KERR MC GEE #9 NAVAJO
SE SE 30-36N-30E Apache County

P-W

[redacted]

CONFIDENTIAL

Release Date ~~H-5-67~~
7-19-67 ltr

COUNTY Apache AREA 15 mi SW red rock LEASE NO. Nav 14-20-0603-8823

Mtn. States Petroleum (5-1-94)

WELL NAME ~~Kerr McGee~~ #9 Navajo

LOCATION SE SE SEC 30 TWP 36N RANGE 30E FOOTAGE 640 FSL 550 FEL

ELEV 7878' GR _____ KB SPUD DATE 4-13-67 STATUS ~~O & G~~ COMP. DATE 5-5-67 TOTAL DEPTH 3720' ~~3644PB~~TD

CONTRACTOR

CASING SIZE	DEPTH	CEMENT	LINER SIZE & DEPTH
9 5/8	405'	525 SKS	NA
7	3712'	100 SKS	

DRILLED BY ROTARY x

DRILLED BY CABLE TOOL _____

PRODUCTIVE RESERVOIR Lower Hermosa ~~Sill~~

INITIAL PRODUCTION 2622 BOPD 42.5

FORMATION TOPS	DEPTHS	SOURCE L.L.	SOURCE E.L.	REMARKS
Coconino	1065'		x	
Hermosa	3410'			

ELECTRIC LOGS	PERFORATED INTERVALS	PROD. INTERVALS
IE; Borehole Comp. Sonic/GR	3420-3460	3420-3460

SAMPLE LOG Am Strat
SAMPLE DESCRP. Farm Cut
SAMPLE NO. 1418*
CORE ANALYSIS _____
DSTs _____
*2080

REMARKS Top Hermosa Intrusive 3410

~~6-8-67 Authorized Release of Certain Information~~

APP. TO PLUG _____
PLUGGING REP. _____
COMP. REPORT x

WATER WELL ACCEPTED BY _____

BOND CO. ~~Firemen's Ins. Co.~~ BIA BOND BOND NO. ~~188 98 10 528~~

BOND AMT. $ ~~25,000~~ CANCELLED 12/1/97 DATE ORGANIZATION REPORT 7-14-64

FILING RECEIPT 9489 LOC. PLAT x WELL BOOK x PLAT BOOK x

API NO. 02-001-20020 DATE ISSUED 4-4-67 DEDICATION SE/4

PERMIT NUMBER 396

(over)

CONFIDENTIAL

Release Date 7-19-67

DRILL STEM TEST

NO.	FROM	TO	RESULTS

CORE RECORD

NO.	FROM	TO	RECOVERY	REMARKS
1	3361	3408		
2	3408	3466		
3	3467	3503		

REMEDIAL HISTORY

DATE STARTED	COMPLETED	WORK PERFORMED	NEW PERFORATIONS

ADDITIONAL INFORMATION

ARIZ

16

WELL COMPLETION OR RECOMPLETION REPORT AND WELL LOG

DESIGNATE TYPE OF COMPLETION:

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

DESCRIPTION OF WELL AND LEASE

Operator	Address
KERR-McGEE CORPORATION	FARMINGTON, NEW MEXICO 215 PETROLEUM CENTER BUILDING

Federal, State or Indian Lease Number or name of lessor if fee lease	Well Number	Field & Reservoir
14-20-0603-8823	No. 9	Dineh-bi-Keyah

Location	County
640' FSL & 550' FEL	Apache

Sec. TWP-Range or Block & Survey: Sec. 30 - T36N - R30E

Date spudded	Date total depth reached	Date completed, ready to produce	Elevation (DF, RKB, RT or Gr.)	Elevation of casing hd. flange
4-13-67	4-26-67	5-5-67	7878' GR feet	feet

Total depth	P.B.T.D.	Single, dual or triple completion?	If this is a dual or triple completion, furnish separate report for each completion.
3720'	3644'	Single	

Producing interval (s) for this completion	Rotary tools used (interval)	Cable tools used (interval)
3420'-3460'	All	None

Was this well directionally drilled?	Was directional survey made?	Was copy of directional survey filed?	Date filed
NO	NO	NO	-

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

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
	15"	9-5/8"	32.30	405'	525 sxs	None
	8-3/4"	7"	23#	3712'	100 sxs 50-50Pozmix,50	None

TUBING RECORD

Size	Depth set	Packer set at
3-1/2 in.	2947 ft.	None ft.

LINER RECORD SXS.

Size	Top	Bottom	Sacks cement	Screen (ft.)
None in.	- ft.	- ft.	-	-

PERFORATION RECORD

Number per ft.	Size & type	Depth Interval
5/ft.	0.46	3420'-3460'

ACID, SHOT, FRACTURE, CEMENT SQUEEZE RECORD

Am't. & kind of material used	Depth Interval
900 gal 10% Acetic Acid	3420-3460'
1680gal. 3% HFl Acid,	3420-3460'

INITIAL PRODUCTION 30,000 gal. oil, 15,000# sand.

Date of first production	Producing method (indicate if flowing, gas lift or pumping—if pumping, show size & type of pump:)
5-5-67	Pumping - Reda Pump.

Date of test	Hrs. tested	Choke size	Oil prod. during test	Gas prod. during test	Water prod. during test	Oil gravity
5-8-67	24	-	2622 bbls.	366 MCF	0 bbls.	42.5° API (Corr)

Tubing pressure	Casing pressure	Cal'ted rate of Production per 24 hrs.	Oil	Gas	Water	Gas—oil ratio
25	0		2622 bbls.	366 MCF	0 bbls.	140

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 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.

5-11-67
Date

C. W. Colvin
Signature

RECEIVED MAY 15 1967 STATE O & G CONS. COMM.

Permit No. 396

STATE OF ARIZONA
OIL & GAS CONSERVATION COMMISSION
Well Completion or Recompletion Report and Well Log
File One Copy
Form No. 4

(Complete Reverse Side)

DETAIL OF FORMATIONS PENETRATED

Formation	Top	Bottom	Description*
COCONINO	1065'	1770'	Sand Shale and chert streaks.
HERMOSA			
INSTRUSIVE	3410'	3498'	Igneous Rock Cored 3361'-3386' 3408'-3503'

* 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

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	Field	Reservoir
14-20-0603-8823	Dineh-Bi-Keyah	Hermosa
Survey or Sec-Twp-Rge	**County**	**State**
Sec29,30,31,32 T-36N-R30E	Apache	AZ

Operator
Mountain States Petroleum Corp.

ADDRESS ALL CORRESPONDENCE CONCERNING THIS FORM TO:

Street	City	State
P O Bx 1936	Roswell,	New Mexico 88202

Above named operator authorizes (name of transporter)

Transporter's street address	City	State
~~Giant Industries~~ P O Bx 12999	Scottsdale,	AZ

Field address
P O Bx 256 (Bloomfield Hwy) Farmington, N M 87499

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 Oper.

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

Signature Ruby Wickersham

Date approved: AUG 16 1995

STATE OF ARIZONA
OIL & GAS CONSERVATION COMMISSION

By: Steven L. Rains

Permit No. 396

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

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

SUBMIT IN TRIPLICATE

1. Type of Well
☒ Oil Well ☐ Gas Well ☐ Other

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)
640' FSL & 550' FEL
Sec. 30, T36N, R30E

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
I/N 396

8. Well Name and No.
Navajo #9

9. API Well No.
02-001-20020

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

11. County or Parish, State
Apache Co., AZ

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

TYPE OF SUBMISSION	TYPE OF ACTION	
☒ Notice of Intent	☐ Abandonment	☐ Change of Plans
☐ Subsequent Report	☐ Recompletion	☐ New Construction
☐ Final Abandonment Notice	☐ Plugging Back	☐ Non-Routine Fracturing
	☐ Casing Repair	☐ Water Shut-Off
	☐ Altering Casing	☐ Conversion to Injection
	☒ Other Shut-in	☐ 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.)*

The long-term shut-in for the subject well expired 12-31-92. Kerr-McGee requests a one year extension to 12-31-93.

APPROVED
By SLR
Date 2/17/93

FEB 1993
ARIZONA GEOLOGICAL SURVEY

14. I hereby certify that the foregoing is true and correct
Signed D. Bunas Title Regulatory Specialist Date 2-15-93

(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

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	Field	Reservoir
14-20-0603-8823 Navajo	Dineh-Bi-Keyah	Hermosa
Survey or Sec-Twp-Rge	**County**	**State**
Several - T 36 N, R 30 E	Apache	Arizona

Operator
Kerr-McGee Corporation

ADDRESS ALL CORRESPONDENCE CONCERNING THIS FORM TO:

Street	City	State
P. O. Box 250	Amarillo	Texas, 79189

Above named operator authorizes (name of transporter)
Gary-Williams Energy

Transporter's street address	City	State
370 17th St., Suite 5300	Denver	Colorado, 80202

Field address
P. O. Box 159, Bloomfield, NM 87413

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.

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 Area Manager 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.

8/18/92
Date

H.H. Rice H.H. Rice
Signature

Date approved: 8-21-92

STATE OF ARIZONA
OIL & GAS CONSERVATION COMMISSION

By: Steven L. Rauzi

Permit No.

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

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

SUBMIT IN TRIPLICATE

1. Type of Well
[X] Oil Well [ ] Gas Well [ ] Other

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)
640' FSL & 550' FEL
Sec. 30, T36N, R30E

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 #9 file 396

9. API Well No.
02-001-20020

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

11. County or Parish, State
Apache Co., AZ

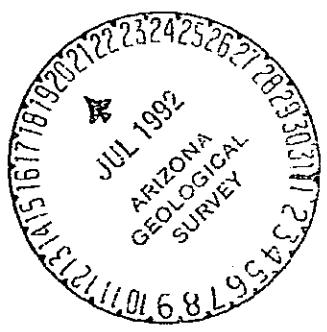
12. CHECK APPROPRIATE BOX(s) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION	
[ ] Notice of Intent	[ ] Abandonment	[ ] Change of Plans
[X] Subsequent Report	[ ] Recompletion	[ ] New Construction
[ ] Final Abandonment Notice	[ ] Plugging Back	[ ] Non-Routine Fracturing
	[ ] Casing Repair	[ ] Water Shut-Off
	[ ] Altering Casing	[ ] Conversion to Injection
	[X] Other Mechanical Integrity Test	[ ] 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.)*

See attached



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

Signed L. Burnas Title Regulatory Specialist Date 7-15-92

(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

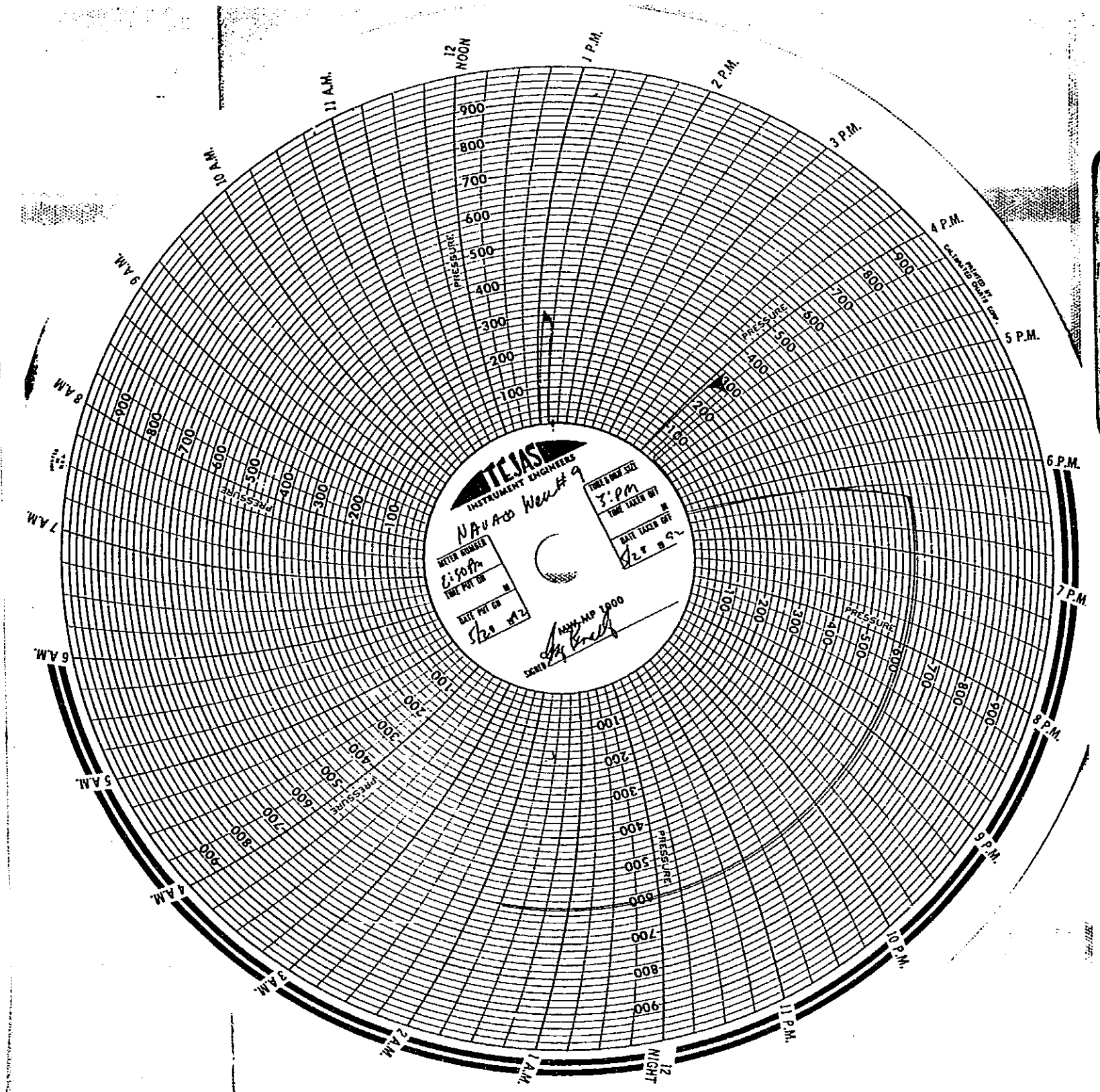
NAVAJO 9
Dineh-Bi-Keyah Field

MECHANICAL INTEGRITY TEST

5/28/92 MI & RU on well. Bled off pressure, opened well. ND WH & NU BOP w/closing unit. PU & TIH w/7" Baker Model-EA retrievamatic pkr, 108 jts 2-7/8" 6.5# 8rd EUE J-55 tbg. Set pkr @ 3378' RKB, 50' above top perf. Perfs @ 3420'-3460' RKB. TD @ 3644' RKB. MI 140 BFW treated w/Tretolite XC-370 Bactericide chemical. Unloaded wtr into steel tank. Ran 2" line from rig pump to 2" 2000# WKM csg valve. Close BOP. Pump 105 bbls treated wtr & loaded 7" csg. Pressure tstd 7" csg to 600 psig for 30 mins. Bled pressure off to steel tank & unset pkr. TOOH w/7" Baker Model-EA pkr, 108 jts of 2-7/8" tbg & LD all equipment on float to move to next location. RD & release rig to next location.

NOTE: Notify Mark Keely w/BLM; Arlene Luther w/Navajo Tribal EPA; Steve Rauzi w/Arizona Oil & Gas Commission. Above agencies were not present to witness pressure testing.

SUPERVISOR: Ray Benally


TEJAS
INSTRUMENT ENGINEERS
NAVAJO Well #9
METER NUMBER
TIME PUT ON
DATE PUT ON
TIME TAKEN OFF
DATE TAKEN OFF
MAXIMUM PRESSURE 1000
SIGNED
12 NOON
1 P.M.
2 P.M.
3 P.M.
4 P.M.
5 P.M.
6 P.M.
7 P.M.
8 P.M.
9 P.M.
10 P.M.
11 P.M.
12 NIGHT
1 A.M.
2 A.M.
3 A.M.
4 A.M.
5 A.M.
6 A.M.
7 A.M.
8 A.M.
9 A.M.
10 A.M.
11 A.M.
PRESSURE
100
200
300
400
500
600
700
800
900

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

SUBMIT IN TRIPLICATE

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:

1. Type of Well: [X] Oil Well [ ] Gas Well [ ] Other
8. Well Name and No.: Navajo #9
2. Name of Operator: Kerr-McGee Corporation
9. API Well No.: 02-001-20020
3. Address and Telephone No.: U.S. Onshore Region, P. O. Box 25861, Oklahoma City, OK 73125 405/270-6023
10. Field and Pool, or Exploratory Area: Dineh-Bi-Keyah
4. Location of Well (Footage, Sec., T., R., M., or Survey Description): 640' FSL & 550' FEL, Sec. 30, T36N, R30E
11. County or Parish, State: Apache Co., AZ

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

TYPE OF SUBMISSION	TYPE OF ACTION	
[X] Notice of Intent	[ ] Abandonment	[ ] Change of Plans
[ ] Subsequent Report	[ ] Recompletion	[ ] New Construction
[ ] Final Abandonment Notice	[ ] Plugging Back	[ ] Non-Routine Fracturing
	[ ] Casing Repair	[ ] Water Shut-Off
	[ ] Altering Casing	[ ] Conversion to Injection
	[X] Other Mechanical Integrity Test	[ ] 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.)*

The long term shut in for the subject well expired December 31, 1991. Kerr-McGee would like to extend the shut in for one additional year to December 31, 1992.

