

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 OR GAS WELL OTHER _____
 SINGLE ZONE MULTIPLE ZONE

2. NAME OF OPERATOR
 ARCO Oil and Gas Company,
 Division of Atlantic Richfield Company

3. ADDRESS OF OPERATOR
 P. O. Box 5540, Denver, Colorado 80217

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)*
 At surface 1920' FEL & 660' FSL Sec. 27 (SW SE)
 At proposed prod. zone Approx the same

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*
 20 miles NW of Neola, Utah

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

16. NO. OF ACRES IN LEASE
 640

17. NO. OF ACRES ASSIGNED TO THIS WELL
 Not Spaced

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

19. PROPOSED DEPTH
 5500

20. ROTARY OR CABLE TOOLS
 Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.)
 GR 7806'

22. APPROX. DATE WORK WILL START*
 November 15, 1980

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
20"	16"	Conductor	50'	75 sx to surface
14-3/4"	10-3/4"	40.5#	500'	550 sx to surface
7-7/8"	5 1/2"	15.5#	5500'	250 sx to 500' above productive zones

This well is a wildcat to test the Nugget Formation expected between 5000 and 5500'.

Attachments: Certified Location Plat.
 10 point drilling plan
 13 point surface use plan.

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 W. A. Walther, Jr. TITLE Operations Manager DATE October 13, 1980

(This space for Federal or State office use)

PERMIT NO. _____ APPROVAL DATE _____

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

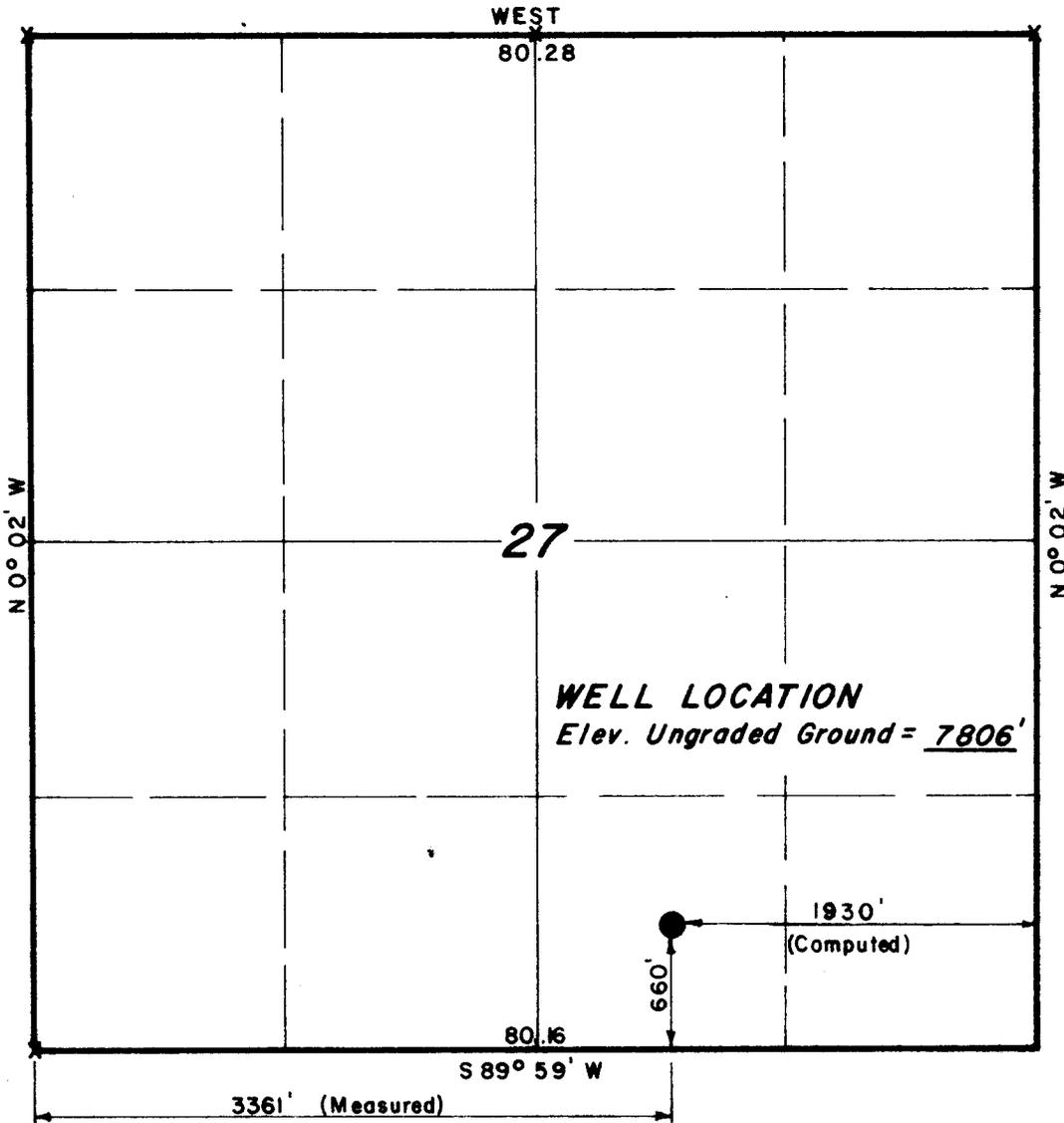
5. LEASE DESIGNATION AND SERIAL NO.
 14-20-H62-3090
 6. IF INDIAN, ALLOTTEE OR TRIBE NAME
 Ute
 7. UNIT AGREEMENT NAME
 8. FARM OR LEASE NAME
 Washs Nipple
 9. WELL NO.
 1
 10. FIELD AND POOL, OR WILDCAT
 Wildcat
 11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA
 Sec. 27-T2N-R8W
 Uintah Meridian
 12. COUNTY OR PARISH
 Duchesne
 13. STATE
 Utah

T 2 N, R 3 W, U.S.B.&M.

PROJECT
ARCO OIL & GAS CO. - A DIVISION OF
ATLANTIC RICHFIELD CO.

Well location located as shown in
the SW 1/4 SE 1/4 Section 27, T2N,
R3W, U.S.B.&M. Duchesne County,
Utah.

WELL WASHS NIPPLE #1
EXHIBIT - 1



X = Section Corners Located.



CERTIFICATE

THIS IS TO CERTIFY THAT THE ABOVE PLAT WAS PREPARED FROM
FIELD NOTES OF ACTUAL SURVEYS MADE BY ME OR UNDER MY
SUPERVISION AND THAT THE SAME ARE TRUE AND CORRECT TO THE
BEST OF MY KNOWLEDGE AND BELIEF.

Lawrence C. Kay

REGISTERED LAND SURVEYOR
REGISTRATION NO 3137
STATE OF UTAH

UINTAH ENGINEERING & LAND SURVEYING
P.O. BOX Q - 110 EAST - FIRST SOUTH
VERNAL, UTAH - 84078

SCALE 1" = 1000'	DATE 10-8-80
PARTY G.S. B.J. L.C.K.	REFERENCES GLO Plat
WEATHER Fair	FILE ATLANTIC RICHFIELD

TEN POINT DRILLING PLAN

Attach to APD Form 9-331-C
ARCO Oil and Gas Company
Well: Washs Nipple #1
1920' FEL & 660' FSL
Section 27-T2N-R3W, U.S.B. & M.
Duchesne County, Utah

1. Surface Geological Formation: Starr Flat

2. Estimated Tops of Geological Markers:

Nugget - 5000'

3. Estimated Tops of Possible Water, Oil, Gas or Minerals:

Nugget - 5000' (oil or gas)

4. Proposed Casing Program:

<u>Casing</u>	<u>Hole Size</u>	<u>Interval</u>	<u>Section Length</u>	<u>Size OD</u>	<u>Weight Grade and Joint</u>	<u>New Used</u>
Conductor	24"	0 - 50'	50	16"	Conductor	New
Surface	14-3/4"	0 - 500'	500	10-3/4"	40.5# K-55 ST&C	New
Production	8-3/4"	0 - 5500'	5500	5-1/2"	15.5# K-55 ST&C	New

4. Proposed Casing Program Cont'd:

Cement

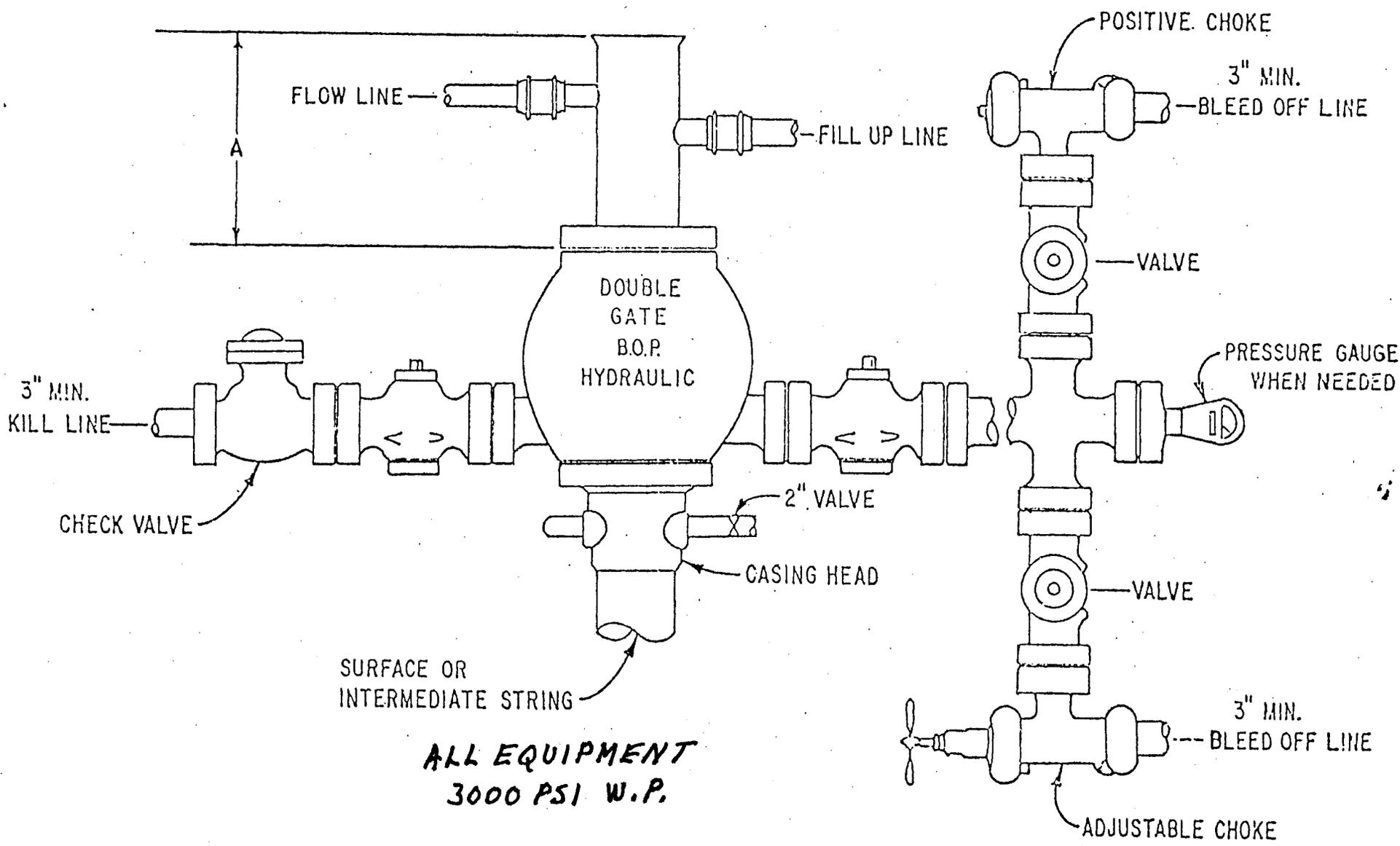
7. Auxiliary Equipment:

- (a) A kelly cock will be kept in the string.
- (b) A float will not be used at the bit.
- (c) A mud logging unit and gas detecting device will be monitoring the system.
- (d) A stabbing valve will be on the floor to be stabbed into the drill pipe when kelly is not in the string.
- (e) A pit level will be used to monitor the mud.

8. Testing, Logging and Coring Programs:

- (a) A minimum of one 30' core will be taken in the Nugget formation.
- (b) One or two drill stem tests will be taken in the Nugget formation.
- (c) Logs will be run from TD to 50' as follows: Dual Induction Laterolog, Compensated Neutron Log, Formation Density Log, Gamma Ray Log and Dipmeter.
- (d) If a productive well is indicated, production casing will be run and gun perforated, production will be through tubing. No stimulation treatments involving flammable fluids are anticipated.

9. Anticipated Abnormal Temperatures, Pressures or Hazards:



SURFACE OR INTERMEDIATE STRING

**ALL EQUIPMENT
3000 PSI W.P.**

**ARCO OIL AND GAS CO.
WASHS NIPPLE #1
SEC 27, 2N, R3W
DUCHESENE COUNTY, UTAH**

13-POINT PLAN SURFACE USE PLAN

Attached to Form 9-331C
ARCO Oil and Gas Company
Well: Washs Nipple #1
Section 27-T2N-R3W, U.S.B. & M.
Duchesne County, Utah

1. Existing Roads:

- A. The certified well location plat is Exhibit 1.
- B. The location is reached as shown in Exhibits 2 and 3. Go west from Neola, Utah approximately 4.3 miles, then north 8.7 miles, then west 4.0 miles to a three-way fork. Take center fork about 0.2 miles to location on left side of road. Alternate access is to go north from Neola 9.0 miles to end of paved highway, then turn west 9.0 miles to location. Neola is 9.8 miles north of Roosevelt, Utah on Highway 121.
- C. Roads to and near the location are shown in Exhibits 2 and 3.
- D. This is an exploratory well. All roads are shown in Exhibits 2 and 3. All roads are gravel surface suitable for access without further work.
- E. N/A.
- F. No improvement of existing roads is required; however, any maintenance needed to keep roads in current good condition will be done.

2. Planned Access Roads:

The only new road required will be a short access angling from the southeast on to the location which is immediately adjacent to the existing road. See Exhibit 4.

3. Location of Existing Wells:

The only well within 2 miles of the proposed location is abandoned dry hole Nu Pahnakaw #1, located 1 mile north as shown in Exhibit 3.

4. Location of Existing and/or Proposed Facilities:

- A. Within a one-mile radius of location there are no facilities owned or controlled by ARCO Oil and Gas Company.
- B. If the well is productive, a Sundry Notice will be submitted for the facilities required for production.
- C. Rehabilitation, whether well is productive or dry, will be made on all unused areas in accordance with B.I.A. stipulations.

5. Location and Type of Water Supply:

- A. The exact water source for this well has not been determined. We intend to acquire water from a local owner of water rights and a Sundry Notice will be submitted when source is finalized. Any State of Utah permits required to use this water will be obtained.
- B. Water will be trucked to the location.
- C. No water well will be drilled.

6. Construction Materials:

No construction materials other than cut on the site will be required.

7. Handling of Waste Materials and Disposal:

- (1) Drill cuttings will be buried in the reserve pit.
- (2) Drilling fluids will be handled in the reserve pit.
- (3) Any fluids produced during drilling test or while making production test will be collected in a test tank. If a test tank is not available during drilling, fluids will be handled in reserve pit. Any spills of oil, gas, salt water or other noxious fluids will be cleaned up and removed. If well is productive, produced water will be disposed of on-site for 30 days only, or 90 days with permission of District Engineer. After that time application will be made for approval of permanent disposal methods in compliance with NTL-2b.
- (4) Chemical toilet facilities will be provided for human waste.
- (5) Garbage and waste will be handled in a trash cage. The drill fluids, water, drilling mud and tailings will be kept in reserve pit. The trash cage will be totally enclosed with small mesh wire to prevent wind scattering trash before being removed. Trash will be hauled to an approved disposal dump. Reserve pit will be fenced on three sides during drilling and the fourth side fenced upon removal of the rig.
- (6) After the rig moves out, all materials will be cleaned up and no adverse materials will be left on location. All dangerous open pits will be fenced during drilling and kept closed until such time as the pit is leveled.

8. Ancillary Facilities:

No air strip, camp or other facilities will be built during drilling of this well.

9. Well Site Layout:

- (1) EXHIBIT "4" is the Drill Pad Layout as staked, with elevations. Cuts and fill have been drafted to visualize the planned cut across the location spot and the deepest part of the pad. Topsoil will be stockpiled per BIA specifications determined at time of pre-drill inspection.
- (2) EXHIBIT "4" has a plan diagram of the proposed rig and equipment, reserve pit, trash cage, pipe racks and mud tanks. No permanent living facilities are planned. There will be 3 or 4 trailers on site.
- (3) EXHIBIT "4" shows rig orientation and access road.
- (4) The reserve pits will not be lined.

10. Plans for Restoration:

- (1) If well is abandoned, site will be restored to original condition as nearly as possible. Backfilling, leveling and contouring are planned as soon as all pits have dried. Waste disposal and spoils materials will be buried or hauled away immediately to an approved sanitary land fill after drilling is completed. If production is obtained, the unused area will be restored as soon as possible.
- (2) The soil banked material will be spread over the area. Revegetation will be accomplished by planting mixed grasses as per formula provided by the BIA. Revegetation is recommended for road area, as well as around drill pad.

- (3) Three sides of the reserve pit will be fenced during drilling operations. Prior to rig release, the reserve pit will be fenced on the fourth side to prevent livestock or wildlife from entering; and the fencing will be maintained until leveling and cleanup are accomplished.
- (4) If any oil is on the pits and is not immediately removed or burned after operations cease, the pit containing the oil or other adverse substances will be flagged overhead or covered with wire mesh.
- (5) The rehabilitation operations will begin immediately after the well is completed. Removal of oil or other adverse substances will begin immediately or area will be flagged and fenced. Other cleanup will be done as needed. Planting and revegetation will be done as recommended by surface management agency.

11. Other Information:

- (1) Exhibit 3 shows the topography of the area. The surface soil is a sandy clay with boulders up to 2'. There are sage, cactus and some pine trees on the edge of the location. Efforts will be made to try to cut as few trees as possible. It is probable that the general area is habitat for varied wildlife such as deer, elk and other animals. Every effort will be made to minimize impacts on wildlife as recommended by the BIA.

- (2) The primary surface use is for grazing and hunting and all lands are Indian owned.

- (3) The closest live water is Dry Gulch 1/4 mile west of the location.

No occupied dwellings were noted within 1 mile of the location.

There were no archaeological, historical, or cultural artifacts observed during staking of this location. However, an archaeological survey will be conducted by a qualified archaeologist and a report submitted to the surface management agency prior to any surface disturbance.

11. Other Information Cont'd:

- (4) The lease is subject to requirements and stipulations of the Unitah and Ouray Indian Agency. All of these items will be followed as required.
- (5) Drilling is planned to start November 15, 1980, requiring 44 days to drill and 15 days for completion if the well is successful.

12. Lessee's or Operator's Representative:

W. A. Walther, Jr.
ARCO Oil and Gas Company
P. O. Box 5540
Denver, Colorado 80217
Bus. Tele: (303) 575-7031
Res. Tele: (303) 575-7153

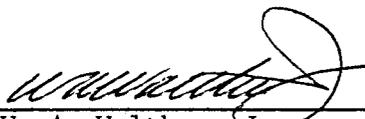
C. E. Latchem
ARCO Oil and Gas Company
P. O. Box 5540
Denver, Colorado 80217
Bus. Tele: (303) 575-7127
Res. Tele: (303) 575-7152

13. Certification:

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 will be performed by ARCO Oil and Gas Company and its contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved.

10/17/80

Date



W. A. Walther, Jr.
Operations Manager
ARCO Oil and Gas Company

ATLANTIC RICHFIELD CO.

ARCO

PROPOSED LOCATION
WASHS NIPPLE #1

TOPO. MAP 'A'



SCALE - 1" = 4 MI.



PROPOSED LOCATION

9.6 Mi.

5.6 Mi.

NEDLA, UTAH

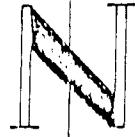
EXHIBIT-2

ATLANTIC RICHFIELD CO.

ARCO

PROPOSED LOCATION
WASHES NIPPLE #1

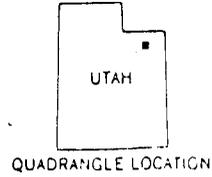
TOPO. MAP 'B'



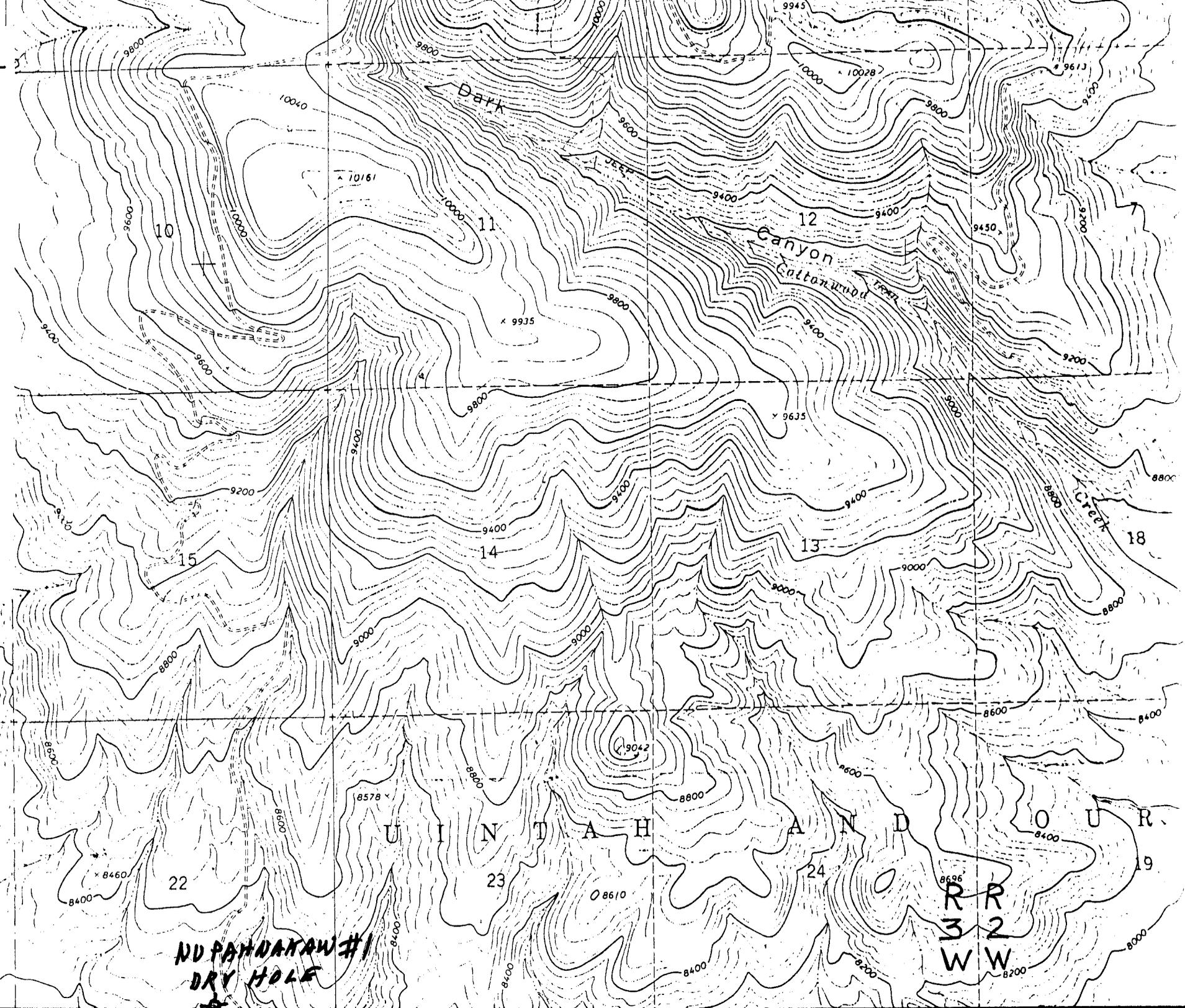
SCALE - 1" = 2000'

ROAD CLASSIFICATION

Light-duty Unimproved dirt



QUADRANGLE LOCATION



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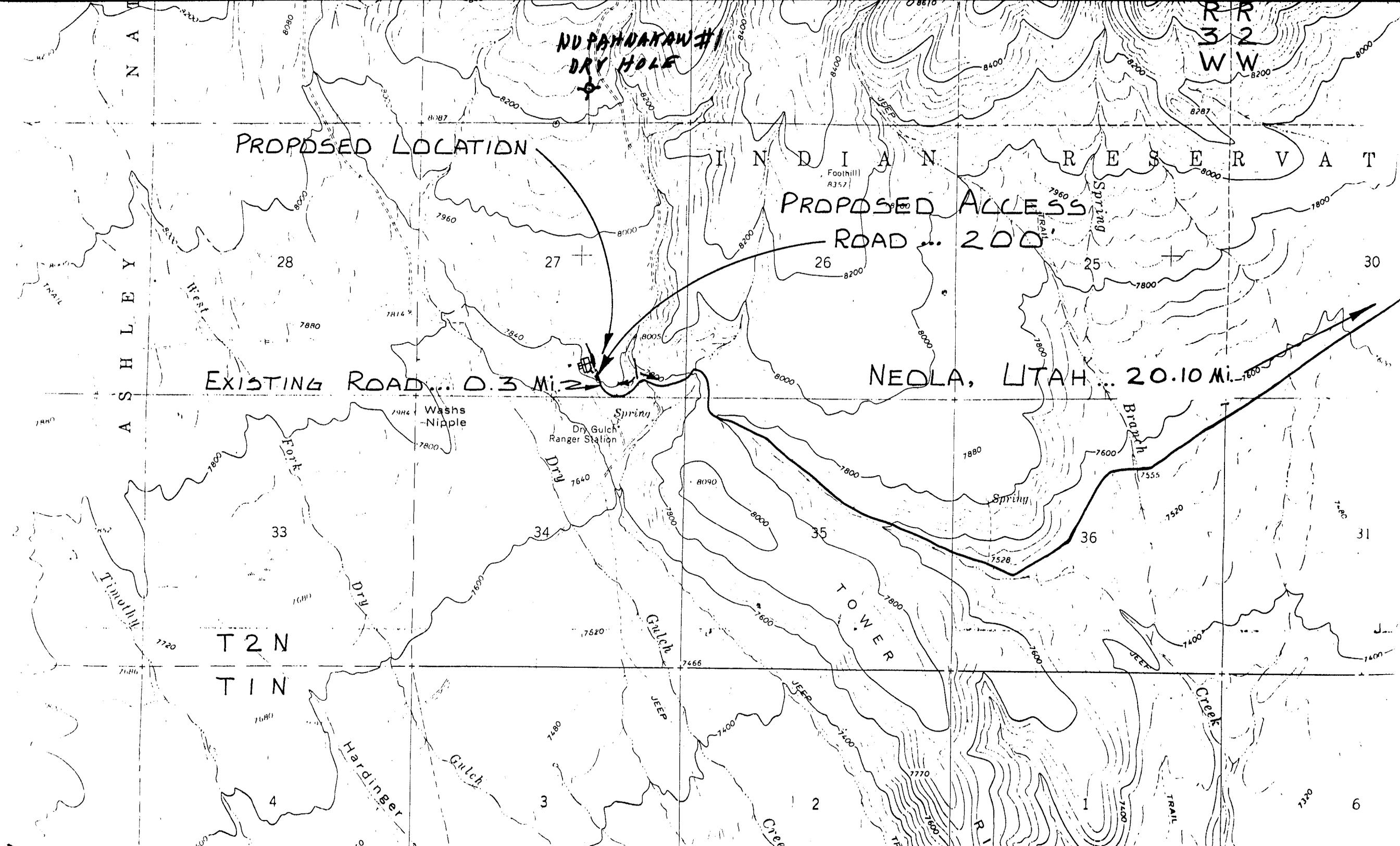
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19

ND PANDANAW #1
DRY HOLE

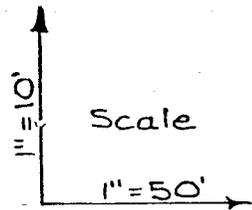
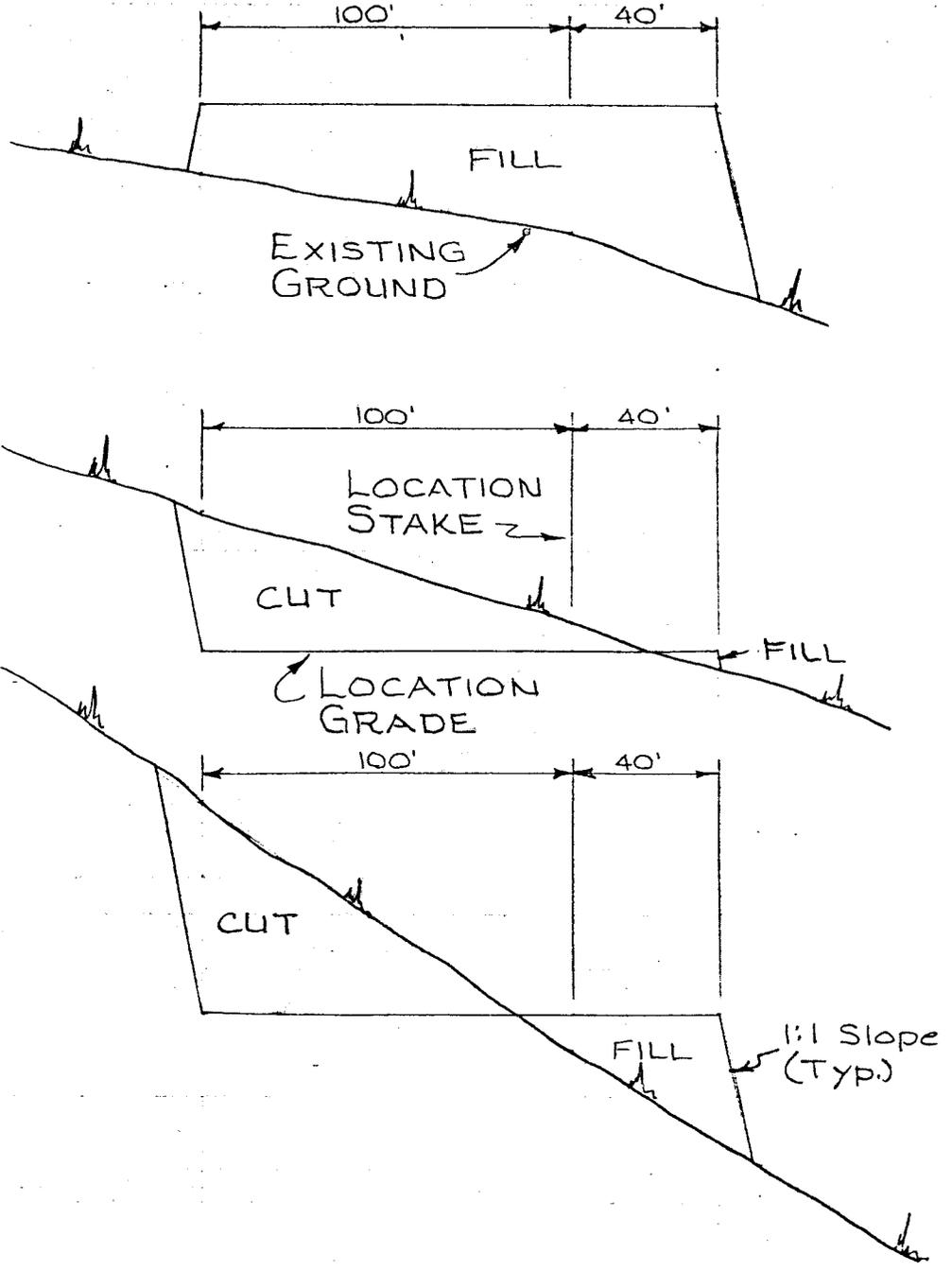
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ARCO OIL & GAS CO.
A DIVISION OF
ATLANTIC RICHFIELD CO.
SEC. 27, T2N, R3W, U.S.M.

