorado.

12. Lessee's or operator's representative

J. G. Routson  
P. O. Box 2564  
Billings, Montana 59103

Office Phone (406) 248-3151  
Home Phone (406) 245-8797  
Mobile Phone (303) 245-3660 Unit #327

R. D. Ballantyne

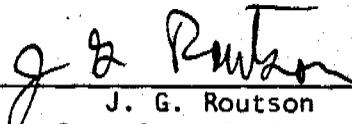
Home Phone (406) 656-1304

William H. Buniger  
Box 42  
Loma, Colorado 81524

Home Phone (303) 858-7377  
Mobile Phone (303) 245-3660 Unit #289

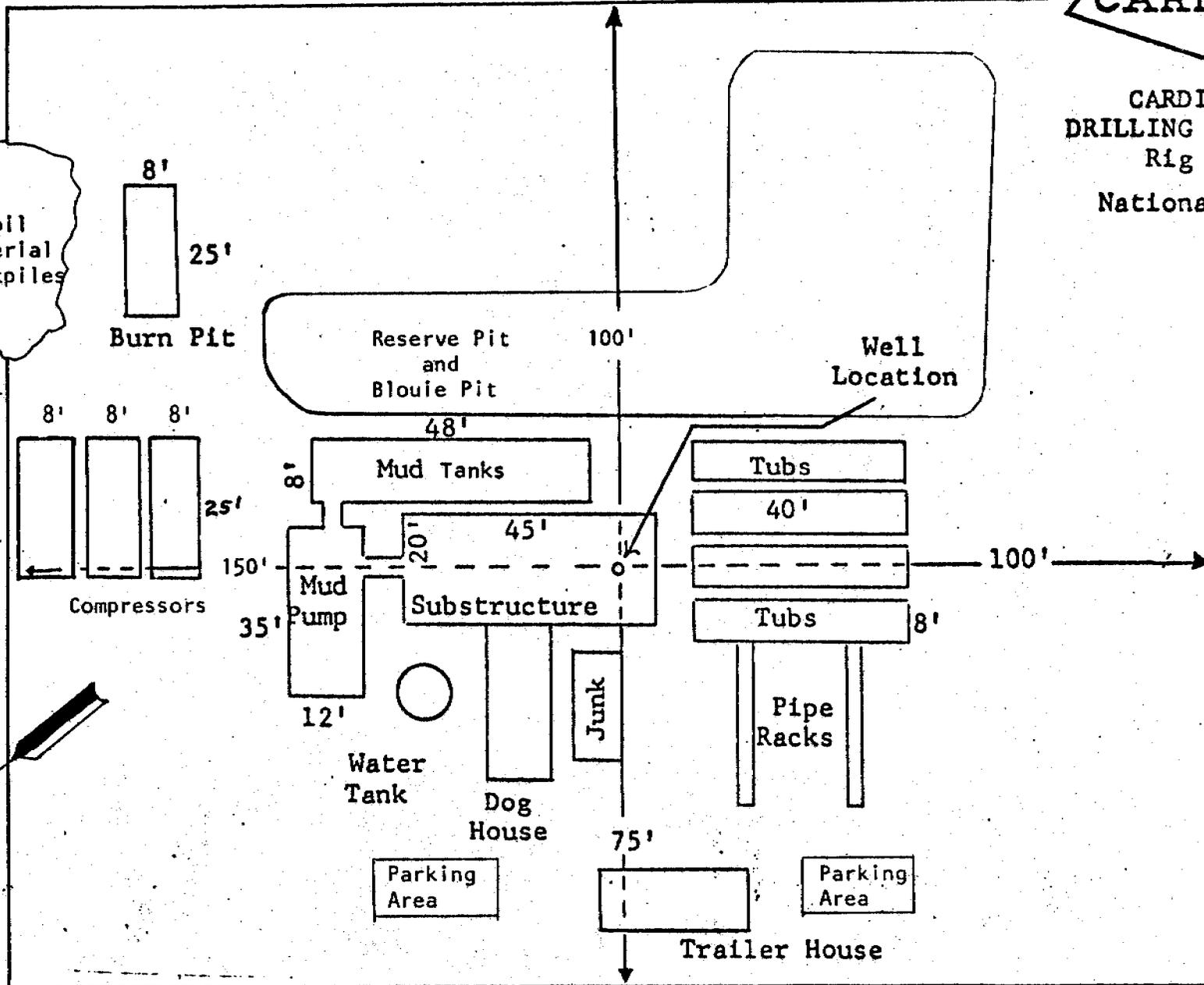
13. I hereby certify that I, or persons under my direct supervision, have inspected the proposed drillsite and access route; that I am familiar with the conditions which presently exist; that the statements made in this plan are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein is being contracted for at this time. The contractor and sub-contractors will conform with this plan and the terms and conditions under which it is approved.

Date: 12/29/78

  
\_\_\_\_\_  
J. G. Routson  
Petroleum Engineer



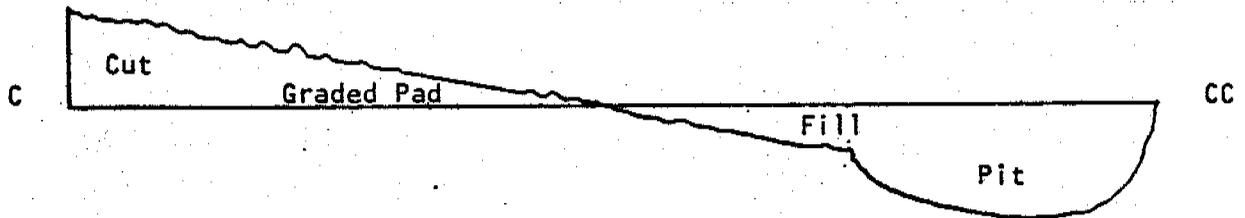
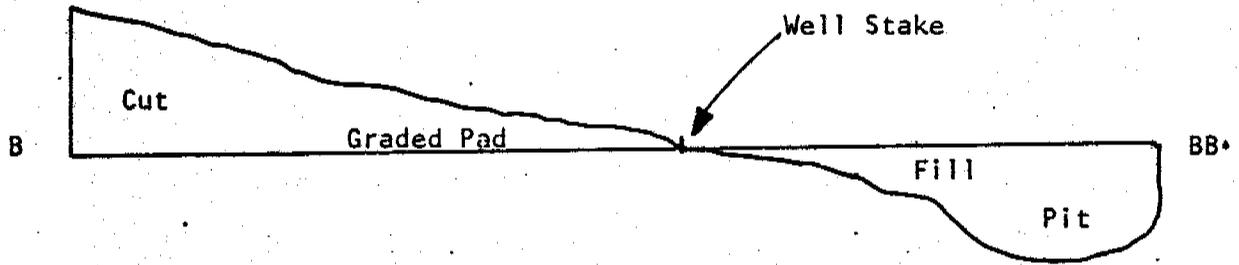
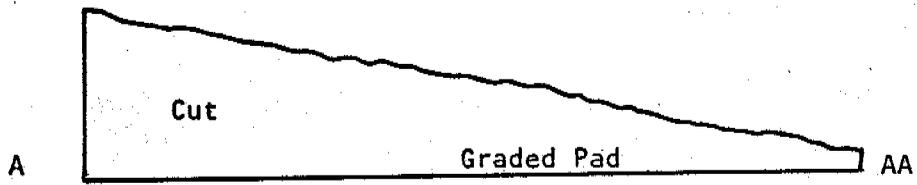
CARDINAL  
DRILLING COMPANY  
Rig #4  
National T-32



PLAN OF DRILLSITE LAYOUT

PLAT NO. 2-A

PLAT NO. 2-B

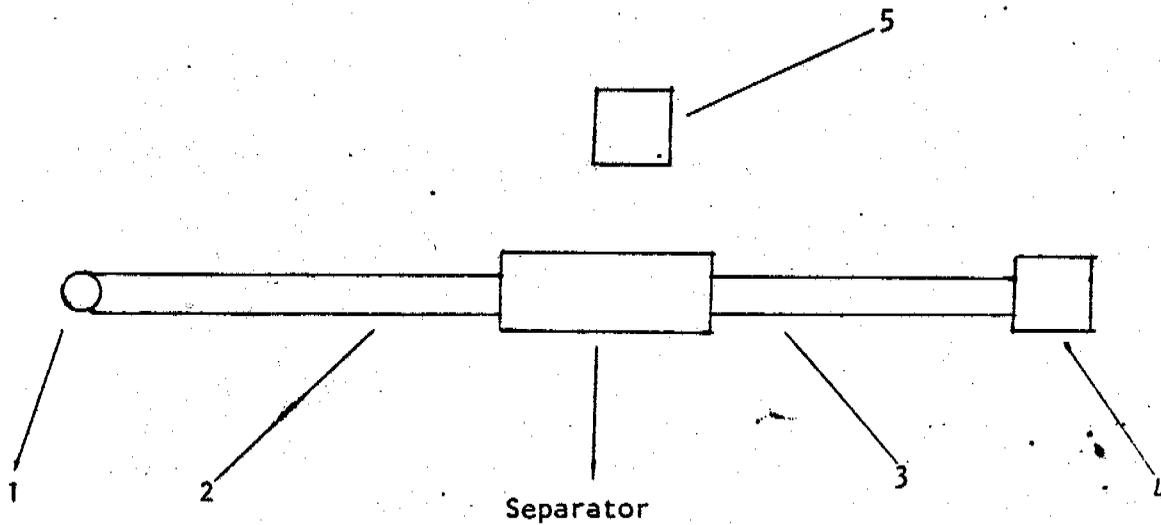


Vertical Scale = 1" = 20'

