

P-W

Kerr-McGee #10 Navajo 446
SE-NE 30-36N-30E Apache County

COUNTY Apache AREA Dineh bi Keyah LEASE NO. Nav 14-20-0603-8823

Min. States Petroleum (5-1-94)

WELL NAME Kerr-McGee #10 Navajo SWD

LOCATION SE NE SEC 30 TWP 36N RANGE 30E FOOTAGE 1990 FNL 610 FEL

ELEV 7355' GR 7356KB SPUD DATE 1-2-68 STATUS OWI TOTAL DEPTH 3868'

CONTRACTOR JCM Drilling Co., Oklahoma City, Okla. 3774' PBT

CASING SIZE	DEPTH	CEMENT	LINER SIZE & DEPTH	DRILLED BY ROTARY
9 5/8	248'	300 sx	NA	<input checked="" type="checkbox"/>
7	3868	250 sx		<input type="checkbox"/>

DRILLED BY CABLE TOOL
 PRODUCTIVE RESERVOIR 3028-3048
 INITIAL PRODUCTION 297 BOPD
24.1 MCF 44 BW

FORMATION TOPS	DEPTHS	SOURCE		REMARKS
		L.L.	E.L.	
<u>SEE Comp. Report</u>				<u>SEE COMPLETION REPORT</u>

ELECTRIC LOGS	PERFORATED INTERVALS	PROD. INTERVALS	SAMPLE LOG
<u>IE, Borehole Compensated</u>			SAMPLE DESCRP. _____
<u>GR</u>			SAMPLE NO. <u>1433</u>
			CORE ANALYSIS <input checked="" type="checkbox"/>
			DSTs <input checked="" type="checkbox"/>

REMARKS Permit originally issued under #418, expired 12-19-67.
SEE OTHER SIDE

APP. TO PLUG
 PLUGGING REP.
 COMP. REPORT

WATER WELL ACCEPTED BY _____

BOND CO. Firemen's Insurance Company BIA BOND BOND NO. 188-98-10-528
 DATE _____ ORGANIZATION REPORT 7-14-60
 BOND AMT. \$ 25,000 CANCELLED 12/1/57
 FILING RECEIPT 9532 LOC. PLAT WELL BOOK PLAT BOOK
 API NO. 02-001-20042 DATE ISSUED 12-27-67 DEDICATION NE/4

PERMIT NUMBER 446

DRILL STEM TEST

NO.	FROM	TO	RESULTS
1	3598	3680'	SEE ATTACHED REPORT AND ANALYSIS (NOT IN FILE)
2	3694	3868	

CORE RECORD

NO.	FROM	TO	RECOVERY	REMARKS
1	3020'	3078		SEE ATTACHED ANALYSIS

REMEDIAL HISTORY

DATE STARTED - COMPLETED	WORK PERFORMED	NEW PERFORATIONS

ADDITIONAL INFORMATION

This well converted to water injection - First water injected June 19, 1976

WELL COMPLETION OR RECOMPLETION REPORT AND WELL LOG

DESIGNATE TYPE OF COMPLETION: WATER INJECTION

New Well Work-Over Deepen Plug Back Same Reservoir Different Reservoir Oil Gas Dry

DESCRIPTION OF WELL AND LEASE

Operator KERR-McGEE CORPORATION		Address P.O. BOX 250; AMARILLO, TEXAS 79189			
Federal, State or Indian Lease Number or name of lessor if fee lease 14-20-0603-8823		Well Number 10	Field & Reservoir DINEH-BI-KEYAH		
Location 1990' FNL & 610' FEL		County APACHE			
Sec. TWP-Range or Block & Survey SEC. 30 - T36N - R30E G & SRM					
Date spudded 1-2-68	Date total depth reached 1-22-68	Date completed, ready to produce 6-15-78	Elevation (DF, RKB, RT or Gr.) feet 7335 GR	Elevation of casing hd. flange 7335 GR	
Total depth 3868	P.B.T.D. 3774	Single, dual or triple completion? WATER INJECTION WELL		If this is a dual or triple completion, furnish separate report for each completion.	
Producing interval (s) for this completion 3010-3070 INTRUSIVE (LOWER HERMOSA)		Rotary tools used (Interval) 0-3868		Cable tools used (Interval) N/A	
Was this well directionally drilled? NO	Was directional survey made? NO	Was copy of directional survey filed? N/A		Date filed N/A	
Type of electrical or other logs run (check logs filed with the commission) INDUCTION ELECTRIC, SONIC LOG, GAMMA RAY				Date filed 2-23-68	

CASING RECORD

Casing (report all strings set in well—conductor, surface, intermediate, producing, etc.)

Purpose	Size hole drilled	Size casing set	Weight (lb./ft.)	Depth set	Sacks cement	Amt. pulled
SURFACE	13 3/4	9 5/8	32.3	248' RKB	300	---
PRODUCTION	8 3/4	7"	23.0	3868	250	---

TUBING RECORD

LINER RECORD

Size	Depth set	Packer set at	Size	Top	Bottom	Sacks cement	Screen (ft.)
2 7/8 in.	2936 ft.	2936 ft.	in.	ft.	ft.	ft.	ft.

PERFORATION RECORD

ACID, SHOT, FRACTURE, CEMENT SQUEEZE RECORD

Number per ft.	Size & type	Depth Interval	Am't. & kind of material used	Depth Interval
2/ft	N/A	3010-28, 3048-70	NONE	
2/ft	.5"	3028-3048 (original perms acidized & fraced)		

INITIAL PRODUCTION

Date of first production (INJECTION) 6-15-76 Producing method (indicate if flowing, gas lift or pumping—if pumping, show size & type of pump:) N/A WATER DISPOSAL WELL

Date of test	Hrs. tested	Choke size	Oil prod. during test	Gas prod. during test	Water prod. during test	Oil gravity
			bbls.	MCF	bbls.	* API (Corr)
Tubing pressure	Casing pressure	Cal'd rate of Production per 24 hrs.	Oil bbls.	Gas MCF	Water bbls.	Gas-oil ratio

Disposition of gas (state whether vented, used for fuel or sold):

CERTIFICATE: I, the undersigned, under the penalty of perjury, state that I am the ENGINEERING ASSISTANT of the KERR-McGEE CORPORATION (company), and that I am authorized by said company to make this report; and that this report was prepared under my supervision and direction and that the facts stated therein are true, correct and complete to the best of my knowledge.

OCTOBER 20, 1978
Date

Larry R. Bell
Signature

Larry R. Bell

RECEIVED

OCT 27 1978
D & G CONS. COMM.

Permit No. 446

STATE OF ARIZONA
OIL & GAS CONSERVATION COMMISSION
Well Completion or Recompletion Report and Well Log

Form No. 4
File One Copy
2

**OPERATOR'S CERTIFICATE OF COMPLIANCE AND AUTHORIZATION
TO TRANSPORT OIL OR GAS FROM LEASE**

Federal, State or Indian Lease Number, or lessor's name if fee lease <u>14-20-0603-8823</u>	Field <u>Dineh-BI-Keyah</u>	Reservoir <u>Hemosa</u>
Survey or Sec-Twp-Rge <u>Sec 29, 30, 31, 32 T-36N-R30E</u>	County <u>Apache</u>	State <u>AZ</u>
Operator <u>Mountain States Petroleum Corp.</u>		
ADDRESS ALL CORRESPONDENCE CONCERNING THIS FORM TO:		
Street <u>P O Bx 1936</u>	City <u>Roswell,</u>	State <u>New Mexico 88202</u>
Above named operator authorizes (name of transporter) <u>Giant Industries</u>		
Transporter's street address <u>P O Bx 12999</u>	City <u>Scottsdale,</u>	State <u>AZ</u>
Field address <u>P O Bx 256 (Bloomfield Hwy) Farmington, N M 87499</u>		
Oil, condensate, gas well gas, casinghead gas		
To transport	<u>100% of the</u>	<u>oil</u> from said lease.
OTHER GATHERERS TRANSPORTING FROM THIS LEASE ARE AS FOLLOWS:		
Name of gatherer	% transported	Product transported
Indicate whether or not this certificate is for a new lease. If not a new lease, indicate whether or not it is a change of operator, change of lease name, change of gatherer, or a consolidation or subdivision of leases and give effective date of change. <u>Change of Oper.</u>		

The undersigned certifies that the rules and regulations of the State of Arizona Oil & Gas Conservation Commission have been complied with in drilling and producing operations on this lease, except as noted above, and that the above transporter is authorized to transport the above specified percentage of the allowable oil or gas produced from the above described property, and that this authorization will be valid until further notice or until cancelled by the State of Arizona Oil & Gas Conservation Commission.

CERTIFICATE: I, the undersigned, under the penalty of perjury, state that I am the Secretary of the Mountain States Petro. Corp. (company), and that I am authorized by said company to make this report; and that this report was prepared under my supervision and direction and that the facts stated therein are true, correct and complete to the best of my knowledge.

Date Aug. 11, 1995

Ruby Wickersham
Signature

Date approved: AUG 16 1995

STATE OF ARIZONA
OIL & GAS CONSERVATION COMMISSION

By: Steven L. Rainey

Permit No. 446

STATE OF ARIZONA
OIL & GAS CONSERVATION COMMISSION
Operator's Certificate of Compliance & Authorization to
Transport Oil or Gas from Lease
File Two Copies
Form No. 8

Drilling/Completion	DUCTION COMPLETION WORKOVER REPORT		
Workover/Re-Completion	RIG #:	_____	
Well Work	AFE #:	_____	AFE AMT \$ _____
Non Well Work	PREVIOUS \$	_____	TODAY \$ _____ TOTAL \$ _____

Hours /Time	ACTIVITY	Cost Breakdown
	Mountain States Petro. Corp. Navajo Well #10 SE NE Sec. 30, T36N, R30E Apache County, Arizona Case NO: 14-20-0603-8823	
	"Five year Mechanical Integrity Test" MIRU C&I Trucking Kill Truck to 2" WKM 7" casing valve, pumped & loaded 7" casing w/ 2 bbls of Fresh water, PSI-tested 7" casing to 700 PSIG. S.I Kill truck & close in 2" valve & hold casing pressure for 30 mins. PSI-TESTING successful & approve by Navajo Nation EPA, Jim Walker. Release Pressure & RD Kill Truck & Release Equip.	
	NOTE: Steve Panni of Arizona Oil & Gas Comm. cancel on witnessing casing test	
		Today's Total \$ _____

Load Orig. in Well:
Bbls. Left to Rec:

Load Rec'd To-Date:
Bbls. Rec'd Today:

SUPERVISOR: *Ray Finley - company rep.*

DATE: 05/18/94

OART: _____

LEASE & NO: NAVAJO Well #10

Field: Dineh-Bi-Keyah Field

OBJECTIVE: _____

ANNULAR PRESSURE TEST

OPERATOR Mountain States Petroleum Co STATE PERMIT NO. NA
 ADDRESS P.O. Box 1936 EPA PERMIT NO. Rule Auth
Roswell, NM 88202 DATE OF TEST 5/18/94
 WELL NAME Dineh Bi Kayok Navajo No. 10 TYPE Class II EOR Inj. Well
 LOCATION SE QUARTER OF THE NE QUARTER OF THE _____ QUARTER.
 SECTION 30 TOWNSHIP 36 N RANGE 30 E
 TOWNSHIP NAME _____ COUNTY NAME Apache Co, Ariz.
 COMPANY REPRESENTATIVE Ray Donnelly FIELD INSPECTOR J.D. Walker
 TYPE PRESSURE GAUGE Tubing gauge INCH FACE, 600 PSI FULL SCALE, 10 PSI INCREMENTS
 NEW GAUGE YES NO IF NO, DATE OF TEST CALIBRATION NA
 CALIBRATION CERTIFICATION SUBMITTED: YES NO
Continuous pressure recorder used on annulus

RESULTS:

TIME	PRESSURE (PSIG)	
	ANNULUS	TUBING
11:07 A.M.	700	0
11:12	700	0
11:17	700	0
11:22	695	0
11:27	695	0
11:37	695	0

CASING 7" *file 446*
 TUBING 2 3/4"
 PACKER _____
 PACKER @ _____
 FLUID RETURN @ _____

COMMENTS:
 Max inj. pressure = 60 PSI
 per company rep.
 well inactive during test

AZ OIL & GAS
 CONSERVATION COMMISSION
 MAY 25 1994

TEST PRESSURE: 700
 MAX. ALLOWABLE PRESSURE CHANGE: TEST PRESSURE X .03 35 PSI
 HALF HOUR PRESSURE CHANGE 5 PSI

TEST PASSED TEST FAILED (CHECK ONE)
 IF FAILED, NO INJECTION MAY OCCUR UNTIL CORRECTIONS HAVE BEEN MADE AND WELL PASSES.

Ray Donnelly
 SIGNATURE OF COMPANY REPRESENTATIVE
James D. Walker
 SIGNATURE OF INSPECTOR

5/18/94
 DATE
5/18/94
 DATE

KIVA

MEASURING, SALES & SERVICE, INC.

P. O. BOX 1796
FARMINGTON, NEW MEXICO 87499
OFFICE: (505) 632-2762

CALIBRATION CERTIFICATE

PART NUMBER KM # 408 SERIAL NUMBER 122491 *file 446*
PRESSURE RANGE 0-1000 P.S.I. ACCURACY \pm 1 % FULL SCALE \pm 10 P.S.I.

CALIBRATION

INCREASING PRESSURE			DECREASING PRESSURE		
Applied Press.	Indicated Press.	Difference	Applied Press.	Indicated Press.	Difference
0	0	± 0	1000	1000	± 0
100	100	± 0	800	800	± 0
300	300	± 0	600	600	± 0
500	500	± 0	400	401	+1
700	699.5	-0.5	200	200	± 0
900	900	± 0	0	0	± 0
1000	1000	± 0			

AZ OIL & GAS
CONSERVATION COMMISSION
MAY 25 1994

Calibrated in vertical/upright Position. Room Temp. 68 °F.

This is to certify that this gauge has been inspected and tested against Pressure Standard of Ametek

Manfield & Green Div. D.W.G. HL-36 serial NO. HL-3067

traceable to the National Bureau of Standards, traceability reference 5221 compensated to local acceleration due to gravity.

Special Conditions: _____

DATE OF CALIBRATION 05-09-94

INSPECTOR W. J. Hamilton

**U.S. ENVIRONMENTAL PROTECTION AGENCY
NOTICE OF INSPECTION**

Address (EPA Regional Office) Region 9 Environmental Inspection Agency 215 Fremont Street (W-6-2) San Francisco, CA 94105	Inspection Contractor THE CADMUS GROUP, INC. CORPORATE OFFICE 135 Beaver Street Waltham, MA 02154 (617) 894-9830	Firm To Be Inspected <i>Mountain States Petroleum Co. Dineh Bi Keyah Field Navajo # 10</i>
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Date *5/18/94*
Hour *10:15 AM*

Notice of inspection is hereby given according to Section 1445(b) of the Safe Drinking Water Act (42 U.S.C. §300 f et seq.).

Reason For Inspection

For the purpose of inspecting records, files, papers, processes, controls and facilities, and obtaining samples to determine whether the person subject to an applicable underground injection control program has acted or is acting in compliance with the Safe Drinking Water Act and any applicable permit or rule.

file 446

AZ OIL & GAS
CONSERVATION COMMISSION
MAY 25 1994

Section 1445(b) of the SDWA (42 U.S.C. §300 j-4 (b) is quoted on the reverse of this form.

Receipt of this Notice of Inspection is hereby acknowledged.

Firm Representative <i>Cheryl Smith</i>	Date <i>5/18/94</i>	Inspector <i>James R. Walker</i>
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Form 3160-5
(June 1990)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
Budget Bureau No. 1004-0135
Expires: March 31, 1993

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to deepen or reentry to a different reservoir.
Use "APPLICATION FOR PERMIT—" for such proposals

5. Lease Designation and Serial No.
14-20-0603-8823

6. If Indian, Allottee or Tribe Name
Navajo

7. If Unit or CA, Agreement Designation
Permit 446

8. Well Name and No.
Navajo #10

9. API Well No.
02-001-20042

10. Field and Pool, or Exploratory Area
Dineh-Bi-Keyah

11. County or Parish, State
Apache County, AZ

SUBMIT IN TRIPLICATE

1. Type of Well
 Oil Well Gas Well Other **Water Injection**

2. Name of Operator
Kerr-McGee Corporation

3. Address and Telephone No.
U.S. Onshore Region, P.O. Box 25861, Oklahoma City, OK 73125
405/270-6023

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)
**1990' FNL & 610' FEL
Sec. 30, T36N, R30E**

12. CHECK APPROPRIATE BOX(S) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION
<input type="checkbox"/> Notice of Intent	<input type="checkbox"/> Abandonment
<input checked="" type="checkbox"/> Subsequent Report	<input type="checkbox"/> Recompletion
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Plugging Back
	<input type="checkbox"/> Casing Repair
	<input type="checkbox"/> Altering Casing
	<input checked="" type="checkbox"/> Other Mechanical Integrity Test
	<input type="checkbox"/> Change of Plans
	<input type="checkbox"/> New Construction
	<input type="checkbox"/> Non-Routine Fracturing
	<input type="checkbox"/> Water Shut-Off
	<input type="checkbox"/> Conversion to Injection
	<input type="checkbox"/> Dispose Water

(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

13. 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.)

Annual mechanical integrity test.

7-6-93 MI & RU Halliburton pump truck to 2" WKM csg valve. Pumped & loaded 7" csg w/2 bbls of FW. Tested 7" csg to 600 PSIG. SI pump truck & held csg press for 30 min. Csg tested ok. Release press & RD pump truck.

NOTE: Test was witnessed by Steve Rauzi with the Arizona Geological Survey.

BLM was notified but did not witness test.

c: Arizona Geological Survey (2)



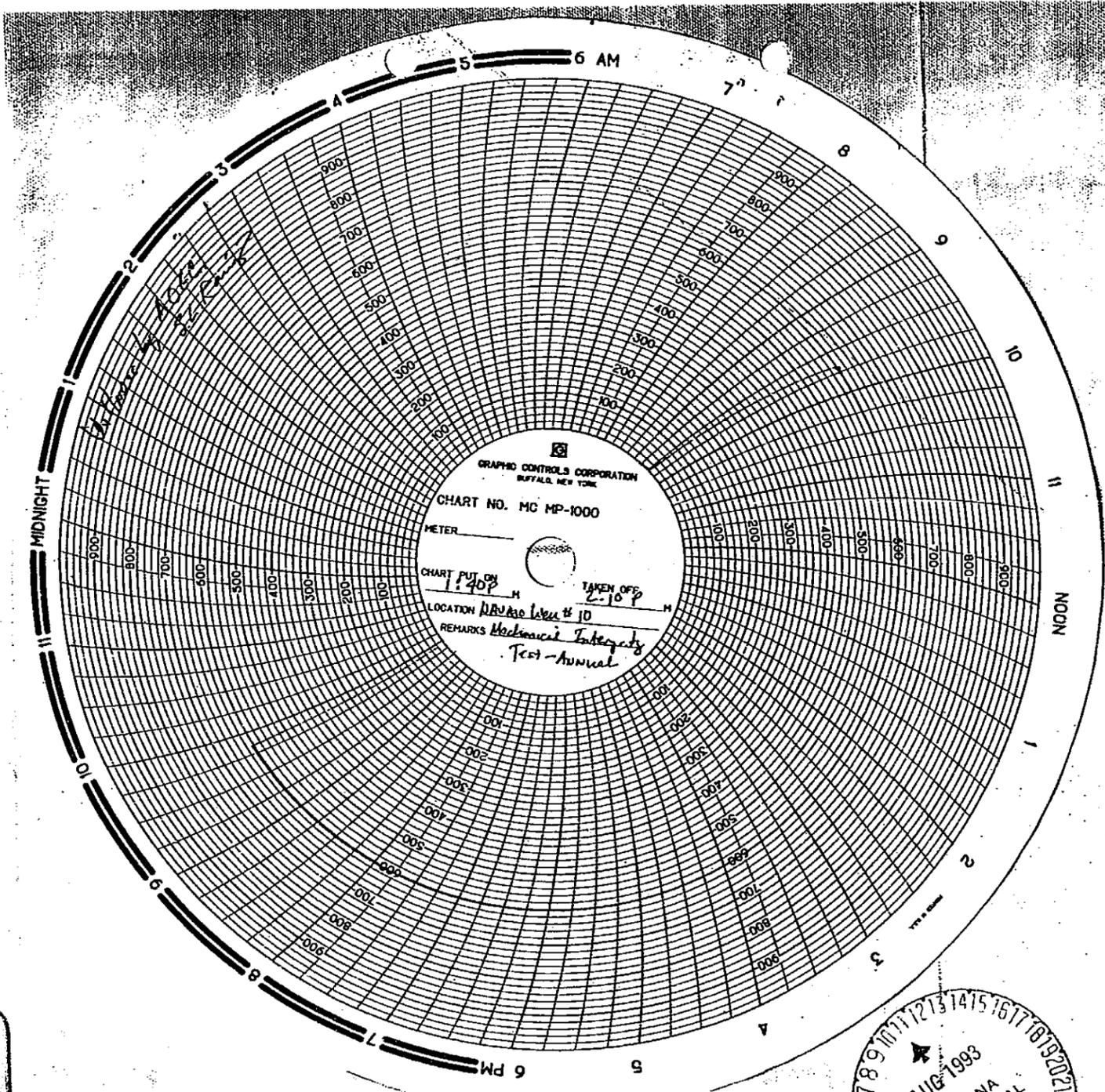
14. I hereby certify that the foregoing is true and correct
Signed S. Buman Title **Regulatory Specialist** Date **8-6-93**

(This space for Federal or State office use)

Approved by _____ Title _____ Date _____
Conditions of approval, if any:

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

*See Instruction on Reverse Side



AUG 1993
 ARIZONA
 GEOLOGICAL
 SURVEY

Form 3160-5
June 1990)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to deepen or reentry to a different reservoir.
Use "APPLICATION FOR PERMIT—" for such proposals

SUBMIT IN TRIPLICATE

1. Type of Well
 Oil Well Gas Well Other Water Injection

2. Name of Operator
 Kerr-McGee Corporation

3. Address and Telephone No.
 U.S. Onshore Reigon, P. O. Box 25861, Oklahoma City, OK 73125

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)
 1990' FNL & 610' FEL
 Sec. 30, T36N, R30E

FORM APPROVED
 Budget Bureau No. 1004-0135
 Expires: March 31, 1993

5. Lease Designation and Serial No.
 14-20-0603-8823

6. If Indian, Allottee or Tribe Name
 Navajo

7. If Unit or CA, Agreement Designation

8. Well Name and No.
 Navajo #10 (446)

9. API Well No.
 02-001-20042

10. Field and Pool, or Exploratory Area
 Dineh-Bi-Keyah

11. County or Parish, State
 Apache County, AZ

12. CHECK APPROPRIATE BOX(S) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION
<input type="checkbox"/> Notice of Intent	<input type="checkbox"/> Abandonment
<input checked="" type="checkbox"/> Subsequent Report	<input type="checkbox"/> Recompletion
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Plugging Back
	<input type="checkbox"/> Casing Repair
	<input type="checkbox"/> Altering Casing
	<input checked="" type="checkbox"/> Other <u>Mechanical Integrity Test</u>
	<input type="checkbox"/> Change of Plans
	<input type="checkbox"/> New Construction
	<input type="checkbox"/> Non-Routine Fracturing
	<input type="checkbox"/> Water Shut-Off
	<input type="checkbox"/> Conversion to Injection
	<input type="checkbox"/> Dispose Water <small>(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)</small>

13. 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.)

Yearly Mechanical Integrity test.
MI & RU Cementer's Inc. Pump Truck to 2" WKM casing valve, pumped & loaded 7" casing w/5 BFW. PSI - tested 7" casing to 780 psig. SI pump truck & held psi for 30 mins. PSI testing successful & approved by *AOGCC. Release psi & RD pump truck. Integrity test witnessed by Steve Raniz w/*AOGCC.

*Arizona Oil & Gas Conservation Commission

AZ OIL & GAS
CONSERVATION COMMISSION

Note: Notify BLM 6/4/91
BLM did not witness psi test.

JUL 5 1991

xc: Arizona Oil & Gas Conservation Commission (2)

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

Signed S. Dumas Title Analyst II Date 6-27-91

(This space for Federal or State office use)

Approved by PN 446 Title _____ Date _____

Conditions of approval, if any:

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

*See Instruction on Reverse Side

Form 3160-5
(June 1990)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUNDRY NOTICES AND REPORTS ON WELLS

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Use "APPLICATION FOR PERMIT—" for such proposals

SUBMIT IN TRIPLICATE

FORM APPROVED
Budget Bureau No. 1004-0135
Expires: March 31, 1993

5. Lease Designation and Serial No.
14-20-0603-8823

6. If Indian, Allottee or Tribe Name
Navajo

7. If Unit or CA, Agreement Designation

8. Well Name and No.
Navajo #10 (446)

9. API Well No.
02-001-20042

10. Field and Pool, or Exploratory Area
Dineh-Bi-Keyah

11. County or Parish, State
Apache County, AZ

1. Type of Well
 Oil Well Gas Well Other Water Injection

2. Name of Operator
Kerr-McGee Corporation

3. Address and Telephone No.
U.S. Onshore Reigon, P. O. Box 25861, Oklahoma City, OK 73125

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)
1990' FNL & 610' FEL
Sec. 30, T36N, R30E

12. CHECK APPROPRIATE BOX(S) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION	
<input type="checkbox"/> Notice of Intent	<input type="checkbox"/> Abandonment	<input type="checkbox"/> Change of Plans
<input checked="" type="checkbox"/> Subsequent Report	<input type="checkbox"/> Recompletion	<input type="checkbox"/> New Construction
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Plugging Back	<input type="checkbox"/> Non-Routine Fracturing
	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> Water Shut-Off
	<input type="checkbox"/> Altering Casing	<input type="checkbox"/> Conversion to Injection
	<input checked="" type="checkbox"/> Other Mechanical Integrity Test	<input type="checkbox"/> Dispose Water

13. 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.)

Yearly Mechanical Integrity test.
MI & RU Cementer's Inc. Pump Truck to 2" WKM casing valve, pumped & loaded 7" casing w/5 BW. PSI - tested 7" casing to 780 psig. SI pump truck held psi for 30 mins. PSI testing successful & approved by *AOGCC. Release psi & RD pump truck. Integrity test witnessed by Steve Raniz w/*AOGCC.

*Arizona Oil & Gas Conservation Commission

AZ OIL & GAS
CONSERVATION COMMISSION

Note: Notify BLM 6/4/91
BLM did not witness psi test.

JUL 5 1991

xc: Arizona Oil & Gas Conservation Commission (2)

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

Signed S. Dumas Title Analyst II Date 6-27-91

(This space for Federal or State office use)

Approved by _____ Title _____ Date _____
Conditions of approval, if any:

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

*See Instruction on Reverse Side



AZ OIL & GAS
CONSERVATION COMMISSION

MAY 25 1990

446

PLEASE REPLY TO

EXPLORATION AND PRODUCTION DIVISION
U. S. ONSHORE REGION
P. O. BOX 25861
OKLAHOMA CITY, OKLAHOMA 73125

PHONE

405 843-9750

May 21, 1990

Environmental Protection Agency
2940 Van Ness #5
San Francisco, CA 94109

Attn: George Robin

RE: Navajo #10
Dineh-Bi-Keyah Field
Apache County, Arizona

Mr. Robin:

Attached in duplicate for the subject well is the Mechanical Integrity Pressure Test with the pressure chart and field report, the Annual Injection Well Monitoring Report and the Plugging and Abandonment Plan. Copies of these forms have been distributed as per the attached distribution.

If additional information is required, please advise.

Sincerely,

A handwritten signature in cursive script, appearing to read 'G. Bunas'.