CROSS SECTIONS

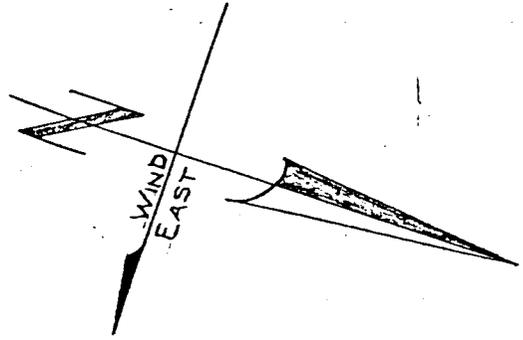


WASHS NIPPLE #1

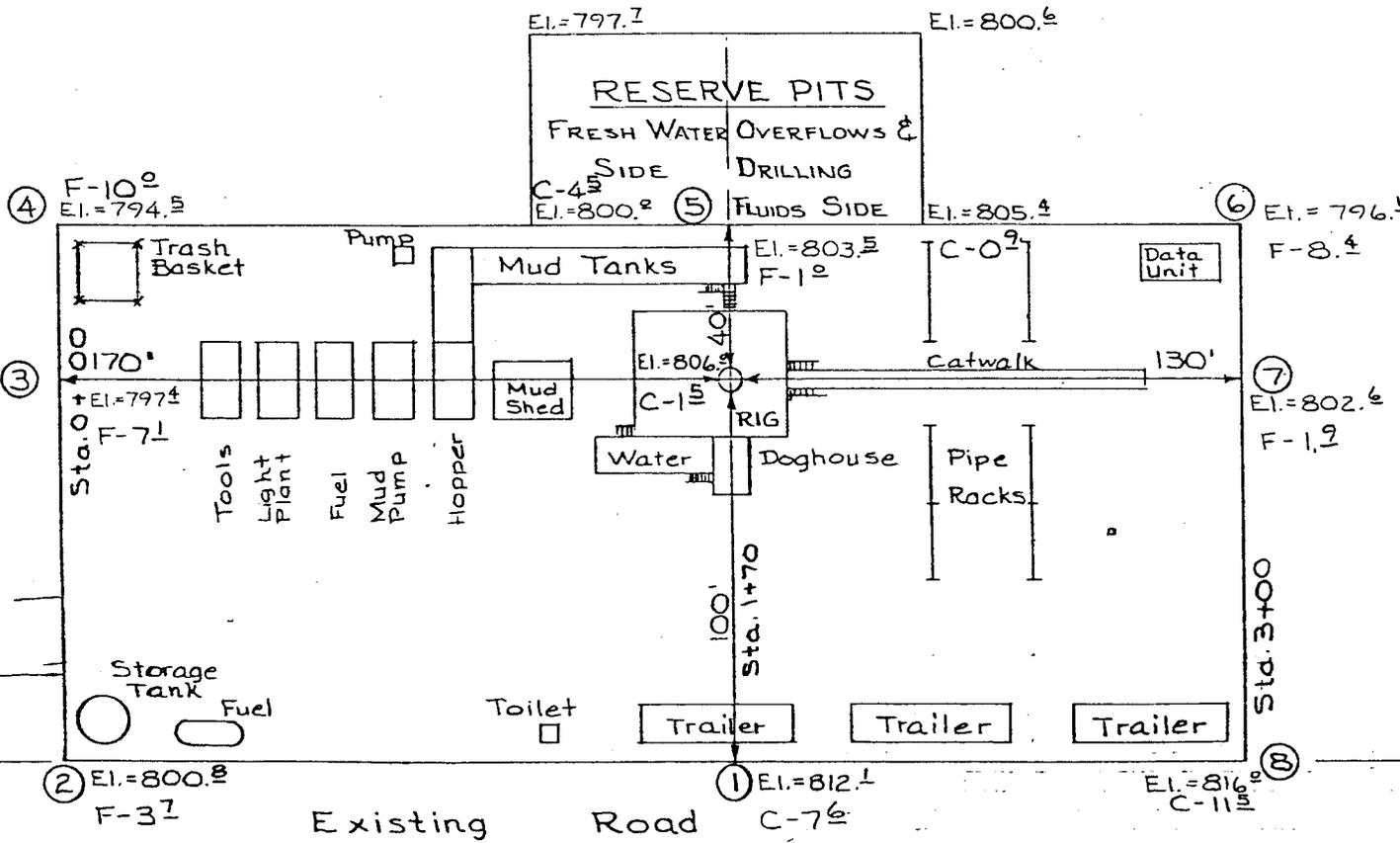
APPROXIMATE YARDAGES

Cubic Yds. of Cut - 4171
 Cubic Yds. of Fill - 3644

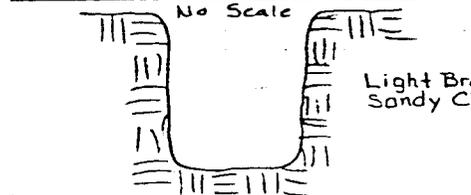
EXHIBIT-4



SCALE: 1" = 50'



SOILS LITHOLOGY



UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

5. LEASE DESIGNATION AND SERIAL NO.
14-20-H62-3090

6. IF INDIAN, ALLOTTEE OR TRIBE NAME
Ute

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME
Washes Nipple

9. WELL NO.
1

10. FIELD AND POOL, OR WILDCAT
Wildcat

11. SEC., T., R., M., OR BLE. AND SURVEY OR AREA
Sec. 27-T2N-R3W
Uintah Meridian

12. COUNTY OR PARISH
Duchesne

13. STATE
Utah

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK
DRILL DEEPEN PLUG BACK

b. TYPE OF WELL
OIL WELL OR GAS WELL OTHER
SINGLE ZONE MULTIPLE ZONE

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Division of Atlantic Richfield Company

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Not Spaced

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

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5500 Nugget

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Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.)
GR 7806'

22. APPROX. DATE WORK WILL START*
November 15, 1980

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This well is a wildcat to test the Nugget Formation expected between 5000 and 5500'.

Attachments: Certified Location Plat.
10 point drilling plan
13 point surface use plan.

APPROVED BY THE DIVISION
OF OIL, GAS, AND MINING
DATE: 10/29/80
BY: W. A. Walther, Jr.

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 W. A. Walther, Jr. TITLE Operations Manager DATE October 13, 1980

(This space for Federal or State office use)

PERMIT NO. _____ APPROVAL DATE _____

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY: _____

ARCO Oil and Gas Company
Western District
717-17th Street
Mailing address: P.O. Box 5540
Denver, Colorado 80217
Telephone 303 575 7000



October 17, 1980

U. S. Geological Survey
Mr. E. W. Guynn, District Engineer
2000 Administration Building
1745 West 1700 South
Salt Lake City, Utah 84138

Re: Filing NTL-6 and A.P.D. Form 9-331C
ARCO Oil and Gas Company
Washes Nipple #1
SW SE Sec. 27-T2N-R3W, U.S.B. & M.
1920' FEL & 660' FSL
Duchesne County, Utah

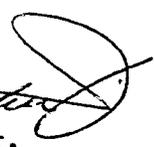
Dear Mr. Guynn:

Enclosed are three copies of the NTL-6 program and A.P.D. Form 9-331C for the above referenced well location.

Please notify us when you have arranged a time with the B.I.A. to inspect the site.

The archaeological report is not included with the NTL-6, but will be forwarded to your office, and to the B.I.A. office, under separate cover.

Sincerely yours,


W. A. Walther, Jr.
Operations Manager

MWS/WAW/ps

Enclosures

cc: Utah Division of Oil, Gas & Mining (2) ✓
1588 West, North Temple
Salt Lake City, Utah 84116

Utah and Oroy Agency
Environmental Analysis and Negative Declaration

1. Description of Proposal:

Atlantic Richfield Co. proposes to drill an Oil well 1 Wash's Nipple to a proposed depth of 5500 feet; to construct approximately 200 Ft. miles of new access road; and upgrade approximately None miles of existing access road. The well site is located approximately 10 miles Northwest Neola, Utah in the SWSE, Sec. 27, T 2N, R 3W USB&M.

2. Description of the Environment:

The area is used for grazing, wildlife habitat, hunting, fishing, camping and scenic value. The topography is an undulating glacial out-wash deposit. The vegetation consists of curl leaf mahogany, sagebrush, bitter brush, wheatgrass, 1 ponderosa pine and 2 pinyon pine trees.

The area is used as wildlife habitat for X deer, 0 antelope, X elk, X bear, X small animals, 0 pheasant, X dove, X sage grouse, X ruffle grouse, X blue grouse, 0 bald eagle, X golden eagle, other Coyote, porcupine, rabbit, beaver, cougar, fox.

The climate is characterized by having cold snowy winters and warm dry summers. Temperatures range from -40°F during the winter to 105°F in the summer. The approximate annual precipitation is 15-18 inches. The elevation is 7806 feet.

3. Environmental Impacts:

During construction of the well dust and exhaust emissions will affect air quality. Soil and vegetation will be removed from 1.5 acres of land occupied by the well site and access road. The disturbance of the soil and removal of vegetation will:

A. Destroy wildlife habitat for X deer, 0 antelope, X elk, X bear, X small animals, 0 pheasant, X dove, X sage grouse, ruffle grouse, X blue grouse, X rabbit, 0 golden eagle, 0 bald eagle, other

B. Remove from production: X rangeland for livestock grazing, 0 irrigated cropland, 0 irrigated pastureland, 0 prime timberland, 0 pinyon-juniper land.

C. Result in the invasion of annual weeds and will cause accelerated soil erosion: During the construction and production of the well human activity in the area will increase significantly. This is expected to significantly increase: X poaching of wildlife, X disturbance of wildlife, X vandalism of property, X theft of firewood, X litter accumulations, X livestock disturbance, X livestock thefts, X livestock loss to accidents, X increase the hazard to public health and safety. There is a high, X moderate, slight possibility that pollution from this activity will enter a stream or lake.

Production facilities can easily be seen from a: 0 community, 0 major highway, 0 public facility.

4. Mitigating measures:

To lessen the impact on the environment the provisions stipulated in the letter to Mr. Ed W. Gynn, District Engineer, U.S. Geological Survey, dated February 13, 1980 will be implemented. Additional stipulations and changes to the 13 point surface use plan are: (1) line reserve pits. (2) stockpile top soil. (3) give 72 hours notice before construction of site begins.

5. Unavoidable adverse effects

None of the adverse effects listed in item 13 above can be avoided in a practical manner except those which were mitigated in item 14 above.

6. Relationship between short term and longterm productivity:

As long as oil or gas wells are producing and the access roads are retained there will be a total loss of production on the land and the Environmental Impacts will continue to affect the surrounding area. Normally oil and gas wells produce from 15 to 30 years. After the wells stop producing it is standard policy to restore the surface to near its original condition. Occasionally the site occupied by the well or road can be restored to produce as much as it originally produced, but most of the time it can not be restored to its original productive capacity. Therefore, the land surface productive ability will be permanently damaged.

7. Irreversible and Irretrievable commitment of Natural Resources:

There are two irreversible and irretrievable resources commit in this action.

- A. Oil or Gas: Oil and gas is a non-renewable resource. Once it has been removed it can never be replaced.
- B. Damage to the land surface: There are three causes of damage to the soil surface due to oil or gas wells and road construction. (1) Gravel is normally hauled onto the site as a pad foundation for equipment and traffic to operate on. Gravel has low fertility and low waterholding capacity. Therefore, after the site is restored the gravel must either be removed, or incorporated into the natural landscape. (2) Chemicals are often either accidentally spilled or intentionally applied to the site for weed and dust control. Generally the chemicals are crude oil or production water, which may contain as much as 20,000 PPM of salts. Once chemicals become incorporated in the soil they are difficult to remove and interfere with the soils ability to produce vegetation. (3) Soil compaction occurs where the site is subject to stormy wet weather and traffic from heavy trucks and equipment. Each of the above items cause soil damage and after the site is restored the productive ability of the soil will be damaged permanently.

8. Alternatives:

- A. No. program - This alternative refuses the authorization of the application for permit to drill. This action would not allow the operator to enter upon the land surface to drill for oil or gas. Because the minerals usually cannot be developed without encroachment on the surface, the mineral estate is normally and traditionally designated as dominant, and the surface ownership subservient. The mineral operator's conduct is generally prescribed only by the rule of reasonableness and the limitations that he is not permitted to act in a wanton or negligent manner. Within their confines, the operator has considerable latitude in the necessary use of the surface to produce and develop the mineral estate. Therefore if the application for permit is not signed, the operator would undoubtedly initiate court proceedings against the surface owner, in this case the Ute Tribe and the Bureau of Indian Affairs. Historically the courts have upheld the right of the mineral owner to develop the mineral resource regardless of the surface owners desire, therefore the operators rights will likely be upheld if B.I.A. refuses to sign the application for permit to drill this well.
- B. Sign the application for permit to drill. This alternative authorizes the operator to drill for oil or gas as prescribed in the application, providing he complies with stipulations which are considered reasonable as specified in paragraph 4 above under mitigating measures.

9. Consultation:

 Craig Hansen ----- USGS, Vernal, Utah

 Mark Smith ----- Atlantic Richfield Oil & Gas Co.

 Elwyn Dushane ----- Ute Tribe Energy & Minerals Office

 Joe Pinnecoose ----- Ute Tribe Energy & Minerals Office

 Leonard Heeney ----- Ross Brother Construction, Vernal, Utah.

L. Lynn Hall 11-18-80
 B.I.A. Representative

10. We (concur with or, recommend) approval of the Application for Permit to Drill the subject well.

Based on available information 11/17/80, we have cleared the proposed location in the following areas of environmental impact:

Yes No Listed threatened or endangered species

Yes No Critical wildlife habitat

Yes No Historical or cultural resources

Yes No Air quality aspects (to be used only if project is in or adjacent to a Class I area of attainment)

Yes No Other (if necessary)

Remarks: See USGS Environmental Assessment #044-81

The necessary surface protection and rehabilitation requirements are specified above.

R. Lynn Hall 11-18-80
B.I.A. Representative

11. Declaration:

It has been determined that the drilling of the above well is not a Federal action significantly affecting the quality of the environment as would require the preparation of an environmental statement in accordance with Section 102 (2) (c) of the National Environmental Policy Act of 1969 (42 USC 4331) (2) (c).

Henry J. Guel
Acting Superintendent

Date 12/3/80

Memorandum

To: District Oil and Gas Engineer, Mr. Edward Guynn

From: Mining, Supervisor, Mr. Jackson W. Moffitt

Subject: Application for Permit to Drill (form 9-331c) Federal oil and gas lease No. 14-20-462-3090 Well No. 1

1. The location appears potentially valuable for:

strip mining*

underground mining**

has no known potential.

2. The proposed area is

under a Federal lease for _____ under the jurisdiction of this office.

not under a Federal lease under the jurisdiction of this office.

3. Please request the operator to furnish resistivity, density, Gamma-Ray, or other appropriate electric logs covering all formations containing potentially valuable minerals subject to the Mineral Leasing Act of 1920.

*If location has strip mining potential:

Surface casing should be set to at least 50 feet below the lowest strip minable zone at _____ and cemented to surface. Upon abandonment, a 300-foot cement plug should be set immediately below the base of the minable zone.

**If location has underground mining potential:

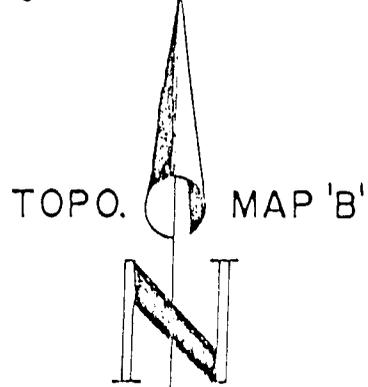
The minable zones should be isolated with cement from a point 100 feet below the formation to 100 feet above the formation. Water-bearing horizons should be cemented in like manner. Except for salines or water-bearing horizons with potential for mixing aquifers, a depth of 4,000 feet has been deemed the lowest limit for cementing.

Signed Allen J. Vance

ATLANTIC RICHFIELD CO.

ARCO

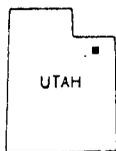
PROPOSED LOCATION
WASHS NIPPLE #1



SCALE - 1" = 2000'

ROAD CLASSIFICATION

Light-duty Unimproved dirt



QUADRANGLE LOCATION

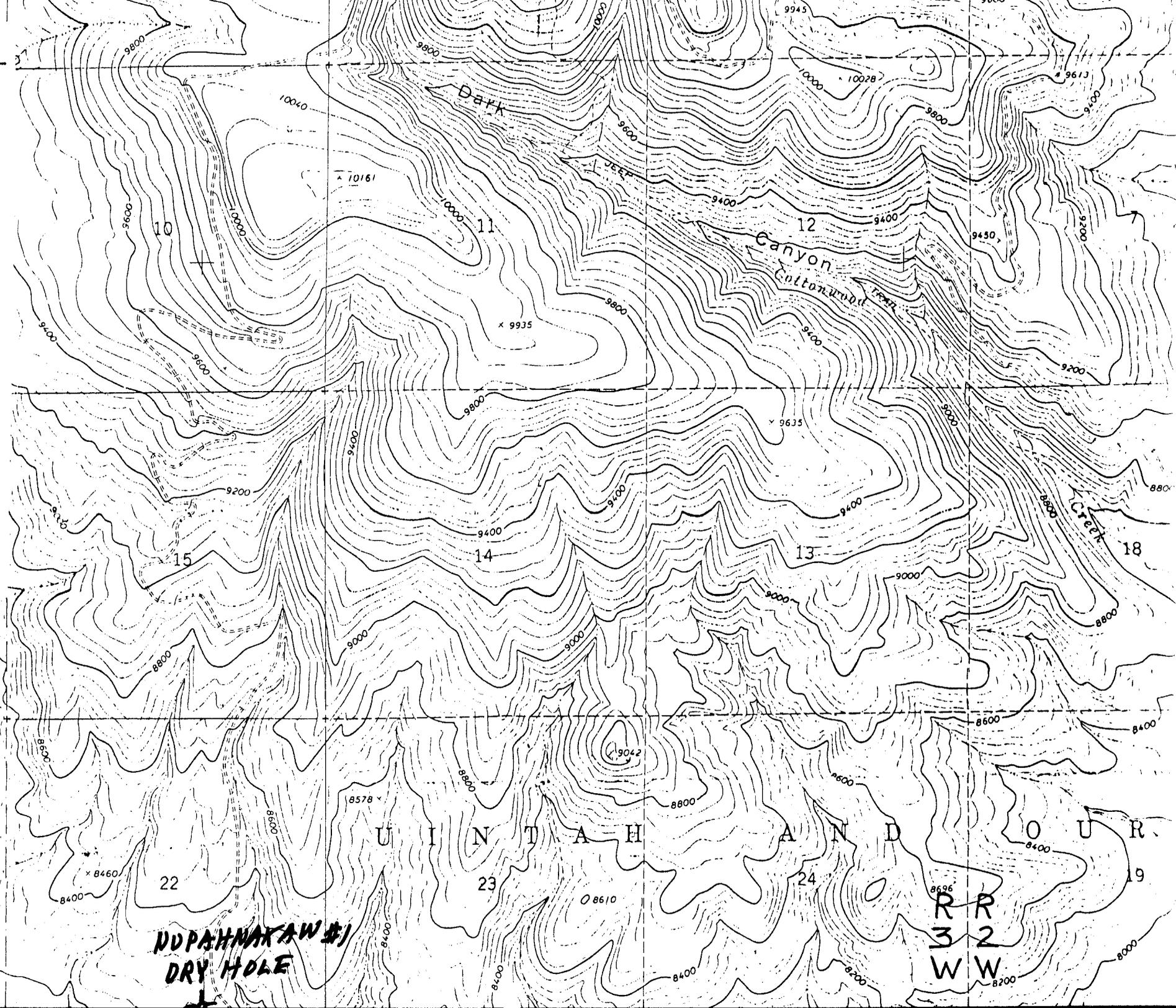
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**NDPAHNAKAW #1
DRY HOLE**

RR
32
WW



PROPOSED LOCATION

INDIAN RESERVATION

PROPOSED ACCESS ROAD ... 2.00

EXISTING ROAD ... 0.3 Mi. 2

NEOLA, UTAH ... 20.10 Mi.

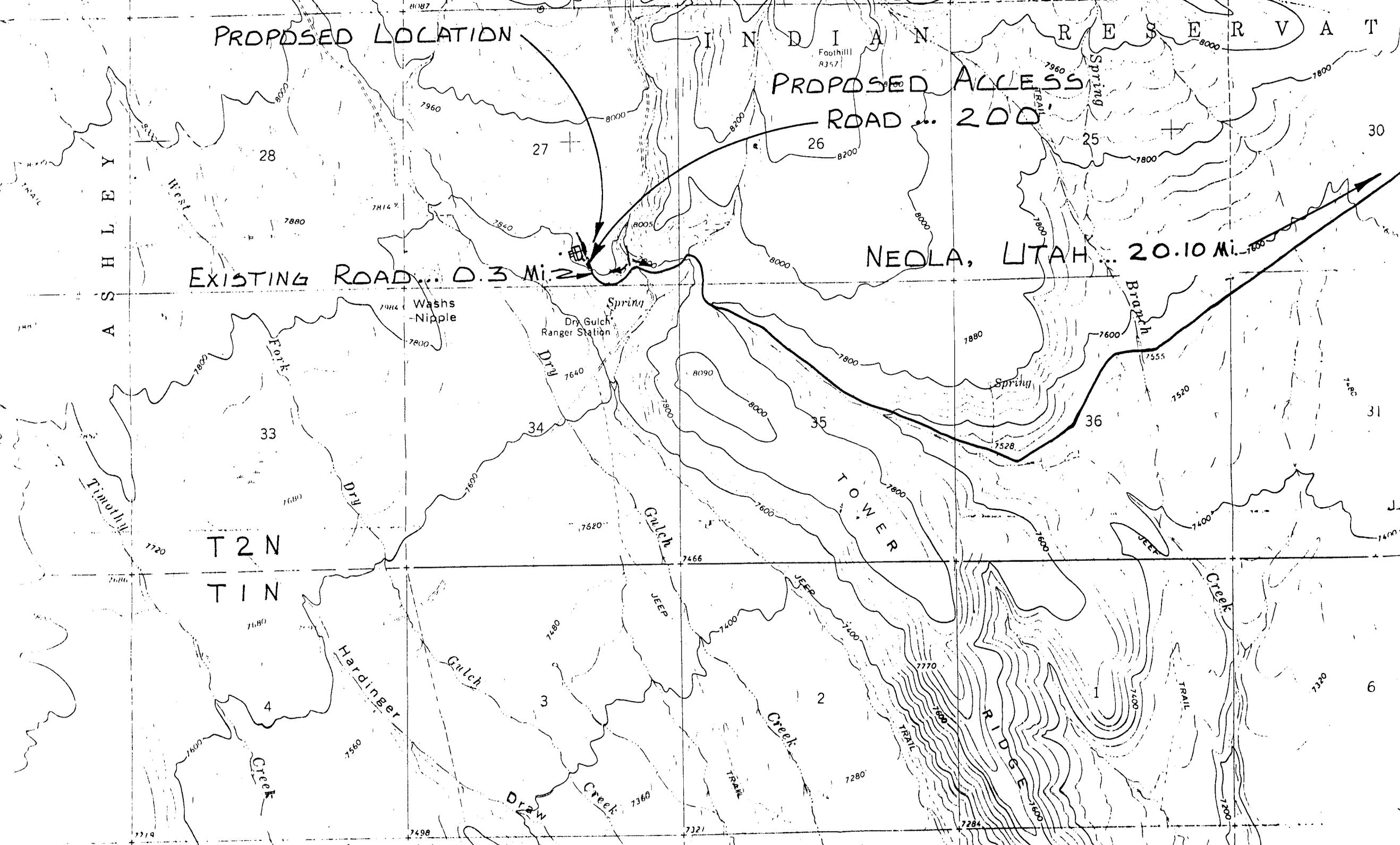
A S H L E Y

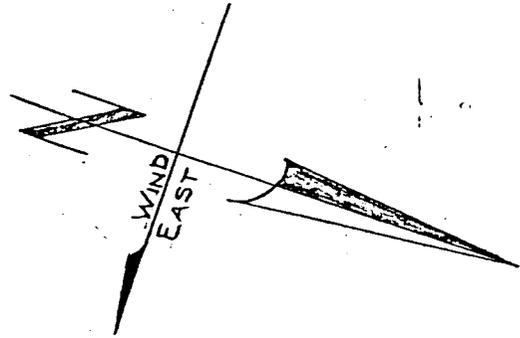
T 2 N

T 1 N

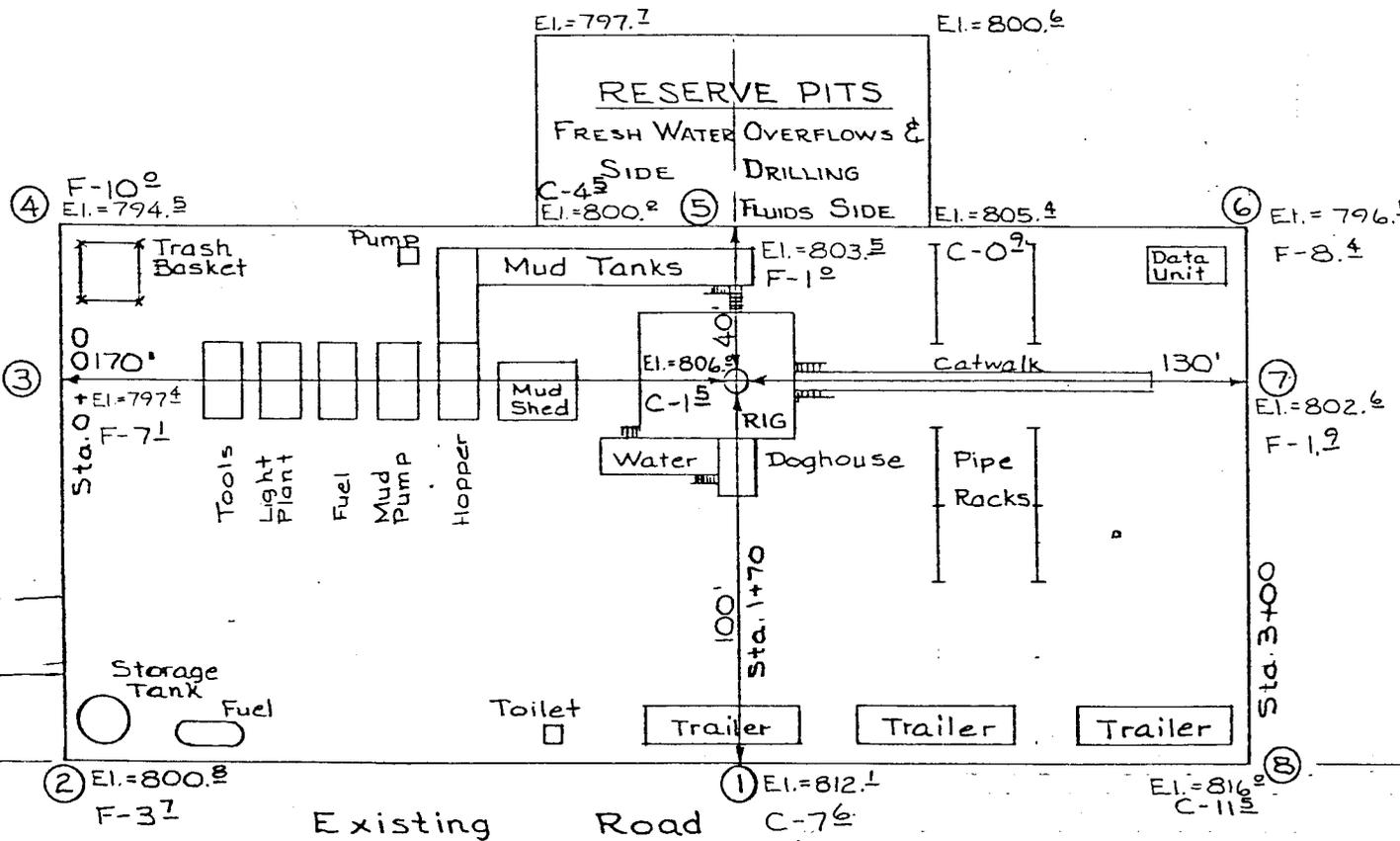
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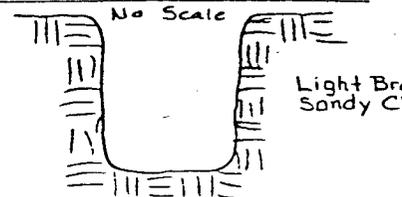