Horizontal Scale = 1" = 50'

PLAT #3

Federal #29-1  
Wellhead



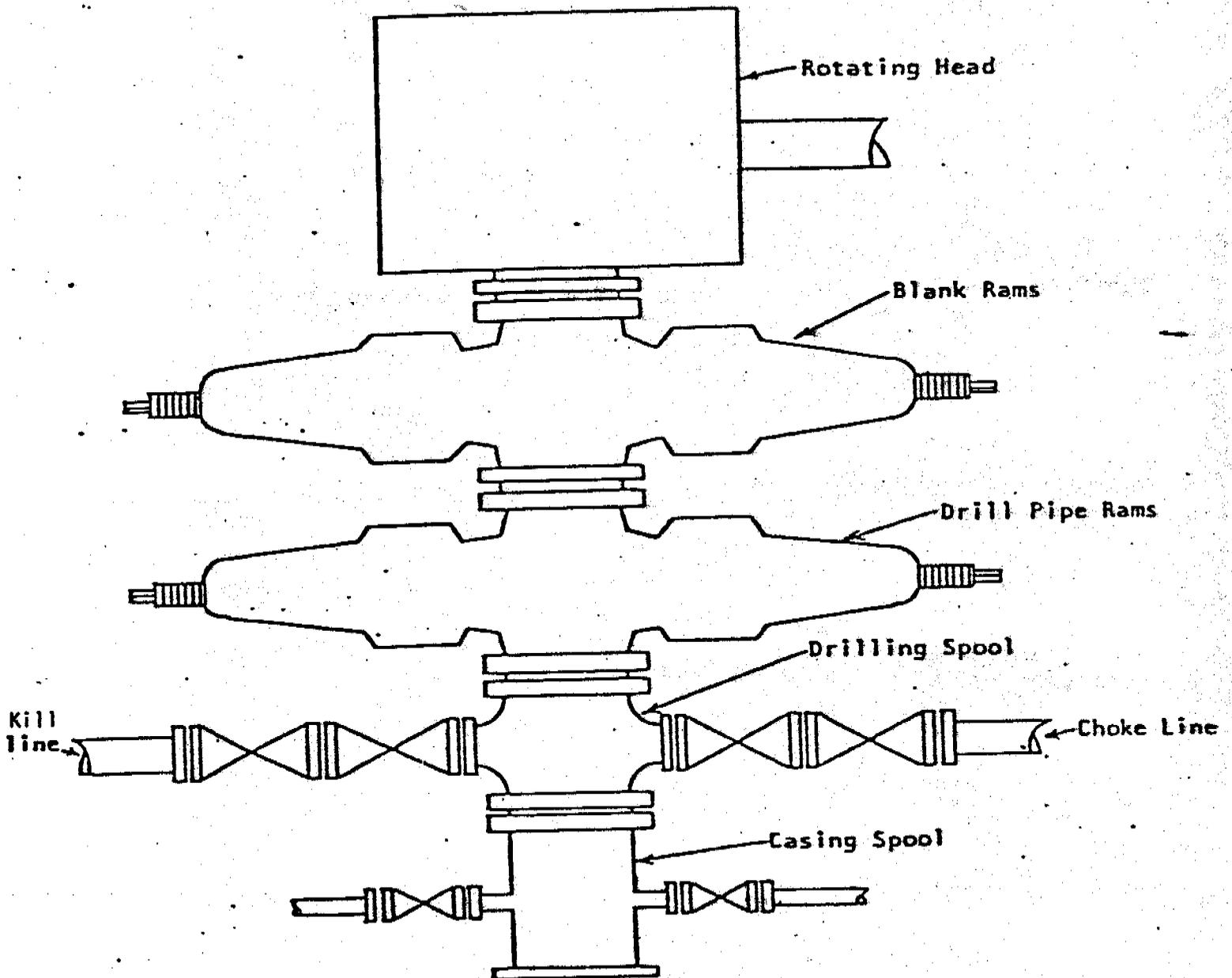
1. Wellhead will be 4-1/2" x 2-3/8" flange x screw with donut hanger full opening valve. All 2000# WP or greater to meet PO&GC specifications.
2. Line between wellhead and separator will be approx. 75 feet in length and constructed of 2-3/8" .218 wall seamless, welded, wrapped and buried approx. 5 feet deep.
3. Line between separator and meter will be 4" or 4.028 OD seamless, welded, coated, wrapped and buried and will be approx. 25 feet in length.
4. Meter run will be American 4" run, 500 psi static rating, 100" of water differential rating.
5. Pit, if necessary will be 10' x 10', enclosed by dikes and fenced.

SCHEMATIC OF BOP STACK

**AIR DRILLED WELLS**  
using

900 series well head equipment

Interval from 200' to TD



WELL CONTROL PLAN

1. Surface Casing: 8-5/8" O.D. 20#/ft., Grade K-55, Short T&C, set at 200' or deeper, cemented with pump and plug method back to the surface or bottom of cellar.
2. Casinghead Flange: 10" 900 series adapted to 8" 900 series BOP. Casinghead has two 2" 2000 psi L.P. outlets.
3. Intermediate Casing: None required.
4. Blowout Preventor: A 8" 3000 psig W.P. Double gate hydraulic Shaffer BOP (or equivalent) with drill pipe rams and blind rams. All fill, kill and choke lines will be minimum of 2" 2000 psi W.P. Grant rotating head to be used above the BOP's.
5. Auxiliary equipment: (a) Drill pipe floats will be allowed at contractor's discretion. (b) Visual monitoring of air returns will be maintained.
6. Anticipated bottom hole pressure is less than 900 psi at 3,670 or a gradient of .25 psi/ft. or less. No abnormal temperatures or hydrogen sulfide gas are anticipated.

PALMER OIL & GAS COMPANY

J. R. Rantson

facilities placed on the location would be painted a color to blend in with the natural environment. Present use of the area is grazing, recreation, and oil and gas activities.

Noise from the drilling operation may temporarily disturb wildlife and people in the area. Noise levels would be moderately high during drilling and completion operations. Upon completion, noise levels would be infrequent and significantly less. If the area is abandoned, noise levels should return to pre-drilling levels. The site is not visible from any major roads.

The overall effect of oil and gas drilling and production activity is significant in Mesa County but it is difficult to assess the environmental impact of a single well on state and/or national levels. However, if said well was to produce in sufficient quantity, additional development wells might be anticipated. This additional development, in turn, would lead to greater environmental and socioeconomic consequences.

Should the wellsite be abandoned, surface rehabilitation would be done according to the surface agency's requirements and to USGS's satisfaction. This would involve leveling, contouring, reseeding, etc., of the location and possibly the access road. If the well should produce hydrocarbons, measures would be undertaken to protect wildlife and domestic stock from the production equipment.

There are no national, state, or local parks, forests, wildlife refuges or ranges, grasslands, monuments, trails or other formally designated recreational facilities near the proposed location.

The proposed location is within the Book Mountain Planning Unit. This Environmental Assessment Record was compiled by the Bureau of Land Management, the surface managing agency of the Federal surface in the area. The study includes additional information on the environmental impact of oil and gas operations in this area and gives land use recommendations. The E.A.R. is on file in the agency's State offices and is incorporated herein by reference.

#### Waste Disposal:

The mud and reserves pits would contain all fluids used during the drilling operations. A trash pit would be utilized for any solid wastes generated at the site and would be buried at the completion of the operations. Sewage would be handled according to State sanitary codes. For further information, see the 13-Point Surface Plan.

#### Alternatives to the Proposed Action:

1) Not Approving the Proposed Permit--The Oil and Gas Lease Grants the Lessee Exclusive Right to Drill For, Mine, Extract, Remove and Dispose of All Oil and Gas Deposits.