Gaylan G. Bunas
Analyst II

GGB/dr

Attachments

xc: JCR/CAR/WRF
IDG/CFR
HHR
R. Benally
CF

DISTRIBUTION LIST

Bureau of Land Management (6 copies)
1235 LaPlata Hwy
Farmington, NM 87401

State of Arizona (2 copies)
Oil & Gas Conservation Commission
5150 N. 16th Street, Suite B-141
Phoenix, AZ 85016

Navajo Environmental Agency (2 copies)
P. O. Box 308
Window Rock, AZ 86515
Attn: Raymond Russell



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
 REGION VIII
 999 18th STREET - SUITE 500
 DENVER, COLORADO 80202-2405

AZ OIL & GAS
 CONSERVATION COMMISSION

MAY 25 1990

MECHANICAL INTEGRITY PRESSURE TEST
 CASING/TUBING ANNULUS

Company Name: Kerr-McGee Corporation Date: 5/8/90
 Well Name: Navajo #10 Permit No. AZ 446
 Field Name: Dineh-Bi-Keyah County: Apache
 Well Location: SE SE NE Sec 30 T 36N R 30E
 Well Type: SWD ER X 2H Other:
 Type of Packer: Baker Model AD-1 Total Depth: 3868'
 Packer Set at (depth): 2939 FT
 Surface Casing Size: 9-5/8" From: 0 FT to 248 FT
 Casing Size: 7" From: 0 FT to 3868 FT
 Tubing Size: 2-7/8" Tubing Pressure during Test: 0 psig
 Time of Day: 9:30-10:00 am/~~pm~~ API No. 02-001-20042
 AZ Injection Order No. 49

	Test #1	Test #2
0 Min:	<u>780</u> psig	<u> </u> psig
5	<u>780</u> psig	<u> </u> psig
10	<u>780</u> psig	<u> </u> psig
15	<u>780</u> psig	<u> </u> psig
20	<u>-780</u> psig	<u> </u> psig
25	<u>780</u> psig	<u> </u> psig
30	<u>780</u> psig	<u> </u> psig
35	<u> </u> psig	<u> </u> psig
40	<u> </u> psig	<u> </u> psig
45	<u> </u> psig	<u> </u> psig
50	<u> </u> psig	<u> </u> psig
55	<u> </u> psig	<u> </u> psig
60	<u> </u> psig	<u> </u> psig

Test Conducted by: Cementers Inc.
 Inspected by: George Robin (EPA), S.L. Rauzi (AZ Oil & Gas)
 Others Present: Raymond Benally - Kerr-McGee Corporation

PRODUCTION COMPLETION AND WORKOVER REPORT

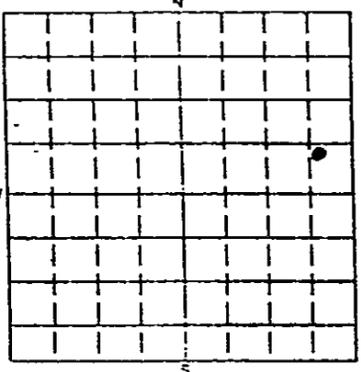
Lease: <i>McBee Corporation</i> <i>NAVAJO Well #10</i> SE NE Sec 30 T36N R30E Apache, County, ARIZONA	COST BREAKDOWN
Mechanical Integrity Test water Injection Disposal Well.	
MI + RI Cementer's Inc Pump Truck to 2" WCKM casing valve, pumped & loaded 7" casing w/ 1 barrel of fresh water, psi-tested 7" casing to 780 psig. Pressure held for 30 mins recommended by AOGCC & EPA. Psi-testing successful & approved by both Agents. Release Psi & RP pump truck & Release pump truck.	
WITNESS: <i>SL Raines (AOGCC)</i> WITNESS: <i>George Robin (EIP.A.)</i>	REC'D MAY 14 1990 DISTRICT
	AFE \$ PREV. \$ TODAY'S \$ <i>350⁰⁰</i> TOTALS <i>350⁰⁰</i>

OART: *Continue monitoring casing & tubing Psi daily.*
 RIG NO: _____
 LEASE: *NAVAJO* WELL NO: *10* DATE: *5/8/90*



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, DC 20460

ANNUAL DISPOSAL/INJECTION WELL MONITORING REPORT

NAME AND ADDRESS OF EXISTING PERMITTEE Kerr-McGee Corporation U.S. Onshore Region P. O. Box 25861 Oklahoma City, OK 73125		NAME AND ADDRESS OF SURFACE OWNER The Navajo Nation P. O. Box 308 Window Rock, AZ 86515	
LOCATE WELL AND OUTLINE UNIT ON SECTION PLAT — 640 ACRES 		STATE AZ	COUNTY Apache
		PERMIT NUMBER AZ 446	
SURFACE LOCATION DESCRIPTION SE 1/4 OF SE 1/4 OF NE 1/4 SECTION 30 TOWNSHIP 36N RANGE 30E LOCATE WELL IN TWO DIRECTIONS FROM NEAREST LINES OF QUARTER SECTION AND DRILLING UNIT Surface Location 650 ft. from (N/S) S Line of quarter section and 610 ft. from (E/W) E Line of quarter section			
WELL ACTIVITY <input type="checkbox"/> Brine Disposal <input checked="" type="checkbox"/> Enhanced Recovery <input type="checkbox"/> Hydrocarbon Storage		TYPE OF PERMIT <input checked="" type="checkbox"/> Individual <input type="checkbox"/> Area Number of Wells 1	
Lease Name Navajo		Well Number 10	

API No. 02-001-20042

Arizona Injection Order No. 49

MONTH	YEAR	INJECTION PRESSURE		TOTAL VOLUME INJECTED		TUBING — CASING ANNULUS PRESSURE (OPTIONAL MONITORING)	
		AVERAGE PSIG	MAXIMUM PSIG	88L	MCF	MINIMUM PSIG	MAXIMUM PSIG
1	89	148	160	9046		0	0
2	89	166	160	9437		0	0
3	89	158	200	10,192		0	0
4	89	191	250	9139		0	0
5	89	189	300	9803		0	0
6	89	257	320	10,757		0	0
7	89	257	300	10,243		0	0
8	89	273	325	9195		0	0
9	89	150	190	9168		0	0
10	89	211	350	9102		0	0
11	89	250	290	12,303		0	0
12	89	210	240	10,824		0	0

CERTIFICATION

I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. (Ref. 40 CFR 144.32).

NAME AND OFFICIAL TITLE (Please type or print) Gaylan G. Bunas Analyst II	SIGNATURE 	DATE SIGNED 5-22-90
---	---	------------------------

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, DC 20460



PLUGGING AND ABANDONMENT PLAN

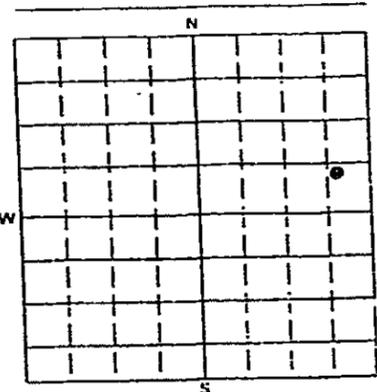
NAME AND ADDRESS OF FACILITY

Navajo #10
Dineh-Bi-Keyah Field

NAME AND ADDRESS OF OWNER/OPERATOR

Kerr-McGee Corporation
U.S. Onshore Region, P. O. Box 25861
Oklahoma City, OK 73125

LOCATE WELL AND OUTLINE UNIT ON SECTION PLAT - 640 ACRES



STATE: AZ COUNTY: Apache PERMIT NUMBER: AZ 446

SURFACE LOCATION DESCRIPTION: SE 1/4 OF SE 1/4 OF NE 1/4 SECTION 30 TOWNSHIP 36N RANGE 30E

LOCATE WELL IN TWO DIRECTIONS FROM NEAREST LINES OF QUARTER SECTION AND DRILLING UNIT
Surface Location: 650 ft. from (N/S) S Line of quarter section and 610 ft. from (E/W) E Line of quarter section
API No. 02-001-20042
AZ Inj. Order No. 49

TYPE OF AUTHORIZATION

- Individual Permit
- Area Permit
- Rul.

Number of Wells 1

WELL ACTIVITY

- CLASS I
- CLASS II
 - Brine Disposal
 - Enhanced Recovery
 - Hydrocarbon Storage
- CLASS III

Lease Name Navajo

Well Number 10

CASING AND TUBING RECORD AFTER PLUGGING

SIZE	WT(LB/FT)	TO BE PUT IN WELL (FT)	TO BE LEFT IN WELL (FT)	HOLE SIZE
9-5/8"	32.3	248	248	13-3/4"
7"	23	3868	3868	8-3/4"
2-7/8"	6.5	2939	-0-	

METHOD OF EMPLACEMENT OF CEMENT PLUGS

- The Balance Method
- The Dump Bailer Method
- The Two-Plug Method
- Other Perf & squeeze

CEMENTING TO PLUG AND ABANDON DATA:	PLUG #1	PLUG #2	PLUG #3	PLUG #4	PLUG #5	PLUG #6	PLUG #7
Size of Hole or Pipe in which Plug Will Be Placed (inches)	7"	7"-8-3/4"	7"-9-5/8"	7"-9-5/8"			
Depth to Bottom of Tubing or Drill Pipe (ft.)	2950	1430	300	53			
Sacks of Cement To Be Used (each plug)	10	280	50	20			
Slurry Volume To Be Pumped (cu. ft.)	11.5	322	57.5	23			
Calculated Top of Plug (ft.)	2900	580	198	3			
Measured Top of Plug (if tagged ft.)							
Slurry Wt. (Lb./Gal.)	15.8	15.8	15.8	15.8			
Type Cement or Other Material (Class III)	"G"	"G"	"G"	"G"			

LIST ALL OPEN HOLE AND/OR PERFORATED INTERVALS AND INTERVALS WHERE CASING WILL BE VARIED (if any)

From	To	From	To
Perfs 3010'	3070'		

Estimated Cost to Plug Wells

\$20,100.

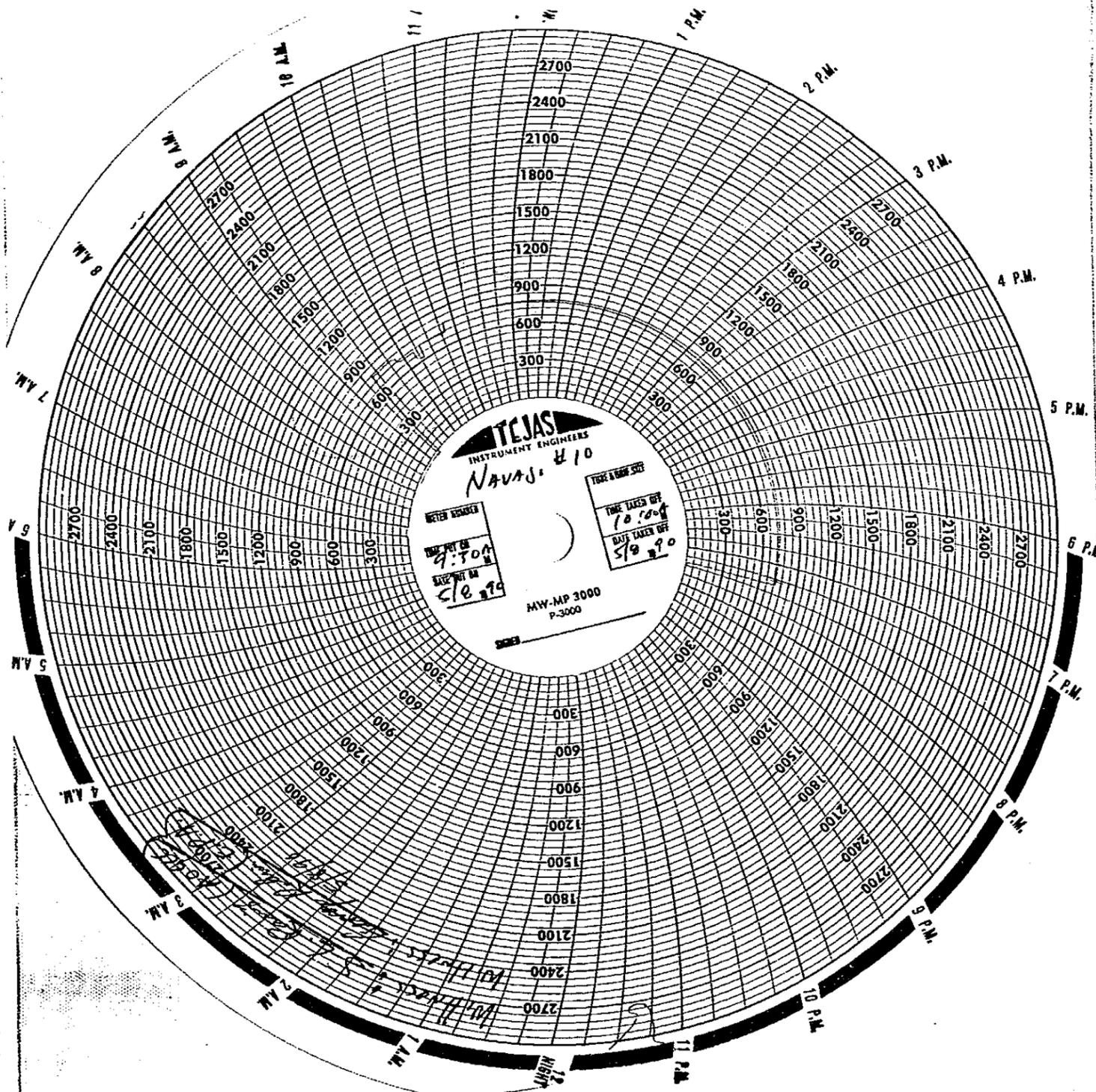
CERTIFICATION

I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. (Ref. 40 CFR 144.32)

NAME AND OFFICIAL TITLE (Please type or print)
Gaylan G. Bunas
Analyst II

SIGNATURE
G. Bunas

DATE SIGNED
5-22-90



PRODUCTION COMPLETION AND WORKOVER REPORT

Kerr McGee Corporation	COST BREAKDOWN
Navajo Well #10 PN 446	
SE NE SEC 30 T36N - R50E	
Apache County ARIZONA	
Mechanical Integrity Test Water- Injection Disposal Wells. (Annually)	
MOVE IN : RUA DeYapp's Hot oiler TRUCK to 2" casing valve, MIX & pump 50 bbls of 2% KCL water w/ 55 Gallon Trololite KW-37 packer fluid, Loaded 9" casing w/ 25 bbls of Fluid, psi-tested casing to 800 Psi. Pressure hold for 30 mins, No leak Release Pressure, RD & Release Hot oiler.	
WITNESS: Tony Thaler Kerr McGee Company WITNESS: J. DeYapp - DeYapp Hot Oil Service WITNESS:	
	AFE \$
	PREV. \$
	TODAYS
	TOTALS

OART:

RIG NO:

SUPERVISOR

Greg Smelly

LEASE: NAVAJO

WELL NO:

#10

DATE:

4/17/90

INJECTION WELL REPORTS

Filed in cabinet of Enforcement Director

GAS-OIL RATIO TEST REPORTS

Filed under Gas-Oil Ratio Tests, Dineh-bi-Keyah Field
in cabinet of Enforcement Director

To FILE

Navajo No. 10
Dineh-Bi-Keyah Field
Apache County, Arizona

CONVERSION PROGRAM
AFE # 11-006

This well is to be converted from a producing well in the Lower Hermosa to a water injection well in the Lower Hermosa. This well is being converted for use in a pilot water flood.

PROCEDURE

1. Move in and rig up pulling unit.
2. Pull and lay down rods in singles.
3. Pull and stand 2 7/8" 8RD tubing in derrick.
4. TIH w/6 1/4" bit and scraper. Make a bit and scraper run to PBTD.
5. TOH w/2 7/8" 8RD tubing and lay down tubing in singles.
6. Rig up McCullough, GIH w/4" casing gun w/collar locator and perforate the following intervals 3010-3028' w/2 SPF and 3048-3070' w/2 SPF.
7. Rig down and release McCullough.
8. Remove all pumping equipment and 2 7/8" 8RD EUE tubing from location.
9. TIH w/7"-2 3/8 Baker Lok-Set Packer, 1 jt of 2 3/8" 8RD plastic coated tubing, 2 3/8" seating nipple w/No Go, and 2 3/8" 8RD plastic coated tubing. Packer to be set at \pm 2950'.
10. Nipple up injection head.
11. Rig down pulling unit.
12. Rig up Western and pump 1000 gals. of 7 1/2% Spearhead acid. Displace with 20 BBLs of field salt water. Shut in for two hours.
13. Place well on injection.

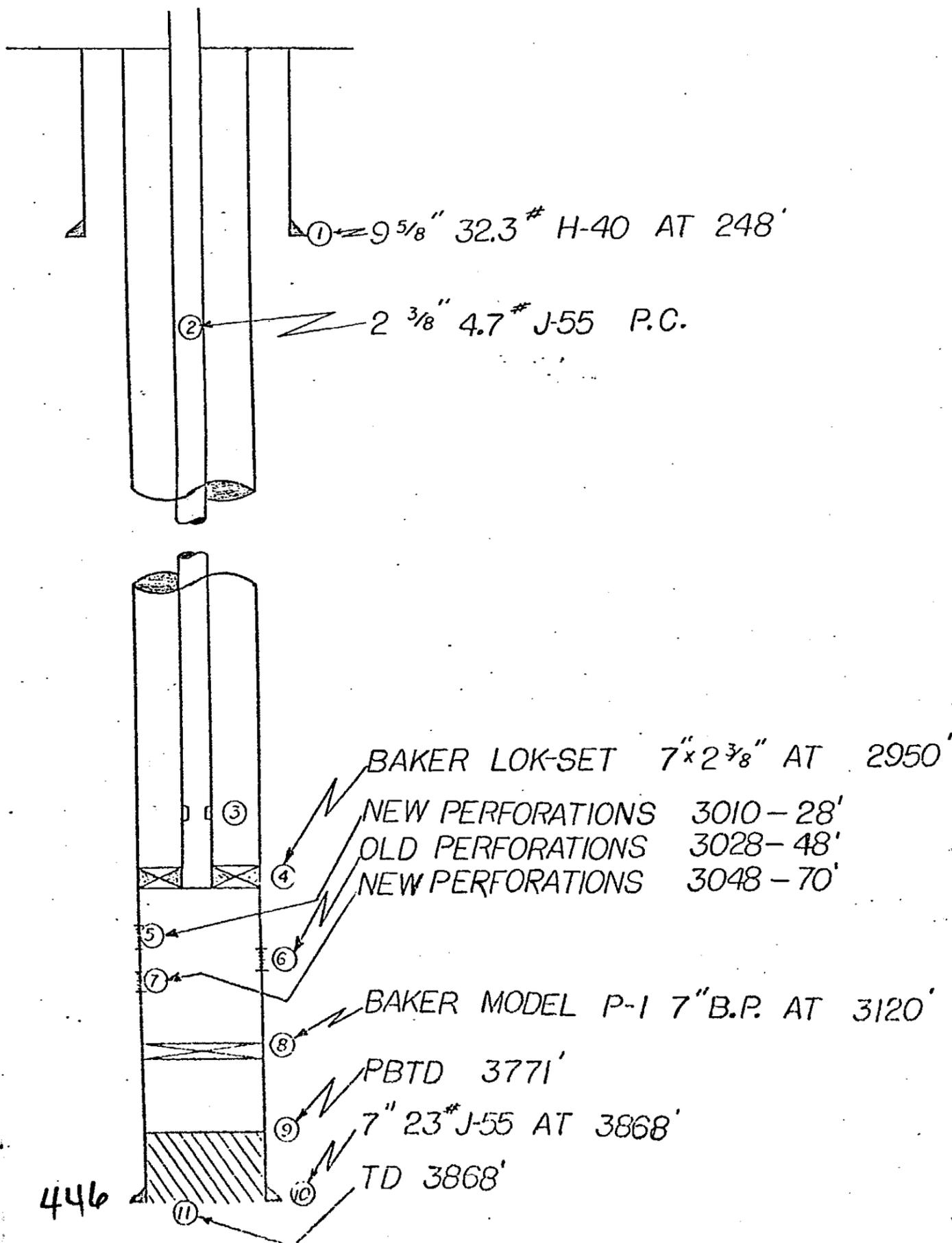
Dennis Fothergill

446

PROPOSED COMPLETION

NAVAJO WELL NO. 10

APACHE COUNTY, ARIZONA



Form 5-23
(May 1965)

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN THIS
(Other instructions
verse side)

Form Approved
Budget Bureau No. 42-111424
5. LEASE DENIMINATION AND SERIAL NO.
14-20-0603-8823

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.)

1. OIL WELL GAS WELL OTHER

2. NAME OF OPERATOR
Kerr-McGee Corporation

3. ADDRESS OF OPERATOR
P. O. Box 250, Amarillo, Texas 79105

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*
See also space 17 below.)
At surface
1990' FNL & 610' FEL, Section 30, T-36N, R-30E G&SRM

14. PERMIT NO.
State No. 446

15. ELEVATIONS (Show whether DT, RT, OR, etc.)
7335' Gr

6. IF INDIAN, ALLOTTEE OR TRIBE NAME
Navajo

7. UNIT AGREEMENT NAME
Navajo

8. FARM OR LEASE NAME
Navajo

9. WELL NO.
10

10. FIELD AND POOL, OR WILDCAT
Dineh-bi-Keyah

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA
G&SRM
Sec. 30, T-36N, R-30E,
12. COUNTY OR PARISH 13. STATE
Apache Arizona

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

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
TEST WATER SHUT-OFF <input type="checkbox"/>	PULL OR ALTER CASING <input type="checkbox"/>	WATER SHUT-OFF <input type="checkbox"/>	REPAIRING WELL <input type="checkbox"/>
FRACTURE TREAT <input type="checkbox"/>	MULTIPLE COMPLETE <input type="checkbox"/>	FRACTURE TREATMENT <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
SHOOT OR ACIDIZE <input type="checkbox"/>	ABANDON* <input type="checkbox"/>	SHOOTING OR ACIDIZING <input type="checkbox"/>	ABANDONMENT* <input type="checkbox"/>
REPAIR WELL <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	(Other) <input type="checkbox"/>	
(Other) <input type="checkbox"/>	Convert to SWD <input checked="" type="checkbox"/>	(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.)*

The existing Salt Water Disposal Well cannot handle the total volume of produced water, thus an additional disposal well is required.

This well is currently producing at a marginal rate. 7" casing set at 3868', cemented with 250 sx (top of cement 2600' est.). Perforated 3028-3048' (Hermosa). Propose to move in pulling unit, pull tubing and rods, acidize and frac the Hermosa Zone. A 7" packer will be run in on 2-3/8" tubing and set at approximately 2950'.

RECEIVED
DEC 24 1975
U. S. GEOLOGICAL SURVEY

18. I hereby certify that the foregoing is true and correct
SIGNED F. D. Schoch TITLE Associate Engineer DATE 12-19-75
(This space for Federal or State office use)

APPROVED BY P. T. McGrath TITLE _____ DATE _____
CONDITIONS OF APPROVAL, IF ANY:
DEC 23 1975
P. T. McGRATH
DISTRICT ENGINEER
*See Instructions on Reverse Side

T 36 N
R 30 E

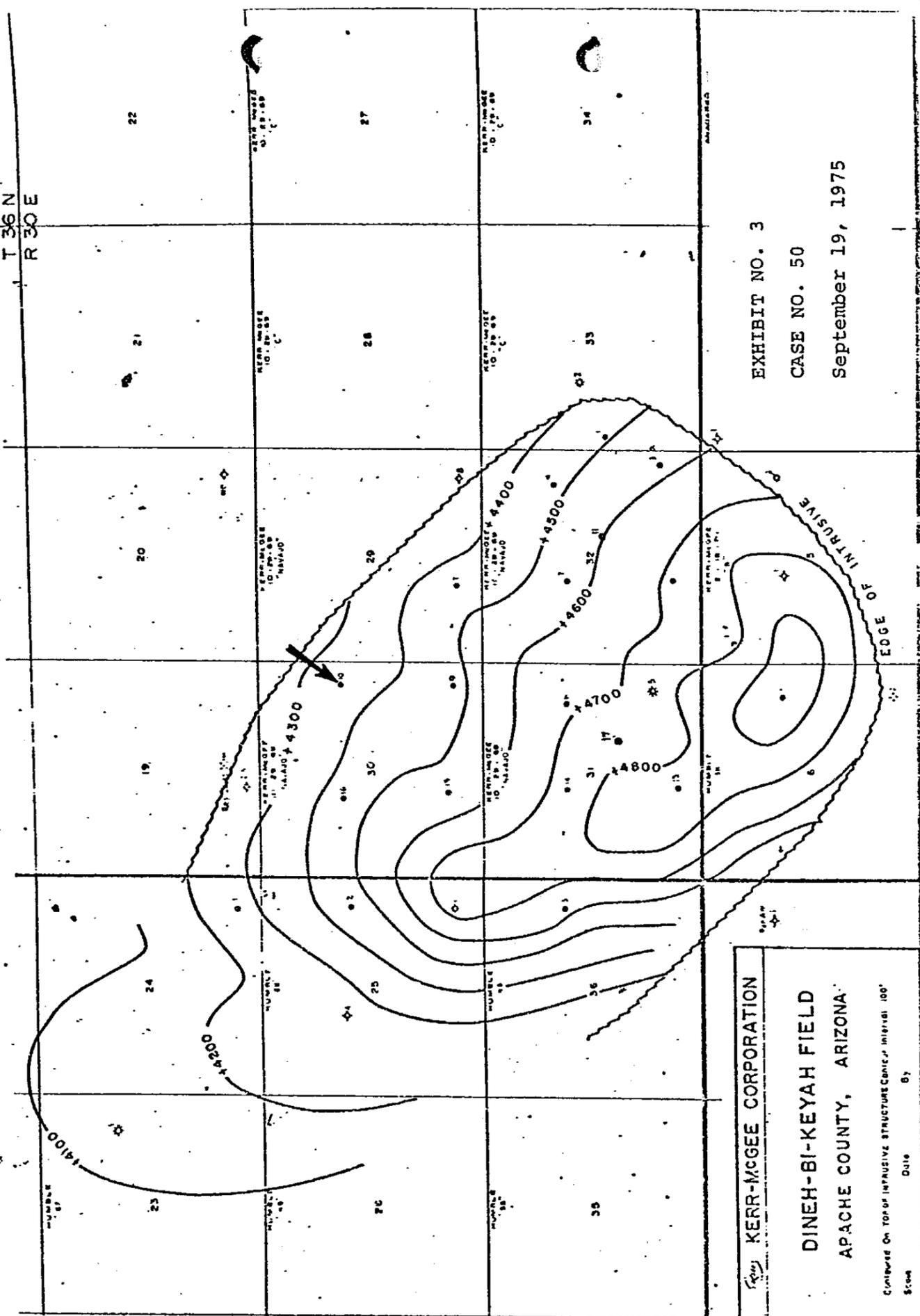


EXHIBIT NO. 3

CASE NO. 50

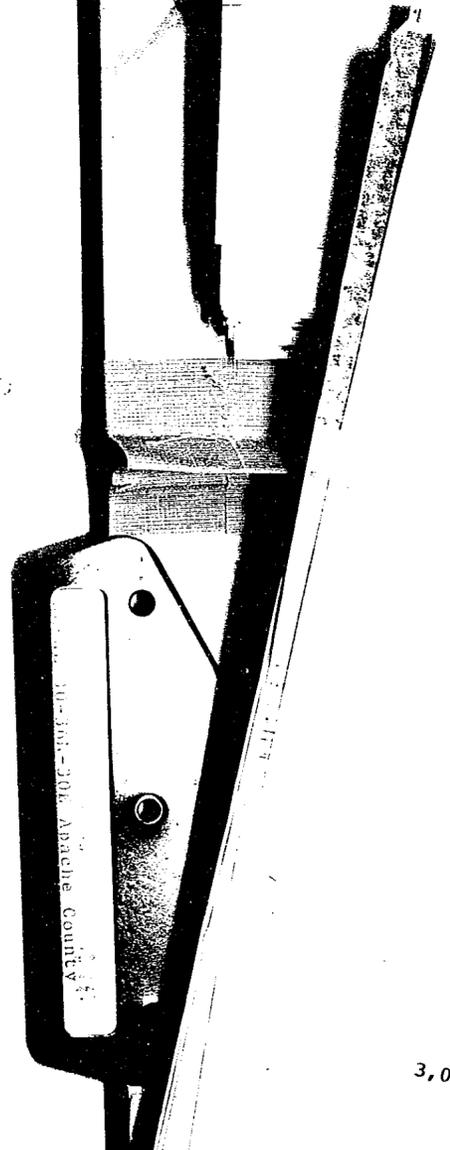
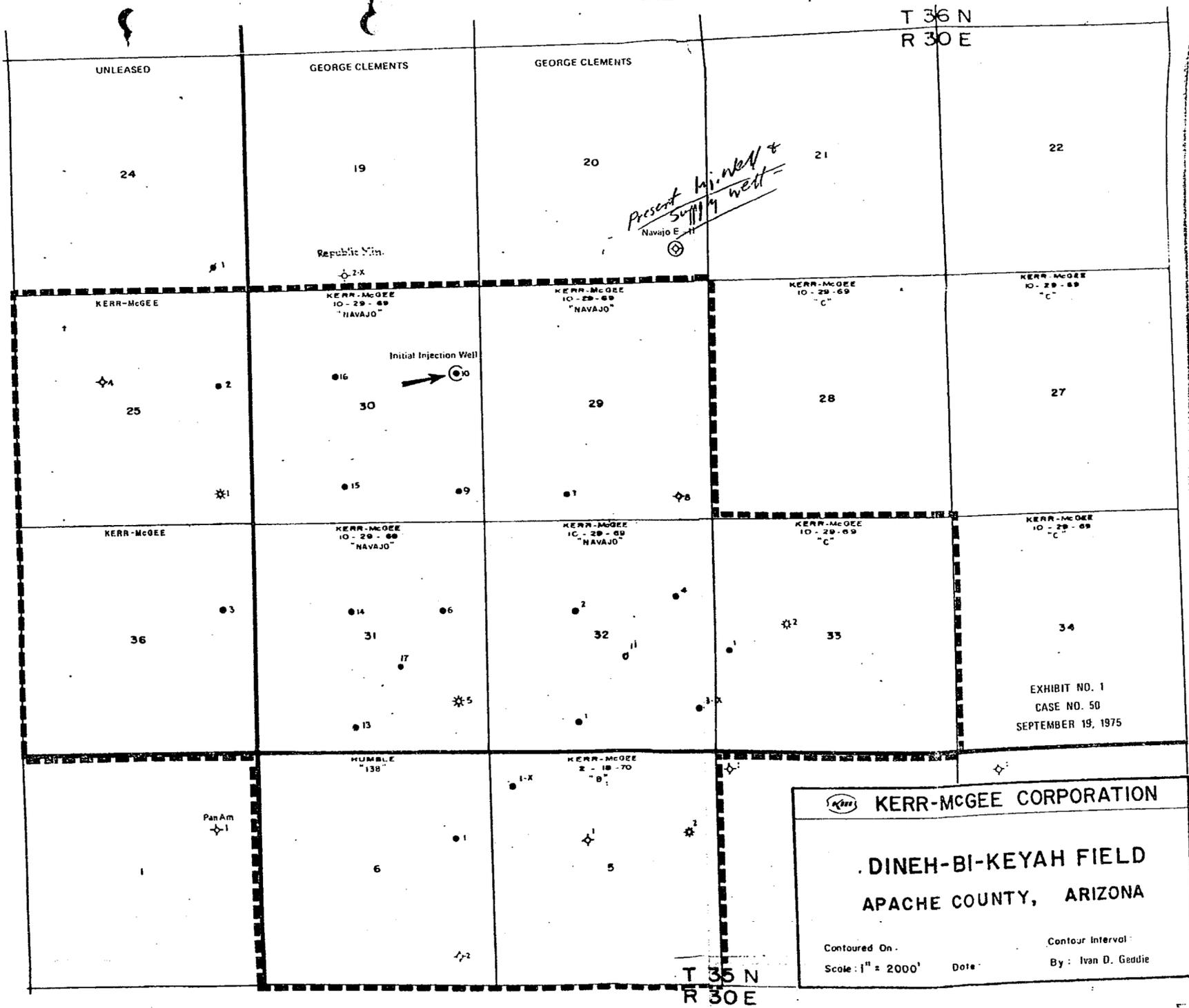
September 19, 1975