SCALE: 1" = 50'



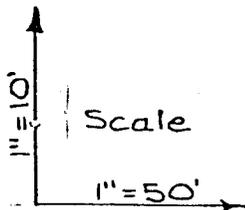
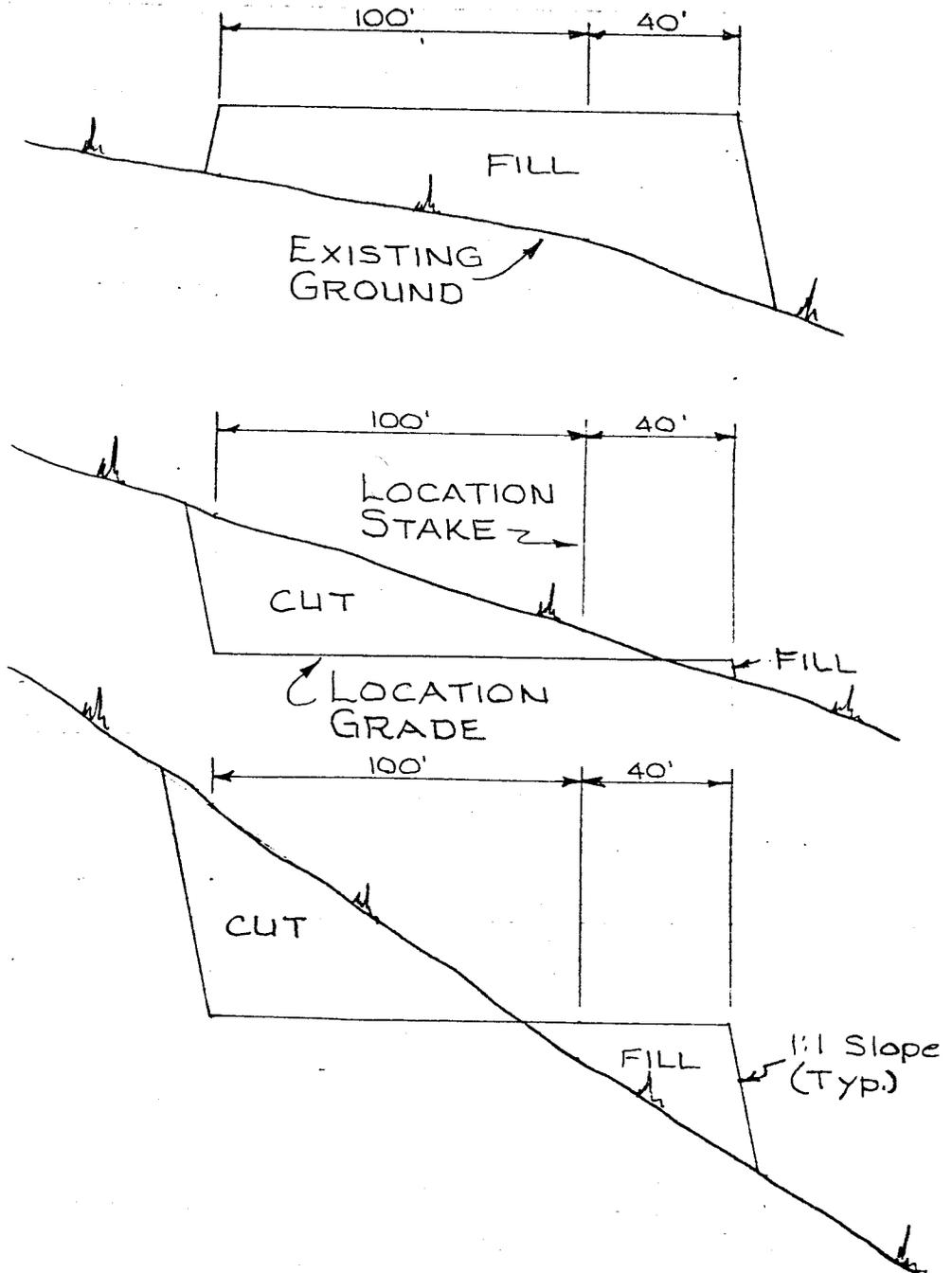
SOILS LITHOLOGY



ARCO OIL & GAS CO.
A DIVISION OF
ATLANTIC RICHFIELD CO.
SEC. 27, T2N, R3W, U.S.M.

C
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WASHES NIPPLE #1

APPROXIMATE YARDAGES

Cubic Yds. of Cut - 4171

Cubic Yds. of Fill - 3644

EXHIBIT-4

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 OR GAS WELL OTHER
 SINGLE ZONE MULTIPLE ZONE

2. NAME OF OPERATOR ARCO Oil and Gas Company,
 Division of Atlantic Richfield Company

3. ADDRESS OF OPERATOR
 P. O. Box 5540, Denver, Colorado 80217

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*)
 At surface
1930' 1920' FEL & 660' FSL Sec. 27 (SW SE)
 At proposed prod. zone. Approx the same

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*
 20 miles NW of Neola, Utah

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

16. NO. OF ACRES IN LEASE
 640

17. NO. OF ACRES ASSIGNED TO THIS WELL
 Not Spaced

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

19. PROPOSED DEPTH
 5500

20. ROTARY OR CABLE TOOLS
 Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.)
 GR 7806'

5. LEASE DESIGNATION AND SERIAL NO.
 14-20-H62-3090

6. IF INDIAN, ALLOTTEE OR TRIBE NAME
 Ute

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME
 Washs Nipple

9. WELL NO.
 1

10. FIELD AND POOL, OR WILDCAT
 Wildcat

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA
 Sec. 27-T2N-R6W SW
 Uintah Meridian

12. COUNTY OR PARISH
 Duchesne

13. STATE
 Utah

22. APPROX. DATE WORK WILL START*
 November 15, 1980

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
20"	16"	Conductor	50'	75 sx to surface
14-3/4"	10-3/4"	40.5#	500'	550 sx to surface
7-7/8"	5 1/2"	15.5#	5500'	250 sx to 500' above productive zones

This well is a wildcat to test the Nugget Formation expected between 5000 and 5500'.

Attachments: Certified Location Plat.
 10 point drilling plan
 13 point surface use plan.

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 W. A. Walther, Jr. TITLE Operations Manager DATE October 13, 1980

(This space for Federal or State office use)

PERMIT NO. _____ APPROVAL DATE _____
 APPROVED BY W. W. Mountain TITLE FOR G. E. W. GUYNN DISTRICT ENGINEER DATE DEC 05 1980

CONDITIONS OF APPROVAL, IF ANY:

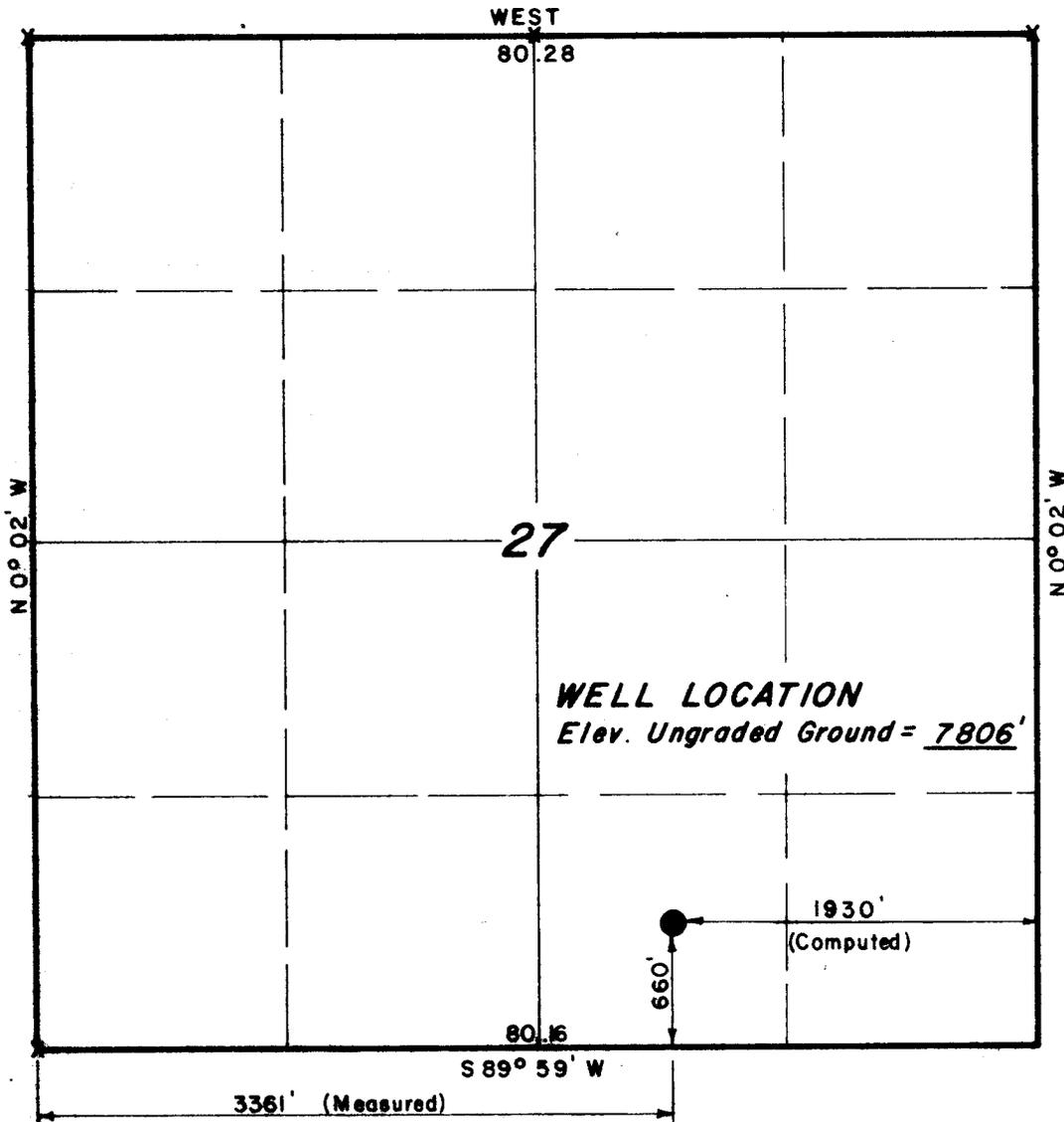
CONDITIONS OF APPROVAL ATTACHED TO OPERATOR'S COPY

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

NOTICE OF APPROVAL

State Oil & Gas

T 2N, R3W, U.S.B.&M.



X = Section Corners Located.

PROJECT
ARCO OIL & GAS CO. - A DIVISION OF
ATLANTIC RICHFIELD CO.

Well location located as shown in
the SW 1/4 SE 1/4 Section 27, T2N,
R3W, U.S.B. & M. Duchesne County,
Utah.

WELL WASHES NIPPLE #1
EXHIBIT - 1



CERTIFICATE

THIS IS TO CERTIFY THAT THE ABOVE PLAT WAS PREPARED FROM
FIELD NOTES OF ACTUAL SURVEYS MADE BY ME OR UNDER MY
SUPERVISION AND THAT THE SAME ARE TRUE AND CORRECT TO THE
BEST OF MY KNOWLEDGE AND BELIEF.

Lawrence C. Kay

REGISTERED LAND SURVEYOR
REGISTRATION NO 3137
STATE OF UTAH

UINTAH ENGINEERING & LAND SURVEYING P. O. BOX Q - 110 EAST - FIRST SOUTH VERNAL, UTAH - 84078	
SCALE 1" = 1000'	DATE 10-8-80
PARTY G.S. B.J. L.C.K.	REFERENCES GLO Plat
WEATHER Fair	FILE ATLANTIC RICHFIELD



ATLANTIC RICHFIELD CO.

ARCO

PROPOSED LOCATION
WASHES NIPPLE #1

TOPO. MAP 'A'



SCALE - 1" = 4 MI.

PROPOSED LOCATION

NEPELA, UTAH

UNTAH AND OURAY INDIAN RESERVATION

UNTAH AND OURAY INDIAN RESERVATION

EXHIBIT-2

TEN POINT DRILLING PLAN

Attach to APD Form 9-331-C
ARCO Oil and Gas Company
Well: Washs Nipple #1
1920' FEL & 660' FSL
Section 27-T2N-R3W, U.S.B.& M.
Duchesne County, Utah

1. Surface Geological Formation: Starr Flat
2. Estimated Tops of Geological Markers:
Nugget - 5000'
3. Estimated Tops of Possible Water, Oil, Gas or Minerals:
Nugget - 5000' (oil or gas)
4. Proposed Casing Program:

<u>Casing</u>	<u>Hole Size</u>	<u>Interval</u>	<u>Section Length</u>	<u>Size OD</u>	<u>Weight and Joint</u>	<u>Grade</u>	<u>New Used</u>
Conductor	24"	0 - 50'	50	16"	Conductor		New
Surface	14-3/4"	0 - 500'	500	10-3/4"	40.5#	K-55 ST&C	New
Production	8-3/4"	0 - 5500'	5500	5-1/2"	15.5#	K-55 ST&C	New

4. Proposed Casing Program Cont'd:

Cement Program

Conductor To surface with 75 sx neat cement.

Surface To surface with 500 sx neat cement.

Production 500' above productive zones with estimated 500 sx cement with additives if required for well conditions.

5. Minimum Specifications for Pressure Control:

Exhibit A is a schematic diagram of the blowout preventer equipment. The BOPs will be hydraulically tested to half of working pressure after nipling up and after any use under pressure. Pipe rams will be operationally checked each 24-hour period, as will blind rams and annular preventer each time pipe is pulled out of the hole. Such checks of BOP will be noted on daily drilling reports.

Accessories to BOP will include a kelly cock, floor safety valve, and choke manifold with pressure rating equivalent to the BOP stack. All equipment will be 3000 psi W.P.

6. Type and Characteristic of Proposed Drilling Fluids:

<u>Depth</u>	<u>Type</u>	<u>Weight #/gal.</u>	<u>Visc. sec/qt.</u>	<u>Fluid Loss cc</u>
0 - 500'	Wtr & Gel	8.3 - 9.0	40 - 60	20+ cc
500 - 5500'	Low Solids	8.7 - 9.0	35 - 45	10-15 cc

Mud system will be gel-chemical with adequate stocks of sorptive agents on site to handle possible spills of fuel and oil on the surface. Heavier muds will be on location to be added if pressure requires. Treat with chemicals as required to maintain hole.

7. Auxiliary Equipment:

- (a) A kelly cock will be kept in the string.
- (b) A float will not be used at the bit.
- (c) A mud logging unit and gas detecting device will be monitoring the system.
- (d) A stabbing valve will be on the floor to be stabbed into the drill pipe when kelly is not in the string.
- (e) A pit level will be used to monitor the mud.

8. Testing, Logging and Coring Programs:

- (a) A minimum of one 30' core will be taken in the Nugget formation.
- (b) One or two drill stem tests will be taken in the Nugget formation.
- (c) Logs will be run from TD to 50' as follows: Dual Induction Laterolog, Compensated Neutron Log, Formation Density Log, Gamma Ray Log and Dipmeter.
- (d) If a productive well is indicated, production casing will be run and gun perforated, production will be through tubing. No stimulation treatments involving flammable fluids are anticipated.

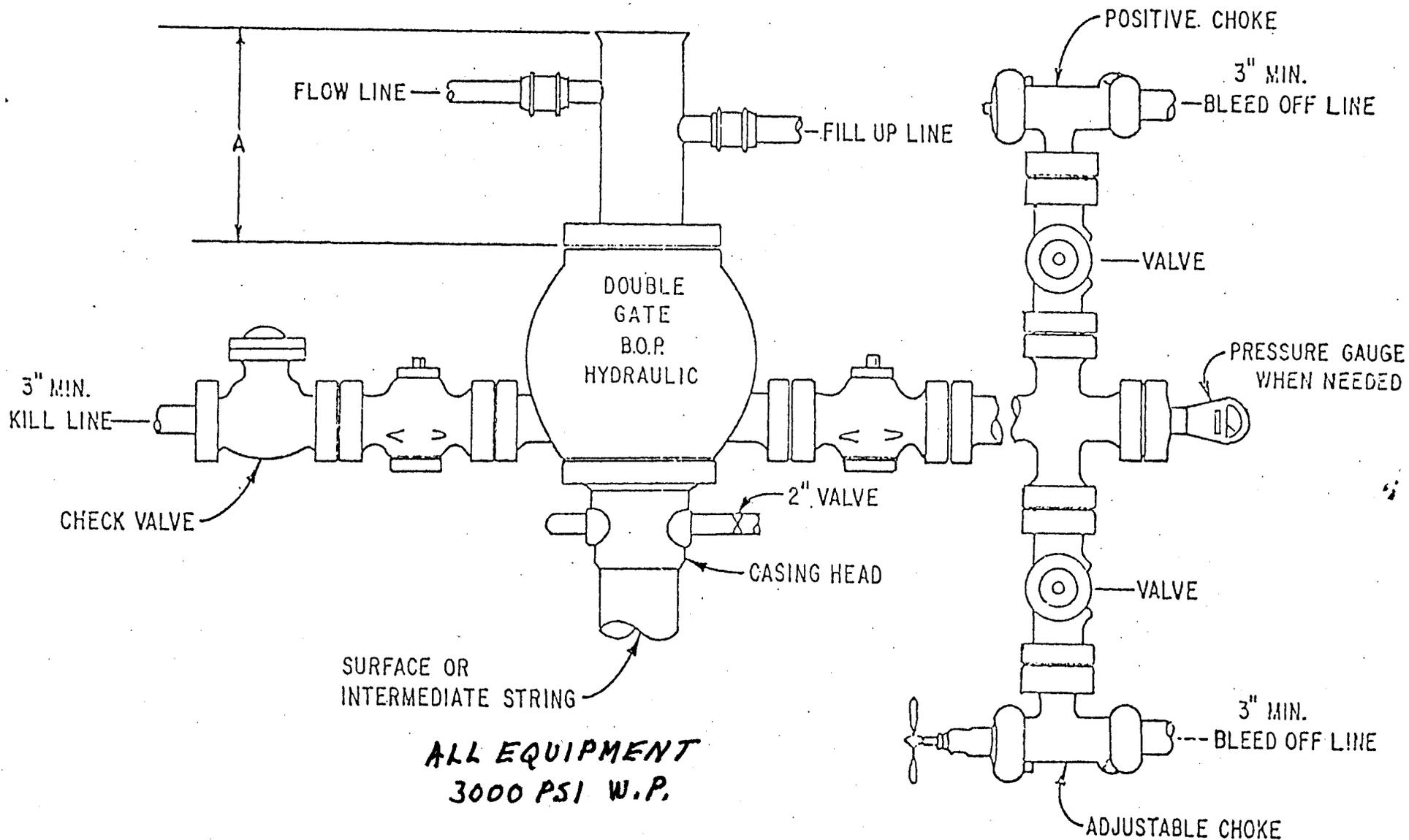
9. Anticipated Abnormal Temperatures, Pressures or Hazards:

No abnormal pressures or temperatures have been noted or reported in wells drilled in the area nor at the depths anticipated in this well. Bottom hole pressure expected is 2400 psi.

No hydrogen sulfide or other hazardous fluids or gases have been found, reported or known to exist at these depths in the area.

10. Anticipated Starting Date and Duration of Operations:

Our anticipated starting date for drilling is November 15, 1980, or as soon as a rig is available after approval. Drilling time is estimated to be 44 days with an additional 15 days required for completion if well is successful.



SURFACE OR INTERMEDIATE STRING

**ALL EQUIPMENT
3000 PSI W.P.**

**ARCO OIL AND GAS CO.
WASHS NIPPLE #/
SEC 27, 2N, R3W
DUCHE SNE COUNTY, UTAH**

13-POINT PLAN SURFACE USE PLAN

Attached to Form 9-331C
ARCO Oil and Gas Company
Well: Washs Nipple #1
Section 27-T2N-R3W, U.S.B. & M.
Duchesne County, Utah

1. Existing Roads:

- A. The certified well location plat is Exhibit 1.
- B. The location is reached as shown in Exhibits 2 and 3. Go west from Neola, Utah approximately 4.3 miles, then north 8.7 miles, then west 4.0 miles to a three-way fork. Take center fork about 0.2 miles to location on left side of road. Alternate access is to go north from Neola 9.0 miles to end of paved highway, then turn west 9.0 miles to location. Neola is 9.8 miles north of Roosevelt, Utah on Highway 121.
- C. Roads to and near the location are shown in Exhibits 2 and 3.
- D. This is an exploratory well. All roads are shown in Exhibits 2 and 3. All roads are gravel surface suitable for access without further work.
- E. N/A.
- F. No improvement of existing roads is required; however, any maintenance needed to keep roads in current good condition will be done.

2. Planned Access Roads:

The only new road required will be a short access angling from the southeast on to the location which is immediately adjacent to the existing road. See Exhibit 4.

3. Location of Existing Wells:

The only well within 2 miles of the proposed location is abandoned dry hole Nu Pahnakaw #1, located 1 mile north as shown in Exhibit 3.

4. Location of Existing and/or Proposed Facilities:

- A. Within a one-mile radius of location there are no facilities owned or controlled by ARCO Oil and Gas Company.
- B. If the well is productive, a Sundry Notice will be submitted for the facilities required for production.
- C. Rehabilitation, whether well is productive or dry, will be made on all unused areas in accordance with B.I.A. stipulations.

5. Location and Type of Water Supply:

- A. The exact water source for this well has not been determined. We intend to acquire water from a local owner of water rights and a Sundry Notice will be submitted when source is finalized. Any State of Utah permits required to use this water will be obtained.
- B. Water will be trucked to the location.
- C. No water well will be drilled.

6. Construction Materials:

No construction materials other than cut on the site will be required:

7. Handling of Waste Materials and Disposal:

- (1) Drill cuttings will be buried in the reserve pit.
- (2) Drilling fluids will be handled in the reserve pit.
- (3) Any fluids produced during drilling test or while making production test will be collected in a test tank. If a test tank is not available during drilling, fluids will be handled in reserve pit. Any spills of oil, gas, salt water or other noxious fluids will be cleaned up and removed. If well is productive, produced water will be disposed of on-site for 30 days only, or 90 days with permission of District Engineer. After that time application will be made for approval of permanent disposal methods in compliance with NTL-2b.
- (4) Chemical toilet facilities will be provided for human waste.
- (5) Garbage and waste will be handled in a trash cage. The drill fluids, water, drilling mud and tailings will be kept in reserve pit. The trash cage will be totally enclosed with small mesh wire to prevent wind scattering trash before being removed. Trash will be hauled to an approved disposal dump. Reserve pit will be fenced on three sides during drilling and the fourth side fenced upon removal of the rig.
- (6) After the rig moves out, all materials will be cleaned up and no adverse materials will be left on location. All dangerous open pits will be fenced during drilling and kept closed until such time as the pit is leveled.

8. Ancillary Facilities:

No air strip, camp or other facilities will be built during drilling of this well.

9. Well Site Layout:

- (1) EXHIBIT "4" is the Drill Pad Layout as staked, with elevations. Cuts and fill have been drafted to visualize the planned cut across the location spot and the deepest part of the pad. Topsoil will be stockpiled per BIA specifications determined at time of pre-drill inspection.
- (2) EXHIBIT "4" has a plan diagram of the proposed rig and equipment, reserve pit, trash cage, pipe racks and mud tanks. No permanent living facilities are planned. There will be 3 or 4 trailers on site.
- (3) EXHIBIT "4" shows rig orientation and access road.
- (4) The reserve pits will not be lined.

10. Plans for Restoration:

- (1) If well is abandoned, site will be restored to original condition as nearly as possible. Backfilling, leveling and contouring are planned as soon as all pits have dried. Waste disposal and spoils materials will be buried or hauled away immediately to an approved sanitary land fill after drilling is completed. If production is obtained, the unused area will be restored as soon as possible.
- (2) The soil banked material will be spread over the area. Revegetation will be accomplished by planting mixed grasses as per formula provided by the BIA. Revegetation is recommended for road area, as well as around drill pad.

- (3) Three sides of the reserve pit will be fenced during drilling operations. Prior to rig release, the reserve pit will be fenced on the fourth side to prevent livestock or wildlife from entering; and the fencing will be maintained until leveling and cleanup are accomplished.
- (4) If any oil is on the pits and is not immediately removed or burned after operations cease, the pit containing the oil or other adverse substances will be flagged overhead or covered with wire mesh.
- (5) The rehabilitation operations will begin immediately after the well is completed. Removal of oil or other adverse substances will begin immediately or area will be flagged and fenced. Other cleanup will be done as needed. Planting and revegetation will be done as recommended by surface management agency.

11. Other Information:

- (1) Exhibit 3 shows the topography of the area. The surface soil is a sandy clay with boulders up to 2'. There are sage, cactus and some pine trees on the edge of the location. Efforts will be made to try to cut as few trees as possible. It is probable that the general area is habitat for varied wildlife such as deer, elk and other animals. Every effort will be made to minimize impacts on wildlife as recommended by the BIA.
- (2) The primary surface use is for grazing and hunting and all lands are Indian owned.
- (3) The closest live water is Dry Gulch 1/4 mile west of the location.

No occupied dwellings were noted within 1 mile of the location.

There were no archaeological, historical, or cultural artifacts observed during staking of this location. However, an archaeological survey will be conducted by a qualified archaeologist and a report submitted to the surface management agency prior to any surface disturbance.

11. Other Information Cont'd:

- (4) The lease is subject to requirements and stipulations of the Unitah and Ouray Indian Agency. All of these items will be followed as required.
- (5) Drilling is planned to start November 15, 1980, requiring 44 days to drill and 15 days for completion if the well is successful.

12. Lessee's or Operator's Representative:

W. A. Walther, Jr.
ARCO Oil and Gas Company
P. O. Box 5540
Denver, Colorado 80217
Bus. Tele: (303) 575-7031
Res. Tele: (303) 575-7153

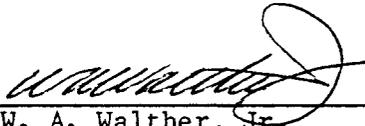
C. E. Latchem
ARCO Oil and Gas Company
P. O. Box 5540
Denver, Colorado 80217
Bus. Tele: (303) 575-7127
Res. Tele: (303) 575-7152

13. Certification:

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 will be performed by ARCO Oil and Gas Company and its contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved.

10/17/80

Date



W. A. Walther, Jr.
Operations Manager
ARCO Oil and Gas Company

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

NEPA CATEGORICAL EXCLUSION REVIEW

PROJECT IDENTIFICATION

Operator ARCO Oil and Gas Company
Project Type Oil well - Wildcat
Project Location ^{1930'}~~1920'~~ FEL 660' FSL Section 27, T. 2N, R. 3W
Well No. #1 Washs Nipple Lease No. 14-20-H62-3090
Date Project Submitted October 20, 1980

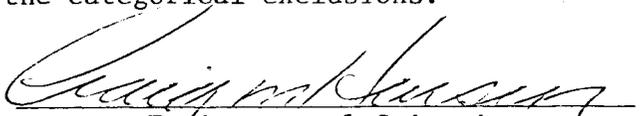
FIELD INSPECTION Date November 17, 1980

Field Inspection Participants
Craig M. Hansen - USGS, Vernal
Lynn Hall - BIA, Fort Duchesne
Elroy Duchesne - Ute Tribe
Joe Pennacoose - Ute Tribe
Mark Smith - ARCO Oil and Gas Company

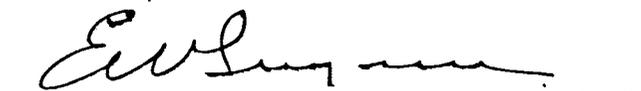
Related Environmental Documents: _____

I have reviewed the proposal in accordance with the categorical exclusion review guidelines. This proposal would not involve any significant effects and, therefore, does not represent an exception to the categorical exclusions.

November 18, 1980
Date Prepared


Environmental Scientist

I concur
12/1/80
Date


District Supervisor

Typing In 11-18-80 Typing Out 11-18-80

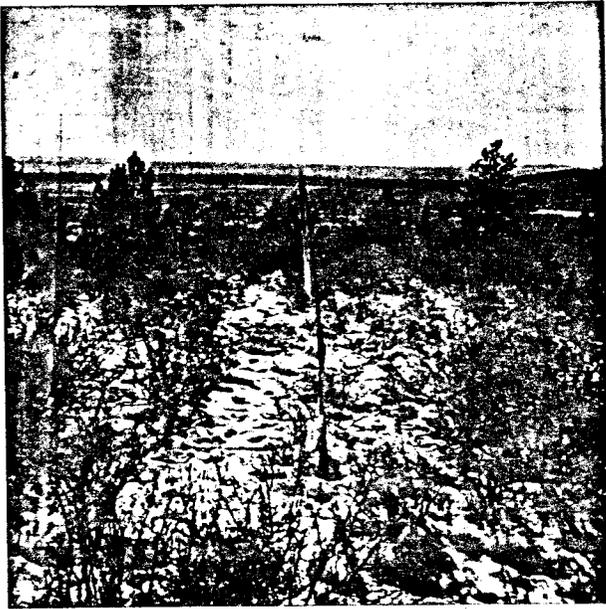
Re 12/1/80

CATEGORICAL EXCLUSION REVIEW COMMON REFERENCE LEGEND

1. Surface Management Agency Input
2. Reviews Reports, or information received from Geological Survey
(Conservation Division, Geological Division, Water Resource Division,
Topographic Division)
3. Lease Stipulations/Terms
4. Application Permit to Drill
5. Operator Correspondence
6. Field Observation
7. Private Rehabilitation Agreement

Recommended Stipulations for ARCO #1 Washs Nipple

1. Reserve pits will be closed as soon as drilling is complete. Testing will be done in steel tanks and removed upon completion of testing.
2. All trailers will be self contained. No sewage will be dumped on location.
3. If production occurs, production facilities will be painted a green color to blend in with the natural surroundings.
4. A 72 hour construction notice will be given to USGS and BIA before construction begins.
5. Access roads will be maintained in good shape to allow safe passage of vehicles.
6. Top-soil stock pile will be placed on the southeast corner of the location.
7. Adhere to basic recommended stipulations by BIA on file in Salt Lake City District Office.