The casing integrity will be tested to allow the well to remain in a shut in status. Kerr-McGee requests that the test be deferred until late spring or early summer due to the current adverse weather conditions. The test will be conducted prior to July 1, 1992.

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

Signed D. Bunas G. Bunas Title Analyst II Date 2-28-92

(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

P/N 396

GAS-OIL RATIO TEST REPORTS

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

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.

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 [X] 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: 640' FSL & 550' FEL of Section 30

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.: 9

10. FIELD AND POOL, OR WILDCAT: Dineh-Bi-Keyah

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: Sec. 30-T36N-R30E

12. COUNTY OR PARISH: APACHE

13. STATE: ARIZONA

14. PERMIT NO.: State No. 396

15. ELEVATIONS (Show whether DF, RT, GR, etc.): 7878' 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	[ ]	PULL OR ALTER CASING	[ ]	WATER SHUT-OFF	[ ]	REPAIRING WELL	[ ]
FRACTURE TREAT	[ ]	MULTIPLE COMPLETE	[ ]	FRACTURE TREATMENT	[X]	ALTERING CASING	[ ]
SHOOT OR ACIDIZE	[ ]	ABANDON*	[ ]	SHOOTING OR ACIDIZING	[X]	ABANDONMENT*	[ ]
REPAIR WELL	[ ]	CHANGE PLANS	[ ]	(Other) Clean Out			[X]
(Other)				(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)			

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

Pulled rods, pump, and tubing. Drilled out scale and paraffin. Reperforated with 1 JPF. Acidized with 1,000 gals. of Resi-Sol and swabbed back acid. Fractured well with 500 gals. scale preventative, 76,300 gals. crude oil; 8,250 lbs. 100 mesh sand, and 60,000 lbs. 10-20 sand. Average injection rate: 54 BPM. Max Press.: 1000 psi; I.S.D.P.: 0 psi. Cleaned out fill up to 3580'. Ran tubing, pump, and rods and placed well on production.

Dates: 11/8/77 - 11/15/77

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

SIGNED Larry D. McRae TITLE District Mgr., Engineering DATE Dec. 5, 1977

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

*See Instructions on Reverse Side

RECEIVED
DEC 12 1977
O & G CONS. COMM.

RECEIVED
NOV 7 1977
O & G CONS. COMM.

SUNDRY NOTICES AND REPORTS ON WELLS

1. Name of Operator: Kerr-McGee Corporation

2. Oil Well [X] Gas Well [ ] Other [ ] (Specify)

3. Well Name: Navajo 9

Location: 640' FSL & 550' FEL

Sec. 30 Twp. T36N Rge. R30E County Apache Arizona.

4. Federal, State or Indian Lease Number, or lessor's name if fee lease: State No. 396

5. Field or Pool Name: Dineh-Bi-Keyah

6. Check Appropriate Box to Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:				SUBSEQUENT REPORT OF:			
TEST WATER SHUT-OFF	[ ]	PULL OR ALTER CASING	[ ]	WATER SHUT-OFF	[ ]	MONTHLY PROGRESS	[ ]
FRACTURE TREAT	[X]	DIRECTIONAL DRILL	[ ]	FRACTURE TREATMENT	[ ]	REPAIRING WELL	[ ]
SHOOT OR ACIDIZE	[X]	PERFORATE CASING	[X]	SHOOTING OR ACIDIZING	[ ]	ALTERING CASING	[ ]
REPAIR WELL	[ ]	CHANGE PLANS	[ ]			ABANDONMENT	[ ]
(OTHER)			[ ]	(OTHER)			[ ]

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

7. 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.)

Pull rods, pump and tubing. Clean out to 3500' RKB with bit. Reperforate from 3,420' to 3,460 with 1 HPF. Acidize perforations with 1,000 gals. of Resi-Sol. Fracture with 76,300 gals. of Lease crude and 60,000 lbs. of 10-20 sand. Clean out with sand pump to 3500' RKB. Run tubing, pump & rods, and place well on production.

Estimated starting date: November 14, 1977

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

Signed Larry D. McRae Title District Mgr.-Engrng Date 10-28-77

Permit No. 396

STATE OF ARIZONA
OIL & GAS CONSERVATION COMMISSION
Sundry Notices and Reports On Wells
File Two Copies
Form No. 25

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.

RESERVOIR PRESSURE REPORT

Operator	Address	Date
Kerr-McGee Corporation	P. O. Box 250, Amarillo, Texas 79105	8-6-73

Field	County	Date
Dineh-bi-Keyah	Apache	

Producing Formation	Oil Gradient	Water Gradient	Initial Completion*	Special*	General Survey*	Datum Plane	Gas Gravity
Hermosa	0.350	--			X	+4500	0.005

Well Name	Permit No.	Well No.	Oil (O) or Gas (G)	Date Tested	Shut-In Time	Shut-In Tubing Pressure	Bomb Test Data: Test Depth	Bomb Test Data: B.H. Temp.	Bomb Test Data: Observed Pressure	Sonic Instrument Test Data: Prod. Test (Bbls per Day) Oil	Prod. Test (Bbls per Day) Water	Liquid Level	Liquid Gradient	Wt. of Liquid Column	Wt. of Gas Column	Casing Pressure	Pressure At Datum *
Navajo	377	1	0	7-12-73	12					113	3						206
Navajo	379	2	0	7-12-73	12					450	61						76
Navajo	396	9	0	7-12-73	12					190	64						94
Navajo Tract 138	388	1	0	7-10-73	12					110	15						293

* Pressures taken from extrapolations of bottom hole pressure build-ups in accordance with method set forth by D. R. Horner (See attached data.)

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* Designate type of report by "x".

CERTIFICATE: I, the undersigned, under the penalty of perjury, state that I am the Dist. Prod. Supt. of the Kerr-McGee Corporation (company), and that I am authorized by said company to make this report; and 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.

August 6, 1973
Date

C J Breeden
Signature C. J. Breeden

STATE OF ARIZONA
OIL & GAS CONSERVATION COMMISSION
Reservoir Pressure Report
File One Copy
Form No. 7

396

DINEH-BI-KEYAH

BHP Data 1973

#1 Pressures calculated at 2,918', datum of +4500' is at 3,073'. Difference is 155' at 0.35 PSI/ft or 54 PSI

152 + 54 = 206 PSI at Datum

#2 Pressures calculated at 3,087', datum of +4500' is at 3,095'. Difference is 8' at 0.35 PSI/ft or 3 PSI

73 + 3 = 76 PSI at Datum

(#9) Pressures calculated at 3,440', datum of +4500' is at 3,378'. Difference is -62' at 0.35 PSI/ft or -22 PSI

116 - 22 = 94 PSI at Datum

#138
-1 Pressures calculated at 3,451', datum of +4500' is at 3,766'. Difference is 315' at 0.35 PSI/ft or 110 PSI

183 + 110 = 293 PSI at Datum

396

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TEFTELLER, INC.
RESERVOIR ENGINEERING DATA
Midland, Texas

Well : NAVAJO NO. 9

Field : DINEH BI KEYAH

File 2-5185-FL

TEST DATA

1973 Date	Status of Well	Time	Elapsed Time Hrs.Min.	Joints To Fluid	Feet To Fluid	Feet Of Fluid To Mid Pay	Oil Column Psi @ .350/Ft.	Gas Column Psi @ .005/Ft.	Casing Pressure Psig	BHP 3440 Psig
7-12	Pumping	07:10		107	3392	48	17	17	0	34
"	Shut in	07:10	0 00							
"	"	07:40	0 30	106	3360	80	28	17	15	60
"	"	08:10	1 00	106	3360	80	28	17	23	68
"	"	08:40	1 30	106	3360	80	28	17	26	71
"	"	09:10	2 00	106	3360	80	28	17	28	73
"	"	09:40	2 30	106	3360	80	28	17	29	74
"	"	10:10	3 00	106	3360	80	28	17	31	76
"	"	10:40	3 30	106	3360	80	28	17	33	78
"	"	11:10	4 00	106	3360	80	28	17	32	77
"	"	12:10	5 00	106	3360	80	28	17	33	78
"	"	13:10	6 00	106	3360	80	28	17	34	79
"	"	14:10	7 00	106	3360	80	28	17	34	79
"	"	15:10	8 00	106	3360	80	28	17	35	80
"	"	17:10	10 00	106	3360	80	28	17	36	81
"	"	19:00	12 00	106	3360	80	28	17	36	81

Average Tubing Length 31.70'
Oil Gradient .350 psi per ft.
Gas Gradient .005 " " "

Total Oil Production to Test Date 1,317,514
Total Water Production to Test Date 257,550

Daily Rate 190 BOPD
Daily Rate 64 BWPD

396

396

NO. 340R-L31C DIETZGEN GRAPH PAPER
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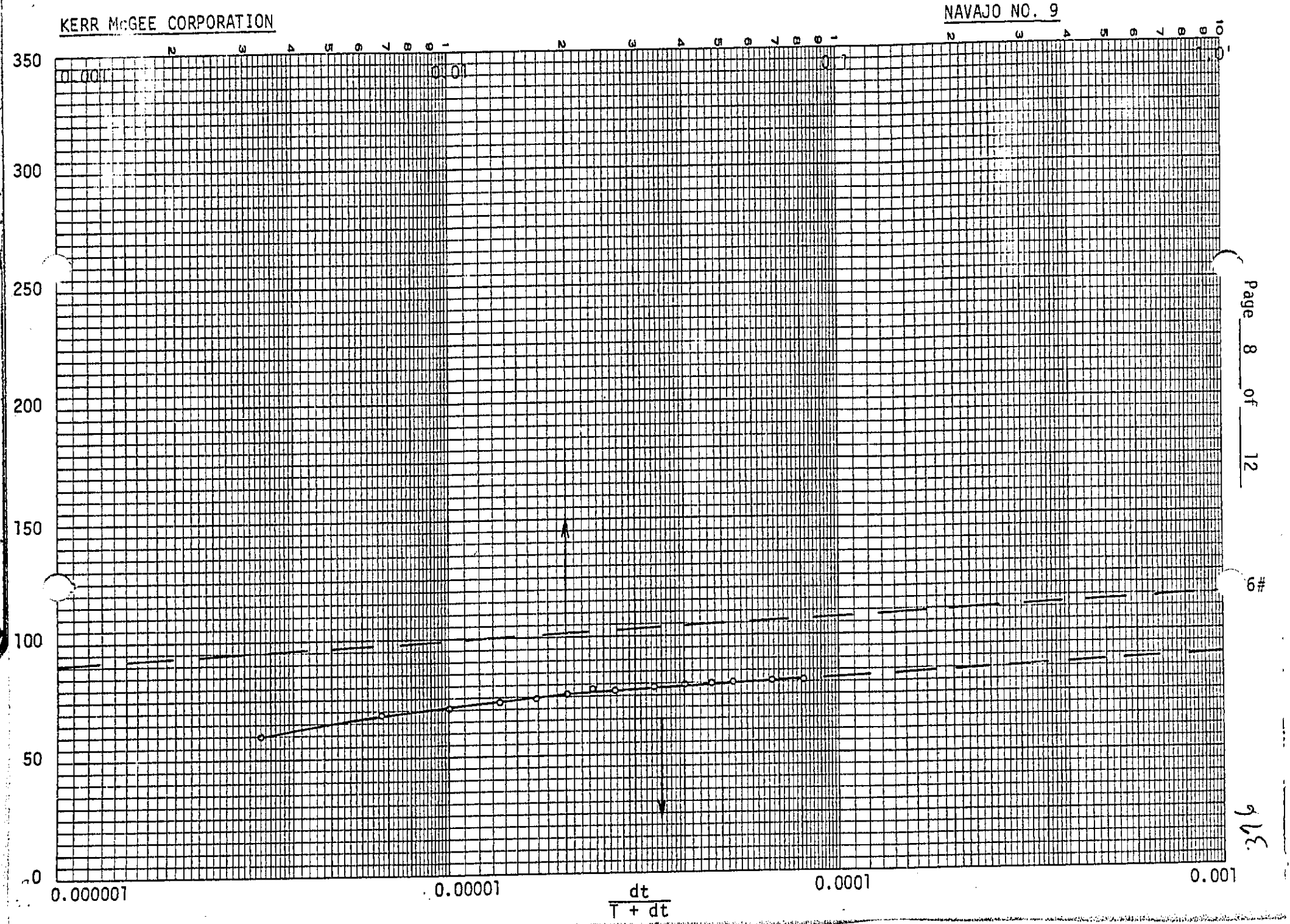
KERR McGEE CORPORATION

NAVAJO NO. 9



Page 8 of 12

6#

316

TEFTELLER, INC.
RESERVOIR ENGINEERING DATA
Midland, Texas

Well : NAVAJO NO. 9 Page 9 of 12

Field : DINEH BI KEYAH File 2-5185-FL

DIMENSIONLESS TIME DATA

1973 Date	Elapsed Time Hours	T + dt	dt / T + dt	Pressure @ 3440' Psig
7-12	0.5	148,825.5	0.0000033	60
"	1.0	148,826.0	0.0000067	68
"	1.5	148,826.5	0.0000100	71
"	2.0	148,827.0	0.0000134	73
"	2.5	148,827.5	0.0000167	74
"	3.0	148,828.0	0.0000201	76
"	3.5	148,828.5	0.0000235	78
"	4.0	148,829.0	0.0000268	77
"	5.0	148,830.0	0.0000335	78
"	6.0	148,831.0	0.0000403	79
"	7.0	148,832.0	0.0000470	79
"	8.0	148,833.0	0.0000537	80
"	10.0	148,835.0	0.0000671	81
"	12.0	148,837.0	0.0000806	81

Cumm. 1,575,064 Bbls Fluid
Rate 254 B/D
T = 148,825

396

396

TEFTELLER, INC.
RESERVOIR ENGINEERING DATA
Midland, Texas

Well : NAVAJO NO. 9

Page 8 of 10

Field : DINEH BI KEYAH

File 2-4719-FL

TEST DATA

1972 Date	Status of Well	Time	Elapsed Time Hrs.	Min.	Joints To Fluid	Feet To Fluid	Feet Of Fluid To Mid Pay	Oil Column Psi @ .350/Ft.	Gas Column Psi @ .005/Ft.	Casing Pressure Psig	BHP 3440' Psig
7-19	Pumping	06:50			106.0	3360	80	28	17	0	45
"	Shut in	07:00	0	00							
"	"	07:30	0	30	107.5	3408	32	11	17	25	53
"	"	08:00	1	00	107.0	3392	48	17	17	30	64
"	"	08:30	1	30	107.0	3392	48	17	17	33	67
"	"	09:00	2	00	107.0	3392	48	17	17	34	68
"	"	09:30	2	30	107.0	3392	48	17	17	36	70
"	" *	10:00	3	00	102.0	3233	207	72	17	0	89
"	"	10:30	3	30	103.0	3265	175	61	17	19	97
"	"	11:00	4	00	105.0	3329	111	39	17	29	85
"	"	12:00	5	00	105.5	3344	96	34	17	35	86
"	"	13:00	6	00	105.5	3344	96	34	17	37	88
"	"	14:00	7	00	105.0	3329	111	39	17	40	96
"	"	15:00	8	00	104.5	3313	127	44	17	40	101
"	"	17:00	10	00	104.0	3297	143	50	17	43	110
"	"	19:00	12	00	104.0	3297	143	50	17	43	110

* Casing pressure was bled off by pumper by mistake.

Average Tubing Length 31.70 ft.
Oil Gradient .350 psi per ft.
Gas Gradient .005 psi per ft.