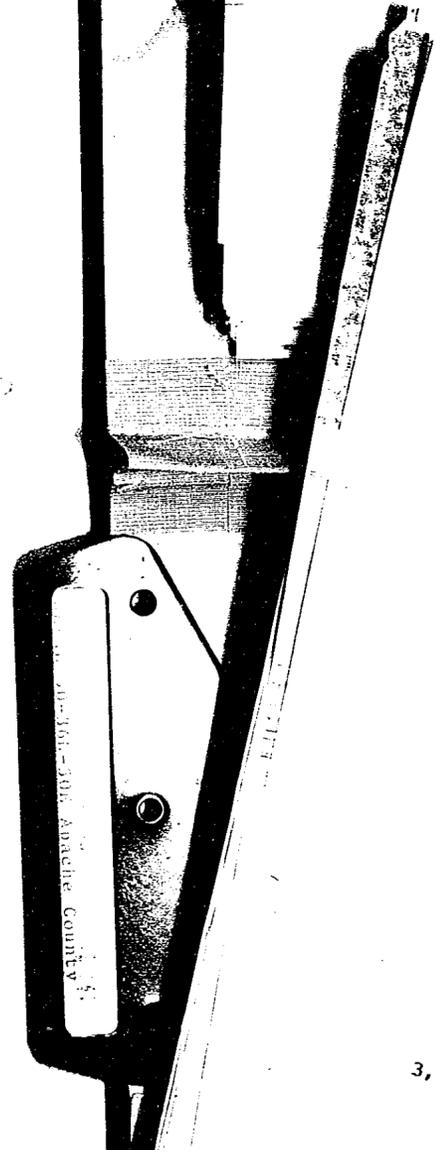
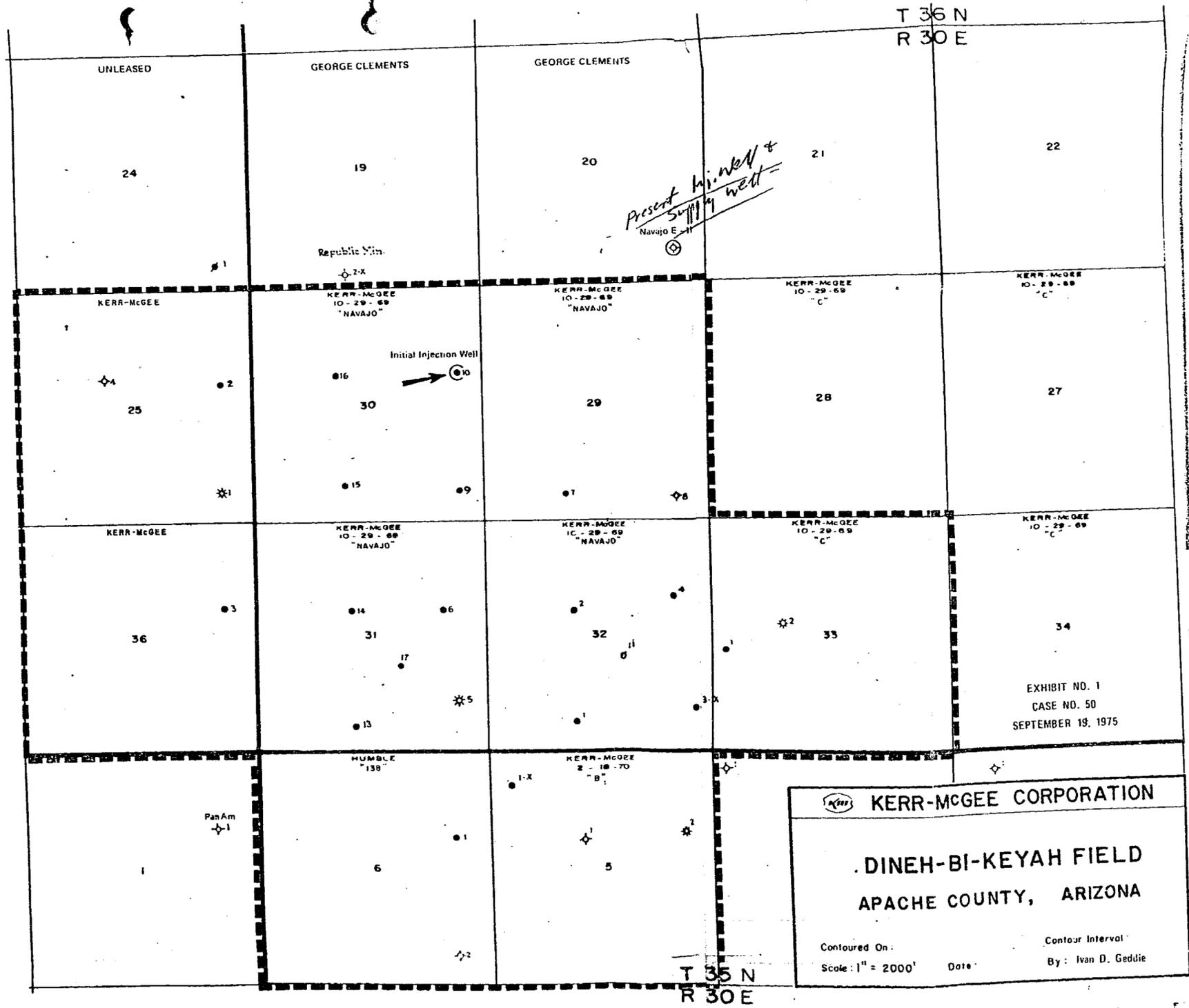
KERR-MCGEE CORPORATION

DINEH-BI-KEYAH FIELD
APACHE COUNTY, ARIZONA

CONTINUED ON TOP OF INTRUSIVE STRUCTURE CASE NO. 50

Scale Date By





KERR-McGEE NAVAJO #10

PROPOSED DOWNHOLE COMPLETION SKETCH

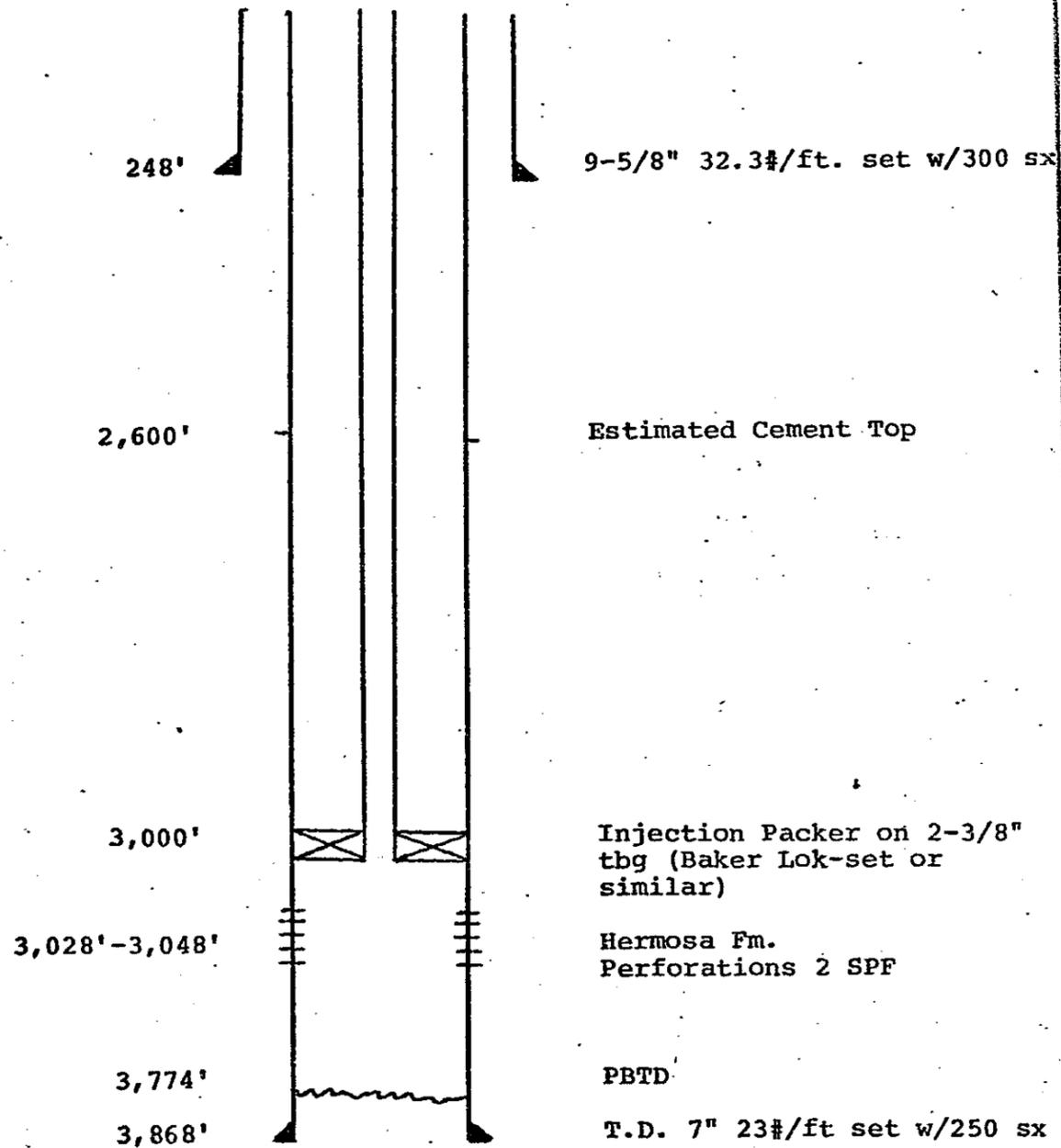


EXHIBIT NO. 2
CASE NO. 50
SEPTEMBER 19, 1975

ESTIMATED RECOVERY
IMBIBITION FLOODING
DINEH-BI-KEYAH FIELD

	<u>Million Bbls</u>	<u>% Original Oil In Place</u>
Cumulative Recovery to 6/1/75	13.62	18.2%
Est. Remaining Primary Recovery	6.40	8.5%
Est. Ultimate Primary Recovery	20.02	26.7%
Est. Remaining Oil In Reservoir After Primary Recovery	54.98	73.3%

The above assumes an original oil in place in this reservoir
of 75 mm bbls.

ARIZONA SECONDARY RECOVERY PROGRAM PROPOSED

The Arizona Oil and Gas Conservation Commission will hold a hearing September 19 to consider an application by Kerr-McGee Corp for a secondary recovery program using injection of salt water into the Hermosa formation in Dineh Bi Keyah field, Apache County. The location for the project is in 29 through 33-36n-30e, 5 and 6-35n-30e, and 25 and 36-36n-29e. The field has produced more than 13.7 million bbls of oil, 1.8 billion cu ft of gas and 2.4 million bbls of water. The hearing begins at 10:00 am at the Oil and Gas Conservation Commission office, 8686 North Central Avenue, Suite 106, Phoenix.

WELL COMPLETION OR RECOMPLETION REPORT AND WELL LOG

DESIGNATE TYPE OF COMPLETION:

New Well Work-Over Deepen Plug Back Same Reservoir Different Reservoir Oil Gas Dry

DESCRIPTION OF WELL AND LEASE

Operator **KERR-McGEE CORPORATION** Address **215 Petroleum Center Bldg, Farmington, NM**

Federal, State or Indian Lease Number or name of lessor if fee lease **14-20-0603-8823 Navajo** Well Number **10** Field & Reservoir **Dineh-Bi-Keyah Lower Hermosa**

Location **1990' FNL & 610' FEL (SE/NE)** County **Apache**

Sec. TWP-Range or Block & Survey **Sec 30, T36N, R30E G&SRM**

Date spudded **1-2-68** Date total depth reached **1-22-68** Date completed, ready to produce **2-15-68** Elevation (DE, RKB, RT or Gr.) **7356** feet Elevation of casing hd. **7356** feet

Total depth **3868** P.B.T.D. **3774** Single, dual or triple completion? **Single** If this is a dual or triple completion, furnish separate report for each completion.

Producing interval (s) for this completion **3028'-3048'** Rotary tools used (interval) **All** Cable tools used (interval) **None**

Was this well directionally drilled? **No** Was directional survey made? **No** Was copy of directional survey filed? **None** Date filed **N/A**

Type of electrical or other logs run (check logs filed with the commission) **Induction-Electric, Sonic Log Gamma Ray, all attached** Date filed

CASING RECORD

Casing (report all strings set in well—conductor, surface, intermediate, producing, etc.)						
Purpose	Size hole drilled	Size casing set	Weight (lb./ft.)	Depth set	Sacks cement	Amt. pulled
Surface	13 3/4	9 5/8 "	32.30	248	300	None
Production	8 3/4	7"	23	3868	250	None

TUBING RECORD

LINER RECORD

Size	Depth set	Packer set at	Size	Top	Bottom	Sacks cement	Screen (ft.)
2 7/8 in.	3014 ft.	None ft.					

PERFORATION RECORD

ACID, SHOT, FRACTURE, CEMENT SQUEEZE RECORD

Number per ft.	Size & type	Depth Interval	Amt. & kind of material used	Depth Interval
2	0.5" Jet	3028-3048	1500 gal 10% acetic acid	3028-3048
			39,480 gal crude 40,000# sd	3028-3048

INITIAL PRODUCTION

Date of first production **2-2-68** Producing method (indicate if flowing, gas lift or pumping—if pumping, show size & type of pump:) **Pumping Reda D25E 209 Stage**

Date of test **2-22-68** Hrs. tested **24** Choke size **None** Oil prod. during test **397** bbls. Gas prod. during test **24.1** MCF Water prod. during test **44** bbls. Oil gravity **40.4** API (Corr)

Tubing pressure **105** Casing pressure **10** Cal'd rate of Production per 24 hrs. **397** bbls. Gas **24.1** MCF Water **44** bbls. Gas-oil ratio **61**

Disposition of gas (state whether vented, used for fuel or sold): **Vented**

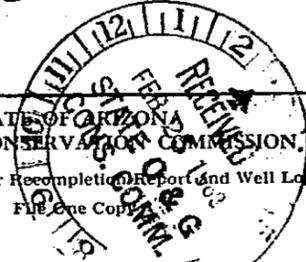
CERTIFICATE: I, the undersigned, under the penalty of perjury, state that I am the Production Superintendent of the KERR-McGEE CORPORATION (company), and that I am authorized by said company to make this report; and that this report was prepared under my supervision and direction and that the facts stated therein are true, correct and complete to the best of my knowledge.

2-23-68
Date

Signature

Permit No. **446**

Form No. 4



DETAIL OF FORMATIONS PENETRATED

Formation	Top	Bottom	Description*
Chinle (Triassic)	Surface	638'	Red shale with thin stringers of sandstone.
Coconino (Permian)	638'	1372'	Massive sandstone with shaly stringers in lower 250'
Cutler (Permian)	1372'	2504'	Shale, sandstone and limestone
Hermosa (Penn)	2504'	3010'	Limestone, predominantly dense and tight with red and gray shale, some thin sand stringers
Sill (Tertiary)	3010'	3070'	Syenite
Hermosa (Penn)	3070'	3244'	Limestone, dense, and shale predominantly gray
Mississippian	3244'	3432'	Limestone, dense with some shale; dolomite near base
Devonian	3432'	3590'	Green waxy shale and varicolored dolomite
McCraken (Devonian)	3590'	3689'	Predominantly tight sandstone with minor shale and dolomite
Aneth (Devonian)	3689'	3851'	Dolomite and varicolored shale
Precambrian	3851	3868'	Granite
DST No. 1	3598'	3680'	See attached report ^{not attached}
DST no. 2	3694'	3868'	See attached report
Core No. 1	3020'	3078'	See attached analysis

* Show all important zones of porosity, detail of all cores, and all drill-stem tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures, and recoveries.

INSTRUCTIONS:

Attach drillers log or other acceptable log of well.

This Well Completion or Recompletion report and well log shall be filed with the State of Arizona Oil & Gas Conservation Commission not later than thirty days after project completion.

Form No. 4

UNITED STATES DEPARTMENT OF THE INTERIOR GEOLOGICAL SURVEY

SUBMIT IN DUPLICATE*

(See other instructions on reverse side)

Form approved Budget Bureau No. 42-R555.5

WELL COMPLETION OR RECOMPLETION REPORT AND LOG*

1. TYPE OF WELL: OIL WELL [X] GAS WELL [] DRY [] Other []
2. TYPE OF COMPLETION: NEW WELL [X] WORK OVER [] DRIFT [] PLUG BACK [] DIFF. RESER. [] Other []
2. NAME OF OPERATOR: KERR-McGEE CORPORATION
3. ADDRESS OF OPERATOR: 215 Petroleum Center Building, Farmington, New Mexico 87401
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements): At surface 1990' FNL & 610' FEL (SE/NE) At top prod. interval reported below SAME At total depth SAME

5. LEASE DESIGNATION AND SERIAL NO.: 14-20-0603-8823
6. IF INDIAN ALLOTTEE OR TRIBE NAME: Navajo
7. UNIT AGREEMENT NAME:
8. FARM OR LEASE NAME: Navajo
9. WELL NO.: 10
10. FIELD AND POOL, OR WILDCAT: Dineh-Bi-Keyah
11. SEC., T., R., N., OR BLOCK AND SURVEY OR AREA: Sec 30, T36N, R30E G&SRM
12. COUNTY OR PARISH: Apache
13. STATE: Arizona

14. PERMIT NO.: 446 DATE ISSUED: 6-6-67
15. DATE SPUNDED: 1-2-68 16. DATE T.D. REACHED: 1-22-68 17. DATE COMPL. (Ready to prod.): 2-15-68 18. ELEVATIONS (DP, RKB, RT, GR, ETC.): 7356 GL 19. ELEV. CASINGHEAD: 7356
20. TOTAL DEPTH, MD & TVD: 3868' 21. PLUG BACK T.D., MD & TVD: 3774' 22. IF MULTIPLE COMPL. HOW MANY?: 1 23. INTERVALS DRILLED BY: All 24. ROTARY TOOLS: 25. CABLE TOOLS: None
26. PRODUCING INTERVAL(S), OF THIS COMPLETION, TOP, BOTTOM, NAME (MD AND TVD): 3028-3048 Hermosa Intrusive
27. TYPE ELECTRIC AND OTHER LOGS RUN: Induction-Electric, Sonic log, Gamma Ray 28. WAS DIRECTIONAL SURVEY MADE?: No 29. WAS WELL CORDED?: Yes

Table with 4 columns: CASING SIZE, WEIGHT, LB./FT., DEPTH SET (MD), HOLE SIZE. Row 1: 5 7/8" OD, 92.30#, 248', 13 3/4". Row 2: 7" OD, 23#, 3868', 8 3/4".

Table with 3 columns: LINER RECORD, TUBING RECORD, PACKER SET (MD). LINER RECORD: None. TUBING RECORD: 2 7/8, 3014. PACKER SET (MD): None.

Table with 2 columns: PERFORATION RECORD (Interval, size and number), ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC. Row 1: 3028-3048 0.5" hole 2 per ft. Row 2: 3028-3048 1500 gal 10% acetic acid. Row 3: 3028-3048 39,480 gals crude 40,000# sand.

Table with 4 columns: DATE FIRST PRODUCTION, PRODUCTION METHOD, WELL STATUS, DATE OF TEST, HOURS TESTED, CHOKEN SIZE, PROD'N. FOR TEST PERIOD, OIL-BBL., GAS-MCF., WATER-BBL., GAS-OIL RATIO. Row 1: 2-2-68, Pumping--Reda D25E 209 stage pump, Production, 2-22-68, 24, None, 397, 24.1, 44, 61.

Table with 4 columns: FLOW, TUBING PRESS., CASING PRESSURE, CALCULATED 24-HOUR RATE, OIL-BBL., GAS-MCF., WATER-BBL., OIL GRAVITY-API (CORR.). Row 1: 105, 10, 397, 24.1, 44, 40.4.

34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.): Vented TEST WITNESSED BY: [Signature]

35. LIST OF ATTACHMENTS: Logs listed in Item 26, Core Analysis, Reports for DST No 1 and No 2

36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records. Production Superintendent: [Signature] DATE: 2-23-68

(See instructions and spaces for Additional Data on Reverse Side)

446

See attached reports... 3028, 3048, 3050, 3051, 3052, 3053, 3054, 3055, 3056, 3057, 3058, 3059, 3060, 3061, 3062, 3063, 3064, 3065, 3066, 3067, 3068, 3069, 3070, 3071, 3072, 3073, 3074, 3075, 3076, 3077, 3078, 3079, 3080, 3081, 3082, 3083, 3084, 3085, 3086, 3087, 3088, 3089, 3090, 3091, 3092, 3093, 3094, 3095, 3096, 3097, 3098, 3099, 3100

310121211

INSTRUCTIONS

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, through the use of 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 areas, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from, the local Federal or State office. See instructions on items 22 and 24, and 28, below regarding separate reports for separate completions.

If necessary, copies of all currently available logs (drillers, geologists, sample and core analysis, all types electric, etc.), forms, maps and measurement 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.

Core and log 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: Address which citation 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 completions), so state in item 22, and in item 24 show the producing interval, or intervals, top(s) and name(s), (if any) for only the interval data pertinent to such interval.

Item 28: Submit a separate report, showing the additional data pertinent to such interval.

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.)

STATION	DEPTH	DESCRIPTION, CONTENTS, ETC.	LOG	COMPLETION OR RECOMPLETION REPORT
Surface	638'	Red shale with thin stringers of sandstone		
638'	1372'	Massive sandstone with shaly stringers in lower 250'		
1372'	2504'	Shale, sandstone and limestone		
2504'	3010'	Limestone, predominantly dense and tight with red and gray shale, some thin sand stringers		
3010'	3070'	Syenite		
3070'	3244'	Limestone, dense, and shale predominantly gray		
3244'	3432'	Limestone, dense with some shaly dolomite near base		
3432'	3590'	Green waxy shale & varicolored dolomite		
3590'	3689'	Predominantly tight sandstone with minor dolomite and dolomitic shale		
3689'	3851'	Dolomite and varicolored shale		
3851'	3868 TD	Granite		
3868 TD	3880'	See attached report		
3880'	3888'	See attached report		
3888'	3694'	See attached analysis		
3694'	3020'			



DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
UNITED STATES

Form G-23
1957

871-233

POTENTIAL TEST AND REQUEST FOR ALLOWABLE WELLS

DESIGNATE TYPE OF COMPLETION:

New Well Work-over Deepen Plug Back Same Reservoir Different Reservoir

Other Reason For Filing:

Operator **KERR-McGEE CORPORATION**
 215 Petroleum Center Building
 Address Farmington, New Mexico 87401

DESCRIPTION OF WELL AND LEASE

Federal, State or Indian Lease Number, or Lessor's Name if Fee Lease 14-20-0603-8823	Well Name Navajo No. 10	County Apache
Footage Location 1990' FNL & 610' FEL (SE/NE)		
Sec. Twp. Rge. Sec 30, T36N, R30E		
Date spudded 1-2-68	Date completed, ready to produce 2-15-68	Total depth 3868'
Field and reservoir Dineh -Bi-Keyah Hermosa		P.B.T.D. 3774'
Top of pay 3010		Producing interval 3028-3048

TEST DATA

Date of first production 2-2-68	Date of test 2-22-68	Length of test 24 hrs.	Producing method (flow pump, gas lift) Pumping Reda pump	Amount of load oil injected if any.
Number of barrels of oil produced from completion or recompletion date to test date 9552'		If well is produced by pumping, give pump size, length of stroke and strokes per minute. Reda Pump D-25E 209 Stages		
Tubing pressure 105	Casing pressure 10	Choke size None		
*Actual production during test: 441	Oil (bbls) 397	Water (bbls) 44	Gas (MCF) 24.1	
*Production must actually equal or exceed wells daily allowable or test must be for full 24 hours				
Gas-oil ratio .061	MCF/bbl.	Oil gravity 40.4	* A.P.I. corrected	Name of transporter of oil Kerr-McGee Pipeline Corp.
Number of acres attributed to this well 160	Number of producing wells in this reservoir on this lease, including this well 12	Single, dual or triple completion? Single	Daily allowable requested (bbls)	

Plat showing acreage attached—plat should show leases, offset wells, distance from this well to the nearest well on the same lease completed in or drilling to the same reservoir, and the boundaries of drilling and producing, or proration, units attributed to this well and other wells on the same lease completed in or drilling to the same reservoir, the number of acres in each unit and the number of acres in the lease.

CERTIFICATE: I, the undersigned, under the penalty of perjury, state that I am the Production Superintendent of the KERR-McGEE CORPORATION (company), and that I am authorized by said company to make this report; and that this report was prepared under my supervision and direction and that the facts stated therein are true, correct and complete to the best of my knowledge.

2-23-68
Date

Signature

Witnessed by: KERR-McGEE CORPORATION
 Organization
[Signature]
 Signature
 2-23-68
 Date

Permit No. 446

Form No. 6



Form 9-331
(May 1963)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN DUPLICATE*
(Other instructions on reverse side)

Form approved.
Budget Bureau No. 42-R1424.

5. LEASE DESIGNATION AND SERIAL NO.

14-20-0603-8823

6. INDIAN, ALLOTTEE OR TRIBE NAME

Navajo

7. UNIT AGREEMENT NAME

Navajo

8. FARM OR LEASE NAME

10

9. WELL NO.

10. FIELD AND POOL, OR WILDCAT

Dinah-Bi-Kayah

11. SEC. T., S., M., OR BLM. AND SURVEY OR AREA

Sec. 30, T36N, R30E

12. COUNTY OR PARISH

Apache

13. STATE

Arizona

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.)

1. OIL WELL GAS WELL OTHER

2. NAME OF OPERATOR
Karr-MoGee Corporation

3. ADDRESS OF OPERATOR
215 Petroleum Center Building, Farmington, N.M.

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

1990 ft FHL & 610 ft FEL, Sec. 30

14. PERMIT NO.
State No. 446

15. ELEVATIONS (Show whether DF, RT, GR, etc.)
7335 ft GR

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

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
TEST WATER SHUT-OFF	<input type="checkbox"/>	WATER SHUT-OFF	<input type="checkbox"/>
FRACURE TREAT	<input type="checkbox"/>	FRACURE TREATMENT	<input checked="" type="checkbox"/>
SHOOT OR ACIDIZE	<input type="checkbox"/>	SHOOTING OR ACIDIZING	<input checked="" type="checkbox"/>
REPAIR WELL	<input type="checkbox"/>	(Other) Perforate	<input type="checkbox"/>
(Other)	<input type="checkbox"/>		
PULL OR ALTER CASING	<input type="checkbox"/>	REPAIRING WELL	<input type="checkbox"/>
MULTIPLE COMPLETE	<input type="checkbox"/>	ALTERING CASING	<input type="checkbox"/>
ABANDON*	<input type="checkbox"/>	ABANDONMENT*	<input type="checkbox"/>
CHANGE PLANS	<input type="checkbox"/>		

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.)

Perf with 2 jets per foot from 3028' - 3048'. Acidized with 1500 gal 10% acetic acid. Max press 2200 psi, ave inj rate 6 BPM. Ave inj press 1800 psi. Frac with 99,480 gals crude and 40,000 lb 10-20 sd. Max press 2050 psi. Ave inj press 2000 psi. Ave inj rate 72.3 BPM. Now swabbing back local oil.



18. I hereby certify that the foregoing is true and correct
SIGNED: [Signature] TITLE: Production Supt.

(This space for Federal or State office use)
APPROVED BY: _____ TITLE: _____
CONDITIONS OF APPROVAL, IF ANY:

- Dist: USGS, 2
- Aris, 2
- Tribes, 1
- JIF, 1
- WRF, 1
- RF, 1

446

*See Instructions on Reverse Side

Form 9-331
(May 1963)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN DUPLICATE
(Other instructions on re-
verse side)

Form approved.
Budget Bureau No. 42-R1424.

5. LEASE DESIGNATION AND SERIAL NO.
14-20-0603-8823

6. IF INDIAN, ALLOTTEE OR TRIBE NAME
NAVAJO

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME
NAVAJO

9. WELL NO.
NO. 10

10. FIELD AND POOL, OR WILDCAT
Dinah-Bl-Kayah

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA
Sec. 30, T36S, R30E GASRM

12. COUNTY OR PARISH
Apache

13. STATE
Arizona

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.)