Arco #1 Wash nipple
Looking West



Arco #1 Wash nipple
Looking South



Arco #1 Wash nipple
Looking East



Arco #1 Wash nipple
Looking north

FROM: DISTRICT GEOLOGIST, ME SALT LAKE CITY, UTAH

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

SUBJECT: APD MINERAL EVALUATION REPORT

LEASE NO. 14-20-H62-3090

OPERATOR: ARCO OIL AND GAS

WELL NO. 1

LOCATION: C 1/2 SW 1/2 SE 1/2 sec. 27, T. 2N, R. 3W, USM

DUCHESNE County, UTAH

Stratigraphy: OPERATOR EXPECTS TO ENCOUNTER NUGGET BETWEEN 5000' + 5500'. EXPECTATION SEEMS REASONABLE.

INTERVENING STRATA MAY BE AS FOLLOWS:

DUCHESNE RIVER - SURFACE

UINTA - 2400'

ENTRADA - 3800'

TWIN CREEK 4600'

NUGGET S.S. 5000'

T.O. 5500'

Fresh Water: FRESH, DRINKABLE WATER MAY BE EXPECTED AT DEPTHS OF 4000' OR MORE, WATER OF POOR QUALITY MAY OVERLIE FRESH WATER ZONES. SEE ATTACHED W.R.D.

Leasable Minerals: NONE

Additional Logs Needed: NONE

Potential Geologic Hazards: NONE EXPECTED

References and Remarks: W.R.D. REPORT ATTACHED

Signature: Sam Richardson

Date: 11 - 80

REQUEST FOR INFORMATION FROM WATER RESOURCES DIVISION

Date 11/6/80

Person and Division making request LARRY RICHARDSON MINERAL EVAL.

AREA: County and State DUCHESNE, UTAH

Township 2 ^(N) S Range 3 ^E _(W) Section 27 C 1/4 SW 1/4 SE 1/4 U S BLM

Altitude of surface at site 7806' Formation at surface (if known) DUCHESNE RIVER

PURPOSE:

Protection of useful ground water (casing program); check

Other (describe):

CASING : 0-500' ft. WRD 1973 SUGGESTS PRESENCE OF USABLE WATER "TO GREAT DEPTHS." UINTA FORMATION MAY BE ENCOUNTERED AT 2800'-4300'

For WRD use

Date in: Nov. 10, 1980

Person assigned: Hood

Date out: do.

Evaluation: This location is in an area of change in structure for which we do not have adequate control; Arco must have some pretty sophisticated geophysical information to project the depth to any formation. In any event, the available information shows that fresh, drinkable water might be expected at depths of 4,000 ft or more in formations ranging from the ~~the~~ Uintah to the Park City- moreover, it is possible that water of poor quality may overlies such fresh water zones. The company will have to watch both fresh water zones and potential water production zones very carefully, because 1) contamination of any zone will degrade water supply elsewhere because of the rapid interformational movement of water through fracturing and 2) with the growing need for water in the Uinta Basin, information on additional supply is badly needed.

The proposed casing program should be adequate during drilling- what will be very important is keeping tabs on the water and careful plugging if the hole is abandoned.

continue over

Signed by evaluator J. Hood

Time used 1/2

Evaluator: Send copy to coordinator - original direct to originator of request

** FILE NOTATIONS **

DATE: Oct. 29, 1980

OPERATOR: Arco Oil & Gas Company

WELL NO: W.N. #1

Location: Sec. 27 T. 2N R. 3W County: Duchess

File Prepared:

Entered on N.I.D:

Card Indexed:

Completion Sheet:

API Number 43-013-30551

CHECKED BY:

Petroleum Engineer: _____

Director: OK under rule C-3

Administrative Aide: _____

APPROVAL LETTER:

Bond Required:

Survey Plat Required:

Order No. _____

O.K. Rule C-3

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

Lease Designation Ind.

Plotted on Map

Approval Letter Written

Hot Line

P.I.

ARCO Oil and Gas Company
Western District
717-17th Street
Mailing address: P.O. Box 5540
Denver, Colorado 80217
Telephone 303 575 7000



October 17, 1980

U. S. Geological Survey
Mr. E. W. Guynn, District Engineer
2000 Administration Building
1745 West 1700 South
Salt Lake City, Utah 84138

RECEIVED

Re: Filing NTL-6 and A.P.D. Form 9-331C OCT 22 1980
ARCO Oil and Gas Company
Washes Nipple #1
SW SE Sec. 27-T2N-R3W, U.S.B. & M.
1920' FEL & 660' FSL
Duchesne County, Utah

DIVISION OF
OIL, GAS & MINING

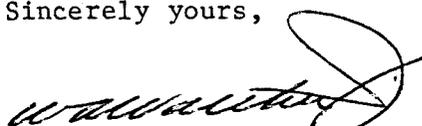
Dear Mr. Guynn:

Enclosed are three copies of the NTL-6 program and A.P.D. Form 9-331C for the above referenced well location.

Please notify us when you have arranged a time with the B.I.A. to inspect the site.

The archaeological report is not included with the NTL-6, but will be forwarded to your office, and to the B.I.A. office, under separate cover.

Sincerely yours,


W. A. Walther, Jr.
Operations Manager

MWS/WAW/ps

Enclosures

cc: Utah Division of Oil, Gas & Mining (2) ✓
1588 West, North Temple
Salt Lake City, Utah 84116

October 29, 1980

ARCO Oil & Gas Company, (Division of Atlantic Richfield Co.)
P. O. Box 5540
Denver, Colorado 80217

Re: Well No. Washs Nipple #1
Sec. 27, T. 2N, R. 3W
Duchesne County, Utah

Insofar as this office is concerned, approval to drill the above referred to o/g is hereby granted in accordance with Rule C-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 - Petroleum Engineer
Office: 533-5771
Home: 876-3001

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

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

The API number assigned to this well is 43-013-30551.

Sincerely,

DIVISION OF OIL, GAS, AND MINING

Cleon B. Feight /ka

Cleon B. Feight
Director

/ka
cc: USGS

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 section. Use Form 9-331-C for such proposals.)

- 1. oil well gas well other
- 2. NAME OF OPERATOR ARCO Oil and Gas Company
Division of Atlantic Richfield Company
- 3. ADDRESS OF OPERATOR
P. O. Box 5540, Denver, Colorado 80217
- 4. LOCATION OF WELL (REPORT LOCATION CLEARLY. See space 17 below.)
AT SURFACE: 1930' FEL & 660' FSL
AT TOP PROD. INTERVAL:
AT TOTAL DEPTH: Approx the same

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) | N.O. spud and set surface casing | |

- 5. LEASE
14-20-H62-3090
- 6. IF INDIAN, ALLOTTEE OR TRIBE NAME
Ute
- 7. UNIT AGREEMENT NAME

- 8. FARM OR LEASE NAME
Washes Nipple
- 9. WELL NO.
1
- 10. FIELD OR WILDCAT NAME
Wildcat
- 11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA
27-2N-3W Uintah Meridan
- 12. COUNTY OR PARISH
Duchesne
- 13. STATE
Utah
- 14. API NO.
43-013-30551
- 15. ELEVATIONS (SHOW DF, KDB, AND WD)
7806' GR

(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.)*

MI & RU; 16" casing cemented @ 55'GL. Spudded 14-3/4" hole @ 6:30 pm 1-14-81. Drilled to 533'. Ran 12 jts 10-3/4", 40.5#, Rge 3, K-55, ST&C casing (536.50') and set @ 533'. Cemented with 525 sx Class "G" with 2% CaCl & 1/4#/sx flocele. Had good returns. P.D. @ 9:45 am 1-16-81.

Tested blind and pipe rams to 1500# - held OK.

Drilling ahead.

RECORDED

CONFIDENTIAL

Subsurface Safety Valve: Manu. and Type _____ Set @ _____ Ft.

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

SIGNED W.A. Walther TITLE Operations Manager DATE 1-20-81
W. A. Walther, Jr.

(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 ARCO Oil and Gas Company
Division of Atlantic Richfield Company

3. ADDRESS OF OPERATOR
P. O. Box 5540, Denver, Colorado 80217

4. LOCATION OF WELL (REPORT LOCATION CLEARLY. See space 17 below.)
AT SURFACE: 1930' FEL & 660' FSL
AT TOP PROD. INTERVAL:
AT TOTAL DEPTH: Approx the same

5. LEASE
14-20-H62-3090

6. IF INDIAN, ALLOTTEE OR TRIBE NAME
Ute

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME
Washes Nipple

9. WELL NO.
1

10. FIELD OR WILDCAT NAME
Wildcat

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA
27-2N-3W Uintah Meridan

12. COUNTY OR PARISH | 13. STATE
Duchesne | Utah

14. API NO.
43-013-30551

15. ELEVATIONS (SHOW DF, KDB, AND WD)
7806' GL

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>N.O. setting intermediate casing</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.)*

While drilling ahead, started losing returns @ 825'. Mixed LCM & pumped. Continued drilling with loss of circulation. Ran temperature survey to determine loss zone. Mixed & pumped LCM. Found loss zone @ 830'. Pumped 150 sx cement, still had loss of circulation. Ran another 150 sx cement. Drilled to 930' and lost returns again. Ran 150 sx cement plug. Lost complete returns. Mixed & LCM & pumped. Regained circulation. It was decided at this time to run 8-5/8" intermediate casing in order to continue drilling to proposed depth of 5500'. Ran 46 jts, 30 jts 24# & 16 jts 32#, ST&C, K-55 casing total of 2074.73' and set @ 2049'. Pumped 10 bbls water flush ahead. Cemented with 180 sx lite, 10# gilsonite/sx & 2% CaCl followed by 125 sx Class "H" with 2% CaCl. Full returns. P.D. @ 7:15 pm 2-11-81.

Subsurface Safety Valve: Manu. and Type _____ Set @ _____ Ft.

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

SIGNED W.A. Walther TITLE Operations Manager DATE 2-12-81
W. A. Walther, Jr.

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____
CONDITIONS OF APPROVAL, IF ANY:

DIVISION OF OIL, GAS AND MINING

PLUGBACK
PLUGGING PROGRAM

NAME OF COMPANY: Arco 303-575-7035 office
Bill Sartain 303-770-7840 home

WELL NAME: Washes Nipple #1 (Fed. Unit)

SECTION 27 TOWNSHIP 2N RANGE 3W COUNTY Duchesne

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

TOTAL DEPTH: 5874'

CASING PROGRAM:

- 16" @ 71' cement to surface
- 10 3/4" @ 533 cement to surface
- 8 5/8" @ 2049' (TOC?)
- 7 7/8" openhole T.D.

FORMATION TOPS:

- Nugget- 4598' (water)
- Chinle- 5742'

PLUGS SET AS FOLLOWS:

- 1) 5800-5600'
- 2) 4700-4500'
- 3) 3100-3000'
- 4) 2350-2000'
dress off to 2150⁺ and
kickoff to northeast

Place 9.3# fresh water gel based abandonment mud between plugs;

DATE 3-10-81 SIGNED MTM

**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 ARCO Oil and Gas Company
Division of Atlantic Richfield Company

3. ADDRESS OF OPERATOR
P. O. Box 5540, Denver, Colorado 80217

4. LOCATION OF WELL (REPORT LOCATION CLEARLY. See space 17 below.)
AT SURFACE: 1930' FEL & 660' FSL
AT TOP PROD. INTERVAL:
AT TOTAL DEPTH: Approx the same (See below)

5. LEASE
14-20-H62-3090

6. IF INDIAN, ALLOTTEE OR TRIBE NAME
Ute

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME
Washes Nipple

9. WELL NO.
1

10. FIELD OR WILDCAT NAME
Wildcat

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA
27-2N-3W Uintah Meridan

12. COUNTY OR PARISH | 13. STATE
Duchesne | Utah

14. API NO.
43-013-30551

15. ELEVATIONS (SHOW DF, KDB, AND WD)
7806' 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) N.O.I. to plug back and sidetrack			

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

DIVISION OF
OIL, GAS & MINING

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.)*

Propose to plug back to 8-5/8" casing as follows:

- Intervals between cement plugs to be filled with 9.3#/gal drilling mud
- Cement plug from 5800' to 5600' with 70 sx cement
- Cement plug from 4700' to 4500' with 70 sx cement
- Cement plug from 3100' to 3000' with 60 sx cement
- * Cement plug from 2350' to 2000' with about 200 sx cement with sand

* This plug to be dressed off to approximately 2100' or 2150'. Then attempt will be made to drill deviated hole in N NW direction about 800' horizontal displacement. Expect to drill top of Nugget formation at about 4100' TVD. (OVER)
Subsurface Safety Valve: Manu. and Type _____ Set @ _____ Ft.

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

SIGNED W. A. Walther, Jr. TITLE Operations Manager DATE 3-11-81

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____

**APPROVED BY THE DIVISION
OF OIL, GAS, AND MINING**
DATE: 3-30-81
BY: M. J. Menden

*See Instructions on Reverse Side

Instructions

General: This form is designed for submitting proposals to perform certain well operations, and reports of such operations when completed, as indicated, on Federal and Indian lands pursuant to applicable Federal law and regulations, and, if approved or accepted by any State, on all lands in such State, pursuant to applicable State law 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.

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 17: Proposals to abandon a well and subsequent reports of abandonment should include such special information as is required by local Federal and/or State offices. In addition, such proposals and reports should include reasons for the abandonment; data on any former or present productive zones, or other zones with present significant fluid contents not sealed off by cement or otherwise; depths (top and bottom) and method of placement of cement plugs; mud or other material placed below, between and above plugs; amount, size, method of parting of any casing, liner or tubing pulled and the depth to top of any left in the hole; method of closing top of well; and date well site conditioned for final inspection looking to approval of the abandonment.

Propose to test Nugget formation.

Procedure verbally approved by Mr. W. P. Martens, U.S.G.S. to Mr. B. J. Sartain, ARCO, on 3-10-81.

Surface to 4598' Tertiary
4598' Nugget Top
5742' Chinle Top

Also verbally approved by Mr. M. T. Minder, Utah Division of Oil, Gas & Mining to Mr. B. J. Sartain, ARCO, on 3-10-81.

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 DRY HOLE
- 2. NAME OF OPERATOR ARCO Oil and Gas Company
Division of Atlantic Richfield Company
- 3. ADDRESS OF OPERATOR
P. O. Box 5540, Denver, Colorado 80217
- 4. LOCATION OF WELL (REPORT LOCATION CLEARLY. See space 17 below.)
AT SURFACE: 1930' FEL & 660' FSL
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"/> | CORRECTED | <input type="checkbox"/> |
| (other) | | | |

- 5. LEASE
14-20-H62-3090
- 6. IF INDIAN, ALLOTTEE OR TRIBE NAME
Ute
- 7. UNIT AGREEMENT NAME

- 8. FARM OR LEASE NAME
Washes Nipple
- 9. WELL NO.
1
- 10. FIELD OR WILDCAT NAME
Wildcat
- 11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA
27-2N-3W Uintah Meridan
- 12. COUNTY OR PARISH
Duchesne
- 13. STATE
Utah
- 14. API NO.
43-013-30551
- 15. ELEVATIONS (SHOW DF, KDB, AND WD)
7806' GL

(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.)*

Present status: 16" casing cemented @ 55' GL; 10-3/4" casing 40.5# cemented @ 533' with 525 sx cement; 8-5/8" casing 24# & 32# cemented @ 2049' with 305 sx cement. Drilled to 5874' and sidetracked hole.

PROPOSE TO P & A AS FOLLOWS WITH PLUGS @:

- 4550'-4350'
- 3340'-3140'
- 2150'-1950'
- 200'-surface

APPROVED BY THE DIVISION
OF OIL, GAS AND MINING
DATE: 5-4-81
BY: W. J. Munder

Per conversation between A. Raffoul, U.S.G.S. & M. W. Smith, ARCO 4-6-81.

Subsurface Safety Valve: Manu. and Type _____ Set @ _____ Ft.

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

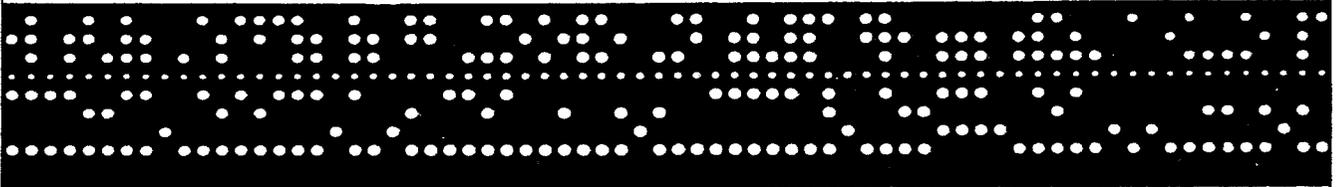
SIGNED W. A. Walther, Jr. TITLE Operations Manager DATE 4-8-81

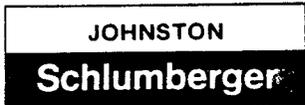
(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____
CONDITIONS OF APPROVAL, IF ANY:

JOHNSTON
Schlumberger

**computerized
data
analysis**





COMPUTERIZED DATA ANALYSIS

MARCH 9, 1981

GENTLEMEN:

THE ENCLOSED TEST APPEARS TO BE A GOOD MECHANICAL DRILL
STEM TEST DURING WHICH THE TOOLS DID FUNCTION PROPERLY.
THE FORMATION PRODUCED ENOUGH RESERVOIR FLUID FOR PROPER
IDENTIFICATION. DUE TO RAPID PRESSURE STABILIZATION DURING
THE SHUT-INS, NO ANALYSIS WAS MADE.

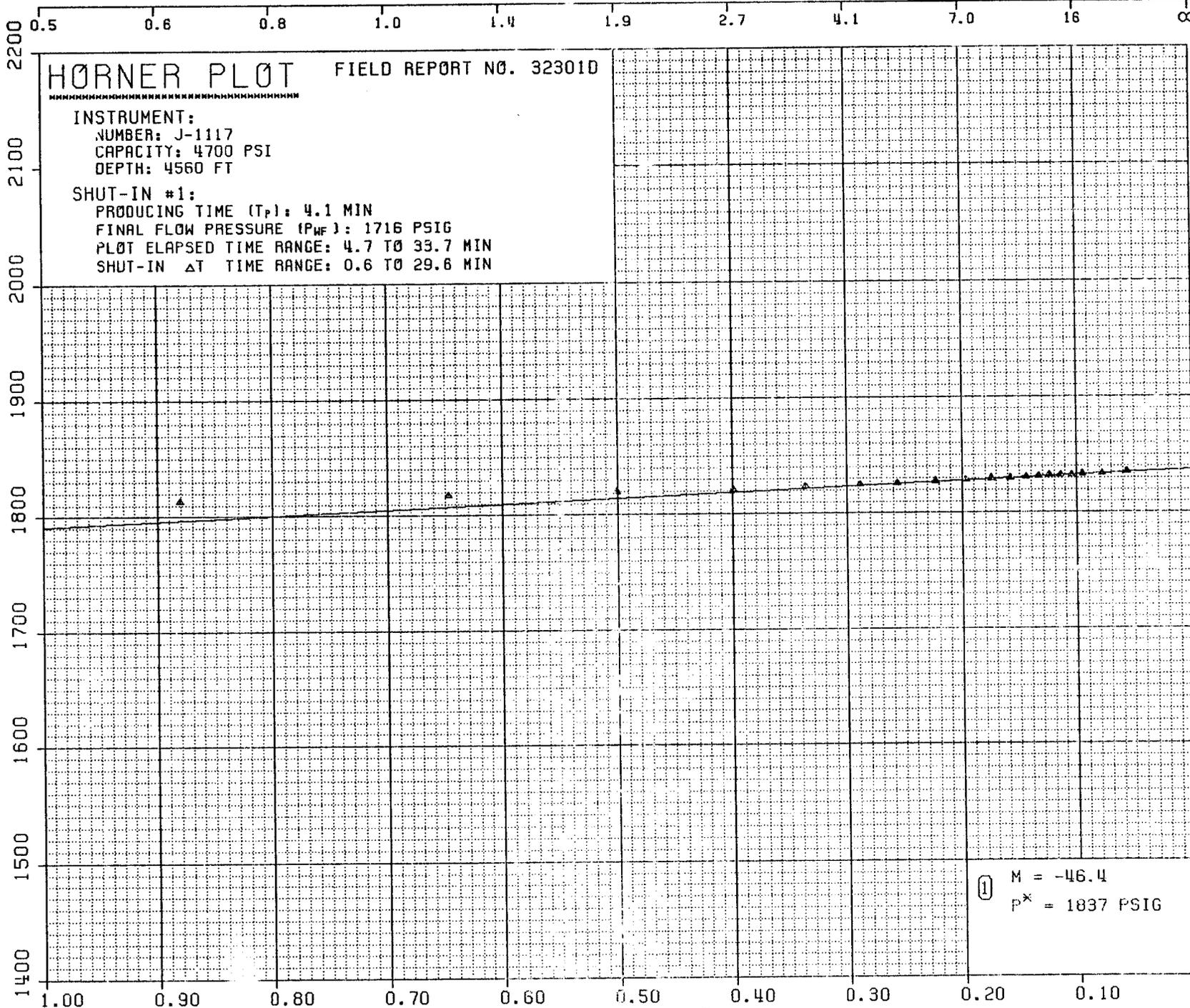
B. A. Bamgade
B.A. BAMGBADE
RESERVOIR EVALUATION
DEPARTMENT

ARCO OIL & GAS
WASH'S NIPPLE #1; DUCHESNE COUNTY, UTAH
TEST #1; 4590' TO 4726'
LOCATION: SEC. 27 - T2N - R3W

FIELD REPORT # 32301 D

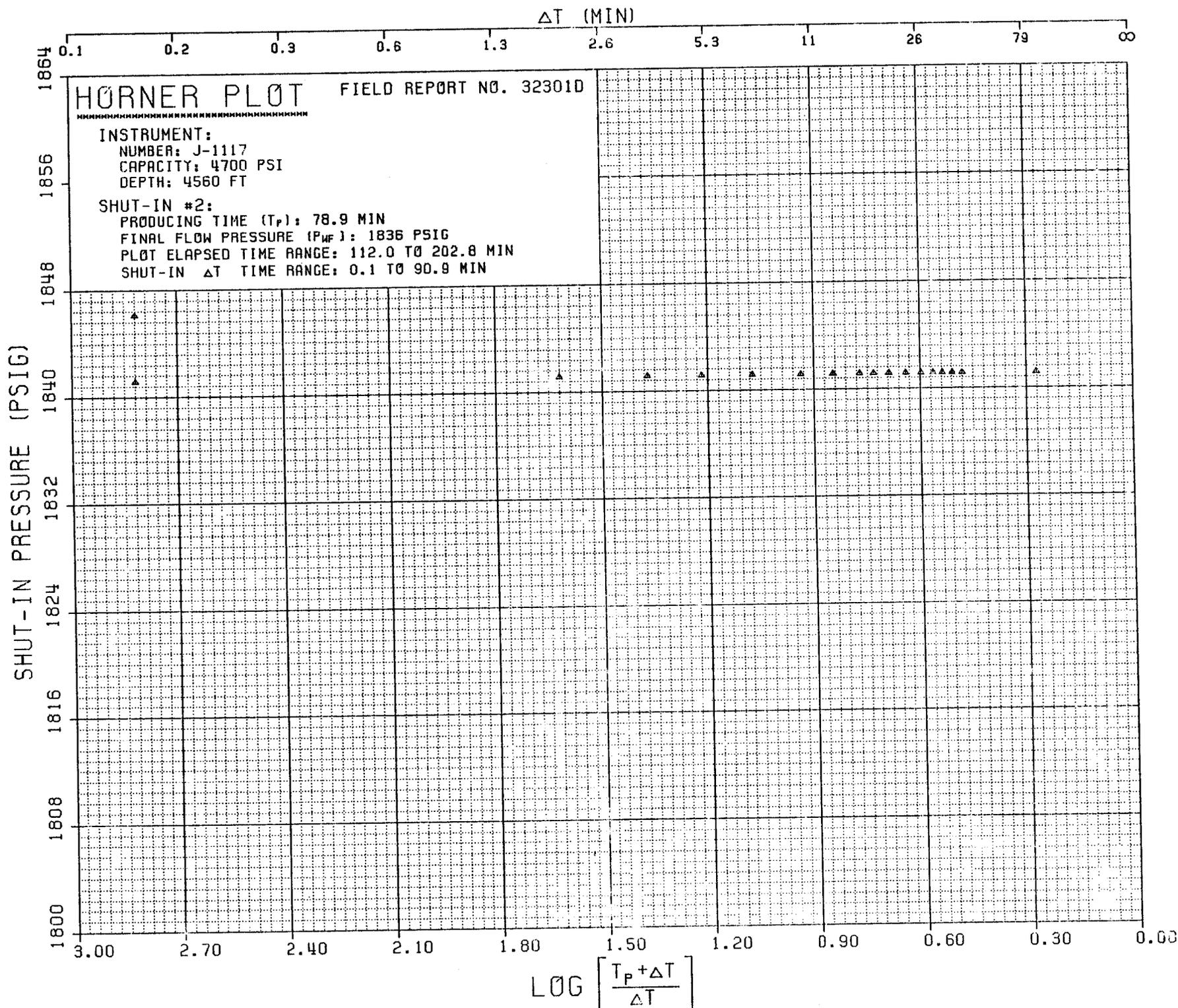
In making any interpretation, our employees will give Customer the benefit of their best judgment as to the correct interpretation. Nevertheless, since all interpretations are opinions based on inferences from electrical, mechanical or other measurements, we cannot, and do not guarantee the accuracy or correctness of any interpretations, and we shall not be liable or responsible, except in the case of gross or wilful negligence on our part, for any loss, costs, damages or expenses incurred or sustained by Customer resulting from any interpretation made by any of our agents or employees.

ΔT (MIN)



① $M = -46.4$
 $P^* = 1837$ PSIG

LOG $\left[\frac{T_p + \Delta T}{\Delta T} \right]$



FIELD REPORT NO. 32301D

INSTRUMENT:

NUMBER: J-1117

CAPACITY: 4700 PSI

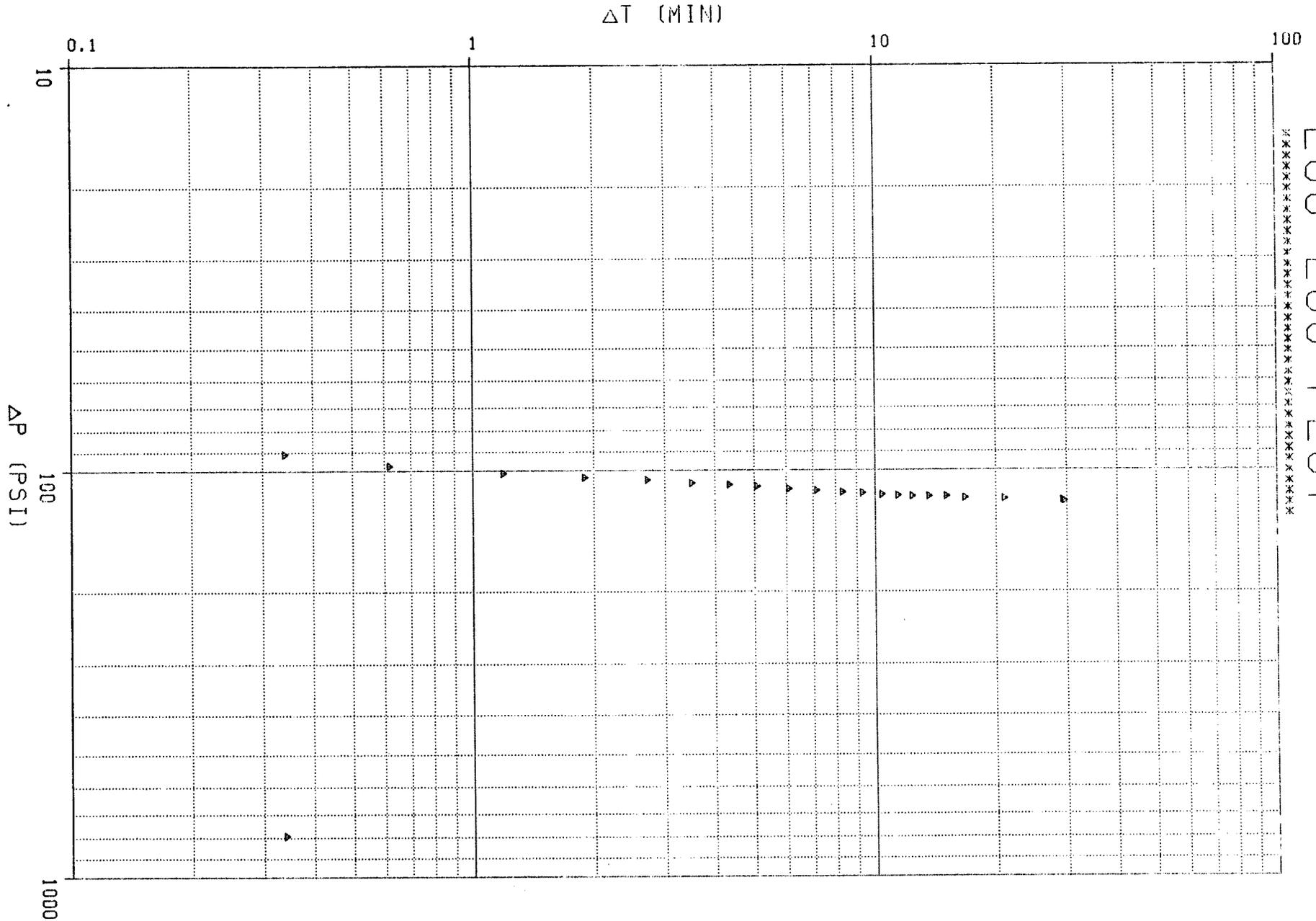
DEPTH: 4560 FT

SHUT-IN #1:

FINAL FLOW PRESSURE (P_{WF}): 1716 PSIG

PLOT ELAPSED TIME RANGE: 4.4 TO 33.7 MIN

SHUT-IN ΔT TIME RANGE: 0.3 TO 29.6 MIN



LOG-LOG PLOT

----- WELL IDENTIFICATION -----

COMPANY:	ARCO OIL AND GAS	DENVER, COLORADO 80217
	117-SEVENTEENTH STREET	
	P.O. BOX 5540	
WELL:	WASH'S NIPPLE #1	LOCATION: SEC.27, T2N R3W
TEST INTERVAL:	4590' TO 4726'	FIELD: WILD CAT
TEST NO:	1	TEST DATE: 3-2-81
COUNTY:	DUCHESNE	STATE: UTAH
TECHNICIAN:	TORGENSEN (VERNAL)	TEST APPROVED BY: MR. LLOYD GARRISON

----- EQUIPMENT AND HOLE DATA -----

TEST TYPE:	M.F.E. OPEN HOLE	DRILL PIPE LENGTH:	-	FT.
ELEVATION:	7823	DRILL PIPE I.D.:	-	IN.
TOTAL DEPTH:	4726	DRILL COLLAR LENGTH:	-	FT.
MAIN HOLE/CASING SIZE:	7 7/8	DRILL COLLAR I.D.:	-	IN.
RAT HOLE/LINER SIZE:	-	PACKER DEPTHS:	4586 & 4590	FT.
FORMATION TESTED:	NUGGET		&	FT.
NET PROD. INTERVAL:	136	FT. DEPTHS REF. TO:	KELLY BUSHING	FT.
POROSITY:	25	%		

----- TEST TOOL CHAMBER DATA -----

SAMPLER PRESSURE:	0	PSIG
RECOVERED OIL GRAVITY:	API @	DEG. F.
RECOVERY GOR:		FT3/BBL.