Total Oil Production to test date 1,277,876 Bbls
Total Water Production to test date 233,970 Bbls

Daily Rate 298 BOPD
Daily Rate 62 BWPD

394

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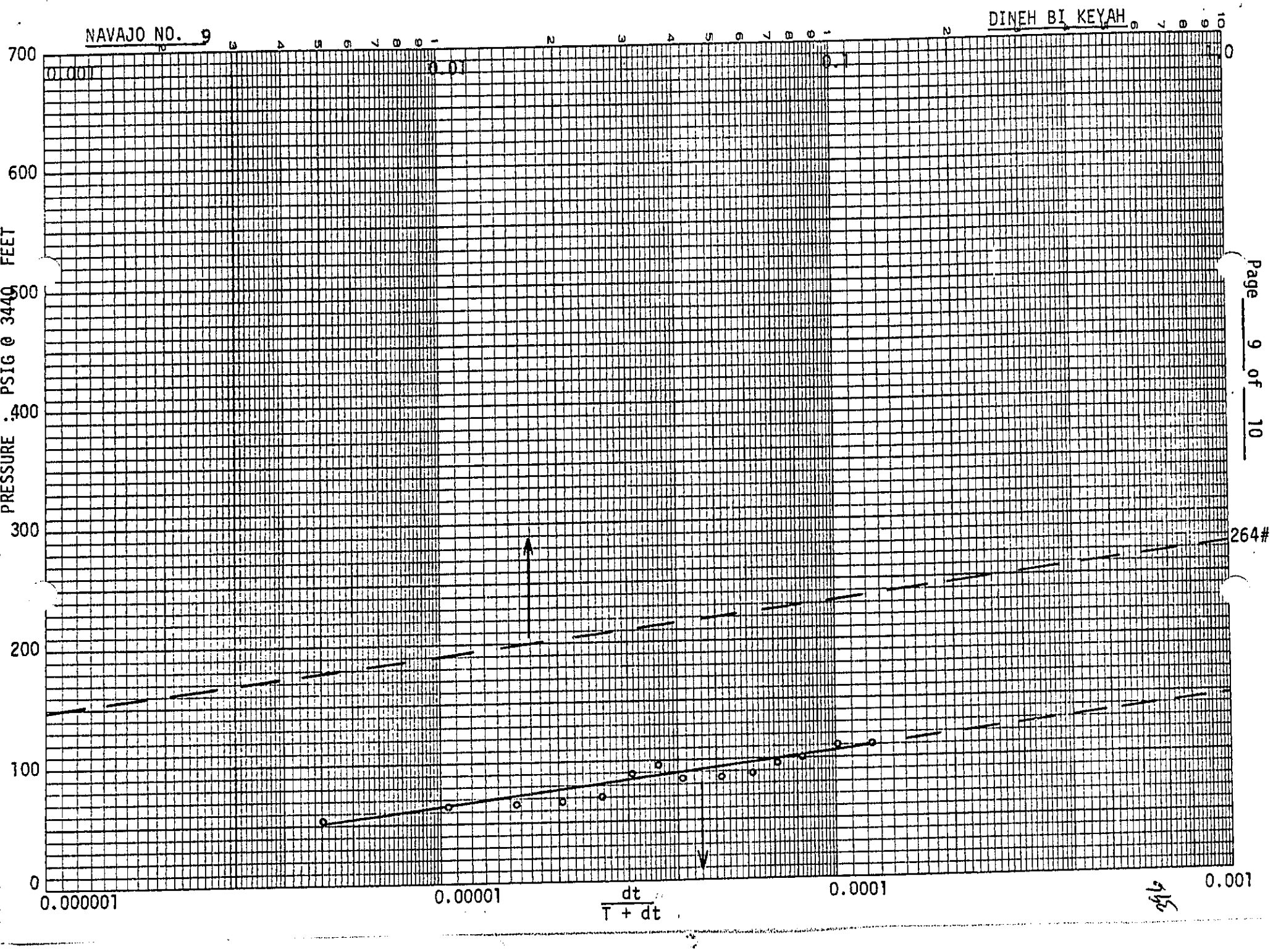
NAVAJO NO. 9

DINEH BI KEYAH



Page 9 of 10

TEFTELLER, INC.
RESERVOIR ENGINEERING DATA
Midland, Texas

Well : NAVAJO NO. 9 Page 10 of 10

Field : DINEH BI KEYAH File 2-4719-FL

DIMENSIONLESS TIME DATA

1972 Date	Elapsed Time Hours	T + dt	dt / T + dt	Pressure @ 3440' Psig
7-19-72	0.5	97,456.5	0.0000051	53
"	1.0	97,457.0	0.0000103	64
"	1.5	97,457.5	0.0000154	67
"	2.0	97,458.0	0.0000205	68
"	2.5	97,458.5	0.0000257	70
"	3.0	97,459.0	0.0000308	89
"	3.5	97,459.5	0.0000359	97
"	4.0	97,460.0	0.0000410	85
"	5.0	97,461.0	0.0000513	86
"	6.0	97,462.0	0.0000616	88
"	7.0	97,463.0	0.0000718	96
"	8.0	97,464.0	0.0000821	101
"	10.0	97,466.0	0.0001026	110
"	12.0	97,468.0	0.0001231	110

Cumm. 1,461,846 Bbls Fluid
Rate 360 B/D
T = 97,456 hours

396

RESERVOIR PRESSURE REPORT

Operator: Kerr-McGee Corporation
Address: P. O. Box 250, Amarillo, Texas 79105
Date: 8-4-72
Field: Dineh-bi-Keyah
County: Apache
Producing Formation: Hermosa
Oil Gradient: 0.350
Water Gradient: ---
Initial Completion*:
Special*:
General Survey*: X
Datum Plane: +4500
Gas Gravity: 0.005

Well Name	Permit No.	Well No.	Oil (O) or Gas (G)	Date Tested	Shut-In Time	Shut-In Tubing Pressure	Bomb Test Data: Test Depth	Bomb Test Data: B.H. Temp.	Bomb Test Data: Observed Pressure	Sonic Instrument Test Data: Prod. Test (Bbls per Day) Oil	Prod. Test (Bbls per Day) Water	Liquid Level	Liquid Gradient	Wt. of Liquid Column	Wt. of Gas Column	Casing Pressure	Pressure At Datum *
Navajo	377	1	0	7-19	12					135	3						301
Navajo	379	2	0	7-19	12					61	12						124
Navajo	396	9	0	7-19	12					298	62						286

RECEIVED
AUG 07 1972
O & G CONS. COMM.

*Pressures taken from extrapolations of bottom hole pressure build-ups in accordance with method set forth by D. R. Horner (See attached data).

* Designate type of report by "x".

CERTIFICATE: I, the undersigned, under the penalty of perjury, state that I am the District Engineer of the Kerr-McGee Corporation (company), and that I am authorized by said company to make this report; and 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.

8-4-72
Date

J E Dobler
Signature

STATE OF ARIZONA
OIL & GAS CONSERVATION COMMISSION
Reservoir Pressure Report
File One Copy

Form No. 7

TEFTELLER, INC.
RESERVOIR ENGINEERING DATA
Midland, Texas

Well : NAVAJO NO. 9

Field : DINEH BI KEYAH

File 2-4306-FL

TEST DATA

Date	Status of Well	Time	Elapsed Time Hrs.	Elapsed Time Min.	Joints To Fluid	Feet To Fluid	Feet Of Fluid To Mid Pay	Oil Column Psi @ .350/FT	Gas Column Psi @ .005/FT	Casing Pressure Psig	BHP @ 3440'
7-6	Pumping	08:45			110.0	3487	0	0	0	0	0
7-6	Shut in	09:10	0	00							
"	"	09:40	0	30	104.5	3313	127	44	17	8	69
"	"	10:10	1	00	105.0	3329	111	39	17	7	63
"	"	10:40	1	30	104.0	3297	143	50	17	9	76
"	"	11:10	2	00	104.0	3297	143	50	17	15	82
"	"	11:40	2	30	104.5	3313	127	44	17	23	84
"	"	12:10	3	00	105.0	3329	111	39	17	29	85
"	"	12:40	3	30	105.0	3329	111	39	17	30	86
"	"	13:10	4	00	105.5	3344	96	34	17	28	79
"	"	14:10	5	00	106.0	3360	80	28	17	33	78
"	"	15:10	6	00	106.5	3376	64	22	17	35	74
"	"	16:10	7	00	107.0	3392	48	17	17	36	70
"	"	17:10	8	00	107.0	3392	48	17	17	36	70
"	"	19:10	10	00	107.5	3408	32	11	17	37	65
"	"	21:10	12	00	107.0	3392	48	17	17	38	72

Average Tubing Length 31.70 Oil Gradient .350 Psi per foot
Gas Gradient .005 Psi per foot

86 Psi @ 4454'

Total Oil Production to Test Date 1,122,273 bbls.
Total Water Production to Test Date 208,554 bbls.

Oil Rate 288 B/D
Water Rate 85 B/D

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O & G CONS. COMM.

~~379~~ 396

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EUGENE DIETZGEN CO.
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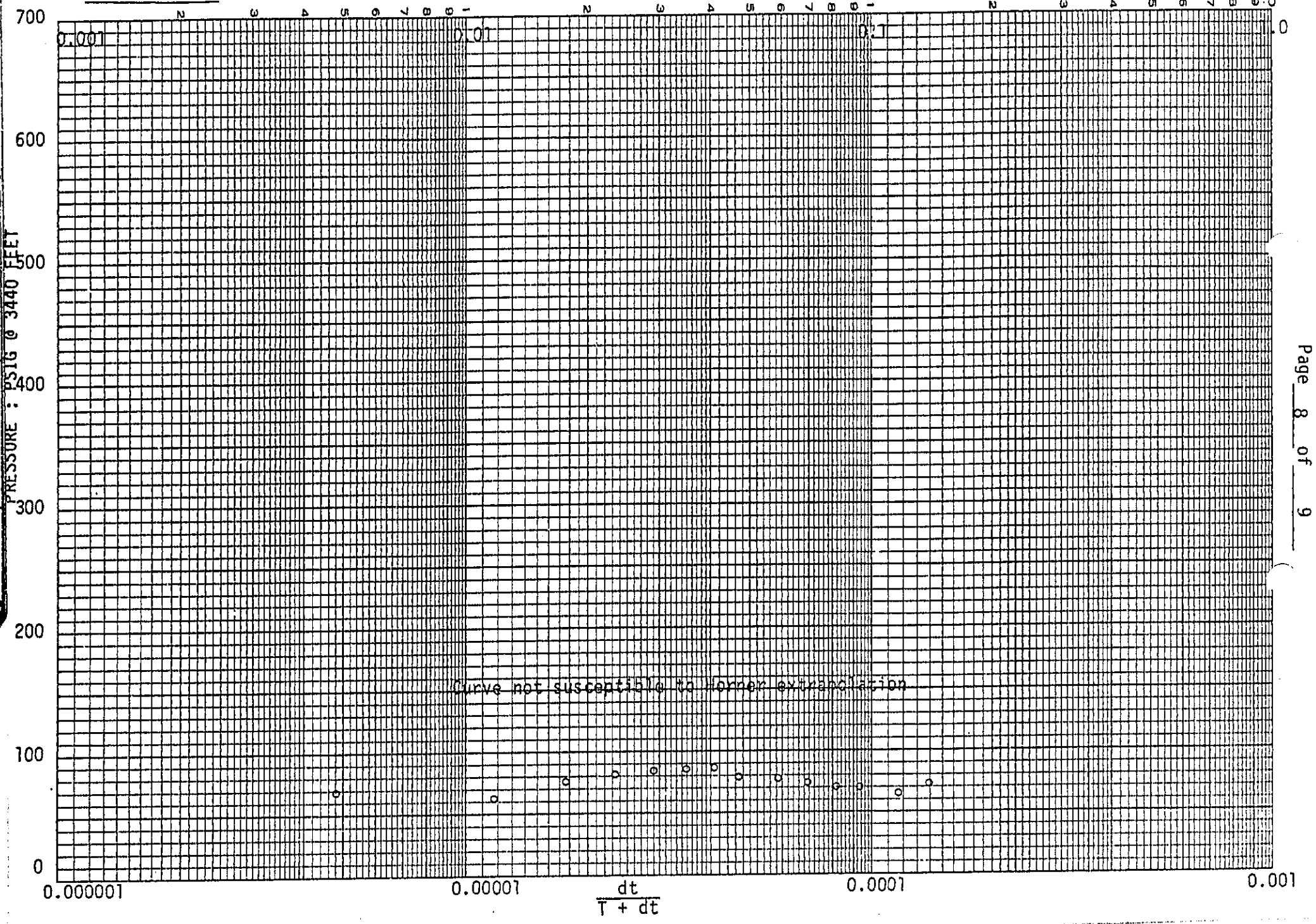
NAVAJO NO. 9

DINEH BI KEYAH



TEFTELLER, INC.
RESERVOIR ENGINEERING DATA
Midland, Texas

Well : NAVAJO NO. 9 Page 9 of 9

Field : DINEH BI KEYAH File 2-4306-FL

DIMENSIONLESS TIME DATA

1971 Date	Elapsed Time Hours	T + dt	dt / T + dt	Pressure @ 3440' Psig
7-6-71	0.5	86,109.5	0.0000058	69
"	1.0	86,110.0	0.0000116	63
"	1.5	86,110.5	0.0000174	76
"	2.0	86,111.0	0.0000232	82
"	2.5	86,111.5	0.0000290	84
"	3.0	86,112.0	0.0000348	85
"	3.5	86,112.5	0.0000406	86
"	4.0	86,113.0	0.0000465	79
"	5.0	86,114.0	0.0000581	78
"	6.0	86,115.0	0.0000697	74
"	7.0	86,116.0	0.0000813	70
"	8.0	86,117.0	0.0000929	70
"	10.0	86,119.0	0.0001161	65
"	12.0	86,121.0	0.0001393	72

Cumm. 1,330,827 BBLS Fluid
Rate 373 B/D
T = 86,109

196

RECEIVED
AUG 5 1971
O & G CONS. COMM.

J 2 L

RESERVOIR PRESSURE REPORT

Operator: Kerr-McGee Corporation
Address: P. O. Box 250, Amarillo, Texas 79105
Date: 8/3/71
Field: Dineh-bi-Keyah
County: Apache
Producing Formation: Hermosa
Oil Gradient: .350
Water Gradient:
Initial Completion*:
Special*:
General Survey*: XX
Datum Plane: +4500'
Gas Gravity:

Well Name	Permit No.	Well No.	Oil (O) or Gas (G)	Date Tested	Shut-in Time	Shut-In Tubing Pressure	Bomb Test Data: Test Depth	Bomb Test Data: B.H. Temp.	Bomb Test Data: Observed Pressure	Prod. Test (Bbls per Day): Oil	Prod. Test (Bbls per Day): Water	Sonic Instrument Test Data: Liquid Level	Sonic Instrument Test Data: Liquid Gradient	Sonic Instrument Test Data: Wt. of Liquid Column	Sonic Instrument Test Data: Wt. of Gas Column	Sonic Instrument Test Data: Casing Pressure	Pressure At Datum *
Navajo	377	1	0	7-6-71	12					185	6						349
Navajo	379	2	0	7-6-71	12					160	36						11
Navajo	396	9	0	7-6-71	12					228	85						70

RECEIVED
AUG 5 1971
O & G CONS. COMM.

*Pressures taken from extrapolations of bottom hole pressure build-ups in accordance with method set forth by D. R. Horner (See attached data).

* Designate type of report by "x".

CERTIFICATE: I, the undersigned, under the penalty of perjury, state that I am the District Manager of the Kerr-McGee Corporation (company), and that I am authorized by said company to make this report; and 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: 8/3/71

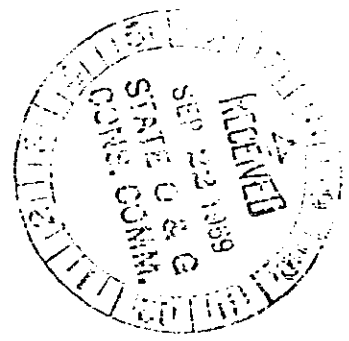
Signature: C. D. Williams

STATE OF ARIZONA
OIL & GAS CONSERVATION COMMISSION
Reservoir Pressure Report
File One Copy
Form No. 7

KERR-McGEE

KERR-McGEE BUILDING • OKLAHOMA CITY, OKLAHOMA 73102

September 19, 1969



Mr. John Bannister
Oil and Gas Conservation Commission
Room 202 - 1624 W. Adams
Phoenix, Arizona

Kerr-McGee Navajo No. 11
Interference Test Data

This will transmit the following data for your information:

9c

1. Twelve-hour shut-in pressure build-up tests on the Navajo No's 1, 2, 3X, 4 and 9 - two copies each well.

2. Arizona Form 7 with SIP's calculated for each of the above wells - two copies.

3. No. 11 stabilized pressure survey conducted by Tefteller, Inc. prior to the shut-in of Well No's 1, 2, 3X and 4 - two copies.

4. Pressure surveys 1 through 4 conducted by Sperry-Sun reflecting the bottom-hole pressure in the Navajo No. 11 during the interference test - one copy each.

The subject test was conducted in August, 1969, utilizing the Navajo No. 11 to monitor reservoir pressure and the No's 1, 2, 3X and 4 to initiate a drawdown signal as offsetting producers. A schedule of events is as follows:

TEST SCHEDULE

August 9, 1969 (Saturday)

6:00 AM - Recovered No. 11 load and shut-in well
9:30 AM - Rods out of No. 11
10:30 AM - Amerada Pressure Bomb on bottom to record 24 hours of stabilized pressure.

August 10, 1969 (Sunday)

12:15 PM - Amerada Bomb out of hole
Pressure stable @ 132 psig @ 2845' (+4561) throughout entire 25-3/4 hour period.
12:45 PM - Amerada Bomb on bottom
1:40 PM - Shut-in Navajo No's 1, 2, 3X and 4. Conduct 12-hour shut-in pressure build-up tests.
5:55 PM - Amerada Bomb out of hole
6:35 PM - Sperry-Sun Pressure Gauge on bottom @ 2845' (+4561)

396

August 11, 1969 (Monday)

1:40 AM - Turn on Navajo No. 4
1:40 PM - Turn on Navajo No. 3X

August 12, 1969 (Tuesday)

1:40 AM - Turn on Navajo No. 2
1:40 PM - Turn on Navajo No. 1

August 14, 1969 (Thursday)

6:30 AM - Pulled Sperry-Sun Pressure Gauge - End Run No. 1
8:10 AM - Sperry-Sun Gauge on bottom

August 15, 1969 (Friday)

9:00 PM - Pulled Sperry-Sun Gauge - End Run No. 2
10:30 PM - Sperry-Sun Gauge on bottom

August 17, 1969 (Sunday)

2:50 PM - Pulled Sperry-Sun Gauge - End Run No. 3
4:30 PM - Sperry-Sun Gauge on bottom

August 18, 1969 (Monday)

2:00 PM - Pulled Sperry-Sun Gauge 192-1/3 hours after official test began (192 hours required) with the shutting-in of Navajo No's 1, 2, 3X and 4. Shut-in Navajo No. 9 to conduct 12-hour shut-in pressure build-up test. Start official potential test on Navajo No. 11.