1. OIL WELL GAS WELL OTHER

2. NAME OF OPERATOR
Kerr-McGee Corporation

3. ADDRESS OF OPERATOR
215 Petroleum Center Bldg. - Farmington, New Mexico

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

1990' FHL & 610' FHL Sec. 30

14. PERMIT NO.
State No. 446

15. ELEVATIONS (Show whether DF, RT, GR, etc.)
7335' GR

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

NOTICE OF INTENTION TO:			SUBSEQUENT REPORT OF:		
TEST WATER SHUT-OFF <input type="checkbox"/>	PULL OR ALTER CASING <input type="checkbox"/>	WATER SHUT-OFF <input checked="" type="checkbox"/>	REPAIRING WELL <input type="checkbox"/>		
FRACTURE TREAT <input type="checkbox"/>	MULTIPLE COMPLETE <input type="checkbox"/>	FRACTURE TREATMENT <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>		
SHOOT OR ACIDIZE <input type="checkbox"/>	ABANDON* <input type="checkbox"/>	SHOOTING OR ACIDIZING <input type="checkbox"/>	ABANDONMENT* <input type="checkbox"/>		
REPAIR WELL <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	(Other) Total Depth <input type="checkbox"/>			

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.)*

Drilled 8-3/4" hole to 3868' and set 7" O.D. 23 1/2" J-55 casing at T.D. Cemented with 250 sacks 50-50 Pozmix with 2 1/2 gal. Used pump & plug method. Plug down 12:30 AM 1-23-67. Tested casing with 1900 psi for 30 minutes. Held OK. Will move out rotary and move in DD unit for completion.

- cc: 2-USGS
- 2-Arizona
- 1-Tribe
- 1-JIP
- 1-MRF
- 1-RF



18. I hereby certify that the foregoing is true and correct.
SIGNED [Signature] TITLE **Production Supt.** DATE **1-24-68**

(This space for Federal or State office use)

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

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*See Instructions on Reverse Side

Do Not Reservoir Data

CORE ANALYSIS RESULTS

Company KERR-MC GEE CORPORATION Formation INTRUSIVE File RP-3-2280
Well NAVAJO NO. 10 Core Type DIAMOND L" Date Report 1-15-68
Field DINEH BI KEYAH Drilling Fluid WATER BASE MUD Analysts GALLOP
County APACHE State ARIZONA Elev. 7356'GL Location SEC 30-T36N-R30E
7370'KB

Lithological Abbreviations

SAND-SB SHALE-SH LINE-LM	DOLOMITE-DOL CHERT-CH GYPSUM-GYP	ANHYDRITE-ANHY CONGLOMERATE-CONG FOSSILIFEROUS-FOSS	SANDY-SBT SHALY-SHY LIMY-LMY	FINE-FN MEDIUM-MED COARSE-CSE	CRYSTALLINE-CLM GRAIN-GRN GRANULAR-GRNL	BROWN-BRN GRAY-GY VUGGY-VUGY	FRACTURED-FRAC LAMINATION-LAM STYLOLITIC-STY	SLIGHTLY-SL/ VERY-V/ WITH-W/
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SAMPLE NUMBER	DEPTH FEET	PERMEABILITY MILLIDARCYB	POROSITY PER CENT	RESIDUAL SATURATION PER CENT PORE		SAMPLE DESCRIPTION AND REMARKS
				OIL	TOTAL WATER	
(CONVENTIONAL ANALYSIS)						
1	3020.0-21.0	0.03	10.2	0.0	70.5	Minette, Vertically Fractured
2	21.0-22.0	0.07	11.4	0.0	65.7	Minette, Vertically Fractured
3	22.0-23.0	0.08	12.9	0.0	59.7	Minette
4	23.0-24.0	0.07	13.2	1.5	60.6	Minette
5	24.0-25.0	0.07	13.0	0.0	57.0	Minette
6	25.0-26.0	0.04	13.3	0.0	53.3	Minette
7	26.0-27.0	0.08	14.1	1.4	51.0	Minette
8	27.0-28.0	0.06	11.1	0.0	49.5	Minette
9	28.0-29.0	0.50	13.0	0.0	51.5	Minette
10	29.0-30.0	0.19	15.5	1.3	47.0	Minette
11	30.0-31.0	0.34	14.9	1.4	57.2	Minette
12	31.0-32.0	0.35	15.8	7.6	39.8	Minette
13	32.0-33.0	0.31	13.9	5.0	46.8	Minette, Vertically Fractured
14	33.0-34.0	0.60	13.8	6.5	50.0	Minette,
15	34.0-35.0	3.5	14.9	6.1	42.9	Minette
16	35.0-36.0	14	16.6	7.2	45.2	Minette
17	36.0-37.0	0.19	16.4	7.3	45.7	Minette
18	37.0-38.0	0.83	17.8	6.7	43.8	Minette
19	38.0-39.0	0.99	12.6	5.6	43.6	Minette
20	39.0-40.0	1.8	15.3	5.9	51.6	Minette
21	40.0-41.0	1.3	13.8	6.5	45.6	Minette
22	41.0-42.0	0.33	14.0	1.4	59.6	Minette
23	42.0-43.0	0.99	13.6	5.1	48.5	Minette
24	43.0-44.0	0.10	14.4	1.4	53.5	Minette
25	44.0-45.0	0.12	11.9	1.7	52.0	Minette
26	45.0-46.0	0.22	13.1	0.0	53.5	Minette
27	46.0-47.0	0.06	13.4	1.5	50.0	Minette
28	47.0-48.0	0.10	14.1	1.4	46.1	Minette
29	48.0-49.0	0.06	13.4	0.0	52.2	Minette
30	49.0-50.0	0.08	14.4	0.0	50.7	Minette
31	50.0-51.0	0.06	14.1	1.4	49.0	Minette
32	51.0-52.0	0.50	15.2	1.3	44.1	Minette
33	52.0-53.0	0.07	13.2	0.0	50.0	Minette
34	53.0-54.0	0.09	12.9	0.0	51.2	Minette
35	54.0-55.0	0.07	13.2	1.5	52.2	Minette



These analyses, opinions or interpretations are based on observations and materials supplied by the client to whom, and for whose exclusive use, this report is made. The interpretations or opinions expressed represent the best judgment of Core Laboratories, Inc. (all errors and omissions excepted). Core Laboratories, Inc. and its officers and employees, assume no responsibility and make no warranty or representations, as to the accuracy of the analyses, opinions or interpretations.

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CORE ANALYSIS RESULTS

Company KERR-MC GEE CORPORATION Formation _____ File RP-3-2280
Well NAVAJO NO. 10 Core Type _____ Date Report _____
Field _____ Drilling Fluid _____ Analysts _____
County _____ State _____ Elev. _____ Location _____

Lithological Abbreviations

SAMPLE NUMBER	DEPTH FEET	PERMEABILITY MILLIDARCY	POROSITY PER CENT	RESIDUAL SATURATION PER CENT PORE		SAMPLE DESCRIPTION AND REMARKS
				OIL	TOTAL WATER	

SAMPLE NUMBER	DEPTH FEET	PERMEABILITY MILLIDARCY	POROSITY PER CENT	RESIDUAL SATURATION PER CENT PORE		SAMPLE DESCRIPTION AND REMARKS
				OIL	TOTAL WATER	
36	3055.0-56.0	0.06	13.5	1.5	57.0	Minette
37	56.0-57.0	0.66	14.6	1.4	44.6	Minette
38	57.0-58.0	0.08	14.0	1.4	55.2	Minette
39	58.0-59.0	0.09	11.6	0.0	61.2	Minette
40	59.0-60.0	0.11	12.0	0.0	57.5	Minette
41	60.0-61.0	0.02	10.9	1.8	72.5	Minette
42	61.0-62.0	0.08	13.6	0.05	56.5	Minette
43	62.0-63.0	0.10	14.1	0.0	55.6	Minette, Vertically Fractured
44	63.0-64.0	0.04	12.4	0.0	65.3	Minette, Vertically Fractured
45	64.0-65.0	0.06	11.8	1.7	68.6	Minette, Vertically Fractured
46	65.0-66.0	1.8	11.1	1.8	76.6	Minette
47	66.0-67.0	0.02	10.0	0.0	81.0	Minette, Vertically Fractured
48	67.0-68.0	0.01	10.1	0.0	80.2	Minette, Vertically Fractured
49	68.0-69.0	<0.01	9.5	0.0	82.1	Lm, Gry, V/Fn Xln, Shy.
50	69.0-70.0	0.01	4.2	0.0	71.6	Lm, Gry, V/Fn Xln, Shy
51	70.0-71.0	<0.01	1.4	0.0	64.2	Lm, Gry, V/Fn Xln, Shy
52	71.0-72.0	<0.01	1.4	0.0	64.2	Lm, Gry, V/Fn Xln, Shy
53	72.0-73.0	<0.01	1.7	0.0	88.1	Lm, Gry, V/Fn Xln, Shy
54	73.0-74.0	<0.01	1.1	0.0	81.8	Lm, Gry, V/Fn Xln, Shy
55	74.0-75.0	0.01	1.0	0.0	90.0	Lm, Gry, V/Fn Xln, Shy
56	75.0-76.0	0.05	1.6	0.0	81.3	Lm, Gry, V/Fn Xln, Shy
57	76.0-77.0	<0.01	2.2	0.0	91.0	Lm, Gry, V/Fn Xln, Shy
58	77.0-78.0	<0.01	2.3	0.0	91.3	Lm, Gry, V/Fn Xln, Shy

These analyses, opinions or interpretations are based on observations and materials supplied by the client to whom, and for whose exclusive and confidential use, this report is made. The interpretations or opinions expressed represent the best judgment of Core Laboratories, Inc. (all errors and omissions excepted); but Core Laboratories, Inc. and its officers and employees, assume no responsibility and make no warranty or representations, as to the productivity, proper operations, or profitability of any oil, gas or other mineral well or sand in connection with which such report is used or relied upon.

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Form 9-331
(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

5. LEASE DESIGNATION AND SERIAL NO.
14-20-0603-8823

6. IF INDIAN, ALLOTTEE OR TRIBE NAME
NAVAJO

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME
NAVAJO

9. WELL NO.
No. 10

10. FIELD AND POOL OR WILDCAT
Meh-bi-Koyah

11. SEC. T. R. M., OR BLM, AND SURVEY OR AREA
Sec. 30, T36N, R30E G&SRM

12. COUNTY OR PARISH
Apache

13. STATE
Arizona

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.)

1. OIL WELL GAS WELL OTHER

2. NAME OF OPERATOR
Kerr-McGee Corporation

3. ADDRESS OF OPERATOR
215 Petroleum Center Bldg. - Farmington, New Mexico

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements. See also space 17 below.)
At surface
1990' FNL & 610' FEL Sec. 30, T36N, R30E G&SRM

14. PERMIT NO.
State No. 446

15. ELEVATIONS (Show whether OF, RT, GR, etc.)
7335' GR

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

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
TEST WATER SHUT-OFF <input type="checkbox"/>	PULL OR ALTER CASING <input type="checkbox"/>	WATER SHUT-OFF <input checked="" type="checkbox"/>	REPAIRING WELL <input type="checkbox"/>
FRACTURE TREAT <input type="checkbox"/>	MULTIPLE COMPLETE <input type="checkbox"/>	FRACTURE TREATMENT <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
SHOOT OR ACIDIZE <input type="checkbox"/>	ABANDON* <input type="checkbox"/>	SHOOTING OR ACIDIZING <input type="checkbox"/>	ABANDONMENT* <input type="checkbox"/>
REPAIR WELL <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	(Other) <input type="checkbox"/>	(Other) <input checked="" type="checkbox"/>

(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.)

Spud 9:30 PM 1-2-68. Drilled 13-3/4" hole to 248' and set 9-5/8" OD, 32' 30", H-40 casing at 248' RKB. Cemented with 300 axs Class A cement with 2% CaCl₂. Used pump and plug method. Circulated cement. Plug down 9:30 PM 1-3-67. Released pressure. Floats held OK. WOC 13-3/4 hrs. Test casing and BOP to 1000 psi for 30 minutes. Held OK. Drilling 8-3/4" hole below surface casing.



18. I hereby certify that the foregoing is true and correct
SIGNED [Signature] TITLE Production Supt. DATE 1-9-68

(This space for Federal or State office use)
APPROVED BY _____ TITLE _____
CONDITIONS OF APPROVAL, IF ANY:

- 2-USGS
- 2-Ariz.
- 1-Tribe
- 1-JIF
- 1-WRF
- 1-RF

12 446

*See Instructions on Reverse Side

1-2-68

Ken Mee #10. (@ Telephone)

Telephone: Shut down repairs. Will
spud next day or so.

#

**OPERATOR'S CERTIFICATE OF COMPLIANCE AND AUTHORIZATION
TO TRANSPORT OIL OR GAS FROM LEASE**

Federal State or Indian Lease Number, or Lessee's name if fee lease: 14-20-0603-6823
 Survey or Sec-Twp-Rge: Sec. 29-32-T36N-R30E
 Field: Dineh-bi-Keyah
 County: Apache
 Location: Lower Hermosa
 State: Arizona
 Operator: Kerr-McGee Corporation

ADDRESS ALL CORRESPONDENCE CONCERNING THIS FORM TO:
 Street: 215 Petroleum Center Bldg. City: Farmington State: New Mexico 87401

Above named operator authorizes (name of transporter): Kerr-McGee Pipeline Corporation Attention: Mr. A. R. Gockel

Transporter's street address: Kerr-McGee Building City: Oklahoma City State: Oklahoma 73102

Field address: P. O. Box 989 - Farmington, New Mexico 87401
 Oil, condensate, gas well gas, casinghead gas

To transport: 100 % of the oil from said lease.

OTHER GATHERERS TRANSPORTING FROM THIS LEASE ARE AS FOLLOWS:

Name of gatherer	% transported	Product transported

Indicate whether or not this certificate is for a new lease. If not a new lease, indicate whether or not it is a change of operator, change of lease name, change of gatherer, or a consolidation or subdivision of leases and give effective date of change.

Change of Gatherer & Transporter Effective: 7/19/67

The undersigned certifies that the rules and regulations of the State of Arizona Oil & Gas Conservation Commission have been complied with in drilling and producing operations on this lease, except as noted above, and that the above transporter is authorized to transport the above specified percentage of the allowable oil or gas produced from the above described property, and that this authorization will be valid until further notice or until cancelled by the State of Arizona Oil & Gas Conservation Commission.

CERTIFICATE: I, the undersigned, under the penalty of perjury, state that I am the Production Superintendent of the Kerr-McGee Corporation (company), and that I am authorized by said company to make this report; and that this report was prepared under my supervision and direction and that the facts stated therein are true, correct and complete to the best of my knowledge.

Date: 7/19/67 Signature: [Handwritten Signature]

Date approved: 7-21-67
 STATE OF ARIZONA
 OIL & GAS CONSERVATION COMMISSION
 By: [Handwritten Signature]
 Permit No. 417

RECEIVED
 JUL 21 1967
 STATE OF ARIZONA
 OIL & GAS CONSERVATION COMMISSION
 Operator's Certificate of Compliance & Authorization to Transport Oil or Gas from Lease
 File Two Copies
 Form No. 8

APPLICATION FOR PERMIT TO DRILL OR RE-ENTER

APPLICATION TO DRILL RE-ENTER OLD WELL

KERR-MCGEE CORPORATION
NAME OF COMPANY OR OPERATOR

215 PETROLEUM CENTER BLDG. FARMINGTON, NEW MEXICO
Address City State

JCM DRILLING CO. - 600 CITIZENS BANK TOWER BLDG. - OKLAHOMA CITY, OKLAHOMA
Drilling Contractor
(Above)
Address

DESCRIPTION OF WELL AND LEASE

Federal, State or Indian Lease Number, or if fee lease, name of lessor 14-20-0603-8823 NAVAJO	Well number No. 10	Elevation (ground) 7335'
Nearest distance from proposed location to property or lease line: 1990 feet	Distance from proposed location to nearest drilling, completed or applied—for well on the same lease: 2651 feet	
Number of acres in lease: 2533	Number of wells on lease, including this well, completed in or drilling to this reservoir: 14	

If lease, purchased with one or more wells drilled, from whom purchased:
None Name Address

Well location (give footage from section lines) Section—township—range or block and survey Dedication (Comply with Rule 105)
1990' FNL & 610' FEL Sec. 30, T36N, R30E G&SRM NE/4 Sec. 30

Field and reservoir (if wildcat, so state) County
Dineh-bi-Keyah Apache County

Distance, in miles, and direction from nearest town or post office:
10 miles SW of Red Rock, Arizona

Proposed depth: 3400'	Rotary or cable tools Rotary	Approx. date work will start 1-1-68
Bond Status Blanket Bond	Organization Report On file XX Or attached	Filing Fee of \$25.00 Attached Yes

Remarks:
New Well. Covered by Commission Order No. 21.

CERTIFICATE: I, the undersigned, under the penalty of perjury, state that I am the Production Supt. of the Kerr-McGee Corporation (company), and that I am authorized by said company to make this report; and that this report was prepared under my supervision and direction and that the facts stated therein are true, correct and complete to the best of my knowledge.

C. D. Williams / Sam Roth
Signature

December 26, 1967
Date

Permit Number: 446
Approval Date: 12-27-67
Approved By: John Bannister

Notice: Before sending in this form be sure that you have given all information requested. Much unnecessary correspondence will thus be avoided.

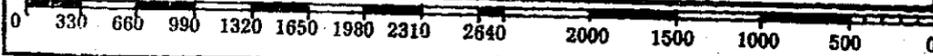
STATE OF ARIZONA
OIL & GAS CONSERVATION COMMISSION
Application to Drill or Re-enter
File Two Copies

RECEIVED
DEC 27 1967
OIL & GAS
COMMISSION

Form No. 3

1. Operator shall outline the dedicated acreage for both oil and gas wells on the plat.
2. A registered professional engineer or land surveyor registered in the State of Arizona or approved by the Commission shall show on the plat the location of the well and certify this information in the space provided.
3. All distances shown on the plat must be from the outer boundaries of the Section.
4. Is the Operator the only owner in the dedicated acreage outlined on the plat below? YES NO
5. If the answer to question four is "no," have the interests of all the owners been consolidated by communitization agreement or otherwise? YES NO If answer is "yes," Type of Consolidation _____
6. If the answer to question four is "no," list all the owners and their respective interests below:

Owner _____	Land Description _____
SEE ATTACHED SURVEY PLAT	<p style="text-align: center;">CERTIFICATION</p> <p>I hereby certify that the information above is true and complete to the best of my knowledge and belief.</p> <p>Name _____</p> <p>Position _____</p> <p>Company _____</p> <p>Date _____</p> <p>I hereby certify that the well location shown on the plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief.</p> <p>Date Surveyed _____</p> <p>Registered Professional Engineer and/or Land Surveyor _____</p> <p>Certificate No. _____</p>



PROPOSED CASING PROGRAM

Size of Casing	Weight	Grade & Type	Top	Bottom	Cementing Depths	Sacks Cement
9-5/8" OD	32.30	H-40 ST&C	0	250'	0-250'	Sufficient to circ. cover all potential productive zones.
7" OD	20	J-55 ST&C	0	3400'	Sufficient to cover all potential productive zones.	

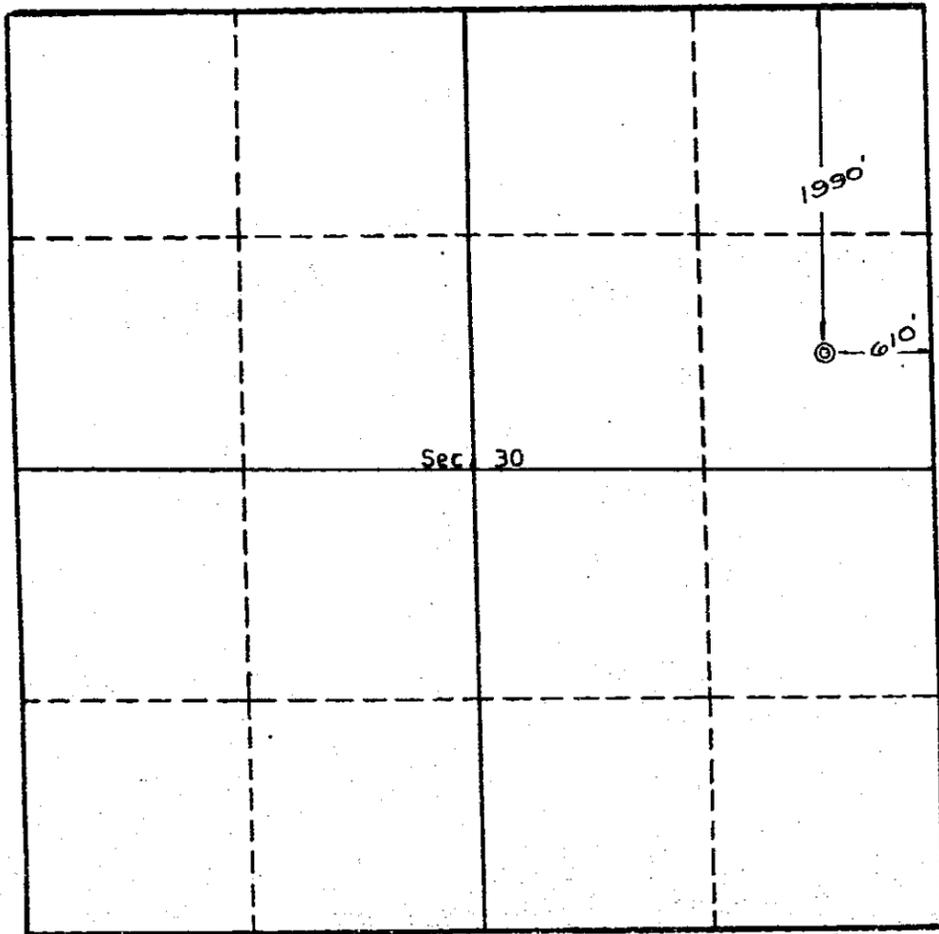
Company KERR-McGEE CORPORATION

Well Name & No. No. 10 Navajo

Location 1990 feet from the North line and 610 feet from the East line.

Sec. 30, T. 36 N., R. 30 E., G. & S. R. M., County Apache, Arizona

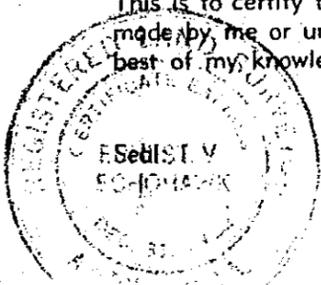
Ground Elevation 7356, graded



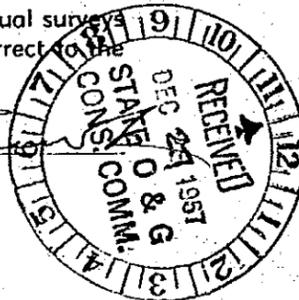
Scale, 1 inch = 1,000 feet

Surveyed May 20, 1967

This is to certify that the above plat was prepared from field notes of actual survey made by me or under my supervision and that the same are true and correct to the best of my knowledge and belief.



Ernest V. Echohawk
Ernest V. Echohawk
Registered Land Surveyor
Arizona Registration No. 2311



14 446



PERMIT TO DRILL

This constitutes the permission and authority from the
OIL AND GAS CONSERVATION COMMISSION,
STATE OF ARIZONA,

To: KERR-MCGEE CORPORATION
(OPERATOR)

to drill a well to be known as

Kerr-McGee #10 Navajo
(WELL NAME)

located ¹⁷⁹⁰ ~~100~~' FNL and 670' FEL (SE/4NE/4)

Section 30 Township 36N Range 30E, Apache County, Arizona.

The NE/4 of said

Section, Township and Range is dedicated to this well.

Said well is to be drilled substantially as outlined in the attached Application and must be drilled in full compliance with all applicable laws, statutes, rules and regulations of the State of Arizona.

Issued this 27th day of December, 1967.

OIL AND GAS CONSERVATION COMMISSION
By John W. Bannister
EXECUTIVE SECRETARY

PERMIT N^o 446

RECEIPT NO. 9532

API No. 02-001-20042
"Forms when to file" attached

State of Arizona
Oil & Gas Conservation Commission
Permit to Drill
FORM NO. 27

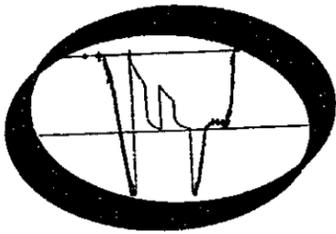
Formation Testing Service Report

NAVAJO

10

2

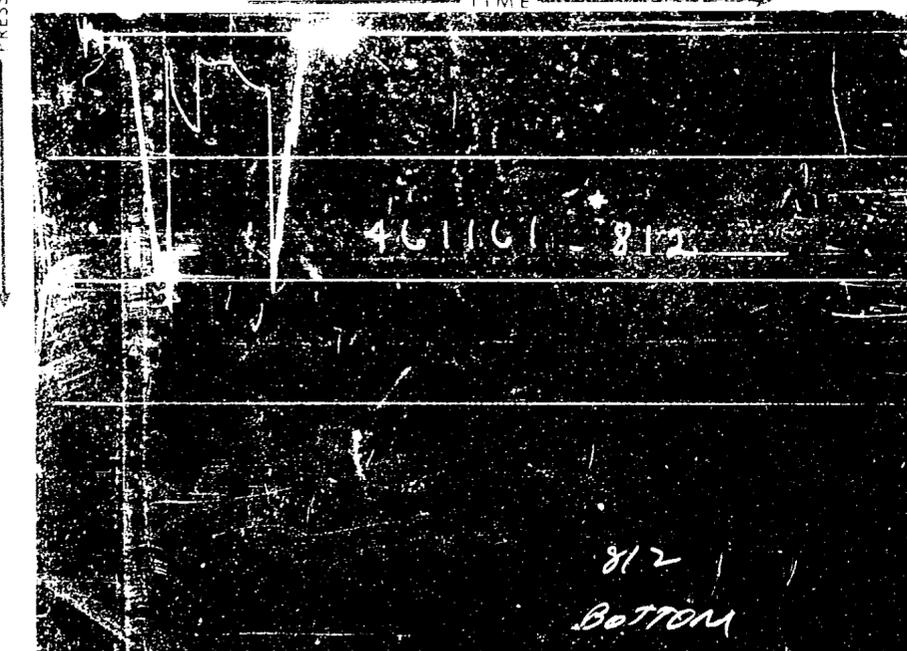
KERR MC GEE CORPORATION



446



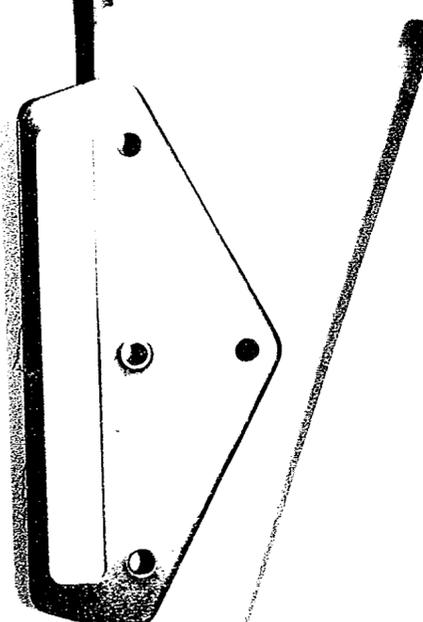
HALLIBURTON COMPANY
DUNCAN, OKLAHOMA



Each Horizontal Line Equal to 1000 p.s.i.

Flow Time	1st	Min	2nd	Min	Date	Ticket Number
Based on Flow Time		Min	2nd	Min	Kind of Job	Halliburton District
Pressure Reading	Field	Office Corrected			Tester	Witness
Depth Top Gauge	Ft.			Blanked Off	Drilling Contractor	
BT P.R.D. No.				Hour Clock	Elevation	Top Packer
Initial Hydro Mud Pressure					Total Depth	Bottom Packer
Initial Closed in Pres.					Interval Tested	Formation Tested
Initial Flow Pres.		1			Casing or Hole Size	Casing Top Perfs. Bot.
Final Flow Pres.		2			Surface Choke	Bottom Choke
Final Closed in Pres.					Size & Kind Drill Pipe	Drill Collars Above Tester
Final Hydro Mud Pressure					Mud Weight	Mud Viscosity
Depth Cen Gauge	Ft.			Blanked Off	Temperature	F Est F Actual
BT P.R.D. No.				Hour Clock	Temperatures Mea. From	Depth of Tester Valve
Initial Hydro Mud Pres.					Cushion	Depth Back Pres. Valve
Initial Closed in Pres.					Recovered	Feet of
Initial Flow Pres.		1			Recovered	Feet of
Final Flow Pres.		2			Recovered	Feet of
Final Closed in Pres.					Recovered	Feet of
Final Hydro Mud Pres.					Oil A.P.I. Gravity	Water Spec Gravity
Depth Bot Gauge	Ft.			Blanked Off	Gas Gravity	Surface Pressure
BT P.R.D. No.				Hour Clock	Tool Opened	A.M. P.M. Tool Closed
Initial Hydro Mud Pres.					Remarks	
Initial Closed in Pres.						
Initial Flow Pres.		1				
Final Flow Pres.		2				
Final Closed in Pres.						
Final Hydro Mud Pres.						

