Call 4-23-82 -
advise Jay on tubing
requirements & limitation
on injection pressures
RE

PETROLEUM ENERGY, INC.

April 20, 1982

Oil Conservation Division
State of New Mexico
P. O. Box 2088
Santa Fe, New Mexico 87501

Gentlemen:

Jay Swearingen
303-259-3232

Enclosed for filing is an original and one copy of an Application for Authorization to Inject. A copy of the Authorization is being filed with the Oil Conservation Division District Office, 1000 Rio Brazos Road, Aztec, New Mexico 87410.

Attached to the Application is an Affidavit of Publication which includes a copy of the legal advertisement published in the Farmington Daily Times, in San Juan County, New Mexico.

Also attached is an Affadivit of Mailing verifying mailing to the Navajo Tribe of Indians, owner of the surface of the land on which the well is to be located.

There are no leasehold operators within one-half (½) mile of the well location, except for the applicant, Petroleum Energy, Inc.

Please advise if there are any questions concerning the application.

Yours very truly,

Petroleum Energy, Inc.

By _____
Jay D. Magness

JDM:pr
Enclosure

RECEIVED
APR 23 1982
OIL CONSERVATION DIVISION
SANTA FE

1120 psi inert plastic tubing

cc: Oil Conservation Division District Office
1000 Rio Brazos Road
Aztec, New Mexico 87410

5-18-82 ok w/stipulations

5-18-82 - Conservation w/Frank - ok to do administratively - no problems in area

HOME OFFICE: 2305 N.W. GRAND BOULEVARD • OKLAHOMA CITY, OKLAHOMA 73116 • (405) 848-8700
AREA OFFICE: POST OFFICE BOX 2121 • DURANGO, COLORADO 81301 • (303) 259-3222 3232

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION
POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87501

FORM C-108
Revised 7-1-81

APPLICATION FOR AUTHORIZATION TO INJECT

I. Purpose: ☐ Secondary Recovery ☐ Pressure Maintenance ☒ Disposal ☒ Storage
Application qualifies for administrative approval? ☒ yes ☐ no

II. Operator: PETROLEUM ENERGY, INC.

Address: P. O. Box 2121 Durango, CO 81301

Contact party: Jay D. Magness Phone: (303) 259-3232

III. Well data: Complete the data required on the reverse side of this form for each well proposed for injection. Additional sheets may be attached if necessary.

IV. Is this an expansion of an existing project? ☐ yes ☒ no
If yes, give the Division order number authorizing the project _____.

V. Attach a map that identifies all wells and leases within two miles of any proposed injection well with a one-half mile radius circle drawn around each proposed injection well. This circle identifies the well's area of review.

* VI. Attach a tabulation of data on all wells of public record within the area of review which penetrate the proposed injection zone. Such data shall include a description of each well's type, construction, date drilled, location, depth, record of completion, and a schematic of any plugged well illustrating all plugging detail.
* See Exhibit "N" to attached application re 1-Barbara Kay Well

VII. Attach data on the proposed operation, including:

1. Proposed average and maximum daily rate and volume of fluids to be injected;
2. Whether the system is open or closed;
3. Proposed average and maximum injection pressure;
4. Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and
5. If injection is for disposal purposes into a zone not productive of oil or gas at or within one mile of the proposed well, attach a chemical analysis of the disposal zone formation water (may be measured or inferred from existing literature, studies, nearby wells, etc.).

*VIII. Attach appropriate geological data on the injection zone including appropriate lithologic detail, geological name, thickness, and depth. Give the geologic name, and depth to bottom of all underground sources of drinking water (aquifers containing waters with total dissolved solids concentrations of 10,000 mg/l or less) overlying the proposed injection zone as well as any such source known to be immediately underlying the injection interval.

IX. Describe the proposed stimulation program, if any.

* X. Attach appropriate logging and test data on the well. (If well logs have been filed with the Division they need not be resubmitted.)

* XI. Attach a chemical analysis of fresh water from two or more fresh water wells (if available and producing) within one mile of any injection or disposal well showing location of wells and dates samples were taken.

XII. Applicants for disposal wells must make an affirmative statement that they have examined available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground source of drinking water.

XIII. Applicants must complete the "Proof of Notice" section on the reverse side of this form.
See Affidavit of Publication, Affidavit of Mailing, both attached hereto and

XIV. Certification incorporated herein by reference.

I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.

Name: Jay D. Magness Title Agent for PETROLEUM ENERGY, INC.

Signature: Jay D. Magness Date: March 31, 1982

* If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be duplicated and resubmitted. Please show the date and circumstance of the earlier submittal. _____

DISTRIBUTION: Original and one copy to Santa Fe with one copy to the appropriate Division

III. WELL DATA

A. The following well data must be submitted for each injection well covered by this application. The data must be both in tabular and schematic form and shall include:

(1) Lease name; Well No.; location by Section, Township, and Range; and footage location within the section.

(2) Each casing string used with its size, setting depth, sacks of cement used, hole size, top of cement, and how such top was determined.

(3) A description of the tubing to be used including its size, lining material, and setting depth.

(4) The name, model, and setting depth of the packer used or a description of any other seal system or assembly used.

Division District offices have supplies of Well Data Sheets which may be used or which may be used as models for this purpose. Applicants for several identical wells may submit a "typical data sheet" rather than submitting the data for each well.

B. The following must be submitted for each injection well covered by this application. All items must be addressed for the initial well. Responses for additional wells need be shown only when different. Information shown on schematics need not be repeated.

(1) The name of the injection formation and, if applicable, the field or pool name.

(2) The injection interval and whether it is perforated or open-hole.

(3) State if the well was drilled for injection or, if not, the original purpose of the well.

(4) Give the depths of any other perforated intervals and detail on the sacks of cement or bridge plugs used to seal off such perforations.

(5) Give the depth to and name of the next higher and next lower oil or gas zone in the area of the well, if any.

XIV. PROOF OF NOTICE

All applicants must furnish proof that a copy of the application has been furnished, by certified or registered mail, to the owner of the surface of the land on which the well is to be located and to each leasehold operator within one-half mile of the well location.

Where an application is subject to administrative approval, a proof of publication must be submitted. Such proof shall consist of a copy of the legal advertisement which was published in the county in which the well is located. The contents of such advertisement must include:

(1) The name, address, phone number, and contact party for the applicant;

(2) the intended purpose of the injection well; with the exact location of single wells or the section, township, and range location of multiple wells:

(3) the formation name and depth with expected maximum injection rates and pressures; and

(4) a notation that interested parties must file objections or requests for hearing with the Oil Conservation Division, P. O. Box 2088, Santa Fe, New Mexico 87501 within 15 days.

NO ACTION WILL BE TAKEN ON THE APPLICATION UNTIL PROPER PROOF OF NOTICE HAS BEEN SUBMITTED.

NOTICE: Surface owners or offset operators must file any objections or requests for hearing of administrative applications within 15 days from the date this application was mailed to them.

MEETING OF THE OPERATING COMMITTEE
Navajo Nation/Petroleum Energy

January 19, 1982

The meeting of the Operating Committee took place in the Conference Room of the Division of Economic Development, Window Rock, Arizona, with the following persons present:

Operating Committee	Al Henderson, Chairman Murari Shrestha, Member Khaled Ferfera, Member
Others:	Jay Magness, Petroleum Energy Larry Sweringen, Petroleum Energy John Stiff, S.E.R.H.

1. The Committee advised Petroleum Energy that it is delinquent in its accounting reports. Jay Magness advised that Petroleum Energy's accountant recently died and his accounting firm is being reorganized. Required reports are being worked on.

2. Petroleum Energy advised that Well 3-29 has been completed as a Barker Creek oil well except for the pumping unit which will be installed soon.

3. Petroleum Energy advised that a salt water disposal well will be needed and requested approval of use of Well 1-20 as the disposal well. The Operating Committee conditionally approved the use of Well 1-20 as a salt water disposal well subject to Petroleum Energy securing any necessary rights of way and all necessary approvals of the USGS, State of New Mexico, and the Navajo Nation Environmental Protection Commission. The Operating Committee approves all necessary rights of way across the Operating Agreement acreage for the disposal well.

4. Petroleum Energy requested that Bass Enterprises be released from all further obligations on Well 1-20. Well 1-20 was drilled on leased lands. The leases were cancelled by the Bureau of Indian Affairs. The lessees, Allied and William Lagos, have executed releases on the acreage, copies of which are attached to these minutes. Bass Enterprises drilled Well 1-20 under a Designation of Operator from Allied, et. al. After cancellation of the lease, the lease acreage was included in the Operating Agreement acreage. The Operating Committee directs that Bass Enterprises take no further action on Well 1-20 and that it not be plugged. The Operating Committee directs that Bass Enterprise's bond on Well 1-20 be cancelled and that Bass Enterprises and its bonding agency be released from liability on the bond.

5. The Operating Committee approved the drilling of the following wells:

   (a) Navajo 5-29 in SE¼ SW¼ of Section 29, possibly to be completed in the Mississippian formation at an estimated cost of $500,000.00.

   (b) Navajo 6-29 in NW¼ SW¼ of Section 29, in the Barker Creek formation at an estimated cost of $400,000.00.

6. John Stiff of S.E.R.H., Inc., advised the Operating Committee that S.E.R.H. is having difficulty in securing capital for its helium development program, (as contemplated in the minutes of the October 9, 1981 meeting). John Stiff presented a copy of a letter from De Golyer and MacNaughton concerning the development of adequate helium reserve to support the expansion of the existing Navajo Helium Plant.

PETROLEUM ENERGY, INC.

BY: _____
Jay Magness, Agent

OPERATING COMMITTEE:

Approved By: _____
Al Henderson, Chairman

_____
Murari Shrestha, Member

_____
Khaled Ferfera, Member

APPLICATION FOR AUTHORITY TO INJECT

Petroleum Energy, Inc.

AFFIDAVIT OF MAILING

STATE OF COLORADO
COUNTY OF LA PLATA

Larry L. Sweringen being of lawful age and being first duly sworn upon oath, deposes and says, that he personally deposited in the United States Mail, return receipt requested, a true copy of the within Application for Authoization to Inject addressed to each of the following persons at their last-known addresses shown below:

State of New Mexico Oil Conservation Division
P. O. Box 2088
Santa Fe, New Mexico 87501

Mr. Frank Chavez
Oil and Gas Conservation
1000 Rio Brazos Road
Aztec, New Mexico 87410

The Navajo Tribe of Indians
Minerals Department
P. O. Box 146
Window Rock, Arizona 86515

on the 20th day of April, 1982.

Larry L. Sweringen

Subscribed and sworn before me this 20th day of April, 1982.