Under leasing provisions, the Geological Survey has an obligation to

allow mineral development if the environmental consequences are not too severe or irreversible. Upon rehabilitation of the site, the environmental effects of this action would be substantially mitigated, if not totally annulled. Permanent damage to the surface and subsurface would be prevented as much as possible under U.S.G.S. and other controlling agencies' supervision with rehabilitation planning reversing almost all effects. Additionally, the growing scarcity of oil and gas should be taken into consideration.

2) Minor relocation of the wellsite would not significantly reduce the environmental impact. There are no severe vegetative, animal or archaeological-historical-cultural conflicts at the site. Since only a minor impact on the environment would be expected, the alternative of moving the location is rejected. At abandonment, normal rehabilitation of the area such as contouring, reseeding, etc., would be undertaken with an eventual return to the present status as outlined in the 13-Point Surface Plan.

The access road was changed. Trash and blooie pits would be located a minimum of 125' from well head. Operator to control dust from drilling operations by acceptable means.

Adverse Environmental Effects Which Cannot Be Avoided:

Surface disturbance and removal of vegetation from approximately four acres of land surface for the lifetime of the project which would result in increased and accelerated erosional potential. Grazing would be eliminated in the disturbed areas and there would be a minor and temporary disturbance of wildlife and livestock. Minor induced air pollution due to exhaust emissions from rig engines of support traffic engines would occur. Minor increase in dust pollution would occur due to vehicular traffic associated with the operation. If the well is a gas producer, additional surface disturbance would be required to install production pipelines. The potential for fires, leaks, spills of gas, oil or water would exist. During the construction and drilling phases of the project, noise levels would increase. Potential for subsurface damage to freshwater aquifers and other geologic formations exists. Minor distractions from aesthetics during the lifetime of the project would exist. If the well is a producer, an irreplaceable and irretrievable commitment of resources would be made. Erosion from the site would eventually be carried as sediment in the Colorado River. The potential for pollution to the San Arroyo would exist through leaks and spills.

If well is a producer, other development wells would be anticipated with substantially greater environmental and economic impacts.

Determination:

This requested action does not constitute a major Federal action significantly affecting the environment in the sense of NEPA, Sec. 102(2)(C).

Date 5/2/79

E. H. [Signature]  
District Engineer  
U. S. Geological Survey  
Conservation Division  
Oil and Gas Operations  
Salt Lake City District



EA #167-79



EA #167-79

FROM: DISTRICT GEOLOGIST, SALT LAKE CITY, UTAH  
TO: DISTRICT ENGINEER, O&G, SALT LAKE CITY, UTAH  
SUBJECT: APD MINERAL EVALUATION REPORT

LEASE NO. USA U-40049

OPERATOR: PALMER OIL AND GAS CO

WELL NO. 29-1

LOCATION:  $\frac{1}{2}$  NE  $\frac{1}{2}$  NE  $\frac{1}{2}$  sec. 29, T. 17 S., R. 25 E., SLM  
GRAND County, UTAH

1. Stratigraphy: OPERATOR ESTIMATES ARE REASONABLE.
2. Fresh Water: FRESH/USABLE WATER MAY BE FOUND IN THE MANCOS SHALE.  
WATER IN DEEPER FORMATIONS IS LIKELY TO BE BRACKISH/SALINE.
3. Leasable Minerals: VALUABLE PROSPECTIVELY FOR COAL IN THE DAKOTA. DAKOTA COAL IS LIKELY TO BE THIN, LENTICULAR & SUBECONOMIC
4. Additional Logs Needed: NONE
5. Potential Geologic Hazards: NONE ANTICIPATED
6. References and Remarks: WITHIN  $1\frac{1}{2}$  MI. OF BAR-X KGS  
USGS FILES SLC, UT. AND USGS BULL 852.

Signature:

TCA

Date: 1 - 11

79

United States Department of the Interior  
 Geological Survey  
 8440 Federal Building  
 Salt Lake City, Utah 84138

## Usual Environmental Analysis

Lease No. U-40049  
 Operator Palmer Oil & Gas Well No. 29-1  
 Location 501' FNL 554' FEL Sec. 29 T. 17S R. 25E  
 County Grand State Utah Field Winter Camp Unit  
 Status: Surface Ownership Public Minerals Federal  
 Joint Field Inspection Date May 1, 1979

## Participants and Organizations:

|                      |  |
|----------------------|--|
| <u>Rocky Curnutt</u> | <u>Bureau of Land Management</u>                   |
| <u>Jeff Williams</u> | <u>Bureau of Land Management</u>                   |
| <u>John Evans</u>    | <u>U. S. Geological Survey</u>                     |
| <u>Bill Buniger</u>  | <u>Dirt Contractor (Operator's representative)</u> |
| <u> </u>             | <u> </u>   |

## Related Environmental Analyses and References:

- (1) Book Mountain Unit Resource Analysis, Bureau of Land Management, Utah
- (2)

Analysis Prepared by: J. T. Evans, Environmental Scientist  
Grand Junction

Date May 4, 1979

*Noted  
5-4-79 JZ*

*Stockpile topsoil  
4 ac  
Arch. Sur. Required  
See Cyle*

*Pad 200x300  
PT 75x200  
1 mi. new access  
4 1/2 mi. long + cut  
1-5' cut over  
Access marked north  
Crown & Ditch road  
w/ pad well  
Final time not included*

Proposed Action:

On January 25, 1979, Palmer Oil & Gas Company filed an Application for Permit to Drill the No. 29-1 exploratory well, a 3671' gas test of the Morrison and Dakota Formations; located at an elevation of 5182' in the NE/4 NE/4, Sec. 29, T17S, R25E on Federal mineral lands and public surface; lease No. U-40049. There was no objection raised to the wellsite.

Several minor changes and understandings were made and agreed to during the on site inspection concerning the access road. The Bureau of Land Management will supply the details in their stipulations.

A rotary rig would be used for the drilling. An adequate casing and cementing program is proposed. Freshwater sands and other mineral-bearing formations would be protected. A Blowout Preventor would be used during the drilling of the well. The proposed pressure rating should be adequate. Details of the operator's NTL-6 10-Point Subsurface and 13-Point Surface Protection Plans are on file in the U.S.G.S. District Office in Salt Lake City, Utah, and the U.S.G.S. Northern Rocky Mountain Area Office in Casper, Wyoming.

A working agreement has been reached with the Bureau of Land Management, the controlling surface agency. Rehabilitation plans would be decided upon as the well neared completion; the Surface Management Agency would be consulted for technical expertise on those arrangements.

The operator proposes to construct a drill pad 200' wide x 300' long and a reserve pit 75' x 200'. Approximately one mile of 16' to 18' driveable surface access road would be constructed from an existing Jeep trail located in the SE/4 of Sec. 21. Maximum disturbance would be limited to 35'. Approximately 0.4 miles of the new access road would involve a side hill cut on steep slope and one 5' minimum diameter culvert would be installed in the SW/4, Sec. 21, rather than a low water crossing. The access road in NE/4 of Sec. 29 was moved northerly to avoid a bog area in a drainage and the point of egress on the pad was changed to reflect a reasonable access point. Two miles of existing Jeep trail would be upgraded by maintainer and major construction anticipated. When and if production is established, a crown and ditch road would be constructed to well site per Bureau of Land Management specifications.

The operator proposes to construct production facilities on disturbed area of the proposed drill pad. If production is established, plans for a gas flow line would be submitted to the appropriate agencies for approval. The anticipated starting date is May 1979 and duration of drilling activities would be about 30 days.

Location and Natural Setting

The proposed drillsite is approximately 16 miles NW of Mack, Colorado, the nearest town. A poor road runs to within one mile of the location. This well is near the Stateline Gas Field in Winter Camp Unit.

Topography:

The well site is on a hillside below a cliff. The Bookcliffs are to the North. The slope is approximately 8% through the location and the reserve pit would be dug deeper to place at least one-half the pit in cut and undisturbed soil.

Geology:

The surface geology is Mancos shale. No geologic hazards are known near the drill site. Seismic risk for the area is minor. Anticipated geologic tops are filed with the 10-Point Subsurface Protection Plan.

Approval of the proposed action would be conditioned that adequate and sufficient electric/radioactive/density logging surveys would be made to locate and identify any potential mineral resources. Production casing and cementing would be adjusted to assure no influence of the hydrocarbon zones through the well bore on these minerals. In the event the well is abandoned, cement plugs would be placed with drilling fluid in the hole to assure protection of any mineral resources.