FORMATION TEST DATA

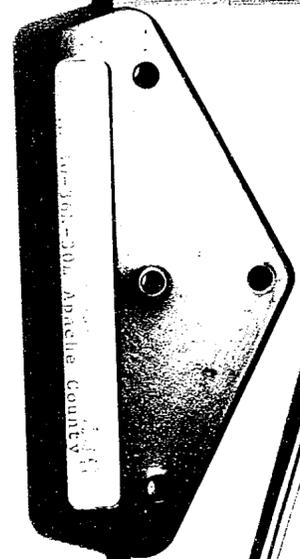


Gauge No.		314		Depth		3684		Clock		12 hour		Ticket No.		461161	
	First Flow Period		Initial Closed In Pressure			Second Flow Period		Final Closed In Pressure							
	Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	Log $\frac{t+\theta}{\theta}$	PSIG Temp. Corr.	Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	Log $\frac{t+\theta}{\theta}$	PSIG Temp. Corr.					
P ₀	.000	113	.000		146	.000	140	.000		154					
P ₁	.0112	106	.031		430	.0689	153	.0418		221					
P ₂	.0224	115	.062		486	.1378	167	.0836		258					
P ₃	.0336	126	.093		528	.2067	158	.1254		293					
P ₄	.0448	137	.124		571	.2756	154	.1672		319					
P ₅	.056	146	.155		610	.3445	151	.2090		339					
P ₆			.186		645	.434	154*	.2508		354					
P ₇			.217		676			.2926		366					
P ₈			.248		697			.3344		374					
P ₉			.279		712			.3762		380					
P ₁₀			.310		723			.418		384					
Gauge No.		812		Depth		3864'		Clock		24 hour					
P ₀	.000	194	.000		216	.000	200	.000		240					
P ₁	.0056	186	.0152		497	.0333	223	.0202		299					
P ₂	.0112	189	.0304		563	.0666	243	.0404		334					
P ₃	.0168	197	.0456		605	.0999	236	.0606		369					
P ₄	.0224	209	.0608		648	.1332	230	.0808		399					
P ₅	.028	216	.0760		685	.1665	232	.1010		417					
P ₆			.0912		722	.210	240*	.1212		433					
P ₇			.1064		749			.1414		444					
P ₈			.1216		771			.1616		454					
P ₉			.1368		786			.1818		461					
P ₁₀			.152		796			.202		467					
Reading Interval		1		4.5		10		6		Minutes					
REMARKS: * INTERVAL = 13 MINUTES.															

SPECIAL PRESSURE DATA

13

Each Horizontal Line Equal to 1000 p.s.i.

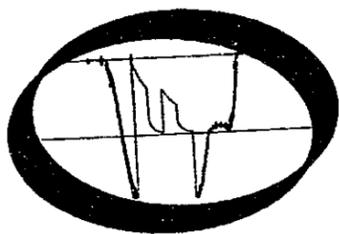


NOMENCLATURE

b	=	Approximate Radius of Investigation	.....	Feet
b_1	=	Approximate Radius of Investigation (Net Pay Zone h)	.....	Feet
D.R.	=	Damage Ratio	.....	—
El	=	Elevation	.....	Feet
GD	=	B.T. Gauge Depth (From Surface Reference)	.....	Feet
h	=	Interval Tested	.....	Feet
h_1	=	Net Pay Thickness	.....	Feet
K	=	Permeability	.....	md
K_1	=	Permeability (From Net Pay Zone h)	.....	md
m	=	Slope Extrapolated Pressure Plot (Psi ² /cycle Gas)	.....	psi/cycle
OF ₁	=	Maximum Indicated Flow Rate	.....	MCF/D
OF ₂	=	Minimum Indicated Flow Rate	.....	MCF/D
OF ₃	=	Theoretical Open Flow Potential with/Damage Removed Max.	.....	MCF/D
OF ₄	=	Theoretical Open Flow Potential with/Damage Removed Min.	.....	MCF/D
P_s	=	Extrapolated Static Pressure	.....	Psig.
P_f	=	Final Flow Pressure	.....	Psig.
P_{or}	=	Potentiometric Surface (Fresh Water*)	.....	Feet
Q	=	Average Adjusted Production Rate During Test	.....	bbls/day
Q_1	=	Theoretical Production w/Damage Removed	.....	bbls/day
Q_g	=	Measured Gas Production Rate	.....	MCF/D
R	=	Corrected Recovery	.....	bbls
r_w	=	Radius of Well Bore	.....	Feet
t	=	Flow Time	.....	Minutes
t_o	=	Total Flow Time	.....	Minutes
T	=	Temperature Rankine	.....	°R
Z	=	Compressibility Factor	.....	—
μ	=	Viscosity Gas or Liquid	.....	CP
Log	=	Common Log	.....	—

* Potentiometric Surface Reference to Rotary Table When Elevation Not Given,
Fresh Water Corrected to 100° F.

Formation Testing Service Report



HALLIBURTON COMPANY
DUNCAN, OKLAHOMA

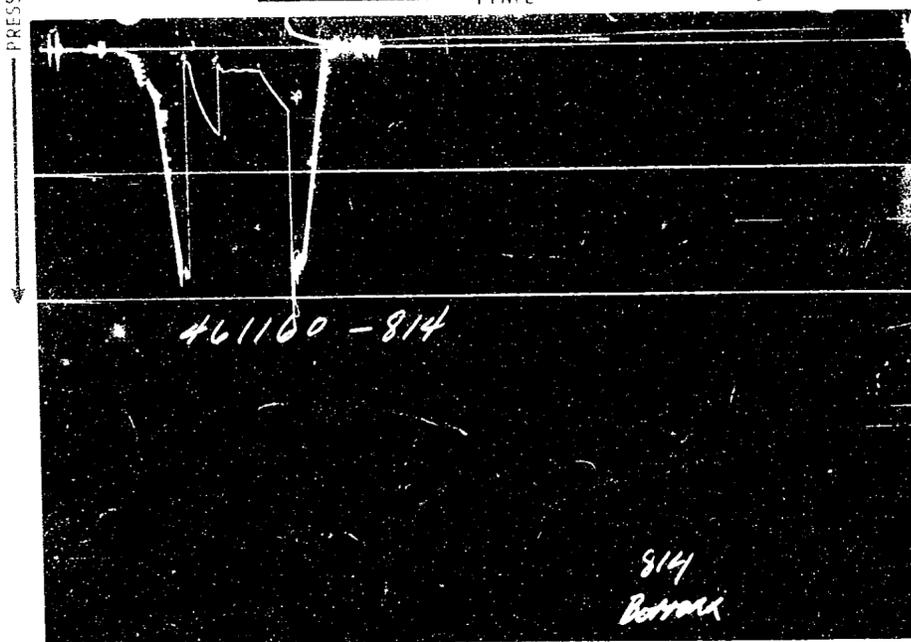
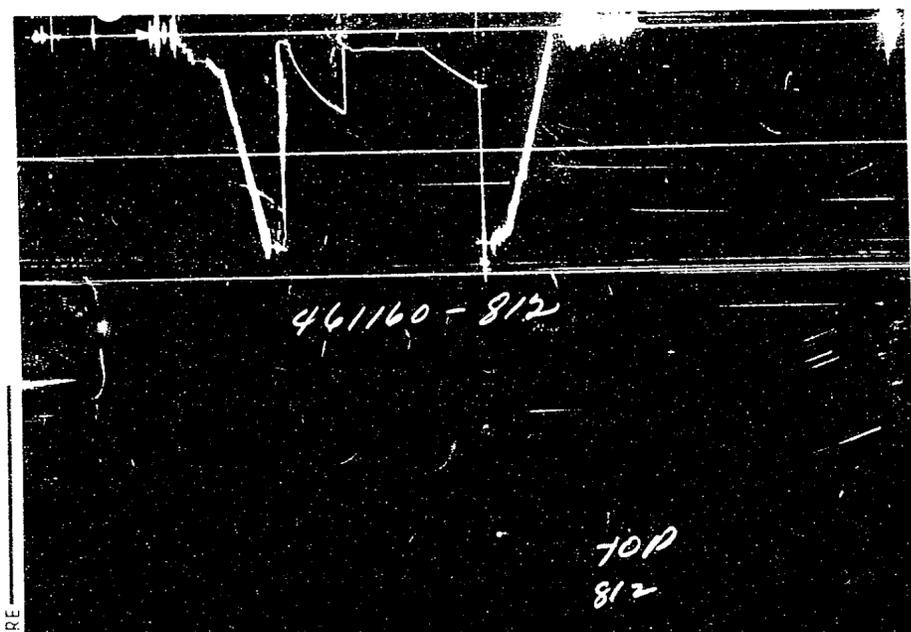
NAVALJO

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1

KERR MC GEE CORPORATION

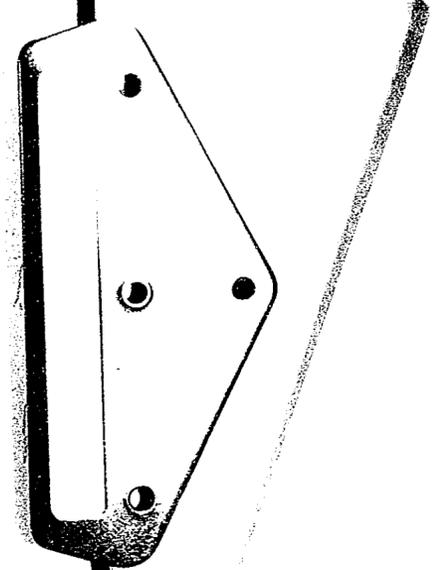
446



Each Horizontal Line Equal to 1000 p.s.i.

Start Time	1st	2nd	3rd	4th	Date	Ticket Number
End Time	st	Min	2nd	Min	Kind of Job	Halliburton District
Tester	Field	Office Corrected	Tester	Witness		
Depth				Blanked Off	Drilling Contractor	
BT P.R.D. No.				Hour Clock	Elevation	Top Packer
Initial Hydro Mud Pressure					Total Depth	Bottom Packer
Initial Closed in Pres.					Interval Tested	Formation Tested
Initial Flow Pres.		1			Casing or Hole Size	Casing Top Perfs. Bot.
Final Flow Pres.		2			Surface Choke	Bottom Choke
Final Closed in Pres.		1			Size & Kind Drill Pipe	Drill Collars Above Tester
Final Hydro Mud Pressure		2			Mud Weight	Mud Viscosity
Depth Cen. Gauge				Blanked Off	Temperature	F. Err. Anchor Size & Length
BT P.R.D. No.				Hour Clock	Depths Meas. From	Depth of Tester Valve
Initial Hydro Mud Pres.					Cushion	Depth Back Pres. Valve
Initial Closed in Pres.					Recovered	Feet of
Initial Flow Pres.		1			Recovered	Feet of
Final Flow Pres.		2			Recovered	Feet of
Final Closed in Pres.		1			Recovered	Feet of
Final Hydro Mud Pres.		2			Oil A.P.I. Gravity	Water Spec. Gravity
Depth Bot. Gauge				Blanked Off	Gas Gravity	Surface Pressure
BT P.R.D. No.				Hour Clock	Tool Opened	A.M. Tool Closed
Initial Hydro Mud Pres.					Remarks	
Initial Closed in Pres.						
Initial Flow Pres.		1				
Final Flow Pres.		2				
Final Closed in Pres.		1				
Final Hydro Mud Pres.		2				

FORMATION TEST DATA
SPECIAL PRESSURE DATA



Gauge No. 812		Depth 3590'		Clock 12 hour		Ticket No. 461160				
First Flow Period		Initial Closed In Pressure			Second Flow Period		Final Closed In Pressure			
Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	Log $\frac{t+\phi}{\phi}$	PSIG Temp. Corr.	Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	Log $\frac{t+\phi}{\phi}$	PSIG Temp. Corr.	
P ₀	.000	97	.000		99	.000	106	.000		156
P ₁	.0126	74	.0344		264	.090	157	.0339		204
P ₂	.0252	76	.0688		350	.180	150	.0678		244
P ₃	.0378	83	.1032		417	.270	151	.1017		281
P ₄	.0504	90	.1376		479	.360	153	.1356		317
P ₅	.0630	99	.1720		531	.450	156	.1695		351
P ₆			.2064		574			.2034		384
P ₇			.2408		610			.2373		414
P ₈			.2752		641			.2712		446
P ₉			.3100		666			.3050		474
P ₁₀			--		--			--		--
Gauge No. 814		Depth 3680'		Clock 24 hour						
P ₀	.000	151	.000		130	.000	130	.000		185
P ₁	.0066	112	.0174		276	.046	186	.0173		225
P ₂	.0132	106	.0348		370	.092	178	.0346		265
P ₃	.0198	112	.0522		444	.138	179	.0519		305
P ₄	.0264	120	.0696		503	.184	181	.0692		342
P ₅	.0330	130	.0870		557	.230	185	.0865		374
P ₆			.1044		602			.1038		408
P ₇			.1218		635			.1211		443
P ₈			.1392		666			.1384		472
P ₉			.1570		691			.1560		500
P ₁₀			--		--			--		--
Reading Interval		2		9		13		5	Minutes	
REMARKS:										

SPECIAL PRESSURE DATA

10/15/50
COMM & G

Each Horizontal Line Equal to 1000 p.s.i.

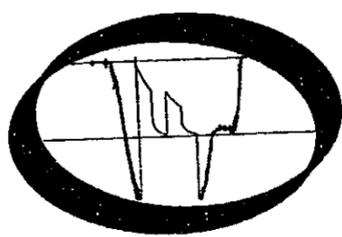
NOMENCLATURE

- b** = Approximate Radius of Investigation Feet
- b₁** = Approximate Radius of Investigation (Net Pay Zone h) Feet
- D.R.** = Damage Ratio
- EI** = Elevation Feet
- GD** = B.T. Gauge Depth (From Surface Reference) Feet
- h** = Interval Tested Feet
- h₁** = Net Pay Thickness Feet
- K** = Permeability md
- K₁** = Permeability (From Net Pay Zone h) md
- m** = Slope Extrapolated Pressure Plot (Psi²/cycle Gas) psi/cycle
- OF₁** = Maximum Indicated Flow Rate MCF/D
- OF₂** = Minimum Indicated Flow Rate MCF/D
- OF₃** = Theoretical Open Flow Potential with/Damage Removed Max. MCF/D
- OF₄** = Theoretical Open Flow Potential with/Damage Removed Min. MCF/D
- P_s** = Extrapolated Static Pressure Psig.
- P_f** = Final Flow Pressure Psig.
- P_o** = Potentiometric Surface (Fresh Water *) Feet
- Q** = Average Adjusted Production Rate During Test bbls/day
- Q₁** = Theoretical Production w/Damage Removed bbls/day
- Q_o** = Measured Gas Production Rate MCF/D
- R** = Corrected Recovery bbls
- r_w** = Radius of Well Bore Feet
- t** = Flow Time Minutes
- t_o** = Total Flow Time Minutes
- T** = Temperature Rankine °R
- Z** = Compressibility Factor
- μ** = Viscosity Gas or Liquid CP
- Log** = Common Log

* Potentiometric Surface Reference to Rotary Table When Elevation Not Given,
Fresh Water Corrected to 160° F.

Each Horizontal Line Equal to 1000 p.s.i.

Formation Testing Service Report



446

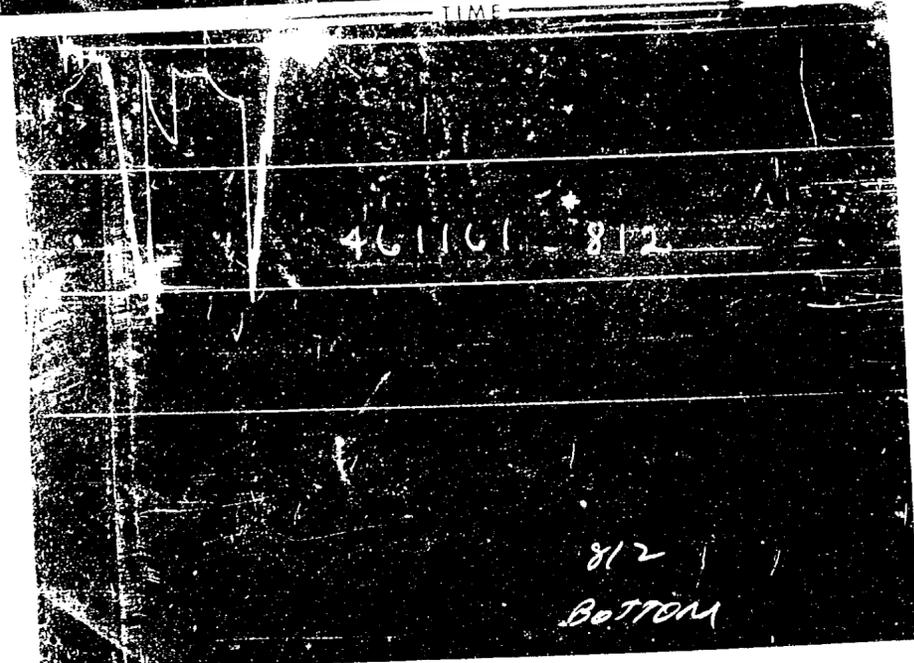
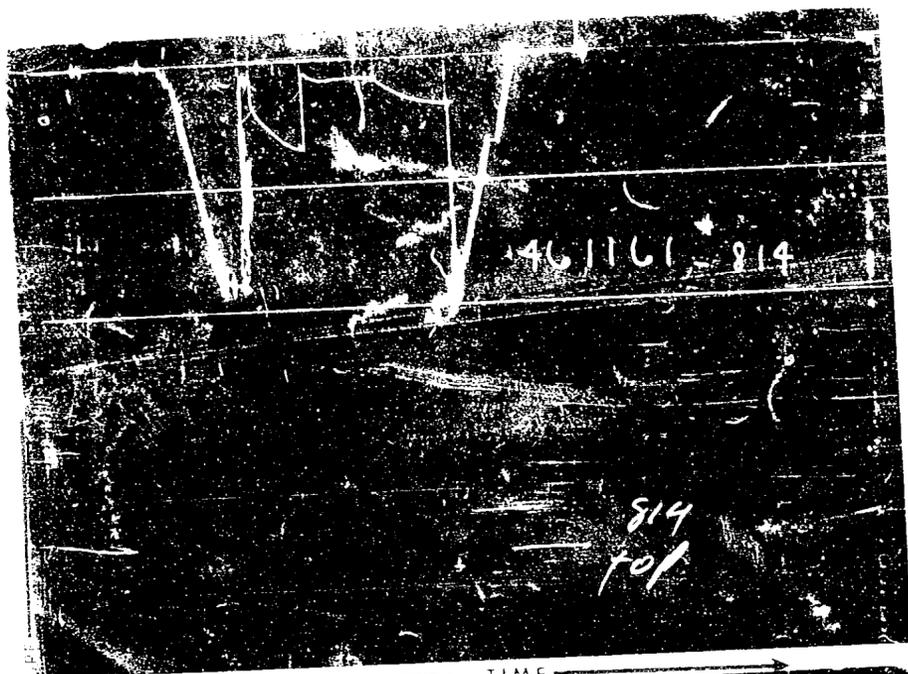
HALLIBURTON COMPANY
DUNCAN, OKLAHOMA

NAVAJO

10

2

HALLIBURTON COMPANY

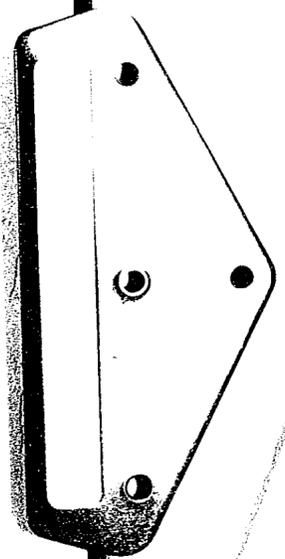


Each Horizontal Line Equal to 1000 p.s.i.

1st	Min	2nd	Min	Date	Ticket Number
	Min	2nd	Min	Kind of Job	Haltiburton District
Field	Office Corrected			Tester	Witness
			Blanked Off	Drilling Contractor	
			Hour Clock	Elevation	Top Packer
				Total Depth	Bottom Packer
				Interval Tested	Formation Tested
		1		Casing or Hole Size	Casing / Top Parts / 1 Bar
		1		Surface Choke	Bottom Choke
		2		Size & Kind of Drill Pipe	Drill Collars Above Tester
				Mud Weight	Mud Viscosity
				Temperature	Anchor Size / & Length
Depth Cor. Gauge			Blanked Off	Temperatures	F. Est. / F. Actual
BT			Hour Clock	Depths Mea. From	Depth of Tester Valve
F.R.D. No.					Depth Back Pres. Valve
Initial Hydro Mud Pres.				Cushion	
Initial Closed in Pres.				Recovered	Feet of
Initial Flow Pres.		1		Recovered	Feet of
Final Flow Pres.		2		Recovered	Feet of
Final Closed in Pres.		1		Recovered	Feet of
Final Hydro Mud Pres.		2		Recovered	Feet of
				Oil A.P.I. Gravity	Water Sp. Gravity
Depth Cor. Gauge			Blanked Off	Gas Gravity	Surface Pressure
BT			Hour Clock	Tool Opened	AM / PM / Tool Closed
F.R.D. No.					
Initial Hydro Mud Pres.				Remarks	
Initial Closed in Pres.					
Initial Flow Pres.		1			
Final Flow Pres.		2			
Final Closed in Pres.		1			
Final Hydro Mud Pres.		2			

FORMATION TEST DATA

FORMATION TEST DATA



PRESSURE

Gauge No.		814		Depth		3684		Clock		12 hour		Ticket No.		461161	
	First Flow Period		Initial Closed In Pressure			Second Flow Period		Final Closed In Pressure							
	Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	Log $\frac{t+\phi}{\phi}$	PSIG Temp. Corr.	Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	Log $\frac{t+\phi}{\phi}$	PSIG Temp. Corr.					
P ₀	.000	113	.000		146	.000	140	.000		154					
P ₁	.0112	106	.031		430	.0689	153	.0418		221					
P ₂	.0224	115	.062		486	.1378	167	.0836		258					
P ₃	.0336	126	.093		528	.2067	158	.1254		293					
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P ₅	.056	146	.155		610	.3445	151	.2090		339					
P ₆			.186		645	.434	154*	.2508		354					
P ₇			.217		676			.2926		366					
P ₈			.248		697			.3344		374					
P ₉			.279		712			.3762		380					
P ₁₀			.310		723			.418		384					
Gauge No.		812		Depth		3864'		Clock		24 hour					
P ₀	.000	194	.000		216	.000	200	.000		240					
P ₁	.0056	186	.0152		497	.0333	223	.0202		299					
P ₂	.0112	189	.0304		563	.0666	243	.0404		334					
P ₃	.0168	197	.0456		605	.0999	236	.0606		369					
P ₄	.0224	209	.0608		648	.1332	230	.0808		399					
P ₅	.028	216	.0760		685	.1665	232	.1010		417					
P ₆			.0912		722	.210	240*	.1212		433					
P ₇			.1064		749			.1414		444					
P ₈			.1216		771			.1616		454					
P ₉			.1368		786			.1818		461					
P ₁₀			.152		796			.202		467					
Reading Interval		1		4.5		10		6		Minutes					
REMARKS:												* INTERVAL = 13 MINUTES.			

SPECIAL PRESSURE DATA CO. & G. 11/13

30770M

Each Horizontal Line Equal to 1000 p.s.i.



NOMENCLATURE

b	= Approximate Radius of Investigation	..... Feet
b_1	= Approximate Radius of Investigation (Net Pay Zone h_1)	..... Feet
D.R.	= Damage Ratio	.....
EI	= Elevation	..... Feet
GD	= B.T. Gauge Depth (From Surface Reference)	..... Feet
h	= Interval Tested	..... Feet
h_1	= Net Pay Thickness	..... Feet
K	= Permeability	..... md
K_1	= Permeability (From Net Pay Zone h_1)	..... md
m	= Slope Extrapolated Pressure Plot ($\text{Psi}^2/\text{cycle Gas}$)	..... \text{psi/cycle
OF_1	= Maximum Indicated Flow Rate	..... MCF/D
OF_2	= Minimum Indicated Flow Rate	..... MCF/D
OF_3	= Theoretical Open Flow Potential with/Damage Removed Max.	..... MCF/D
OF_4	= Theoretical Open Flow Potential with/Damage Removed Min.	..... MCF/D
P_s	= Extrapolated Static Pressure	..... Psig.
P_f	= Final Flow Pressure	..... Psig.
P_{o1}	= Potentiometric Surface (Fresh Water*)	..... Feet
Q	= Average Adjusted Production Rate During Test	..... bbls/day
Q_1	= Theoretical Production w/Damage Removed	..... bbls/day
Q_g	= Measured Gas Production Rate	..... MCF/D
R	= Corrected Recovery	..... bbls
r_w	= Radius of Well Bore	..... Feet
t	= Flow Time	..... Minutes
t_o	= Total Flow Time	..... Minutes
T	= Temperature Rankine	..... °R
Z	= Compressibility Factor	.....
μ	= Viscosity Gas or Liquid	..... CP
Log	= Common Log	

* Potentiometric Surface Reference to Rotary Table When Elevation Not Given,
Fresh Water Corrected to 100° F.

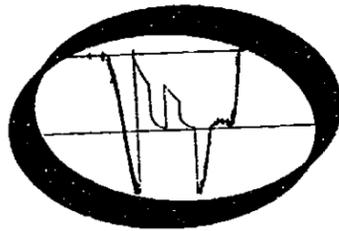
Formation Testing Service Report

NAVAJO

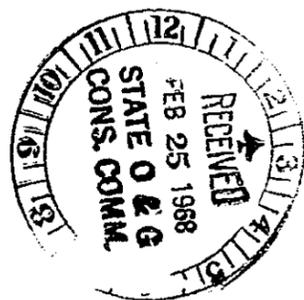
10

1

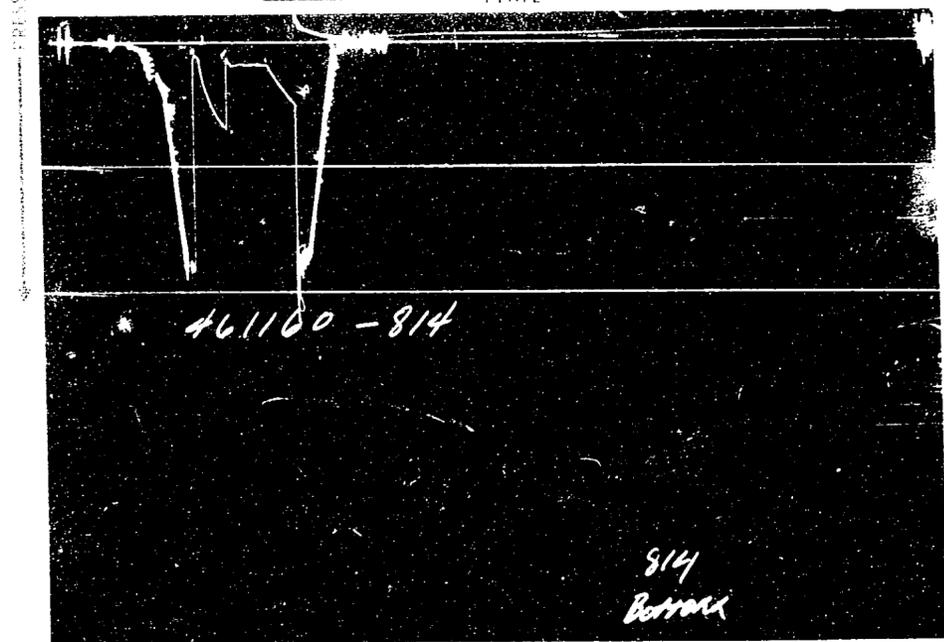
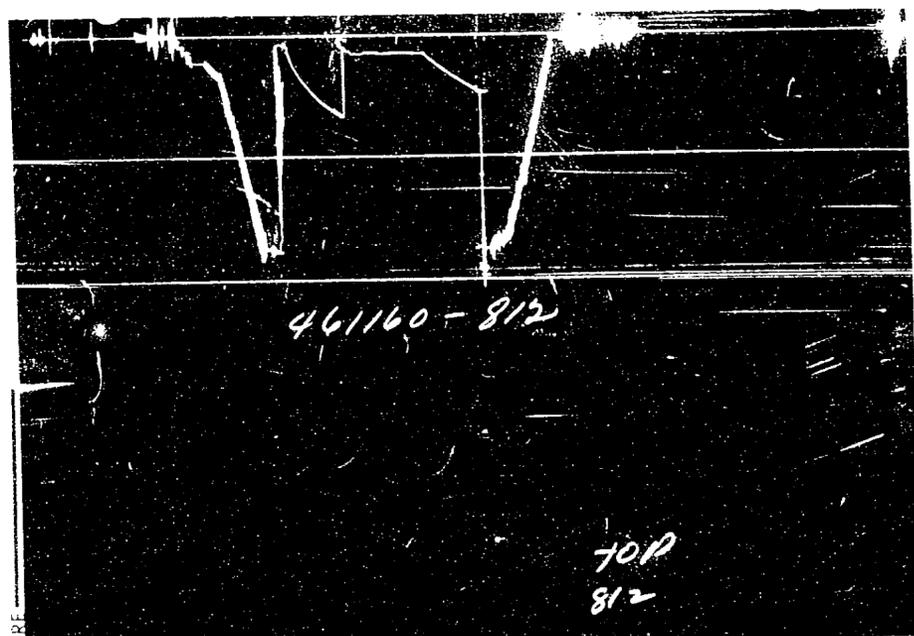
KERR MC GEE CORPORATION



446



HALLIBURTON COMPANY
DUNCAN, OKLAHOMA



Each Horizontal Line Equal to 1000 p.s.i.