My commission expires: 8-31-85

Notary Public

AFFIDAVIT OF PUBLICATION

No. 11212

STATE OF NEW MEXICO,
County of San Juan:

Deborah Walker being duly sworn, says: That he is the Sec. to the Publisher of THE FARMINGTON DAILY TIMES, a daily newspaper of general circulation published in English at Farmington, said county and state, and that the hereto attached Legal Notice

was published in a regular and entire issue of the said FARMINGTON DAILY TIMES, a daily newspaper duly qualified for the purpose within the meaning of Chapter 167 of the 1937 Session Laws of the State of New Mexico for One consecutive (days) (weeks) on the same day as follows:

First Publication Friday, April 9, 1982

Second Publication

Third Publication

Fourth Publication

and that payment therefor in the amount of $ 9.01 has been made.

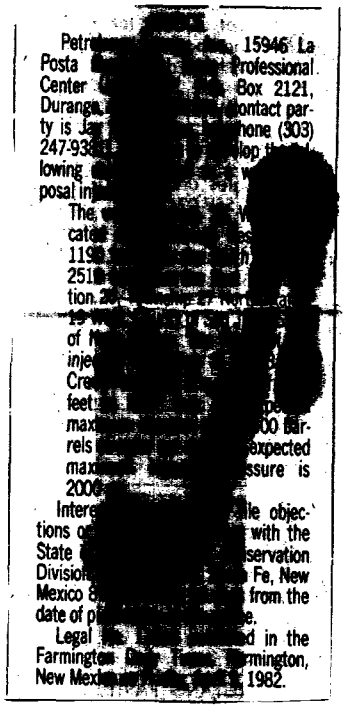
Deborah Walker

Subscribed and sworn to before me this 9th day of April, 1982.

Marian L. Brown
NOTARY PUBLIC, SAN JUAN COUNTY, NEW MEXICO

My Commission expires: 9/12/83

Copy of Publication


Petr[illegible] 15946 La
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Legal [illegible] d in the
Farmingto[illegible] rmington,
New Mexi[illegible] 1982.

PETROLEUM ENERGY, INC.

APPLICATION FOR AUTHORIZATION TO USE

WELL AS A WATER DISPOSAL WELL

I. OPERATOR:

Petroleum Energy, Inc.

P. O. Box 2121

Durango, Colorado 81301

Contact party: Jay D. Magness Telephone (303)259-3232

II. SUMMARY OF WATER DISPOSAL PLAN:

(A) Petroleum Energy, Inc., proposes to install a closed salt water disposal system that will initially service the Operating Agreement lands, Navajo Lease N00-C-14-20-4157 and Navajo Lease N00-C-14-20-4158. The system will consist of the following elements:

(1) Holding tanks near the well heads for temporary storage and measurement.

(2) A pressurized pipeline system to convey the salt water from the tanks to the disposal well.

(3) A holding tank at the disposal well to temporarily hold the water for injection.

(4) An injection well located on a Navajo Business Lease Site (Initially Well 1-20 and subsequently Well Barbara Kay-3).

(B) The proposed location of the elements of the disposal system are set forth on the map attached hereto as Exhibit "A".

(C) The system will be constructed in two, or possibly three, phases. The first phase will be the construction of the pipeline from Well 1-5 (farthest south well) to Well 1-20

and the re-completion of the Barker Creek Zone of Well 1-20 as a disposal well. The Barker Creek zone will be used for injection purposes because it contains water of such poor quality that there is no practical use for it.

The second phase will be the construction of the pipeline from Section 6, T26N, R19W, to Well 1-20. The second phase will occur when drilling has occurred in that area.

As part of the second phase, or possibly as a third phase, the Barbara Kay-3 well will be recompleted as a Barker Creek disposal well. The Barbara Kay-3 well is down dip from the producing Barker Creek oil zone and the injection of the water should assist in maximizing production by pressure maintenance from the Barker Creek oil wells. Well 1-20 will then either continue in use as a disposal well or be recompleted as a marginal Barker Creek oil well.

III. DISPOSAL WELL DATA:

(A) Navajo - Petroleum Energy Operating Agreement formerly within Navajo Lease N00-C-14-20-2976

(B) Well Number: Navajo 1-20

(C) Well Location: 1190' from South line and 2510' from East line, Section 20, T27N, R19W, County of San Juan, State of New Mexico.

(D) Casing String:

(1) Casing String details are set forth at line 28 of the Completion Report which is attached hereto as Exhibit "B" and incorporated herein by reference.

(2) Cement tops were determined from Cement Bond Log. See Exhibit "C" attached hereto and incorporated herein be reference.

(E) Tubing to be used:

must be lined

(1) Size: 2 3/8"

(2) Lining material: None

Telephone conversion w/ Larry S. that Pet-Eng. Inc. will follow written order, i.e will use lined tubing

(3) Setting depth: 5540 on packer

(4) Any corrosion inhibitor fluid to be placed in the tubing-casing annulus: No corrosion inhibitor fluid will be placed in the tubing-casing annulus unless future tests show that it is needed. See letter from Dowell attached hereto as Exhibit "D".

(F) Packer:

(1) Name: Baker

(2) Model: R-3 Production Packer.

(3) Setting depth: 5540

IV. INJECTION INFORMATION:

(A) Name of injection formation: Barker Creek

(B) Field or pool name: Beautiful Mountain - Barker Creek

(C) Injection interval: 5589' to 5594'

Perforated or open hole: Perforated 2 per foot

(D) Original purpose of well: Oil Well

(E) Depths of any other perforated intervals and details on sacks of cement or bridge plugs used to seal off such perforations:

Well is presently completed in the Organ Rock with perforations at 3690' to 3691'; 3711' to 3719'; 3724' to 3730'; and 3738' to 3748'.

We will squeeze off these perforations with 200 sacks of cement.

(F) Depth to and name of the next higher and next lower oil or gas zone in the area of the well:

Next higher oil or gas zone is the Organ Rock gas zone located at a depth of 3622' to 3748'.

Next lower oil or gas zone is the Mississippian gas zone located approximately at 6000'. The well has not been drilled into the Mississippian zone.

V. DATA ON PROPOSED NEW OPERATION:

(A) Proposed average and maximum daily rate and volume of fluids to be injected are as follows:

Daily average: 200 BWPD

Maximum rate: 500 BWPD

(B) The system will be a closed system.

(C) The proposed average and maximum injection pressures are as follows:

Average: 1000

Maximum: 2000

1116.8 psi

4-27-82 w/Larry S. - will limit psi to 1120 lbs - ok w/ Pet. Eng. Inc

(D) The sources and analysis of the injection fluid and compatibility with the receiving formation are as follows:

(1) The initial sources of injection fluid are as follows:

Leases:

N00-C-14-20-4157; Navajo 1-5

2035' from the West Line and 1650' from the North Line of Section 5, T26N, R19W, NMPM, San Juan County, New Mexico.

N00-C-14-20-4158; Navajo 1-32

660' from the South Line and 2150' from the East Line of Section 32, T27N, R19W, NMPM, San Juan County, New Mexico.

Navajo 2-32

1050' from the North Line and 1610' from the East Line of Section 32, T27N, R19W, NMPM, San Juan County, New Mexico.

Operating Agreement:

Navajo 2-29

1980' from the North Line and 660' from the East Line of Section 29, T27N, R19W, NMPM, San Juan County, New Mexico.

Navajo 3-29

2230' from the South Line and 1780' from the East Line of Section 29, T27N, R19W, NMPM, San Juan County, New Mexico.

(2) Water analysis report forms for the above wells are attached hereto as Exhibits "E", "F", "G", "H", and "I" respectively.

(3) An analysis will be made of the water from the Barker Creek zone of Disposal Well 1-20 as soon as the Barker Creek zone is reopened. It is anticipated that the quality of the Barker Creek water in the disposal well will be similar to the quality of the water in the source wells, all being of such poor quality as to eliminate any practical use thereof.

VI. PROPOSED STIMULATION PROGRAM:

To be determined after Barker Creek Zone is reopened.

VII. GEOLOGICAL DATA ON INJECTION ZONE:

(A) Geological name: Lower Barker Creek Zone; Paradox formation; Pennsylvanian Age

(B) Thickness: overall 80'; effective 8'

(C) Depth: 5542' to 5622'; effective 5600' to 5608'

VIII. GEOLOGICAL DATA ON UNDERGROUND DRINKING WATER:

(A) Underground sources of drinking water overlying the proposed injection zones:

Geologic name and Depth to bottom: Entrada - 1372' (1300' to 1372'); DeChelly 3055' (2954' to 3055')

A copy of a Schlumberger Dual Induction - Laterolog Dated October 29, 1978, with the water zones marked is attached hereto as Exhibit "J".

(B) Sources immediately underlying injection zone: None

(C) A chemical analysis of fresh water from one producing fresh water well and one fresh water reservoir, both located within one mile of the injection or disposal well are attached hereto as Exhibits "K" and "L".

(D) Applicant states that he has examined available geologic and engineering data and has found no evidence of open faults or any other hydrologic connection between the disposal zone and any underground source of drinking water.

IX. MONITORING SYSTEM AND SHUT-IN MEASURES:

(A) Monitoring System: The system will consist of a pressure gauge at the well-head that will show any change of pressure in the tubing-casing annulus.

(B) Shut-In Measures: If it becomes necessary to shut-in the disposal system, the following measures will be taken:

(1) Shut down injection pumps.

(2) Check tanks to see if adequate storage space is available.

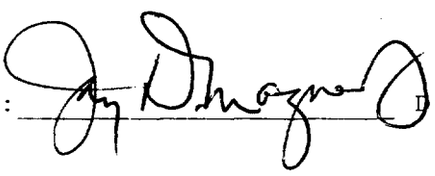
(3) Shut down wells if storage not available.

X. SCHEMATIC DIAGRAM OF WELL 1-20; attached hereto as Exhibit "M".

XI. CERTIFICATION:

I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.

Name: Jay D. Magness Title: Agent for Petroleum Energy, Inc.