The potential for loss of circulation would exist. Loss of circulation may result in the lowering of the mud levels, which might permit exposed upper formations to blow out or to cause formation to slough and stick to drill pipe. A loss of circulation would result in contamination due to the introduction of drilling muds, mud chemicals, filler materials, and water deep into the permeable zone, fissures, fractures, and caverns within the formation in which fluid loss is occurring. The use of special drilling techniques, drilling muds, and lost circulation materials may be effective in controlling lost circulation.

A geologic review of the proposed action has been furnished by the Area Geologist, U. S. Geological Survey, Salt Lake City, Utah.

The operator's drilling, cementing, casing and blowout prevention programs have been reviewed by the Geological Survey engineers and determined to be adequate.

Soils:

No detailed soil survey has been made of the project area. The topsoils in the area range from a sandy clay to a clay type soil. The soil is subject to runoff from rainfall and has a high runoff potential and sediment production would be high. The soils are mildly to moderately alkaline and support the salt-desert shrub community. The pinyon-juniper association is also present.

Topsoil would be removed from the surface and stockpiled. The soil would be spread over the surface of disturbed areas when abandoned to aid in rehabilitation of the surface. Rehabilitation is necessary to prevent erosion and encroachment of undesired species on the disturbed areas.

The operator proposes to rehabilitate the location and access roads per the recommendations of the Bureau of Land Management.

Approximately four acres of land would be stripped of vegetation. This would increase the erosional potential. Proper construction practice, construction of water bars, reseeding of slope-cut area would minimize this impact.

#### Air:

No specific data on air quality is available at the proposed location. There would be a minor increase in air pollution due to emissions from rig and support traffic engines. Particulate matter would increase due to dust from travel over unpaved dirt roads. The potential for increased air pollution due to leaks, spills, and fire would be possible.

Relatively heavy traffic would be anticipated during the drilling-operations phase, increasing dust levels and exhaust pollutants in the area. If the well was to be completed for production, traffic would be reduced substantially to a maintenance schedule with a corresponding decrease of dust levels and exhaust pollutants to minor levels. If the project results in a dry hole, all operations and impact from vehicular traffic would cease after abandonment. Due to the limited number of service vehicles and limited time span of their operation, the air quality would not be substantially reduced.

Toxic or noxious gases would not be anticipated.

#### Precipitation:

Annual rainfall should range from about 10" to 15" at the proposed location. The majority of the numerous drainages in the surrounding area are of a non-perennial nature flowing only during early spring runoff and during extremely heavy rainstorms.

Winds are medium and gusty, occurring predominantly from west to east. Air mass inversions are rare. The climate is semiarid with abundant sunshine, hot summers and cold winters with temperature variations on a daily and seasonal basis.

#### Surface Water Hydrology:

Drainage is to the San Arroyo.

Some additional erosion would be expected in the area since surface vegetation would be removed. If erosion became serious, drainage systems such as water bars and dikes would be installed to minimize the problem. The proposed project should have minor impact on the surface water systems. The potentials for pollution would be present from leaks or spills. The operator is required to report and clean up all spills or leaks.

### Groundwater Hydrology:

Some minor pollution of groundwater systems would occur with the introduction of drilling fluids (filtrate) into the aquifer. This is normal and unavoidable during rotary drilling operations. The potential for communication, contamination, and commingling of formations via the well bore would be possible. The drilling program is designed to prevent this. There is need for more data on hydrologic systems in the area and the drilling of this well may provide some basic information as all shows of fresh water would be reported. Water production with the gas would require disposal of produced water per the requirements of NTL-2B. The depths of freshwater formations are listed in the 10-Point Subsurface Protection Plan. The pits would be unlined. If fresh water should be available from the well, the owner or surface agency may request completion as a water well if given approval.

### Vegetation:

Plants in the area are of the salt-desert shrub types grading to the pinyon-juniper association.

Proposed action would remove about four acres of vegetation. Removal of vegetation would increase the erosional potential and there would be a minor decrease in the amount of vegetation available for grazing.

The operator proposes to rehabilitate the surface upon completion of operations.

### Wildlife:

Animal and plant inventory has been made by the BLM. No endangered plants or animals are known to inhabit the project area. The fauna of the area consists predominantly of mule deer, coyotes, rabbits, foxes, and varieties of small ground squirrels and other types of rodents and various types of reptiles. The area is used by man for the primary purpose of grazing domestic livestock and sheep. The birds of the area are raptors, finches, ground sparrows, magpies, crows, and jays.

### Social-Economic Effect:

An on the ground surface archaeological reconnaissance would be required prior to approval of the proposed action. Appropriate clearances would then be obtained from the surface managing agency. If a historic artifact, an archaeological feature or site is discovered during construction operations, activity would cease until the extent, the scientific importance, and the method of mitigating the adverse effects could be determined by a qualified cultural resource specialist.

There are no occupied dwellings or other facilities of this nature in the general area. Minor distractions from aesthetics would occur over the lifetime of the project and are judged to be minor. All permanent

STATE OF UTAH  
DIVISION OF OIL, GAS AND MINING

\*\* FILE NOTATIONS \*\*

Date: Jan. 5-  
Operator: Palmer Oil & Gas  
Well No: Federal 29-1  
Location: Sec. 29 T. 17S R. 3E County: Grand

File Prepared:  Entered on N.I.D.:   
Card Indexed:  Completion Sheet:

API NUMBER: 43-019-30495

CHECKED BY:

Administrative Assistant [Signature]  
Remarks: No other wells - Sec. 29 (Fed. Unit)  
Petroleum Engineer M.T.M 2-13-79  
Remarks: Have to wait for order  
Director [Signature]  
Remarks: wait for order

INCLUDE WITHIN APPROVAL LETTER:

Bond Required:  Survey Plat Required:   
Order No.  Surface Casing Change   
to

Rule C-3(e), Topographic exception/company owns or controls acreage  
within a 660' radius of proposed site   
O.K. Rule C-3  O.K. In Whitellamp Unit   
Other:

Letter Written/Approved

SCOTT M. MATHESON  
Governor

GORDON E. HARMSTON  
Executive Director,  
NATURAL RESOURCES

CLEON B. FEIGHT  
Director



STATE OF UTAH  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS, AND MINING  
1588 West North Temple  
Salt Lake City, Utah 84116  
(801) 533-5771

OIL, GAS, AND MINING BOARD

CHARLES R. HENDERSON  
Chairman

JOHN L. BELL  
C. RAY JUVELIN  
THADIS W. BOX  
CONSTANCE K. LUNDBERG  
EDWARD T. BECK  
E. STEELE McINTYRE

August 2, 1979

Palmer Oil and Gas  
PO Box 2564  
Billings., Montana 59103

Re: Federal 29-1  
Sec. 29, T. 17S., R. 25E.,  
Grand County

Dear Sir:

Insofar as this office is concerned, approval to drill the above referred to well is hereby granted in accordance with Section 40-6-11, Utah Code Annotated 1953; and predicated on Rule A-3, General Rules and Regulations and Rules of Practice and Procedure.

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

MICHAEL T. MINDER - Geological Engineer  
HOME: 876-3001  
OFFICE: 533-5771

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 43-019-30495.

Sincerely,

DIVISION OF OIL, GAS AND MINING

*M. T. Minder*

MICHAEL T. MINDER  
GEOLOGICAL ENGINEER

MTM/tlh

**Tenneco Oil**  
A Tenneco Company

Penthouse  
720 South Colorado Blvd  
Denver, Colorado 80222  
(303) 758-7130

October 23, 1979



Mr. Cleon B. Feight  
Utah Division of Oil, Gas & Mining  
1588 West, North Temple  
Salt Lake City, Utah 84111

RE: Tenneco Well formerly operated  
by Palmer Oil and Gas Company  
Grand County, Utah

Gentlemen:

The following wells formerly operated by Palmer Oil and Gas Company will now be operated by Tenneco Oil Company. Please note that record title to several of these wells will be held by Energy Increments, Inc., and Pate Oil Company, however, Tenneco Oil Company will continue to operate the wells.

Grand County, Utah

Township 16 South, Range 24 East

Sec. 33: 33-14/ Section 29: Federal 29-15  
Sec. 35: 35-10/ Section 28: Federal 28-15

Township 16 South, Range 25 East

Section 13: Federal 13-9-SIGW  
Section 17: Federal 17-9-SIGW  
Section 14: Federal 14-2

Township 16 South, Range 26 East

Section 32: State 32-1-SIGW  
State 32-11-SIGW  
Section 33: Federal 33-13-SIGW  
Section 16: State 16-4

Township 17 South, Range 24 East

-SIGW Section 3: Federal 3-8/Section 5: Federal 5-13  
SIGW-Federal 3-15/Section 14: Federal 14-4

Section 4: Federal 4-12

Township 17 South, Range 25 East

Section 6: Federal 6-7  
Federal 6-14-SIGW

Section 7: Federal 7-4-SIGW

Section 29: Federal 29-1

Township 17 South, Range 26 East

Section 5: Federal 5-4-SIGW  
Federal 5-9-SIGW  
Section 8: Federal 8-5-SIGW

\*\*\*SIGW=SHUT IN GAS WELL  
REMAINING ARE DRILLING WELLS

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

**SUNDRY NOTICES AND REPORTS ON WELLS**

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use Form 9-331-C for such proposals.)