August 19, 1969 (Tuesday)

2:00 AM - Turn on Navajo No. 9

Except for minor fluctuations where bottom-hole conditions were interrupted by pulling and re-running the pressure gauge, only one interference point was noted on the Sperry-Sun data. At approximately 5:10 AM on August 12, 1969, an inflection point, although quite subtle, occurred on the Navajo No. 11 bottom-hole pressure plot. This occurrence was 34-1/2 hours after the Sperry-Sun

instrument reached bottom on the first run and 27-1/2 hours after the Navajo No. 4 had been returned to production. Based on radial flow calculations, which may not be applicable to this type of reservoir, this drawdown would be caused by the Navajo No. 4. We could not identify from this data any other well which may have contributed to interference with Well No. 11. It is probable that a critical examination of future individual well performance may provide the best information to evaluate the effects of Well No. 11.

As you will note, shut-in pressure build-up tests are reported on more wells than are required by Order No. 24. Kerr-McGee desired to have this additional information, and it is also reported for the information of the Commission

Sincerely yours,

KERR-McGEE CORPORATION

Bill P. Stauss
Production Division

BPS:md
Enclosures

cc: Humble Oil & Refining Company

346

RESERVOIR PRESSURE REPORT

Operator: KERR-McGEE CORPORATION
Address: Kerr-McGee Building, Oklahoma City, Okla. 73102
Field: Dineh-bi-keyah
County: Apache
Date: Sept. 12, 1969

Producing Formation	Oil Gradient	Water Gradient	Initial Completion*	Special*	General Survey*	Datum Plane	Gas Gravity
Hermosa	.35 psi/ft.	---	---	---	X	+4500	---

Lease	Permit Number	Well No.	Oil (O) or Gas (G)	Date Tested	Shut-In Time	Shut-In Tubing Pressure	Bomb Test Data: Test Depth	Bomb Test Data: B.H. Temp.	Bomb Test Data: Observed Pressure	Sonic Instrument Test Data: Prod. Test (Bbls per Day) Oil	Prod. Test (Bbls per Day) Water	Liquid Level	Liquid Gradient	Wt. of Liquid Column	Wt. of Gas Column	Casing Pressure	Pressure At Datum*
					Hrs.				Psig								P - IA
Navajo	377	1	0	8-10-69	12		+4655		112								258
Navajo	379	2	0	8-10-69	12		+4429		170								191
Navajo	386	3X	0	8-10-69	12		+4552		163								211
Navajo	384	4	0	8-10-69	12		+4462		126								126
Navajo	396	9	0	8-18-69	12		+4457		118								136

RECEIVED SEP 22 1969 STATE O & G CONS. COMM.

*Pressures calculated from extrapolations of bottom hole pressure build-up tests in accordance with method set forth by Mr. D. R. Horner (see attached data).

* Designate type of report by "x".

CERTIFICATE: I, the undersigned, under the penalty of perjury, state that I am the Reservoir Engr. of the Kerr-McGee Corporation (company), and that I am authorized by said company to make this report; and 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.

September 12, 1969
Date

Signature

STATE OF ARIZONA
OIL & GAS CONSERVATION COMMISSION

Reservoir Pressure Report

Form No. P-12 File two copies
Authorized by Order No. 4-6-59
Effective April 6, 1959

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PRESSURE BUILD-UP TEST

42 NAVAJO NO. (9) CALCULATION SHEET

Test Date: 8-18-69

Dimensionless Pressure Drawdown, $p(t_{De})$

$$p(t_{De}) = \frac{2.303 \quad (Pi - P^*)}{M}$$

Where: $p(t_{De})$ = dimensionless pressure drawdown at exterior boundary of drainage system

Pi = initial static pressure in drainage system or reservoir = 597 psia

P* = pressure at exterior boundary determined by extrapolating straight line slope of build-up plot to infinite shut-in time = 150 psia (plot attached)

M = straight line slope of build-up plot, psia per cycle = 10.7 (plot attached)

$$p(t_{De}) = \frac{2.303\ (597 - 150)}{10.7} = 96.21$$

Dimensionless Producing Time, t_{De}

The dimensionless producing time is determined to be 24.8 from a plot of $p(t_{De})$ versus t_{De} (refer to Case No. 26 hearing exhibits for example of this plot).

Average Static Pressure, $\overline{P}$

$$\overline{P} = Pi - 1.737\ M\ t_{De}$$

Where $\overline{P}$ = average static pressure of the drainage system

$$\overline{P} = 597 - 1.737\ (10.7)(24.8) = \underline{136 \text{ psia}}$$

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PRESSURE BUILD-UP TEST

NAVAJO NO. 9 DATA SHEET

Test Date: 8-18-69
Producing Rate when shut-in: 660 BPD (546 BOPD)
Producing Pressure when shut-in: 70 psig at 3437 (+4457)
Producing Pressure corrected to +4500' Datum: 66 psia
Cumulative Production to test date: 856,640 bbls.
Producing Time (T): 37,655 hours

TIME	Shut-In Time Min.	Shut-In Time Hrs.	Mid-Pay Press (PSIG)	Corrected Press @ +4500' (PSIA)	ΔT / T + ΔT
2:00 PM	0	0.0	70	66	0
2:05 "	5	0.0833	82	78	.0000022
2:10 "	10	0.1667	92	88	.0000044
2:15 "	15	0.2500	96	92	.0000066
2:30 "	30	0.5000	102	98	.0000133
3:00 "	60	1.0000	108	104	.0000266
3:30 "	90	1.5000	108	104	.0000398
4:00 "	120	2.0000	108	104	.0000531
4:30 "	150	2.5000	110	106	.0000664
5:00 "	180	3.0000	110	106	.0000797
5:30 "	210	3.5000	112	108	.0000929
6:00 "	240	4.0000	112	108	.0001062
7:00 "	300	5.0000	112	108	.0001328
8:00 "	360	6.0000	112	108	.0001593
9:00 "	420	7.0000	114	110	.0001859
10:00 "	480	8.0000	114	110	.0002124
12:00 Midn.	600	10.0000	118	114	.0002655
2:00 AM	720	12.0000	118	114	.0003186

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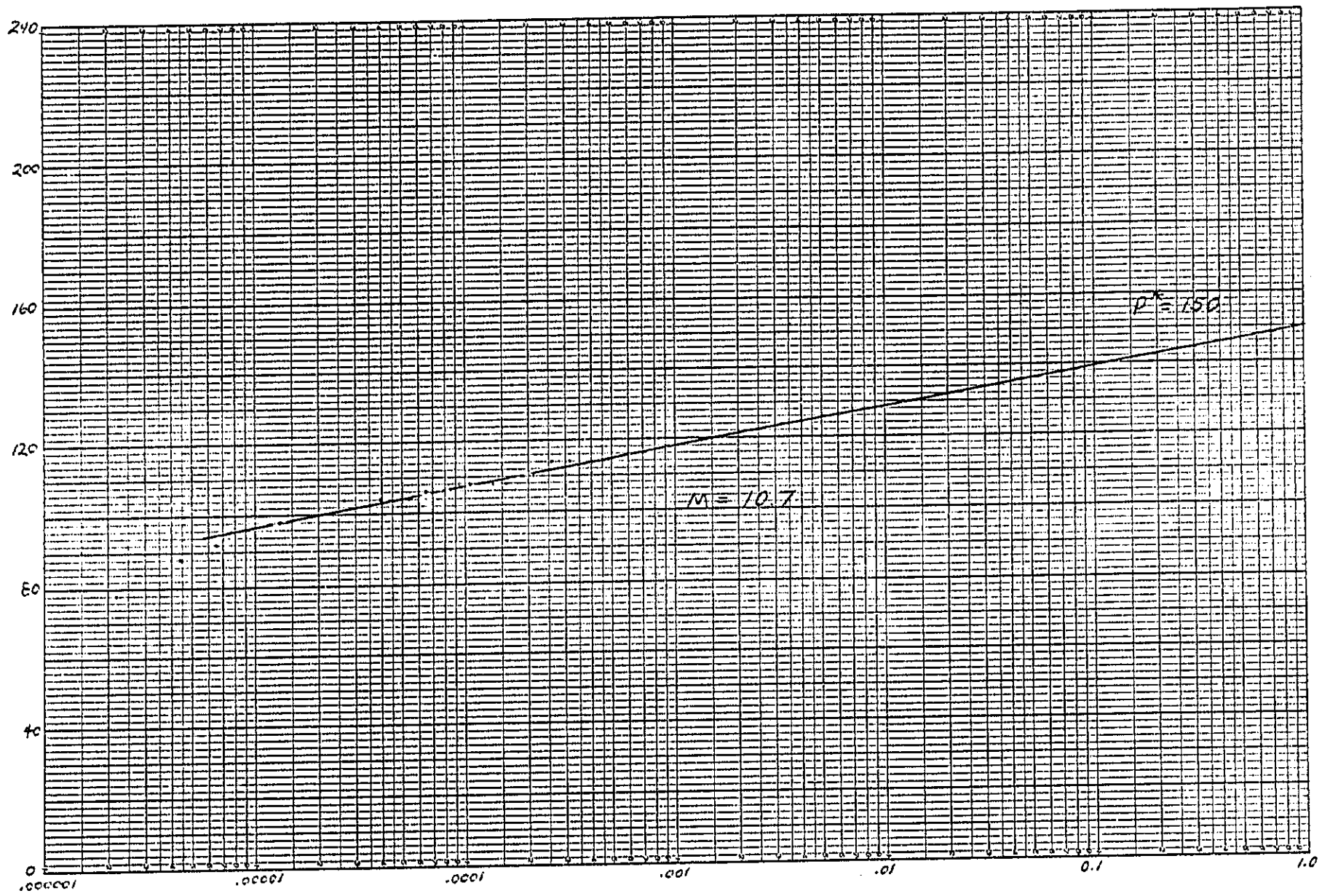
NO. 32,228. 20 DIVISIONS PER INCH (120 DIVISIONS) BY SIX CYCLES RATIO RULING.

CODEX BOOK COMPANY, INC., NORWOOD, MASSACHUSETTS.
PRINTED IN U.S.A.

Navajo No. 9. Pressure Build-up Plot - August 18, 1969 - +4500' Datum



$$\frac{\Delta T}{T + \Delta T}$$

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RESERVOIR PRESSURE REPORT

Operator: Kerr-McGee Corporation

Address: 215 Petroleum Center Building, Farmington, New Mexico 87401

Field: Dineh-bi-Keyah

County: Apache

Date: 8-9-68

Producing Formation	Oil Gradient	Water Gradient	Initial Completion*	Special*	General Survey*	Datum Plane	Gas Gravity
Hermosa					X	+4500'	

Well Name	Permit No.	Well No.	Oil (O) or Gas (G)	Date Tested	Shut-In Time	Shut-In Tubing Pressure	Bomb Test Data: Test Depth	B.H. Temp.	Observed Pressure	Sonic Instrument Test Data: Prod. Test (Bbls per Day) Oil	Water	Liquid Level	Liquid Gradient	Wt. of Liquid Column	Wt. of Gas Column	Casing Pressure	Pressure At Datum *
Navajo	377	1	0	7-12-68	12		4703		120 psig								304 psia
Navajo	379	2	0	7-12-68	12		4573		200								236
Navajo	386	3X	0	7-12-68	12		4595		192								260
Navajo	389	7	0	7-12-68	12		4395		114								191
Navajo	396	9	0	7-12-68	12		4457		88								160
Navajo "B"	445	1X	0	7-12-68	12		4703		230								474

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*Pressures taken from extrapolations of bottom hole pressure build-ups in accordance with method set forth by Mr. D. R. Horner (see attached data).

* Designate type of report by "X".

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 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.

August 9, 1968
Date

Signature C D Williams

STATE OF ARIZONA
OIL & GAS CONSERVATION COMMISSION

Reservoir Pressure Report
File One Copy

Form No. 7

ARIZONA

CORE LABORATORIES, INC.
Petroleum Reservoir Engineering
DALLAS, TEXAS

CORE ANALYSIS RESULTS

Company KERR-McGEE CORPORATION Formation PENNSYLVANIAN File CP-12-1519
Well NAVAJO NO. 9 Core Type DIAMOND Date Report 6-12-67
Field DINEH-BI-KEYAH Drilling Fluid WATER BASE MUD Analysts DANIEL
County APACHE State ARIZONA Elev. 7881'GL Location 640'FSL 550'FEL SEC 30-36N-30E

Lithological Abbreviations

SAND-SD, SHALE-SH, LIME-LM, DOLOMITE-DOL, CHERT-CH, GYPSUM-GYP, ANHYDRITE-ANHY, CONGLOMERATE-CONG, FOSSILIFEROUS-FOES, SANDY-SDY, SHALY-SHY, LIMY-LMY, FINE-FN, MEDIUM-MED, COARSE-CSE, CRYSTALLINE-XLN, GRAIN-GRN, GRANULAR-GRNL, BROWN-BRN, GRAY-GY, VUGGY-VGY, FRACTURED-FRAC, LAMINATION-LAM, STYLOLITIC-STY, SLIGHTLY-SL/, VERY-V/, WITH-W/

SAMPLE NUMBER	DEPTH FEET	PERMEABILITY MILLIDARCYS PERM. MAX.	PERM. 90°	BOYLE'S LAW Ø	RESIDUAL SATURATION PER CENT PORE OIL	TOTAL WATER	SAMPLE DESCRIPTION AND REMARKS
	REVISED DATA						FRACTURE DESCRIPTION ONLY
	CORE NO. 1						
	3361.0-69.0						No analysis
1	3369.0-70.0	<0.1		8.1			Vertical Fractures
2	70.0-71.0	<0.1		5.0			Vertical Fractures
3	71.0-72.0	<0.1		5.1			Vertical Fractures
4	3372.0-73.0	<0.1		2.2			Vertical Fractures
	3373.0-86.0						No analysis
	3386.0-3408.0						Drilled
	CORE NO. 2						
5	3408.0-09.0	0.1		6.3			Horizontal Fractures
6	09.0-10.0	<0.1		8.9			Vertical & Horizontal Fracture
7	10.0-11.0	<0.1		8.8			Vertical Fractures (Open)
8	11.0-12.0	<0.1		8.7			Vertical Fractures
9	12.0-13.0	0.1		8.9			Vertical Fractures (Open)
10	13.0-14.0	0.1		9.2			Vertical Fractures (Open)
11	14.0-15.0	0.2		10.7			Vertical Fractures
12	15.0-16.0	0.1		9.5			
13	16.0-17.0	0.1		9.2			
14	17.0-18.0	0.2		10.2			
15	18.0-19.0	0.4		10.5			
16	19.0-20.0	0.2		9.3			Diagonal Fractures (Open)
17	20.0-21.0	0.2		9.2			
18	21.0-22.0	0.2		9.9			
19	22.0-23.0	0.2		9.8			
20	23.0-24.0	0.4		11.0			
21	24.0-25.0	0.2		10.3			
22	25.0-26.0	0.4		10.2			Vertical & Horizontal Fracture
23	26.0-27.0	0.2		9.6			Vertical & Horizontal Fracture
24	27.0-28.0	0.6		11.0			Vertical & Horizontal Fracture
25	28.0-29.0	0.4		9.5			
26	3429.0-30.0	0.9		12.0			

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 profitableness 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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CORE LABORATORIES, INC.
Petroleum Reservoir Engineering
DALLAS, TEXAS