Signature:  Date: March 29, 1982

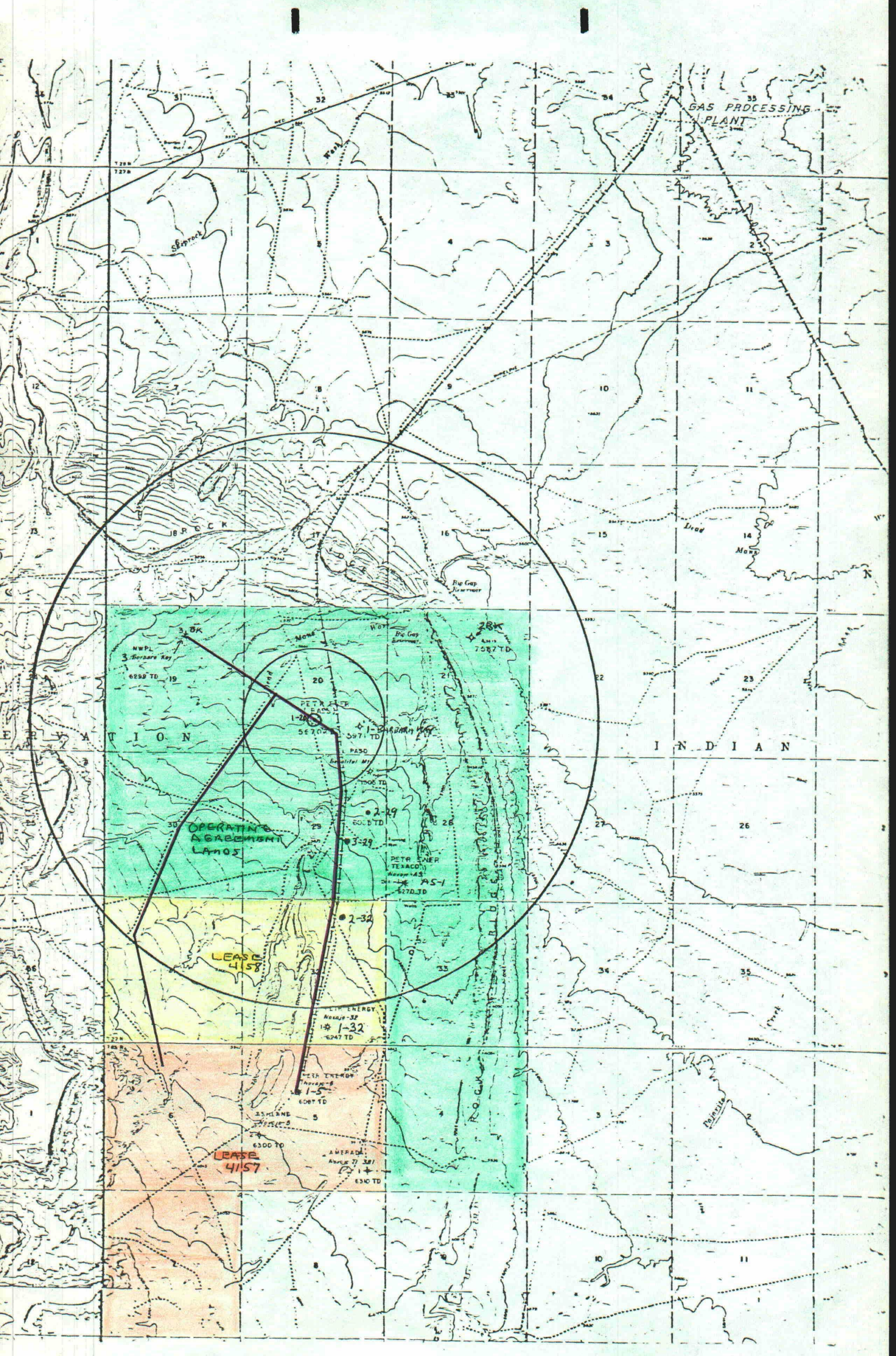

GAS PROCESSING PLANT
ERVATION
INDIAN
OPERATING AGREEMENT LANDS
LEASE 4158
LEASE 4157
2-29
3-29
2-32
1-32
1-5
6247 TD
6087 TD
6300 TD
6310 TD
7587 TD
6299 TD
6270 TD

EXHIBIT "A"

EXHIBIT "B"

Form 9-330
(Rev. 5-63)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN DUPLICATE* (See other instructions on reverse side)

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

WELL COMPLETION OR RECOMPLETION REPORT AND LOG*

1a. TYPE OF WELL: OIL WELL ☐ GAS WELL ☒ DRY ☐ Other

b. TYPE OF COMPLETION: NEW WELL ☐ WORK OVER ☐ DEEP-EN ☐ PLUG BACK ☒ DIFF. RESVR. ☐ Other

2. NAME OF OPERATOR: Petroleum Energy, Inc.

3. ADDRESS OF OPERATOR: P. O. Box 2121, Durango, Colorado 81301

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements)*
At surface: 1190' from South line and 2510' from East line
At top prod. interval reported below
At total depth

5. LEASE DESIGNATION AND SERIAL NO.: Noo-C-14-20-2976
6. IF INDIAN, ALLOTTEE OR TRIBE NAME: Navajo
7. UNIT AGREEMENT NAME:
8. FARM OR LEASE NAME: Navajo
9. WELL NO.: #1-20
10. FIELD AND POOL, OR WILDCAT: Wildcat
11. SEC., T., R., M., OR BLOCK AND SURVEY OR AREA: Sec. 20, T27N, R19W
12. COUNTY OR PARISH: San Juan
13. STATE: New Mexico
14. PERMIT NO.:
DATE ISSUED:

15. DATE SPUDDED	16. DATE T.D. REACHED	17. DATE COMPL. (Ready to prod.)	18. ELEVATIONS (DF, RKB, RT, GR, ETC.)*	19. ELEV. CASINGHEAD
10-11-78		8-15-80	5711 ground	

20. TOTAL DEPTH, MD & TVD	21. PLUG, BACK T.D., MD & TVD	22. IF MULTIPLE COMPL., HOW MANY*	23. INTERVALS DRILLED BY	ROTARY TOOLS	CABLE TOOLS
5670'	3900'		→	All	

24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)*: 3622-25, 3711-19, 3690-91, 3724-20, 3738-48

RECEIVED
SEP [illegible] 1980
GEOLOGICAL SURVEY
FARMINGTON, N. M.

25. WAS DIRECTIONAL SURVEY MADE: No
26. TYPE ELECTRIC AND OTHER LOGS RUN: Bond Logs
27. WAS WELL CORED: Yes

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

CASING SIZE	WEIGHT, LB./FT.	DEPTH SET (MD)	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
13 3/8	48#	202'	17½"	208 sks	
8 5/8	24#	1202'	12¼"	630 sks	
5 1/2	14#	5670'	7 7/8"	400 sks	

29. LINER RECORD

SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT*	SCREEN (MD)

30. TUBING RECORD

SIZE	DEPTH SET (MD)	PACKER SET (MD)
2 3.8-4.7#	3650	3650

31. PERFORATION RECORD (Interval, size and number)

3622-25	6 holes
3690-91	2 holes
3711-19	16 holes
3724-30	12 holes
3738-48	20 holes

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

DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED
3757'	Squeezed 300 sks class B
Sec. '31'	Acidized 500 gal. MCA acid
3500'	Squeezed 100 sks class B

33.* PRODUCTION

DATE FIRST PRODUCTION	PRODUCTION METHOD (Flowing, gas lift, pumping—size and type of pump)	WELL STATUS (Producing or shut-in)
8-16-80	Flowing	Producing

DATE OF TEST	HOURS TESTED	CHOKE SIZE	PROD'N. FOR TEST PERIOD →	OIL—BBL.	GAS—MCF.	WATER—BBL.	GAS-OIL RATIO
8-16-80	24	3/4		0	200,	0	

FLOW. TUBING PRESS.	CASING PRESSURE	CALCULATED 24-HOUR RATE →	OIL—BBL.	GAS—MCF.	WATER—BBL.	OIL GRAVITY-API (CORR.)
650	Packer		0	200,	0	

34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.): Sold to Navajo Helium
TEST WITNESSED BY: J D Hicks

35. LIST OF ATTACHMENTS

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

SIGNED [signature] TITLE Agent DATE 9-5-80

ACCEPTED FOR RECORD
SEP 12 1980
FARMINGTON DISTRICT
BY

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

OPERATOR

EXHIBIT "B"

Form 9-331
Dec. 1973

Form Approved.
Budget Bureau No. 42-R1424

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
Petroleum Energy, Inc.

3. ADDRESS OF OPERATOR
P.O.Box 2121, Durango, Colorado 81301

4. LOCATION OF WELL (REPORT LOCATION CLEARLY. See space 17 below.)
~~1980'~~ 1190' from South line and 2510' from East Line
AT SURFACE:
AT TOP PROD. INTERVAL:
AT TOTAL DEPTH:

5. LEASE
NOO - C - 14-20-2976

6. IF INDIAN, ALLOTTEE OR TRIBE NAME
Navajo

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME
Navajo

9. WELL NO.
1-20

10. FIELD OR WILDCAT NAME
Wildcat

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA
Sec. 20- T27N- R19W

12. COUNTY OR PARISH
San Juan

13. STATE
New Mexico

14. API NO.
30-045-23004

15. ELEVATIONS (SHOW DF, KDB, AND WD)
5711 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	☐		☐
FRACTURE TREAT	☐		☐
SHOOT OR ACIDIZE	☐		☐
REPAIR WELL	☐		☐
PULL OR ALTER CASING	☐		☐
MULTIPLE COMPLETE	☐		☐
CHANGE ZONES	☐		☒
ABANDON*	☐		☐
(other)			

RECEIVED
SEP 12 1980
U. S. GEOLOGICAL SURVEY
FARMINGTON, N. M.

(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.)*

Perforated two squeeze holes at 3757'. Squeezed with 300 sks class B neat cement. Perforated with 2 holes per foot - Intervals 3622-25, 3690-91, 3711-19, 3724-30, and 3738-48. Total 28' and 56 holes. Acidized with 500 gallons MCA. Broke down at 2150 psi. Treated at 1950 psi. 3 bbl/min. Swabbed well, recovering 3/4 bbl. gas cut water per run. 8-11-80 - Perforated 2 squeeze holes at 3500'. Squeezed with 100 sks class B neat. Maximum pressure 1900 psi. 8-13-80 - Flowing ½" stream of water to pit. Swabbed 800-900ft. of water per run, 5 - 6 runs per hour. 8-14-80 - Set packer at 3650'. Swabbed water. Flowed good spray of gas and water out of tubing. Casing flowing ½" water to pit. 8-15-80 - Tied tbg. well into sales line. Producing to plant.

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

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

SIGNED [signature] TITLE AGENT DATE 9/5/80

(This space for Federal or State office use)

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

ACCEPTED FOR RECORD

*See Instructions on Reverse Side

OPERATOR

SEP 12 1980

FARMINGTON DISTRICT

BY _____

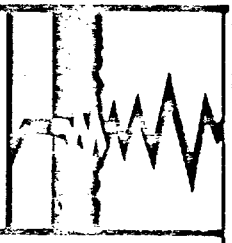
EXHIBIT "C"

FORM 925192

DresserAtlas

DRESSER

Acoustic Cement Bond Log VDL Signature



FILE NO. FM-6213

API WELL NO.