1. oil well  gas well  other

2. NAME OF OPERATOR  
Tenneco Oil Company

3. ADDRESS OF OPERATOR  
720 S. Colorado Blvd., Denver, CO 80222

4. LOCATION OF WELL (REPORT LOCATION CLEARLY. See space 17 below.)  
501'FNL & 554'FEL  
AT SURFACE:  
AT TOP PROD. INTERVAL: NE 1/4 NE 1/4  
AT TOTAL DEPTH:

5. LEASE  
USA-U-40049

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME  
Winter Camp

8. FARM OR LEASE NAME  
Federal

9. WELL NO.  
29-1

10. FIELD OR WILDCAT NAME  
Winter Camp Unit

11. SEC., T., R., M. OR BLK. AND SURVEY OR AREA  
Sec. 29, T17S: R25E

12. COUNTY OR PARISH  
Grand

13. STATE  
Utah

14. API NO.

15. ELEVATIONS (SHOW DF, KDB, AND WD)  
5182'GL, 5193'KB

16. CHECK APPROPRIATE BOX TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

|   |                          |
|---|--------------------------|
| REQUEST FOR APPROVAL TO:                      | SUBSEQUENT REPORT OF:    |
| TEST WATER SHUT-OFF <input type="checkbox"/>  | <input type="checkbox"/> |
| FRACTURE TREAT <input type="checkbox"/>       | <input type="checkbox"/> |
| SHOOT OR ACIDIZE <input type="checkbox"/>     | <input type="checkbox"/> |
| REPAIR WELL <input type="checkbox"/>          | <input type="checkbox"/> |
| PULL OR ALTER CASING <input type="checkbox"/> | <input type="checkbox"/> |
| MULTIPLE COMPLETE <input type="checkbox"/>    | <input type="checkbox"/> |
| CHANGE ZONES <input type="checkbox"/>         | <input type="checkbox"/> |
| ABANDON* <input type="checkbox"/>             | <input type="checkbox"/> |
| (other) <u>spud, surface, prod. csg.</u>      |                          |

(NOTE: Report results of multiple completion or zone change on Form 9-330.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)\*

11/12/79

Spud 12 1/4" hole on 11/12/79. Ran 8 5/8", K-55, 20# casing to 2779'. Cmt w/155 sxs C1 G and 2% CACL2 and 1/4# /sk D-29. Reduced hole to 7 7/8" and drilled to TD of 3832' on 11/17/79. Ran 4 1/2", 10.5#, K-55 casing to 3820'. Cmt. w/225 sxs. 10.1 RFC, w/1/4# D-29. RD. WOCU. 11/19

**RECEIVED**

DEC 10 1979

Subsurface Safety Valve: Manu. and Type \_\_\_\_\_

18. I hereby certify that the foregoing is true and correct

DIVISION OF  
OIL, GAS & MINING

SIGNED

*Curly Watson*

TITLE

Admin. Supervisor

DATE

12/3/79

(This space for Federal or State office use)

APPROVED BY \_\_\_\_\_

TITLE \_\_\_\_\_

DATE \_\_\_\_\_

CONDITIONS OF APPROVAL, IF ANY:

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

**SUNDRY NOTICES AND REPORTS ON WELLS**

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use Form 9-331-C for such proposals.)

1. oil well  gas well  other

2. NAME OF OPERATOR  
Tenneco Oil Company

3. ADDRESS OF OPERATOR  
720 S. Colo. Blvd., Denver, CO 80222

4. LOCATION OF WELL (REPORT LOCATION CLEARLY. See space 17 below.)  
AT SURFACE: 501'FNL, 554'FEL  
AT TOP PROD. INTERVAL: NE/4, NE/4  
AT TOTAL DEPTH:

16. CHECK APPROPRIATE BOX TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

5. LEASE  
USA-U-40049

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME  
Winter Camp

8. FARM OR LEASE NAME  
Federal

9. WELL NO.  
29-1

10. FIELD OR WILDCAT NAME  
Winter Camp Unit

11. SEC., T., R., ME OR BLK. AND SURVEY OR AREA  
Sec. 29; T17S; R25E

12. COUNTY OR PARISH  
Grand

13. STATE  
Utah

14. API NO.

15. ELEVATIONS (SHOW DF, KDB, AND WD)  
5182'GL 5193'KB

REQUEST FOR APPROVAL TO:      SUBSEQUENT REPORT OF:

TEST WATER SHUT-OFF

FRACTURE TREAT

SHOOT OR ACIDIZE

REPAIR WELL

PULL OR ALTER CASING

MULTIPLE COMPLETE

CHANGE ZONES

ABANDON\*

(other) Status Report: Completion

(NOTE: Report results of multiple completion or zone change on Form 9-330.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)\*

12/26/79-1/28/80  
MIRUCU. Circ. hole w/4% KCL water. Press tested csq to 3500 PSI-held ok  
Perf'd Morrison @3738-48 w/2 SPF (20 holes). Set packer @ 3616'. Acidized  
w/250 gal 15% MSR acid. Frac'd w/53000 gal foamed acid & 64000# sand. Perf'd  
Dakota @ 3232-52 w/2 SPF (40 holes). Brake down perfs w/2% KCL water @ 2300 PSI.  
Acidized Dakota w/500 gal 15% MSR acid. Frac'd Dakota w/80000 gal 75% quality  
foam w/100000# sand. Landed 2 3/8 tubg @ 3248'. RDMOCU on 1/9/80. Flowing  
to clean up. SI for pressure build up.

Subsurface Safety Valve: Manu. and Type \_\_\_\_\_

18. I hereby certify that the foregoing is true and correct

SIGNED Carly J. [Signature] TITLE Admin. Supervisor DATE 12/28/80

(This space for Federal or State office use)

APPROVED BY \_\_\_\_\_ TITLE \_\_\_\_\_ DATE \_\_\_\_\_  
CONDITIONS OF APPROVAL, IF ANY:

RECEIVED  
 12-28-80  
 MINING  
 GATEWAY

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

**SUNDRY NOTICES AND REPORTS ON WELLS**

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use Form 9-331-C for such proposals.)

1. oil well  gas well  other

2. NAME OF OPERATOR  
Tenneco Oil Company

3. ADDRESS OF OPERATOR  
720 S. Colo. Blvd., Denver, CO 80222

4. LOCATION OF WELL (REPORT LOCATION CLEARLY. See space 17 below.)  
AT SURFACE: 501'FNL, 554'FEL  
AT TOP PROD. INTERVAL: NE/4 NE/4  
AT TOTAL DEPTH:

16. CHECK APPROPRIATE BOX TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

|  |                          |                          |
|--|--------------------------|--------------------------|
| REQUEST FOR APPROVAL TO:                     |                          | SUBSEQUENT REPORT OF:    |
| TEST WATER SHUT-OFF                          | <input type="checkbox"/> | <input type="checkbox"/> |
| FRACTURE TREAT                               | <input type="checkbox"/> | <input type="checkbox"/> |
| SHOOT OR ACIDIZE                             | <input type="checkbox"/> | <input type="checkbox"/> |
| REPAIR WELL                                  | <input type="checkbox"/> | <input type="checkbox"/> |
| PULL OR ALTER CASING                         | <input type="checkbox"/> | <input type="checkbox"/> |
| MULTIPLE COMPLETE                            | <input type="checkbox"/> | <input type="checkbox"/> |
| CHANGE ZONES                                 | <input type="checkbox"/> | <input type="checkbox"/> |
| ABANDON*                                     | <input type="checkbox"/> | <input type="checkbox"/> |
| (other) Status Report: Temporary Abandonment |                          |                          |

|   |                   |
|---|-------------------|
| 5. LEASE<br>USA-U-40049   |                   |
| 6. IF INDIAN, ALLOTTEE OR TRIBE NAME                                    |                   |
| 7. UNIT AGREEMENT NAME  |                   |
| 8. FARM OR LEASE NAME<br>Federal  |                   |
| 9. WELL NO.<br>29-1   |                   |
| 10. FIELD OR WILDCAT NAME<br>Winter Camp Unit                           |                   |
| 11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA<br>Sec. 29; T17S; R25E |                   |
| 12. COUNTY OR PARISH<br>Grand   | 13. STATE<br>Utah |
| 14. API NO.   |                   |
| 15. ELEVATIONS (SHOW DF, KDB, AND WD)<br>5182'GL, 5193'KB               |                   |

(NOTE: Report results of multiple completion or zone change on Form 9-330.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)\*

2/7/80

Tenneco has temporarily abandoned the Federal 29-1 well. Plans to plug and abandon are currently being evaluated.