File CP-12-1519 Page No. 2
Well Navajo No. 9

CORE ANALYSIS RESULTS

SAMPLE NUMBER	DEPTH FEET	PERMEABILITY MILLIDARCYS	BOYLE'S LAW Ø	RESIDUAL SATURATION PER CENT PORE: OIL	RESIDUAL SATURATION PER CENT PORE: TOTAL WATER	SAMPLE DESCRIPTION AND REMARKS
27	3430.0-31.0	0.4	14.0			3 Diagonal Fractures
28	31.0-32.0	0.4	10.7			Diagonal Fractures
29	32.0-33.0	0.2	9.8			3 Diagonal Fractures
30	33.0-34.0	0.2	10.0			1 Vertical & Diagonal Fractures ✓
31	34.0-35.0	0.2	9.2			Vertical Fractures (Open)
32	35.0-36.0	0.2	9.4			Vertical Fractures
33	36.0-37.0	0.2	10.0			3 Vertical Fractures
34	37.0-38.0	0.2	10.2			
35	38.0-39.0	0.4	10.6			
36	39.0-40.0	0.4	10.9			
37	40.0-41.0	0.9	12.3			6
38	41.0-42.0	1.0	11.1			
39	42.0-43.0	2.8	13.0			
40	43.0-44.0	1.6	13.3			
41	44.0-45.0	1.9	13.7			1 Diagonal Fractures
42	45.0-46.0	1.0	11.9			1
43	46.0-47.0	2.4	12.4			1 Diagonal Fractures
44	47.0-48.0	1.4	14.1			
45	48.0-49.0	1.4	13.7			4
46	49.0-50.0	1.4	13.0			
47	50.0-51.0	1.6	13.1			
48	51.0-52.0	1.0	12.8			Horizontal Fractures
49	52.0-53.0	0.9	11.8			2 Horizontal Fractures
50	53.0-54.0	0.4	10.7			Diagonal Fractures
51	54.0-55.0	0.4	10.3			2 Diagonal Fractures
52	55.0-56.0	0.2	10.4			1
53	56.0-57.0	0.2	10.3			1 Diagonal Fractures
54	57.0-58.0	0.2	10.4			Horizontal Fractures
55	58.0-59.0	0.2	10.1			Horizontal Fractures
56	59.0-60.0	0.2	10.6			Horizontal Fractures
57	60.0-61.0	0.4	10.2			Horizontal Fractures
58	61.0-62.0	0.4	10.7			Horizontal Fractures
59	62.0-63.0	0.4	10.0			6 Horizontal Fractures
60	63.0-64.0	0.2	9.3			Diagonal Fractures (Open)
61	64.0-65.0	0.4	10.2			Diagonal Fractures
62	65.0-66.0	0.6	10.5			3 Diagonal Fractures
63	3466.0-67.0	0.2	9.4			1 Diagonal & Horizontal Fractures

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CORE LABORATORIES, INC.
Petroleum Reservoir Engineering
DALLAS, TEXAS

File CP-12-1519 Page No. 3
Well Navajo No. 9

CORE ANALYSIS RESULTS

SAMPLE NUMBER	DEPTH FEET	PERMEABILITY MILLIDARCYS	BOYLE'S LAW Ø	RESIDUAL SATURATION PER CENT PORE OIL	RESIDUAL SATURATION PER CENT PORE TOTAL WATER	SAMPLE DESCRIPTION AND REMARKS
	CORE NO. 3					
64	3467.0-68.0	0.2	9.2			Vertical Fractures (Open)
65	68.0-69.0	0.2	8.7			Vertical & Horizontal Fractures (Open)
66	69.0-70.0	0.2	9.0			Vertical & Horizontal Fractures (Open)
67	70.0-71.0	0.2	8.5			Vertical & Horizontal Fractures (Open)
68	71.0-72.0	0.3	11.1			Vertical Fractures (Open)
69	72.0-73.0	0.2	10.2			Horizontal Fractures
70	73.0-74.0	0.2	10.0			Diagonal Fractures
71	74.0-75.0	0.2	9.3			
72	75.0-76.0	0.4	11.3			
73	76.0-77.0	0.2	10.1			Horizontal Fractures
74	77.0-78.0	0.1	8.5			Diagonal (Open) & Horizontal Fractures
75	78.0-79.0	0.2	9.0			Vertical Fractures (Open)
76	79.0-80.0	0.1	8.3			Vertical & Diagonal Fractures (Open)
77	80.0-81.0	0.1	8.5			Vertical & Diagonal Fractures (Open)
78	81.0-82.0	0.1	7.9			Vertical & Horizontal Fractures
79	82.0-83.0	0.1	8.0			Vertical & Horizontal Fractures
80	83.0-84.0	0.1	8.6			Horizontal Fractures
81	84.0-85.0	0.1	8.8			Horizontal Fractures
82	85.0-86.0	0.1	11.1			Horizontal Fractures
83	86.0-87.0	0.2	11.3			Horizontal Fractures
84	87.0-88.0	0.1	11.5			Horizontal & Diagonal Fractures
85	88.0-89.0	0.1	9.2			Vertical Fractures (Open)
86	89.0-90.0	<0.1	7.6			Vertical Fractures (Open)
87	3490.0-91.0	<0.1	9.8			3S1/Vertical Fractures
	3491.0-3503.0					No Analysis

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Navajo No. 7 - Test Period: 7-6 to 10-67

Original SIP on 4-22-67 was 448 psig at 2624 (+4884 - pump sensor) or 583 psig at +4500 datum; Perforations: 3072-3112 (+4436 - +4396); Pressure Sensor at 2624 (+4884). Well SI 7-6-67 after pumping at 1165 BOPD rate with 200 psig sensor pressure (335 psig at +4500 datum). Pressure build-up as follows:

Time After SI	Pressure at +4500 Datum	% Change From Last Pressure
0	335 psig	-
24 hours	429 psig	21.9%
48 hours	439 psig	2.3%
72 hours	445 psig	1.3%
96 hours	451 psig	1.3%

Note: 95.1% of the well's 96 hour SIP and 96.4% of the 72 hour SIP was achieved after 24 hours.

Navajo No. 9 - Test Period: 7-6 to 9-67

Original SIP on 5-4-67 was 430 psig at 2947 (+4947 - pump sensor) or 586 psig at +4500 datum; Perforations: 3420-60 (+4474 - +4434); Pressure Sensor at 2947 (+4947). Well SI 7-6-67 after pumping at 2000 BOPD rate with 246 psig sensor pressure (402 psig at +4500 datum). Pressure build-up as follows:

Time After SI	Pressure at +4500 Datum	% Change From Last Pressure
0	402 psig	-
24 hours	418 psig	3.8%
48 hours	426 psig	1.9%
72 hours	428 psig	0.5%

Note: 97.7% of the wells 72 hour SIP was achieved after 24 hours. Also note only 6% (26 psi) draw-down while producing at 2000 BOPD rate.

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KERR-McGEE CORPORATION

KERR-McGEE BUILDING • OKLAHOMA CITY, OKLAHOMA 73102

July 27, 1967

Mr. John Bannister
State of Arizona
Oil & Gas Conservation Commission
Room 202 - 1624 W. Adams
Phoenix, Arizona 85007

Mr. John P. Anderson
United States Geological Survey
Oil & Gas Division
P. O. Drawer 1857
Roswell, New Mexico 88201

Mr. Henry F. Pohlmann
Minerals Supervisor
The Navajo Tribe
412 Petroleum Plaza Building
3535 E. 30th Street
Farmington, New Mexico 87401

Mr. P. T. McGrath
United States Geological Survey
Oil & Gas Division
P. O. Box 959
Farmington, New Mexico

IGNEOUS SILL RESERVOIR
DINEH BI KEYAH FIELD

Please find enclosed additional pressure information which we have acquired during the initial productive life of the subject reservoir.

Attachment No. 1 contains all of the shut-in pressure data which we have on wells which are presently producing. This data includes both original and subsequent shut-in pressures taken after each well's completion. Subsurface pressure bombs have been run on six of the nine wells which are presently producing. A data sheet and pressure plot was made for each bomb run by the technician in charge of the survey. This correspondence on four of the six wells (Nos. 2, 4, 7, 9, 14 and 15) on which this survey was conducted is also attached. The data sheets have not been received from the field on Nos. 4 and 15; however, the pressures recorded in these wells have been presented.

Attachment No. 2 contains shut-in pressure buildup data on five producing wells (Nos. 1, 2, 3X, 7 and 9). Please note the rapid pressure buildup characteristics of each well. In an effort to gain as much factual data and knowledge from this reservoir as possible; we are considering gathering additional pressure data.

Utilizing production history and pressure data the indicated producing mechanism at this time is probably solution gas drive.

#396

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We hope this data will be beneficial to your consideration of this reservoir.

KERR-McGEE CORPORATION

John I. Fisher
Regional Production Manager

JIF/bes
attachments

cc: C. D. Williams

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Navajo No. 7 - Perfs. 3072-3112 (+4436 - +4396); Sensor: 2624 (+4884)
Original (Sub-surface Bomb):
4-18-67 612 psig @ 3092 (+4416 - cent. of perfs.)
583 psig @ +4500 datum

Additional:

Date	SI Pressure (Psig) Sensor	Perforations	+4500 Datum
7-10-67	316	480	451

Navajo No. 9 - Perfs. 3420-60 (+4474 - +4434); Sensor: 2947 (+4947)
Original (Sub-surface Bomb):
5-4-67 599 psig @ 3430 - bomb depth
602 psig @ 3440 (+4454 - cent. of perfs.)
586 psig @ +4500 datum

Additional:

Date	SI Pressure (Psig) Sensor	Perforations	+4500 Datum
7-9-67	272	428	412

Navajo No. 14 - Open hole 3829-3920 (+4739 - +4648); No Sensor
Original (Sub-surface Bomb):
7-8-67 477 psig @ 3875 (+4680 - mid-way through O.H.)
540 psig @ +4500 datum

Navajo No. 15 - Open Hole 3159-3225 (+4538 - +4472); Beam Pump - No Sensor
Original (Sub-surface Bomb):
7-14-67 462 psig @ 3191 (+4493 - mid-way through O.H.)
460 @ +4500 datum

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EFTELLER, INC.
reservoir engineering data
MIDLAND, TEXAS

Page 1 of 1
File 2-3183-F

Company KERR-McGEE CORPORATION Lease NAVAJO Well No. 9
Field IUKA County APACHE State ARIZONA
Formation LOWER HERMOSA Test Date MAY 4, 1967

Status of Well Shut in 12 hrs

DEPTH Feet	PRESSURE Psig	GRADIENT Psi/Ft.
0	27	
1000	29	0.002
1500	30	0.002
2000	109	0.158
2500	280	0.342
3030	462	0.343
3230	530	0.340
3430	599	0.345

Datum Pressure Psig

PRESSURE POUNDS PER SQUARE INCH GAUGE

0 100 200 300 400 500 600 700 800

0 500 1000 1500 2000 2500 3000 3500

DEPTH FEET

OIL LEVEL 1770'

346

Elev. 7894 RKB Datum Ft.
Total Depth 3720 Perf. 3420-3460 Ft.
Tubing 3-1/2" EUE in. to 3430 Ft.
Casing 7" in. to 3712 Ft.
Casing Press. PKR Tubing Press. 27
Oil Level 1770 Water Level
Temperature 92 °F @ 3430 Ft.
Element No. 10943 Range 0-2340
Last Test Date
Pressure Last Test Date Psig
B.H.P. Change Psi

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	Field	Reservoir
14-20-0603-8823	Dineh-bi-Keyah	Lower Hermosa
Survey or Sec-Twp-Rge	**County**	**State**
Sec. 29-32-T36N-R30E	Apache	Arizona

Operator: Kerr-McGee Corporation

ADDRESS ALL CORRESPONDENCE CONCERNING THIS FORM TO:

Street	City	State
215 Petroleum Center Bldg.	Farmington	New Mexico 87401

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

Transporter's street address	City	State
Kerr-McGee Building	Oklahoma City	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: C. D. Cockrum

Date approved: 1-21-67

STATE OF ARIZONA
OIL & GAS CONSERVATION COMMISSION

By: John V. Bannister

Permit No.

396

RECEIVED JUL 21 1967 STATE O & G CONS. COMM.

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

RESERVOIR PRESSURE REPORT

Operator: Kerr-McGee Corporation
Address: 215 Petroleum Center Bldg. - Farmington, New Mexico
Field: Dineh-Bi-Keyah
County: Apache County, Arizona
Date: 7-13-67
Producing Formation: Hermosa
Oil Gradient: 0.35 #/ft
Water Gradient:
Initial Completion*: X
Special*:
General Survey*:
Datum Plane: 3440 RKB
Gas Gravity:

Well Name	Permit No.	Well No.	Oil (O) or Gas (G)	Date Tested	Shut-In Time	Shut-In Tubing Pressure	Bomb Test Data: Test Depth	Bomb Test Data: B.H. Temp.	Bomb Test Data: Observed Pressure	Sonic Instrument Test Data: Prod. Test (Bbls per Day) Oil	Sonic Instrument Test Data: Prod. Test (Bbls per Day) Water	Sonic Instrument Test Data: Liquid Level	Sonic Instrument Test Data: Liquid Gradient	Sonic Instrument Test Data: Wt. of Liquid Column	Sonic Instrument Test Data: Wt. of Gas Column	Sonic Instrument Test Data: Casing Pressure	Pressure At Datum
NAVAJO	396	9	O	5-4-67	12hrs	27	+4461	92	599								603

* Designate type of report by "X".

CERTIFICATE: I, the undersigned, under the penalty of perjury, state that I am the Production Engr. of the Kerr-McGee Corp. (company), and that I am authorized by said company to make this report; and 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.

7-13-67
Date

Signature

STATE OF ARIZONA
OIL & GAS CONSERVATION COMMISSION
Reservoir Pressure Report
File One Copy
Form No. 7

RECEIVED
JUL 18 1967
STATE O & G
CONS. COMM.

4-Ariz.
1-Nav.Tribe, 1-JIF, 1-WRF, 1-RF

AR 12

Form 9-330
(Rev. 5-63)

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

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

WELL COMPLETION OR RECOMPLETION REPORT AND LOG*

1a. TYPE OF WELL: OIL WELL [X] GAS WELL [ ] DRY [ ] Other

b. TYPE OF COMPLETION: NEW WELL [X] WORK OVER [ ] DEEP-EN [ ] PLUG BACK [ ] DIFF. RESVR. [ ] Other

2. NAME OF OPERATOR: KERR-MCGEE CORPORATION

3. ADDRESS OF OPERATOR: 215 PETROLEUM CENTER BUILDING-FARMINGTON, NEW MEXICO

4. LOCATION OF WELL (*Report location clearly and in accordance with any State requirements*)*
At surface
640' FSL & 550' FEL of Sec. 30-T36N-R30E
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.: NO. 9

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

11. SEC., T., R., M., OR BLOCK AND SURVEY OR AREA: Sec. 30, T36N, R30E

12. COUNTY OR PARISH: Apache

13. STATE: Arizona

14. PERMIT NO.:

DATE ISSUED: 4-4-67

15. DATE SPUDDED	16. DATE T.D. REACHED	17. DATE COMPL. (*Ready to prod.*)	18. ELEVATIONS (DF, RKB, RT, GR, ETC.)*	19. ELEV. CASINGHEAD
4-13-67	4-26-67	5-5-67	7878' GR	

20. TOTAL DEPTH, MD & TVD	21. PLUG, BACK T.D., MD & TVD	22. IF MULTIPLE COMPL., HOW MANY*	23. INTERVALS DRILLED BY	ROTARY TOOLS	CABLE TOOLS
3720'	3644'		→	All	None

24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)*
3420'-3460' Hermosa

25. WAS DIRECTIONAL SURVEY MADE: NO

26. TYPE ELECTRIC AND OTHER LOGS RUN
Induction Electric, Gamma Ray-Sonic

27. WAS WELL CORED: YES

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

CASING SIZE	WEIGHT, LB./FT.	DEPTH SET (MD)	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
9-5/8"	32.30	405'	15"	525 sxs	NONE
7"	23#	3712'	8-3/4"	100 sxs 50-50Pozmix 50 sxs	NONE

29. LINER RECORD

SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT*	SCREEN (MD)
NONE				

30. TUBING RECORD

SIZE	DEPTH SET (MD)	PACKER SET (MD)
3-1/2"	2947'	NONE

31. PERFORATION RECORD (*Interval, size and number*)
3420' - 3460', 0.46, 5/ft.

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

DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED
3420-3460	900 gal. 10% acetic acid.
3420-3460	1680 gal. 3% H Fl acid.
3420-3460	30,000 gal. oil-15,000# sand.

33.* PRODUCTION

DATE FIRST PRODUCTION	PRODUCTION METHOD (*Flowing, gas lift, pumping—size and type of pump*)	WELL STATUS (*Producing or shut-in*)
5-5-67	Pumping - Reda Pump.	Producing

DATE OF TEST	HOURS TESTED	CHOKE SIZE	PROD'N. FOR TEST PERIOD →	OIL—BBL.	GAS—MCF.	WATER—BBL.	GAS-OIL RATIO
5-8-67	24	-		2622	366	0	140

FLOW. TUBING PRESS.	CASING PRESSURE	CALCULATED 24-HOUR RATE →	OIL—BBL.	GAS—MCF.	WATER—BBL.	OIL GRAVITY-API (CORR.)
	0		2622	36	0	42.5

34. DISPOSITION OF GAS (*Sold, used for fuel, vented, etc.*)
Vented.

TEST WITNESSED BY: Gary Roth

35. LIST OF ATTACHMENTS

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

SIGNED [signature] TITLE Production Supt. DATE 5-11-67

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

7 396

INSTRUCTIONS

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

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

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

Item 18: Indicate which elevation is used as reference (where not otherwise shown) for depth measurements given in other spaces on this form and in any attachments.

Items 22 and 24: If this well is completed for separate production from more than one interval zone (multiple completion), so state in item 22, and in item 24 show the producing interval, or intervals, top(s), bottom(s) and name(s) (if any) for only the interval reported in item 33. Submit a separate report (page) on this form, adequately identified, for each additional interval to be separately produced, showing the additional data pertinent to such interval.