COMPANY PETROLEUM ENERGY INCORPORATED

WELL NAVAJO 1-20

FIELD WILDCAT

COUNTY SAN JUAN STATE NEW MEXICO

LOCATION: 1190' FSL, 2510' FEL

SEC 20 TWP 27N RGE 19W

Other Services: NONE

Permanent Datum G.L. Elev 5711

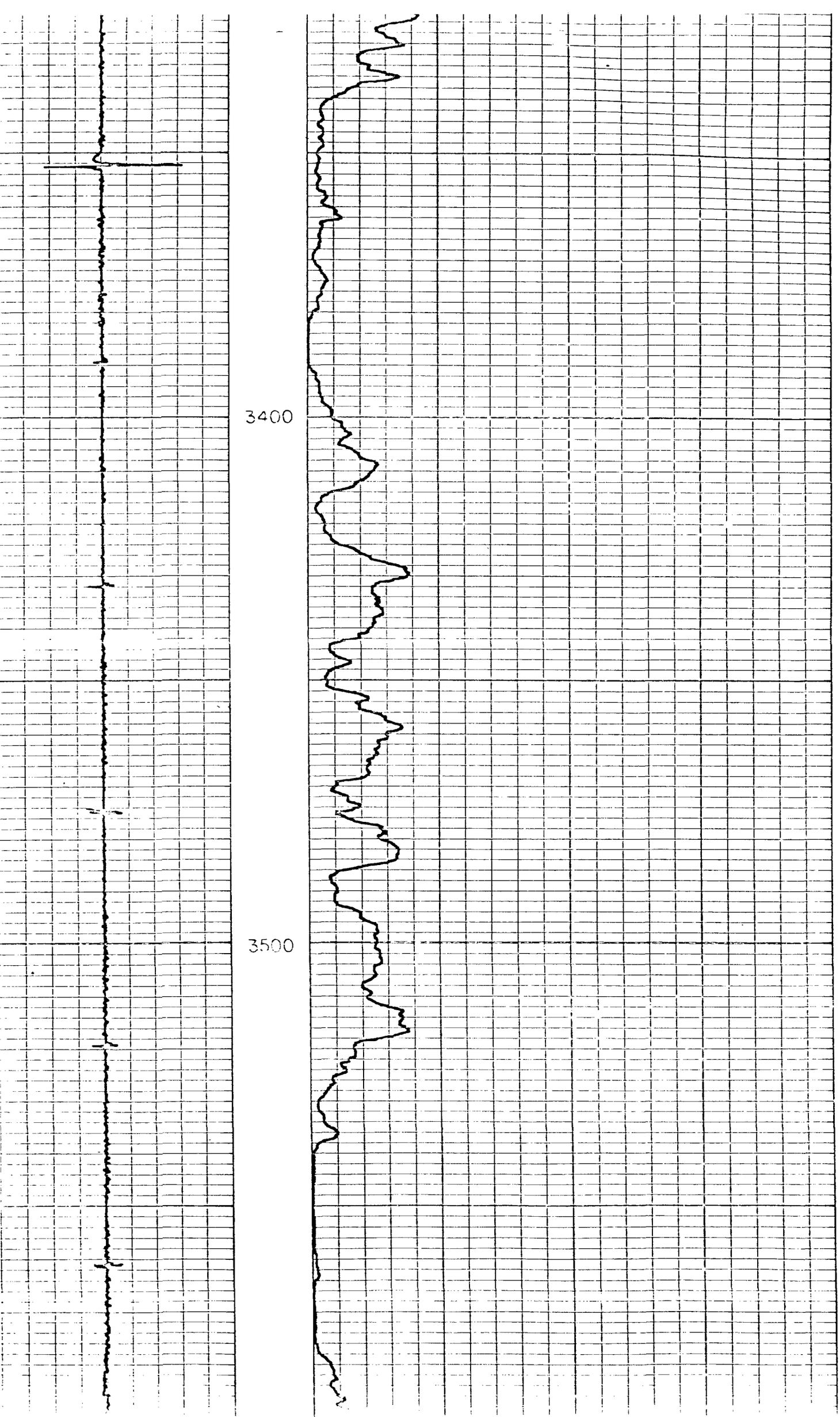
Log Measured from K.B. 0 Ft Above Permanent Datum

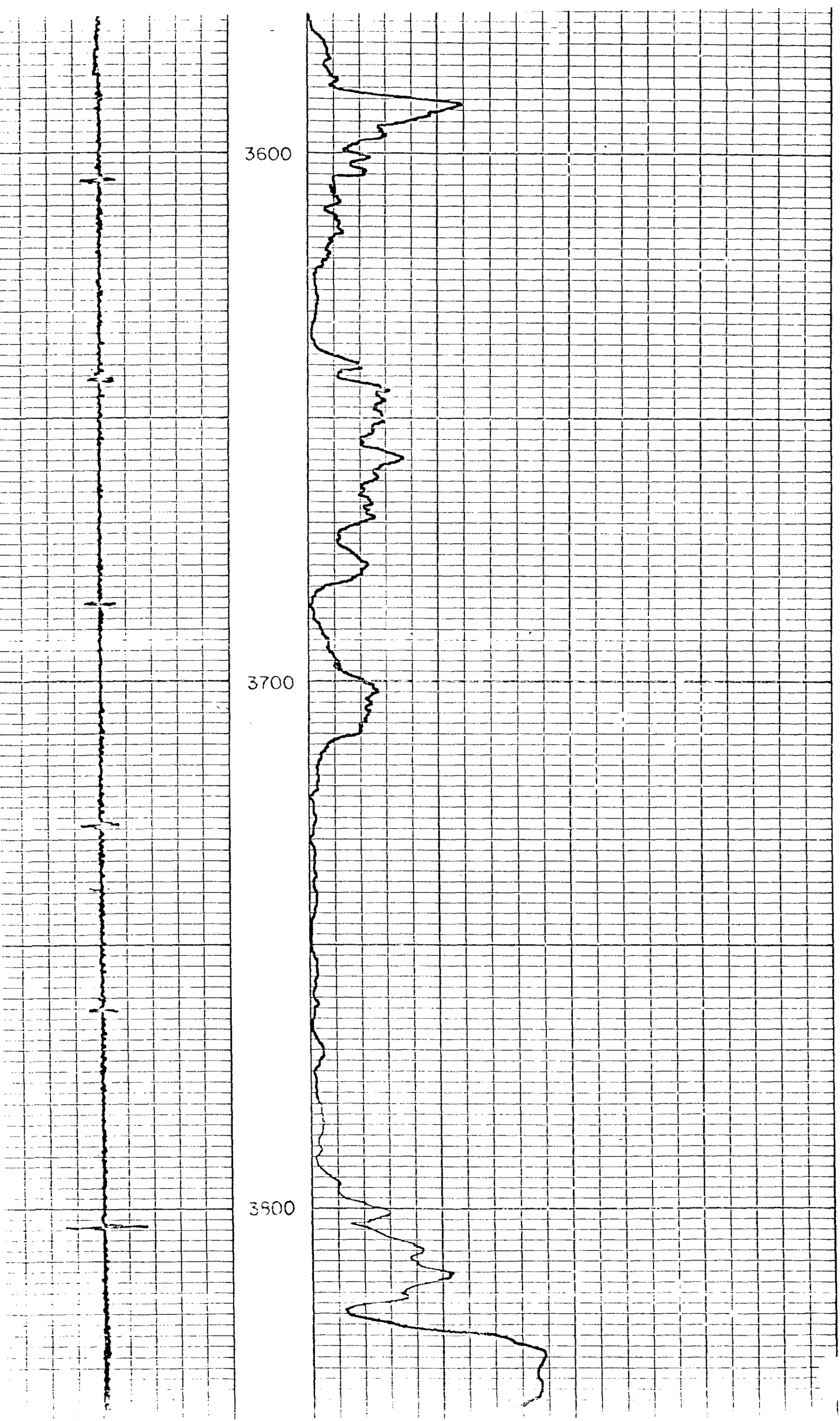
Drilling Measured from K.B.

Elevations: KB 5720 DF 5719 GL 5711

Date	8/6/80		
Run No	ONE		
Service Order No.	23104		
Depth-Driller	3875 PBTD		
Depth-Logger	3899		
Bottom Logged Interval	3893		
Top Logged Interval	3100		
Type Fluid in Hole	WATER		
Salinity, Ppm Cl	-		
pH and Fluid Loss	- - cc	cc	cc
Density Lb/Gal	-		
Level	FULL		
Max. Rec. Temp. Deg. F	-		
Opr. Rig Time	2 HRS.		
Recorded By	KRIEGER		
Witnessed By	HICKS		

Run No.	Bore Hole Record Bit	From	To	Casing Record Size	Wgt.	From	To
				5 1/2	15.5	SURFACE	5700


3400
3500


3600
3700
3800

DWL-578-D

EXHIBIT "D"

DOWELL DIVISION OF DOW CHEMICAL U.S.A.

SERVICE RECOMMENDATION

PO Box 1650
Farmington, NM 87499-1650
March 26, 1982

Jay Magness
Petroleum Energy, Inc.
PO Box 2121
Durango, CO

Dear Jay,

The following is our recommendation for scale prevention on proposed injection wells in the Beautiful Mountain Field, the Barker Creek Formation.

The water samples we analyzed from the producing formations: the water well, & the Reservoir; all indicate a tendency to form scale from calcium carbonate.

We recommend intermitent injection of Inhibited Hydrochloric Acid treatments to be determined according to changes in injection rates and pressure build ups.

Sincerely,

R.G. (Bob) Lawson
Sr. Sales Engineer
Farmington, NM

R G Lawson

cje

DWL-481-2-A

EXHIBIT "E"

DOWELL DIVISION OF THE DOW CHEMICAL COMPANY

DENVER REGION

LABORATORY LOCATION: CASPER

API WATER ANALYSIS REPORT FORM

DATE: March 16, 1982

LAB NO.: CL 10325-5

Company	Sample No.	Date Sampled
Petroleum Energy	58456	

Field	Legal Description	County or Parish	State
		San Juan	N. Mex.

Lease or Unit	Well	Depth	Formation	Water, B/D
	1-5			

Type of Water (Produced, Supply, etc.)	Sampling Point	Sampled By

DISSOLVED SOLIDS

CATIONS	mg/l	me/l
Sodium, Na (calc.)	63227	2782.0
Calcium, Ca	19000	950
Magnesium, Mg	0	
Barium, Ba		

ANIONS		
Chloride, Cl	130000	3640.0
Sulfate, SO_4	1000	20.0
Carbonate, CO_3	4500	720
Bicarbonate, HCO_3		

Total Dissolved Solids (calc.) 217727

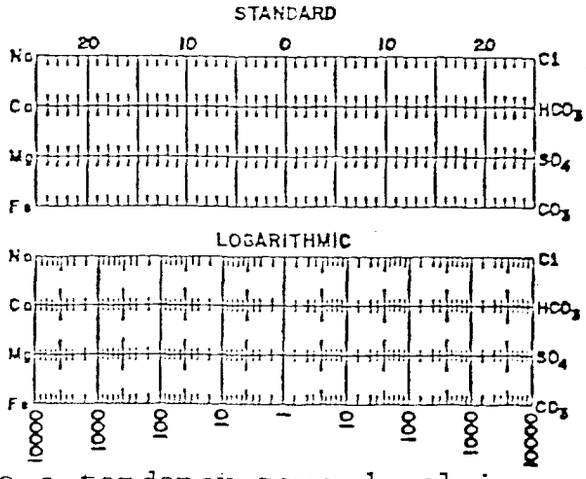
Iron, Fe (total) 300

Sulfide, as H_2S

OTHER PROPERTIES

pH	5.8
Specific Gravity, 60/60 F.	1.086
Resistivity (ohm-meters) ____ F.	