Time	Well No.	Kind of Job	Date	Sheet Number
	461160-812			
	461160-814			
Field		Office Corrected		Witness
Blanked On	Drilling Contractor			
Hour Clock	Elevation			
Initial Hydro Mud Pressure	Total Depth			
Initial Closed in Pres	Interval Tested			
Initial Flow Pres	Casing or Hole Size			
Final Flow Pres	Surface Choke			
Final Closed in Pres	Size & Kind Drill Pipe			
Final Hydro Mud Pressure	Mud Weight			
Depth Cor. Gauge	Temperature			
Blanked Off	Temps			
Hour Clock	Depth Meas. From			
Initial Hydro Mud Pres	Cushion			
Initial Closed in Pres	Recovered			
Initial Flow Pres	Recovered			
Final Flow Pres	Recovered			
Final Closed in Pres	Recovered			
Final Hydro Mud Pres	Oil A.P.I. Gravity			
Depth Cor. Gauge	Gas Gravity			
Blanked Off	Gas Gravity			
Hour Clock	Tool Opened			
Initial Hydro Mud Pres	Remarks			
Initial Closed in Pres				
Initial Flow Pres				
Final Flow Pres				
Final Closed in Pres				
Final Hydro Mud Pres				

FORMATION TEST DATA
SPECIAL PRESSURE DATA

Gauge No. 812		Depth 3590'			Clock 12 hour		Ticket No. 461160			
	First Flow Period		Initial Closed In Pressure			Second Flow Period		Final Closed In Pressure		
	Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	Log $\frac{t+\phi}{\phi}$	PSIG Temp. Corr.	Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	Log $\frac{t+\phi}{\phi}$	
P ₀	.000	97	.000		99	.000	106	.000		156
P ₁	.0126	74	.0344		264	.090	157	.0339		204
P ₂	.0252	76	.0688		350	.180	150	.0678		244
P ₃	.0378	83	.1032		417	.270	151	.1017		281
P ₄	.0504	90	.1376		479	.360	153	.1356		317
P ₅	.0630	99	.1720		531	.450	156	.1695		351
P ₆			.2064		574			.2034		384
P ₇			.2408		610			.2373		414
P ₈			.2752		641			.2712		446
P ₉			.3100		666			.3050		474
P ₁₀			--		--			--		--
Gauge No. 814		Depth 3680'			Clock 24 hour					
P ₀	.000	151	.000		130	.000	130	.000		185
P ₁	.0066	112	.0174		276	.046	186	.0173		225
P ₂	.0132	106	.0348		370	.092	178	.0346		265
P ₃	.0198	112	.0522		444	.138	179	.0519		305
P ₄	.0264	120	.0696		503	.184	181	.0692		342
P ₅	.0330	130	.0870		557	.230	185	.0865		374
P ₆			.1044		602			.1038		408
P ₇			.1218		635			.1211		443
P ₈			.1392		666			.1384		472
P ₉			.1570		691			.1560		500
P ₁₀			--		--			--		--
Reading Interval		2	9		13		5		Minutes	
REMARKS:										

Each Horizontal Line Equal to 1000 p.s.i.

SPECIAL PRESSURE DATA

13

NOMENCLATURE

b	= Approximate Radius of Investigation Feet
b_1	= Approximate Radius of Investigation (Net Pay Zone h) Feet
D.R.	= Damage Ratio
El	= Elevation Feet
GD	= B.T. Gauge Depth (From Surface Reference) Feet
h	= Interval Tested Feet
h_1	= Net Pay Thickness Feet
K	= Permeability md
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Z	= Compressibility Factor
μ	= Viscosity Gas or Liquid CP
Log	= Common Log	

* Potentiometric Surface Reference to Rotary Table When Elevation Not Given.
Fresh Water Corrected to 100° F.

KERR-McGEE CORPORATION



CASE NO. 50
WATER INJECTION
DINEH-BI-KEYAH FIELD
APACHE COUNTY, ARIZONA
SEPTEMBER 19, 1975

446

PRODUCTION DEPARTMENT

OIL AND GAS OPERATIONS

Applicant & Exhibit #1
9-19-75 (ml)

KERR-McGEE NAVAJO #10
PROPOSED DOWNHOLE COMPLETION SKETCH

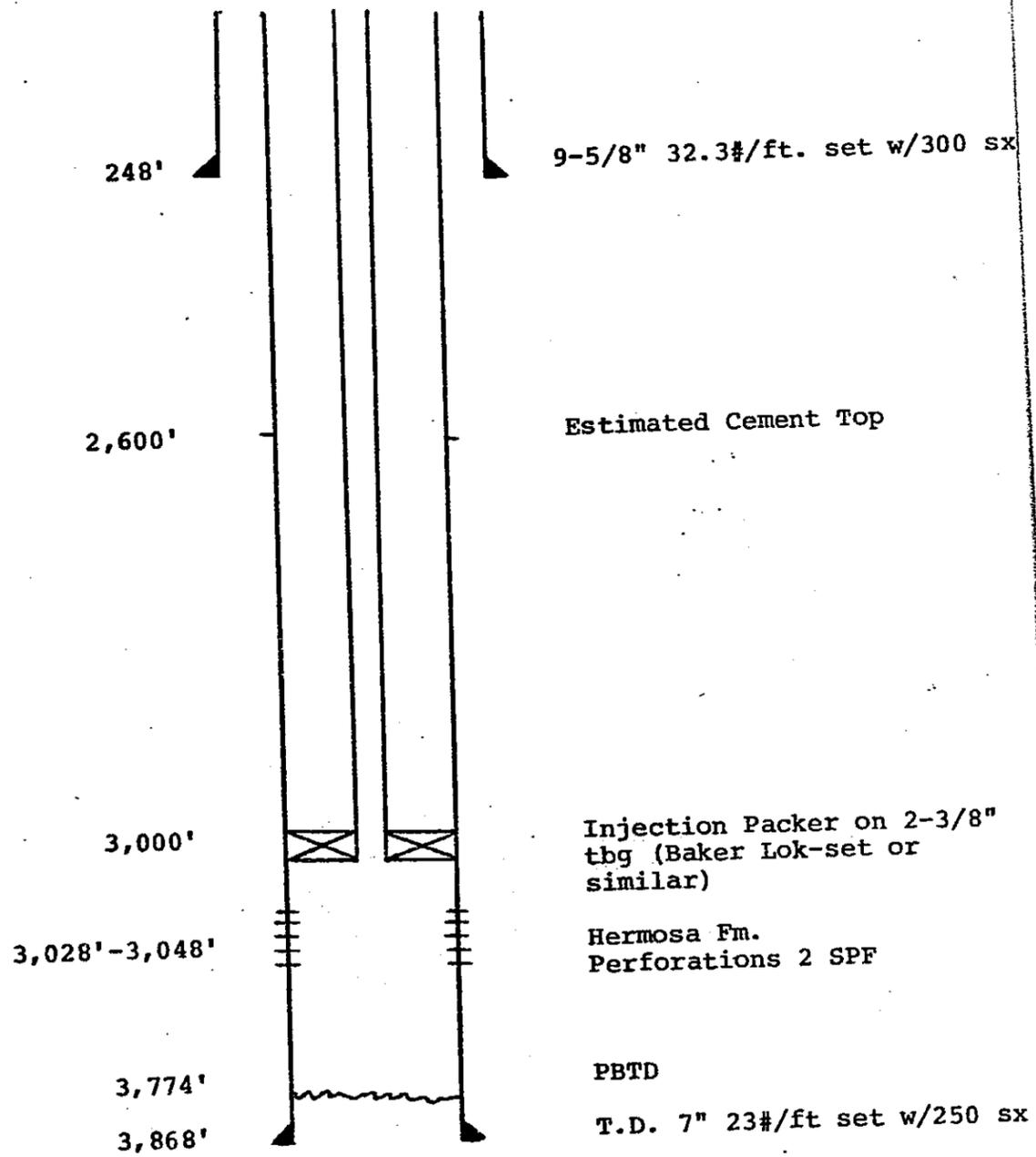


EXHIBIT NO. 2
CASE NO. 50
SEPTEMBER 19, 1975

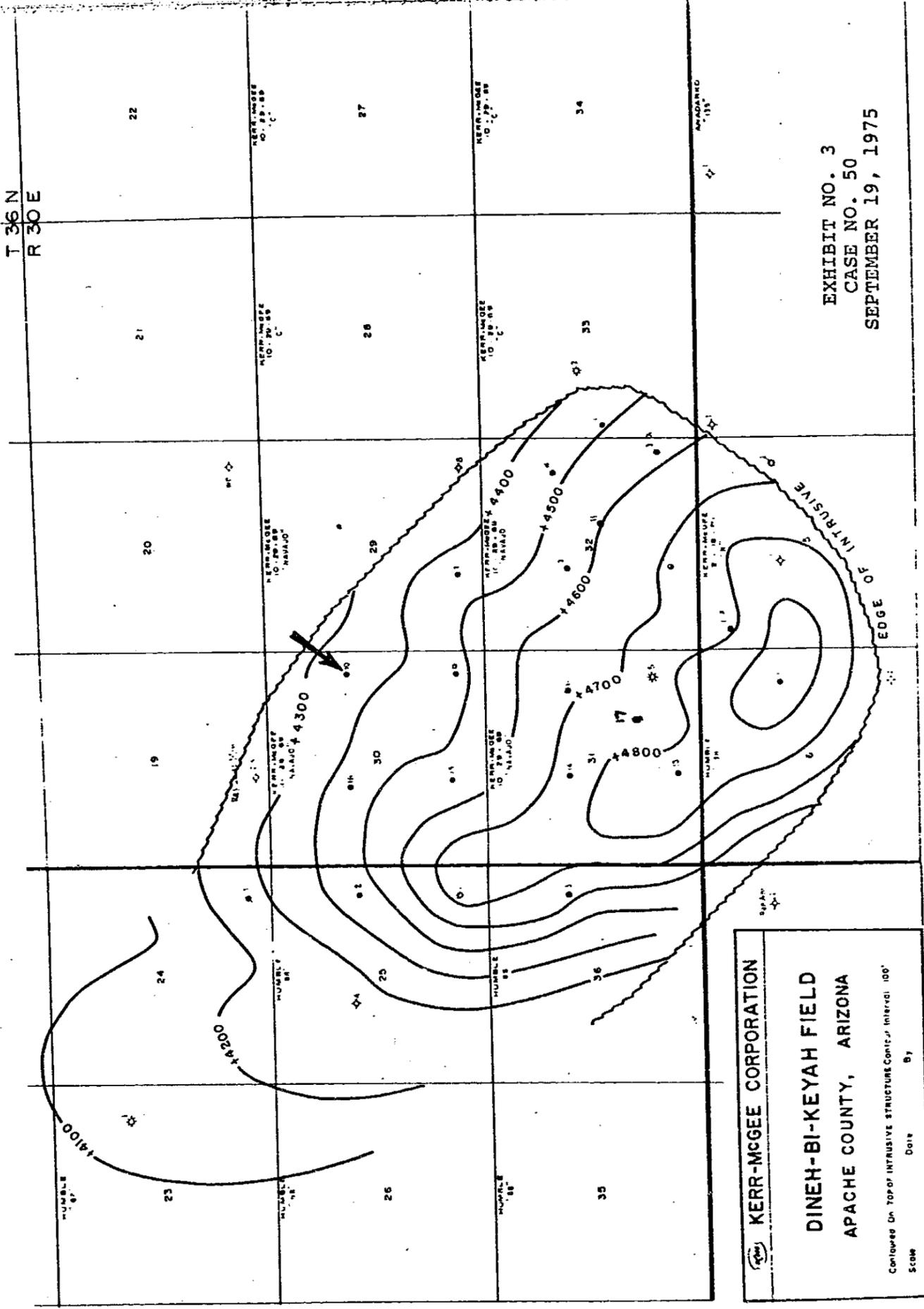


EXHIBIT NO. 3
CASE NO. 50
SEPTEMBER 19, 1975

KERR-MCGEE CORPORATION
DINEH-BI-KEYAH FIELD
APACHE COUNTY, ARIZONA
Contours On Topographic Structure Contour Interval 100'
Scale _____ Date _____ By _____

ESTIMATED RECOVERY
IMBIBITION FLOODING
DINEH-BI-KEYAH FIELD

	<u>Million Bbls</u>	<u>% Original Oil In Place</u>
Cumulative Recovery to 6/1/75	13.62	18.2%
Est. Remaining Primary Recovery	6.40	8.5%
Est. Ultimate Primary Recovery	20.02	26.7%
Est. Remaining Oil In Reservoir After Primary Recovery	54.98	73.3%

The above assumes an original oil in place in this reservoir
of 75 mm bbls.

EXHIBIT NO. 4
CASE NO. 50
SEPTEMBER 19, 1975

DINEH-BI-KEYAH FIELD

Operator: Mountain States Petroleum Corporation

Bond Company: Indian lands, evidence of bond posted with BIA

Amount: \$325,000*

Bond No.: Letter of Credit Bond No. 315 **Date approved:** 5/27/94

* Pursuant to commission motion of October 31, 1997, no bond required with State of Arizona upon evidence of bond posted with the BIA.

Permits covered by this bond posted with the BIA:

<u>377</u>	<u>445</u>
<u>384</u>	<u>446</u> ✓
<u>385</u>	<u>484</u>
<u>386</u>	<u>506</u>
<u>388</u>	<u>618</u>
<u>389</u>	<u>691</u>
<u>390</u>	<u>692</u>
<u>396</u>	<u>693</u>
<u>416</u>	<u>695</u>
<u>417</u>	<u>696</u>
<u>419</u>	<u>719</u>
<u>421</u>	<u>720</u>
<u>422</u>	<u>721</u>
<u>431</u>	<u>722</u>
<u>443</u>	<u>723</u>



Jane Dee Hull
Governor

State of Arizona
Arizona Geological Survey
416 W. Congress, Suite 100
Tucson, Arizona 85701
(520) 770-3500



Larry D. Fellows
Director and State Geologist

June 8, 2001

Mr. Melvin Badonie
Navajo Nation Dept of Water Resources
P. O. Box 678
Fort Defiance AZ 86504

file # 446

Dear Mel:

I have enclosed information from the three wells you called about this morning. The information includes, where available, the plugging and completion reports, application to plug, and a copy of the wireline and lithologic logs.

There is a lithologic, induction electric, gamma ray-neutron, and sonic-gamma ray log for the Pure Oil #1 Navajo well in se 32-38n-30e. There is an induction electric and sonic-gamma ray log for the Kerr McGee #10 Navajo well in ne 30-36n-30e. The #10 Navajo originally produced oil, then, when the oil production rate got to low to be economic, it was converted to a produced-water disposal well. There is a gamma ray-sonic, induction electric, microlog, and density log for the Kerr-McGee #1 Navajo-E well in se 20-36n-30e. The #1 Navajo-E was drilled originally as a dry hole and plugged, then, it was re-entered and used for a time as a produced-water disposal well. It is now plugged and abandoned.

446

Sincerely,

Steve

Steven L. Rauzi
Oil & Gas Administrator

Enclosures



Jane Dee Hull
Governor

State of Arizona
Arizona Geological Survey

416 W. Congress, Suite 100
Tucson, Arizona 85701
(520) 770-3500



Larry D. Fellows
Director and State Geologist

December 1, 1997

Ms. Stacey Roberts
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City, OK 73125

446

Re: Kerr-McGee Corporation
\$25,000 Oil Drilling Blanket Bond #2971100-2620
Safeco Insurance Company of America

Dear Ms. Roberts:

Mountain States Petroleum has provided evidence of its bonding with the BIA for the Dineh-bi-Keyah Field in Arizona, and our records show that Kerr-McGee Corporation has no outstanding drilling or plugging obligations in Arizona.

As a result, this letter constitutes written permission by the Oil and Gas Conservation Commission to terminate liability under the referenced bond. A copy of the bond is enclosed for your information.

Please advise if we may be of further service.

Sincerely,

Steven L. Rauzi
Oil & Gas Program Administrator

Enclosure

Operator KERR-McGEE CORPORATION
Bond Company SAFECO INSURANCE COMPANY OF AMERICA Amount \$25,000
Bond No. 2971100-2620 Date Approved FEBRUARY 18, 1994
DATE

CANCELLED

ACTIVE

Permits covered by this bond:

377	445
384	446
385	484
386	506
388	618
389	691
390	692
396	693
416	695
417	696
419	719
421	720
422	721
431	722
443	723



Fife Symington
Governor

State of Arizona
Arizona Geological Survey

416 W. Congress, Suite 100
Tucson, Arizona 85701
(520) 770-3500



Larry D. Fellows
Director and State Geologist

April 25, 1996

Mr. Roger P. Slayton, President
Mountain States Petroleum Corp
P. O. Box 1936
Roswell, New Mexico 88201

File 446

Dear Mr. Slayton:

I just finished updating my injection records and noted a discrepancy in the cumulative water injected into the Navajo #10 disposal well in the Dineh-bi-Keyah Field, Arizona. My record indicates the cumulative injection figure on the submitted injection reports has been carrying a surplus of 10,414 barrels since December 1978:

- 1) The cumulative figure for produced water is 9,663 bbls high on the reports.
- 2) The cumulative figure for backflowed water is 751 bbls high on the reports.

A printout of my record and the pertinent injection reports are enclosed for your review. If you agree my record is correct, please note an adjustment of -9,663 bbls for the total produced water and -751 bbls for the total backflowed water on a future injection report (suggested annotation attached), otherwise please let me know where my record is in error.

Thank you.

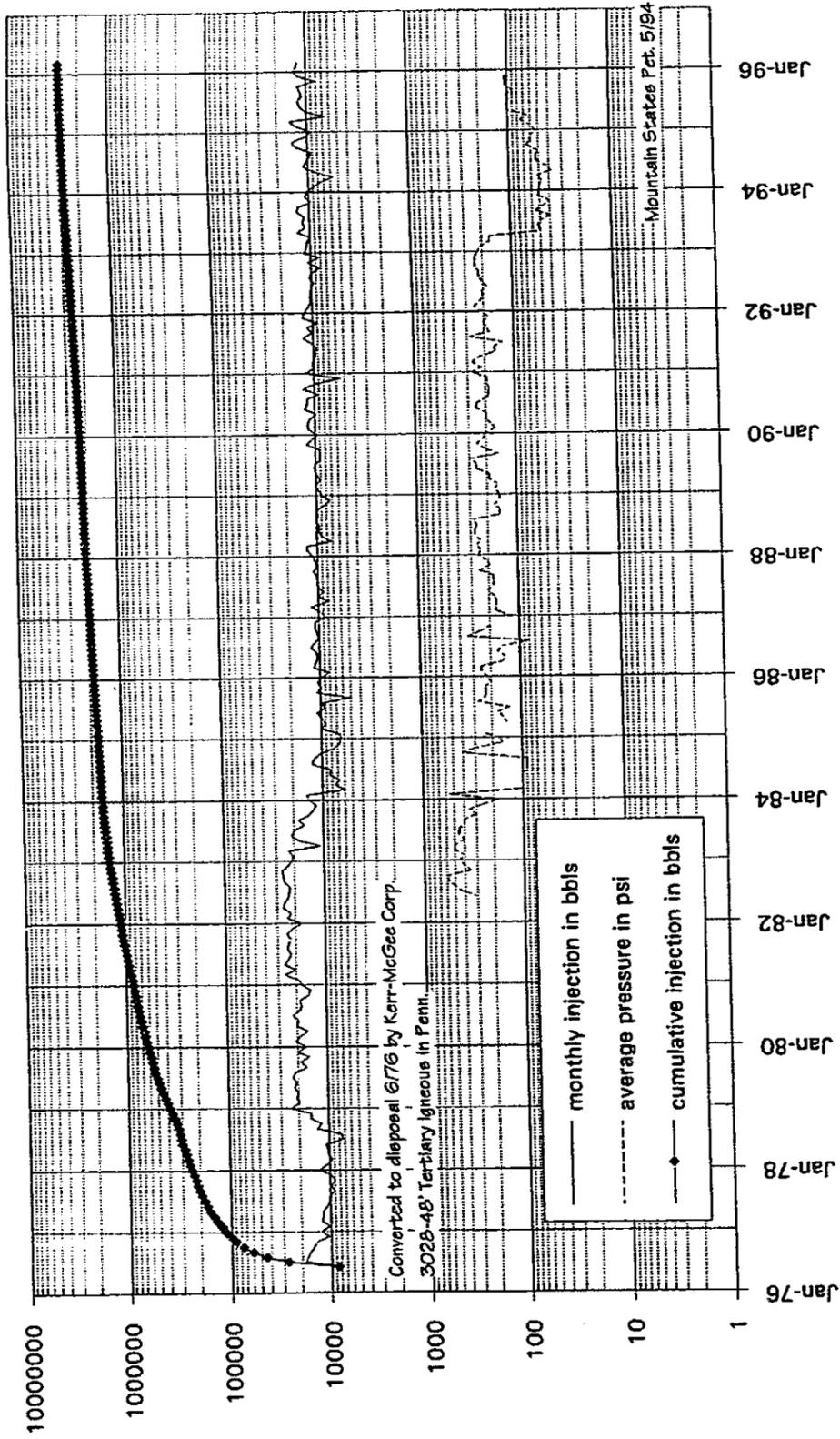
Sincerely,

Steven L. Rauzi

Steven L. Rauzi
Oil & Gas Program Administrator

Enclosures

WATER DISPOSAL AT 10 NAVAJO (446), DINEH-BI-KEYAH FIELD, ARIZONA: 6/76 -- 3/96
SE NE 30-36N-30E, Apache County



MONTHLY WATER DISPOSAL AT 10 NAVAJO (446), DINEH-BI-KEYAH FIELD, ARIZONA
(per SLR audit of producer's injection reports 6/76 - 3/96)

DATE	month inj	ave psi	cum inj	bk flw'd	bk'fl cum	comments
Jan-76						
Feb-76						Kerr-McGee Corp.
Mar-76						#10 Navajo (p/n 446)
Apr-76						
May-76						
Jun-76	8549		8549	5571	5571	1st injection 6/76
Jul-76	18296		26845	10017	15588	3028'-3048'
Aug-76	17241		44086	7729	23317	Tert. igneous in Penn.
Sep-76	16221		60307	6065	29382	
Oct-76	14890		75197	5005	34387	
Nov-76	13681		88878	4645	39032	
Dec-76	10497		99375	4021	43053	
Jan-77	12538		111913	3074	46127	
Feb-77	10254		122167	2162	48289	
Mar-77	12376		134543	1858	50147	
Apr-77	11872		146415	1385	51532	
May-77	12075		158490	862	52394	
Jun-77	10690		169180	643	53037	
Jul-77	10247		179427	463	53500	
Aug-77	9989		189416	343	53843	
Sep-77	8993		198409	257	54100	
Oct-77	9788		208197	218	54318	
Nov-77	8908		217105	166	54484	
Dec-77	9788		226893	140	54624	
Jan-78	12798		239691	100	54724	
Feb-78	10670		250361	68	54792	
Mar-78	9410		259771	55	54847	
Apr-78	10270		270041	33	54880	
May-78	10418		280459	4	54884	
Jun-78	10863		291322		54884	
Jul-78	7277		298599	4	54888	last bkflw'd 7/78
DATE	month inj	ave psi	cum inj			comments
Aug-78	7602		306201			rptd bkflw cum 751 bbls high
Sep-78	13026		319227			rptd prod cum 7416 bbls high
Oct-78	11822		331049			rptd cum 9342 bbls high
Nov-78	15029		346078			rptd cum 9766 bbls high
Dec-78	15170		361248			rptd cum 10414 bbls high
Jan-79	23755		385003			
Feb-79	19344		404347			
Mar-79	20585		424932			
Apr-79	19925		444857			
May-79	21742		466599			
Jun-79	20740		487339			
Jul-79	22599		509938			
Aug-79	21281		531219			
Sep-79	16169		547388			

MONTHLY WATER DISPOSAL AT 10 NAVAJO (446), DINEH-BI-KEYAH FIELD, ARIZONA
(per SLR audit of producer's injection reports 6/76 -- 3/96)

DATE	month inj	ave psi	cum inj	comments
Oct-79	18875		566263	
Nov-79	15302		581565	
Dec-79	20023		601588	rptd cum cont. 10414 bbls high
Jan-80	16431		618019	
Feb-80	20563		638582	
Mar-80	18887		657469	
Apr-80	15703		673172	
May-80	19861		693033	
Jun-80	19164		712197	
Jul-80	21925		734122	
Aug-80	18652		752774	
Sep-80	17977		770751	
Oct-80	18488		789239	
Nov-80	15186		804425	
Dec-80	14522		818947	rptd cum cont. 10414 bbls high
Jan-81	17590		836537	
Feb-81	18876		855413	
Mar-81	25523		880936	
Apr-81	20239		901175	
May-81	25566		926741	
Jun-81	23667		950408	
Jul-81	22286		972694	
Aug-81	23796		996490	
Sep-81	23138		1019628	
Oct-81	22124		1041752	
Nov-81	24143		1065895	
Dec-81	21356		1087251	rptd cum cont. 10414 bbls high
Jan-82	17051		1104302	
Feb-82	23580		1127882	
Mar-82	21826		1149708	
Apr-82	25965		1175673	
May-82	25368		1201041	
Jun-82	23072	300	1224113	
Jul-82	22684	420	1246797	
Aug-82	22320	500	1269117	
Sep-82	25202	580	1294319	
Oct-82	25729	592	1320048	
Nov-82	26693	350	1346741	
Dec-82	23521	400	1370262	rptd cum cont. 10414 bbls high
Jan-83	21230	450	1391492	
Feb-83	20415	400	1411907	
Mar-83	22497	500	1434404	
Apr-83	10793	500	1445197	
May-83	17664	400	1462861	
Jun-83	21057	450	1483918	
Jul-83	19444	450	1503362	

MONTHLY WATER DISPOSAL AT 10 NAVAJO (446), DINEH-BI-KEYAH FIELD, ARIZONA
(per SLR audit of producer's injection reports 6/76 - 3/96)

DATE	month inj	ave psi	cum inj	comments
Aug-83	15590	400	1518952	
Sep-83	17691	400	1536643	
Oct-83	14064	300	1550707	
Nov-83	12580	350	1563287	
Dec-83	11797	250	1575084	rptd cum cont. 10414 bbls high
Jan-84	13917	175	1589001	
Feb-84	14416	550	1603417	
Mar-84	5926	100	1609343	
Apr-84	7450	100	1616793	
May-84	6797	100	1623590	
Jun-84	8473	100	1632063	
Jul-84	8317	90	1640380	
Aug-84	12549	90	1652929	
Sep-84	12256	90	1665185	
Oct-84	10531	400	1675716	
Nov-84	7828	300	1683544	
Dec-84	6664	160	1690208	rptd cum cont. 10414 bbls high
Jan-85	6440	170	1696648	
Feb-85	6630	250	1703278	
Mar-85	9946		1713224	No March rpt -- est. 9946 bbls
Apr-85	9046	140	1722270	
May-85	9897	155	1732167	
Jun-85	10964	170	1743131	
Jul-85	9171	130	1752302	
Aug-85	9655	270	1761957	
Sep-85	4953	230	1766910	
Oct-85	10977	230	1777887	
Nov-85	9767	230	1787654	
Dec-85	10710	200	1798364	rptd cum cont. 10414 bbls high
Jan-86	9964	218	1808328	
Feb-86	8102	250	1816430	
Mar-86	11547	250	1827977	
Apr-86	10926	150	1838903	
May-86	10594	142	1849497	
Jun-86	10822	170	1860319	
Jul-86	12313	150	1872632	
Aug-86	10874	80	1883506	
Sep-86	10061	335	1893567	
Oct-86	10725	250	1904292	
Nov-86	11016	200	1915308	rptd cum cont. 10414 bbls high
Dec-86	10924		1926232	No Dec. rpt -- est. 10924 bbls
Jan-87	8719	120	1934951	rptd cum cont. 10414 bbls high
Feb-87	9468	175	1944419	
Mar-87	11832	170	1956251	
Apr-87	7942	170	1964193	
May-87	9965	180	1974158	

MONTHLY WATER DISPOSAL AT 10 NAVAJO (446), DINEH-BI-KEYAH FIELD, ARIZONA
(per SLR audit of producer's injection reports 6/76 - 3/96)

DATE	month inj	ave psi	cum inj	comments
Jun-87	9009	205	1983167	
Jul-87	10138	180	1993305	
Aug-87	10337	180	2003642	
Sep-87	10294	180	2013936	
Oct-87	11021	250	2024957	
Nov-87	10180	195	2035137	
Dec-87	10631	213	2045768	rptd cum cont. 10414 bbls high
Jan-88	11206	250	2056974	
Feb-88	12632	240	2069606	
Mar-88	12745	260	2082351	
Apr-88	7304	240	2089655	
May-88	9114	270	2098769	
Jun-88	9616	270	2108385	
Jul-88	9408	260	2117793	
Aug-88	10022	280	2127815	
Sep-88	9855	150	2137670	
Oct-88	9915	150	2147585	
Nov-88	8599	170	2156184	
Dec-88	7319	150	2163503	rptd cum cont. 10414 bbls high
Jan-89	9046	150	2172549	
Feb-89	9437	166	2181986	
Mar-89	10192	158	2192178	
Apr-89	9139	191	2201317	
May-89	9803	189	2211120	
Jun-89	10413	257	2221533	
Jul-89	10243	257	2231776	
Aug-89	9195	290	2240971	
Sep-89	9168	150	2250139	
Oct-89	9102	212	2259241	
Nov-89	12303	250	2271544	
Dec-89	10824	210	2282368	rptd cum cont. 10414 bbls high
Jan-90	9543	210	2291911	
Feb-90	11759	162	2303670	
Mar-90	11875	180	2315545	
Apr-90	11128	201	2326673	
May-90	9646	199	2336319	
Jun-90	12581	251	2348900	
Jul-90	11836	248	2360736	
Aug-90	11888	192	2372624	
Sep-90	9118	188	2381742	
Oct-90	12927	186	2394669	
Nov-90	9768	194	2404437	
Dec-90	5427	190	2409864	rptd cum cont. 10414 bbls high
Jan-91	12209	267	2422073	
Feb-91	10178	217	2432251	
Mar-91	10413	268	2442664	