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

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

37. SUMMARY OF POROUS ZONES: SHOW ALL IMPORTANT ZONES OF POROSITY AND CONTENTS THEREOF; CORED INTERVALS; AND ALL DRILL-STEM TESTS, INCLUDING DEPTH INTERVAL TESTED, CUSHION USED, TIME TOOL OPEN, FLOWING AND SHUT-IN PRESSURES, AND RECOVERIES				38. GEOLOGIC MARKERS		
FORMATION	TOP	BOTTOM	DESCRIPTION, CONTENTS, ETC.	NAME	TOP MEAS. DEPTH	TOP TRUE VERT. DEPTH
COCONINO	1065'	1770'	Sand Shale and chert streaks.			
HERMOSA INSTRUSIVE	3410'	3498'	Igneous Rock Cored 3361-86', 3408-3503'.			

RECEIVED MAY 15 1967 STATE O & G CONS. COMM.

U.S. GOVERNMENT PRINTING OFFICE: 1965—O-683636

AR12-C

POTENTIAL TEST AND REQUEST FOR ALLOWABLE (NEW WELLS)

DESIGNATE TYPE OF COMPLETION:

New Well [XX] Work-over [ ] Deepen [ ] Plug Back [ ] Same Reservoir [ ] Different Reservoir [ ]

Other Reason For Filing:

Operator: Kerr-McGee Corporation

Address: 215 Petroleum Center Building - Farmington, New Mexico

DESCRIPTION OF WELL AND LEASE

Federal, State or Indian Lease Number, or Lessor's Name if Fee Lease	Well Name	County
14-20-0603-3823	Navajo Well No. 9	Apache

Footage Location: 640' FSL & 550' FEL

Sec. Twp. Rge.: Sec. 30, T36N, R30E

Date spudded	Date completed, ready to produce	Total depth	P.B.T.D.
4-13-67	5-5-67	3720'	3644'

Field and reservoir	Top of pay	Producing interval
Dineh-bi-Keyah	3410'	3420' - 3460'

TEST DATA

Date of first production	Date of test	Length of test	Producing method (flow pump, gas lift)	Amount of load oil injected if any.
5-5-67	5-8-67	24 hrs.	Pumping - Reda Pump	

Number of barrels of oil produced from completion or recompletion date to test date	If well is produced by pumping, give pump size, length of stroke and strokes per minute.
7903	Reda Pump

Tubing pressure	Casing pressure	Choke size
25	0	-

*Actual production during test:	Oil (bbls)	Water (bbls)	Gas (MCF)
2622	2622	0	366

*Production must actually equal or exceed wells daily allowable or test must be for full 24 hours

Gas-oil ratio	Oil gravity	Name of transporter of oil
140 MCF/bbl.	42.5 * A.P.I. corrected	Permian Corp.

Number of acres attributed to this well	Number of producing wells in this reservoir on this lease, including this well	Single, dual or triple completion?	Daily allowable requested (bbls)
80	5	Single	

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 Supt. of the Kerr-McGee (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.

5-11-67
Date

C. D. Walker
Signature

Witnessed by: Kerr-McGee Corp.
Organization

Helen Scott
Signature

5-11-67
Date

Permit No. 396

STATE OF ARIZONA
OIL & GAS CONSERVATION COMMISSION

Potential Test & Request for Allowable - Oil Wells

File One Copy

Form No. 6

RECEIVED MAY 15 1967 STATE O & G CONS. COMM.

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.

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 [XX] 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
640' FSL and 550' FEL of Sec. 30-T36N-R30E.

14. PERMIT NO.
State No. 396

15. ELEVATIONS (Show whether DF, RT, GR, etc.)
7878' GR

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. 9

10. FIELD AND POOL, OR WILDCAT
Dineh bi Keyah

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA
Sec. 30-T36N-R30E

12. COUNTY OR PARISH
Apache

13. STATE
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	[ ]	PULL OR ALTER CASING	[ ]	WATER SHUT-OFF	[ ]	REPAIRING WELL	[ ]
FRACTURE TREAT	[ ]	MULTIPLE COMPLETE	[ ]	FRACTURE TREATMENT	[X]	ALTERING CASING	[ ]
SHOOT OR ACIDIZE	[ ]	ABANDON*	[ ]	SHOOTING OR ACIDIZING	[X]	ABANDONMENT*	[ ]
REPAIR WELL	[ ]	CHANGE PLANS	[ ]	(Other) Test of production casing.			[XX]
(Other)				(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)			

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

Set 7" 23# J-55 LT&C production casing at 3712' RKB. Cemented with 100 sxs 50-50 Pozmix w/4% gel and 1/4# flocele/sx followed by 50 sacks neat cement. Pumped plug down with 900 gals 10% Acetic Acid followed with fresh water w/1% KCL. Waited on cement 12 hrs. tested casing to 1200 psi for 30 minutes. Held O.K. Perf. casing with 1 jet/ft. from 3420-60. Displaced acetic acid into formation. Swabbed dry. Acidized with 1680 gals 3% HCl utilizing 40 balls. Swabbed dry. Frac on 5-1-67 with 30,000 gallons lease crude and 15,000# 10-20 sd, 1/5#/gal Adomite 2. Max. pressure 1300 psi. Reperforated with 4 jets/ft. from 3420-60. Hole size 0.46.

RECEIVED
MAY 8 1967
STATE O & G
CONS. COMM.

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

SIGNED [signature] TITLE Prod. Supt. DATE 5-4-67

(This space for Federal or State office use)

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

*See Instructions on Reverse Side

#396

10

5-2-67
Bud Williams - Kerr-McGee Div. Prod. Super.
2nd Floor (Rm 215)
Petroleum Center Bldg (old Pan-Am office
ph (505) 327-9637 at Apache & Air Port Dr.?)

Sunray will send in Apl. production - then
Farmington will take over

B-2 T.D 4565'
5½" Csg. set to T.D.
Appx. tops Coconino 1622'
Hermosa 3412'
Miss. 4056'
No sill found in B-2 - was present in B-1
will move rig back to B-1

E-1 Spud 10:00 AM 4-29-67
9 5/8" surf csg set to 253'
Rlg @ 316'

#7 Producing to No. 1 location

#9 TD 3720' (Drillers) 7" Casing to 3712' PBTD 3649'
Perforated 3420'-3460' 1 shot per ft
acidized 1680 gals 3% hydrofloric acid / ball sealers
frucked (5-1-67) 30,000 gal oil, 15000 lbs sand
1300# pressure - re-perforated to 4 shots per ft
swab 46 Bbls in 1 hr. Swabbing 5-2-67

316

B

WELL SITE CHECK

By J.B
Date 4-28-67

Contractor Pico Drilling Co
Person(s) Contacted Tom McLane (Pico driller)

Spud Date
Type Rig National 20 Rotary ✓ Cable Tool
Present Operations Rlg @ 2969'

Samples
Pipe Surface pipe to 420' - 9 5/8"
Drilling with Air Mud
Water Zones
Size Hole 8 3/4"
Lost Circ. Zones
Size Drill Pipe
Formation Tops Coconino 1050 ①
Type Bit
Cores, Logs, DST
No. Bit 8 Drilling Date
Formation
Crews 4 men - 3 tours
Lithology

REMARKS, PHOTO, MAP

① Top of Coconino 997' by log - 1050' by samples
to dark for pictures.

14
WELL NAME Kerr-McGee #9 Navajo
SE SE 30-36N-30E 640 FSL-550 FEL
Permit No. 396
Confidential: yes No

Form 9-331
(May 1963)

CONFIDENTIAL

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN TRIPLICATE* (Other instructions on reverse side)

Form approved.
Budget Bureau No. 42-R1424.

SUNDRY NOTICES AND REPORTS ON WELLS

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

1. OIL WELL [X] GAS WELL [ ] OTHER

2. NAME OF OPERATOR: Kerr-McGee Corporation

3. ADDRESS OF OPERATOR: P.O. Box K, Sunray, Texas 79086

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.) At surface: 640' FSL and 550' FEL of Section 30, T36N, R30E Apache County, Arizona

5. LEASE DESIGNATION AND SERIAL NO.: 14-20Q0603-8823

6. IF INDIAN, ALLOTTEE OR TRIBE NAME: Navajo

7. UNIT AGREEMENT NAME:

8. FARM OR LEASE NAME: Navajo

9. WELL NO.: 9

10. FIELD AND POOL, OR WILDCAT: Dineh bi keyah

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: Sec 30, T36N, R30E

12. COUNTY OR PARISH: Apache

13. STATE: Arizona

14. PERMIT NO.: State Number 396

15. ELEVATIONS (Show whether DF, RT, GR, etc.): 7878' 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	[ ]	WATER SHUT-OFF	[ ]
FRACTURE TREAT	[ ]	FRACTURE TREATMENT	[ ]
SHOOT OR ACIDIZE	[ ]	SHOOTING OR ACIDIZING	[ ]
REPAIR WELL	[ ]	(Other) Test of Surface casing	[X]
(Other)			
PULL OR ALTER CASING	[ ]	REPAIRING WELL	[ ]
MULTIPLE COMPLETE	[ ]	ALTERING CASING	[ ]
ABANDON*	[ ]	ABANDONMENT*	[ ]
CHANGE PLANS	[ ]		

(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.)*

Spudded at 5:30 PM, 4-13-67. Drilled 15" hole to 420' and set 9 5/8" OD, 32.30#/ft, H-40, ST&C casing at 405' RKB or 392' GR. Cemented with 525 sacks common cement plus 2% Calcium Chloride and 1/4# flosele per sack. Circulated out 22 bbls cement. Bumped plug at 10:30 PM, 4-14-67. Released pressure and waited on cement 12 hours. Tested casing to 1200# for 30 minutes. Held OK.

PLEASE KEEP THIS INFORMATION CONFIDENTIAL.

RECEIVED
APR 21 1967
STATE O&G CONS. COMM.

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

SIGNED E. C. Reish Jr. TITLE Engineer DATE 4-20-67

(This space for Federal or State office use)

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

*See Instructions on Reverse Side

14 # 396

Kerr-McGee

Otto Burton phone 4-17-67

B-2 Spudded 4-6-67 11 AM
13 3/4" hole to 918'
set 9 5/8" (32lb) to 910' w 800 Sx
Circulated out 25 Bls
~~TD~~ Drilling (4-17-67) 2881' 8 3/4" hole

#7 Fracked 4-16-67 looks good
results 2 or 3 days

#9 Spudded 4-13-67 5:30 pm
15" hole to 420'
Set 9 5/8" (32lb) to 405' w 520 sx
Circulated out 22 Bls
drilled out from under surface 4-16-67
~~TD~~ Drilling (4-17-67) 1107' 8 3/4" hole

2 Rigs running
Tank farm to be in NE/4 29-36N-3DE
Surveying for pipe line

Prod. averages - 6600-6700.
#1 6700-6700
2 2800-2900
3X 2800-2900 (1 day made 3200)

36
16

Form 9-331 C
(May 1963)

SUBMIT IN TRIPLICATE*
(Other Instructions on reverse side)

Form approved.
Budget Bureau No. 42-R1425.

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK: DRILL [X] DEEPEN [ ] PLUG BACK [ ]

b. TYPE OF WELL: OIL WELL [X] GAS WELL [ ] OTHER — SINGLE ZONE [X] MULTIPLE ZONE [ ]

2. NAME OF OPERATOR: Kerr-McGee Corporation

3. ADDRESS OF OPERATOR: P. O. Box K, Sunray, Texas, 79086

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*)
At surface: 640' FSL and 550' FEL of Section 30, T36N, R30E, Apache County, Arizona
At proposed prod. zone: 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.: 9

10. FIELD AND POOL, OR WILDCAT: Wildcat

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: Sec. 30, T36N, R30E

12. COUNTY OR PARISH: Apache — 13. STATE: Arizona

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*: 15 miles SW of Red Rock, Arizona

15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any): 4,640' from lease line

16. NO. OF ACRES IN LEASE: 2,533

17. NO. OF ACRES ASSIGNED TO THIS WELL: 80

18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.: 2,421'

19. PROPOSED DEPTH: 3,600'

20. ROTARY OR CABLE TOOLS: Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.): 7,878' GR

22. APPROX. DATE WORK WILL START*: April 9, 1967

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
15"	9-5/8"	36	400	Sufficient to circulate cement
8-3/4"	7"	20	3,600'	Sufficient to cover all potential productive zones

Blowout preventers: 400' to 3,600'

1. Kill and choke manifold.
2. 10" Series 600 GRC or equivalent with pipe rams.
3. 10" Series 600 GRC or equivalent with blind rams.

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24.

SIGNED C J Breeden TITLE Engineer DATE April 3, 1967

(This space for Federal or State office use)

PERMIT NO. _____ APPROVAL DATE _____

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

RECEIVED APR 4 1967 STATE O & G CONS. COMM.

396

*See Instructions On Reverse Side

18

APPLICATION FOR PERMIT TO DRILL OR RE-ENTER

APPLICATION TO DRILL X ☐ RE-ENTER OLD WELL ☐

Kerr-McGee Corporation
NAME OF COMPANY OR OPERATOR

P.O. Box K. Address — Sunray City — Texas State — 79086

Unknown
Drilling Contractor

Address

DESCRIPTION OF WELL AND LEASE

Federal, State or Indian Lease Number, or if fee lease, name of lessor	Well number	Elevation (ground)
14-20-0603-8823 Navajo	9	7,878' GR

Nearest distance from proposed location to property or lease line:	Distance from proposed location to nearest drilling, completed or applied—for well on the same lease:
4,640 feet	2,421 feet

Number of acres in lease:	Number of wells on lease, including this well, completed in or drilling to this reservoir:
2,533	2 completed and 2 drilling

If lease, purchased with one or more wells drilled, from whom purchased: Name — Address

Well location (give footage from section lines)	Section—township—range or block and survey	Dedication (Comply with Rule 105)
640' FSL and 550' FEL	Sec 30, T36N, R30E	E/2 of SE/4

Field and reservoir (if wildcat, so state)	County
Wildcat Hermosa	Apache

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

Proposed depth:	Rotary or cable tools	Approx. date work will start
3,600'	Rotary	April 9, 1967
Bond Status Blanket Bond Amount	Organization Report On file X Or attached	Filing Fee of $25.00 Attached yes

Remarks:

New Well

CERTIFICATE: I, the undersigned, under the penalty of perjury, state that I am the Engineer 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 J Breeden
Signature

April 3, 1967
Date

Permit Number: 396
Approval Date: 4-4-67
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

Form No. 3

RECEIVED APR 4 1967 STATE O. & G. CONS. COMM.

17 API 02-001-20020

(Complete Reverse Side)

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.

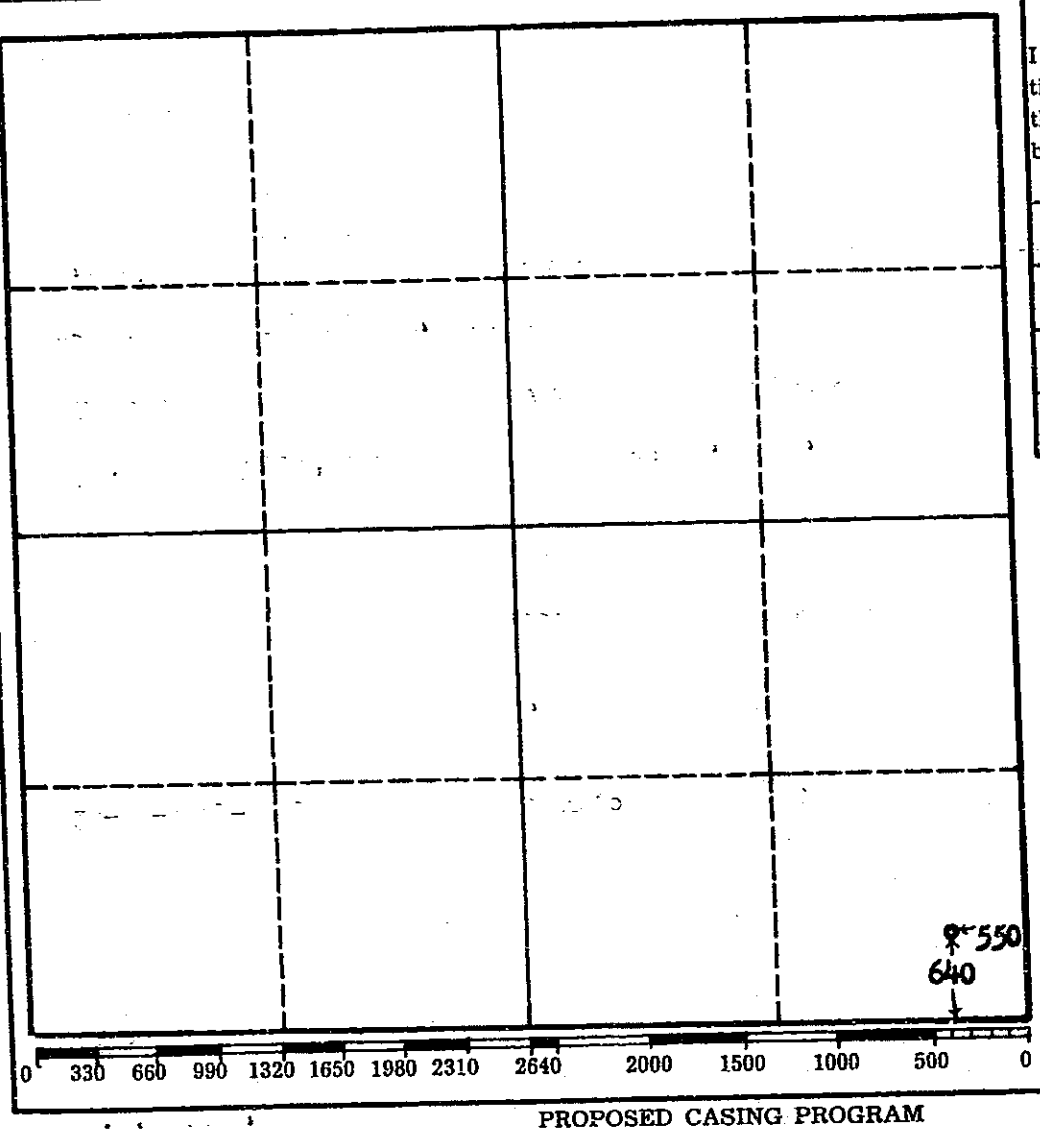
3. All distances shown on the plat must be from the outer boundaries of the Section.