WATER PATTERNS — me/l



REMARKS & RECOMMENDATIONS: Calculations indicate a tendency toward calcium carbonate deposition; however, no calcium sulfate deposition is indicated.

ANALYSIS BASED ON API RECOMMENDED PROCEDURE

EXHIBIT "F"

DWL-481-2-A

DOWELL DIVISION OF THE DOW CHEMICAL COMPANY

DENVER REGION

LABORATORY LOCATION: CASPER

API WATER ANALYSIS REPORT FORM

DATE: March 16, 1982

LAB NO.: CL 10325-4

Company		Sample No.	Date Sampled
Petroleum Energy		58456	
Field	**Legal Description**	**County or Parish**	**State**
		San Juan	N. Mex.
Lease or Unit	**Well**	**Depth**	**Formation**	**Water, B/D**
	1-32			
Type of Water (Produced, Supply, etc.)	**Sampling Point**	**Sampled By**

DISSOLVED SOLIDS

CATIONS	mg/l	me/l
Sodium, Na (calc.)	55102	2424.5
Calcium, Ca	18000	900.0
Magnesium, Mg	1200	96.0
Barium, Ba		

ANIONS		
Chloride, Cl	12000	3360.0
Sulfate, SO_4	625	12.5
Carbonate, CO_3	0	
Bicarbonate, HCO_3	3000	48.0

Total Dissolved Solids (calc.) 181727

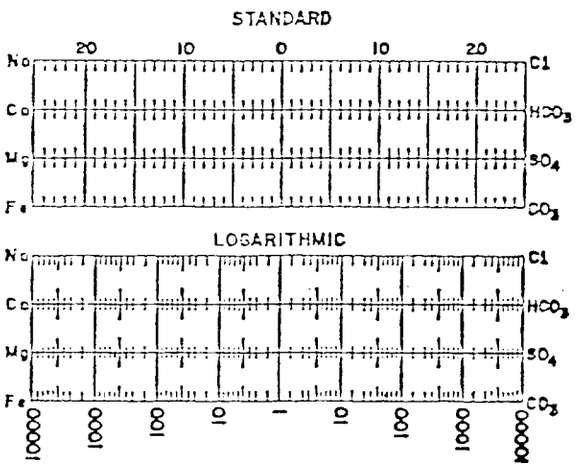
Iron, Fe (total) 500

Sulfide, as H_2S

OTHER PROPERTIES

pH	5.2
Specific Gravity, 60/60 F.	1.084
Resistivity (ohm-meters) F.	

WATER PATTERNS — me/l



REMARKS & RECOMMENDATIONS: Calculations indicate a tendency toward calcium carbonate deposition; however, no calcium sulfate deposition is indicated.

ANALYSIS BASED ON API RECOMMENDED PROCEDURE

DWL-481-2-A

EXHIBIT "G"

DOWELL DIVISION OF THE DOW CHEMICAL COMPANY

DENVER REGION

LABORATORY LOCATION
CASPER

API WATER ANALYSIS REPORT FORM

DATE March 16, 1982

LAB NO. CL 10325-3

Company	Sample No.	Date Sampled
Petroleum Energy	58456	

Field	Legal Description	County or Parish	State
		San Juan	N. Mex.

Lease or Unit	Well	Depth	Formation	Water, B/D
	2-32			

Type of Water (Produced, Supply, etc.)	Sampling Point	Sampled By

DISSOLVED SOLIDS

CATIONS	*mg/l*	*me/l*
Sodium, Na (calc.)	25005	1100.2
Calcium, Ca	1900	95.0
Magnesium, Mg	510	40.8
Barium, Ba		

ANIONS		
Chloride, Cl	36000	1008.0
Sulfate, SO_4	5000	100.0
Carbonate, CO_3	0	
Bicarbonate, HCO_3	800	12.8

Total Dissolved Solids (calc.) 61215

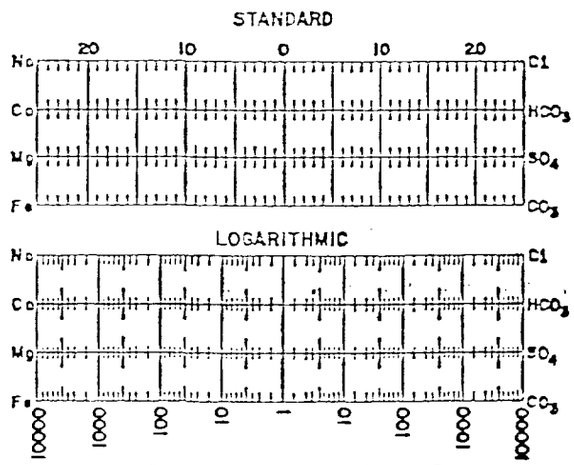
Iron, Fe (total) 150

Sulfide, as H_2S

OTHER PROPERTIES

pH	6.8
Specific Gravity, 60/60 F.	1.042
Resistivity (ohm-meters) F.	

WATER PATTERNS — *me/l*



REMARKS & RECOMMENDATIONS: Calculations indicate a tendency toward calcium carbonate deposition; however, no calcium sulfate deposition is indicated.

ANALYSIS BASED ON API RECOMMENDED PROCEDURE

EXHIBIT "H"

DWL-481-2-A

DOWELL DIVISION OF THE DOW CHEMICAL COMPANY

DENVER REGION

LABORATORY LOCATION: CASPER

API WATER ANALYSIS REPORT FORM

DATE: March 16, 1982

LAB NO.: CL 10325

Company		Sample No.	Date Sampled
Petroleum Energy		58456	
Field	**Legal Description**	**County or Parish**	**State**
		San Juan	N. Mex.
Lease or Unit	**Well**	**Depth**	**Formation**	**Water, B/D**
	2-29		Barker Ck.	
Type of Water (Produced, Supply, etc.)	**Sampling Point**	**Sampled By**

DISSOLVED SOLIDS

CATIONS	*mg/l*	*me/l*
Sodium, Na (calc.)	31095	1368.2
Calcium, Ca	3200	160.2
Magnesium, Mg	540	43.2
Barium, Ba		

ANIONS		
Chloride, Cl	54000	1512.0
Sulfate, SO_4	2500	50.0
Carbonate, CO_3	0	
Bicarbonate, HCO_3	600	9.6

Total Dissolved Solids (calc.): 91935

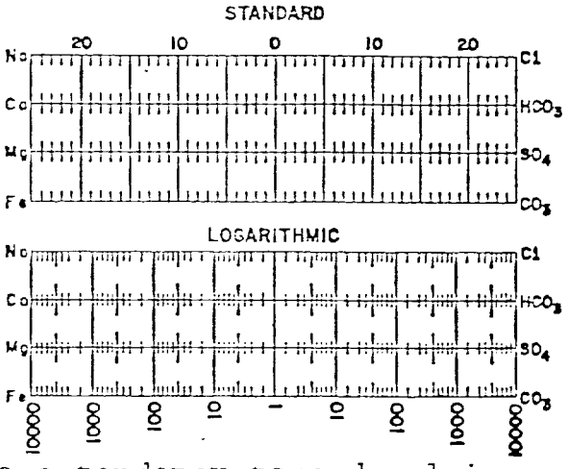
Iron, Fe (total): 150

Sulfide, as H_2S:

OTHER PROPERTIES

pH	6.4
Specific Gravity, 60/60 F.	1.058
Resistivity (ohm-meters) ____ F.	

WATER PATTERNS — *me/l*



REMARKS & RECOMMENDATIONS: Calculations indicate a tendency toward calcium carbonate deposition; however, no calcium sulfate deposition is indicated.

A. R. Geiselman/ml

R. G. Lawson
D15 - Denver Regional Office
Sales - Casper Office File
Tulsa - T. Niles

ANALYSIS BASED ON API RECOMMENDED PROCEDURE

EXHIBIT "I"

DWL-481-2-A

DOWELL DIVISION OF THE DOW CHEMICAL COMPANY

DENVER REGION

LABORATORY LOCATION: CASPER

API WATER ANALYSIS REPORT FORM

DATE: March 16, 1982

LAB NO.: CL 10325-2

Company		Sample No.	Date Sampled
Petroleum Energy		58456	
Field	**Legal Description**	**County or Parish**	**State**
		San Juan	N. Mex.
Lease or Unit	**Well**	**Depth**	**Formation**	**Water, B/D**
	3-29			
Type of Water (Produced, Supply, etc.)	**Sampling Point**	**Sampled By**

DISSOLVED SOLIDS

CATIONS	mg/l	me/l
Sodium, Na (calc.)	29145	1282.4
Calcium, Ca	3200	160.0
Magnesium, Mg	780	62.4
Barium, Ba		

ANIONS	mg/l	me/l
Chloride, Cl	51500	1442.0
Sulfate, SO_4	2500	50.0
Carbonate, CO_3	0	
Bicarbonate, HCO_3	800	12.8

Total Dissolved Solids (calc.): 87925

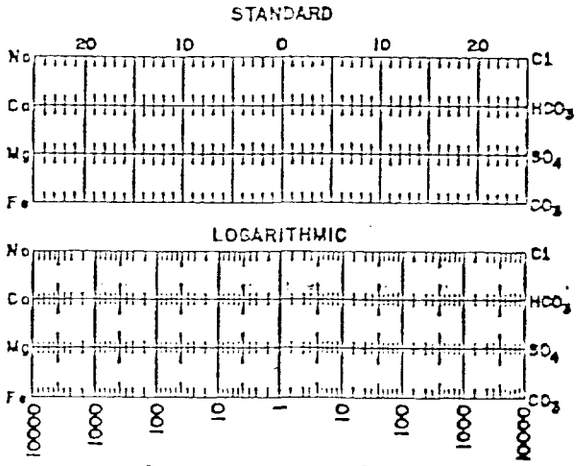
Iron, Fe (total): 500

Sulfide, as H_2S:

OTHER PROPERTIES

pH	6.6
Specific Gravity, 60/60 F.	1.057
Resistivity (ohm-meters) ____ F.	

WATER PATTERNS — me/l



REMARKS & RECOMMENDATIONS: Calculations indicate a tendency toward calcium carbonate deposition; however, no calcium sulfate deposition is indicated.

ANALYSIS BASED ON API RECOMMENDED PROCEDURE

EXHIBIT "J"

Schlumberger

DUAL INDUCTION - LATEROLOG WITH LINEAR CORRELATION LOG

COMPANY BASS ENTERPRISES PRODUCTION CO.