**RECEIVED**  
FEB 15 1980

DIVISION OF  
OIL, GAS & MINING

Subsurface Safety Valve: Manu. and Type \_\_\_\_\_

18. I hereby certify that the foregoing is true and correct

SIGNED Carley Stettin TITLE Admin. Supervisor DATE 2/7/80

(This space for Federal or State office use)

APPROVED BY \_\_\_\_\_ TITLE \_\_\_\_\_ DATE \_\_\_\_\_  
CONDITIONS OF APPROVAL, IF ANY:

May 8, 1980

Tenneco Oil Co.  
720 S. Colorado Blvd.  
Denver, Colorado 80222

Re: well No. Federal 29-1  
Sec. 29, T. 17S, R. 25E.  
Grand County, Utah

Gentlemen:

This letter is to advise you that the Well Completion or Recompletion Report and Log for the above mentioned well is due and has not been filed with this office as required by our rules and regulations.

Please complete the enclosed Form OGC-3, in duplicate, and forward them to this office as soon as possible.

Also, Rule C-5, General Rules and Regulations and Rules of Practice and Procedure, requires that a well log shall be filed with the Commission together with a copy of the electric and radioactivity logs. Please enclose any logs that were run on this well.

Your prompt attention to the above will be greatly appreciated.

Sincerely,

DIVISION OF OIL, GAS, AND MINING



JANICE TABISH  
CLERK-TYPIST

**UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY**

SUBMIT IN DUPLICATE\*

(See other instructions on reverse side)

Form approved.  
Budget Bureau No. 42-R355.5.

**WELL COMPLETION OR RECOMPLETION REPORT AND LOG\***

1a. TYPE OF WELL: OIL WELL  GAS WELL  DRY  Other \_\_\_\_\_

1b. TYPE OF COMPLETION: NEW WELL  WORK OVER  DEEP-EN  FLUG BACK  DIFF. RESVR.  Other Temporary Abandonment

2. NAME OF OPERATOR  
Tenneco Oil Company

3. ADDRESS OF OPERATOR  
P.O. Box 3249, Englewood, Colorado 80155

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements)  
At surface 501' FNL 554' FEL **NE NE**

At top prod. interval reported below

At total depth

**RECEIVED**

DIVISION OF  
OIL, GAS & MINING

14. PERMIT NO. 43-019-30495 DATE ISSUED 2-26-79

5. LEASE DESIGNATION AND SERIAL NO.  
USA U-40049

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

UNIT AGREEMENT NAME  
Winter Camp

8. FARM OR LEASE NAME  
Federal

9. WELL NO.  
29-1

10. FIELD AND POOL, OR WILDCAT  
Winter Camp Unit **Bar-X Field**

11. SEC., T., R., M., OR BLOCK AND SURVEY OR AREA  
Sec 29 T17S R25E

12. COUNTY OR PARISH  
Grand

13. STATE  
Utah

15. DATE SPUNDED 11/12/79 16. DATE T.D. REACHED 11/17/79 17. DATE COMPL. (Ready to prod.) **T.A.** 18. ELEVATIONS (DF, REB, RT, GR, ETC.)\* 5182' gr 19. ELEV. CASINGHEAD -

20. TOTAL DEPTH, MD & TVD 3832' 21. PLUG, BACK T.D., MD & TVD 22. IF MULTIPLE COMPL., HOW MANY\* 23. INTERVALS DRILLED BY → 24. ROTARY TOOLS 0'-TD 25. CABLE TOOLS

24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)\*  
None

25. WAS DIRECTIONAL SURVEY MADE  
No

26. TYPE ELECTRIC AND OTHER LOGS RUN  
CYB, DIL, FDC

27. WAS WELL CORED  
No

28. CASING RECORD (Report all strings set in well)

| CASING SIZE | WEIGHT, LB./FT. | DEPTH SET (MD) | HOLE SIZE | CEMENTING RECORD | AMOUNT PULLED |
|-------------|-----------------|----------------|-----------|------------------|---------------|
| 8-5/8"      | 20#             | 2779'          | 12 1/4"   | 155sx            |               |
| 4 1/2"      | 10.5#           | 3832'          | 7-7/8"    | 225sx            |               |

29. LINER RECORD

| SIZE | TOP (MD) | BOTTOM (MD) | BACKS CEMENT* | SCREEN (MD) |
|------|----------|-------------|---------------|-------------|
|      |          |             |               |             |

30. TUBING RECORD

| SIZE | DEPTH SET (MD) | PACKER SET (MD) |
|------|----------------|-----------------|
|      |                |                 |

31. PERFORATION RECORD (Interval, size and number)

3738-48' (2 JSPF) Morrison  
3232-52' (2 JSPF) Dakota

32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.

| DEPTH INTERVAL (MD) | AMOUNT AND KIND OF MATERIAL USED  |
|---------------------|---|
| 3738-48'            | 250 gals 15% MSR  |
| 3232-52'            | 53,000 gals foamed acid 64,000# sand<br>500 gals 15% MSR, 80,000 gals 75% quality foam, 100,000# sand |

33.\* PRODUCTION

| DATE FIRST PRODUCTION | PRODUCTION METHOD (Flowing, gas lift, pumping—size and type of pump) | WELL STATUS (Producing or shut-in) |
|-----------------------|--|------------------------------------|
| N/A                   | N/A  | T/A                                |

| DATE OF TEST | HOURS TESTED | CHOKER SIZE | PROD'N. FOR TEST PERIOD | OIL—BBL. | GAS—MCF. | WATER—BBL. | GAS-OIL RATIO |
|--------------|--------------|-------------|-------------------------|----------|----------|------------|---------------|
|              |              |             |                         |          |          |            |               |

| FLOW. TUBING PRESS. | CASING PRESSURE | CALCULATED 24-HOUR RATE | OIL—BBL. | GAS—MCF. | WATER—BBL. | OIL GRAVITY-API (CORR.) |
|---------------------|-----------------|-------------------------|----------|----------|------------|-------------------------|
|                     |                 |                         |          |          |            |                         |

34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.) TEST WITNESSED BY

35. LIST OF ATTACHMENTS  
Electric logs forwarded by Schlumberger

36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records

SIGNED Carly Hatten TITLE Asst. Div. Adm. Mgr. DATE 1/19/81

\*(See Instructions and Spaces for Additional Data on Reverse Side)

# INSTRUCTIONS

**General:** This form is designed for submitting a complete and correct well completion report and log on all types of lands and leases to either a Federal agency or a State agency, or both, pursuant to applicable Federal and/or State laws and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local, area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from, the local Federal and/or State office. See instructions on items 22 and 24, and 33, below regarding separate reports for separate completions.

If not filed prior to the time this summary record is submitted, copies of all currently available logs (drillers, geologists, sample and core analysis, all types electric, etc.), formation and pressure tests, and directional surveys, should be attached hereto, to the extent required by applicable Federal and/or State laws and regulations. All attachments should be listed on this form, see item 35.

Item 4: If there are no applicable State requirements, locations on Federal or Indian land should be described in accordance with Federal requirements. Consult local State or Federal office for specific instructions.

Item 18: Indicate which elevation is used as reference (where not otherwise shown) for depth measurements given in other spaces on this form and in any attachments. Items 22 and 24: If this well is completed for separate production from more than one interval zone (multiple completion), so state in item 22, and in item 24 show the producing interval, or intervals, top(s), bottom(s) and name(s) (if any) for only the interval reported in item 33. Submit a separate report (page) on this form, adequately identified, for each additional interval to be separately produced, showing the additional data pertinent to such interval.

Item 29: "Sacks Cement": Attached supplemental records for this well should show the details of any multiple stage cementing and the location of the cementing tool.