4. Is the Operator the only owner in the dedicated acreage outlined on the plat below? YES X 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
Kerr-McGee Corporation	Sec 30, T36N, R30E, Apache County



CERTIFICATION

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

C J Breeden

Name: C. J. Breeden

Position: Engineer

Company: Kerr-McGee Corporation

Date: April 3, 1967

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.

Date Surveyed: March 30, 1967

Registered Professional Engineer and/or Land Surveyor

Certificate No.

PROPOSED CASING PROGRAM

Size of Casing	Weight	Grade & Type	Top	Bottom	Cementing Depths	Sacks Cement
9 5/8	36	J-55	0	400'	0-400'	Sufficient to Circulate Cement
7"	20	J-55	0	3600'	Sufficient to cover all potential productive zones	

PERMIT TO DRILL

This constitutes the permission and authority from the

OIL AND GAS CONSERVATION COMMISSION,
STATE OF ARIZONA,

To: KERR-MC GEE CORPORATION
(OPERATOR)

to drill a well to be known as

KERR-MC GEE #9 NAVAJO
(WELL NAME)

located 640' FSL and 550' FEL (SE/4SE/4)

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

The E/2 of SE/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 4th day of April, 19 67.

OIL AND GAS CONSERVATION COMMISSION

By John Bannister
EXECUTIVE SECRETARY

PRIOR TO BEING ALLOWED TO PRODUCE THIS WELL YOU MUST BE IN FULL COMPLIANCE WITH RULE 105, SECTION A THRU G (SPACING), WITH RESPECT TO THE PRODUCT TO BE PRODUCED.

PERMIT No. 396

RECEIPT NO. 9489

State of Arizona
Oil & Gas Conservation Commission
Permit to Drill

FORM NO. 27

API 02-001-20020

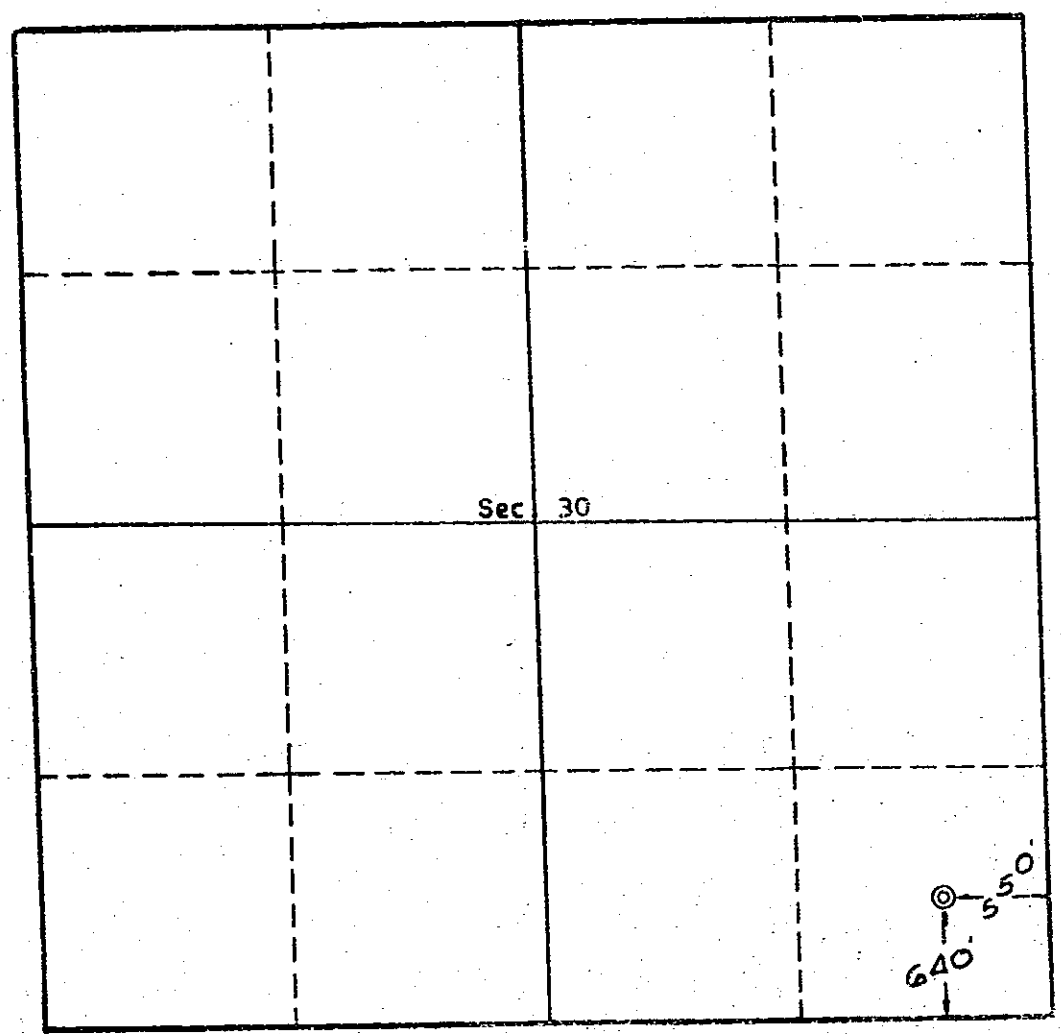
Company KERR-McGEE OIL INDUSTRIES, INC.

Well Name & No. #9 Navajo

Location 640 feet from the South line and 550 feet from the East line.

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

Ground Elevation 7878



Scale, 1 inch = 1,000 feet

Surveyed March 30, 19 67

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

Seal

REGISTERED LAND SURVEYOR
ERNEST V. ECHOHAWK
CERTIFICATE EXPIRES
DEC. 31, 19
ARIZONA, U.S.A.

E. V. Echohawk

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

396

DINEH-BI-KEYAH FIELD

Operator: Mountian 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:

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

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

Jane Dee Hull
Governor

Larry D. Fellows
Director and State Geologist

December 1, 1997

396

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

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

CANCELLED

Bond Company SAFECO INSURANCE COMPANY OF AMERICA Amount $25,000

Bond No. 2971100-2620 Date Approved FEBRUARY 18, 1994

ACTIVE DATE

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

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

Fife Symington
Governor

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:

Well	API #
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

Steven L. Rauzi
Oil & Gas Program Administrator

396

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

CHANGES TO REPORTER INFORMATION

OLD INFORMATION:

MMS OPERATOR CODE: X 0 2 1 7

COMPANY NAME: KERR MCGEE CORPORATION

NEW INFORMATION:

MMS OPERATOR CODE: X 0 2 7 4

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
AREA CODE

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 #9 (396)

Dineh Bi Keyah Field - Apache County, Arizona

Lease #: 14-20-0603- 8823 API #: 0200120020000S1

JUN 1994

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

SIGNATURE: Judy Burkhart

DATE: 5/13/94

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

FORM MMS – RPD/PRB/INFO FORM (REVISED 4/93)

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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

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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

AZ
CONSERVATION COMMISSION
MAY 31 1994

396

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

Fife Symington
Governor

Larry D. Fellows
Director and State Geologist

March 5, 1992

Mr. G. Bunas, Analyst II
Kerr-McGee Corporation
US Onshore Region
P. O. Box 25861
Oklahoma City, Oklahoma 73125

Re: Mechanical Integrity tests at Dineh-bi-keyah field, Arizona
Navajo 7, 9, 15, 16, 17, 24, 26, "B" 1 & 2, "C" 2, and "88" 1 & 3

Dear Mr. Bunas:

I acknowledge receipt of your sundry notices on the referenced wells. Let me take this opportunity to inform you that the Arizona Oil and Gas Conservation Commission has merged with the Arizona Geological Survey. Please note our new address and phone number in your files for future correspondence.

This office has no problem with your request to defer mechanical integrity testing on the referenced wells until late spring or early summer due to currently adverse weather conditions.

However, when you do schedule the actual dates, I hereby request at least 2 to 3 days advance notice to arrange for a representative from this office to travel to Dineh-bi-keyah to observe these tests.

Sincerely,

Steven L. Rauzi
Oil and Gas Program Administrator

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

PHONE
806 376-7256

December 5, 1977

State of Arizona
Oil & Gas Conservation Commission
1645 West Jefferson, Ste. 420
Phoenix, Arizona 85007

Re: Kerr-McGee Corporation's Navajo Nos. 7 and 9 Workovers, Dineh-Bi-Keyah Field, Section 29 & 30 T36N-R30E, Apache County, Arizona.

Dear Sirs:

Please find attached two (2) copies of "Sundry Notices and Reports on Wells" for the above mentioned wells.

If any further information is needed, please call me collect at (806) 376-7256.

Sincerely,

KERR-McGEE CORPORATION

Larry D. McRae
District Manager, Engineering
Southwest District - North America

LDM/LB/vs

Enclosures

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DEC 12 1977
O & G CONS. COMM.

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

PHONE
806 376-7256

October 28, 1977

RECEIVED
NOV 7 1977
O & G CONS. COMM.

State of Arizona
Oil & Gas Conservation Commission
4515 N. 7th Ave.
Phoenix, Arizona 85013

Re: Kerr-McGee Corporation's Navajo Nos. 7 & 9
Workovers, Dineh-Bi-Keyah Field, Section
31-T36N-R30E, Apache County, Arizona

Dear Sirs:

Please find attached two (2) copies of "Sundry Notices and Reports on Wells" for the above mentioned wells.

If any further information is needed, please call me collect at (806) 376-7256.

Sincerely,

KERR-McGEE CORPORATION

Larry D. McRae
District Manager, Engineering
Southwest District - North America

LDM/vs

Enclosures

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OFFICE OF

Oil and Gas Conservation Commission

STATE OF ARIZONA

4515 NORTH 7TH AVE.
PHOENIX, ARIZONA 85013
PHONE: (602) 271-5161

April 19, 1974

Mr. B. G. Taylor
Kerr-McGee Corporation
Kerr-McGee Building
Oklahoma City, Oklahoma 73102

Re: Annual Pressure Tests
Dineh-bi-Keyah Field
Apache County, Arizona
Permit Nos. 377, 379, 396 & 388

Dear Mr. Taylor:

This letter is your authorization to suspend the annual pressure testing of certain designated wells in the Dineh-bi-Keyah Field.

At any time during the course of your operations that you do test any of the wells in this field, this Commission will expect to be furnished the results of such tests.

Very truly yours,

W. E. Allen, Director
Enforcement Section

WEA/rlb

KERR-McGEE CORPORATION
KERR-McGEE BUILDING • OKLAHOMA CITY, OKLAHOMA 73102

B. G. TAYLOR, VICE PRESIDENT
OIL AND GAS PRODUCTION DIVISION

April 16, 1974

Arizona Oil & Gas Commission
4515 North 7th Avenue
Phoenix, Arizona 85013

Attention Mr. John Bannister

ANNUAL PRESSURE TESTS
DINEH BI KEYAH FIELD
APACHE COUNTY, ARIZONA

The field rules for the Dineh bi Keyah Field require that annual pressure tests be performed on certain designated wells in the field. In our opinion, these tests no longer provide useful data.

It is respectfully requested that Rule F of the field rules for the Dineh bi Keyah Field be rescinded so as to eliminate the well pressure testing requirement. We will, of course, be happy to provide the Commission with a copy of any pressure tests on the field wells should we decide to run additional such tests at some time in the future.

B. G. Taylor

B. G. Taylor

BGT/bs

396

RECEIVED

[redacted]

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

PHONE
806 376-7256

November 5, 1973

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

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NOV 8 1973
O & G CONS. COMM.

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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/rlb

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

PHONE
806 376-7256

August 6, 1973

Oil and Gas Conservation Commission
State of Arizona
4515 North 7th Avenue
Phoenix, Arizona 85013

RE: Annual Bottom Hole
Pressure Survey
Dineh-bi-Keyah Field
Apache County, Arizona

Gentlemen:

Enclosed is completed Form Number 7, Reservoir Pressure Report, showing the annual bottom hole pressure survey for the Navajo Well Numbers 1, 2 and 9, and Navajo Tract 138 Well Number 1. Also enclosed are the calculations and plots for this survey.

Sincerely yours,

KERR-McGEE CORPORATION

C. J. Breeden
District Production Superintendent

CJB/mm

Attachments

Copies to: USGS
Farmington, New Mexico

Navajo Tribe
Window Rock, Arizona

396

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AUG 0 6 1973
O & G CONS. COMM.

BHP * BU * PE * DD * GWT * EPS * OOR * FL * TS

TEFTELLER, INC.

reservoir engineering data

Associated with Dennis Owens Co.

MIDLAND, TEXAS / FARMINGTON, NEW MEXICO

P. O. Box 5247
Midland, Texas 79701

AUG 2 RECD

July 31, 1973

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

Attention: Mr. Joe Breeden

Subject: Fluid Level Build Up Measurements
Four Wells
Dineh Bi Keyah Field
Apache County, Arizona
Our File NO. 2-5185-FL

Gentlemen:

Attached hereto are the results of fluid level build up measurements which were made in subject field July 10 and July 12, 1973.

The data presented are in tabular and graphical form.

It has been our pleasure to have conducted this service for you. If we may be of further assistance, please call us at any time.

Respectfully submitted,

TEFTELLER, INC.

Neil Tefteller

Neil Tefteller

NT/ct

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AUG [illegible] 1973
O & G CONS. COMM.

KERR-McGEE CORPORATION

626 AMARILLO PETROLEUM BUILDING

P. O. BOX 250 • AMARILLO, TEXAS 79105

PHONE
806 376-7256

August 3, 1971

Arizona Oil and Gas Conservation Commission
4515 North 7th Avenue
Phoenix, Arizona 85013

RE: Kerr-McGee Corporation
Annual Bottom Hole Pressure Survey
Dineh-bi-Keyah Field
Apache County, Arizona

Gentlemen:

Enclosed please find Form #7, listing results of the Annual Bottom Hole Pressure Survey on the Navajo #1, Navajo #2, and Navajo #9.

Sincerely yours,

KERR-McGEE CORPORATION

C. D. Williams
District Manager
Southwestern District
Production Division

CDW:kj
Enclosures

cc: U.S.G.S. - Farmington
Navajo Tribe
Humble Oil

RECEIVED
AUG 5 1971
O & G CONS. COMM.

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TEFTELLER, INC.

reservoir engineering data

Associated with Dennis Oxsner Co.

MIDLAND, TEXAS / FARMINGTON, NEW MEXICO

P. O. Box 5247
Midland, Texas 79701

July 30, 1971

Kerr-McGee Corp.
215 Petroleum Center
Farmington, New Mexico 87401

Attention: Mr. Joe Breeden

Subject: Fluid Level Build-up Measurements
& Fluid Level Measurements
5 Wells
Dineh Bi Keyah Field
Apache County, Arizona
Our File No. 2-4306-FL

Gentlemen:

Attached hereto are the results of fluid level build-up measurements and fluid level measurements which were made on wells in the above captioned field July 6, 1971.

The data presented are in tabular and graphical form.

It has been our pleasure to have conducted this service for you. If we may be of further assistance, please call us at anytime.

Respectfully submitted,

TEFTELLER, INC.

Neil Tefteller

Neil Tefteller

FT/bt

RECEIVED
AUG [illegible] 1971
O & G CONS. COMM.

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X-Chiero
X-Lambert

August 27, 1969

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

Re: Kerr-McGee #1 Navajo
SE/4 SW/4 32-36N-30E, Apache County
Permit #377 X

Kerr-McGee #2 Navajo
SE/4 NW/4 32-36N-30E, Apache County
Permit #379 X

Kerr-McGee #9 Navajo
SE/4 ~~SE/4~~ 30-36N-30E, Apache County
Permit (#396)

Dear Mr. Barton;

Commission Order No. 24 dated August 16, 1967, established a bottom hole pressure test for the captioned wells within the Dineh bi Keyah Field. This procedure this year was to have been done in conjunction with the testing procedure connected with Case No. 36 applying to the #11 well. Please submit the completed Form 7's on these wells. We enclose a few for your convenience.

506-X

Yours truly,

James A. Lambert
Administrative Assistant

JAL:jf
Enc.