WELL NAVAJO 30-1 Cut

FIELD WILDCAT

COUNTY SAN JUAN STATE NEW MEXICO

LOCATION 1190 FEL 2510 FE

Other Services: FDC-CNL, BHC

API SERIAL NO.	SEC.	TWP	RANGE
	20	27N	19W

COUNTY / FIELD / LOCATION / WELL / COMPANY

Permanent Datum: GROUND LEVEL ; Elev.: 5711

Log Measured From KB 9 Ft. Above Perm. Datum

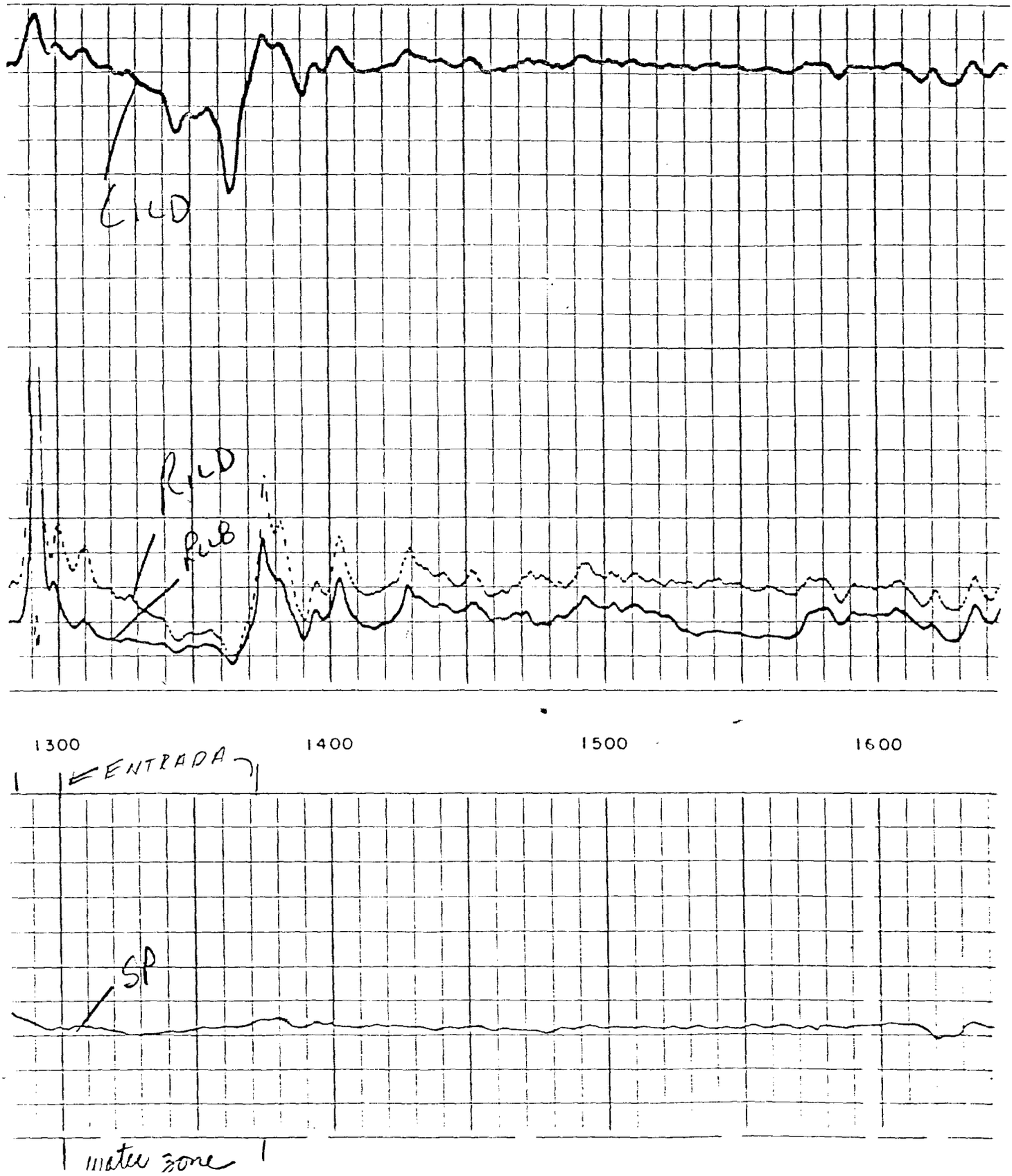
Drilling Measured From KB

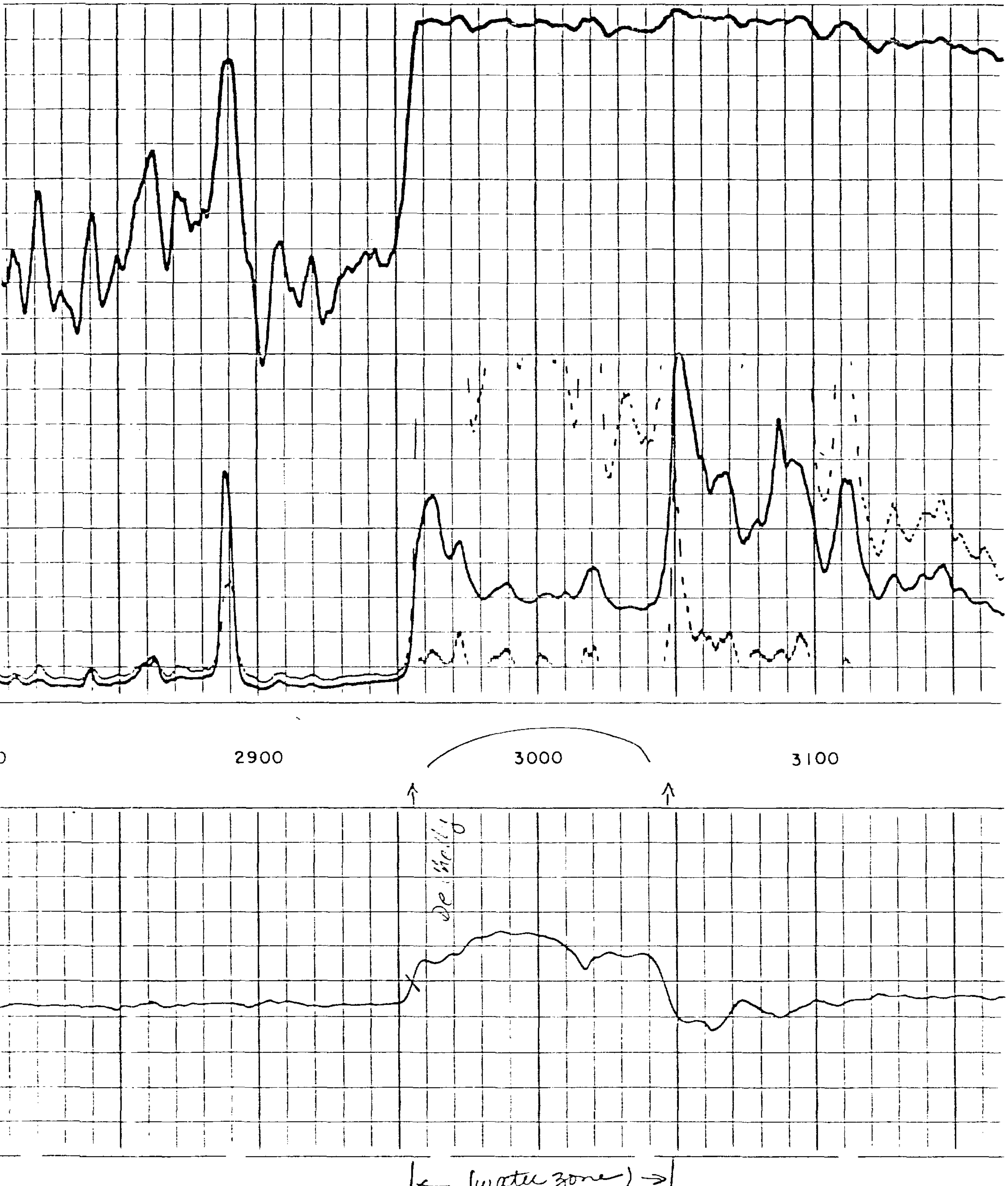
Elev.: K.B. 5720 D.F. G.L. 5711

Date	27 OCT 78			
Run No.	ONE			
Depth—Driller	5670			5880
Depth—Logger	5670			5056
Btm. Log Interval	5660			2764
Top Log Interval	1201			
Casing—Driller	8 5/8 @ 1202	@	@	@
Casing—Logger	1201			
Bit Size	7 7/8"			
Type Fluid in Hole	FRESH GEL MUD			
Dens. | Visc.	10.4 | 60			
pH | Fluid Loss	8.4 | — ml	ml	ml	ml
Source of Sample	SHAKER			
Rm @ Meas. Temp.	2.50 @ 70 °F	@ °F	@ °F	@ °F
Rmf @ Meas. Temp.	.51 @ 70 °F	@ °F	@ °F	@ °F
Rmc @ Meas. Temp.	— @ — °F	@ °F	@ °F	@ °F
Source: Rmf | Rmc	MEAS | CALC			
Rm @ BHT	1.2 @ 131 °F	@ °F	@ °F	@ °F
TIME Circulation Stopped	0100			
TIME Logger on Bottom	1100			
Max. Rec. Temp.	131 °F	°F	°F	°F
Equip. | Location	5768 | FARM			
Recorded By	BOB KRAAF			
Witnessed By	MR. GAZE - MC BRIDE			

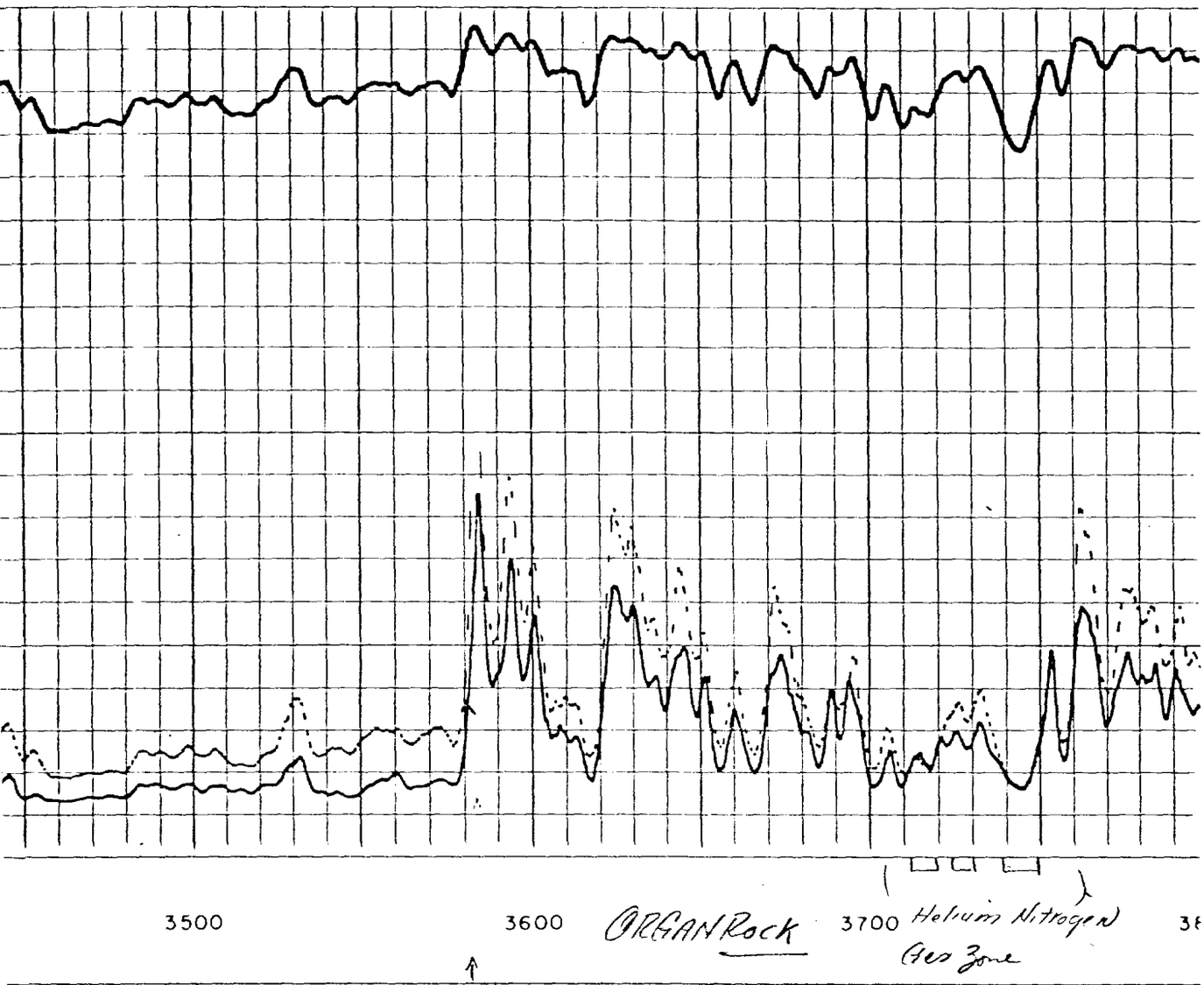
The well name, location and borehole reference data were furnished by the customer.