Item 33: Submit a separate completion report on this form for each interval to be separately produced. (See instruction for items 22 and 24 above.)

| 37. SUMMARY OF POROUS ZONES:<br>SHOW ALL IMPORTANT ZONES OF POROSITY AND CONTENTS THEREOF: CORED INTERVALS; AND ALL DRILL-STEM TESTS, INCLUDING DEPTH INTERVAL TESTED, CUSHION USED, TIME TOOL OPEN, FLOWING AND SHUT-IN PRESSURES, AND RECOVERIES |      | 38. GEOLOGIC MARKERS |   |
|--|------|----------------------|---|
| FORMATION  | TOP  | BOTTOM               | DESCRIPTION, CONTENTS, ETC.                       |
| Dakota   | 3160 | 3380                 | Sand, Shale, water, Gas<br><br>Shale, sand, water |
| Morrison   | 3380 | TD                   |   |
|  |      |                      | NAME  |
|  |      |                      | MEAS. DEPTH                                       |
|  |      |                      | TOP   |
|  |      |                      | TRUE VERT. DEPTH                                  |
|  |      |                      | Mancos "B"<br>Frontier<br>Dakota Silt             |
|  |      |                      | 340<br>2840<br>3110                               |

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

**SUNDRY NOTICES AND REPORTS ON WELLS**

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use Form 9-331-C for such proposals.)

1. oil well  gas well  other

2. NAME OF OPERATOR  
Tenneco Oil Company

3. ADDRESS OF OPERATOR  
P.O. Box 3249, Englewood, CO 80155

4. LOCATION OF WELL (REPORT LOCATION CLEARLY. See space 17 below.)  
AT SURFACE: 501' FNL, 554' FEL  
AT TOP PROD. INTERVAL:  
AT TOTAL DEPTH:

16. CHECK APPROPRIATE BOX TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

|   |                          |
|---|--------------------------|
| REQUEST FOR APPROVAL TO:                      | SUBSEQUENT REPORT OF:    |
| TEST WATER SHUT-OFF <input type="checkbox"/>  | <input type="checkbox"/> |
| FRACTURE TREAT <input type="checkbox"/>       | <input type="checkbox"/> |
| SHOOT OR ACIDIZE <input type="checkbox"/>     | <input type="checkbox"/> |
| REPAIR WELL <input type="checkbox"/>          | <input type="checkbox"/> |
| PULL OR ALTER CASING <input type="checkbox"/> | <input type="checkbox"/> |
| MULTIPLE COMPLETE <input type="checkbox"/>    | <input type="checkbox"/> |
| CHANGE ZONES <input type="checkbox"/>         | <input type="checkbox"/> |
| ABANDON* <input checked="" type="checkbox"/>  | <input type="checkbox"/> |
| (other) _____                                 |                          |

5. LEASE  
USA-U-40049

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME  
Winter Camp

8. FARM OR LEASE NAME  
Federal

9. WELL NO.  
29-1

10. FIELD OR WILDCAT NAME  
Winter Camp Unit

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA  
Section 29, T17S, R25E

12. COUNTY OR PARISH  
Grand

13. STATE  
Utah

14. API NO.

15. ELEVATIONS (SHOW DF, KDB, AND WD)  
5182' gr. 5193' KB

(NOTE: Report results of multiple completion or zone change on Form 9-330.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)\*

2/10/81, Tenneco proposes to plug and abandon the Federal 29-1 per the attached detailed procedure.

**APPROVED BY THE DIVISION  
OF OIL, GAS, AND MINING**

DATE: 3-30-81  
BY: M. J. Munder

Subsurface Safety Valve: Manu. and Type \_\_\_\_\_ Set @ \_\_\_\_\_ Ft.

18. I hereby certify that the foregoing is true and correct

SIGNED Carley Hatten TITLE Asst. Div. Adm. Mgr. DATE 2/17/81

(This space for Federal or State office use)

APPROVED BY \_\_\_\_\_ TITLE \_\_\_\_\_ DATE \_\_\_\_\_  
CONDITIONS OF APPROVAL, IF ANY:

LEASE Federal

WELL NO. 29-1

8-5/8 "OD, \_\_\_\_\_ LB, \_\_\_\_\_ CSG.W/ 195 SX

TOC @ Surface

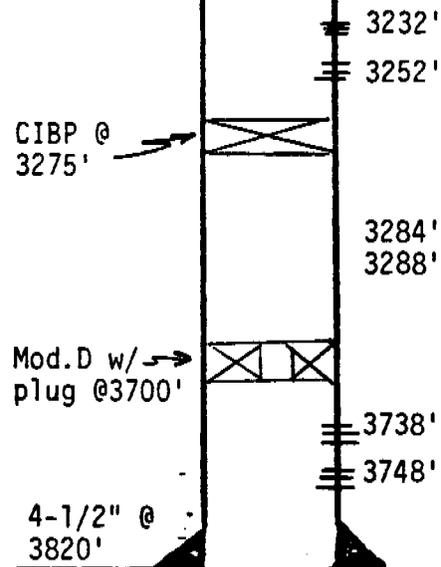
8-5/8"  
@258'

4-1/2 "OD, 10.5 LB, \_\_\_\_\_ CSG.W/ 225 SX

TOC @ 3196'

### DETAILED PROCEDURE

1. MIRUSU. POOH w/tbg. Install BOPE.
2. RIH w/Baker Model K cement retainer & set @3150'. Load hole w/water.
3. Sting into retainer & squeeze w/50 sxs Class G. Displace cement to retainer.
4. PU 1 jt & circ hole vol. w/9# mud.
5. Cut 4-1/2" csg @3100' & pull.
6. RIH w/tbg & set 100 sx plug @4-1/2" csg stub. PU & set surface plug from ±300' to surface (±80 sx).
7. Cut off surface csg & set P&A marker



UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

**SUNDRY NOTICES AND REPORTS ON WELLS**

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1. oil well  gas well  other

2. NAME OF OPERATOR  
Tenneco Oil Company

3. ADDRESS OF OPERATOR  
P.O. Box 3249, Englewood, CO 80155

4. LOCATION OF WELL (REPORT LOCATION CLEARLY. See space 17 below.)  
AT SURFACE: 501' FNL, 554' FEL  
AT TOP PROD. INTERVAL:  
AT TOTAL DEPTH:

5. LEASE  
USA-U-40049

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME  
Winter Camp

8. FARM OR LEASE NAME  
Federal

9. WELL NO.  
29-1

10. FIELD OR WILDCAT NAME  
Winter Camp Unit

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA  
Sec. 29, T17S, R25E

12. COUNTY OR PARISH  
Grand

13. STATE  
Utah

14. API NO.

15. ELEVATIONS (SHOW DF, KDB, AND WD)  
5182' gr.

16. CHECK APPROPRIATE BOX TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

|                          |                          |                       |                          |
|--------------------------|--------------------------|-----------------------|--------------------------|
| REQUEST FOR APPROVAL TO: |                          | SUBSEQUENT REPORT OF: |                          |
| TEST WATER SHUT-OFF      | <input type="checkbox"/> |                       | <input type="checkbox"/> |
| FRACTURE TREAT           | <input type="checkbox"/> |                       | <input type="checkbox"/> |
| SHOOT OR ACIDIZE         | <input type="checkbox"/> |                       | <input type="checkbox"/> |
| REPAIR WELL              | <input type="checkbox"/> |                       | <input type="checkbox"/> |
| PULL OR ALTER CASING     | <input type="checkbox"/> |                       | <input type="checkbox"/> |
| MULTIPLE COMPLETE        | <input type="checkbox"/> |                       | <input type="checkbox"/> |
| CHANGE ZONES             | <input type="checkbox"/> |                       | <input type="checkbox"/> |
| ABANDON*                 | <input type="checkbox"/> |                       | <input type="checkbox"/> |
| (other)                  |                          |                       |                          |

(NOTE: Report results of multiple completion or zone change on Form 9-330.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)\*

1/28/82 - Tenneco proposes to plug the above referenced well in accordance with the attached detailed procedure.

APPROVED BY THE STATE  
OF DIVISION OF  
OIL AND MINING

DATE 2/18/82  
BY: [Signature]

Subsurface Safety Valve: Manu. and Type \_\_\_\_\_ Set @ \_\_\_\_\_ Ft.