MONTHLY WATER DISPOSAL AT 10 NAVAJO (446), DINEH-BI-KEYAH FIELD, ARIZONA
(per SLR audit of producer's injection reports 6/76 -- 3/96)

DATE	month inj	ave psi	cum inj	comments
Apr-91	9715	230	2452379	
May-91	9581	158	2461960	
Jun-91	9359	161	2471319	
Jul-91	10523	132	2481842	
Aug-91	12620	277	2494462	
Sep-91	10321	178	2504783	
Oct-91	11516	194	2516299	
Nov-91	8999	203	2525298	
Dec-91	12604	183	2537902	rptd cum cont. 10414 bbls high
Jan-92	12388	208	2550290	
Feb-92	11012	250	2561302	
Mar-92	10450	219	2571752	
Apr-92	10505	200	2582257	
May-92	10457	208	2592714	
Jun-92	10204	184	2602918	
Jul-92	9615	204	2612533	
Aug-92	10524	219	2623057	
Sep-92	9896	219	2632953	
Oct-92	8297	238	2641250	
Nov-92	10838	239	2652088	
Dec-92	8311	239	2660399	rptd cum cont. 10414 bbls high
Jan-93	11779	221	2672178	
Feb-93	10998	206	2683176	
Mar-93	10751	167	2693927	
Apr-93	10108	167	2704035	
May-93	13216	50	2717251	
Jun-93	11145	53	2728396	
Jul-93	11810	50	2740206	
Aug-93	11380	40	2751586	
Sep-93	13271	55	2764857	
Oct-93	12928	47	2777785	
Nov-93	9660	40	2787445	
Dec-93	10887	52	2798332	rptd cum cont. 10414 bbls high
Jan-94	10380	50	2808712	
Feb-94	8881	50	2817593	
Mar-94	7639	47	2825232	
Apr-94	5680	52	2830912	
May-94	8612	38	2839524	Mountain States Petroleum
Jun-94	11042	42	2850566	
Jul-94	10499	53	2861065	
Aug-94	9526	54	2870591	
Sep-94	9495	51	2880086	
Oct-94	13334	66	2893420	
Nov-94	14301	61	2907721	
Dec-94	10561	60	2918282	rptd cum cont. 10414 bbls high
Jan-95	9091	54	2927373	

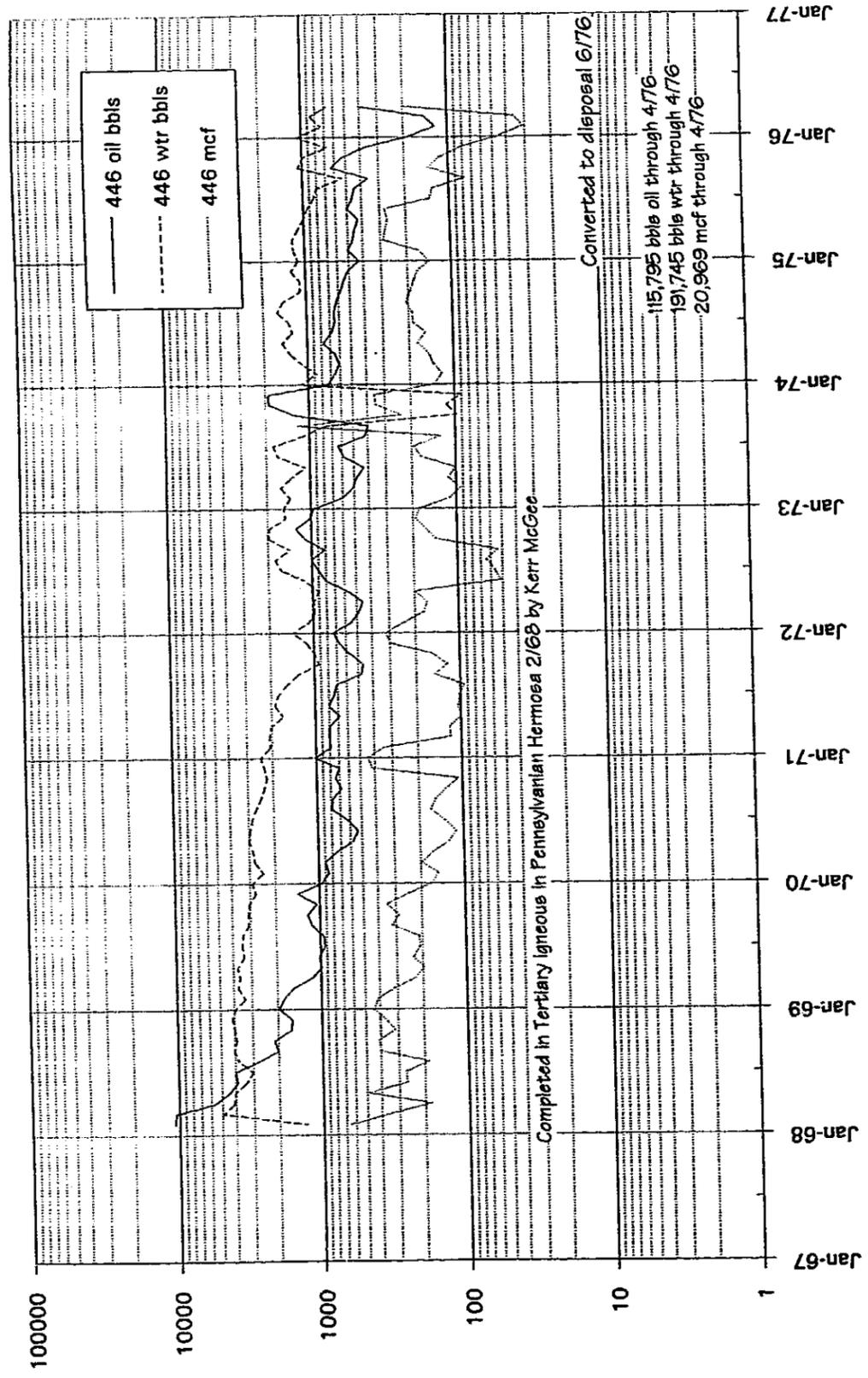
MONTHLY WATER DISPOSAL AT 10 NAVAJO (446), DINEH-BI-KEYAH FIELD, ARIZONA
(per SLR audit of producer's injection reports 6/76 - 3/96)

DATE	month inj	ave psi	cum inj	comments
Feb-95	12899	60	2940272	
Mar-95	14755	75	2955027	
Apr-95	6704	64	2961731	
May-95	10349	99	2972080	
Jun-95	11806	104	2983886	
Jul-95	12214	98	2996100	
Aug-95	11250	104	3007350	
Sep-95	11412	89	3018762	
Oct-95	12186	106	3030948	
Nov-95	8121	106	3039069	
Dec-95	12144	106	3051213	rptd cum cont. 10414 bbls high
Jan-96	13419		3064632	
Feb-96	12430		3077062	
Mar-96	12186		3089248	
Apr-96				
May-96				
Jun-96				
Jul-96				
Aug-96				
Sep-96				
Oct-96				
Nov-96				
Dec-96				
Jan-97				

S.L. RAUZI AUDIT OF PRODUCED, BACKFLOWED, AND CUMULATIVE WATER INJECTED INTO
10 NAVAJO (446), DINEH-BI-KEYAH FIELD, ARIZONA: JUNE 1976 - JULY 1978

DATE	produced/	cum prod	bflwd/mo	cum bflwd	tot inj mo	cum inj	comment
Jun-76	2978	2978	5571	5571	8549	8549	1st injection June 1976
Jul-76	8279	11257	10017	15588	18296	26845	
Aug-76	9512	20769	7729	23317	17241	44086	
Sep-76	10156	30925	6065	29382	16221	60307	cum on rpt is 743 bbls low
Oct-76	9885	40810	5005	34387	14890	75197	rptd cum 241 bbls low
Nov-76	9036	49846	4645	39032	13681	88878	ditto
Dec-76	6476	56322	4021	43053	10497	99375	rptd cum 238 bbls low
Jan-77	9464	65786	3074	46127	12538	111913	rptd cum 692 bbls high
Feb-77	8092	73878	2162	48289	10254	122167	rptd cum 1084 bbls high
Mar-77	10518	84396	1858	50147	12376	134543	rptd cum 1495 bbls high
Apr-77	10487	94883	1385	51532	11872	146415	rptd cum 1993 bbls high
May-77	11213	106096	862	52394	12075	158490	rptd cum 2319 bbls high
Jun-77	10047	116143	643	53037	10690	169180	rptd cum 2279 bbls high
Jul-77	9784	125927	463	53500	10247	179427	rptd cum 3031 bbls high
Aug-77	9646	135573	343	53843	9989	189416	rptd cum 3351 bbls high
Sep-77	8736	144309	257	54100	8993	198409	rptd cum 3665 bbls high
Oct-77	9570	153879	218	54318	9788	208197	rptd cum 3975 bbls high
Nov-77	8742	162621	166	54484	8908	217105	rptd cum 4364 bbls high
Dec-77	9648	172269	140	54624	9788	226893	rptd cum 4739 bbls high
Jan-78	12698	184967	100	54724	12798	239691	rptd cum 5353 bbls high
Feb-78	10602	195569	68	54792	10670	250361	rptd cum 5902 bbls high
Mar-78	9355	204924	55	54847	9410	259771	rptd cum 6310 bbls high
Apr-78	10237	215161	33	54880	10270	270041	rptd cum 6747 bbls high
May-78	10414	225575	4	54884	10418	280459	rptd cum 7422 bbls high
Jun-78	10863	236438		54884	10863	291322	rptd cum 7769 bbls high
Jul-78	7273	243711	4	54888	7277	298599	rptd cum 8167 bbls high
							Last backflowed water injected July 1978
							Cumulative produced water injected is 7416 bbls high on submitted reports
							Cumulative backflowed water injected is 751 bbls high on submitted reports
							Cumulative combined water injected is thus 8167 bbls high on submitted reports
							Discrepancy is attributed to improper addition of monthly injection amounts on submitted reports

MONTHLY PRODUCTION AT 10 NAVAJO (446), ARIZONA: FEB 1968 - APR 1976
 se ne 30-36n-30e, Dineh-bi-Keyah Field, Apache County





Fife Symington
Governor

State of Arizona
Arizona Geological Survey
845 North Park Avenue, #100
Tucson, Arizona 85719
(602) 882-4795



Larry D. Fellows
Director and State Geologist

June 8, 1994

Ms. Judy Burkhart
Mountain States Petroleum Corporation
P. O. Box 1936
Roswell, New Mexico 88201

Dear Ms. Burkhart:

This will acknowledge receipt of your letter of June 6, which included a change of operator form for each of the 31 Kerr-McGee Corporation wells at the Dineh-bi-Keyah Field sold to Mountain States Petroleum Corporation. Our records indicate that the Navajo #B-1 was plugged and abandoned by Kerr-McGee Corporation in October 1993.

Please note that our records indicate a different API number than the one you have recorded on your forms for the following wells:

<u>Well</u>	<u>API #</u>
Navajo 01	02-001-20001
Navajo 03X	02-001-20011
Navajo 04	02-001-20009
Navajo 10	02-001-20042
Navajo 14	02-001-20040
Navajo 15	02-001-20041

Sincerely,

Steven L. Rauzi
Oil & Gas Program Administrator

UNITED STATES DEPARTMENT OF THE INTERIOR
MINERALS MANAGEMENT SERVICE
ROYALTY MANAGEMENT PROGRAM

CHANGES TO REPORTER INFORMATION

OLD INFORMATION:

MMS OPERATOR CODE: X0217

COMPANY NAME: KERR MCGEE CORPORATION

NEW INFORMATION:

MMS OPERATOR CODE: X0274

COMPANY NAME: MOUNTAIN STATES PETROLEUM CORP

CONTACT NAME: RUBY WICKERSHAM

STREET ADDRESS: 213 E FOURTH

CITY: ROSWELL

STATE: NM ZIP CODE: 88201

PHONE: 505 623-7184

COMPLETE IF APPLICABLE:

I AM NO LONGER AN OPERATOR OF INDIAN OR FEDERAL PROPERTIES.
PLEASE REMOVE MY NAME FROM YOUR MAILING LIST.

COMPANY SOLD TO: _____ EFFECTIVE DATE: _____

LEASES/AGREEMENTS AFFECTED: NAVAJO # 10 SWD (446)

Dineh Bi Keyah Field - Apache County, Arizona

Lease #: 14-20-0603-8823 API #: 020010531400S1 JUN 6 1994

02-001-20092

COMMENTS: This property was sold to Mountain States Petroleum Corp.
and they became operator effective May 1, 1994.

SIGNATURE: Judy Berkhart

DATE: 5/13/94

MAIL TO:
MINERALS MANAGEMENT SERVICE
ROYALTY MANAGEMENT PROGRAM
P.O. BOX 25165 MS 3122
DENVER, CO 80225

P. O. BOX 1936

505 623-7184

MOUNTAIN STATES PETROLEUM CORPORATION

213 EAST FOURTH STREET
ROSWELL, NEW MEXICO
88202

June 6, 1994

Arizona Geological Survey
845 North Park Avenue, #100
Tucson, Arizona, 85719

**AZ OIL & GAS
CONSERVATION COMMISSION**

JUN 8 1994

Attention: Steven L. Rauzi,
Oil & Gas Program Administrator

Re: Dineh-bi-Keyah Field
Apache County, Arizona

Dear Sir;

In followup of our May 24, 1994, letter to you relative to the change of operator from Kerr McGee to Mountain States Petroleum Corporation for the captioned field; please find enclosed a copy of the notices sent to the Minerals Management Service.

We hope this will supply the information you requested and apologize for any inconvenience we may have caused. If you have any questions or are in need of anything further please contact the undersigned. Thank you.

Sincerely,

Judy Burkhart
Judy Burkhart,
Secretary

Enclosures

P. O. BOX 1936

505 623-7184

MOUNTAIN STATES PETROLEUM CORPORATION

213 EAST FOURTH STREET
ROSWELL, NEW MEXICO
88202

May 24, 1994

Arizona Geological Survey
845 North Park Avenue, #100
Tucson, Arizona 85719

Attention: Steven L. Rauzi,
Oil & Gas Program Administrator

Re: Dineh-bi-Keyah Field
Apache County, Arizona

Dear Sir;

Please be advised that effective May 1, 1994, Mountain States Petroleum Corporation replaced Kerr-McGee as Operator of the captioned field and it's respective wells.

Listed on the attached sheet are the well names and API #'s of each well in this field, including shut-in, producing, and abandoned wells.

Please change your records to reflect that Mountain States Petroleum Corporation, Post Office Box 1936, Roswell, New Mexico, 88202-1936, (505) 623-7184, is now the operator of these properties and as such will be filing all required monthly production reports.

If you have any questions or are in need of anything further in this matter please contact the undersigned. Thank you.

Sincerely,

Judy Burkhart

Judy Burkhart,
Secretary

Attachment

CONSERVATION COMMISSION

MAY 31 1994

P. O. BOX 1936

505 623-7184

MOUNTAIN STATES PETROLEUM CORPORATION

213 EAST FOURTH STREET
ROSWELL, NEW MEXICO
88202

May 23, 1994

United States Environmental Protection Agency
Region IX
75 Hawthorne Street
San Francisco, California, 94105-3901

Attention: David Holguin

Re: Navajo #10
Dineh-bi-Keyah Field
Apache County, Arizona

file 446

Gentlemen:

Attached in duplicate for the subject well is the Mechanical Integrity Pressure Test with pressure chart and field report. Copies of these reports have been distributed as per the attached distribution list.

If additional information is required, please advise.

Sincerely,

Judy Burkhart
Judy Burkhart,
Secretary

Enclosures

AZ OIL & GAS
CONSERVATION COMMISSION
MAY 25 1994

Distribution List - Navajo #10 - Dineh-bi-Keyah - MI test

Bureau of Land Managment
1235 LaPlata Highway
Farmington, New Mexico, 87401

Arizona Geological Survey ✓
845 North Park Avenue, Suite #100
Tucson, Arizona, 85719
Attn: Steve Ranzi

Navajo Environmental Protection Agency
Post Office Box 308
Window Rock, Arizona, 86515

Navajo Environmental Protection Agency
Shiprock Field Office
Post Office Box 3605
Shiprock, New Mexico, 87420
Attn: James Walker

AZ OIL & GAS
CONSERVATION COMMISSION
MAY 25 1994



Oil and Gas Conservation Commission

STATE OF ARIZONA

5150 N. 16th STREET, SUITE B-141
PHOENIX, ARIZONA 85016
PHONE: (602) 255-5161

April 2, 1990

To: All Operators of Wells for the Injection of Oil Field-Produced Waters in Arizona

Our records indicate that Kerr McGee Corporation operates the following injection well:

Kerr McGee Navajo #10 SE NE Sec. 30-T36N-R30E

As you know, oil field injection wells have been the subject of federal legislation and have come under the regulatory authority of EPA. State programs must meet certain EPA requirements. Recently the General Accounting Office issued a report, Drinking Water - Safeguards Are Not Preventing Contamination From Injected Oil and Gas Waters, at the request of the House Environment, Energy, and Natural Resources Subcommittee of the House Committee on Government Operations.

The report showed that states have not been as diligent as desirable in making sure that Injection wells are not causing contamination. Arizona has been developing a program to achieve state primacy for the wells and needs to be in compliance with EPA criteria to achieve that goal.

As you are probably aware, EPA requires a Mechanical Integrity Test of every injection well every 5 years. This is also a requirement of Arizona Rules. Our records do not show a record of a mechanical integrity test on the above well in the past 5 years. If you have conducted the test, please send a copy of the report by May 1, 1990.

If you have not conducted the test you may not be in compliance with EPA rules and you are not in compliance with Arizona Rule 12-7-179, and you should schedule one soon. Prior to testing, send a copy of your Testing Plan to the Commission for approval. We are also required to witness the test, so we must be notified ahead of time. Please send your plan by May 1, 1990.

Thank you for your cooperation.

Very truly yours,

A handwritten signature in cursive script, appearing to read "Daniel J. Brennan".

Daniel J. Brennan
Executive Director



KERR-McGEE CORPORATION

626 AMARILLO PETROLEUM BUILDING
P. O. BOX 250 • AMARILLO, TEXAS 79105

RECEIVED

OCT 27 1978

O & G CONS. COMM.

PHONE
806 376-7256

October 20, 1978

State of Arizona
Oil & Gas Conservation Commission
1645 W. Jefferson
Suite 420
Phoenix, Arizona 85007

Subject: Recompletion Form #4 for Kerr-McGee Corporation's Navajo
#10; Dineh-Bi-Keyah Field, Arizona

Attn: Bill Allen

Two copies of Form #4 for the subject well are enclosed. The well
was recompleted as a water injection well in 1976.

Thank you for bringing this matter to our attention.

Sincerely,

KERR-McGEE CORPORATION

Larry R. Bell

Larry R. Bell
Engineering Assistant

October 16, 1978

Kerr-McGee Corporation
P.O. Box 250
Amarillo, Texas 79105

Attention: Mr. Larry Bell

Re: Kerr-McGee No. 10 Navajo
SE/4 NE/4 Sec. 30, T36N, R30E,
Apache County, Arizona
State Permit No. 446

Gentlemen:

In June, 1976, the above referenced well was recompleted and converted to a water injection well.

Since the recompletion of this well, we have not received a well completion or recompletion report, Form 4.

Please furnish this office with this report at your earliest convenience.

Very truly yours,

W. E. Allen
Director
Enforcement Section

WEA/vb

8686 N. Central Ave. Ste. 106
XXXXXXXXXXXXXXXXXXXX
XXXX 85020

July 14, 1976

Mr. W. G. Callaway
Kerr-McGee Corporation
P.O. Box 250
Amarillo, Texas 79105

Re: Kerr-McGee Navajo #10
SE/4 NE/4 Sec. 30, T36N, R30E
Apache County, Arizona
Permit No. 446
Water Injection Report

Dear Mr. Callaway:

It is our understanding that water injection was started on the above referred well during the month of June, 1976.

Please refer to Rule 703 (copy enclosed) of the rules and regulations of the Oil and Gas Conservation Commission, State of Arizona, and furnish this Commission with the required information.

Very truly yours,

William E. Allen
Director,
Enforcement Section

WEA/vb
Enc.



KERR-McGEE CORPORATION

626 AMARILLO PETROLEUM BUILDING
P. O. BOX 250 • AMARILLO, TEXAS 79105

RECEIVED

JUN 18 1976

O & G CONS. COMM.

PHONE

806 376-7256

June 16, 1976

Mr. W. E. Allen
State of Arizona
Oil and Gas Conservation Commission
8686 N. Central
Suite 106
Phoenix, Arizona 85020

RE: Navajo Well #10, Apache Co., Ariz.

Dear Sir:

In reference to your phone conversation with W. G. Callaway on June 15, 1976, please find attached copies of:

1. Approved Sundry Notices from United States Department of the Interior, for the subject well.
2. Kerr-McGee Corporation Conversion Program for the subject well.
3. Mechanical design of the well bore for the subject well.

If any additional information is needed, please advise.

Yours truly,

L. Steve Hamilton

L. Steve Hamilton
Engineering Assistant
Southwest District

LSH/kh

Attachments

446

BEFORE THE OIL AND GAS CONSERVATION COMMISSION
OF THE STATE OF ARIZONA

IN THE MATTER OF THE HEARING CALLED
BY THE OIL AND GAS CONSERVATION
COMMISSION OF THE STATE OF ARIZONA
FOR THE PURPOSE OF CONSIDERING:

CASE NO. 50

ORDER NO. 49

THE APPLICATION OF KERR-McGEE COR-
PORATION FOR AN ORDER PERMITTING
THE INJECTION OF SALT WATER IN THE
HERMOSA FORMATION UNDERLYING SEC-
TIONS 29 THROUGH 33, TOWNSHIP 36
NORTH, RANGE 30 EAST; ALL OF SEC-
TIONS 5 AND 6, TOWNSHIP 35 NORTH,
RANGE 30 EAST, AND ALL OF SECTIONS
25 AND 36, TOWNSHIP 36 NORTH, RANGE
29 EAST, APACHE COUNTY, ARIZONA

ORDER OF THE COMMISSION

BY THE COMMISSION

This cause comes regularly on for hearing at 10:00 a.m.
on September 19, 1975, at Phoenix, Arizona, before the OIL
AND GAS CONSERVATION COMMISSION of the STATE OF ARIZONA,
hereinafter referred to as the "Commission".

NOW, the Commission, a quorum being present, having
considered the testimony presented and the exhibits received
at said hearing, and being fully advised in the premises,
finds as follows:

COPY

FINDINGS:

(1) That due public notice having been given as required by law, the Commission has jurisdiction of the cause and the subject matter hereof.

(2) That this is an Application of Kerr-McGee Corporation for permission and authority to inject salt water in the Hermosa Formation underlying the following described property situated in Apache County, State of Arizona, to-wit:

All of Sections 29 through 33, Township 36 North, Range 30 East; all of Sections 5 and 6, Township 35 North, Range 30 East, and all of Sections 25 and 36, Township 36 North, Range 29 East, Apache County, Arizona.

(3) That the Applicant is the owner and operator of oil and gas leases on the above described lands upon which there are nineteen wells completed in the Hermosa Formation, at an average depth of 3,000 feet, all of which are producing oil, and that the production of oil from said wells is decreasing and will continue to decrease.

(4) That the Applicant proposes to convert its Navajo No. 10 Well, in the SE/4 NE/4 of Section 30, Township 36 North, Range 30 East, into an injection well for the purposes of a pilot flood operation to increase the recovery of oil from other wells in the field, and to determine the

feasibility of the expansion of such waterflood operation to a greater part or all of the above described area.

(5) That the injection of salt water into such formation through wells other than the Navajo No. 10 Well, described above, shall be permitted by filing with the Commission the information required by Article I, Injection to Increase Recovery, of the Rules and Regulations of the Oil and Gas Conservation Commission of the State of Arizona.

(6) That the Navajo No. 10 Well is cased with 9-5/8ths inch casing to a depth of 248 feet, and cemented to the surface; that it is further cased with 7 inch casing to a depth of 3,268 feet, and cemented with 250 sacks of cement, with the estimated top of the cement at 2,600 feet, and that the Hermosa Formation is perforated in said well between 3,028 feet and 3,048 feet.

(7) That the surface casing was pressure tested, as required by Rule 702B of the Rules and Regulations of this Commission during drilling operations, and that such surface casing and the other casing and tubing used in such well has been so set or cemented that damage will not be caused to oil, gas or fresh water resources.

(8) That Applicant proposes to initially inject 500 to 1,000 barrels of water per day, at a pressure not to exceed

2400 PSI; that the salt water for injection in said well will be obtained from the producing wells in the immediate field, and from the Navajo E-1 Diposal Well, located in the SE/4 SE/4 of Section 20, Township 36 North, Range 30 East, Apache County, Arizona.

(9) That if additional supplies of water are required for injection, that such supplies of water shall be obtained in compliance with the Statutes of the State of Arizona and the Rules and Regulations of the agency or agencies of such State having jurisdiction.

(10) That in the event that the injection of salt water into the Navajo No. 10 Well should indicate that such injection is having a detrimental effect upon the Hermosa Formation in such reservoir, Applicant will immediately cease such injection operations.

(11) That the Applicant believes that there is substantial quantities of oil in said formation underlying said land that can be recovered by operating a secondary recovery project thereon that would otherwise be lost.

(12) That in the interest of securing the greatest ultimate recovery of oil from the pool, the prevention of waste and the protection of correlative rights, this application should be granted.

IT IS THEREFORE ORDERED:

(A) That Kerr-McGee Corporation be, and it is hereby permitted and authorized to operate a secondary recovery project by the injection of salt water into the Hermosa Formation underlying the following described real property situated in Apache County, State of Arizona, to-wit:

All of Sections 29 through 33, Township 36 North, Range 30 East, and all of Sections 5 and 6, Township 35 North, Range 30 East, and all of Sections 25 and 36, Township 36 North, Range 29 East, Apache County, Arizona.

(B) That such injection of salt water shall commence in the Navajo No. 10 Well in the SE/4 NE/4 of Section 30, Township 36 North, Range 30 East, and may be extended to other wells in the subject area upon filing with the Commission the information required by the Rules and Regulations of the Commission.

(C) That this secondary recovery project shall be operated in accordance with all the Rules and Regulations prescribed by the Oil and Gas Conservation Commission of the State of Arizona;

(D) That in the event that the injection of salt water into the Navajo No. 10 Well should indicate that such injection is having a detrimental effect upon the Hermosa Formation in such reservoir, Applicant will immediately cease such injection operations; and

(E) That this secondary recovery project shall be operated in such a manner that no detriment or damage will be done to any oil, gas or fresh water bearing formation.

IT IS FURTHER ORDERED that this Order is conditioned upon Kerr-McGee's compliance with all of the statutes of the State of Arizona and the Rules and Regulations of the various agencies of the State of Arizona having jurisdiction over matters in connection with the obtaining of waters for and the use of waters in the secondary recovery project approved herein.

DONE at Phoenix, Arizona on the day and year hereinabove designated.

OIL AND GAS CONSERVATION COMMISSION
STATE OF ARIZONA

By *Ralph W. Bilby*
Ralph W. Bilby, Chairman

ATTEST:

John Bannister
John Bannister, Executive
Secretary

(SEAL)

WA

 **KERR-McGEE CORPORATION**
626 AMARILLO PETROLEUM BUILDING
P. O. BOX 250 • AMARILLO, TEXAS 79105

November 5, 1973

PHONE
806 376-7256

Oil and Gas Conservation Commission
State of Arizona
4515 North Seventh Avenue
Phoenix, Arizona 85013

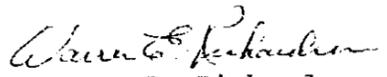
Attention: Mr. W. E. Allen
Director

Dear Mr. Allen:

In regards to your letter of September 18, 1973, requesting reserve information for the Dineh-bi-Keyah Field and Pinta Dome Field, please be advised that I have referred your letter to our Oklahoma City office and have determined that due to company policy, we are unable to furnish the information at this time.

Yours truly,

KERR-McGEE CORPORATION


Warren E. Richardson
District Manager
Southwestern District

WER/mm

RECEIVED

NOV 13 1973

O & G CON. COMM.

446



OFFICE OF

Oil and Gas Conservation Commission

STATE OF ARIZONA

4515 NORTH 7TH AVE.
PHOENIX, ARIZONA 85013

PHONE: (602) 271-5161

September 18, 1973

Mr. Warren E. Richardson
Kerr-McGee Corporation
P. O. Box 250
Amarillo, Texas 79105

Dear Mr. Richardson:

Will you please supply this Commission with any information that you might have regarding the recoverable reserves in the Dineh-Bi-Keyah Field and also in the Pinta Dome Field?

This information will be considered confidential if you so desire.

Thank you for your cooperation.