SAMPLE CHAMBER CONTENTS

FLUID	VOLUME	RESIST. (OHM-M)	MEAS. TEMP. (DEG F.)	CHLOR. (PPM)
GAS:	- FT.3			
OIL:	- CC			
WATER:	2500 CC	6	68	500
MUD:	- CC			
FILTRATE:				
TOTAL LIQUID:	2500 CC			

----- MUD DATA -----

TYPE:	LSND
WEIGHT:	9.2 LB/GAL.
VISCOSITY:	40-42 SEC.
WATER LOSS:	8 CC
FLUID	RESIST (OHM-M) TEMP (DEG F) CHLOR (PPM)
MUD:	5 42
FILTRATE:	5 44 500

----- REMARKS -----

BOTTOM TWO STANDS OF COLLARS COMPLETELY PLUGGED WITH SAND.

NO. OF REPORTS REQUESTED: 10 (3X'S)

FIELD REPORT NO. 32301D

----- SURFACE INFORMATION -----

DESCRIPTION(RATE OF FLOW)	TIME	PRESSURE PSIG	SURFACE CHOKE
SET PACKER	0810	-	BUBBLE
OPENED TOOL	0815	-	HOSE
BLOW OFF BOTTOM OF BUCKET IMMEDIATELY			
	0816	2	"
CLOSED FOR INITIAL SHUT-IN	0820	9	"
FINISHED SHUT-IN	0850	-	"
RE-OPENED TOOL	0853	-	"
BLOW OFF BOTTOM OF BUCKET			
	0858	8	"
	0903	9	"
	0908	6	"
	0923	.75	"
BLOW DIED	0931	0	"
CLOSED FOR FINAL SHUT-IN	1000	-	"
FINISHED SHUT-IN	1138	-	"
PULLED PACKER LOOSE	1140	-	"

CUSHION TYPE: -

- FT

- PSIG

15/16 IN. BOTTOM CHOKE

----- RECOVERY INFORMATION -----

RECOVERY	FEET	BARRELS	%OIL	%WATER	%OTHERS	API GRAV.	DEG.	RESIST	DEG.	CHL PPM
MUD CUT WATER	3660	-						4.5	57	500
TOP SAMPLE								10	60	300
MIDDLE SAMPLE								6	68	500
SAMPLE CHAMBER										

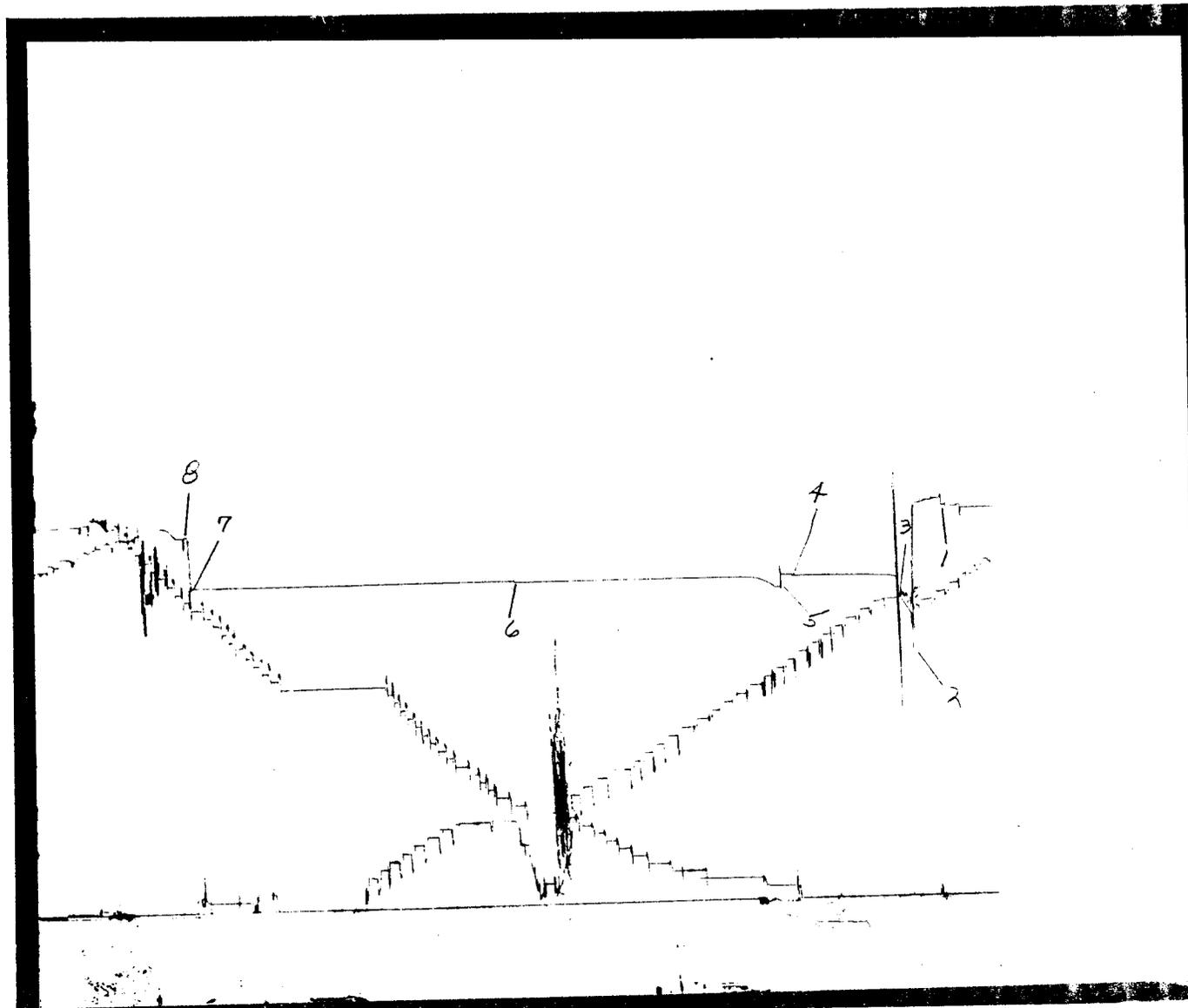
FIELD REPORT NO. 32301D

FIELD REPORT NO.: 32301 D CAPACITY: 4700#

INSTRUMENT NO.: J-1117 NUMBER OF REPORTS: 10

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CHARTS INDICATE PERFORATED ANCHOR PLUGGING DURING THE TEST



PRESSURE LOG

FIELD REPORT NO. 323010

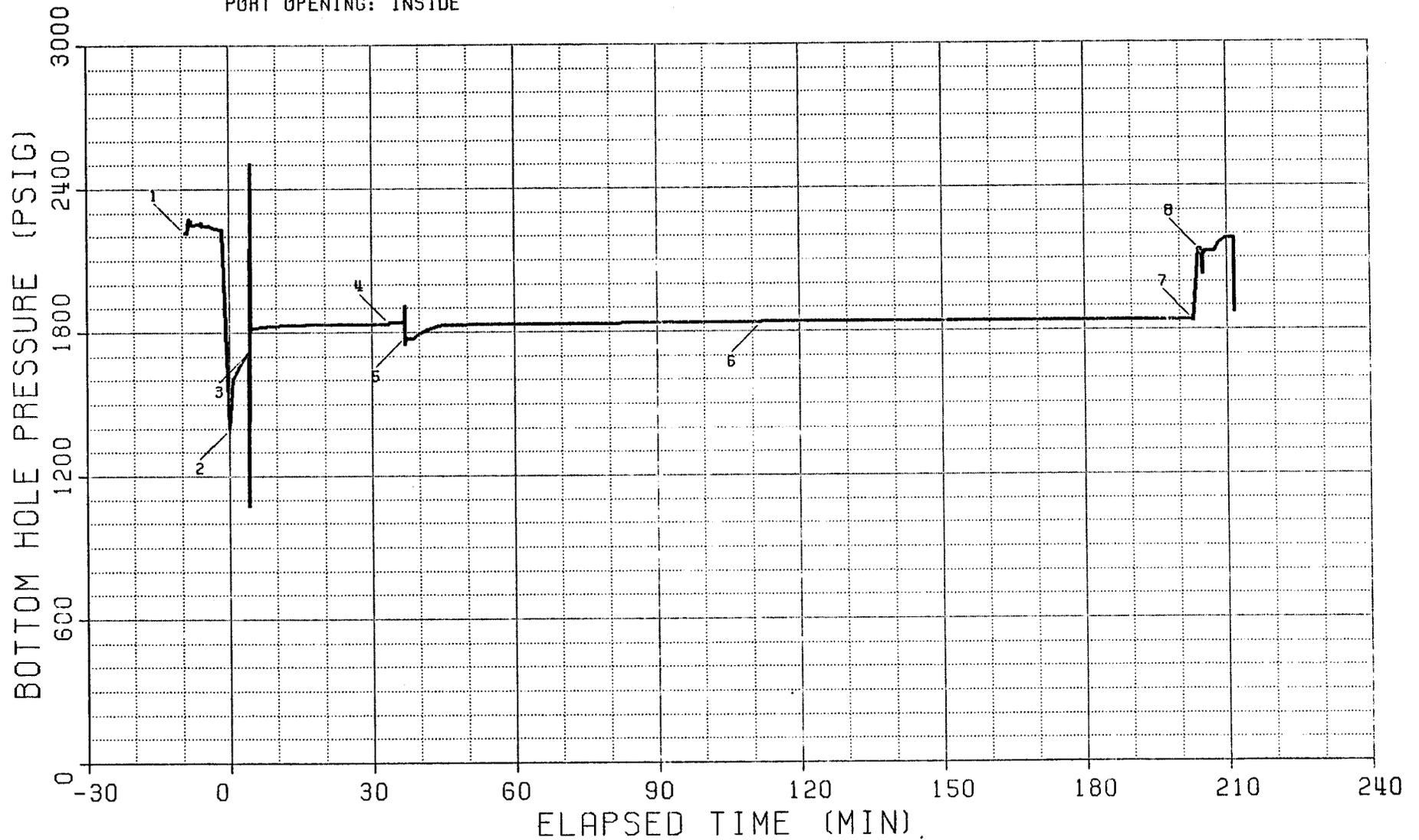
INSTRUMENT:

NUMBER: J-1117

CAPACITY: 4700 PSI

DEPTH: 4560 FT

PORT OPENING: INSIDE



BOTTOM HOLE PRESSURE AND TIME DATA

INSTRUMENT NO.: J-1117
 PORT OPENING: INSIDE

CAPACITY (PSI): 4700
 BOTTOM HOLE TEMP (F): 72

DEPTH (FT): 4560
 PAGE 1

EXPLANATION	LABELED POINT	PRESSURE (PSIG)	ELAPSED TIME (MIN)
HYDROSTATIC MUD	1	2216	-9.4
START FLOW	2	1398	0.0
END FLOW & START SHUT-IN	3	1716	4.1
END SHUT-IN	4	1835	33.7
START FLOW	5	1779	37.1
END FLOW & START SHUT-IN	6	1836	111.9
END SHUT-IN	7	1841	202.8
HYDROSTATIC MUD	8	2133	204.3

 * SUMMARY OF FLOW PERIODS *

FLOW PERIOD	ELAPSED TIME AT START (MIN)	ELAPSED TIME AT END (MIN)	DURATION OF FLOW (MIN)	PRESSURE AT START (PSIG)	PRESSURE AT END (PSIG)
1	0.0	4.1	4.1	1398	1716
2	37.1	111.9	74.8	1779	1836

 * SUMMARY OF SHUT-IN PERIODS *

SHUT-IN PERIOD	ELAPSED TIME AT START (MIN)	ELAPSED TIME AT END (MIN)	DURATION OF SHUT-IN (MIN)	PRESSURE AT START (PSIG)	PRESSURE AT END (PSIG)	FINAL FLOW PRESSURE (PSIG)	PRODUCING TIME (MIN)
1	4.1	33.7	29.6	1716	1835	1716	4.1
2	111.9	202.8	90.9	1836	1841	1836	78.9

TEST PHASE : FLOW PERIOD # 1

ELAPSED TIME (MIN) *****	DELTA TIME (MIN) *****	FLOWING PRESSURE (PSIG) *****
0.0	0.0	1398
4.1	4.1	1716

TEST PHASE : SHUT-IN PERIOD # 1

1. FINAL FLOW PRESSURE ["P_{WF} "] = 1716 PSIG
2. PRODUCING TIME ["T_P "] = 4.1 MIN

ELAPSED TIME (MIN) *****	DELTA TIME ["DT"] (MIN) *****	SHUT-IN PRESSURE ["P _{WS} "] (PSIG) *****	LOG [(T +DT)/DT] P *****	DELTA PRESSURE [P _{WS} - P _{WF}] *****
4.1	0.0	1716		0
5.1	1.0	1816	0.707	100
6.1	2.0	1820	0.484	104
7.1	3.0	1822	0.374	106
8.1	4.0	1824	0.306	108
9.1	5.0	1826	0.260	110
10.1	6.0	1827	0.226	111
11.1	7.0	1828	0.200	112
12.1	8.0	1829	0.179	113
13.1	9.0	1830	0.163	114
14.1	10.0	1831	0.149	114
16.1	12.0	1832	0.127	116
18.1	14.0	1832	0.111	116
20.1	16.0	1833	0.099	117
22.1	18.0	1833	0.089	117
24.1	20.0	1833	0.081	117
26.1	22.0	1834	0.074	118
28.1	24.0	1834	0.068	118
30.1	26.0	1834	0.063	118
32.1	28.0	1835	0.059	119
33.7	29.6	1835	0.056	119

TEST PHASE : FLOW PERIOD # 2

ELAPSED TIME (MIN)	DELTA TIME (MIN)	FLOWING PRESSURE (PSIG)
*****	*****	*****
37.1	0.0	1779
42.1	5.0	1813
47.1	10.0	1831
52.1	15.0	1833
57.1	20.0	1834
62.1	25.0	1834
67.1	30.0	1835
72.1	35.0	1835
77.1	40.0	1835
82.1	45.0	1835
87.1	50.0	1836
92.1	55.0	1836
97.1	60.0	1836
102.1	65.0	1836
107.1	70.0	1836
111.9	74.8	1836

TEST PHASE : SHUT-IN PERIOD # 2

1. FINAL FLOW PRESSURE ["P_{WF}"] = 1836 PSIG
2. PRODUCING TIME ["T_P"] = 78.9 MIN

ELAPSED TIME (MIN)	DELTA TIME ["DT"] (MIN)	SHUT-IN PRESSURE ["P _{WS} "] (PSIG)	LOG [(T +DT)/DT] P	DELTA PRESSURE [P _{WS} - P _{WF}]
*****	*****	*****	*****	*****
111.9	0.0	1836		0
112.9	1.0	1841	1.903	5
113.9	2.0	1841	1.607	5
114.9	3.0	1841	1.436	5
115.9	4.0	1841	1.317	5
116.9	5.0	1841	1.225	5
117.9	6.0	1841	1.151	5
118.9	7.0	1841	1.089	5
119.9	8.0	1841	1.036	5
120.9	9.0	1841	0.990	5
121.9	10.0	1841	0.949	5
123.9	12.0	1841	0.879	5
125.9	14.0	1841	0.822	5
127.9	16.0	1841	0.773	5
129.9	18.0	1841	0.731	5
131.9	20.0	1841	0.694	5
133.9	22.0	1841	0.662	5
135.9	24.0	1841	0.632	5

FIELD REPORT NO. 32301D
INSTRUMENT NO. J-1117

TEST PHASE : SHUT-IN PERIOD # 2

1. FINAL FLOW PRESSURE ["P "] = 1836 PSIG

2. PRODUCING TIME ["T "] = 78.9 MIN
P WF

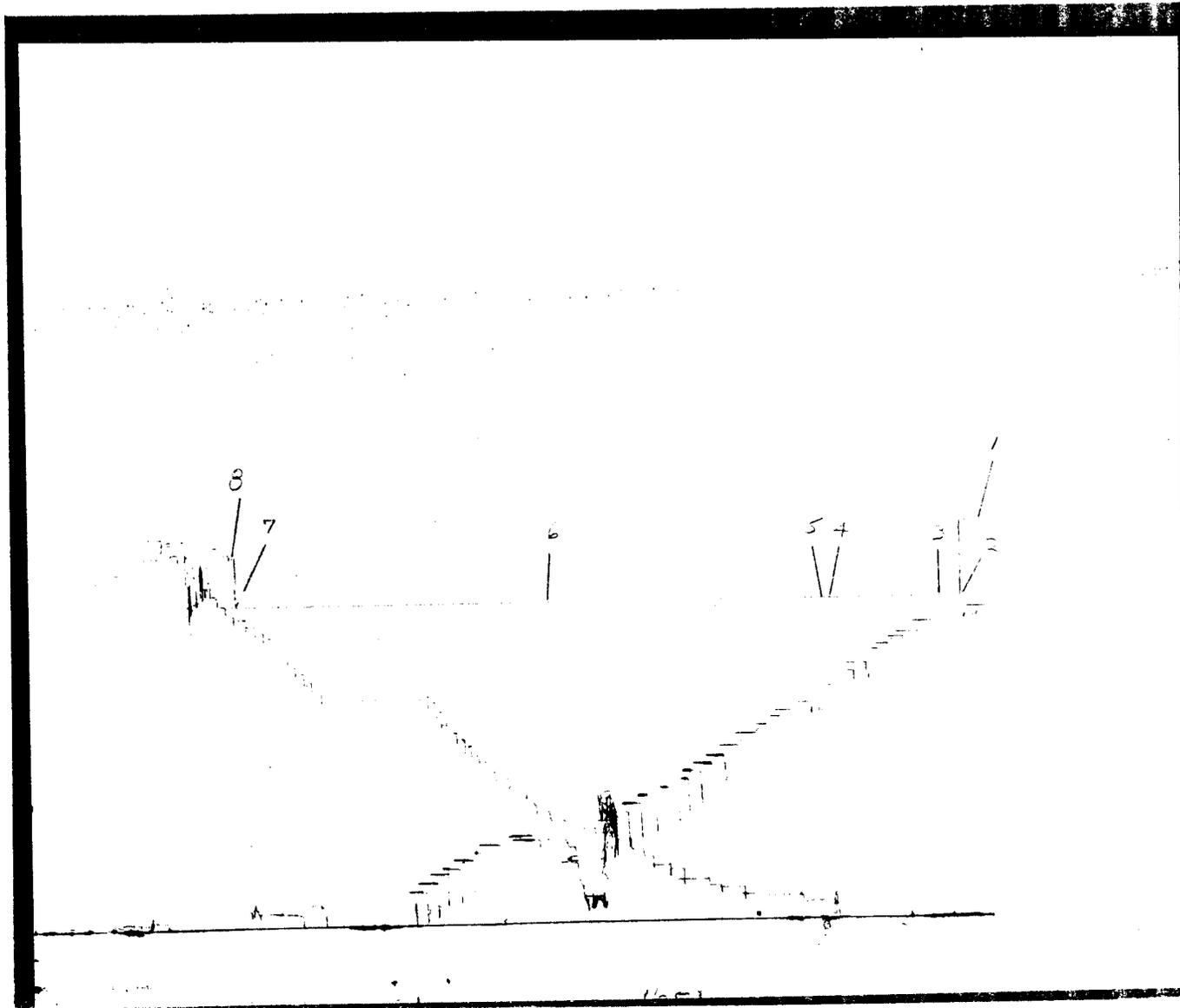
ELAPSED TIME (MIN)	DELTA TIME ["DT"] (MIN)	SHUT-IN PRESSURE ["P "] (PSIG)	LOG [(T +DT)/DT] P	DELTA PRESSURE [P - P] WS WF
*****	*****	*****	*****	*****
137.9	26.0	1841	0.606	5
139.9	28.0	1841	0.582	5
141.9	30.0	1841	0.560	5
146.9	35.0	1841	0.512	5
151.9	40.0	1841	0.473	5
156.9	45.0	1841	0.440	5
161.9	50.0	1841	0.411	5
166.9	55.0	1841	0.386	5
171.9	60.0	1841	0.365	5
176.9	65.0	1841	0.345	5
181.9	70.0	1841	0.328	5
186.9	75.0	1841	0.312	5
191.9	80.0	1841	0.298	5
196.9	85.0	1841	0.285	5
201.9	90.0	1841	0.273	5
202.8	90.9	1841	0.271	5

FIELD REPORT NO.: 32301 D CAPACITY: 4700#

JOHNSTON
Schlumberger

INSTRUMENT NO.: J-1651 NUMBER OF REPORTS: 10

CHARTS INDICATE PERFORATED ANCHOR PLUGGING DURING THE TEST



BOTTOM HOLE PRESSURE AND TIME DATA

INSTRUMENT NO.: J-1651
 PORT OPENING: OUTSIDE

CAPACITY (PSI): 4700
 BOTTOM HOLE TEMP (F): 72

DEPTH (FT): 4600

EXPLANATION	LABELED POINT	PRESSURE (PSIG)	ELAPSED TIME (MIN)
HYDROSTATIC MUD	1	2257	-6.2
START FLOW	2	1830	0.0
END FLOW & START SHUT-IN	3	1831	5.4
END SHUT-IN	4	1832	35.3
START FLOW	5	1832	38.8
END FLOW & START SHUT-IN	6	1836	113.2
END SHUT-IN	7	1836	202.9
HYDROSTATIC MUD	8	2114	204.3

 * SUMMARY OF FLOW PERIODS *

FLOW PERIOD	ELAPSED TIME AT START (MIN)	ELAPSED TIME AT END (MIN)	DURATION OF FLOW (MIN)	PRESSURE AT START (PSIG)	PRESSURE AT END (PSIG)
1	0.0	5.4	5.4	1830	1831
2	38.8	113.2	74.4	1832	1836

 * SUMMARY OF SHUT-IN PERIODS *

SHUT-IN PERIOD	ELAPSED TIME AT START (MIN)	ELAPSED TIME AT END (MIN)	DURATION OF SHUT-IN (MIN)	PRESSURE AT START (PSIG)	PRESSURE AT END (PSIG)	FINAL FLOW PRESSURE (PSIG)	PRODUCING TIME (MIN)
1	5.4	35.3	29.8	1831	1832	1831	5.4
2	113.2	202.9	89.7	1836	1836	1836	79.6

DIVISION OF OIL, GAS AND MINING

PLUGGING PROGRAM

NAME OF COMPANY: Arco Mark Smith 303-575-7102

WELL NAME: Washes Nipple #1

SECTION 27 TOWNSHIP 2N RANGE 3W COUNTY Duchesne

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

TOTAL DEPTH: 4552' (3833 TVD)

CASING PROGRAM:

16" @ 55' cement to surface
10 3/4" @ 533' Cement to surface
8 5/8" @ 2049' cement to surface

FORMATION TOPS:

Tertiary fill
Nugget- 4521' (3817 TVD)
Cored: 4537-52'; No DST; no shows or water,
all formations are tight

PLUGS SET AS FOLLOWS:

2000-2350' previously set plug at
and dressed plug to 2110' and
kicked off

- 1) 4550-4350' 70 sx.
- 2) 3340-3140' (sh) 70 sx.
- 3) 1950-2150' 70 sx.
- 4) 200'-surface

8.8# fresh water gel based abandonment mud
between plugs; erect regulation dryhole
marker; clean, grade and restore the site.

DATE 4-7-81 SIGNED MTM

CHEMICAL & GEOLOGICAL LABORATORIES

P. O. Box 2794
Casper, Wyoming

WATER ANALYSIS REPORT

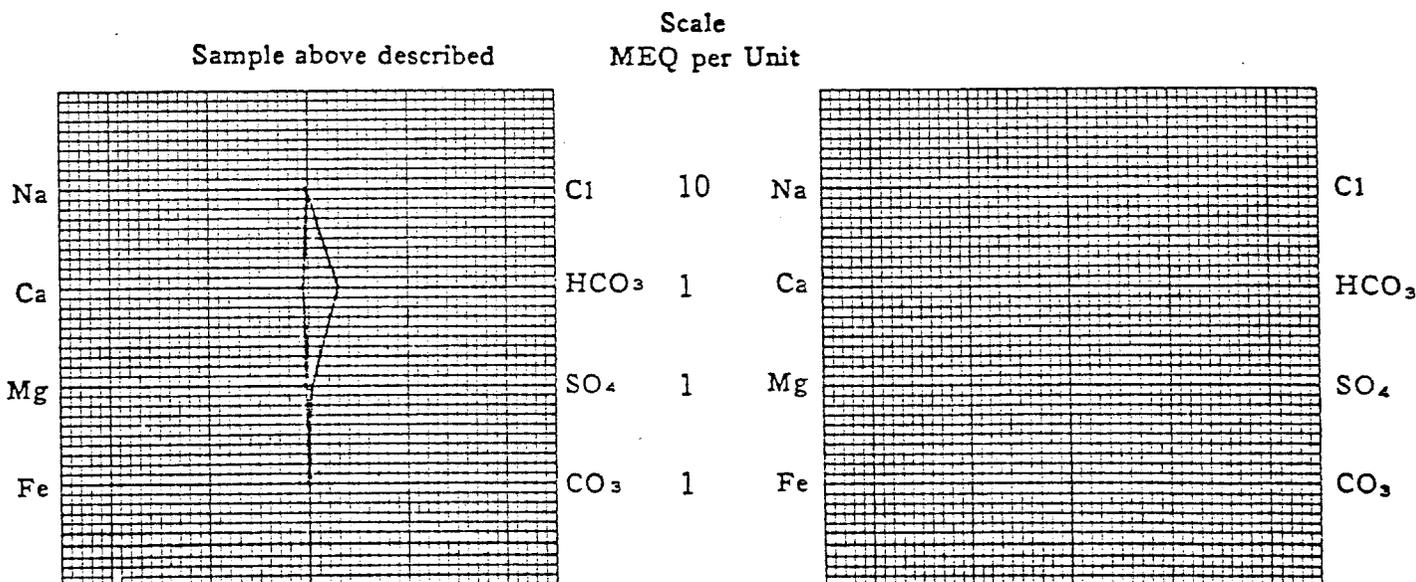
OPERATOR	ARCO Oil & Gas Co.	DATE	3-12-81	LAB NO.	36854-8
WELL NO.	Wash's Nipple #1	LOCATION	SWSE 27-2N-3W		
FIELD	Wildcat	FORMATION			
COUNTY	Duchesne	INTERVAL	3720'		
STATE	Utah	SAMPLE FROM	DST #1		

REMARKS & CONCLUSIONS: _____

Cations			Anions		
	mg/l	meq/l		mg/l	meq/l
Sodium	53	2.29	Sulfate	18	0.37
Potassium	11	0.28	Chloride	10	0.28
Lithium	-	-	Carbonate	0	0.00
Calcium	14	0.70	Bicarbonate	195	3.20
Magnesium	7	0.58	Hydroxide	-	-
Iron	-	-	Hydrogen sulfide	-	-
Total Cations		3.85	Total Anions		3.85

Total dissolved solids, mg/l	209	Specific resistance @ 68°F.:	
NaCl equivalent, mg/l	165	Observed	32.0 ohm-meters
Observed pH	8.3	Calculated	35.0 ohm-meters

WATER ANALYSIS PATTERN



(Na value in above graphs includes Na, K, and Li)
 NOTE: Mg/l=Milligrams per liter Meq/l= Milligram equivalents per liter
 Sodium chloride equivalent=by Dunlap & Hawthorne calculation from components