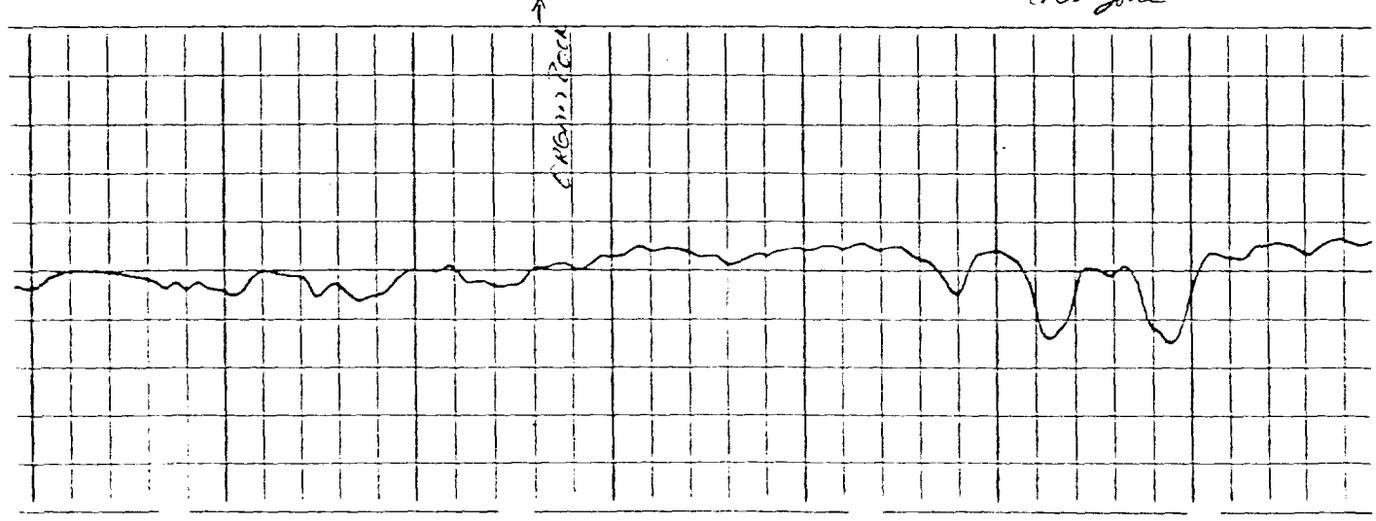
FOLD HERE


C-LD
R-LD
P-LB
1300
1400
1500
1600
ENTRADA
SP
water zone



2900
3000
3100
← (water zone) →


3500
3600
ORGAN Rock
3700
Helium Nitrogen
Gas Zone



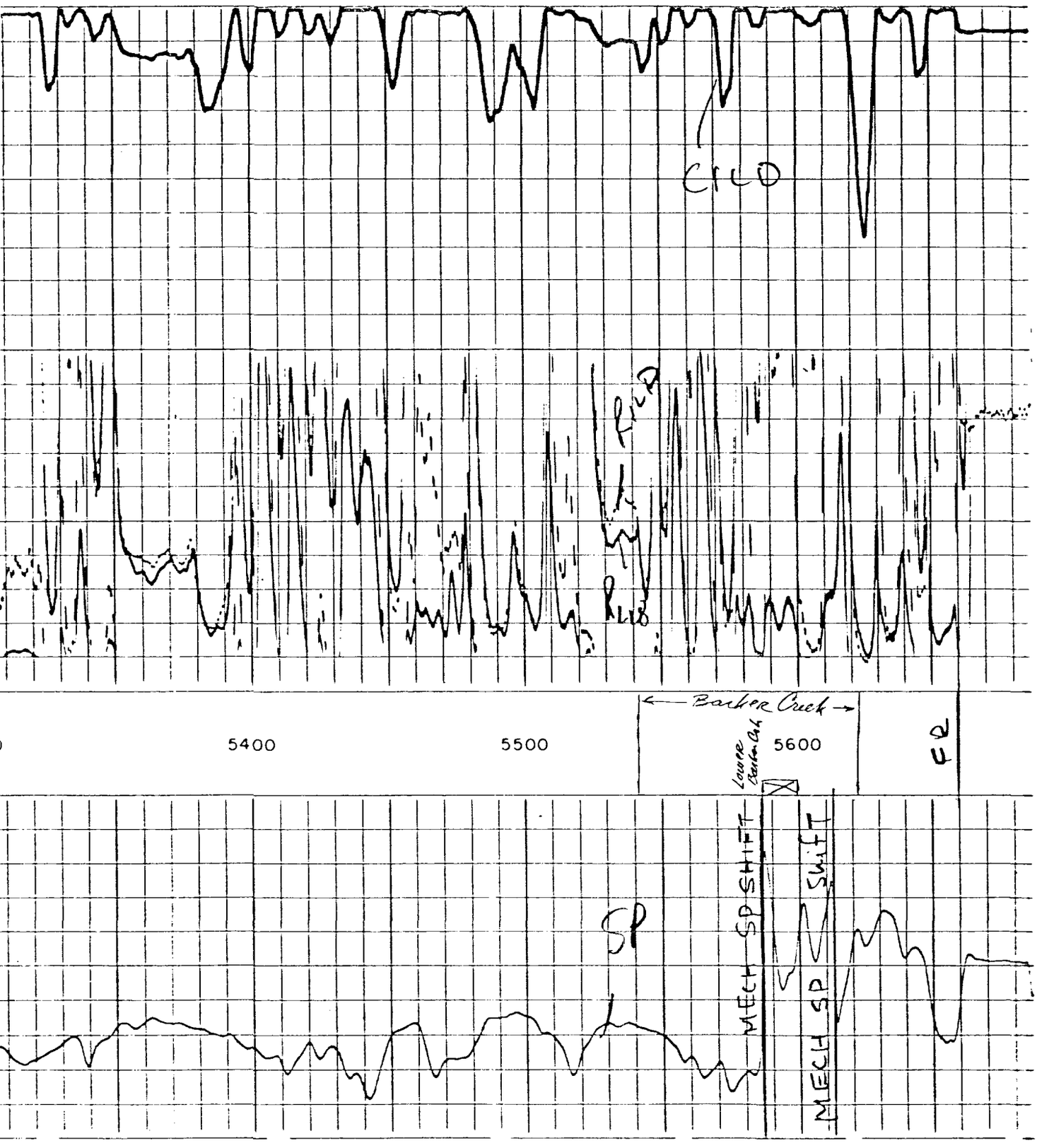

CILD
ILD
ILS
← Barker Creek →
5400
5500
5600
Lower Barker Cr.
F2
SP
MECH SP SHIFT
MECH SP SHIFT

EXHIBIT "K"

DWL-481-2-A

DOWELL DIVISION OF THE DOW CHEMICAL COMPANY

DENVER REGION

LABORATORY LOCATION: CASPER

API WATER ANALYSIS REPORT FORM

DATE: March 16, 1982

LAB NO.: CL 10325-7

Company	Sample No.	Date Sampled
Petroleum Energy	58456	

Field	Legal Description	County or Parish	State
		San Juan	N. Mex.

Lease or Unit	Well	Depth	Formation	Water, B/D

Type of Water (Produced, Supply, etc.)	Sampling Point	Sampled By
Water Well		

DISSOLVED SOLIDS

CATIONS	*mg/l*	*me/l*
Sodium, Na (calc.)	220	9.7
Calcium, Ca	10	0.5
Magnesium, Mg	3	.2
Barium, Ba		

ANIONS		
Chloride, Cl	150	4.2
Sulfate, SO_4	20	.4
Carbonate, CO_3	102	3.4
Bicarbonate, HCO_3	150	2.4

Total Dissolved Solids (calc.) 655

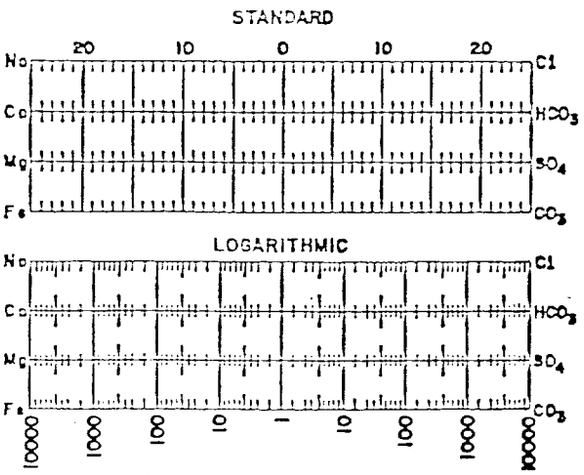
Iron, Fe (total) 15

Sulfide, as H_2S

OTHER PROPERTIES

pH	9.1
Specific Gravity, 60/60 F.	1.000
Resistivity (ohm-meters) F.	

WATER PATTERNS — *me/l*



REMARKS & RECOMMENDATIONS: Calculations indicate a tendency toward calcium carbonate deposition; however, no calcium sulfate deposition is indicated.