Very truly yours,

W. E. Allen, Director
Enforcement Section

WEA/rfb

Operator KERR MC GEE ~~OTT~~ ^{Corporation} INDUSTRIES INC

Bond Company Insurance Co. of N. America Amount 25,000

Bond No. M 41 95 25 (KMS28) Date Approved 10-28-65

Permits covered by this bond:

10	386	417
36	389	418
37 0	390	419
38	391	420
39	392	422
57 0	396	426
63 0	397	427
64	398	441
142 0	399	445
238	402	446
303	403	
90 0	404	
91 0	405	
349	406	
303	407	
377	408	
378	409	
379	410	
380	411	
381	413	
384	414	
385	416	

CANCELLED

DATE 10-24-68

Superseded by
 American Casualty Co. Bond
 \$25,000
 #5471020-52
 DATE 10-19-73

→ see this file

October 24, 1968

Mr. Charles W. Hatcher
Insurance Company of North America
501 Guaranty Bank Building
Phoenix, Arizona 85011

Re: Bond No. M41-95-21
Kerr-McGee Corporation

Dear Mr. Hatcher:

This Commission authorizes the termination of
the Insurance Company of North America Bond
No. M41-95-21, Surety, for Kerr-McGee Corpora-
tion, Principal, effective this date.

Yours truly,

John Bannister
Executive Secretary

JAL:jf

cc: Mr. Charles E. Hughes

October 24, 1968

Mr. Charles E. Hughes
Kerr-McGee Corporation
Kerr-McGee Building
Oklahoma City, Oklahoma 73102

Dear Mr. Hughes:

Enclosed is the letter for Mr. Hatcher with carbon copy for yourself. We understand that you wish to mail the authorization for termination of the bond with the Insurance Company of North America.

Yours truly,

James A. Lambert
Administrative Assistant

JAL:jf

Enclosures



KERR-McGEE CORPORATION

KERR-McGEE BUILDING • OKLAHOMA CITY, OKLAHOMA 73102

September 25, 1968

Oil and Gas Conservation Commission
State of Arizona
Room 222, 1624 West Adams
Phoenix, Arizona 85007

Attention: Mr. John Bannister
Executive Secretary

Re: KERR-McGEE CORPORATION
\$25,000 BLANKET DRILLING BOND
AMERICAN CASUALTY CO. BOND #5471020-52

Gentlemen:

Enclosed herewith for your further handling is \$25,000 Blanket Drilling Bond #5471020-52 written through American Casualty Company which replaces our current Bond #M419521 written through Insurance Company of North America.

If the enclosed bond is acceptable for filing, I would appreciate your issuing a release on the Insurance Company of North America Bond and forwarding the release to the undersigned for my further handling.

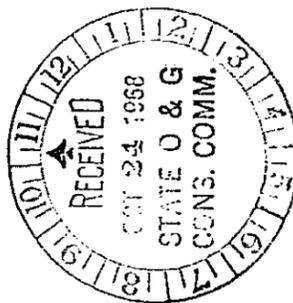
Sincerely,

Charles E. Hughes
Insurance Department

CEH:jh

Enclosure

cc: Mr. Roger Miller



LIABILITY UNDER THIS BOND MAY NOT BE TERMINATED WITHOUT WRITTEN PERMISSION OF THIS COMMISSION.

KNOW ALL MEN BY THESE PRESENTS

KM BOND 528

BOND SERIAL NO. M41-95-21

That we: KERR-MCGEE OIL INDUSTRIES, INC.

of the County of: Oklahoma in the State of: Oklahoma

as principal, and INSURANCE COMPANY OF NORTH AMERICA

of Philadelphia, Pennsylvania AUTHORIZED TO DO BUSINESS WITHIN the State of Arizona.

as surety, are held and firmly bound unto the State of Arizona in the penal sum as indicated, lawful money of the United States, for which payment, well and truly to be made, we bind ourselves, and each of us, and each of our heirs, executors, administrators or successors, and assigns jointly and severally, firmly by these presents.

The conditions of this obligation is that whereas the above bounden principal proposes to drill a well or wells for oil, gas or stratigraphic purposes in and upon the following described land situated within the State, to wit:

Lands covered by oil and gas mining leases of various dates and periods of
(May be used as blanket bond or for single well)

duration heretofore entered into or which may hereafter be entered into by

the Principal

CANCELLED
DATE 10-28-65

NOW, THEREFORE, if the above bounden principal shall comply with all of the provisions of the laws of this State and the rules, regulations and orders of the Oil and Gas Conservation Commission, especially with reference to the requirements of A.R.S. 27-516, providing for the proper drilling, casing and plugging of said well or wells, and filing with the Oil & Gas Conservation Commission all notices and records required by said Commission, in the event said well or wells do not produce oil or gas in commercial quantities, or cease to produce oil or gas in commercial quantities, then this obligation is void; otherwise, the same shall be and remain in full force and effect.

Penal sum of TWENTY-FIVE THOUSAND (\$25,000.00) Dollars

Witness our hands and seals, this 19th day of October, 1965

KERR-MCGEE OIL INDUSTRIES, INC.

By: George H. Cobb
Principal George H. Cobb, Vice President

Witness our hands and seals, this 19th day of October, 1965

INSURANCE COMPANY OF NORTH AMERICA

By: R. E. Anderson
Surety R. E. Anderson, Attorney in Fact

Counter-signed at Phoenix, Ariz.
Charles W. Hatcher

(If the principal is a corporation, the bond should be executed by its duly authorized officers, with the seal of the corporation annexed, when principal or surety executes this bond by agent, power of attorney or other evidence of authority must accompany the bond.)

Approved
Date 10-28-65
STATE OF ARIZONA
OIL & GAS CONSERVATION COMMISSION
By: John J. Emmester

STATE OF ARIZONA
OIL & GAS CONSERVATION COMMISSION
Bond
File Two Copies
Form No. 2

Permit No. _____

POWER OF ATTORNEY

INSURANCE COMPANY OF NORTH AMERICA

PHILADELPHIA, PA.

Know all men by these presents: That the INSURANCE COMPANY OF NORTH AMERICA, a corporation of the Commonwealth of Pennsylvania, having its principal office in the City of Philadelphia, Pennsylvania, pursuant to the following Resolution, which was adopted by the Board of Directors of the said Company on June 9, 1953, to wit:

"RESOLVED, pursuant to Articles 3.6 and 5.1 of the By-Laws, that the following Rules shall govern the execution for the Company of bonds, undertakings, recognizances, contracts and other writings in the nature thereof:

- (1) "Such writings shall be signed by the President, a Vice President, an Assistant Vice President, a Resident Vice President or an Attorney-in-Fact.
- (2) "Unless signed by an Attorney-in-Fact, such writings shall have the seal of the Company affixed thereto, duly attested by the Secretary, an Assistant Secretary or a Resident Assistant Secretary. When such writings are signed by an Attorney-in-Fact, he shall either affix an impression of the Company's seal or use some other generally accepted method of indicating use of a seal (as by writing the word "Seal" or the letters "L.S." after his signature).
- (3) "Resident Vice Presidents, Resident Assistant Secretaries and Attorneys-in-Fact may be appointed by the President or any Vice President, with such limits on their authority to bind the Company as the appointing officer may see fit to impose.
- (4) "Such Resident Officers and Attorneys-in-Fact shall have authority to act as aforesaid, whether or not the President, the Secretary, or both, be absent or incapacitated; and shall also have authority to certify or verify copies of this Resolution, the By-Laws of the Company, and any affidavit or record of the Company necessary to the discharge of their duties.
- (5) "Any such writing executed in accordance with these Rules shall be as binding upon the Company in any case as though signed by the President and attested by the Secretary."

does hereby nominate, constitute and appoint **R. E. ANDERSON**, of the City of Oklahoma City, State of Oklahoma

its true and lawful agent and attorney -in-fact, to make, execute, seal and deliver for and on its behalf, and as its act and deed any and all bonds and undertakings in penalties not exceeding **FIVE HUNDRED THOUSAND DOLLARS (\$ 500,000.00)** each in its business of guaranteeing the fidelity of persons holding places of public or private trust, and in the performance of contracts other than insurance policies, and executing and guaranteeing bonds or other undertakings not exceeding **FIVE HUNDRED THOUSAND DOLLARS (\$ 500,000.00)** each as aforesaid, required or permitted in all actions or proceedings or by law required or permitted.

All such bonds and undertakings as aforesaid to be signed for the Company and the Seal of the Company attached thereto by the said **R. E. Anderson**, Individually.

CANCELLED
10-24-62

And the execution of such bonds or undertakings in pursuance of these presents, shall be as binding upon said Company, as fully and amply, to all intents and purposes, as if they had been duly executed and acknowledged by the regularly elected officers of the Company at its office in Philadelphia, Commonwealth of Pennsylvania, in their own proper persons.

IN WITNESS WHEREOF, the said **R. S. GILLESPIE**, Vice-President, has hereunto subscribed his name and affixed the corporate seal of the said **INSURANCE COMPANY OF NORTH AMERICA** this 1st day of November 19 63

INSURANCE COMPANY OF NORTH AMERICA

(SEAL) by **R. S. GILLESPIE** Vice-President

STATE OF PENNSYLVANIA }
COUNTY OF PHILADELPHIA } ss.

On this 1st day of November, A.D. 19 63, before the subscriber, a Notary Public of the Commonwealth of Pennsylvania, in and for the County of Philadelphia, duly commissioned and qualified, came **R. S. GILLESPIE**, Vice-President of the **INSURANCE COMPANY OF NORTH AMERICA** to me personally known to be the individual and officer described in, and who executed the preceding instrument, and he acknowledged the execution of the same, and, being by me duly sworn, deposeth and saith, that he is the officer of the Company aforesaid, and that the seal affixed to the preceding instrument is the corporate seal of said Company, and the said corporate seal and his signature as officer were duly affixed and subscribed to the said instrument by the authority and direction of the said corporation, and that Resolution, adopted by the Board of Directors of said Company, referred to in the preceding instrument, is now in force.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed my official seal at the City of Philadelphia, the day and year first above written.

(SEAL) **MARY MARGARET JONES** Notary Public.

My commission expires **July 15, 1966**

I, the undersigned, Assistant Secretary of **INSURANCE COMPANY OF NORTH AMERICA**, do hereby certify that the original **POWER OF ATTORNEY**, of which the foregoing is a full, true and correct copy, is in full force and effect.

In witness whereof, I have hereunto subscribed my name as Assistant Secretary, and affixed the corporate seal of the Corporation, this 19th day of October 19 63

(SEAL) **J. E. Anderson** Assistant Secretary.

October 28, 1965

Kerr-McGee Oil Industries, Inc.
Kerr-McGee Building
Oklahoma City, Oklahoma 73102

Re: Insurance Company of North America
Bond M 41 95 25 KM 528

Gentlemen:

Attached is copy of captioned bond which has been approved
by this Commission as of this date.

Since this bond is now in full force and effect, this let-
ter will constitute authority from this Commission to
terminate Insurance Company of North America Bond M 24 64 35
KM 146 effective as of this date.

Your cooperation is very much appreciated.

Very truly yours,

John Bannister
Executive Secretary
wr
enc

cc: Insurance Company of North America
501 Guaranty Bank Bldg.
Phoenix, Arizona 85011



INSURANCE BY NORTH AMERICA

Insurance Company of North America
Life Insurance Company of North America
501 Guaranty Bank Bldg., Phoenix, Arizona 85011

October 26, 1965

State of Arizona
Oil and Gas Conservation Commission
1624 West Adams
Phoenix, Arizona

Attention: John Bannister
Executive Secretary

Re: Kerr McGee Oil Industries, Inc.
Blanket Drilling Bond M 41 95 25
KM 528

Dear Mr. Bannister:

We are enclosing Blanket Drilling Bond M 41 95 25 in
the penal sum of \$25,000.00 for filing on behalf of
our Principal Kerr McGee Oil Industries, Inc.

This Bond is a replacement for M 24 64 35, KM 146 and
your authorization to terminate our liability under the
latter form shall be appreciated.

We trust you will find the enclosures in order.

Very truly yours,

C. W. Hatcher

C. W. Hatcher
Underwriter

sar



October 14, 1965

Kerr-McGee Oil Industries, Inc.
Kerr-McGee Building
Oklahoma City, Oklahoma 73102

Re: Indemnity Insurance Company of North America
Bond Number Not Shown

Gentlemen:

As you are aware, the captioned bond in the amount of \$10,000 is on file with this Commission to cover bonding requirements of this Commission.

As a result of the public hearing held September 22, 1965 in Phoenix, Arizona, concerning the Rules and Regulations of this Commission, the bonding requirements have been increased to \$5,000 for a single well and to \$25,000 for a state-wide blanket bond.

As required by law, certified copy of the new Rules and Regulations was filed with the Secretary of State on October 1, 1965, and consequently the new Rules became effective on that date.

This letter is to request that at your earliest convenience you take the necessary steps to increase your state-wide bond to \$25,000. Upon receipt of your new bond your old bond of course may be released.

Your earliest cooperation will be appreciated.

Yours very truly,

John Bannister
Executive Secretary
nr



KERR-McGEE CORPORATION

KERR-McGEE BUILDING • OKLAHOMA CITY, OKLAHOMA 73102

July 22, 1966

Oil and Gas Conservation Commission
State of Arizona
Room 202, 1624 West Adams
Phoenix, Arizona 85007

ATTENTION Mr. John Bannister
Executive Secretary

Re: KM BOND NO. 528
INSURANCE COMPANY OF NORTH AMERICA BOND NO. M 41 95 25

On November 1, 1965, our Corporate name was changed from Kerr-McGee Oil Industries, Inc. to Kerr-McGee Corporation. In checking our bond files, we find that the above captioned bond on file with your office is still in our old corporate name. Please find enclosed herewith, the original and one carbon copy of name change rider to be attached to the said bond wherein the name of the principal is amended to our present corporate name.

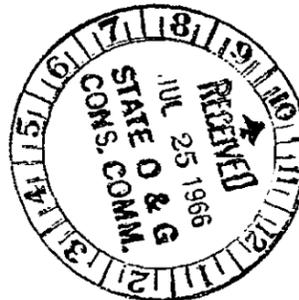
Please advise if this name change rider is accepted.


W. E. Long, Attorney
Oil and Gas Lease Records Dept.

WEL:mh

Enclosures

cc: Insurance Company of North America
Room 222
2000 Classen Center
2000 Classen Boulevard
Oklahoma City, Oklahoma 73106
Attention: Mr. Bob Richardson



INSURANCE COMPANY OF NORTH AMERICA
PHILADELPHIA, PA. 19101

Rider to be attached to and form a part of Bond Number M41 95 21 (KM BOND 528)
on behalf of KERR-McGEE OIL INDUSTRIES, INC.
(Name)
Kerr-McGee Building, Oklahoma City, Oklahoma 73102 (Principal),
(Address)
and in favor of THE STATE OF ARIZONA (Obligee),
executed by the INSURANCE COMPANY OF NORTH AMERICA, as
Surety, in the amount of TWENTY-FIVE THOUSAND (\$ 25,000.00)
Dollars, effective October 19th 19 65

The Principal and the Insurance Company of North America hereby consent to changing the said bond as follows:

AMEND THE NAME OF THE PRINCIPAL TO:

KERR-McGEE CORPORATION
Kerr-McGee Building
Oklahoma City, Oklahoma 73102

(Said name change to be effective as of November 1, 1965)

Nothing herein contained shall vary, alter or extend any provision or condition of the bond other than as above stated.

Signed, Sealed and dated this 19th day of July, 1966
ATTEST:
Carter G. Dudley
Carter G. Dudley, Assistant Secretary

KERR-McGEE CORPORATION
By George H. Cobb
George H. Cobb, Vice President
INSURANCE COMPANY OF NORTH AMERICA
By R. E. Anderson
R. E. Anderson, Attorney in Fact

FORM APPROVED
LEASE RECORDS

POWER OF ATTORNEY

INSURANCE COMPANY OF NORTH AMERICA

PHILADELPHIA, PA.

Know all men by these presents: That the INSURANCE COMPANY OF NORTH AMERICA, a corporation of the Commonwealth of Pennsylvania, having its principal office in the City of Philadelphia, Pennsylvania, pursuant to the following Resolution, which was adopted by the Board of Directors of the said Company on June 9, 1953, to wit:

"RESOLVED, pursuant to Articles 3.6 and 5.1 of the By-Laws, that the following Rules shall govern the execution for the Company of bonds, undertakings, recognizances, contracts and other writings in the nature thereof:

- (1) "Such writings shall be signed by the President, a Vice President, an Assistant Vice President, a Resident Vice President or an Attorney-in-Fact.
- (2) "Unless signed by an Attorney-in-Fact, such writings shall have the seal of the Company affixed thereto, duly attested by the Secretary, an Assistant Secretary or a Resident Assistant Secretary. When such writings are signed by an Attorney-in-Fact, he shall either affix an impression of the Company's seal or use some other generally accepted method of indicating use of a seal (as by writing the word "Seal" or the letters "L.S." after his signature).
- (3) "Resident Vice Presidents, Resident Assistant Secretaries and Attorneys-in-Fact may be appointed by the President or any Vice President, with such limits on their authority to bind the Company as the appointing officer may see fit to impose.
- (4) "Such Resident Officers and Attorneys-in-Fact shall have authority to act as aforesaid, whether or not the President, the Secretary, or both, be absent or incapacitated; and shall also have authority to certify or verify copies of this Resolution, the By-Laws of the Company, and any affidavit or record of the Company necessary to the discharge of their duties.
- (5) "Any such writing executed in accordance with these Rules shall be as binding upon the Company in any case as though signed by the President and attested by the Secretary."

does hereby nominate, constitute and appoint **R. E. ANDERSON**, of the City of Oklahoma City, State of Oklahoma

its true and lawful agent and attorney -in-fact, to make, execute, seal and deliver for and on its behalf, and as its act and deed any and all bonds and undertakings in penalties not exceeding **FIVE HUNDRED THOUSAND DOLLARS (\$ 500,000.00)** each in its business of guaranteeing the fidelity of persons holding places of public or private trust, and in the performance of contracts other than insurance policies, and executing and guaranteeing bonds or other undertakings not exceeding **FIVE HUNDRED THOUSAND DOLLARS (\$ 500,000.00)** each as aforesaid, required or permitted in all actions or proceedings or by law required or permitted.

All such bonds and undertakings as aforesaid to be signed for the Company. and the Seal of the Company attached thereto by the said **R. E. Anderson**, individually.

And the execution of such bonds or undertakings in pursuance of these presents, shall be as binding upon said Company, as fully and amply, to all intents and purposes, as if they had been duly executed and acknowledged by the regularly elected officers of the Company at its office in Philadelphia, Commonwealth of Pennsylvania, in their own proper persons.

IN WITNESS WHEREOF, the said **R. S. GILLESPIE**, Vice-President, has hereunto subscribed his name and affixed the corporate seal of the said **INSURANCE COMPANY OF NORTH AMERICA** this 1st day of November 19 63.

INSURANCE COMPANY OF NORTH AMERICA

(SEAL) by **R. S. GILLESPIE** Vice-President

STATE OF PENNSYLVANIA }
COUNTY OF PHILADELPHIA } ss.

On this 1st day of November, A.D. 19 63, before the subscriber, a Notary Public of the Commonwealth of Pennsylvania, in and for the County of Philadelphia, duly commissioned and qualified, came **R. S. GILLESPIE**, Vice-President of the **INSURANCE**

COMPANY OF NORTH AMERICA to me personally known to be the individual and officer described in, and who executed the preceding instrument, and he acknowledged the execution of the same, and, being by me duly sworn, deposeth and saith, that he is the officer of the Company aforesaid, and that the seal affixed to the preceding instrument is the corporate seal of said Company, and the said corporate seal and his signature as officer were duly affixed and subscribed to the said instrument by the authority and direction of the said corporation, and that Resolution, adopted by the Board of Directors of said Company, referred to in the preceding instrument, is now in force.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed my official seal at the City of Philadelphia, the day and year first above written.

(SEAL) **MARY MARGARET JONES** Notary Public.

My commission expires July 15, 1966

I, the undersigned, Assistant Secretary of **INSURANCE COMPANY OF NORTH AMERICA**, do hereby certify that the original **POWER OF ATTORNEY**, of which the foregoing is a full, true and correct copy, is in full force and effect.

In witness whereof, I have hereunto subscribed my name as Assistant Secretary, and affixed the corporate seal of the Corporation, this 19th day of July 19 66.

(SEAL) **J. E. Anderson** Assistant Secretary.

INSURANCE COMPANY OF NORTH AMERICA
PHILADELPHIA, PA. 19101

Rider to be attached to and form a part of Bond Number **ML 95 21 (KM BOND 528)**
on behalf of **KERR-MCGEE OIL INDUSTRIES, INC.**
(Name)
Kerr-McGee Building, Oklahoma City, Oklahoma 73102 (Principal),
(Address)
and in favor of **THE STATE OF ARIZONA** (Obligee),
executed by the INSURANCE COMPANY OF NORTH AMERICA, as
Surety, in the amount of **TWENTY-FIVE THOUSAND** (\$ 25,000.00)
Dollars, effective **October 19th** 19**65**

The Principal and the Insurance Company of North America hereby consent to changing the said bond as follows:

AMEND THE NAME OF THE PRINCIPAL TO:

KERR-MCGEE CORPORATION
Kerr-McGee Building
Oklahoma City, Oklahoma 73102

(Said name change to be effective as of November 1, 1965)

Nothing herein contained shall vary, alter or extend any provision or condition of the bond other than as above stated.

Signed, Sealed and dated this 19th day of July, 1966
KERR-MCGEE CORPORATION
By *Carter O. Dudley*
Carter O. Dudley, Assistant Secretary


KERR-MCGEE CORPORATION
By *George H. Cobb*
George H. Cobb, Vice President
INSURANCE COMPANY OF NORTH AMERICA
By *R. E. Anderson*
R. E. Anderson, Attorney in Fact


CANCELLED
DATE 10-24-68

FORM
REMOVED
LEASE
RECORDS

POWER OF ATTORNEY
INSURANCE COMPANY OF NORTH AMERICA
 PHILADELPHIA, PA.

Know all men by these presents: That the INSURANCE COMPANY OF NORTH AMERICA, a corporation of the Commonwealth of Pennsylvania, having its principal office in the City of Philadelphia, Pennsylvania, pursuant to the following Resolution, which was adopted by the Board of Directors of the said Company on June 9, 1953, to wit:

- "RESOLVED, pursuant to Articles 3.6 and 5.1 of the By-Laws, that the following Rules shall govern the execution for the Company of bonds, undertakings, recognizances, contracts and other writings in the nature thereof:
- (1) "Such writings shall be signed by the President, a Vice President, an Assistant Vice President, a Resident Vice President or an Attorney-in-Fact.
 - (2) "Unless signed by an Attorney-in-Fact, such writings shall have the seal of the Company affixed thereto, duly attested by the Secretary, an Assistant Secretary or a Resident Assistant Secretary. When such writings are signed by an Attorney-in-Fact, he shall either affix an impression of the Company's seal or use some other generally accepted method of indicating use of a seal (as by writing the word "Seal" or the letters "L.S." after his signature).
 - (3) "Resident Vice Presidents, Resident Assistant Secretaries and Attorneys-in-Fact may be appointed by the President or any Vice President, with such limits on their authority to bind the Company as the appointing officer may see fit to impose.
 - (4) "Such Resident Officers and Attorneys-in-Fact shall have authority to act as aforesaid, whether or not the President, the Secretary, or both, be absent or incapacitated; and shall also have authority to certify or verify copies of this Resolution, the By-Laws of the Company, and any affidavit or record of the Company necessary to the discharge of their duties.
 - (5) "Any such writing executed in accordance with these Rules shall be as binding upon the Company in any case as though signed by the President and attested by the Secretary."

does hereby nominate, constitute and appoint R. E. ANDERSON, of the City of Oklahoma City, State of Oklahoma

its true and lawful agent and attorney -in-fact, to make, execute, seal and deliver for and on its behalf, and as its act and deed any and all bonds and undertakings in penalties not exceeding FIVE HUNDRED THOUSAND DOLLARS (\$ 500,000.00) each in its business of guaranteeing the fidelity of persons holding places of public or private trust, and in the performance of contracts other than insurance policies, and executing and guaranteeing bonds or other undertakings not exceeding FIVE HUNDRED THOUSAND DOLLARS (\$ 500,000.00) each as aforesaid, required or permitted in all actions or proceedings or by law required or permitted.

All such bonds and undertakings as aforesaid to be signed for the Company, and the Seal of the Company attached thereto by the said R. E. Anderson, individually.

And the execution of such bonds or undertakings in pursuance of these presents, shall be as binding upon said Company, as fully and amply, to all intents and purposes, as if they had been duly executed and acknowledged by the regularly elected officers of the Company at its office in Philadelphia, Commonwealth of Pennsylvania, in their own proper persons.

IN WITNESS WHEREOF, the said R. S. GILLESPIE, Vice-President, has hereunto subscribed his name and affixed the corporate seal of the said INSURANCE COMPANY OF NORTH AMERICA this 1st day of November 19 63.

INSURANCE COMPANY OF NORTH AMERICA

(SEAL) by R. S. GILLESPIE Vice-President
 STATE OF PENNSYLVANIA }
 COUNTY OF PHILADELPHIA } ss.

On this 1st day of November, A.D. 19 63, before the subscriber, a Notary Public of the Commonwealth of Pennsylvania, in and for the County of Philadelphia, duly commissioned and qualified, came R. S. GILLESPIE, Vice-President of the INSURANCE COMPANY OF NORTH AMERICA to me personally known to be the individual and officer described in, and who executed the preceding instrument, and he acknowledged the execution of the same, and, being by me duly sworn, deposeth and saith, that he is the officer of the Company aforesaid, and that the seal affixed to the preceding instrument is the corporate seal of said Company, and the said corporate seal and his signature as officer were duly affixed and subscribed to the said instrument by the authority and direction of the said corporation, and that Resolution, adopted by the Board of Directors of said Company, referred to in the preceding instrument, is now in force.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed my official seal at the City of Philadelphia, the day and year first above written.
 MARY MARGARET JONES
 Notary Public.

My commission expires July 15, 1966

I, the undersigned, Assistant Secretary of INSURANCE COMPANY OF NORTH AMERICA, do hereby certify that the original POWER OF ATTORNEY, of which the foregoing is a full, true and correct copy, is in full force and effect.

In witness whereof, I have hereunto subscribed my name as Assistant Secretary, and affixed the corporate seal of the Corporation, this 19th day of July 19 63.

(SEAL) J. E. Anderson Assistant Secretary.



KERR-MCGEE CORPORATION

KERR-MCGEE BUILDING • OKLAHOMA CITY, OKLAHOMA 73102
215 Petroleum Center Building
Farmington, New Mexico 87401

March 25, 1968

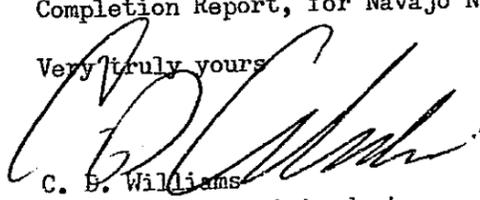
Arizona Oil and Gas Conservation Commission
1624 West Adams, Room 202
Phoenix, Arizona 85007

In re Navajo No 10
SE $\frac{1}{4}$ NE $\frac{1}{4}$, Sec 30, T36N, R30E
Apache County, Arizona
Permit No. 446

Gentlemen

Enclosed please find copies of reports of DST No. 1 and DST No. 2
which should be attached to your file copy of Form No. 4, Well
Completion Report, for Navajo No. 10.

Very truly yours


C. E. Williams
Production Superintendent

Im

Enclosures



446



KERR-MCGEE CORPORATION

KERR-MCGEE BUILDING • OKLAHOMA CITY, OKLAHOMA 73102
215 Petroleum Center Building
Farmington, New Mexico
December 26, 1967

State of New Mexico
O&G Conservation Commission
Room 202 - 1624 W. Adams
Phoenix, Arizona

Attn: Mr. John Bannister

RE: Application For Permit
To Drill
Navajo Well No. 10
Apache Co., Arizona

Gentlemen:

Enclosed please find two copies of Arizona O&GCC Form No. 3 for our Navajo No. 10 located in SE NE Sec. 30-T36N, R30E, Apache County, Arizona. Also enclosed are two copies of the Surveyor's Plat for the location of the well. A draft for \$25.00 to cover the filing fee is included.

Your approval of this application is requested. Please keep this information confidential.

Very truly yours,
KERR-MCGEE CORPORATION

Gary Roth
Gary Roth
Prod. Engineer

hs

Enclosures

cc: J.I.Fisher
R.W.King
WRF #10
RF
Tribe



WELL SITE CHECK

By MR
 Date 12-26-67
 Person(s) Contacted Gary Roth
telephoned 12-26-67

Contractor _____
 Spud date _____
 Type Rig _____ Rotary _____ Cable _____
 Samples _____
 Pipe _____
 Water Zones _____
 Lost Circ. Zones _____
 Formation Tops _____
 Cores, Logs, DST _____
 Crews _____

Present Operations _____
 Drilling with Air _____ Mud _____
 Size Hole _____
 Size Drill Pipe _____
 Type Bit _____
 No. Bit _____ Drilling Rate _____
 Formation _____
 Lithology _____

REMARKS, PHOTO, MAP

Permit # 418 for this location expired
 12-19-67.
 New applic & filing fee in mail today.
 Moving drill rig from # B-1X on 12-30-67 on
 12-31-67. Requested permission to spud
 asap thereafter. Verbal permission granted.

WELL NAME Kerr-McGee #10 Navajo

New Permit No. 446
 Confidential: Yes No