CHEMICAL & GEOLOGICAL LABORATORIES

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WATER ANALYSIS REPORT

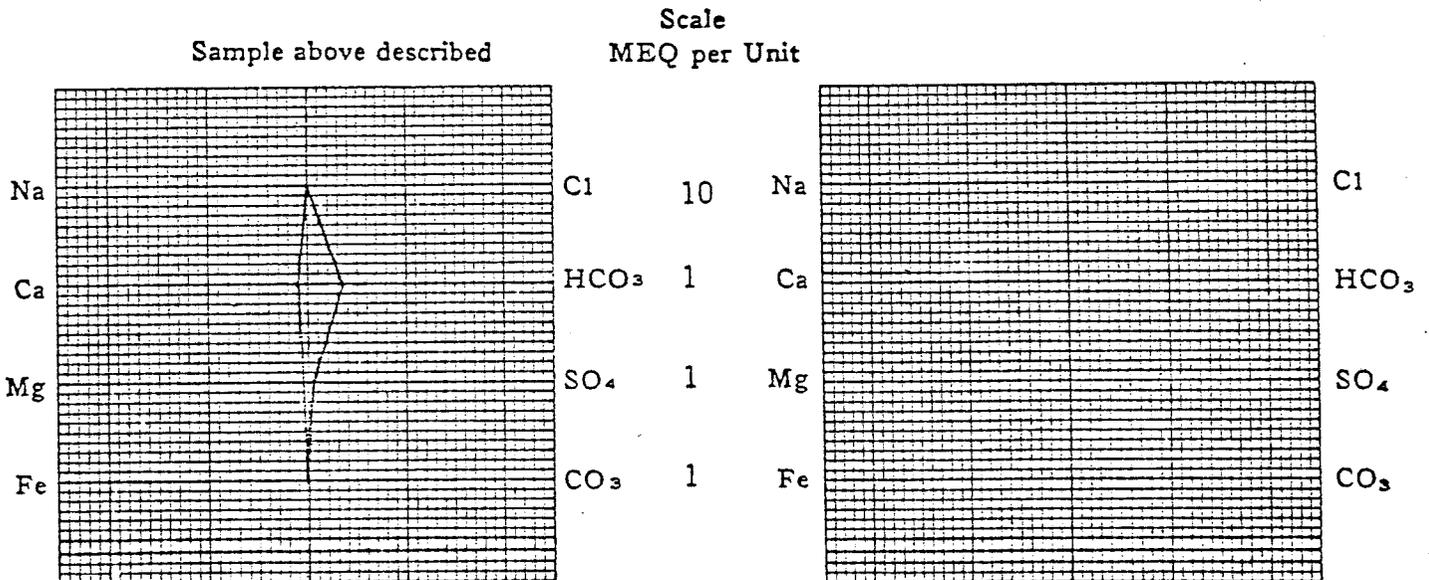
OPERATOR <u>ARCO Oil & Gas Co.</u>	DATE <u>3-12-81</u>	LAB NO. <u>36854-6</u>
WELL NO. <u>Wash's Nipple #1</u>	LOCATION <u>SWSE 27-2N-3W</u>	
FIELD <u>Wildcat</u>	FORMATION _____	
COUNTY <u>Duchesne</u>	INTERVAL <u>2602'</u>	
STATE <u>Utah</u>	SAMPLE FROM <u>DST #1</u>	

REMARKS & CONCLUSIONS: _____

<u>Cations</u>	<u>mg/l</u>	<u>meq/l</u>	<u>Anions</u>	<u>mg/l</u>	<u>meq/l</u>
Sodium - - - - -	44	1.92	Sulfate - - - - -	20	0.42
Potassium - - - - -	12	0.31	Chloride - - - - -	5	0.14
Lithium - - - - -	-	-	Carbonate - - - - -	0	0.00
Calcium - - - - -	23	1.15	Bicarbonate - - - - -	217	3.56
Magnesium - - - - -	9	0.74	Hydroxide - - - - -	-	-
Iron - - - - -	-	-	Hydrogen sulfide - - - - -	-	-
Total Cations - - - - -		4.12	Total Anions - - - - -		4.12

Total dissolved solids, mg/l - - - - -	220		Specific resistance @ 68°F.:
NaCl equivalent, mg/l - - - - -	172		Observed - - - - -
Observed pH - - - - -	8.1		28.0
			ohm-meters
			Calculated - - - - -
			33.5
			ohm-meters

WATER ANALYSIS PATTERN



(Na value in above graphs includes Na, K, and Li)
NOTE: Mg/l=Milligrams per liter Meq/l= Milligram equivalents per liter
Sodium chloride equivalent=by Dunlap & Hawthorne calculation from components

CHEMICAL & GEOLOGICAL LABORATORIES

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WATER ANALYSIS REPORT

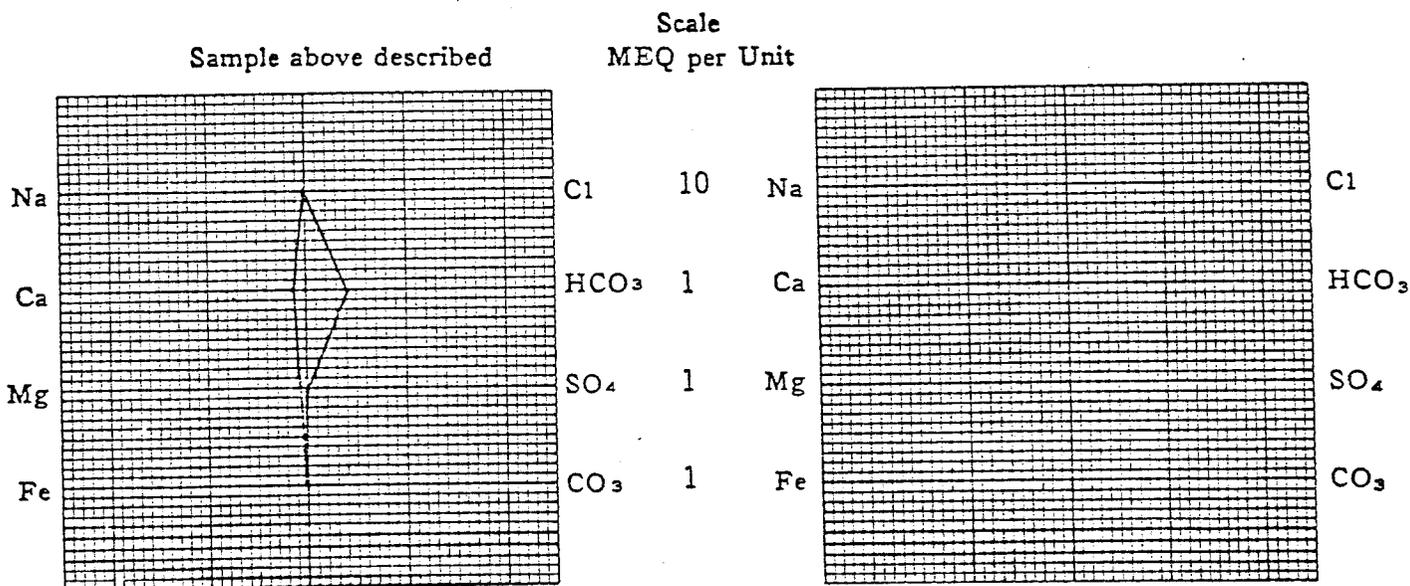
OPERATOR <u>ARCO Oil & Gas Co.</u>	DATE <u>3-12-81</u>	LAB NO. <u>36854-7</u>
WELL NO. <u>Wash's Nipple #1</u>	LOCATION <u>SWSE 27-2N-3W</u>	
FIELD <u>Wildcat</u>	FORMATION _____	
COUNTY <u>Duchesne</u>	INTERVAL <u>3160'</u>	
STATE <u>Utah</u>	SAMPLE FROM <u>DST #1</u>	

REMARKS & CONCLUSIONS: _____

<u>Cations</u>	<u>mg/l</u>	<u>meq/l</u>	<u>Anions</u>	<u>mg/l</u>	<u>meq/l</u>
Sodium	47	2.06	Sulfate	10	0.21
Potassium	13	0.33	Chloride	6	0.17
Lithium	-	-	Carbonate	0	0.00
Calcium	25	1.25	Bicarbonate	244	4.00
Magnesium	9	0.74	Hydroxide	-	-
Iron	-	-	Hydrogen sulfide	-	-
Total Cations	4.38		Total Anions	4.38	

Total dissolved solids, mg/l	230	Specific resistance @ 68°F.:
NaCl equivalent, mg/l	179	Observed
Observed pH	8.2	Calculated
		27.0 ohm-meters
		34.0 ohm-meters

WATER ANALYSIS PATTERN



(Na value in above graphs includes Na, K, and Li)
 NOTE: Mg/l=Milligrams per liter Meq/l= Milligram equivalents per liter
 Sodium chloride equivalent=by Dunlap & Hawthorne calculation from components

CHEMICAL & GEOLOGICAL LABORATORIES

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Casper, Wyoming

WATER ANALYSIS REPORT

OPERATOR <u>ARCO Oil & Gas Co.</u>	DATE <u>3-12-81</u> LAB NO. <u>36854-5</u>
WELL NO. <u>Wash's Nipple #1</u>	LOCATION <u>SWSE 27-2N-3W</u>
FIELD <u>Wildcat</u>	FORMATION _____
COUNTY <u>Duchesne</u>	INTERVAL <u>2137'</u>
STATE <u>Utah</u>	SAMPLE FROM <u>DST #1</u>

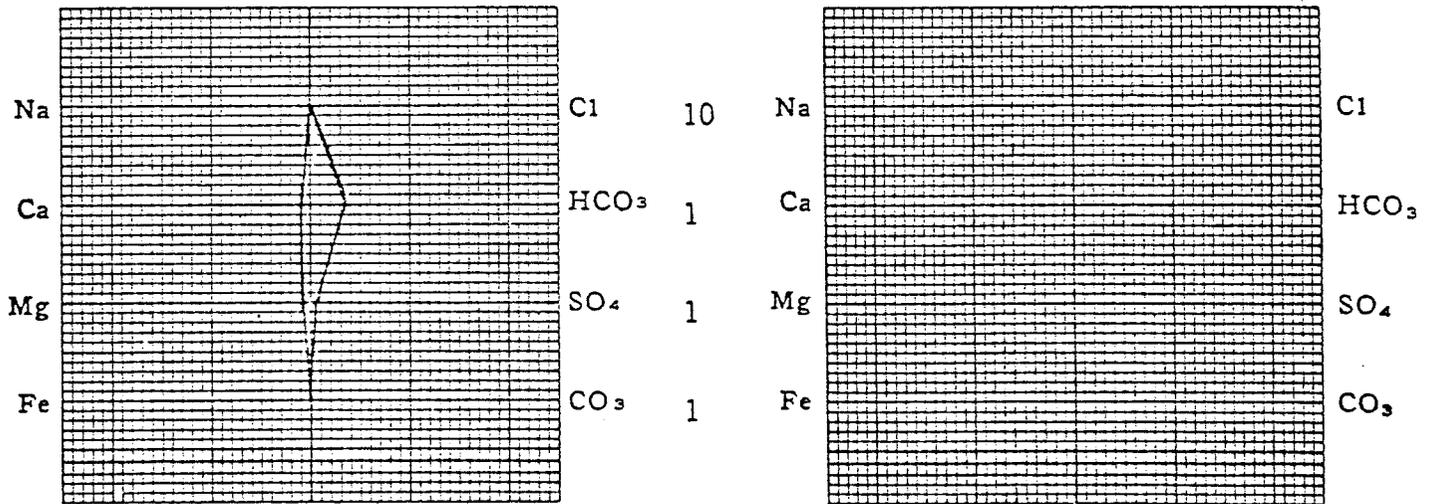
REMARKS & CONCLUSIONS: _____

<u>Cations</u>	<u>mg/l</u>	<u>meq/l</u>	<u>Anions</u>	<u>mg/l</u>	<u>meq/l</u>
Sodium - - - - -	59	2.58	Sulfate - - - - -	25	0.52
Potassium - - - - -	12	0.31	Chloride - - - - -	12	0.34
Lithium - - - - -	-	-	Carbonate - - - - -	0	0.00
Calcium - - - - -	19	0.95	Bicarbonate - - - - -	217	3.56
Magnesium - - - - -	7	0.58	Hydroxide - - - - -	-	-
Iron - - - - -	-	-	Hydrogen sulfide - - - - -	-	-
Total Cations - - - - -	4.42		Total Anions - - - - -	4.42	

Total dissolved solids, mg/l - - - - -	241	Specific resistance @ 68°F.:
NaCl equivalent, mg/l - - - - -	190	Observed - - - - -
Observed pH - - - - -	8.1	26.0
		ohm-meters
		Calculated - - - - -
		30.5
		ohm-meter

WATER ANALYSIS PATTERN

Scale
Sample above described MEQ per Unit



(Na value in above graphs includes Na, K, and Li)
NOTE: Mg/l=Milligrams per liter Meq/l= Milligram equivalents per liter
Sodium chloride equivalent=by Dunlap & Hawthorne calculation from components

CHEMICAL & GEOLOGICAL LABORATORIES

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Casper, Wyoming

WATER ANALYSIS REPORT

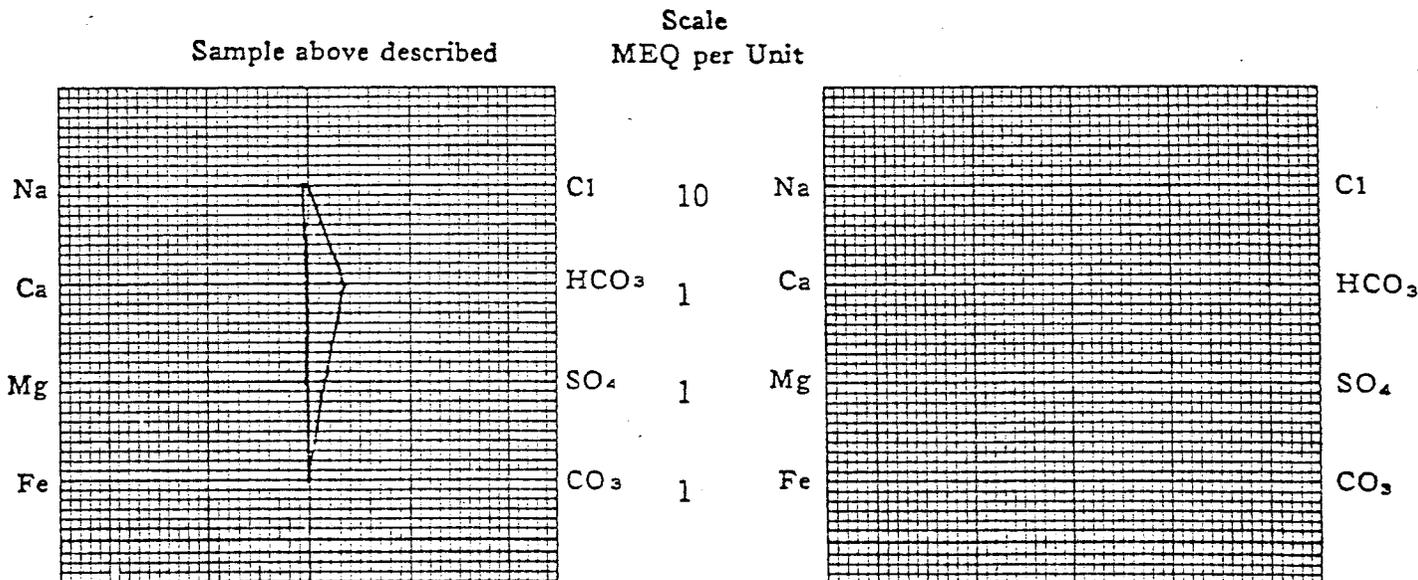
OPERATOR <u>ARCO Oil & Gas Co.</u>	DATE <u>3-12-81</u>	LAB NO. <u>36854-4</u>
WELL NO. <u>Wash's Nipple #1</u>	LOCATION <u>SWSE 27-2N-3W</u>	
FIELD <u>Wildcat</u>	FORMATION _____	
COUNTY <u>Duchesne</u>	INTERVAL <u>1672'</u>	
STATE <u>Utah</u>	SAMPLE FROM <u>DST #1</u>	

REMARKS & CONCLUSIONS: _____

Cations	mg/l	meq/l	Anions	mg/l	meq/l
Sodium - - - - -	131	5.71	Sulfate - - - - -	78	1.62
Potassium - - - - -	10	0.26	Chloride - - - - -	12	0.34
Lithium - - - - -	-	-	Carbonate - - - - -	24	0.80
Calcium - - - - -	5	0.25	Bicarbonate - - - - -	226	3.71
Magnesium - - - - -	3	0.25	Hydroxide - - - - -	-	-
Iron - - - - -	-	-	Hydrogen sulfide - - - - -	-	-
Total Cations - - - - -	6.47		Total Anions - - - - -	6.47	

Total dissolved solids, mg/l - - - - -	374	Specific resistance @ 68°F.:
NaCl equivalent, mg/l - - - - -	310	Observed - - - - -
Observed pH - - - - -	8.9	16.0
		ohm-meters
		Calculated - - - - -
		19.0
		ohm-meters

WATER ANALYSIS PATTERN



(Na value in above graphs includes Na, K, and Li)
NOTE: Mg/l = Milligrams per liter Meq/l = Milligram equivalents per liter
Sodium chloride equivalent = by Dunlap & Hawthorne calculation from components

CHEMICAL & GEOLOGICAL LABORATORIES

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WATER ANALYSIS REPORT

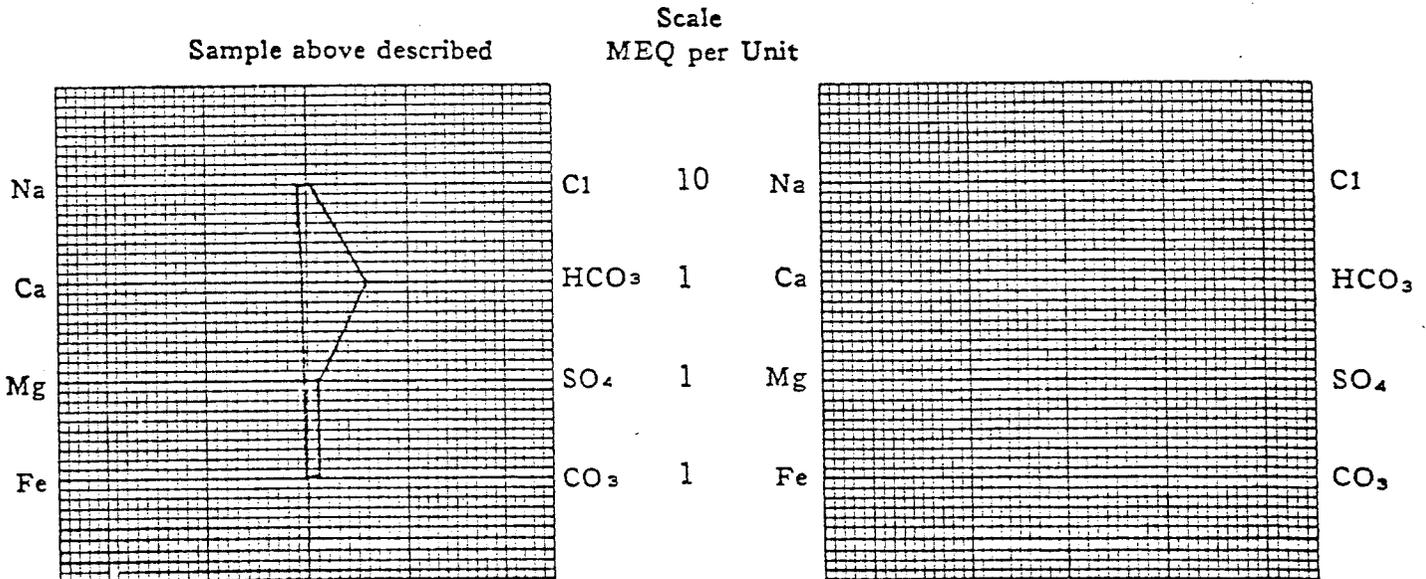
OPERATOR <u>ARCO Oil & Gas Co.</u>	DATE <u>3-12-81</u> LAB NO. <u>36854-9</u>
WELL NO. <u>Wash's Nipple #1</u>	LOCATION <u>SWSE 27-2N-3W</u>
FIELD <u>Wildcat</u>	FORMATION _____
COUNTY <u>Duchesne</u>	INTERVAL <u>3720'</u>
STATE <u>Utah</u>	SAMPLE FROM <u>DST #1</u>

REMARKS & CONCLUSIONS: _____

Cations	mg/l	meq/l	Anions	mg/l	meq/l
Sodium	224	9.75	Sulfate	45	0.94
Potassium	45	1.15	Chloride	128	3.61
Lithium	-	-	Carbonate	36	1.20
Calcium	12	0.60	Bicarbonate	366	6.00
Magnesium	3	0.25	Hydroxide	-	-
Iron	-	-	Hydrogen sulfide	-	-
Total Cations		11.75	Total Anions		11.75

Total dissolved solids, mg/l	673	Specific resistance @ 68°F.:
NaCl equivalent, mg/l	585	Observed
Observed pH	8.4	10.0
		ohm-meters
		Calculated
		10.1
		ohm-meters

WATER ANALYSIS PATTERN



(Na value in above graphs includes Na, K, and Li)
NOTE: Mg/l=Milligrams per liter Meq/l= Milligram equivalents per liter
Sodium chloride equivalent=by Dunlap & Hawthorne calculation from components

CHEMICAL & GEOLOGICAL LABORATORIES

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WATER ANALYSIS REPORT

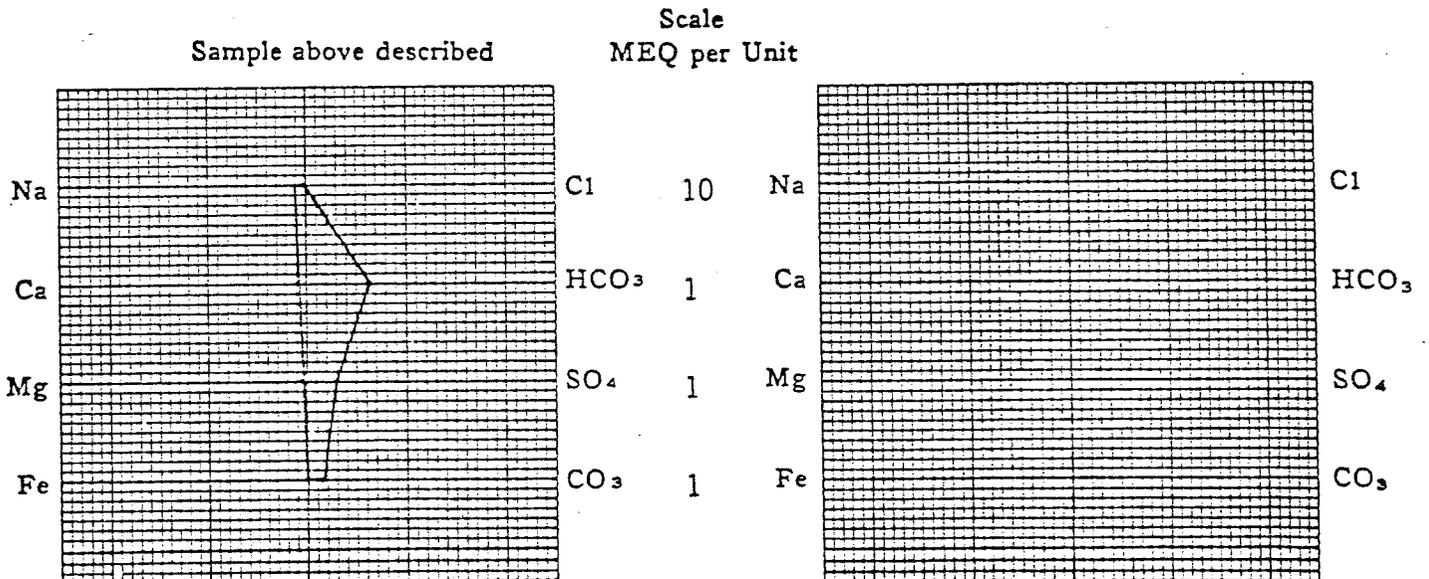
OPERATOR <u>ARCO Oil & Gas Co.</u>	DATE <u>3-12-81</u>	LAB NO. <u>36854-3</u>
WELL NO. <u>Wash's Nipple #1</u>	LOCATION <u>SWSE 27-2N-3W</u>	
FIELD <u>Wildcat</u>	FORMATION _____	
COUNTY <u>Duchesne</u>	INTERVAL <u>1486'</u>	
STATE <u>Utah</u>	SAMPLE FROM <u>DST #1</u>	

REMARKS & CONCLUSIONS: _____

Cations	mg/l	meq/l	Anions	mg/l	meq/l
Sodium	228	9.92	Sulfate	147	3.06
Potassium	17	0.44	Chloride	28	0.78
Lithium	-	-	Carbonate	48	1.60
Calcium	18	0.90	Bicarbonate	390	6.40
Magnesium	7	0.58	Hydroxide	-	-
Iron	-	-	Hydrogen sulfide	-	-
Total Cations		11.84	Total Anions		11.84

Total dissolved solids, mg/l	685	Specific resistance @ 68°F.:		
NaCl equivalent, mg/l	573	Observed	11.0	ohm-meters
Observed pH	8.6	Calculated	10.3	ohm-meters

WATER ANALYSIS PATTERN



(Na value in above graphs includes Na, K, and Li)
 NOTE: Mg/l = Milligrams per liter Meq/l = Milligram equivalents per liter
 Sodium chloride equivalent = by Dunlap & Hawthorne calculation from components

CHEMICAL & GEOLOGICAL LABORATORIES

P. O. Box 2794
Casper, Wyoming

WATER ANALYSIS REPORT

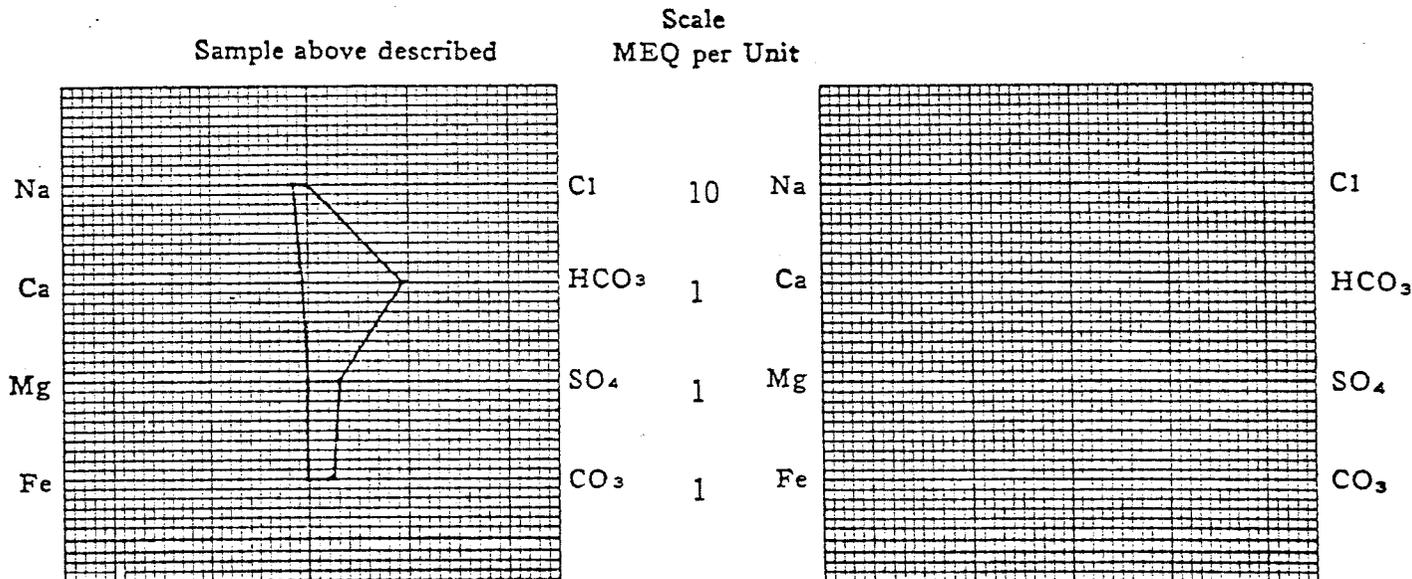
OPERATOR <u>ARCO Oil & Gas Co.</u>	DATE <u>3-12-81</u>	LAB NO. <u>36854-2</u>
WELL NO. <u>Wash's Nipple #1</u>	LOCATION <u>SWSE 27-2N-3W</u>	
FIELD <u>Wildcat</u>	FORMATION _____	
COUNTY <u>Duchesne</u>	INTERVAL <u>1300'</u>	
STATE <u>Utah</u>	SAMPLE FROM <u>DST #1 (Middle)</u>	

REMARKS & CONCLUSIONS: _____

<u>Cations</u>	<u>mg/l</u>	<u>meq/l</u>	<u>Anions</u>	<u>mg/l</u>	<u>meq/l</u>
Sodium	351	15.26	Sulfate	148	3.08
Potassium	8	0.20	Chloride	30	0.85
Lithium	-	-	Carbonate	80	2.66
Calcium	10	0.50	Bicarbonate	581	9.53
Magnesium	2	0.16	Hydroxide	-	-
Iron	-	-	Hydrogen sulfide	-	-
Total Cations		16.12	Total Anions		16.12

Total dissolved solids, mg/l	915	Specific resistance @ 68°F.:	
NaCl equivalent, mg/l	765	Observed	9.40 ohm-meters
Observed pH	9.1	Calculated	7.90 ohm-meters

WATER ANALYSIS PATTERN



(Na value in above graphs includes Na, K, and Li)
NOTE: Mg/l = Milligrams per liter Meq/l = Milligram equivalents per liter
Sodium chloride equivalent = by Dunlap & Hawthorne calculation from components