396

OFFICE OF

Oil and Gas Conservation Commission

STATE OF ARIZONA

ROOM 202

1624 WEST ADAMS

Phoenix, Arizona 85007

PHONE: 271-5161

June 12, 1969

Kerr-McGee Corporation
Kerr-McGee Building
Oklahoma City, Oklahoma 73102

Re: Case No. 36

Attention: Mr. John Fisher

Gentlemen:

Pursuant to Commission Order 21A dated May 21, 1969, a meeting was held in the Commission offices at 1624 West Adams Street, Phoenix, Arizona, at 1:00 p.m. on June 11, 1969.

Present at this meeting and representing Kerr-McGee Corporation were Mr. John I. Fisher and Bill P. Stauss. Present and representing Humble Oil Company were Kenneth H. Lay and J. K. Lytle. Present and representing the Oil and Gas Conservation Commission were John Bannister, James R. Scurlock and James Lambert. Also present and representing the Commission in his capacity as engineer was Ewell Walsh of Farmington, New Mexico.

The purpose of this meeting was to establish a testing program for Kerr-McGee Corporation's proposed well, the Kerr-McGee No. 11 Navajo, to be located in the NW/4 SE/4 of Section 32, Township 36 North, Range 30 East, Apache County, Arizona, and being a part of the Dineh-bi-Keyah Field.

As a result of this meeting, the following testing program has been established as satisfactory to this Commission. The program outlined below will be strictly adhered to and no deviation therefrom will be permitted.

TESTING PROGRAM

1. After the Kerr-McGee No. 11 Navajo Well has reached total depth, completed, and after load oil has been recovered (the initial potential test will be delayed until the first day of full production from this well),

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this well will be shut in until its bottom hole pressure has stabilized to within no more than a five pound pressure increase or less over a 24-hour period.

2. After the Kerr-McGee No. 11 Well has stabilized as set forth in Section 1 above, Kerr-McGee Nos. 1, 2, 3X and 4 Navajo Wells will be shut in for a continuous twelve hour period.

3. After the initial twelve hour shut in period as outlined in Section 2 above, Kerr-McGee No. 4 Well shall be put on production.

4. Twelve hours after Kerr-McGee No. 4 Navajo Well has been put on production, the Kerr-McGee No. 3X Navajo Well will be put on production.

5. Twelve hours after Kerr-McGee No. 3X Navajo Well has been put on production, the Kerr-McGee No. 2 Navajo Well will be put on production.

6. Twelve hours after Kerr-McGee No. 2 Navajo Well has been put on production, the Kerr-McGee No. 1 Navajo Well will be put on production.

7. Continuous bottom hole pressure readings shall be recorded in the Kerr-McGee No. 11 Navajo Well for a maximum period of 192 hours from the time that Kerr-McGee Nos. 1, 2, 3X and 4 Navajo Wells are shut in, as outlined in Section 2 above, or until there is evidence of interference in the Kerr-McGee No. 11 Navajo Well, whichever is the lesser time.

   Should there be evidence of interference in this well prior to the 192 hours specified maximum time, Kerr McGee Corporation will immediately notify the Commission at its Phoenix address. Should the Executive Secretary of the Commission be satisfied that there is evidence of interference, he may authorize a cessation of the tests. Should the Executive Secretary not be satisfied as to evidence submitted, test will continue for the full maximum 192 hours, as herein specified.

8. Upon completion of the tests as specified in Section 7 above, Kerr-McGee Corporation may commence the full production of the Kerr-McGee No. 11 Navajo Well.

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Commission Order No. 24 dated August 16, 1967 establishes bottom hole pressure testing for certain key wells within the Dineh-bi-Keyah Field. Inasmuch as Kerr-McGee Nos. 1 and 2 Navajo Wells are designated in said order as key wells, the last in time as above specified in Section 2 of the testing procedure may be used by Kerr-McGee Corporation for its stabilization period for the purpose of compliance with said Order No. 24.

The bottom hole pressure test as called for in said Order No. 24 as to the Kerr-McGee No. 9 Navajo Well and as to the Humble No. 1-138 Navajo Well, shall be conducted as soon as possible after the completion of the above set forth testing schedule.

Should you have any questions, please advise immediately.

Yours truly,

John Bannister
Executive Secretary

/vb

cc - Humble Oil Company
Att'n. J. K. Lytle

Ewell Walsh

Commissioners

U.S.G.S. - Farmington
Att'n. Phil McGrath

The Navajo Tribe
Att'n. P. K. Hurlbut

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Operator KERR MC GEE ~~OIL INDUSTRIES INC~~ Corporation

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

Bond No. M 41 95 25 (~~KN528~~) Date Approved 10-28-65

Permits covered by this bond:

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

CANCELLED
DATE 10-24-68

CANCELLED
Superseded by
American Casualty Co Bond
#25,000
#5477982619-73
DATE

August 7, 1967

Mrs. Anna Smith, Manager
Four Corners Sample Cut Association
P. O. Box 899
Farmington, New Mexico

Re: Kerr-McGee Well Samples
Dineh-bi-Keyah Field
Apache County, Arizona

Dear Mrs. Smith:

Kerr-McGee Corporation is releasing well cuttings and core chips from the following Apache County, Arizona, wells to the Four Corners Sample Cut:

Kerr-McGee #2 Navajo, 2020' FNL & 1980' FWL, Sec.32-36N-30E,
Elev. 7604 GL, 7614 KB. Spudded 2-14-67, Comp. 3-12-67,
T.D. 3275'.

Kerr-McGee #3 Navajo, 950' FSL & 350' FEL, Sec.32-36N-30E,
Elev. 7992 GL, 8002 KB. Spudded 3-11-67, Comp. 4-7-67,
T.D. 3600'.

Kerr-McGee #4 Navajo, 1720' FNL & 870' FEL, Sec.32-36N-30E,
Elev. 7361 GL, 7374 KB. Spudded 6-28-67, Comp. 7-13-67,
T.D. 2960'.

Kerr-McGee #7 Navajo, 590' FSL & 1870' FWL, Sec.29-36N-30E,
Elev. 7498 GL, 7508 KB. Spudded 3-29-67, Comp. 4-22-67,
T.D. 3270'.

Kerr-McGee #9 Navajo, 640' FSL & 550' FEL, Sec.30-36N-30E,
Elev. 7881 GL, 7894 KB. Spudded 4-13-67, Comp. 5-5-67,
T.D. 3720'.

Kerr-McGee #1 Navajo "B", 1980' FNL & 2160' FWL, Sec.5-35N-30E,
Elev. 8491 GL, 8503 KB. Spudded 3-7-67, Comp. 6-22-67,
T.D. 4130'.

Samples from the foregoing wells will be delivered to your office this week.

Yours very truly,

KERR-MCGEE CORPORATION

R. W. King

R. W. King
Division Manager

RWK:sg

cc: J. W. McKenny
J. I. Fisher

John Bannister
Arizona O&G Conservation Commission
Room 202 - 1624 West Adams
Phoenix, Arizona 85007

Henry F. Pohlmann
Navajo Tribe Minerals Dept.
412 Petroleum Plaza Bldg.
Farmington, New Mexico

KERR-McGEE CORPORATION

KERR-McGEE BUILDING • OKLAHOMA CITY, OKLAHOMA 73102

215 Petroleum Center Building
Farmington, New Mexico 87401

August 11, 1967

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

Attention: Mr. John Bannister
Executive Secretary

Re: Confidential Well Information
Dineh-bi-Keyah Field
Apache County, Arizona

Dear John:

Please be advised that Kerr-McGee has removed from confidential well status the following wells:

Navajo No. 1	-	SESW, Section 32, T36N, R30E
Navajo No. 2	-	SENW, Section 32, T36N, R30E
Navajo No. 3X	-	SESE, Section 32, T36N, R30E
Navajo No. 4	-	SENE, Section 32, T36N, R30E
Navajo No. 6	-	SENE, Section 31, T36N, R30E
Navajo No. 7	-	SESW, Section 29, T36N, R30E
Navajo No. 8	-	SESE, Section 29, T36N, R30E
Navajo No. 9	-	SESE, Section 30, T36N, R30E
Navajo No. 14	-	SENW, Section 31, T36N, R30E
Navajo No. 15	-	SESW, Section 30, T36N, R30E
Navajo No. 16	-	SENW, Section 30, T36N, R30E
Navajo No. C-2	-	SENW, Section 33, T36N, R30E

Kerr-McGee desires to hold in the confidential status the information on the following wells:

Navajo No. 5	-	SESE, Section 31, T36N, R30E
Navajo No. 13	-	SESW, Section 31, T36N, R30E
Navajo No. B-1	-	SENW, Section 5, T35N, R30E
Navajo No. B-2	-	SENE, Section 5, T35N, R30E
Navajo No. E-1	-	SESE, Section 20, T36N, R30E

Very truly yours,

C. D. Williams
Production Superintendent

CDW:la

CC: USGS - Farmington
Navajo Tribe - Farmington

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July 19, 1967

Oil and Gas Conservation Commission
Room 202 - 1624 W. Adams
Phoenix, Arizona 85007

Attn: Mr. John Bannister

Re: Well Logs For:
Navajo Well 3X
Apache County, Arizona
S32-T36N-R30E

Gentlemen:

With reference to Kerr-McGee's letter of July 12, 1967 wherein the set of electric logs was furnish to the commission with the request that they be kept confidential for the remainder of the six-month period, this is to advise that effective immediately Kerr-McGee authorizes the release and use of the logs on Well #3X.

In order to further clarify Kerr-McGee's position, release is also authorized for all other data with reference to the wells for which the logs have also been released.

Very truly yours,

KERR-MCGEE CORPORATION

C. F. Miller

C.F. Miller, General Manager
Oil & Gas Prodn. Oprs.

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CONS. COMM.

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KERR-McGEE

KERR-McGEE BUILDING • OKLAHOMA CITY, OKLAHOMA 73102

215 Petroleum Center Building
Farmington, New Mexico 87401

July 14, 1967

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

Attention: Mr. John Bannister

RE: Well Logs
Dineh-bi-keyah Field
Apache Co., Arizona

Dear John:

Kerr-McGee Corporation has authorized the release and use of the following well logs which are enclosed:

Navajo No. 6 - Induction-Electric Log
Borehole Compensated Sonic Log Gamma-Ray
Gamma-Ray Neutron Log

Navajo No. 7 - Induction-Electric Log
Borehole Compensated Sonic Log Gamma-Ray

Navajo No. 9 - Induction-Electric Log
Borehole Compensated Sonic Log Gamma-Ray

Navajo No. 14- Induction-Electric Log
Induction Gamma-Ray Log
Formation Density Log
Borehole Compensated Sonic Log Gamma-Ray

Very truly yours,
Kerr-McGee Corporation

C. D. Williams by Gary Ruth

C. D. Williams
Production Superintendent

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CDW:la

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KERR-McGEE CORPORATION
KERR-McGEE BUILDING • OKLAHOMA CITY, OKLAHOMA 73102

215 Petroleum Center Building
Farmington, New Mexico
June 8, 1967

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

Attn: Mr. John Bannister, Exec. Secretary

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

Dear John:

In a telephone conversation with your office today, we were made aware of the fact that the permit to drill for certain wells in the Dineh-bi-Keyah Field would expire in the near future since drilling operations would not commence within the allowed period of 90 days, after date of approval. These wells are:

WELL	PERMIT NO.	DATE OF APPROVAL
Navajo #4	384	3- 9-67
Navajo #8	391	3-30-67
Navajo #12	399	4-24-67
Navajo "C" #1	397	4-24-67

This letter is to confirm my verbal request that the permit time for these four wells be extended an additional 90 days. Due to the changing geological interpretation with the drilling of each well, it is desirable to postpone the drilling of these wells at this time. These locations will probably be drilled at a later date and we would like to keep the permits active. Your consideration of this request will be appreciated.

Confirming my telephone conversation with Mr. Jim Scurlock, Kerr-McGee authorizes the Commission to release certain well information that has been requested held confidential. The Commission may release, if desired, (1) the total depth, perforations, and initial potential for the Navajo #3X, #7, and #9 wells, (2) for

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Navajo "B" #1 release perforations only and the fact that we are still testing, (3) for Navajo "B" #2, the total depth, drill stem test results, perforations in the Paradox completion zone (3904'-3907', 3924'-35') and that the well flowed 98 MCF on 1/8" plate with 300 psi on test during completion.

Your assistance and cooperation in these matters is very much appreciated.

Sincerely yours,
KERR-MCGEE CORPORATION

C. D. Williams
Prod. Supt.

cc: J.I.Fisher
File
RF

3-46

Mary
Correct records

KERR-McGEE CORPORATION
KERR-McGEE BUILDING • OKLAHOMA CITY, OKLAHOMA 73102

215 Petroleum Center Building
Farmington, New Mexico
June 5, 1967

State Of Arizona
Oil & Gas Conservation Comm.
Room 202 - 1624 W. Adams St.
Phoenix, Arizona

Attn: Mr. John Bannister, Executive Secr.

RE: 160 Acre Units
Lower Hermosa Formation
Dinah-bi-Keyah Field
Apache County, Arizona

Gentlemen:

As provided by Commission Order No. 21, oil wells in the lower Hermosa formation shall be on spacing units comprising a full governmental quarter section. Certain wells have already been permitted by Kerr-McGee Corporation with a dedicated area of only 80 acres. The quarter section allotted to each of the wells presently permitted is as follows:

WELL	PERMIT NO.	QUARTER SECTION
Navajo #1	377	SW/4 Sec. 32 - 36N - 30E
Navajo #2	379	NW/4 Sec. 32 - 36N - 30E
Navajo #3X	386	SE/4 Sec. 32 - 36N - 30E
Navajo #4	384	NE/4 Sec. 32 - 36N - 30E
Navajo #5	392	SE/4 Sec. 31 - 36N - 30E
Navajo #6	390	NE/4 Sec. 31 - 36N - 30E
Navajo #7	389	SW/4 Sec. 29 - 36N - 30E
Navajo #8	391	SE/4 Sec. 29 - 36N - 30E
Navajo #9	396	SE/4 Sec. 30 - 36N - 30E
Navajo #12	399	NE/4 Sec. 29 - 36N - 30E
Navajo "B" #1	381	NW/4 Sec. 5 - 35N - 30E
Navajo "C" #1	397	SW/4 Sec. 33 - 36N - 30E
Navajo "E" #1	398	SE/4 Sec. 20 - 36N - 30E

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Two wells, Navajo "E" #1 and Navajo "B" #2 have already been drilled and did not obtain oil production in the lower Hermosa so

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these wells were not included. Also, Navajo #3 was not included since it was replaced by Navajo #3X.

If additional information is needed, please advise.

Sincerely yours,
KERR-McGEE CORPORATION

C. D. Williams
Prod. Supt.

CDW/hs

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KERR-McGEE

April 25, 1967

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State of Arizon

Oil and Gas Conservation Commission

Room 202, 1624 West Adams
Pheonix, Arizona 85007

Attention Mr. John Bannister

Gentlemen :

It is our request that all information on Producing, Drilling, and Permitted wells operated by Kerr McGee Corporation in Dineh bi Keyah Field in Apache County Arizona be kept confidential.

The producing wells are Kerr-McGee Navajo wells No.1, 2, 3X and 7. Well no. 7 has been put on pump but has not been potentialed because mechenical and transportation difficulties. Wells started but not completed are Kerr-McGee Navajo No.9 , Navajo No. B-1 and No. B-2.

Wells that have been permitted but drilling operations have not actually started are our Navajo wells No.4, 5, 6,8 and 12, and Navajo A-1 and C-1. Most of the road and location work has been completed on these locations.

Yours very truly,
Kerr-McGee Corporation

O. C. Benton

Division Supt. Oil & Gas Production
Sunray, Texas.

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KERR-McGEE CORPORATION

POST OFFICE BOX "K" • SUNRAY, TEXAS 79086

April 20, 1967

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

Attention: Mr John Bannister

Gentlemen:

Enclosed are two copies each of USGS Form 9-331 Sundry Notice and Reports On Wells, covering setting and testing the surface casing for the Kerr-McGee Corporation Navajo No.9, located 640' FSL and 550' FEL of Section 30, T36N, R30E, Apache County, Arizona and the perforating, acidizing and fracturing of the Kerr-McGee Corporation Navajo No.7, located 590' FSL and 1870' FWL of Section 29, T36N, R30E, Apache County, Arizona.

Please keep all information concerning these wells confidential.

Yours very truly,

KERR-McGEE CORPORATION

E. C. Reish, Jr.

E. C. Reish, Jr.

ECR/s

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KERR-McGEE CORPORATION

POST OFFICE BOX "K" • SUNRAY, TEXAS 79086

April 3, 1967

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

Attention: Mr. John Bannister

Gentlemen:

Enclosed are two copies of the Arizona Oil and Gas Conservation Commission Form No. 3, Application for Permit to Drill, one copy of USGS Form No. 9-331C, Application for Permit to Drill, and two copies of the Surveyors Plat for the Kerr-McGee Corporation Navajo No. 9, located 640' FSL and 550' FEL of Section 30, T36N, R30E, Apache County, Arizona. Also enclosed is a draft of $25.00 for the filing fee for this well.

Yours very truly,
KERR-MCGEE CORPORATION

C. J. Breeden

C. J. Breeden

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STATE OF ARIZ.

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