ANALYSIS BASED ON API RECOMMENDED PROCEDURE

DWL-481-2-A

EXHIBIT "L"

DOWELL DIVISION OF THE DOW CHEMICAL COMPANY

DENVER REGION

LABORATORY LOCATION
CASPER

API WATER ANALYSIS REPORT FORM

DATE March 16, 1982

LAB NO. CL 10325 -6

Company		Sample No.	Date Sampled
Petroleum Energy		58456	
Field	**Legal Description**	**County or Parish**	**State**
		San Juan	N. Mex.
Lease or Unit	**Well**	**Depth**	**Formation**	**Water, B/D**
Type of Water (Produced, Supply, etc.)	**Sampling Point**	**Sampled By**
Reservoir		

DISSOLVED SOLIDS

CATIONS	*mg/l*	*me/l*
Sodium, Na (calc.)	435	20 0
Calcium, Ca	113	5 6
Magnesium, Mg	23	1 8
Barium, Ba		

ANIONS		
Chloride, Cl	150	4.2
Sulfate, SO_4	1000	20 0
Carbonate, CO_3	0	
Bicarbonate, HCO_3	200	3 2

Total Dissolved Solids (calc.) 1918

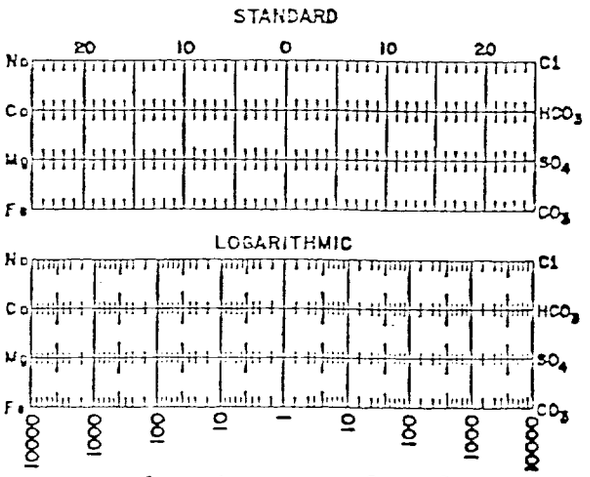
Iron, Fe (total) 20

Sulfide, as H_2S

OTHER PROPERTIES

pH	8.3
Specific Gravity, 60/60 F.	1.000
Resistivity (ohm-meters) ____ F.	

WATER PATTERNS — *me/l*



REMARKS & RECOMMENDATIONS: Calculations indicate a tendency toward calcium carbonate deposition; however, no calcium sulfate deposition is indicated.

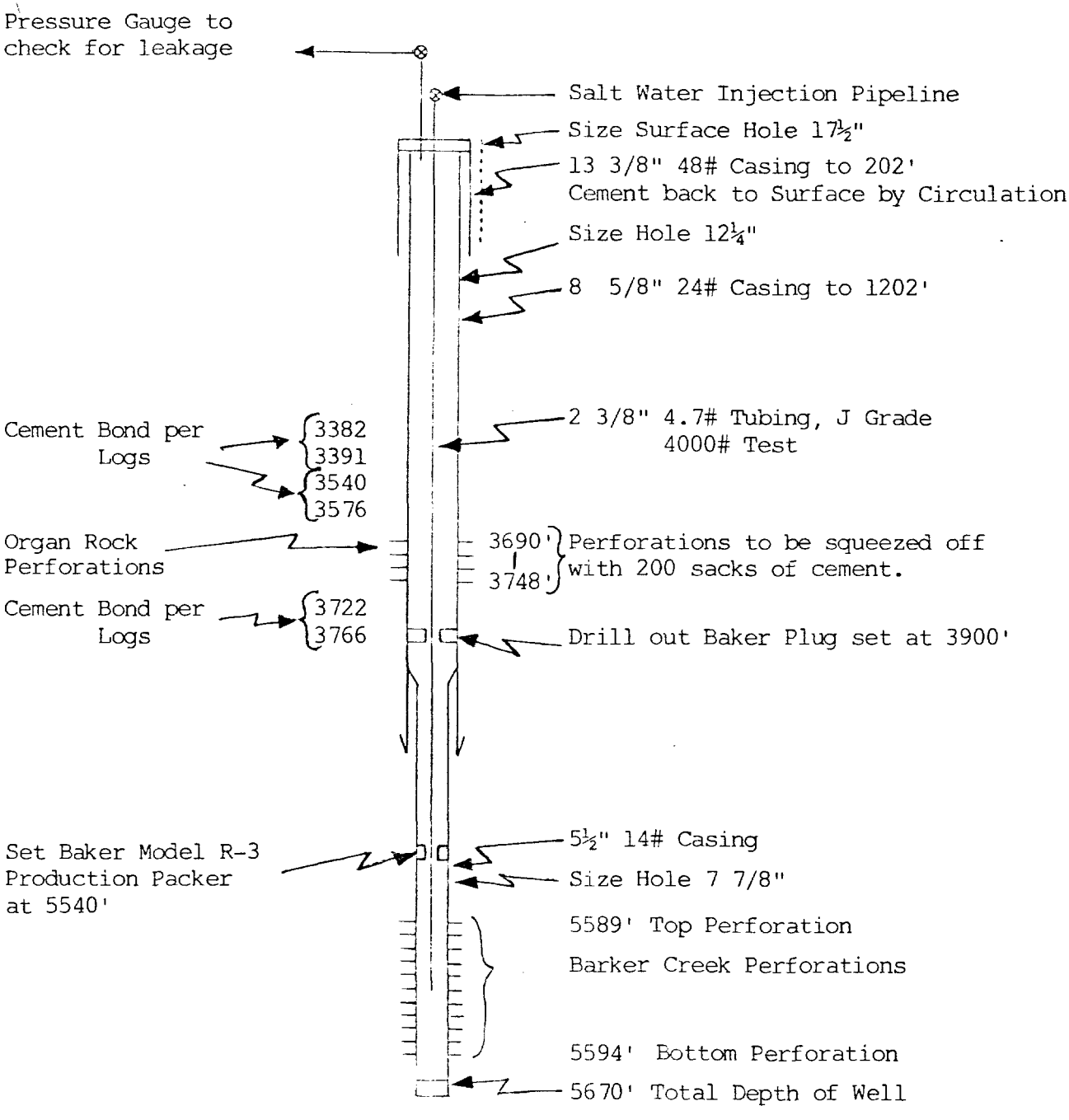
ANALYSIS BASED ON API RECOMMENDED PROCEDURE

EXHIBIT " M "

PETROLEUM ENERGY, INC.

SCHEMATIC DIAGRAM
OF
PROPOSED WATER DISPOSAL WELL

WELL 1-20
SW ¼ SE ¼ SECTION 20, T27N, R19W



(May 1963)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN TRIPLICATE* (Other instructions on reverse side)

Form approved.
Budget Bureau No. 42-R1424.

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 "APPLICATION FOR PERMIT—" for such proposals.)

5. LEASE DESIGNATION AND SERIAL NO.

6. IF INDIAN, ALLOTTEE OR TRIBE NAME
NOO-C-14-20-2976

1. OIL WELL [X] GAS WELL [ ] OTHER Wildcat - Adandonment

7. UNIT AGREEMENT NAME

2. NAME OF OPERATOR
Northwest Pipeline Corporation

8. FARM OR LEASE NAME
Barbara Kay

3. ADDRESS OF OPERATOR
P.O. Box 90 Farmington, New Mexico

9. WELL NO.
1

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.)
At surface
990' FSL & 990' FEL

10. FIELD AND POOL, OR WILDCAT
Wildcat

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA
Sec 20, T27N, R19W

14. PERMIT NO.

15. ELEVATIONS (Show whether DF, RT, GR, etc.)
5703 GR

12. COUNTY OR PARISH
San Juan

13. STATE
New Mexico

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:				SUBSEQUENT REPORT OF:			
TEST WATER SHUT-OFF	[ ]	PULL OR ALTER CASING	[ ]	WATER SHUT-OFF	[ ]	REPAIRING WELL	[ ]
FRACTURE TREAT	[ ]	MULTIPLE COMPLETE	[ ]	FRACTURE TREATMENT	[ ]	ALTERING CASING	[ ]
SHOOT OR ACIDIZE	[ ]	ABANDON*	[ ]	SHOOTING OR ACIDIZING	[ ]	ABANDONMENT*	[X]
REPAIR WELL	[ ]	CHANGE PLANS	[ ]	(Other)			
(Other)				(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)			

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

2-10-75: Total Depth 5971 RKB - Ran logs
2-12-75: This well was plugged and abandoned in the following manner:

Plug #1: 80 sacks of Class "B" neat cement from 5971' to 5700'.
Plug #2: 85 sacks of Class "B" neat cement from 5600' to 5300'.
Plug #3: 70 sacks of Class "B" neat cement from 5050' to 4850'.
Plug #4: 80 sacks of Class "B" neat cement from 3100' to 2850'.
Plug #5: 50 sacks of Class "B" neat cement from 1300' to 1150'.
Plug #6: 15 sacks of Class "B" neat cement from 40' to 0'.

FEB 25 19[illegible]

A dry hole marker of 4-1/2" casing was placed in the top of the 8-5/8" casing. This marker extends approximately 5' above ground level.

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

SIGNED O.B. Whitenburg /js/ O.B. Whitenburg TITLE Production & Drilling Engineer DATE 2-24-75

(This space for Federal or State office use)

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

APPROVED

NEW MEXICO-N
SAN JUAN CO.
WILDCAT (WF)

Petroleum Information CORPORATION

Twp 27n-19w
Section 20
se se
990 fsl 990 fel

Opr: Northwest Pipeline **Well:** 1 Barbara Kay

Elev: 5703 Gr

Tops: Log

Todilto 1255
× Entrada 1270
Chinle 1765
× De Chelly 2920
× Organ Rock 3558
Supai evap 4012
× Hermosa 4946
Akah 5350
× Barker Creek 5528
Molas 5736
× Mississippian massive 5810
Elbert 5958

Dsts & Cores:
No cores or tests.

Spud: 1-17-75 **Comp:** 2-12-75
TD: 5971 **PB:**
Csg: 13 3/8 @ 154 w/140
8 5/8 @ 1225 w/600
Perf:
Prod Zone:
Init. Prod: D&A

EXHIBIT "N"

STATE OF NEW MEXICO

ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION

AZTEC DISTRICT OFFICE

1000 RIO BRAZOS ROAD
AZTEC, NEW MEXICO 87410
(505) 334-6178

OIL CONSERVATION DIVISION
BOX 2088
SANTA FE, NEW MEXICO 87501

DATE 5-5-92

RE: Proposed MC_____
Proposed DHC_____
Proposed NSL_____
Proposed SWD ✓
Proposed WFX_____
Proposed PMX_____

Gentlemen:

I have examined the application dated 4-21-92

for the Petroleum Energy Inc. (Operator) Navajo 20 #1 (Lease and Well No.) O-20-27N-14W (Unit, S-T-R)

and my recommendations are as follows:

Approve

2 producing wells within 2 miles both Petroleum Energy Inc

M-29-27N-14W is a WC Penn (Organ Rock)

H-29-27N-14W is a WC Penn (Barker Creek)

Yours truly,

Jeff A. Edwards

MAY 13 1992