CHEMICAL & GEOLOGICAL LABORATORIES

P. O. Box 2794
Casper, Wyoming

WATER ANALYSIS REPORT

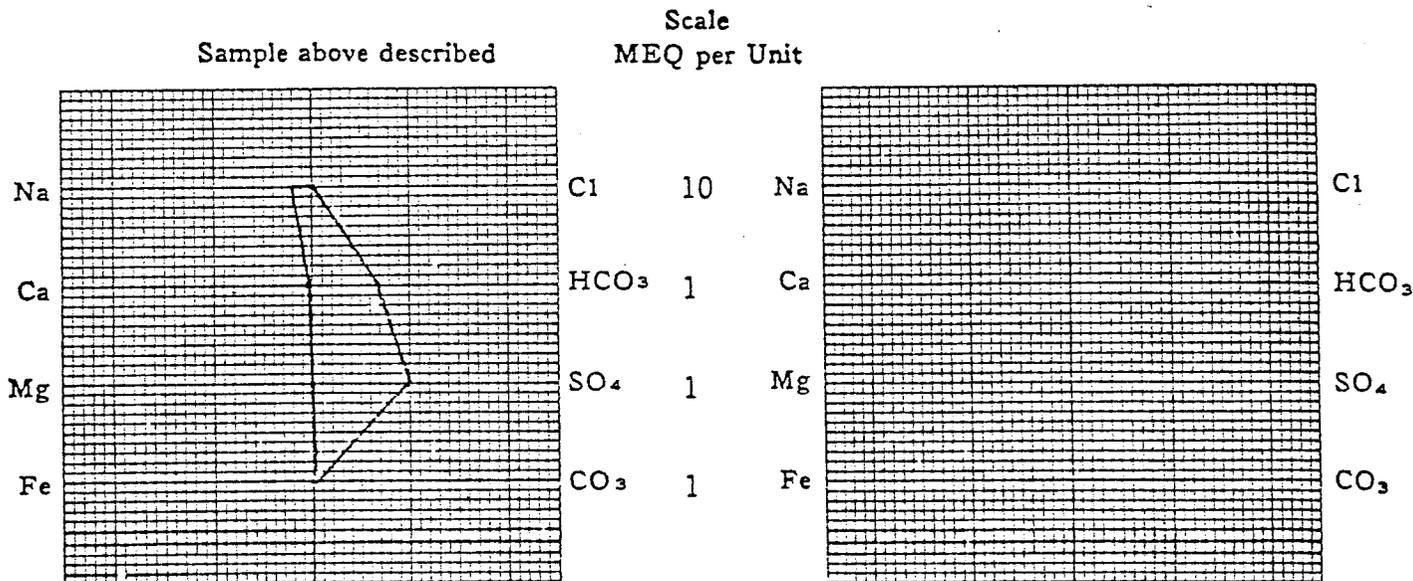
OPERATOR <u>ARCO Oil & Gas Co.</u>	DATE <u>3-12-81</u> LAB NO. <u>36854-1</u>
WELL NO. <u>Wash's Nipple #1</u>	LOCATION <u>SWSE 27-2N-3W</u>
FIELD <u>Wildcat</u>	FORMATION _____
COUNTY <u>Duchesne</u>	INTERVAL <u>880'</u>
STATE <u>Utah</u>	SAMPLE FROM <u>DST #1 (Top)</u>

REMARKS & CONCLUSIONS: _____

Cations	mg/l	meq/l	Anions	mg/l	meq/l
Sodium	471	20.51	Sulfate	490	10.19
Potassium	9	0.23	Chloride	128	3.61
Lithium	-	-	Carbonate	19	0.63
Calcium	13	0.65	Bicarbonate	434	7.12
Magnesium	2	0.16	Hydroxide	-	-
Iron	-	-	Hydrogen sulfide	-	-
Total Cations		21.55	Total Anions		21.55

Total dissolved solids, mg/l	1346	Specific resistance @ 68°F.:	
NaCl equivalent, mg/l	1118	Observed	5.10 ohm-meters
Observed pH	8.8	Calculated	5.50 ohm-meters

WATER ANALYSIS PATTERN



(Na value in above graphs includes Na, K, and Li)
NOTE: Mg/l = Milligrams per liter Meq/l = Milligram equivalents per liter
Sodium chloride equivalent = by Dunlap & Hawthorne calculation from components

T H T H O L E

**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 **DRY HOLE**

2. NAME OF OPERATOR **ARCO Oil and Gas Company
Division of Atlantic Richfield Company**

3. ADDRESS OF OPERATOR
P. O. Box 5540, Denver, Colorado 80217

4. LOCATION OF WELL (REPORT LOCATION CLEARLY. See space 17 below.)

**AT SURFACE: 1930' FEL & 660' FSL
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
FRACTURE TREAT
SHOOT OR ACIDIZE
REPAIR WELL
PULL OR ALTER CASING
MULTIPLE COMPLETE
CHANGE ZONES
ABANDON*
(other)

5. LEASE 14-20-H62-3090	
6. IF INDIAN, ALLOTTEE OR TRIBE NAME Ute	
7. UNIT AGREEMENT NAME ---	
8. FARM OR LEASE NAME Washes Nipple	
9. WELL NO. 1	
10. FIELD OR WILDCAT NAME Wildcat	
11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA 27-2N-3W Uintah Meridan	
12. COUNTY OR PARISH Duchesne	13. STATE Utah
14. API NO. 43-013-30551	
15. ELEVATIONS (SHOW DF, KDB, AND WD) 7806' GR	

CONFIDENTIAL

(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.)*

Present status: 16" casing cemented @ 55' GL; 10-3/4" casing 40.5# cemented @ 533' with 525 sx cement; 8-5/8" casing 24# & 32# cemented @ 2049' with 305 sx cement. Drilled to 5874' and sidetracked hole.

PROPOSE TO P & A AS FOLLOWS WITH PLUGS @:

4550'-4150'
3340'-3140'
2150'-1950'
200'-surface

APR 13 1981

**DIVISION OF
OIL, GAS & MINING**

Per conservation between A. Raffoul, U.S.G.S. & M.W. Smith, ARCO, 4-5-81.

Subsurface Safety Valve: Manu. and Type _____ Set @ _____ Ft.

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

SIGNED W. A. Walther, Sr. TITLE Operations Manager DATE 4-8-81

(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 **DRY HOLE**

2. NAME OF OPERATOR **ARCO Oil and Gas Company
Division of Atlantic Richfield Company**

3. ADDRESS OF OPERATOR
P. O. Box 5540, Denver, Colorado 80217

4. LOCATION OF WELL (REPORT LOCATION CLEARLY. See space 17 below.)
AT SURFACE: **1930' FEL & 660' FSL**
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 type="checkbox"/>		<input checked="" type="checkbox"/>
(other)			

5. LEASE
14-20-H62-3090

6. IF INDIAN, ALLOTTEE OR TRIBE NAME
Ute

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME
Washes Nipple

9. WELL NO.
1

10. FIELD OR WILDCAT NAME
Wildcat

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA
27-2N-3W Uintah Meridan

12. COUNTY OR PARISH
Duchesne

13. STATE
Utah

14. API NO.
43-013-30551

15. ELEVATIONS (SHOW DF, KDB, AND WD)
7806' GL

(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.)*

Circl'd hole clean. Set plugs @ 4550'-4350', 500 gals mud flush ahead with 70 sx Class "H"; 3340'-3140', 500 gals mud flush ahead with 70 sx Class "H"; 2150'-1950', 10 BW ahead with 70 sx Class "H"; 250' - BOP with 70 sx Class "H". (In sidetracked hole.)

Cut off casinghead. Clean mud tanks.
Cleaning location and filling reserve pit.
Released rig @ 3:00 pm 4-7-81.

**APPROVED BY THE DIVISION
OF OIL, GAS, AND MINING**
DATE: 5-4-81
BY: M. J. Minder

Subsurface Safety Valve: Manu. and Type _____ Set @ _____ Ft.

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

SIGNED W. A. Walther, Jr. TITLE Operations Manager DATE 4-10-81
W. A. Walther, Jr.

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE APR 13 1981
CONDITIONS OF APPROVAL, IF ANY:

Washes Nipple #1

1920' FEL - 560' FSL

SW SE Sec. 27-T2N-R3W

Duchesne County, Utah

Legal Bottom Hole Position 2460.38 FWL - 1765.58 FSL NE SW Sec. 27-T2N-R3W

Used curvature method for determination of bottom position.

Assume Kick-off point was vertical.

April 15, 1981

B. W. Smith

DRILLED (MEASRD.) DEPTH-FT.	TRUE VERTICAL DEPTH	RECTANGLR COORD.-FT (FROM SURFACE LOC.)		CLOSURES		DOG LEG SEVERITY DEG/100FT.
		+=NORTH	+=EAST	DISTANCE	ANGLE	
2110	2110	0	0	0	N 0 E	0
2132	2132.	0.05	0.205249	0.21	N 75 E	36.33
2142	2141.99	-0.22	0.346224	0.4	S 53 E	5.38
2171	2170.96	-1.2	-0.22030	1.21	S 10 W	26.96
2205	2204.9	-0.98	-2.19579	2.4	S 66 W	4.34
2231	2230.85	-0.3	-3.75287	3.76	S 85 W	3.68
2265	2264.75	1.07	-5.95147	6.04	N 80 W	2.71
2301	2300.63	2.84	-8.25382	8.73	N 71 W	1.26
2327	2326.54	4.27	-9.86625	10.75	N 67 W	2.19
2358	2357.39	6.59	-11.8147	13.52	N 61 W	6.78
2371	2370.3	7.91	-12.6394	14.91	N 58 W	9.86
2389	2388.12	10.08	-13.892	17.16	N 54 W	5.82
2456	2454.32	19.47	-18.175	26.63	N 43 W	2.51
2490	2487.33	24.85	-20.2388	32.05	N 39 W	3.14
2522	2519.11	31.01	-22.9183	38.56	N 36 W	12
2552	2547.92	38.65	-26.2407	46.71	N 34 W	14.6
2570	2564.71	44.54	-28.9295	53.11	N 33 W	34.39
2600	2591.89	55.34	-35.5478	65.77	N 33 W	15.18
2640	2627.69	69.78	-46.0396	83.6	N 33 W	2.5
2670	2654.3	80.91	-54.2801	97.43	N 34 W	3.69
2699	2679.70	91.82	-62.7997	111.24	N 34 W	4.84
2762	2734.34	116.12	-82.8369	142.64	N 36 W	3.28
2828	2790.31	142.91	-105.319	177.52	N 36 W	3.03
2858	2815.33	155.5	-116.074	194.04	N 37 W	3.83
2915	2862.02	179.98	-137.738	225.64	N 37 W	3.66
3006	2934.21	220.15	-175.865	281.77	N 39 W	3.93
3068	2981.7	248.33	-204.046	321.4	N 39 W	3.22
3163	3051.73	292.9	-250.21	385.22	N 41 W	3.49
3255	3116.21	337.64	-298.199	450.47	N 41 W	3.26
3346	3176.5	383.23	-348.843	518.22	N 42 W	3.71
3442	3236.26	432.01	-405.960	592.83	N 43 W	3.23
3473	3254.48	448.3	-425.04	617.76	N 43 W	6.98
3542	3294.06	486.47	-466.71	674.15	N 44 W	3.56
3605	3329.74	523.18	-503.424	726.05	N 44 W	3.08
3759	3414.74	619.32	-588.496	854.33	N 44 W	2.81
3900	3489.46	715.4	-659.674	973.07	N 43 W	3.38
3909	3494.13	721.8	-663.851	980.66	N 43 W	1.99
3970	3525.78	766.02	-691.480	1031.96	N 42 W	2.93
4087	3536.91	851.08	-743.619	1130.17	N 41 W	1.11
4221	3657.92	947.96	-803.003	1242.35	N 40 W	0.63
4439	3773.45	1105.58	-899.612	1425.34	N 39 W	0.38

WASHS NIPPLE #1
SW SE Section 27-2N-3W
Duchesne County, Utah

Plugs set as follows:

Vertical hole:

5800'-5600'	70 sx Class "H"
4700'-4500'	70 sx Class "H"
3100'-3000'	60 sx Class "H"
2350'-2000'	270 sx Class "H"

Sidetrack hole:

4550'-4350'	70 sx Class "H"
3340'-3140'	70 sx Class "H"
2150'-1950'	70 sx Class "H"
250'-BOP	70 sx Class "H"

- /15/81 285 Day-1, Ftg-285. Drlg (Red sandy clay). Mud: 10.4#, vis 45, WL NC. SPUDDED 6:30 pm 1/14/81. CO boulders & set in rat hole sock, dn OK. Set in rotary & floor. PU BHA. Drlg & survey. 15' cmt left inside 16" conductor, set @ 71'. 3/4° @ 90', 1/2° @ 150', 3/4° @ 226'.
- /16/81 533 Day-2, Ftg-248. Rig to run 10-3/4" csg. Mud: 10, vis 40. Repair to tail shaft chain. 3/4° @ 288, 443, 500; Missrun @ 350.
- /17/81 533 Day-3, Ftg-0. Nippling Up. Mud: 10, vis 40. Ran 12 jts 10 3/4", 40.5# R-3, K-55, STC csg (536.50'). Set csg at 533'. RKB with insert at 489' and with 3 centralizers on casing. Cmted w/525 sks Class "G" w/2% CaCl₂ & 1/4#/sk flocele. Had good cmt returns to the surface. PO at 9:45 am 1-16-81.
- /18/81 533 Day-4, Ftg-0. TOH w/Magnet. Mud: 10, vis 40. While nippling up and aligning Hydr1, the 3/8" link chain snapped and 10' fell inside 10 3/4" csg. Finished NU, stack & tstd blind rams, pipe rams, choke manifold & kelly cock to 1500# - OK. LD 5-8" DCs. PU magnet & TIH. POH recovering 3' piece. Reran magnet & TOH at 6 am.
- /19/81 739 Day-5, Ftg-206. Mixing mud f/lost circl @ 739'. Mud: 8.5, vis 36, WL: 28. TOH w/magnet. Recov'd 7' 3" chain. TIH w/DCs & bit #1. Drlg cmt plug, float & shoe. Drlg to 590'. Circl 1/4 hr. Trip f/BHA. Drlg to 679' - lost all returns, 200 bbls. Drld to 739' - lost all returns, 100 bbls. (#2 pmp dn, no way to continuously mx md.)
- /20/81 825 Day-6, Ftg-86. Mix mud & LCM - lost returns @ 825'. Mud: 8.3, vis 35. Lost returns @ 739. Recov'd returns & plugged bit - 300 bbls. Try to replug bit. TOH & chg bit & unplug DC. Drlg. Survey. Drlg. Pmp repair. Lost returns again @ 825'. Mix gel & LCM - 750 bbls. No returns yet. Had 1050 loss in 24 hrs. (Rig mud tank volume very small, 250 bbl usable. Mud mixing poor, very slow, 4-5 hrs to mix 250 bbls.) 1/4° @ 801.
- /21/81 1270 Day-7, Ftg-445. Drlg. Mud: 8.3, vis 35. Mxd hvy pill of 50% LCM @ 825'. Pmpd dwn pill & recov'd circl, lost 150 bbls. Drlg. Survey. Drlg. Adding LCM to keep 35%-40% in system. No large amt of loss in past 400'.
- 1/22/81 1640 Day-8. Ftg. 370. Drlg (hard ss). MW: 9.3, vis 38, WL 14. Drlg 3-1/2 hrs. Survey 1/2 hr. Rig ser. 1/4 hr. Drlg 2-3/4 hrs. TOH, 2 hrs. Worked BOP 1/4 hr. RIH w/DCs 3/4 hr. Repair pmp drive chain, 1-1/4 hrs. TIH 1-1/4 hrs. Hole good. Drlg 8-1/2 hrs. Air pmp 3/4 hr. Drlg 2-1/4 hrs. No mud loss last 24 hrs. Strtg to shake out LCM. No problems. 1-1/4° @ 1304'.
- 1/23/81 1869 Day-9, Ftg-229. Lost returns & mxd gel @ 1869' & LCM. MW: 8.6, vis 41. Dropped LCM to 10%. MW: 8.6, vis 35 w/no loss. Lost circul. sudden w/no drlg break (at 6 am, had lost 350 bbls, 40% no returns). 1-3/4° @ 1657, 1-1/2° @ 1846.
- 1/24/81 1869 Day-10, Ftg-0. LC @ 1869, run temp stvy. MW: 8.6, vis 35. Mx & pmpd total 700 bbls mud w/45% LCM, part thru bit & part thru annulus w/no returns. POH & RU. Sch to run temp survey. 3 runs unable to determine loss zone (1st run out about 2 hrs, 2° kick @ 420'). PI 50 bbls mud & ran 2nd run, had 1° -ick @ 982'. 3rd run no kick, no determination of loss of FL. Temp mostly constant & radient 42° @ top to 55° @ bottom. Ran 2x4 on Howco WL & deter FL standing @ 528'. Pit mud temp 41° (after 200 bbls, FL 410' w/2" x 4").

/25/81	1965	Day-11, Ftg-96. Drlg (55). MW: 9.0, vis 36, WL 18. Pmp in 200 bbls mud. Ran temp log to find loss zone. Schlum tool failed. Mx mud & LCM. WO Schlum. Pmp in 200 bbls mud & run survey. Found loss zone @ 830'. Ran a 2" x 4" on WL, found @ 238'. RIH open ended to 790'. Dropped 50 burlap sxs thru DP, pmpg 5 min ea 10 sxs. Rec'd circ. POH. PU BHA. RIH & hit sack bridge @ 850'. CO to btm & resumed drlg to present depth.
/26/81	2260	Day-12, Ftg-295. Drlg. MW: 9.1, vis 35, WL 18. No mud loss in 24 hrs (looks like #1 pmp has bearing out, might have to take out). 1-3/4° @ 2109.
/27/81	2623	Day-13, Ftg-363. Drlg. MW: 9.3, vis 39. #1 pmp dwn, bearing out. Sweco unit dwn, wkg on engine. 1-3/4° @ 2370'.
/28/81	2668	Day-14, Ftg-45. TOH w/bit & no returns. MW: 8.9, vis 41. Drlg 2-3/4 hrs. Dropped survey 1/4 hr. TOH 2-1/2 hrs, left 3 cones in hole. WO fishing tools, ck BOP while waiting. PU & make up finger bskt. TIH. Wkd bskt, lost returns, 50 bbls. TOH. Clean bskt, rec'd 2 cones, LD bskt & BHA. Ran in opn ended 8 stnds to 780'. Mxd mud & LCM. Pmpd 20 burlap sacks dn DP & 100 bbls mud, rec'd circl. Pld 8 stnds out of hole. PU BHA & bit. TIH & lost returns. Bridge @ 1250'. DO bridge & fin trip to btm. Wshd dn 30', cone on btm. TOH.
1/29/81	2665	Day-15. WO cmt to set. Mud: 8.4, vis 35. RIH w/finger bskt & try to retrieve 1 cone. Bskt picked up too many sxs, didn't get cone. RU Hall & RIH OE to 690'. Pmpd 150 sxs Mixotropic cmt, plug f/lost circ. PD @ 2:00 pm 1-28-81. WO cmt plug to set. Tried to fill hole w/100 BM--no returns. RIH OE, tried to cmt @ 890'. POH to 690'. Ran 150 sxs cmt, again no returns. PD @ 2:00 am 1-29-81. WO cmt.
1/30/81	2668	Day-16. Drlg cmt @ 660'. Mud: 8.4, vis 37. WO cmt to set. Repairing pmp drive chain. Filled hole w/30 bbls. TIH w/bit & tag cmt @ 760'. Drlg cmt. Drld to 930' & lost returns again. TOH. Run WL to find FL. FL @ 420'. TIH OE to 710'. Mx mud & WO Hall. Ran 150 sx cmt plug. POH & WO cmt. Filled hole w/20 bbls. TIH w/bit tag cmt @ 532'. Drlg cmt to 660'. Plug 150 sx Thixotropic cmt w/25# gilsonite/sx, 1/4# flocele/sx & 1# tuf plug/sx.
1/31/81	1237	Day-17, Ftg-102. Combating lost return @ 1237'. Mud: 8.7, vis 39. Drld & rmd cmt f/532' to 900' & poss cmt & new fm to 1135' in 13-1/4 hrs. To be in new fm @ 1135'. Dropped survey & TOH. TIH w/bit #5 & drld to 1237' (just into drlg break) & lost complete returns. Had considerable more dp torque in interval f/900'-1135' so either hole was trying to ST or was slicing along side of original hole. Lost 20 bbls of mud when losing returns @ 1237' drlg break, PU and increasing LCM to 40% at report time. 1-1/4° @ 1135'.

- 2/1/81 1374' Day-18, Ftg-137. Working stuck pipe. Mud: 8.6, vis 37. Mxd mud to 40% LCM @ 1237' & regained full returns--loss was 75 bbls mud. Drl'd to 1374' & lost returns. PU off btm 40' & rotated pipe slowly while mxg LCM to 40% (lost 100 bbls). Got returns back & stopped rotating f/5 min to lower bit & resume drlg, but pipe was stuck. Circ'd & attempted to work stuck pipe f/6-1/2 hrs w/o any success. Made up Bowen surface jars & worked surface jars while mixing 25 bbls diesel w/60 gal Milfree. Sptd 13 bbls outside DCs & pipe & left 12 bbls inside. Working stuck pipe while moving oil 1/2 bbl every 30 min w/o success. Free pt & fishing tools are on the way.
- 2/2/81 1374 Day-19. Circ'l & cond mud-stuck. Mud: 8.5, vis 46, WL 27.8. Jar on stuck pipe w/Bowen surface jars. LD jars, RU Dialog to free pt. Fd string stuck @ 1005', top of DCs. RI string shoot to back off. Chg over sub @ top of DC. String backed off 13 jts up @ 715' in DP. Screwed back in & torqued up string. Ran 2 more shots in chg over sub w/no results. Re-run free pt. Fd string stuck @ 823'. PU Kelly & broke circulation. Circl & wrk pipe. Lost 50 BM while circlg w/800# press. Run free pt. Pipe still stuck @ 823'. Circl & cond mud, wrk pipe & lower wtr loss.
- 2/3/81 1374 Day-20. Circl'g stuck pipe. Mud: 8.7, vis 54, WL 6.8. Circl'g stuck pipe, cond mud. Lost all returns, 100 bbls. Mxd LCM @ 30%, rec'd returns. Circl'd 1/2 hrs, lost returns again. Lost returns, 150 bbls. Cleaned #1 & #2 shale tks. Trans mud f/mud tks. Bld LCM to 30%, rec'd returns in 20 bbls. Ran string shot to bit to knock out jets. Circl'g & cond mud f/stuck pipe. Lowered filtrate f/27cc to 6.8. Circl'g @ 200# press @ 25 strokes. Press went dn to 0# @ 25 strokes. Incr'd strokes to 34, @ 200#. No mud loss since last rec'd. Wshd out pre-mx tk clean. Filled w/45 bbls w/diesel oil. Mxd 60 sx of black magic, very slow mxg (5 hrs-60 sx). 96 needed for 55 bbl pill (need add'l 36 sx for 55 bbl pill--truck has not arrived). RU Hallib to spot pill; worked pipe. (Note: need to pay Ute's \$3000 if they have refunded other water money.)
- 2/4/81 1374 Day-21. LD 1 DC & PU fishing tools. Mud: 8.6, vis 51, WL 7.4. Circl & wk stuck pipe; w/o truck w/black magic. Circl & mx balance of black magic in premix tks (60 bbls). Spt black magic w/Hallib (48 bbls thru bit around DP & DCs). Pmpd 1 bbl every 30 min f/3 hrs (total of 6 bbls). 1 bbl every hr f/6 hrs. 1 bbl/mud per hr f/3 hrs. Wkd & torqued pipe thruout 12 hrs. did not move. Rng free pt. First tool failed due to black magic slipping. Ran 2nd free pt w/800 grain string shot. Found free pt @ 1165', (5 DCs dn). Had small amount of movement on next collar dn. Set back off charge and backed off @ 1165'. String had some drag 10-15M# f/approx 130', then POH w/5 DCs. Fish still in hole: 4-7" spiral DCs & BHA (f/1165' - 1334' - 169' fish). Spiral DC's clean; no day or fm on spirals.
- 2/5/81 1374 Day-22. Lost returns, mix LCM. Mud: 8.6, vis 43, WL 5. PU fshg tools & DCs. TIH to top of fish @ 1165'. Screwed in fish & bmpd dn on fish f/2 hrs - knocked it dn 3". Strtd jarring up & came free. TOH w/fish. Brk & LD fishing tools (2 DCs & 6 pt rmr). Load out tools, RD dialog. TIH w/bit #6. Strtd w/string & rng f/1240'. No bridges. Torque when rotating. Rnd to 1360' & lost returns. Msg gel & LCM to retain circl. (lost 300 bbls).

2/6/81	1374	Day-23. Rmg 8-3/4" to 9-7/8". Mud 8.5, vis 46, WL 6. Mxd gel & LCM @ 1360'. Pmpd into hole 400 bbls, could not regain circl. POH & LD BHA f/8-3/4" hole. Dropped into hole 50 paper gel sx. TIH w/DP open ended w/11 stds @ 1000'. Dropped 30 burlap sx thru DP. Pmpd 50 bbls mud, no returns. Pld 2 stds up to 818' (182' out of hole). Dropped addn'1 30 sx thru pipe. Pmpd another 50 bbls mud, rec'd 50% returns f/approx 15 min & lost again. Dropped 20 sx. Pmpd 50 bbls, no returns. Pld 2 more stds out of hole up to 636'. Pmpd 30 sx thru pipe again and regained fill returns. POH. PU BHA f/9-7/8" hole. TIH to flat collar on 10-3/4" (490') & strt'd rmg out to 9-7/8" hole.
2/7/81	1420	Day-24, Ftg-46. Drlg 9-7/8" hole. Mud: 8.6, vis 50, WL 5.6. Rmd hole 8-3/4-9-7/8" f/725-1374' w/no mud loss. Strtd torqueing @ 1295. POH - had gunny sack wound in cutter. PU 9-7/8" bit, check BOP & WIH slowly. Lost 20 bbls mud when brkg circ. No loss since. Fin rmg 8-3/4 - 9-7/8" hole 1295 - 1374' & resumed drlg 9-7/8" hole.
2/8/81	1524	Day-25, Ftg-104. Mxg mud & LCM. Mud: 8.4, vis 43, WL 6.4. Drl'd to 1478 - lost comp net. Mx mud & LCM 150 bbls loss, Drlg to 1524' & lost comp returns. Mx gel & LCM, lost 200 bbl no returns. POH w/bit. WIH open ended to 728'. Build mud vol & pmpd in plastic sxs, sheet plastic & burlap sxs dn DP. Recv'd circ after 100 bbl loss. POH. PU bit & GIH slowly. Pmp 150 bbl w/no returns. Mx mud & LCH to 40%.
2/9/81	1903	Day-26, Ftg-379. Drlg (red clay & sd) Mud: 8.3, vis 53, WL 12.6. Pmpd into hole 50 bbls, rec'd circl. Drlg, no mud loss. Mud circ, LCM 40%.
2/10/81	2055 (corr'd)	Day-27, Ftg-97. Rig repairs. Mud: 8.5, vis 67, WL 8.8. Drlg, no mud loss to 2000'. Circl & cond mud hole for 8-5/8" csg. Drop survey. TOH, strap pipe-made 55' corr to 2055'. SIH. Sprocket hub broke on input shaft. 1 std DC in hole. WO repairs & repair rig. Instlg broken hub w/new bolts. 1-1/2" @ 2055'.
2/11/81	2055	Day-28, Ftg-0. Rig repairs (pmp drive chain) Mud: 9.0, vis 44, WL 9.2. WO repair parts f/sprocket. Repairing hub & sprocket. Thawing out pmp rotary table; etc. RI 4 stds, ice plugs. Pld out & thawed out. TIH, brk circl every 270' (3 stds). Circlg & cond hole to run pipe. TOH. Drive chain on #1 pmp broke on TOH. LD DCs & BHA. Repairing pmp drive chain.
2/12/81	2055	Day-29, Ftg-0. ND BOP. Mud 9.0, vis 46. Repairing pmp drive chain. RU csg tools, strt'd rmg 8-5/8" csg. RIH to 550', tried to fill pipe. Pmp & mud lines froze. Mud pmp & RU 2" line to fill & circl pipe. Fin rmg 8-5/8" csg, 47 jts. Circl, no mud loss while circlg. Cmtg. PD @ 7:15 pm, 2/11/81. WO cmt. Pmpd cmt into annulus. ND. Rn 8-5/8" csg. 8-5/8", ST&C K-55, Howco GS (1.10'). Float jt. (46.57', 24#), FC (1.65') @ 2002', 30 jts 24# (1371.95') 16 jts 32# (653.46'). Total pipe run 2074.73'. Landed @ 2049' KB. Mud returning thruout pipe job. Broke circl & circl'd 1-1/2 hrs w/no mud loss @ the rate of 3 BPM. RU Hallib & pmpd cmt. Pmpd 10 bbls wtr flush ahead. Pmpd 180 sx Howco lite, 10# gilsonite/sx & 2% CaCl foll by 125 sx Cl "H", 2% CaCl. Full returns thruout mx. Dropped plug, strt'd displacement. Cmt set to surf. 86 bbls displacement (w/42 bbls to go). Lost returns when we had 109 bbls in (w/19 bbls to go). Pmp press lost 200# (dropped f/950-750#) when lost returns. Tried to come back, but dropped back to 750# each time. Bmpd plug w/128 bbls displ'mt (500# over pmpg @ 1250#). Float held OK. Waited 8 hrs on cmt, tried to pmp 50 sx into annulus, Hydril open. Cmt did not drop. Closed Hydril. Press came up to 1000#, would not take cmt. Rel Hallib & ND.