18. I hereby certify that the foregoing is true and correct

SIGNED [Signature] TITLE Production Analyst DATE 2/4/82

(This space for Federal or State office use)

APPROVED BY \_\_\_\_\_ TITLE \_\_\_\_\_ DATE \_\_\_\_\_  
CONDITIONS OF APPROVAL, IF ANY:

LEASE FEDERALWELL NO. 29-1

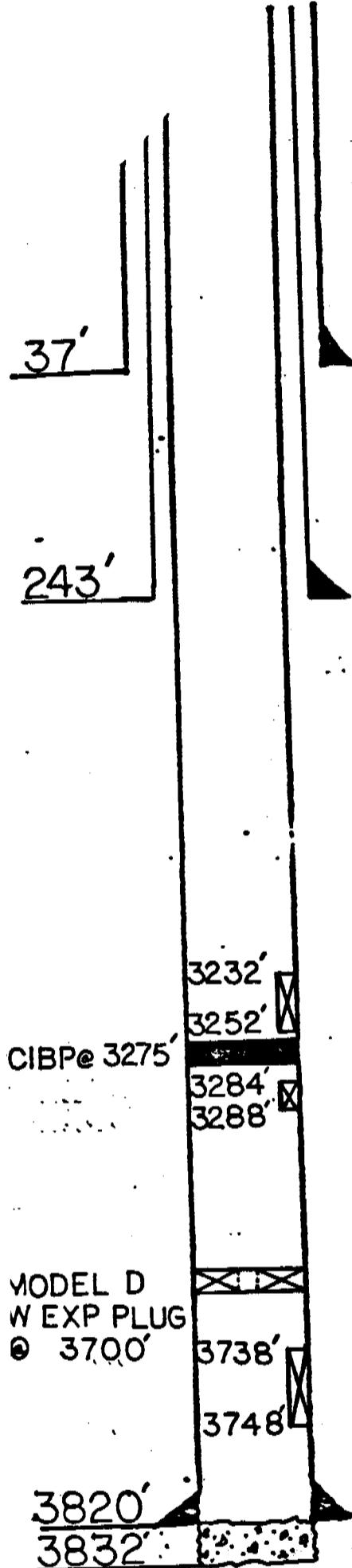
13 3/8 "OD. \_\_\_\_\_ LB. \_\_\_\_\_ CSG.W/ \_\_\_\_\_ SX  
 TOC @ SURFACE

8 5/8 "OD. 20 LB. K-55 CSG.W/ 155 SX  
 TOC @ SURFACE

4 1/2 "OD. 10.5 LB. K-55 CSG.W/ 225 SX  
 TOC @ 3190'

Detailed Procedure:

1. MIRUSU. Kill well if necessary. Remove WH & install BOPE.
2. POOH w/2-3/8" tbg. PU a cmt. ret. on tbg & RIH to 3132' & set. Load annulus w/wtr & PT to 500 psig. PU on tbg & PT to 1500 psig. Sting out & est. reverse circ. Sting back into ret. & establish rate into perfs.
3. RU to cmt squeeze perfs (3232-52') leaving a 100' cmt plug in the csg above them & below the retainer. Use 50 sxs Class H w/.4% Halid 9. Sting out of ret. w/1' bbl cmt left in. tbg or when 1500 psig is encountered & reverse tbg clean.
4. Circ hole w/9.2 ppg fresh wtr mud w/50 visc. minimum. POOH w/2-3/8" tbg.
5. MIRUWL. Run csg free pt. test (TOC @3190'). Cut csg using a WL chemical cutter at point where csg is free.
6. RU csg crew. POOH & lay dn 4-1/2" csg. (Have pipe rack & slide on loc.).
7. PU & RIH w/2-3/8" tbg to 50' below top of csg stub. Spot a 100' plug 50' in csg & 50' out of csg using 30 sxs Class H cmt.
8. PUH w/2-3/8" tbg to 2850', 38' below top of the Frontier & spot a 100' cmt plug fr 2850' to 2750', 62' above the Frontier. Use 35 sxs Class H cmt.
9. PUH w/2-3/8" tbg to 700', 48' below top of the Mancos 'B' & spot a 100' cmt plug fr 700' to 600', 52' above top of Mancos 'B'. Use 35 sxs Class H cmt.
10. PUH w/2-3/8" tbg to 300' & spot plug to surface which is also 47' below the 8-5/8" csg stub & runs to the surface. POOH w/tbg & lay dn.
11. Place a 4" P&A marker orange peeled at the top at the surface stating: well name, number, 1/4 section, township, range & date of P&A.
12. Remove all equip fr location & haul to TOC's yard. Fill in all pits & restore location to original as per APD.



**UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY**

**SUNDRY NOTICES AND REPORTS ON WELLS**

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use Form 9-331-C for such proposals.)

1. oil well  gas well  other

2. NAME OF OPERATOR  
Tenneco Oil Company

3. ADDRESS OF OPERATOR  
Box 3249 Englewood, CO 80155

4. LOCATION OF WELL (REPORT LOCATION CLEARLY. See space 17 below.)  
AT SURFACE: 501' FNL, 554' FEL  
AT TOP PROD. INTERVAL:  
AT TOTAL DEPTH:

16. CHECK APPROPRIATE BOX TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

5. LEASE  
USA U-40049

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME  
Winter Camp

8. FARM OR LEASE NAME  
Federal

9. WELL NO.  
29-1

10. FIELD OR WILDCAT NAME  
Winter Camp Unit

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA  
Sec 29, T17S, R25E

12. COUNTY OR PARISH  
Grand

13. STATE  
Utah

14. API NO.

15. ELEVATIONS (SHOW DF, KDB, AND WD)  
5182' gr

REQUEST FOR APPROVAL TO:

|                      |                          |
|----------------------|--------------------------|
| TEST WATER SHUT-OFF  | <input type="checkbox"/> |
| FRACTURE TREAT       | <input type="checkbox"/> |
| SHOOT OR ACIDIZE     | <input type="checkbox"/> |
| REPAIR WELL          | <input type="checkbox"/> |
| PULL OR ALTER CASING | <input type="checkbox"/> |
| MULTIPLE COMPLETE    | <input type="checkbox"/> |
| CHANGE ZONES         | <input type="checkbox"/> |
| ABANDON*             | <input type="checkbox"/> |
| (other)              | <input type="checkbox"/> |

SUBSEQUENT REPORT OF:

|                                     |
|-------------------------------------|
| <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> |

MAY 24 1982  
DIVISION OF  
OIL, GAS & MIN.

(NOTE: Report results of multiple completion or zone change on Form 9-330.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)\*

5/12/82--MIRUSU. Blew well dn. NDWH, NUBOP. POOH w/tbg & F nipple.

5/13/82--Picked up cmt retainer. RIH w/tbg & retainer to 3132'. Set retainer. PT csg to 500 psi & tbg to 1500 psi--both held OK. Stung out of retainer. Established reverse circ. Stung back into retainer & established rate into perfs @ 4 BPM & 1000 psi. Cemented perfs w/50 sxs Class G w/4%Halad 9. Stung out of retainer w/lbbl left in tbg. Reversed clean. Mixed 9.2# mud w/50 vis. Displaced hole w/mud. POOH w/tbg. NDBOP, NUWH. MIRUWL. Ran freepoint. Cut csg @ 3050'. RU csg crew. POOH w/4-1/2" csg.

5/14/82--RIH w/3125'. Spotted 100' plug w/30 sxs Class G cmt. Pld tbg to 2850'. Spotted 100' cmt, plug fr 2850' to 2750' using 35 sxs Class G cmt. PUH to 700' Spotted 100' cmt plug 700' to 600' using 35 sxs Class G cmt. PUH to 300' & spotted plug to surface. POOH w/tbg. Placed 4' P&A marker. RDMUSU.

Subsurface Safety Valve: Manu. and Type \_\_\_\_\_ Set @ \_\_\_\_\_ Ft.

18. I hereby certify that the foregoing is true and correct

SIGNED Denise Wilson TITLE Production Analyst DATE 5/18/82

(This space for Federal or State office use)

APPROVED BY \_\_\_\_\_ TITLE \_\_\_\_\_ DATE \_\_\_\_\_  
CONDITIONS OF APPROVAL, IF ANY:

PTA

DIVISION OF OIL, GAS AND MINING

PLUGGING PROGRAM

NAME OF COMPANY: Tenneco Oil Co.

WELL NAME: Winter Camp Unit Fed. 29-1

SECTION 29 TOWNSHIP 17S RANGE 25E COUNTY Grand

VERBAL APPROVAL GIVEN TO PLUG AND ABOVE REFERRED TO WELL IN THE FOLLOWING MANNER:

TOTAL DEPTH: 3832' (PBTD 3275')

CASING PROGRAM:

8 5/8", 20#, @ 2779' to surface  
4 1/2" TOC 3196'

FORMATION TOPS:

Mancos 13- 340'  
Frontier- 2840'  
Dakota Silt- 3110'  
Dakota- 3160'  
Morrison- 3380'

Perf: 3737-48' Morrison  
3232-52' Dakota

PLUGS SET AS FOLLOWS:

Previously Set:

3700' Mod D w/plug  
3275' CIBP

Place 9.2# fresh water gel based abandonment mud between plugs; clean, restore and regrade site, erect regulation dryhole marker.

- 1) Set retainer at 3150 squeeze 50 sx CIG. Displace on top retainer
- 2) Part 4 1/2" at 3100' set 100 sx plug across stub
- 3) 300'-surface

DATE 3-30-81 SIGNED MTM