- 2/13/81 2055 Day-30, Ftg-0. H.U. hydraulic lines to BOP. ND BOPs & riser. Clean mud tanks. Cut off csg & 10-3/4" well head. Cmtd 8-5/8" csg to 10-3/4" annulus. Instl 8-5/8" well head. Tst welds to 1100#. Held OK. NU BOPs & thawed out mud lines. HU hydraulic lines to BOP.
- 2/14/81 2055 Day-31, Ftg-0. WO #1 Pmp - valves. Mud: Wtr. Thaw out mud lines, Kelly hose & std pipe. Try to press tst BOP. Several surface eqpt leaks. Tst blind rams to 1200# 15 min OK. PU 2 DC. Shut dn to repair tail shaft chain drive in compound. Modify sub structure below chain. Replaced air compressor. PU DCs, HWDP & DP. SLM RIH. Tagged plug @ 1995'. PU off plug. Tst pipe rams & csg to 1500# 15 min OK. Tstd hydril to 1000# OK. Circ dn to plug. Drilled 1/4'. Shut down. Work on #1 pmp.
- 2/15/81 2105 Day-32, Ftg-50. RIH. Mud: 8.9, vis 42, WL 12. Drilled cmt & GS top cmt 2025', w/clr wtr. Flush wtr & mx mud. Drill to 2105' w/slick BHA. Circ & POH. Change BHA. RIH to 1400'.
- 2/16/81 2322 Day-33, Ftg-217. Drlg. Mud: 8.7, vis 43, WL 11.4. Finish RIH. Repair compound chain. Wshd & rmd w/lit wt 2050-2105'. Drlg ahead. Had 1/4 hr rig service.
- 2/17/81 2577 Day-34, Ftg-255. Drlg (sd & clay). Mud: 8.7, vis 47, WL 13.4. Lost returns @ 2347'. Mxd 50 bbl pill, rec'd circl, 75 total bbl loss (38 sx sawdust & fiber to regain circl). Lost returns again @ 2470'. Mxd 50 bbl pill, rec'd circl, 100 bbls loss (44 sx sawdust & fiber to regain circl.). 1-1/4° @ 2424'.
- 2/18/81 2739 Day-35, Ftg-162. Wrkg stuck pipe @ 2710'. Mud: 9.0, vis 39, WL 9.8. Drlg. Mud airy due to LCM. Strtd shaking out same. Pmp press 400#, 54 strokes. Pld up to rm dn for conn (29'). No drag. Pipe stuck, no movement since. Work stuck pipe. Drained & cleaned pre-mx tnk. Mxd 49 bbls black magic. Spot 25 bbls out around DCs. 24 bbls still in pipe. Sptd w/Hallib 5-3/4 hrs--moved oil 1 bbl every 1/2 hr for 3 hrs, then 1 bbl/hr. thereafter.
- 2/19/81 2739 Day-36, Ftg-0. TIH w/fishing tools (still stuck @ 2710') Mud:8.9, vis 36 WL 9.8. Black magic sptd, working stuck pipe. Remove goose neck f/swivel. Run free-point indicator. Obstruction in top DC, could not get through. Free-point @ btm jt of DP. It indicated sticking. Run sinker bar and jars on WL. Drove obstruction in thru bit. Worked pipe. Run free-point; free to DP. Run string shot & backed off leaving 6 pt, DC & 3 pt in hole. Chain out of hole. Set back DCs & LD shock sub. Cut drlg line. Repair compound chain. Put goose-nect back on swivel. PU screw in sub, bumper sub, jars & accelerator. TIH.
- 2/20/81 2827 Day-37, Ftg-88. Drlg. (Sd & Clay) MW: 9.0, vis 38, WL 5.6. Fin TIH w/fishing tools. Screwed into fish, bmpd dn 25 min; came free. Chain out of hole w/fish. New crew orient & repair. LD fishing tools, BHA. PU 3 DCs & daily jars. TIH w/bit, put on more pipe protector rubbers. Wsh & rm 90' to btm. Drlg. No problems.
- 2/21/81 3001 Day-38, Ftg-174. Rmg out of hole. MW: 9.0, vis 43, WL 8. Drl & lost returns @ 2934'. Mxd 50 bbls LOM pill. Required returns. 1/2 hr. survey. Drilled 7-1/2 hrs to 3001'. POH. Lost all cones and shanks. Broke out bit sub. TIH. Rmg 2955-2975' @ 6 am. 2-1/2° @ 2894'.

- 2/22/81 3001 Day-39, Ftg-0. Cutting drlg line. Mud: 8.8, vis 38, WL 8.4. Rm 2975-3001'. Found junk on btm. POH. RIH w/magnet, wsh & rm 45' to btm. Channel out of hole. Rec'vd 2 halves of cones & small pieces. Ran globe bskt, cut 6". Channel out of hole, recovered one whole cone & one pin plus 2 other pins. Believe most of junk recovered. RIH. Cutting drlg line.
- 2/23/81 3042 Day-40, Ftg-41. TOH, looking f/hole in pipe (lost pmp press). Mud: 9.0, vis 44, WL 8. Fin cutting drlg line. Fin TIH to 2910'. Rm out of guage hole w/bit & 6 pt rmr. Repair bearing housing on input shaft. Rng. Rmd f/2910-3001'. No junk left on btm. Drlg f/3001-3015'. Dropped survey, TOH f/BHA & insert bit. PU BHA & work BOP. TIH. Wsh 30' to btm. Drlg. Lost 400# pmp press. Check pmps & surf equip. TOH & look wsh out. At 6:00 on bank-- found nothing so far. 1° @ 2972'.
- 2/24/81 3307 Day-41, Ftg-265. TIH w/bit #16. Mud: 9.1, vis 40, WL 6.8. TIH & checking press. Repairing input bearing housing. Fin TIH & check press. Did not find any hole. Bridge @ 2982'. D.O. bridge & wsh to btm. Drlg. Drop survey. Trip f/bit #16 (1 cone on journal completely out, other two were tight). No tight hole. Slow mud loss in past 24 hrs (total of approx 100 bbls). 0° @ 3307', 4° @ 3307'.
- 2/25/81 3717 Day-42, Ftg-410. TOH f/bit. Mud: 9.4, vis 43, WL 7.8. TIH w/bit #16. Drlg sdstone & siltstone. Drop survey. TOH. Bit stopped rotating; torqued up @ 3381' while drlg. Had 40M# overweight to pull free. No fracture when resumed drlg. No tite hole. No mud loss.
- 2/26/81 3995 Day-43, Ftg-278. Drlg (Siltstone, dolo. & lime). MW: 9.2, vis 43, WL 8.6. TOH. Cleaned 3 sections mud tank. Gauge rmrs & work BOP. Rig service & repair. TIH. Drlg. Survey. Drlg. No mud loss or tight hole. Drlg ahead. 1-3/4° @ 3684.
- 2/27/81 4223 Day-44, Ftg-228. Drlg (dolo & limestone). MW: 9.2, vis 43, WL 6.8. Rng all mud over shaker, no mud loss. 2nd gear clutch on rig is out, otherwise, no problems.
- 2/28/81 4349 Day-45, Ftg-126. Drlg (dolo, limestone, Slts.). MW: 9.3, vis 45, WL 8.2. Srvy & SLM out. Rep dwks bearing cap & clutch, chg rmrs & wrk BOP. Repair high gear chain. Trip in w/bit #18. No fill or bridges. Drlg. No mud loss. SLM corr from 4223 to 4217. 1-1/2° @ 4210.
- 3/1/81 4517 Day-46, Ftg-168. Repairing Compound. MW: 9.2, vis 39, WL 8.0. Drlg, Rig ser, drlg, repair drawworks compound. Oiler tube fell dn into chains on compound & broke same. Chains wrapped up on engine drive & split compound case. Bit on btm, unable to move pipe. Circ w/pmp #2.
- 3/2/81 4725 Day-47, Ftg-208. TIH f/DST #1. MW: 9.3, vis 51, WL 7.6. Repairing compound. Drlg. Rig serv. Drlg. Circ samples & circ hole & mud f/DST #1. Dropped survey. TOH & SLM. Stand back BHA & PU tst tools. TIH w/test tools. 3° @ 4700'.
- 3/3/81 4725 Day-48, Ftg-0. Chg out jack shaft & drawworks. MW: 9.0, vis 33, WL 8.6. TIH. Repair jack shaft chain. Fin TIH w/test tools. 4 hrs tstg. TOH w/ tst tools. LD, brkdn & load out tst tools. Unplug 7 DCs - sand. Repair drawworks, chg out jack shaft.

3/4/81	4725	Day-49, Ftg-0. TIH w/bit #19. MW: 9.0+, vis 45, WL 6.8. Fin chg jack shaft in drawworks. PU DC & rmg BHA. TIH w/bit #19. Brk in circ every 10 stds. Thawed Kelly hose.
3/5/81	5198	Day-50, Ftg-473. TOH f/logs (Chinle fm). Mud: 9.3#, vis 45, WL 6.9. Fin TIH. Wsh 60' to btm, no fill. Drld. Rig service. Drld. Circ samples @ 5198'. Tried to resume drlg, bit torqued up, would not drl. Made 10 std short trip. Circ & cond hole & mud f/logs. Dropped survey. TOH.
3/6/81	5198	Day-51, Ftg-0. TOH w/finger bskt. Mud: 9.3#, vis 45, WL 6.2. Fin TOH. SLM. RU Sch & log, LTD 5190'. Put rotary hose on kelly. PU finger bskt & TIH. Mill bskt over cone, made 2'. TOH. Chaining out of hole. Ran logs as foll: DIL, FDC, CNL, GR, Dipmeter, SFL, wave form log, borehole compens sonic & cyberlook. 3-1/2° @ 5198'.
3/7/81	5595	Day-52, Ftg-397. Drlg, Nugget. Mud: 9.3#, vis 39, WL 6.4. Chained out w/finger bskt & rec'd all of bit cone. TIH & intermittent circ'd to clean btm of hole & then resumed drlg.
3/8/81	5790	Day-53, Ftg-195. Drlg, Chinle. Mud: 9.4#, vis 40, WL 5.6. Dropped survey & TOH f/bit @ 5747'. Chgd out 6 pt & 3 pt reamers. TIH (repacked swivel) & drld to 5760' & circ'd up samples. ST of Chinle @ 5750' to 5760'. Misrun @ 5747'.
3/9/81	5858	Day-54, Ftg-68 (cored 16). Rng Core #1. Mud: 9.4#, vis 44, WL 6.4. Drld ahead @ 5811' & circ'd samples. WO pmp, tighten swivel packing. Drld ahead to 5842', circ f/core. Dropped survey. TOH. SLM. Repair bearing on input shaft. PU core bbl. TIH. Wshd dn 50'. Circ btm, 5' fill. Cored 5842-5858'. 7° @ 5811'.
3/10/81	5874	Day-55, Ftg-cored 16. WO orders. Mud: 9.3#, vis 47, WL 6.4. Cont coring 5858-5874'. Core jammed. POH. Rec'd 32' of core, full recovery. LD core bbl. RIH, circ & cond f/logs. POH. WO Schl. Logged 5874-4887', WLTD 5874'. (Dipmeter w/GR & Cyber dip). POH w/logs. RD Schl.
3/11/81	3100	Day-56, Ftg-0. PB - RU to set plug @ 2350'. Mud: 9.2#, vis 40, WL 7.8. 8-1/2 hrs WO orders. Trip pipe in derrick OE. PU 42 jts DP (5813' depth). Circ & RU Hallib to run cmt plugs. Setting plugs @ 5800-5600' 70 sx Cl "H" cmt; 4700-4500' 70 sx Cl "H" cmt; 3100-3000' 60 sx Cl "H" cmt. LD DP. Stood back 2400' pipe in derrick between plugs. RIH OE (2342'). Wrkd on light plt. Fin TIH to 2342'. Rig to set sidetrack plug.
3/12/81	2000 (approx)	Day-57, Ftg-0. WOC. Set 270 sx cmt plug @ 2350-2000' (approx). Plug consisted of 270 sx Cl "H" 500 Gal mud flush ahead, .85# salt/sx, .75# CFR 2, 5# SD/sx, 2% CaCl. WOC. Inspected all DCs & HWDP. Had 1 cracked DC & 1 cracked HWDP.
3/13/81	2135	Day-58, Ftg-185 (cmt). RU Scientific Drlg Control Steering Tool. Mud: 8.9, vis 38, WL 8.0. TIH. Tagged cmt top @ 1950'. Ran drill off test, 15#M, 60 RPM, 2 min/ft. Drld cmt to 2135'. Circ & clean hole and cond mud. TOH. PU ST assembly. TIH leaving 2 jts HW & 5 DCs out. PU regular drill pipe to replace same. RU Scientific drlg controls, swivel & pack off.

- 3/14/81 2218 Day-59, Ftg-87. Drlg @ 2218'. Mud: 9.0, vis 40, WL 7.6.
RU steering tools. Start drlg @ 2132'. Drill ahead building angle.
1-1/2° S30E @ 2132', 2° S25E @ 2142; 3-1/4° S85W @ 2171.
- 3/15/81 2310 Day-60, Ftg-92. Drlg @ 2310. Mud: 9.0, vis 50, WL 4.4.
Drill ST w/Navadrill & survey to PD. Scientific drlg, repaired equip.
Now working correctly. Problem was in probe, not computer. 3-1/2° N72W
@ 2205, 4° N61W @ 2231, 4-3/4° N55W @ 2265.
- 3/16/81 2333 Day-61, Ftg-23. Rng directional survey. Mud: 8.8, vis 47, WL 6.0.
Drl and survey. Trip to chg bit. Rig repair. RIH. Wsh to btm. Last 100
BF @ 2333' and still losing. TOH. LD Navadrill & diamond bit. TIH w/
insert bit. Mxd 25% LCM pill. Pmpd dn pill, regained full circl. Rng
directional survey. 4-1/2° N50W @ 2301.
- 3/17/81 2390 Day-62, Ftg-7. Drlg @ 2390'. Mud: 8.9, vis 39, WL 6.
Surveyed. TOH. PU 4-3/4" Navadrill. TIH. Wshd 200' to btm. Resumed
ST w/Navadrill & steering tool. Chgd out swivel. Resumed drlg.
5° N47W @ 2327', 6-1/4° N33W @ 2358'.
- 3/18/81 2404 Day-63, Ftg-14. TOH to chg Navadrill. Mud: 8.8, vis 38, WL 5.5.
Navadrl quit. Circl. TOH. PU new 4-3/4" navadrl. TOH. Drlg. Tried to go
past btm. Spudded navadrl w/full string wgt. Navadrl motor would not
drl. Circl. WO new dn hole motors. TOH. PU new 4-3/4" navadrl. TIH.
Attempt to resume side-tracking. Navadrl would not drl. TOH to PU new
navadrl. 6-1/4° N33W @ 2358.
- 3/19/81 2404 Day-64, Ftg-0. TIH w/5" dynadrill. Mud: 8.9, vis 43, WL 4.7.
TOH. SLM. POH. Surf tst navadrl, wrkg OK. PU new 4-3/4" navadrl. Surf
tst, wrkg OK. TIH. Hold tite @ 2345'. Brk circl. Navadrl motor will
not rm or drl. Circ & cond hole. WO dynadrls. TOH. Surf tst navadrl,
wrkg OK. LD navadrl. PU 5" dynadrl. Surf tst dynadrl, wrkg OK. LD daily
oil tool jars. PU new set of jars. TIH.
- 3/20/81 2446 Day-65, Ftg-42. TOH. Mud: 8.9, vis 42, WL 5.2.
TIH. Rm & wsh 60' to btm. Steering tool bar will not go past 2103'.
Finally wrkd steering tool past obstruction. Seated steering tool &
resumed drlg. Circ & wrk pipe on tite spots @ 2420-2423' and 2436-2440'.
Resumed drlg. Scientific drl operator deserted his controls. Steering
tool came unseated & crimped WL. PU tool to inspect WL. WL OK. Couldn't
get steering tool past 2215'. Obstruction in DC below jars. RD steering
tool. POH to inspect obstruction in drl string. 7-1/2° N31W @ 2371,
8-1/2° N29W @ 2389'.
- 3/21/81 2482 Day-66, Ftg-36. Drlg w/6-1/2" Dynaflex Motor. Mud: 8.9, vis 44, WL 4.6.
Fin TOH. Stood back DCs. Found obstruction in 2nd DC below the jars.
LD, 5" dynadrl & PU 6-1/2" Dynaflex Motor. Tstd motor @ surface & TIH.
Had 3-1/2 hrs rmg btm 75' of hole to TD 2446' then had 36' of fast drlg
of new hole to 2482'. Made conn but required 4 hrs of rmg to get back to
btm. Scientific Eye reading 7-3/4° N25W @ 2424' and 88° to 8.9° @ 2456'
& these readings have been running about 1/2° lower than single shots.

- 3/22/81 2560 Day-67, Ftg-78. Drlg w/6-1/2" Dynaflex Motor. Mud: 8.8, vis 43, WL 4.5. Drlg w/6-1/2" Dynaflex motor & steering tool. Drls good in sh FM but tool bogs dn in the soft clays. If next survey shows cont'd rapid build will POH & chg probe in dynaflex to reduce angle. While drlg last 30' have pulled up 40-50' several times when tool gets sticky & drld back to btm. 9-1/4° N20W @ 2456, 10-1/4° N22W @ 2490, 14° N25W @ 2522'.
- 3/23/81 2549
(corr'd) Day-68, Ftg-21. Drlg. Mud: 8.9, vis 42, WL 4.4. Drl w/Dynaflex, circ, TOH & LD Dynaflex & monel collar. PU bit plus BHA. TIH (full gage 3 pt rmr wouldn't go thru 8-5/8" csg) Resume TIH, SLM in 30' correction f/258' up to 2549'. Rm & wsh f/2322-2549'. 18-1/4° N22W @ 2522 (corr f/2552-30' core up hole).
- 3/24/81 2678 Day-69, Ftg-129. Drlg. Mud: 8.8, vis 42, WL 5.2. Drlg 7-7/8" hole. Rn survey. Survey tool would not go past top of spiral DCs. Retrieved survey tools, removed rubber feathers, survey tool went to btm. Resumed drlg. Lost circ @ 2579' (100 bbls). Mxd 25 sx LCM pill, regained full circ. Resumed drlg. Run survey @ 2609'; could not get past DCs w/tool. TOH to inspect collars for obstruction. Found bent corrosion ring @ top of DCs. Cont TOH to inspect bit. Teeth hailed out on bit. Chg bit & IBS. PU KeeCee wiper. TIH. Wsh & rmd last 60' to btm & resumed drlg. 24° N27W @ 2570, 26° N36W @ 2609, 27° N36W @ 2640, 28° N37W @ 2670'.
- 3/25/81 2793 Day-70, Ftg-115. TIH. Mud: 9.0, vis 40, WL 4.4. Drld 7-7/8" hole & survey. Rotary cable torquing up at times, probably due to angle & FM chgs. TO - no tite hole. Inserts partially gone on one cone on bit. Chg out 3 pt rmr. Part protector rubbers on DP on trip in. 29° N39W @ 2699.
- 3/26/81 2989 Day-71, Ftg-196. Drlg (7-7/8" hole). Mud: 9.1, vis 45, WL 6. Rig repair, fix hydromatic. TIH. Resume drlg & surveys, no problems. 33° N40W @ 2828', 34° N41W @ 2858', 36° N42W @ 2915'.
- 3/27/81 3180 Day-72, Ftg-191. Drlg (7-7/8" hole). Mud: 8.9, vis 47, WL 4. Drl 7-7/8" & survey. Rotary table torquing up. Trip out. Tite hole for 90'. PU new bit. TIH. Resume drlg. 39° N45W @ 3006', 41° N45W @ 3068', 44° N47W @ 3163'.
- 3/28/81 3384 Day-73, Ftg-204. Drlg. Mud: 9.1, vis 40, WL 4.2. Drl to 3384'. Torque incr & erratic. POH. Change bit. RIH w/bit #29. On btm @ 6 am. 47° N47W @ 3255, 50° N49W @ 3346'.
- 3/29/81 3520 Day-74, Ftg-136. Drlg. Mud: 9.3, vis 43, WL 3.6. Drld 3384-3410'. Rep rotary clutch. Con't drlg. Had high torque. Survey @ 3442'. Con't drlg to 3483' w/high torque. Circ. Drop survey. POH. Chg BHA. Possible misrun on survey. RIH. No tite spots. Con't drlg. 53° N50W @ 3442', 55° N30W @ 3473.
- 3/30/81 3684 Day-75, Ftg-164. Pmpg LCM. Mud: 8.8+, vis 47, WL 10.0. Drld to 3542'. Circ'd & surveyed. Con't drlg to 3605'. Circ'd & surveyed. Con't drlg to 3680'; lost returns @ 11 pm, 3/29/81. Mxd LCM. Rec'd full returns after 200 bbls mud loss. Circ & build volume. Drld ahead to 3684' lost returns. Mxd mud & LCM. Lost 400 bbls mud, 1:15 am--6 am, 3/30/81. Pmpg LCM slowly @ 6 am, no returns. Hole stable, no tite spots, keeping pipe moving. 55° N21W @ 3542', 56° N20W @ 3605'.

- 3/31/81 3689 Day-76, Ftg-5. Drlg (w/slow mud loss) Mud: 8.6, vis 60, WL 6.0. Mxg mud & LCM. Tried to regain circ, no returns. Pld up into 8-5/8" csg (25 stds). Clean mud tanks. Rebuild mud vol, mx gel to 50 vis, LCM 40%. Plugged bit trying to pump. TOH. Unplug bit & DC. Fill hole thru fillup line. Build mud vol, 250 bbl loss. Hole filled up, still slow loss @ 50 BPH. TIH to 1950'. Break circ. Circ & cond mud. TIH to 2800'. Circ & cond. TIH to 3520'. Circ & con. Wsh 160' to btm. Drlg w/slow mud loss.
- 4/1/81 3875 Day-77, Ftg-186. Drlg (SS & Limestone) Mud: 9.0, vis 60, WL 4.4. Drld ahead w/only slight mud loss to 3769'. Circ'd & surveyed. Drld ahead. continuous mud loss f/3780-3818'. Could not keep pits full and mud prop up; lost est. 200 bbls f/3780-3818'. PU off btm. Mxd mud & LCM. Pmpd dn one pit of 30-40% LCM. Mxd more mud & LCM. Est total loss in 24 hrs = 750 bbls. Regained full circ @ 12 midnite. Cont drlg f/3818-3875'. 57° N20W @ 3759'.
- 4/2/81 3958
(15' corr) Day-78, Ftg-68. Drlg (SS & siltstone). Mud: 9.0, vis 40, WL 3.8. Drld to 3908'. Circ. Dropped survey. POH. LD BHA. PU new BHA, caliper & strap. TIH. SLM. Tite spot @ 3470-3500'. Wsh & rm thru, OK (same torque). Minor bridges or tite spots up hole. Wsh & rm 150' to btm. Corr depth = 15' lower (3923' vs 3908'). Drl ahead to 3949'. Circ & survey. Cont drlg. 59° N18W @ 3900' (w/old BHA), 58-1/2° N33W @ 3909' (new BHA).
- 4/3/81 4162 Day-79, Ftg-204. Drlg. Mud: 9.1, vis 53, WL 3.8. Drlg ahead. No mud loss past 24 hrs. Hole good. 59° N31W @ 3970', 58° N32W @ 4087'.
- 4/4/81 4435 Day-79, Ftg-273. Drlg. Mud: 9.1, vis 51, WL 3.7. Survey slow--hard to run thru hvywt. Drlg torque increased @ 4360' (apparently fm). Circ @ 4418', drlg break @ 4411, no show limestone. 58° N31W @ 4221'.
- 4/5/81 4528 Day-81, Ftg-93. ST. Wsh back to btm after LC. Mud 8.9, vis 55, WL 8.2. Circ 1 hr to clean hole for survey. Trip for bit #32 hole good. Wshd 30' to btm, no fill. Drld to 4521 @ 5-6"/ft avg. Had drlg break to 2" a ft. Drld to 4528'. Started circ spts & lost all returns. Mxd 200 bbl pill 40% LCM. Rec 80% net after 190 bbl pmpd in. Cont'd pmpg slow rate mxg mud & LCM after another 100 bbl lost had comp returns--w/LCM avg 22% all around. 58° N32W @ 4439.
- 4/6/81 4552 Day-82, Ftg-9. Extract core f/4537-4552'. Mud 8.8, vis 47, WL 4.5. Circ & cond mud, wsh 30' back to btm, 100% returns. Drl 6' (4528-4534'). Circ samples. Drl 3' (4534-4537'). Circ samples. TOH @ 3466'. SLM. Drop survey. Fin TOH & LD BHA. PU 30' core bbl & TIH. Wsh 90' to btm. Circ & clean btm to core. Coring. Cored 15', bbl jammed (sand packed). TOH, wet. Extract core, 15', full recovery. 53° N35W @ 3466'.
- 4/7/81 4552 Day-83. TD - Cleaning mud tanks, prep to ND. WO orders. LD core bbl & daily jars. Rec'd orders to plug hole. LD DCs & TIH open ended. Wshd thru bridge @ 4100'. Fin TIH to 4550'. Circ. Rig to set plugs & LD pipe. Set plug @ 4550, 4350', 500 gals mud flush ahead w/ 70 sx Cl "H" plug. Plug @ 3340-3140'. 500 gals mud flush ahead w/70 sx Cl "H" plug. Plug @ 2150-1950' w/10 BW ahead w/70 sx Cl "H" plug. Plug @ 250'-BOP w/70 sx Cl "H" plug. LD Kelly. Clean mud tanks & ND.

4/8/81 4552

Day-84. TD - FINAL REPORT-WELL P & A, 4/7/81.
ND BOP equip. Cut off csg head. Clean mud tanks. RR @ 3:00 pm,
4/7/81. Load out rental spiral DCs, daily jars, and core bbl. M/O mud
house & excess mud material. Csg head to be shipped to equip renewal in
Vernal, Utah. Rental mud mxg tank still on loc--not yet PU. Co. trailer
house & fresh wtr tank to be moved 4/9/81. Co. telephone to be
disconnected this pm. Loffland rig to be moved to Rock Springs in next
2-3 days (as soon as trucks are avail). Reserve pit to be filled as soon
as rig is moved.

ARCO Oil and Gas Company
Western Dist.
717 - 17th Street
Mailing address: P.O. Box 5540
Denver, Colorado 80217
Telephone 303 575 7031
W. A. Walther, Jr.
Operations Manager



April 27, 1981

Mr. Edgar Guynn
United States Geological Survey
1745 W. 1700 S
Ste 2000
Salt Lake City, Utah 84104

RECEIVED
APR 29 1981
DIVISION OF
OIL, GAS & MINING

Re: Washes Nipple #1
SW SE Section 27-2N-3W
Duchesne County, Utah

Dear Mr. Guynn:

Final prints for the above TIGHT HOLE well have not been received. These will be forwarded to your office as soon as possible after they are received.

Thank you.

Very truly yours,

K. L. Flinn
Operations Information Assistant

cc: Utah Oil, Gas & Mining

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: 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.	NAME	TOP	
					MEAS. DEPTH	TRUE VERT. DEPTH
	SEE ATTACHED		Straight hole	Nugget Chinle	4598' 5742'	
			Sidetrack hole	Nugget	4521'	3817'

WASHS NIPPLE #1
SW SE Section 27-2N-3W
Duchesne County, Utah

DST #1

4560' - 4600'
Temp 72° F

Top Recorder 4560'

IH 2221
IF 1571-1703
ISI 1835
FF 1769-1825
FSI 1854
F Hyd 2211

Bottom Recorder 4600'

IH 2237
FH 2267
No other recording - probably plugged off

Sample Chamber 2000 cc muddy wtr, R - 6 ohms @ 68° F Chl - 500 ppm

Middle sampler R - 10 ohms @ 60° F Chl - 300 ppm

Top sampler R - 4.5 ohms @ 57° F Chl - 500 ppm

R - mud - 5 Ohms @ 42° & 500 ppm

WASHS NIPPLE #1
SW SE Section 27-2N-3W
Duchesne County, Utah

CORE #1

5842'-5874' Vertical hole Recov'd 32'

CORE #2

4537'-4552' Sidetracked hole Recov'd 15'
Loose friable, white sand, no shows, no staining

DIVISION OF OIL, GAS AND MINING

PLUGGING PROGRAM

NAME OF COMPANY: Arco Oil and Gas Co. Mark W. Smith

WELL NAME: Washs Nipple #1

SECTION 27 TOWNSHIP 2N RANGE 3W COUNTY Duchesne

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

TOTAL DEPTH: 4552'

CASING PROGRAM:

- 16" @ 55'
- 10 3/4" @ 533'
- 8 5/8" @ 2049'

FORMATION TOPS:

Nugget- 4598'
Chinle- 5742'

PLUGS SET AS FOLLOWS:

- 1) 4550-4350'
- 2) 3340-3140'
- 3) 2150-1950'
- 4) 200'-surface

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

DATE 5-4-81 SIGNED MTM

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 9-331-0 for such proposals.

1. oil well gas well other

2. NAME OF OPERATOR ARCO Oil and Gas Company
Division of Atlantic Richfield Company

3. ADDRESS OF OPERATOR
P. O. Box 5540, Denver, Colorado 80217

4. LOCATION OF WELL (REPORT LOCATION CLEARLY. See space 17 below.)
AT SURFACE: 1930' FEL & 660' FSL
AT TOP PROD. INTERVAL:
AT TOTAL DEPTH: Approx the same

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

REQUEST FOR APPROVAL TO:

- TEST WATER SHUT-OFF
- FRACTURE TREAT
- SHOOT OR ACIDIZE
- REPAIR WELL
- PULL OR ALTER CASING
- MULTIPLE COMPLETE
- CHANGE ZONES
- ABANDON*
- (other) LOCATION RECLAMATION

SUBSEQUENT REPORT OF:

-
-
-
-
-
-
-
-

RECEIVED NOV 30 1982
DIVISION OF OIL, GAS & MINING

5. LEASE
14-20-H62-3090

6. IF INDIAN, ALLOTTEE OR TRIBE NAME
Ute

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME
Washes Nipple

9. WELL NO.
1

10. FIELD OR WILDCAT NAME
Wildcat

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA
27-2N-3W

12. COUNTY OR PARISH 13. STATE
Duchesne Utah

14. API NO.
43-013-30551

15. ELEVATIONS (SHOW DF, KDB, AND WD)
7806'

(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.)*

Location was seeded on October 21, 1982 by Ross Construction of Vernal, Utah.

Ready for M.M.S inspection.

Subsurface Safety Valve: Manu. and Type _____ Set @ _____ Ft.

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

SIGNED W. A. Walther, Jr. TITLE Acting District Manager DATE 11-19-82

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____
CONDITIONS OF APPROVAL, IF ANY: