

Release Date 11-26-57

CONFIDENTIAL



P-W

Kerr-McGee 1 Navajo Sp 441  
SE SE 20-36N-30E Apache County 398

COUNTY Apache AREA 13 mi SW Red Rock LEASE NO. Nav 14-20-0603-8821

WELL NAME Kerr-McGee #1 Navajo-E

LOCATION SE SE SEC 20 TWP 36N RANGE 30E FOOTAGE 740 FSL 660 FEL

ELEV 7014' GR KB SPUD DATE 4-29-67 STATUS see 441 for details TOTAL DEPTH 3868'  
 COMP. DATE 5-26-67

CONTRACTOR Pico Drilling

CASING SIZE	DEPTH	CEMENT	LINER SIZE & DEPTH	DRILLED BY ROTARY
<u>9 5/8</u>	<u>253'</u>	<u>340 SKS</u>		<u>X</u>
				DRILLED BY CABLE TOOL
				PRODUCTIVE RESERVOIR
				INITIAL PRODUCTION <u>Dry</u>

FORMATION TOPS	DEPTHS	SOURCE		REMARKS
		L.L.	E.L.	
Chinle	Surface		X	
Coconino	634'			
Cutler	1350'			
Hermosa	2519'			
Mississippian	3251'			
Elbert	3454'			
McCracken	3619'			
Aneth	3728'			
Cambrian	3827'			
Pre-Cambrian	3863'			

ELECTRIC LOGS	PERFORATED INTERVALS	PROD. INTERVALS	SAMPLE LOG
IE; Sonic Gamma Ray, Microlog Domp. Formation Density	3650-3700'	3600-3700'	SAMPLE DESCRP. _____ SAMPLE NO. _____ CORE ANALYSIS <u>X</u> DSTs <u>X</u> <u>Water Analysis</u> <u>Core report in files</u>

REMARKS 10-18-67 Case 29, Order 25. Salt Water Injection Well. See Permit 441. Permit to Re-enter . DST 3645-3695 opened 1 hr. No rec.

APP. TO PLUG X  
 PLUGGING REP. X  
 COMP. REPORT X

WATER WELL ACCEPTED BY \_\_\_\_\_

BOND CO. Firemen's Ins. Co. BOND NO. 188 98 10-528  
 DATE \_\_\_\_\_ ORGANIZATION REPORT 7-14-60  
 BOND AMT. \$ 25,000 CANCELED \_\_\_\_\_  
 FILING RECEIPT 9490 LOC. PLAT \_\_\_\_\_ X WELL BOOK \_\_\_\_\_ X PLAT BOOK \_\_\_\_\_ X  
 API NO. 02-001-20022 DATE ISSUED 4-24-67 DEDICATION SE/4

PERMIT NUMBER 378

**CONFIDENTIAL**

Release Date 11-26-78

(over)



## WELL COMPLETION OR RECOMPLETION REPORT AND WELL LOG

DESIGNATE TYPE OF COMPLETION:

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

### DESCRIPTION OF WELL AND LEASE

Operator <b>KERR-MCGEE CORPORATION</b>		Address <b>215 PETROLEUM CENTER BLDG. * FARMINGTON, N.M.</b>	
Federal, State or Indian Lease Number or name of lessor if fee lease <b>LI-20-0503-8221 NAVAJO "E"</b>		Well Number <b>NO. 1</b>	Field & Reservoir <b>DINEN-BI-KEYAH</b>
Location <b>740' FSL &amp; 660' FEL</b>		County <b>APACHE COUNTY</b>	
Sec. TWP-Range or Block & Survey <b>Sec. 20 - T36N - R30E G&amp;SRM</b>			
Date spudded <b>4-29-67</b>	Date total depth reached <b>5-19-67</b>	Date completed, ready to produce <b>NONE</b>	Elevation (DF, RKB, RT or Gr.) feet <b>7011' GR</b>
Total depth <b>3868'</b>	P.B.T.D. <b>0</b>	Single, dual or triple completion? <b>NONE</b>	If this is a dual or triple completion, furnish separate report for each completion.
Producing interval (s) for this completion		Rotary tools used (interval) <b>ALL</b>	Cable tools used (interval) <b>NONE</b>
Was this well directionally drilled? <b>NO</b>	Was directional survey made? <b>NO</b>	Was copy of directional survey filed?	Date filed
Type of electrical or other logs run (check logs filed with the commission):			Date filed

### CASING RECORD

Casing (report all strings set in well—conductor, surface, intermediate, producing, etc.)						
Purpose	Size hole drilled	Size casing set	Weight (lb./ft.)	Depth set	Sacks cement	Amt. pulled
SURFACE	15"	9-5/8"	32.30	253	310	NONE

### TUBING RECORD

### LINER RECORD

Size	Depth set	Packer set at	Size	Top	Bottom	Sacks cement	Screen (ft.)
in.	ft.	ft.	in.	ft.	ft.		
NONE							

### PERFORATION RECORD

### ACID, SHOT, FRACTURE, CEMENT SQUEEZE RECORD

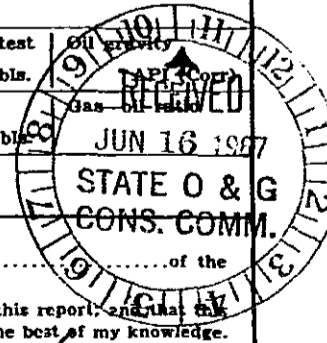
Number per ft.	Size & type	Depth Interval	Amt. & kind of material used	Depth Interval
NONE			NONE	

### INITIAL PRODUCTION

Date of first production <b>NONE</b>		Producing method (indicate if flowing, gas lift or pumping—if pumping, show size & type of pump):				
Date of test	Hrs. tested	Choke size	Oil prod. during test bbls.	Gas prod. during test MCF	Water prod. during test bbls.	Oil test
Tubing pressure	Casing pressure	Cal'ed rate of Production per 24 hrs.	Oil bbls.	Gas MCF	Water bbls.	Gas test
Disposition of gas (state whether vented, used for fuel or sold):						

CERTIFICATE: I, the undersigned, under the penalty of perjury, state that I am the 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.

Date 6/14/67 Signature [Handwritten Signature]



Permit No. 398

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

**DETAIL OF FORMATIONS PENETRATED**

Formation	Top	Bottom	Description*
CHINIE (TRIASSIC)	Surface	634'	RED SH. W/THIN. STRGS. OF SS.
Goconino (Permian)	634'	1350'	MASS. SS. W/SHLY. STRGS. IN LOWER 250'.
Cutler (Permian)	1350'	2519'	SH., SS. & LS.
Hermosa (Penn)	2519'	3251'	LS. W/RED & GRN. SH., MOSTLY DNS. & TIGHT, SOME THIN SD. STRGS.
Mississippian	3251'	3454'	DNS. LS.
Elbert (Devon)	3454'	3619'	DNS. DOLO. & GRN. SH.
McCracken (Devon)	3619'	3728'	MOSTLY SS. QUARTZIC, SOME POR. W/RED SH. & DOLO. INTERLAMINATIONS.
Aneth	3728'	3827'	MOSTLY DNS. DOLO., LITTLE POR., & RED SH.
Cambrian	3827'	3863'	Conglomeration Sd.
Pre-Cambrian	3863'	3868'	Granite.

\* 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

(CONFIRMING verbal request of 5-26-67.)

APPLICATION TO ABANDON AND PLUG

FIELD DINEH-BI-KEYAH  
OPERATOR KEPP-McGEE CORPORATION ADDRESS FARMINGTON, NEW MEXICO 87401  
Federal, State, or Indian Lease Number NAVAJO "E" (14-20-0603-8821) WELL NO. 1  
or Lessor's Name if Fee Lease  
SURVEY SECTION 20 - T36N - R30E COUNTY Apache  
LOCATION 740' FSL and 660' FEL of Sec. 20.

TYPE OF WELL DRY HOLE TOTAL DEPTH 3868'  
(Oil, Gas or Dry Hole)  
ALLOWABLE (If Assigned) NONE  
LAST PRODUCTION TEST OIL NONE (Bbls.) WATER NONE (Bbls.)  
GAS NONE (MCF) DATE OF TEST \_\_\_\_\_

PRODUCING HORIZON NONE PRODUCING FROM \_\_\_\_\_ TO \_\_\_\_\_  
1. COMPLETE CASING RECORD 9-5/8" O.D. 32.30# H-40 ST&C at 253' RKB.

2. FULL DETAILS OF PROPOSED PLAN OF WORK The following cement plugs will be set:  
Plug #1 340 sxs TD - 3200'  
Plug #2 100 sxs 700'-550'  
Plug #3 50 sxs 300'-200'  
Plug #4 10 sxs Surface.

Portion of hole between plugs is filled with drilling mud. A dry hole marker will be placed on top and the 9-5/8" casing stub capped.

If well is to be abandoned, does proposed work conform with requirements of Rule 202? YES If not, outline proposed procedure above.

DATE COMMENCING OPERATIONS 5-26-67  
NAME OF PERSON DOING WORK HALLIBURTON ADDRESS FARMINGTON, NEW MEXICO  
CORRESPONDENCE SHOULD BE SENT TO G. D. WILLIAMS  
Name  
Title PRODUCTION SUPT.  
Address 215 PETROLEUM CENTER BLDG. FARMINGTON, NEW MEXICO 87401  
Date May 29, 1967

Date Approved 6-1-67  
STATE OF ARIZONA  
OIL & GAS CONSERVATION COMMISSION  
By: John Bannister

Permit No. 398

STATE OF ARIZONA  
OIL & GAS CONSERVATION COMMISSION  
Application to Abandon and Plug  
File Two Copies  
RECEIVED  
JUN 1 1967  
STATE OF ARIZONA  
OIL & GAS CONSERVATION COMMISSION  
Form No. 9

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INJECTION WELL REPORTS

Filed in cabinet of Enforcement Director

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

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REPLY TO  
8 N. W. 42ND ST.  
OKLAHOMA CITY, OKLA.  
73118

Gentlemen:

Subject: Core Analysis

The measured physical properties presented on the accompanying report were determined on samples submitted to our laboratory for analysis.

Information pertaining to the well name, field, location, type of analysis, coring method and drilling fluid used is shown in the heading of the report.

Thank you for this opportunity to be of service.

Yours very truly,

CORE LABORATORIES, INC.



J. C. Evertson, Jr.  
District Manager

JGE:jc

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

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 Page No. 1

**CORE ANALYSIS RESULTS**

Company KERR-McGEE CORPORATION Formation AS NOTED File GP-12-1520  
 Well NAVAJO "E" NO. 1 Core Type DIAMOND Date Report 5-25-67  
 Field DINEH-BI-KEYAH Drilling Fluid WATER BASE MUD Analysts DANIEL  
 County APACHE State ARIZONA Elev. 7027'KB Location 740'FSL 660'FEL SEC 20 T 36 N R 30 E

**Lithological Abbreviations**

SAND-SD SHALE-SH LIME-LM	DOLOMITE-DOL CHERT-CH GYPSUM-GYP	ANHYDRITE-ANHY CONGLOMERATE-CONG FOSSILIFEROUS-FOSS	SANDY-SDY SHALY-SHY LIMY-LMY	FINE-FN MEDIUM-MED COARSE-CSE	CRYSTALLINE-XLM GRAIN-GRN GRANULAR-GRNL	BROWN-BRN GRAY-GY UGGY-VGY	FRACTURED-FRAC LAMINATION-LAM STYLOLITIC-STY	SLIGHTLY-SL/ VERY-V/ WITH-W/
SAMPLE NUMBER	DEPTH FEET	PERMEABILITY MILLIDARCY		POROSITY PER CENT	RESIDUAL SATURATION PER CENT PORE		SAMPLE DESCRIPTION AND REMARKS	GRAIN DENSITY
		PERM. MAX.	PERM. 90°		OIL	TOTAL WATER		

**CONVENTIONAL ANALYSIS**

**MC CRAKEN SAND (DEVONIAN)**

SAMPLE NUMBER	DEPTH FEET	PERM. MAX.	PERM. 90°	POROSITY PER CENT	OIL	TOTAL WATER	SAMPLE DESCRIPTION AND REMARKS	GRAIN DENSITY
1	3636.0-37.0	<0.1		1.2	0.0	83.5	Sd, gy, v/fn grn, dns	
	3637.0-38.0						Sh, rd, v/sl sdy	
2	3638.0-39.0	<0.1		2.5	0.0	92.0	Sd, gy-pk, v/fn grn, gn clay, inc	
3	39.0-40.0	<0.1		2.9	0.0	65.6	Sd, gy-pk, v/fn grn, gn clay, inc	
4	40.0-41.0	0.1		4.7	0.0	61.7	Sd, gy, v/fn grn, gn clay incl	
5	41.0-42.0	<0.1		5.4	0.0	76.0	Sd, gy-pk, v/fn grn, gn clay incl	
6	42.0-43.0	<0.1		3.4	0.0	58.9	Sd, gy-pk, v/fn grn, gn clay incl	
7	43.0-44.0	<0.1		3.7	0.0	78.4	Sd, gy-pk, v/fn grn, gn clay incl	
8	3644.0-45.0	<0.1		2.5	0.0	76.1	Sd, gy-pk, v/fn grn, gn clay incl	
	3645.0-46.0						Sh, rd, v/sl sdy, gn clay incl	
9	3646.0-47.0	0.1		6.5	0.0	75.5	Sd, gy-pk, v/fn grn, gn clay incl	
10	47.0-48.0	0.1		5.3	0.0	66.1	Sd, gy-pk, v/fn grn, branded w/rd sh	
11	3648.0-49.0	<0.1		3.4	0.0	91.3	(Same) w/vert frac, x-bedding	
	3649.0-50.0						Sh, rd, v/sl sdy, gn clay incl	
12	3650.0-51.0	0.2		5.6	0.0	35.8	Sd, gy-pk, v/fn grn, branded w/rd sh	
13	51.0-52.0	0.4		9.5	0.0	72.7	Sd, gy, fn grn	
14	52.0-53.0	15		9.3	0.0	24.8	Sd, gy-pk, fn grn, x-bdd	2.655
15	53.0-54.0	27		11.5	4.3	30.4	Sd, gy-pk, fn grn, x-bdd	
16	54.0-55.0	105		9.3	0.0	16.1	Sd, gy-pk, fn grn, x-bdd	
17	55.0-56.0	55		7.9	6.3	20.2	Sd, gy-pk, fn grn, x-bdd	2.625
18	56.0-57.0	33		7.4	0.0	18.9	Sd, gy-pk, fn grn, x-bdd	
19	57.0-58.0	33		8.4	2.4	14.3	Sd, pk, fn grn	2.660
20	58.0-59.0	21		7.1	2.8	8.5	Sd, pk, fn grn	
21	59.0-60.0	5.4		2.7	7.4	22.2	Sd, pk, fn grn	
22	60.0-61.0	0.2		4.1	4.9	14.6	Sd, pk, fn grn	
23	3661.0-62.0	<0.1		0.8	0.0	87.5	Sd, gy-pk, v/fn grn, sh incl, dns	
	3662.0-64.0						Lost Core	
24	3664.0-65.0	0.1		5.8	3.4	37.9	Sd, gy-pk, fn grn	
25	65.0-66.0	<0.1		4.3	16.3	18.6	Sd, gy-pk, fn grn	
26	3666.0-67.0	<0.1		1.5	0.0	60.0	Sd, gy-pk, v/fn grn, sl/shy, dns	

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

CORE LABORATORIES, INC.  
Petroleum Reservoir Engineering  
DALLAS, TEXAS

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File CP-12-1520 Page No. 2  
Well Navajo "E" No. 1

**CORE ANALYSIS RESULTS**

SAMPLE NUMBER	DEPTH FEET	PERMEABILITY MILLIDARCYs	POROSITY PER CENT	RESIDUAL SATURATION PER CENT PORE		SAMPLE DESCRIPTION AND REMARKS	GRAIN DENSITY
				OIL	TOTAL WATER		
27	3667.0-68.0	0.2	9.3	9.7	21.5	Sd, gy-pk, fn grn	
28	68.0-69.0	15	11.0	8.2	19.1	Sd, gy-pk, fn grn	
29	69.0-70.0	14	9.1	7.7	13.2	Sd, gy-pk, fn grn	
30	70.0-71.0	1.3	7.5	12.0	18.7	Sd, gy, fn grn	
31	71.0-72.0	0.7	7.8	11.5	15.4	Sd, gy, fn grn	2.635
32	72.0-73.0	6.9	9.0	13.3	22.2	Sd, gy, fn grn	
33	73.0-74.0	62	8.5	8.2	30.6	Sd, bn, fn grn, sh incl	2.648
34	74.0-75.0	21	9.3	25.8	16.1	Sd, bn, fn grn	
35	75.0-76.0	30	8.4	25.0	19.0	Sd, bn, fn grn	
36	76.0-77.0	39	10.0	24.0	16.0	Sd, bn, fn grn	
37	3677.0-78.0 3678.0-83.0	<0.1	2.6	0.0	65.4	Sd, gy-pk, v/fn grn, dns Sh, rd, v/sl sdy	
38	3683.0-84.0	0.1	8.2	2.4	39.0	Sd, rd, fn grn, sl/shy, sl/lmy	
39	84.0-85.0	2.3	9.3	5.4	43.0	Sd, gy-pk, fn grn	
40	85.0-86.0	8.6	10.5	4.8	23.8	Sd, gy-pk, fn grn	2.654
41	86.0-87.0	4.8	6.1	8.2	44.3	Sd, pk, fn grn	
42	87.0-88.0	1.5	8.6	5.8	14.0	Sd, pk, fn grn	2.643
43	88.0-89.0	36	8.7	10.3	25.2	Sd, pk, fn grn	
44	89.0-90.0	17	8.1	22.2	24.7	Sd, rd, fn grn, sl/shy	
45	90.0-91.0	1.0	6.1	26.2	22.7	Sd, rd, fn grn, sl/shy	2.651
46	91.0-92.0	<0.1	3.1	0.0	61.4	Sd, pk, v/fn grn, dns	
47	92.0-93.0	<0.1	3.4	0.0	61.8	Sd, rd, v/fn grn, dns	
48	3693.0-94.0 3694.0-96.0	0.1	5.1	0.0	39.2	Sd, gy, fn grn, dns Lost Core	
49	3696.0-97.0	0.2	6.1	19.7	29.5	Sd, gy, fn grn, dolomitic	
50	97.0-98.0 3698.0-3727.5	0.1	6.4	0.0	51.6	Sd, gy, fn grn, dolomitic Shale, no analysis	
ANETH FORMATION							
51	3727.5-28.0	<0.1	2.0	0.0	65.0	Dol, pk, v/fn xln, v/sl shy, sucrosic	
52	28.0-29.0	1.3	8.1	0.0	63.1	Dol, pk, v/fn xln, v/sl shy, sucrosic, v/sl vgy	
53	3729.0-30.5 3730.5-35.0 3735.0-62.0 3762.0-77.0	<0.1	1.1	18.2	63.7	Dol, gy, v/fn xln, v/sl shy, v/sl frac Lost Core Dol, gy, shy Sh, blk, w/dol	
54	3777.0-78.0 3778.0-81.0	<0.1	0.8	0.0	87.5	Dol, gy, fn xln, v/sl shy, frac Dol, gy, fn xln, shy, dns	
55	3781.0-82.0	<0.1	2.2	9.1	82.0	Dol, gy, fn xln, v/sl shy, frac	
56	3782.0-83.0	<0.1	1.3	15.3	54.0	Dol, gy, fn xln, v/sl shy, frac	

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

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 Petroleum Reservoir Engineering  
 DALLAS, TEXAS

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File CP-12-1520 Page No. 3  
 Well Navajo "E" No. 1

**CORE ANALYSIS RESULTS**

SAMPLE NUMBER	DEPTH FEET	PERMEABILITY MILLIDARCY	POROSITY PER CENT	RESIDUAL SATURATION PER CENT PORE		SAMPLE DESCRIPTION AND REMARKS	GRAIN DENSITY
				OIL	TOTAL WATER		
57	3783.0-84.0 3784.0-85.0	<0.1	1.4	14.3	64.3	Dol, gy, fn xln, v/sl shy, frac Lost Core	
58	3785.0-86.0 3786.0-88.0 3788.0-92.0 3792.0-01.0  3801.0-06.0	<0.1	1.3	15.4	53.9	Dol, gy, fn xln, shy, frac Dol, gy, fn xln, v/shy Dol, gy, fn xln, carb, inter lam sh Dol, gy, fn xln, inter lam sh, dolomitic Sh, blk, carb, thin lam dol	
59	3806.0-07.0	0.1	4.0	20.0	37.6	Dol, gy, fn xln, shy, carb	2.819
60	07.0-08.0	<0.1	2.0	0.0	90.0	Dol, gy, fn xln, sl/shy	
61	08.0-09.0	<0.1	2.4	0.0	75.0	Dol, gy, fn xln, sl/shy	
62	09.0-10.0	<0.1	3.4	0.0	88.1	Dol, gy, fn xln, sl/shy	
63	10.0-11.0	0.1	7.0	0.0	51.5	Dol, gy, med xln, sh lam	
64	11.0-12.0	6.3	11.7	1.7	51.4	Dol, gy, med xln, sh lam, v/sl frac, sl/vgy	2.836
65	12.0-13.0	157	12.6	1.6	92.0	Dol, gy, med xln, sh lam, v/ sl vgy	2.864
66	3813.0-14.0 3814.0-15.0 3815.0-18.0 3818.0-22.0 3822.0-50.0	1.0	10.6	0.0	78.2	Dol, gy, med xln, sh lam Qtzite, brn, fn med Sh, red, brn Lost Core No analysis	

THIS IS A FINAL REPORT.

DISTRIBUTION: 4CC: KERR-McGEE CORPORATION  
 ATTN: MR. R. W. KING  
 612 PETROLEUM BUILDING  
 AMARILLO, TEXAS

8CC: KERR-McGEE CORPORATION  
 ATTN: MR. J. W. McKENNY  
 KERR-McGEE BUILDING  
 OKLAHOMA CITY, OKLAHOMA

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Core Descriptions  
Kerr-McGee Navajo "E" #1  
Dineh-bi-Keyah Field  
Apache County, Arizona  
May 24, 1967

Page Two

87 - 91 4' Sd, med - crs gr., spotty flour, fair por,  
good cut, stks stain, scattered pin point bleed  
oil.  
91 - 93 Sd - NS No Por.  
93 - 94 Sd - Qtzit - NS Tite

8 units methane throughout core (reverse kick throughout - indicates  
He or Co<sub>2</sub>)

Core #4 3695 $\frac{1}{2}$  - 3734 $\frac{1}{2}$  Cut 39' - recovered 34 $\frac{1}{2}$ '  
3696 - 98 2' Quartzite - ltd, tite, w/strks, lite brn oil stn,  
flour & cut, pin point bleeding.  
3698 - 3704 6' Sh, red to brown  
3704 - 07 3' interbedded sh and Quartzite - tite - NS  
3707 - 09 2' Sh - red to brn  
3709 - 10 1' Quartzite - NS  
3710 - 12 2' Sh  
3712 - 15 3' Quartzite - NS  
3715 - 19 4' Dolo. - Dns - NS  
3719 - 21 2' Sh  
3721 - 22 1' Dolo - NS  
3722 - 24 2' Sh  
3724 - 27 3' Dolo - Dns - NS  
3727 - 29 2' Dolo - NS - fair por  
3729 - 30 $\frac{1}{2}$  1 $\frac{1}{2}$ ' Dolo - lite gry - fn xln - dns matrix, thin strks  
lite brn stain, and bleeding, Ver. hairline frac, few  
vugs - w/stain

Top of Aneth 3724'.

(2' show in Basal McCracken)

Core #5 3735 - 85' Cut 50' - recovered 50'.  
3735 - 62 27' Dolo - gry - grn, f xln to litho, dns tite - few  
hairline fracs - v. sli show of oil 46-47 in frac.  
62 - 77 15' Sh - & Dolo - blk SS - Dolo, shly dns tite - two  
frac with faint tr bleed oil.  
77 - 85 8' Dolo - V. f xln, dns, hd, (has shattered appearance  
with numerous hairline fracs and contorted sh - v. sli  
bleed oil 78-79 & 80-85.

Core Descriptions  
Kerr-McGee Navajo "K" #1  
Dinch-bi-Keyah Field  
Apache County, Arizona  
May 25, 1967

Page Three

Core #6 3785 - 3822' Cut 37' - recovered 33' - bbl jammed  
3785 - 86' 1' Dolo, brn - sub-sucros - w/blk sh lam. - numerous  
hairline frac - tr stn and bleed oil - matrix tite  
86 - 88' 2' Dolo - gry - f stn - litho - shly & dns - tr stn  
on one hairline frac.  
88 - 92 4' Dolo & sh - dolo dns shly NS.  
92 - 3801 9' sh & Dolo - dns NS  
3801 - 06 5' sh, blk with thin Dolo lam dns NS  
06 - 14 8' Dolo, gry brn - f-m xlm - w/lam blk sh - dns NS  
06 - 12, 12 - 14 fair - gd dns vugg & inter xln por w/  
good lite brn stain - gd flour - excellent cut - tr  
bleed oil  
14 - 15 1' Qtz - glassy tite NS  
15 - 18 3' Sh + red - grn & brn mottled.  
Poss. Camb at 3814 (+3213')



DRILL STEM TEST  
Kerr-McGee Navajo #1  
Dineh-bi-Keyah Field  
Apache County, Arizona  
May 24, 1967

(4399)

DST

3645 - 95' straddle packer

Op 5" good blow

SI 30"

Op 1 hour

fair blow throughout

would not burn

Recovered 520' fluid

(280' sli GCM; 180' salt water cut mud; 60' mud cut salt water)

FP 107 - 149

IS 1000/30"

FSI 868/30"

HP 1798 - 1798

DST #1 -

Sample #1 (in 280') chlor 3124 ppm

Sample #2 (180') 11,500 ppm

Sample #3 (60') 15,052 ppm



Kerr-McGee Navajo #1  
Dineh-bi-Keyoh Ficta  
Apache County, Arizona  
May 26, 1967

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Formation Test #1 3658 -

SI 55"  
Stab. @ 1050#/45"  
op. 4" on both chambers  
No spl. poss.  
Rec. in 6 gal chamber  
No gas  
1300 cc filtrate wtr  
Rw .2  
Rmf 2.5  
Had flour on wtr  
Segerated chamber  
Rec. .1 cc gas  
1300 cc filtrate wtr  
Rr 2.7  
scum flour

Formation Test #2 3677 - 80 Failed

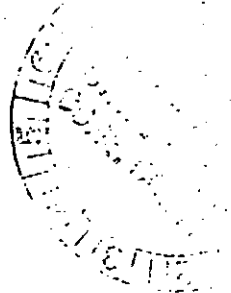
Formation Test #3 3690

SI 60" Stab 52"/1225#  
op 6 gal cham. 70", Seg. chamb. - 30" /No press  
6 gal cham - Rec. 900 cc filtrate wtr  
Rw 1.8  
Seg chamb 4500 cc filtrate  
Rw 2.3  
No flour - No shows

Formation Test #4 3671 Pkr. failed

Formation Test #5 3656 - 59

SI 60"/1060#  
6 gal chamb - 1900 cc wtr  
Seg. chamb - Mal faction



Kerr-McGee Navajo #1  
Dineh-bi-Keyah Field  
Apache County, Arizona  
May 26, 1967

(398

Formation Test #6 3678

SI 55" - Stab @ 1040#/40"  
6 gal. chamb - op 15", Rec 1700 cc  
filtrate Rw 2.1  
w/saum oil  
.6 cc free gas  
Seg. chamb - 2000 cc filtrate  
Rw 2.3  
rainbow

Formation Test #7 3657 - 59

No SI  
6 gal. op 20" - 1300 cc fil  
w/ sli gas sho  
Seg. chamb - 21 cc filtrate  
Rw 2.2 No shows



✓ - Chicas  
X - Lambert

September 19, 1969

Memo to File #398 X  
File #441  
and  
Continental Energy Corporation #E-2  
Navajo (8821)  
T36N, R30E, G & SRM  
Sec. 19: SE/4 SW/4  
Apache County  
Permit Number not yet assigned X

Memo From J. A. Lambert

Lease No. 14-20-0603-8821 covers all of Sections 17, 18, 19, and 20 of Township 36 North, Range 30 East, and Kerr-McGee Corporation is lessee of records per Mr. Jeffrey Henry on 9-19-69.

~~441~~  
398

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

SUBMIT IN DUPLICATE

(See other In-  
structions on  
reverse side)

Form approved  
Budget Bureau No. 42-R355.5

WELL COMPLETION OR RECOMPLETION REPORT AND LOG \*

1a. TYPE OF WELL: OIL WELL  GAS WELL  DRY  Other  Salt Water Disposal  
1b. TYPE OF COMPLETION: NEW WELL  WORK OVER  DEEP-EN  PLUG BACK  DIFF. CESVR.  Other  Re-Enter, P&A Well.

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)\*  
At surface 740° FSL & 660° FEL (SE SE) Sec. 20, T36N, R30E  
At top prod. interval reported below  
At total depth Same.

5. LEASE DESIGNATION AND SERIAL NO.  
14-20-0603-8821

6. IF INDIAN, ALLOTTEE OR TRIBE NAME  
NAVAJO

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME  
NAVAJO #27

9. WELL NO.  
No. 1

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

11. SEC., T., R., M., OR BLOCK AND SURVEY OR AREA  
Sec. 20, T36N, R30E GASRM

12. COUNTY OR PARISH  
Apache

13. STATE  
Arizona

14. PERMIT NO. 441 DATE ISSUED 10-31-67

15. DATE RE-ENTER 12-27-67 16. DATE T.D. REACHED 12-30-67 17. DATE COMPL. (Ready to prod.) 1-2-68 18. ELEVATIONS (OF RKB, RT, CR, ETC.)\* 7014° CR 19. ELEV. CASINGHEAD Same

20. TOTAL DEPTH, MD & TVD 3868° 21. PLUG BACK T.D., MD & TVD 3700° 22. IF MULTIPLE COMPL., HOW MANY\* 23. INTERVALS DRILLED BY All 24. ROTARY TOOLS None 25. CABLE TOOLS None

24. INTERVAL(S) OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)\*  
Injection 3650°-3700° McCracken

26. TYPE ELECTRIC AND OTHER LOGS RUN  
IES, Microlog, Sonic Log Gamma Ray

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	253'	15"	340 axs w/2% gel	None
4-1/2"	9.50	3650'	8-3/4"	240 axs around bit & 250 axs thru DV tool at 1250'	None

29. LINER RECORD

SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT*	SCREEN (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)
None					2-3/8"	3609'	3611'

31. PERFORATION RECORD (Interval, size and number)

INTERVAL (MD)	SIZE	NUMBER
3650°-3700°	Open Hole	

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

DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED
3650°-3700°	1500 gal mud acid

33. PRODUCTION  
DATE FIRST PRODUCTION None  
PRODUCTION METHOD (Flowing, gas lift, pumping—size and type of pump)  
WELL STATUS (Producing or shut-in)

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

DATE OF TEST	HOURS TESTED	CHOKE SIZE	PROD'N. FOR TEST PERIOD	OIL—BBL.	GAS—BBL.	WATER—BBL.	WATER—GAL.	GAS/OIL RATIO

35. LIST OF ATTACHMENTS

36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available data.  
SIGNED [Signature] TITLE Production Supt. DATE 1-27-68

## 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, SEGWING AND SHUT-IN PRESSURES, AND RECOVERIES

FORMATION	TOP	BOTTOM	DESCRIPTION, CONTENTS, ETC.
CHINLE (Triassic)	Surface	634'	Red sh. w/ thin strgs. of SS.
COCOMINO (Permian)	634'	1350'	Mass. SS. w/ shly. strgs in lower 250'.
CUTLER (Permian)	1350'	2519'	Sh., SS. & ls.
HERMOSA (PERM)	2519'	3251'	ls. w/ red & gray Sh., mostly dns. & tight with some thin SD strgs.
MISSISSIPPIAN	3251'	3454'	Dns. ls.
ELBERT (Devon)	3454'	3619'	Dns. Dolo. & Grn. Sh.
MCCRACKEN (Devon)	3619'	3728'	Mostly ss. Quartzic, some por. w/ red Sh. & Dolo. interaminations.
AMETI	3728'	3827'	Mostly Dns. Dolo., little por., & red sh.
CAMBRIAN	3827'	3863'	Conglomeratic sd.
PRE-CAMBRIAN	3863'	3868'	Granite

**38. GEOLOGIC MARKERS**

NAME	TOP	
	MEAS. DEPTH	TRUE VERT. DEPTH
COCOMINO	1622'	
PENNSYLVANIAN	2519'	
MISSISSIPPIAN	3251'	
DEVONIAN	3454'	
GRANITE	3863'	

Form 5-331  
(May 1963)

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

SUBMIT IN TRIPLICATE\*  
(Other instructions on re-  
verse 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 <input type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <input checked="" type="checkbox"/> Salt Water Disposal	5. LEASE DESIGNATION AND SERIAL NO. 14-20-0603-8821
2. NAME OF OPERATOR Kerr-McGee Corporation	6. IF INDIAN, ALLOTTEE, OR TRIBE NAME NAVAJO
3. ADDRESS OF OPERATOR 215 Petroleum Center Bldg. - Farmington, New Mexico	7. UNIT AGREEMENT NAME
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.) At surface 740' FSL & 660' FEL, Sec. 20, T36N, R30E	8. FARM OR LEASE NAME NAVAJO "E"
14. PERMIT NO. State No. 441	9. WELL NO. NO. 1
15. ELEVATIONS (Show whether DF, RT, GR, etc.) 7014' GR	10. FIELD AND POOL, OR WILDCAT Dineh-bi-Kevah
	11. SEC., T., R., M., OR BLM. AND SURVEY OR AREA Sec. 20, T36N, R30E G&SRM
	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 <input type="checkbox"/>	FULL OR ALTER CASING <input type="checkbox"/>	WATER SHUT-OFF <input checked="" type="checkbox"/>	REPAIRING WELL <input type="checkbox"/>
FRACTURE TREAT <input type="checkbox"/>	MULTIPLE COMPLETE <input type="checkbox"/>	FRACTURE TREATMENT <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
SHOOT OR ACIDIZE <input type="checkbox"/>	ABANDON* <input type="checkbox"/>	SHOOTING OR ACIDIZING <input checked="" type="checkbox"/>	ABANDONMENT* <input type="checkbox"/>
REPAIR WELL <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	(Other) Re-Enter for SWD <input checked="" type="checkbox"/>	
(Other) <input type="checkbox"/>			

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

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

On 12-26-67 moved in rotary rig and nipped up on 9-5/8" OD surface casing. Drilled cement plugs and clean out hole to 3700'. Ran 4-1/2" OD, 9.5#, J-55 casing and set at 3650'. Had DV tool at 1250'. Cemented with 250 sxs Class A around bottom of casing and 250 sxs thru DV tool. Bottom plug down at 4:45 PM 12-30-67 and top plug down at 5:45 PM. Test casing with 1000 psi for 30 mins. Held OK. Drill out DV tool. Test casing with 1000 psi. Held OK. Drill out cement in bottom of casing and clean out open hole to 3700'. Ran Baker 7" Model A tension packer and set at 3609'. Swab tubing dry. Acidized with 1500 gallons mud acid, 1650 psi, 5 BPM. Swab tubing dry. No recovery. Nipple up well head. Pump test water injection. 4 BPM at 1500 psi. 2 BPM at 1000 psi. Move out rig.

*Information only  
See 441*



18. I hereby certify that the foregoing is true and correct.  
SIGNER *[Signature]* TITLE Production Supt. DATE 1-5-68

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

- 2-USGS
- 2-Arizona
- 1-Tribe
- 1-JLF
- 1-WRF, 1-RF

441-398

\*See Instructions on Reverse Side

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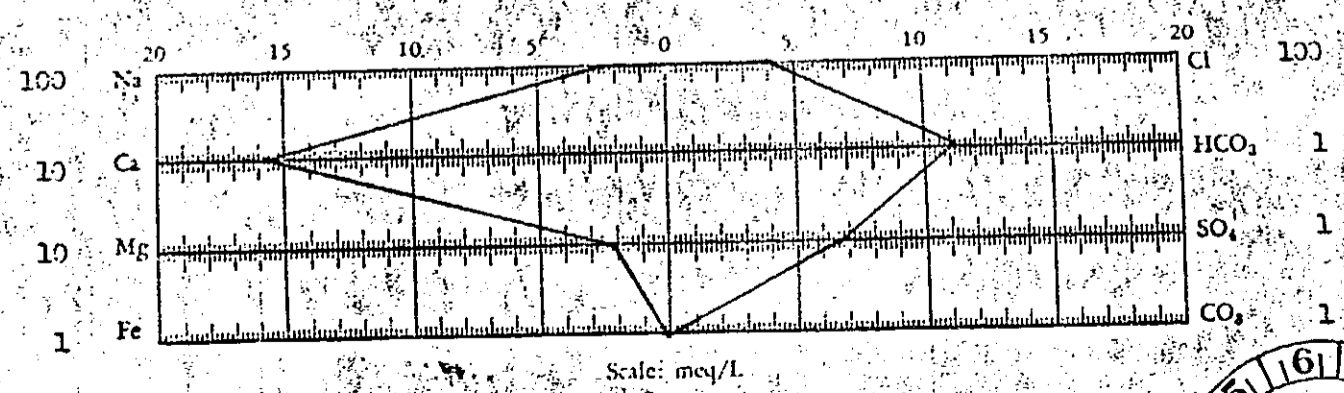
CORE LABORATORIES, INC.  
Petroleum Reservoir Engineering  
DALLAS, TEXAS  
WATER ANALYSIS

File # 3-72-721

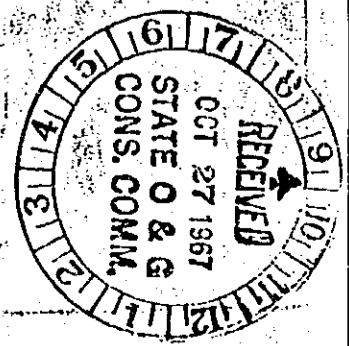
Company BERNARD CORP. Well Name NAVAJO E-1 Sample No. EMR Top of tool  
DEVONIAN McCracken Depth ~3645-3695 Sampled From MCSW  
Location \_\_\_\_\_ Field UNDESIGNATED County APACHE State ARIZONA  
Date Sampled \_\_\_\_\_ Date Analyzed 5/23/67 Engineer GRHAM

Total Dissolved Solids 23,586 mg/L calc. Sp. Gr. INSUFFICIENT SAMP.  
Resistivity 260 ohm-meters @ Cl F. meas. Hydrogen Sulfide absent  
pH 6.8

Constituents	meq/L	mg/L	Constituents	meq/L	mg/L
Sodium	216.5	5,670	Chloride	417.0	14,770
Calcium	156.9	2,911	Bicarbonate	11.2	603
Magnesium	22.0	262	Sulfate	6.7	320
Iron	TR5		Carbonate		
Barium			Hydroxide		



All analyses except iron determination performed on a filtered sample.



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CORE LABORATORIES, INC.  
Petroleum Reservoir Engineering  
DALLAS, TEXAS  
WATER ANALYSIS

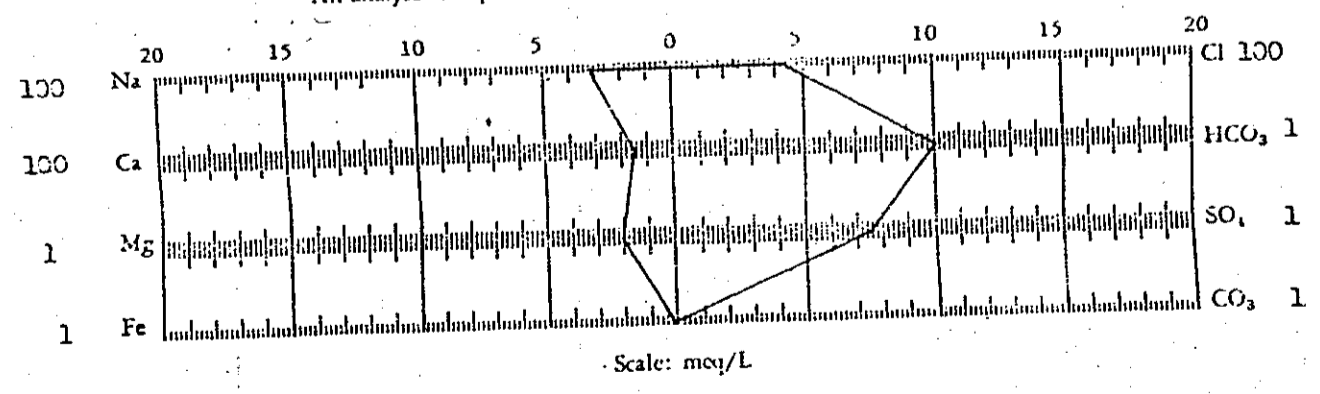
File K-3-16

Company KIMBERLY CLAY CORPORATION Well Name CONSOLIDATED HAWAII TANK BATTERY Sample No. \_\_\_\_\_  
Formation HEALING Depth \_\_\_\_\_ Sampled From PRODUCED FLUID  
Location SEC 22-T36N-R30E Field DINEH BI KEVAH County APACHE State ARIZONA  
Date Sampled \_\_\_\_\_ Date Analyzed 12-11-67 Engineer GALLOP

Total Dissolved Solids 24,294 mg/L. Calculated Sp. Gr. 1.020 @ 73 °F.  
Resistivity 0.272 ohm-meters @ 73 °F. Measured Hydrogen Sulfide Absent  
pH 6.7 @ 73 °F.

*Constituents	meq/L	mg/L	Constituents	meq/L	mg/L
Sodium	<u>308</u>	<u>5,290</u>	Chloride	<u>130</u>	<u>15,250</u>
Calcium	<u>130</u>	<u>2,760</u>	Bicarbonate	<u>10</u>	<u>610</u>
Magnesium	<u>2</u>	<u>24</u>	Sulfate	<u>7.5</u>	<u>360</u> (Grav.)
Iron	<u>Absent</u>		Carbonate	<u>Absent</u>	
Barium			Hydroxide	<u>Absent</u>	

\*All analyses except iron determination performed on a filtered sample.



MILLIPORE ANALYSIS

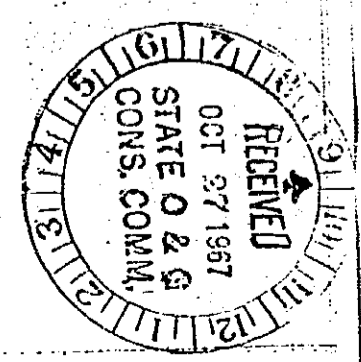
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UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

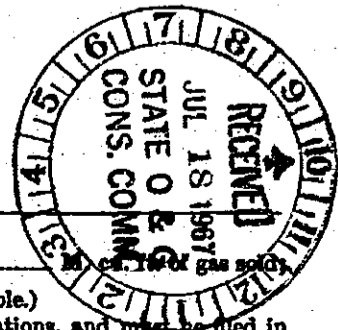
Form approved.  
Budget Bureau No. 42-R714.4.

ALLOTTEE  
TRIBE NAVAJO  
LEASE No. 14-20-0603-8821

**LESSEE'S MONTHLY REPORT OF OPERATIONS** NAVAJO E LSE.

State ARIZONA County Apache Field Dineh-bi-Keyah  
The following is a correct report of operations and production (including drilling and producing wells) for the month of JUNE, 19 67,  
Agent's address 215 Petroleum Center Bldg. Farmington, New Mexico Company Kerr-McGee Corporation  
Signed [Signature] Agent's title Production Supt.  
Phone 327-9637

SEC. AND 1/4 OF 1/4	TWP.	RANGE	WELL No.	DATE PRODUCED	BARRELS OF OIL	GRAVITY	Cu. Ft. OF GAS (In thousands)	GALLONS OF GASOLINE RECOVERED	BARRELS OF WATER (If none, so state)	REMARKS (If drilling, depth; if shut down, cause; date and result of test for gasoline content of gas)
SESE20	36N	30E	1	None.		Well F&A.				No activity on this lease in June 1967. thru Nov, 1967



NOTE.—There were NO runs or sales of oil; No runs or sales of gasoline during the month. (Write "no" where applicable.)  
NOTE.—Report on this form is required for each calendar month, regardless of the status of operations, and must be filed in duplicate with the supervisor by the 6th of the succeeding month, unless otherwise directed by the supervisor.

Form 9-330  
(Rev. 5-63)

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

SUBMIT IN DUPLICATE\*

(See other instructions on reverse side)

Form approved  
Budget Bureau No. 42-R555.5

ARIZ.

WELL COMPLETION OR RECOMPLETION REPORT AND LOG\*

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

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

2. NAME OF OPERATOR  
**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)\*  
At surface **740' FSL & 660' FEL (SE SE) Sec. 20-T36N-R30E**  
At top prod. interval reported below  
**Apache County, Arizona**  
At total depth  
**SAME.**

5. LEASE DESIGNATION AND SERIAL NO.  
**14-20-0603-8821**

6. IF INDIAN, ALLOTTEE OR TRIBE NAME  
**NAVAJO**

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME  
**NAVAJO WEL**

9. WELL NO.  
**NO. 1**

10. FIELD AND POOL, OR WILDCAT  
**Dineh-bi-Koyah**

11. SEC., T., R., M., OR BLOCK AND SURVEY OR AREA  
**Sec. 20-T36N-R30E**  
**G&SHH**

12. COUNTY OR PARISH  
**Apache**

13. STATE  
**Arizona**

15. DATE SPUNDED **4-29-67** 16. DATE T.D. REACHED **5-19-67** 17. DATE COMPL. (Ready to prod.) 18. ELEVATIONS (OF RKB, RT, OR, ETC.)\* **7014' OR** 19. ELEV. CASINGHEAD

20. TOTAL DEPTH, MD & TVD **3868'** 21. PLUG, BACK T.D., MD & TVD **0** 22. IF MULTIPLE COMPL., HOW MANY\* 23. INTERVALS DRILLED BY **All** 24. ROTARY TOOLS **None** 25. CABLE TOOLS **None**

24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)\* **NONE** 25. WAS DIRECTIONAL SURVEY MADE? **NO**

26. TYPE ELECTRIC AND OTHER LOGS RUN 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
<b>9-5/8"</b>	<b>32.30</b>	<b>253'</b>	<b>15"</b>	<b>340 BXS w/2% CaCl</b>	<b>NONE</b>

29. LINER RECORD 30. TUBING RECORD

SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT*	SCREEN (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)
<b>NONE</b>					<b>NONE</b>		

31. PERFORATION RECORD (Interval, size and number) 32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.

DEPTH INTERVAL (MD)	AMOUNT AND KIND OF
<b>NONE</b>	

33. PRODUCTION

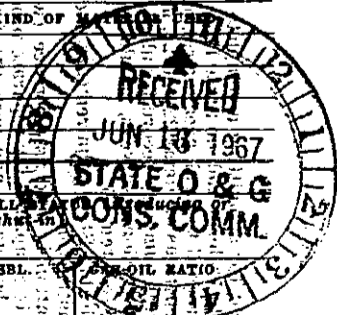
DATE FIRST PRODUCTION **NONE** PRODUCTION METHOD (Flowing, gas lift, pumping—size and type of pump) WELL CONSTRUCTION

DATE OF TEST	HOURS TESTED	CHOKE SIZE	PROD'N. FOR TEST PERIOD	OIL—BBL.	GAS—MCF.	WATER—BBL.	OIL GRAVITY-API (CORR.)

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

35. LIST OF ATTACHMENTS

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 **6-13-67**



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

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## INSTRUCTIONS

**General:** This form is designed for submitting a complete and correct well completion report and log on all types of lands and leases to either a Federal agency or a State agency, or both, pursuant to applicable Federal and/or State laws and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local, area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from, the local Federal and/or State office. See instructions on items 22 and 24, and 33, below regarding separate reports for separate completions. If not filed prior to the time this summary record is submitted, copies of all currently available logs (drillers, geologists, sample and core analysis, all types electric, etc.), formation and pressure tests, and directional surveys, should be attached hereto, to the extent required by applicable Federal and/or State laws and regulations. All attachments should be listed on this form, see item 35.

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

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

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

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

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

**37. SUMMARY OF POROUS ZONES:**  
SHOW ALL IMPORTANT ZONES OF POROSITY AND CONTENTS THEREOF; CORED INTERVALS; AND ALL DRILL-STEM TESTS, INCLUDING DEPTH INTERVAL TESTED, CUSHION USED, TIME TOOL OPEN, FLOWING AND SHUT-IN PRESSURES, AND RECOVERIES

**38. GEOLOGIC MARKERS**

FORMATION	TOP	BOTTOM	DESCRIPTION, CONTENTS, ETC.	NAME	TOP	
					MEAS. DEPTH	TRUE VERT. DEPTH
Chinle (Triassic)	Surface	634'	RED SH. WITHIN STRCS. OF SS.	COCONINO	1622'	
Cocconino (Permian)	634'	3350'	MASS. SS. W/SHLY. STRCS IN LOWER 250'.	PENNSYLVANIAN	2519'	
Cutler (Permian)	1350'	2519'	SH., SS., & LS.	MISSISSIPPIAN	3251'	
Hermosa (Penn)	2519'	3251'	LS. W/RED & GRN. SH., MOSTLY DNS. & TIGHT SOME WHIN SD. STRCS.	DEVONIAN	3454'	
Mississippian	3251'	3454'	DNS. LS.	GRANITE	3863'	
Elbert (Devon)	3454'	3619'	DNS. DOLO. & GRN. SH.			
McCracken (Devon)	3619'	3728'	MOSTLY SS. QUARTZIC, SOME POR. W/RED SH. & DOLO. INTERLAMINATIONS.			
Aneth	3728'	3827'	MOSTLY DNS. DOLO., LITTLE POR., & RED SH.			
Cambrian	3827'	3863'	Conglomeratic Sd.			
Pre-Cambrian	3863'	3868'	Granite.			

PART COMPLETION OR RECOMPLETION REPORT  
 GEOLOGICAL SURVEY  
 DEPARTMENT OF THE INTERIOR  
 OIL AND GAS DIVISION

Form 9-331  
(May 1963)

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

SUBMIT IN TRIPLICATE\*  
(Other instructions on re-  
verse side)

Form approved  
Budget Bureau No. 42-B1424.

ARIZ.

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 <input type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <input checked="" type="checkbox"/> <b>Dry Hole.</b>		5. LEASE DESIGNATION AND SERIAL NO. <b>14-20-0603-8821</b>
2. NAME OF OPERATOR <b>Kerr-McGee Corporation</b>		6. IF INDIAN, ALLOTTEE OR TRIBE NAME <b>NAVAJO</b>
3. ADDRESS OF OPERATOR <b>215 Petroleum Center Bldg.-Farmington, New Mexico</b>		7. UNIT AGREEMENT NAME
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.) At surface <b>740' FSL &amp; 660' FEL (SE SE) Sec. 20-T36N-R30E Apache County Arizona</b>		8. FARM OR LEASE NAME <b>NAVAJO #B</b>
14. PERMIT NO. <b>State No. 398</b>	15. ELEVATIONS (Show whether DP, RT, GR, etc.) <b>7014' GR</b>	9. WELL NO. <b>WELL NO. 1</b>
		10. FIELD AND POOL OR WILDCAT <b>Dinah-bi-Koyah</b>
		11. SEC. T., R., M., OR BLM. AND SURVEY OR AREA <b>Sec. 20-T36N-R30E G&amp;SRM</b>
		12. COUNTY OR PARISH 13. STATE <b>Apache Arizona</b>

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

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

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

Set the following cement plugs by balanced plug method using drill pipe.

Plug No. 1	340 SXS	3868' (TD) - 3200'
Plug No. 2	100 SXS	700' - 500'
Plug No. 3	50 SXS	300' - 200'
Plug No. 4	10 SXS	Surface.

Drilling mud is in the hole between the plugs. Casing left in the well is 9-5/8" OD, 32.30#, H-40, ST&C. Surface casing set at 253' and cemented back to surface. No casing was pulled.

A dry hole marker 4" OD x 4' high was placed in top of the casing and a steel cap welded between the 9-5/8" and the 4" marker. Work was completed on 5-26-67. Notice will be given when pit has been filled and location is ready for inspection. This work will be done as soon as the pit dries.



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

SIGNED [Signature] TITLE Production Supt. DATE 6-13-67

(This space for Federal or State office use)

APPROVED BY \_\_\_\_\_ TITLE \_\_\_\_\_ DATE \_\_\_\_\_

CONDITIONS OF APPROVAL, IF ANY:

398

\*See Instructions on Reverse Side

Form 9-331  
(May 1963)

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

SUBMIT IN THIS CATEGORY  
(Other instructions on reverse side)

Form approved  
Budget Bureau No. 42-R1424

SUNDRY NOTICES AND REPORTS ON WELLS

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

5. LEASE DESIGNATION AND SERIAL NO. <b>14-20-0603-8821</b>	
6. IF INDIAN, ALLOTTEE OR TRIBE NAME <b>NAVAJO</b>	
7. UNIT AGREEMENT NAME	
8. FARM OR LEASE NAME <b>NAVAJO "E"</b>	
9. WELL NO. <b>NO. 1</b>	
10. FIELD AND POOL OR WILDCAT <b>Dinah-bi-Kayah</b>	
11. SEC. T., R., M., OR BLM. AND SURVEY OR AREA <b>Sec. 20, T36N, R30E.</b>	
12. COUNTY OR PARISH <b>Apache</b>	13. STATE <b>Arizona</b>
14. PERMIT NO.	15. ELEVATIONS (Show whether DF, ST, CR, etc.)

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

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

(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.)\*

Well drilled to 3868' and logged. Dry Hole. The last casing is 9-5/8" at 253'.

The following cement plugs will be set:

- Plug No. 1      340 sxs      TD - 3200'.
- Plug No. 2      100 sxs      700-550'.
- Plug No. 3      50 sxs      300'-200'.
- Plug No. 4      10 sxs      Surface.

Hole between plugs is filled with drilling mud. A dry hole marker will be placed in top of the 9-5/8" casing, and the casing stub capped.

RECEIVED  
 STATE OF ARIZONA  
 COMMISSIONER OF GEOL. & MIN. AFFS.  
 TULSA, OKLA.

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

SIGNED [Signature] TITLE Production Supt. DATE 5-29-67

(This space for Federal or State office use)

APPROVED BY \_\_\_\_\_ TITLE \_\_\_\_\_ DATE \_\_\_\_\_

CONDITIONS OF APPROVAL, IF ANY:

USGS - 2  
 ARIZ - 2  
 Tribes - 1  
 JIF - 1  
 WRF - 1  
 RF - 1

\*See Instructions on Reverse Side

5-26-67  
Telephone work Bud Williams  
gave verbal permission to plug E-1 Navajo

Tops:

Surface pipe @	250'
Coconino	634'
Miss	3251
TD	3868

plug #1: TD - 3200

#2 550 - 700

#3 200 - 300

plus surface plug and marker

} proposed plugging  
program

#

May 12-67  
El. D. 19 3700 @ rough pipe tally @  
Dane Walker (scout for Humble)

Union reported to be shooting (Sis crew)  
adjoining section 21; Plan to shoot  
3 sections up for sale (5-25-67) in  
[Sec 11, 12, 14 36N-29E] also.

May 17 Coring around 3700-3800 (@ Dane Walker)

398

ARIZ. COAL. 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 <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <input type="checkbox"/>		5. LEASE DESIGNATION AND SERIAL NO. <b>14-20-0603-8821</b>
2. NAME OF OPERATOR <b>Kerr-McGee Corporation</b>		6. IF INDIAN, ALLOTTEE OR TRIBE NAME <b>Navajo</b>
3. ADDRESS OF OPERATOR <b>215 Petroleum Center Bldg. - Farmington, New Mexico</b>		7. UNIT AGREEMENT NAME
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.) At surface <b>740' PSL &amp; 660' FEL (SE/4 SE/4) Sec. 20-T36N-R30E Apache County, Arizona</b>		8. FARM OR LEASE NAME <b>Navajo "E"</b>
14. PERMIT NO. <b>State No. 398</b>	15. ELEVATIONS (Show whether DF, ST, CR, etc.) <b>7014' GL</b>	9. WELL NO. <b>No. 1</b>
		10. FIELD AND POOL, OR WILDCAT <b>Dinah-bi-Keeah</b>
		11. SEC. T. R. S. OR BLM. AND SURVEY OR AREA <b>Sec. 20-T36N-R30E</b>
		12. COUNTY OR PARISH <b>Apache</b>
		13. STATE <b>Arizona</b>

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

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

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

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

Spudded at 10:00 a.m. 4-29-67. Drlg. 15" hole to 253' and set 9-5/8" O.D. 32.30# H-40 ST&C casing at 253' RKB. Cemented with 340 sacks common cement with 2% CACL and 1/4#/bbl floeal/sack. Circ out 9 bbls. Plug down at 3:00 p.m. 4-30-67. Released pressure and waited on cement 12 hours. Tested casing and BOP to 1200 psi for 30 minutes. Held OK.



18. I hereby certify that the foregoing is true and correct.  
SIGNED [Signature] TITLE Production Supt. DATE 5-1-67

(This space for Federal or State office use)

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

#398

19

\*See Instructions on Reverse Side

5-2-67

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

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

B-2 T.D. 4565'

5 1/2" csg. set to T.D.

Appl. 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" sur. csg set to 253'

Rly @ 316'

#7 Producing to No. 1 location

#9 TD 3720' (Drillers) 7" casing to 3712'

Perforated 3420'-3460' 1-shot per ft

acidized 1680 gals 3% hydrofluoric acid / ball sealers  
fracked (5-1-67) 30,000 gal oil, 15,000 lbs sand

1300# pressure - re-perforated to 4-shots per ft  
swab 46 Bbls in 1 hr. Swabbing 5-2-67

PBTD 3644'

UNITED STATES DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

SUBMIT IN TRIPLICATE\*  
(Other instructions on reverse side)

Form approved  
Budget Bureau No. 42-R1424

5. LEASE DESIGNATION AND SERIAL NO.  
**14-20-0603-8821**

6. IF INDIAN, ALLOTTEE OR TRIBE NAME  
**Navajo**

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME  
**Navajo**

9. WELL NO.  
**E-1**

10. FIELD AND POOL, OR WILDCAT  
**Dinah b1 Kayah**

11. SEC., T., R., M., OR BLM. AND SURVEY OR AREA  
**Sec. 20, T36N, R30E**

12. COUNTY OR PARISH  
**Apache**

13. STATE  
**Arizona**

**SUNDRY NOTICES AND REPORTS ON WELLS**  
(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use "APPLICATION FOR PERMIT—" for such proposals.)

1. OIL WELL  GAS WELL  OTHER

2. NAME OF OPERATOR  
**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  
**740' FSL and 660' FEL of Section 20, T36N, R30E, Apache County, Arizona**

14. PERMIT NO.

15. ELEVATIONS (Show whether SF, RT, GR, etc.)  
**7014' GR**

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

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

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

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

**Change in plans of proposed casing and cementing program from a 13 3/4" surface hole with 9 5/8" - 32.3#/ft. surface casing set at 4000' to a 15" surface hole with 9 5/8" - 32.3#/ft. surface casing set at 250'.**

**Will cement with a sufficient amount to circulate.**

**Please keep information confidential.**

RECEIVED  
 STATE OF ARIZONA  
 CONSERVATION DEPARTMENT  
 APR 25 1967  
 PHOENIX, ARIZONA

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

SIGNED *E.C. Beitch* TITLE Engineer DATE 4-26-67

(This space for Federal or State office use)

APPROVED BY *John J. Connors* TITLE \_\_\_\_\_ DATE 5/1/67

CONDITIONS OF APPROVAL, IF ANY:

\*See Instructions on Reverse Side

21  
398

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK DRILL  DEEPEN  PLUG BACK

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

2. NAME OF OPERATOR  
**Kerr-McGee Corporation**

3. ADDRESS OF OPERATOR  
**P.O. Box K, Surray, Texas 79086**

4. LOCATION OF WELL. (Report location clearly and in accordance with any State requirements.)  
At surface **740' FSL and 660' FEL of Section 20, T36N, R30E, Apache County, Arizona**  
At proposed prod. zone  
**Same**

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

10. DISTANCE FROM PROPOSED\* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drig. unit line, if any)  
**660' from lease line**

16. NO. OF ACRES IN LEASE  
**2530**

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.  
**None**

19. PROPOSED DEPTH  
**3400'**

20. ROTARY OR CABLE TOOLS  
**Rotary**

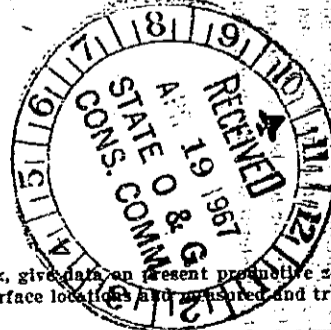
21. ELEVATIONS (Show whether DF, RT, GR, etc.)  
**7014' GR**

22. APPROX. DATE WORK WILL START\*  
**April 21, 1967**

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
13 3/4"	9 5/8"	32.3	400'	Sufficient to circulate cement
8 3/4"	7"	20	3400'	Sufficient to cover all potential pay zones

- Blowout preventors: 400' to 3400'
1. Kill and choke manifold
  2. 10" Series 600 QRC or equivalent with pipe rams.
  3. 10" Series 600 QRC 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 location and measured and true vertical depths. Give blowout preventer program, if any.

24. SIGNED E.C. [Signature] TITLE Engineer DATE \_\_\_\_\_

(This space for Federal or State office use)

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

APPROVED BY \_\_\_\_\_ TITLE \_\_\_\_\_ DATE \_\_\_\_\_

CONDITIONS OF APPROVAL, IF ANY:

**APPLICATION FOR PERMIT TO DRILL OR RE-ENTER**

APPLICATION TO DRILL

RE-ENTER OLD WELL

**Kerr-McGee Corporation**  
NAME OF COMPANY OR OPERATOR

**P. O. Box K, Sunray, Texas 79086**  
Address City State

**Pico Drilling Company**  
Drilling Contractor

**P. O. Box 512, Breckenridge, Texas**  
Address

DESCRIPTION OF WELL AND LEASE

Federal, State or Indian Lease Number, or if fee lease, name of lessor <b>14-20-0603-8821 Navajo</b>	Well number <b>E - 1</b>	Elevation (ground) <b>7 014' GR</b>
---	-----------------------------	--

Nearest distance from proposed location to property or lease line: <b>660</b> feet	Distance from proposed location to nearest drilling completed or applied—for well on the same lease: <b>NONE</b> feet
---	--

Number of acres in lease: <b>2 530</b>	Number of wells on lease, including this well, completed in or drilling to this reservoir: <b>NONE</b>
---	---

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

Well location (give footage from section lines) <b>740' FSL and 660' FSL</b>	Section—township—range or block and survey <b>Section 20, T36N, R30E</b>	Dedication (Comply with Rule 105) <b>E/2 of SE/4</b>
---	---	---

Field and reservoir (if wildcat, so state) <b>Dineh bi Keyah Hermosa</b>	County <b>Apache</b>
---	-------------------------

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

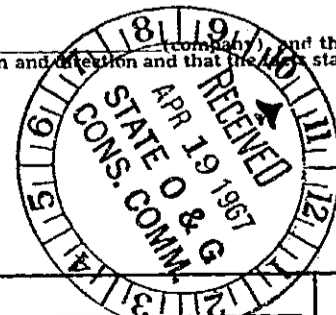
Proposed depth: <b>3 400'</b>	Rotary or cable tools <b>Rotary</b>	Approx. date work will start <b>April 21, 1967</b>
----------------------------------	--	---

Bond Status <b>B lanket Bond</b>	Organization Report On file <input checked="" type="checkbox"/> Or attached	Filing Fee of \$25.00 Attached <b>yes</b>
----------------------------------	--	--

Remarks:  
**New Well**

CERTIFICATE: I, the undersigned, under the penalty of perjury, state that I am the **Engineer** of the

**Kerr-McGee Corporation** and that I am authorized by said company to make this report; and that this report was prepared under my supervision and that the information stated therein are true, correct and complete to the best of my knowledge.



Signature **E.C. Reish, jr.**  
Date **April 17, 1967**

Permit Number: **308**  
Approval Date: **4-24-67**  
Approved By: **John Hamster**

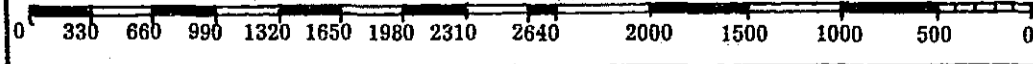
STATE OF ARIZONA  
OIL & GAS CONSERVATION COMMISSION  
Application to Drill or Re-enter  
File Two Copies  
Form No. 3

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

API 02-001-20022

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

Owner <b>Kerr-McGee Corporation</b>	Land Description <b>Section 20, T36N, R30E Apache County</b>																
<table border="1" style="width: 100%; height: 150px; border-collapse: collapse;"> <tr> <td style="width: 25%;"></td> <td style="width: 25%;"></td> <td style="width: 25%;"></td> <td style="width: 25%;"></td> </tr> <tr> <td style="width: 25%;"></td> <td style="width: 25%;"></td> <td style="width: 25%;"></td> <td style="width: 25%;"></td> </tr> <tr> <td style="width: 25%;"></td> <td style="width: 25%;"></td> <td style="width: 25%;"></td> <td style="width: 25%;"></td> </tr> <tr> <td style="width: 25%;"></td> <td style="width: 25%;"></td> <td style="width: 25%;"></td> <td style="width: 25%;"></td> </tr> </table>																	
<p style="text-align: center;"><b>CERTIFICATION</b></p> <p>I hereby certify that the information above is true and complete to the best of my knowledge and belief.</p> <p style="text-align: right;"><i>E. C. Reish, jr.</i></p> <p>Name <b>E. C. Reish, jr.</b> Engineer</p> <p>Position <b>Kerr-McGee Corporation</b></p> <p>Company <b>April 17, 1967</b></p> <p>Date</p>																	
<p>I hereby certify that the well location shown on the plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief.</p>																	
<p>Date Surveyed _____</p> <p>Registered Professional Engineer and/or Land Surveyor _____</p> <p>Certificate No. _____</p>																	



**PROPOSED CASING PROGRAM**

Size of Casing	Weight	Grade & Type	Top	Bottom	Cementing Depths	Sacks Cement
9 5/8"	32.3#	H-40	0	400'	0-400'	Sufficient to circulate cement
7"	20#	J-55	0	3 400'	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-MCGEE CORPORATION  
(OPERATOR)

to drill a well to be known as

Kerr-McGee #E-1 Navajo

(WELL NAME)

located 740' FSL and 660' FEL (SE/4SE/4)

Section 20 Township 36N Range 30E, Apache County, Arizona.

The E1/2 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 24th day of April, 1967.

OIL AND GAS CONSERVATION COMMISSION

By John Bonmeister  
EXECUTIVE SECRETARY

PRIOR TO BEING ALLOWED TO PRODUCE THIS WELL  
YOU MUST BE IN FULL COMPLIANCE WITH RULE  
100, SECTION A THROUGH (S-C-G), WITH RESPECT  
TO THE PRODUCT TO BE PRODUCED.

PERMIT No 398

RECEIPT NO. 9490

State of Arizona  
Oil & Gas Conservation Commission  
Permit to Drill

FORM NO. 27

API 02-001-20022

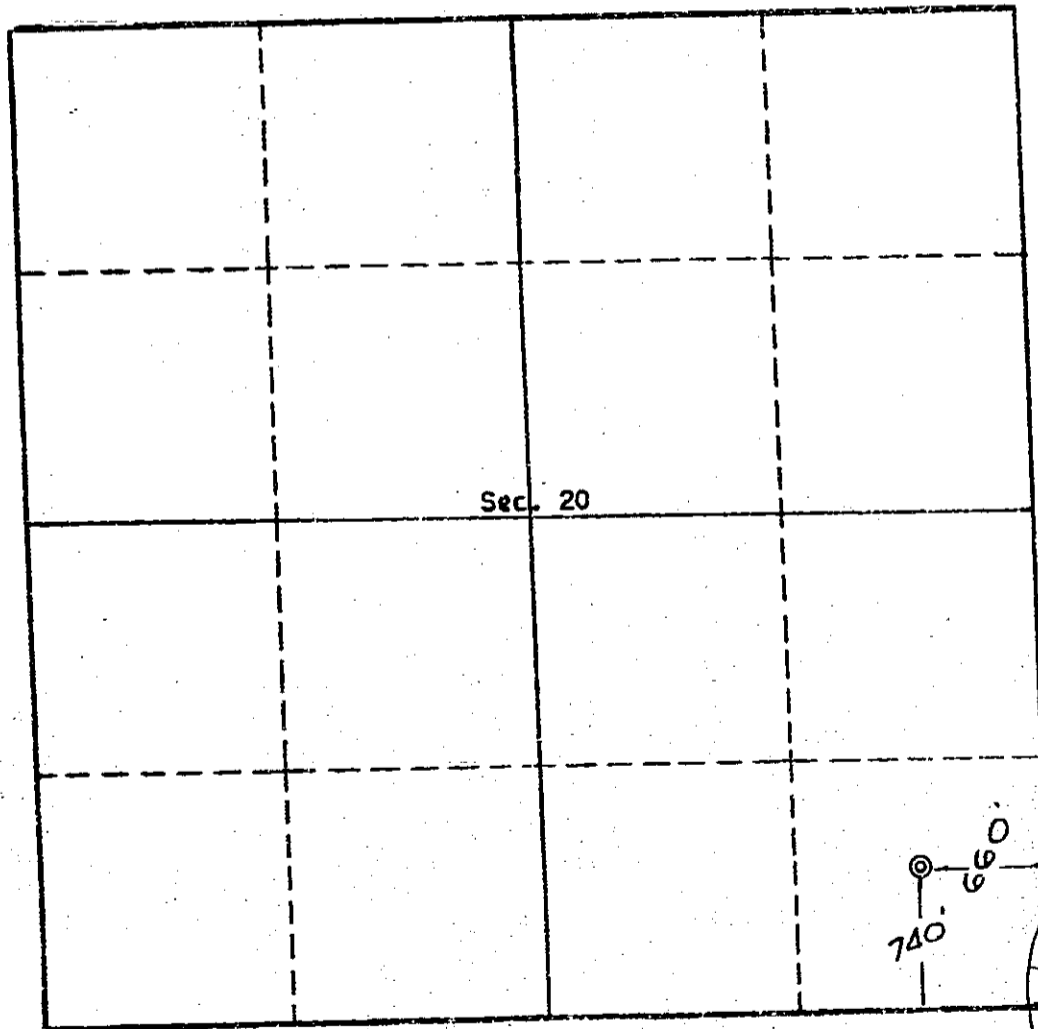
Company KERR-McGEE OIL INDUSTRIES, INC.

Well Name & No. E #1 Navajo

Location 740 feet from the South line and 660 feet from the East line.

Sec. 20, T. 36 N., R. 30 E., G. & S. R. M., County Apache, Arizona

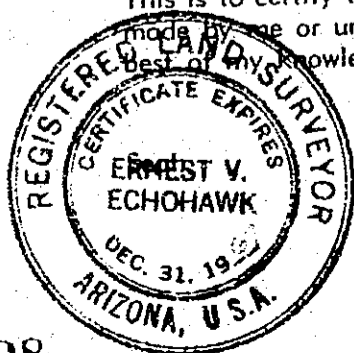
Ground Elevation 7014



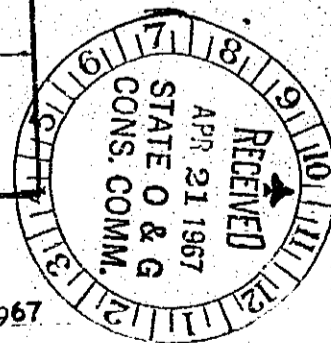
Scale, 1 inch = 1,000 feet

Surveyed April 15, 1967

This is to certify that the above plot 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.

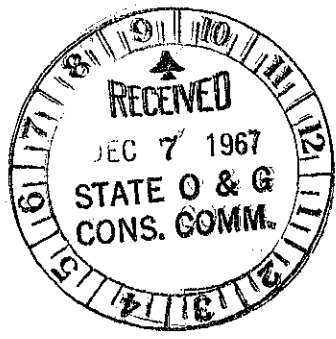
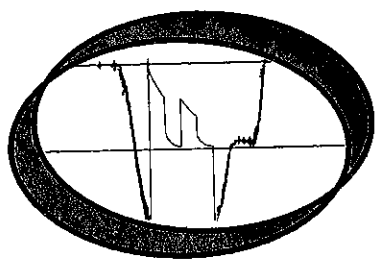


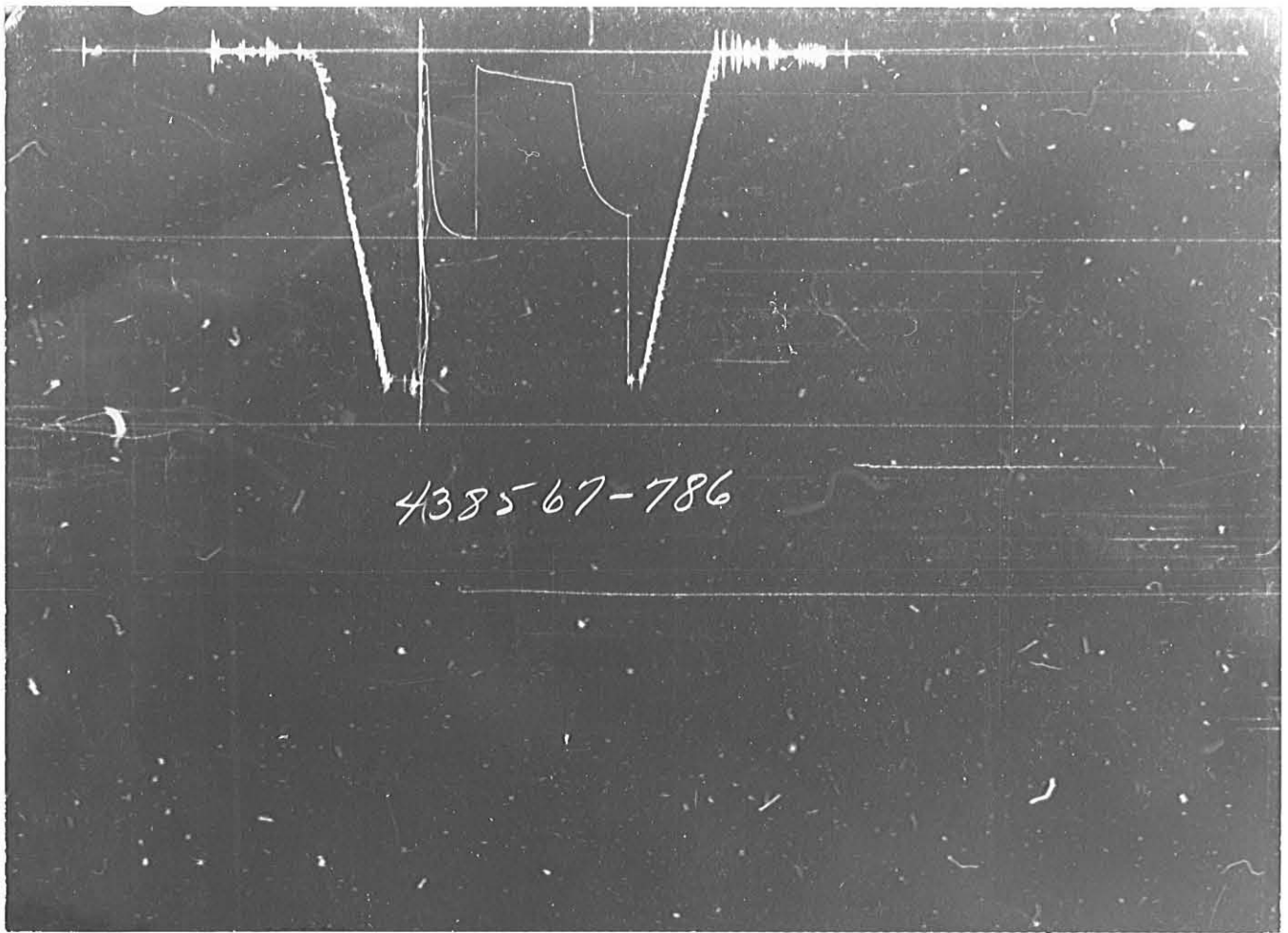
*Ernest V. Echohawk*  
Ernest V. Echohawk  
Registered Land Surveyor  
Arizona Registration No. 2311



# Formation Testing Service Report

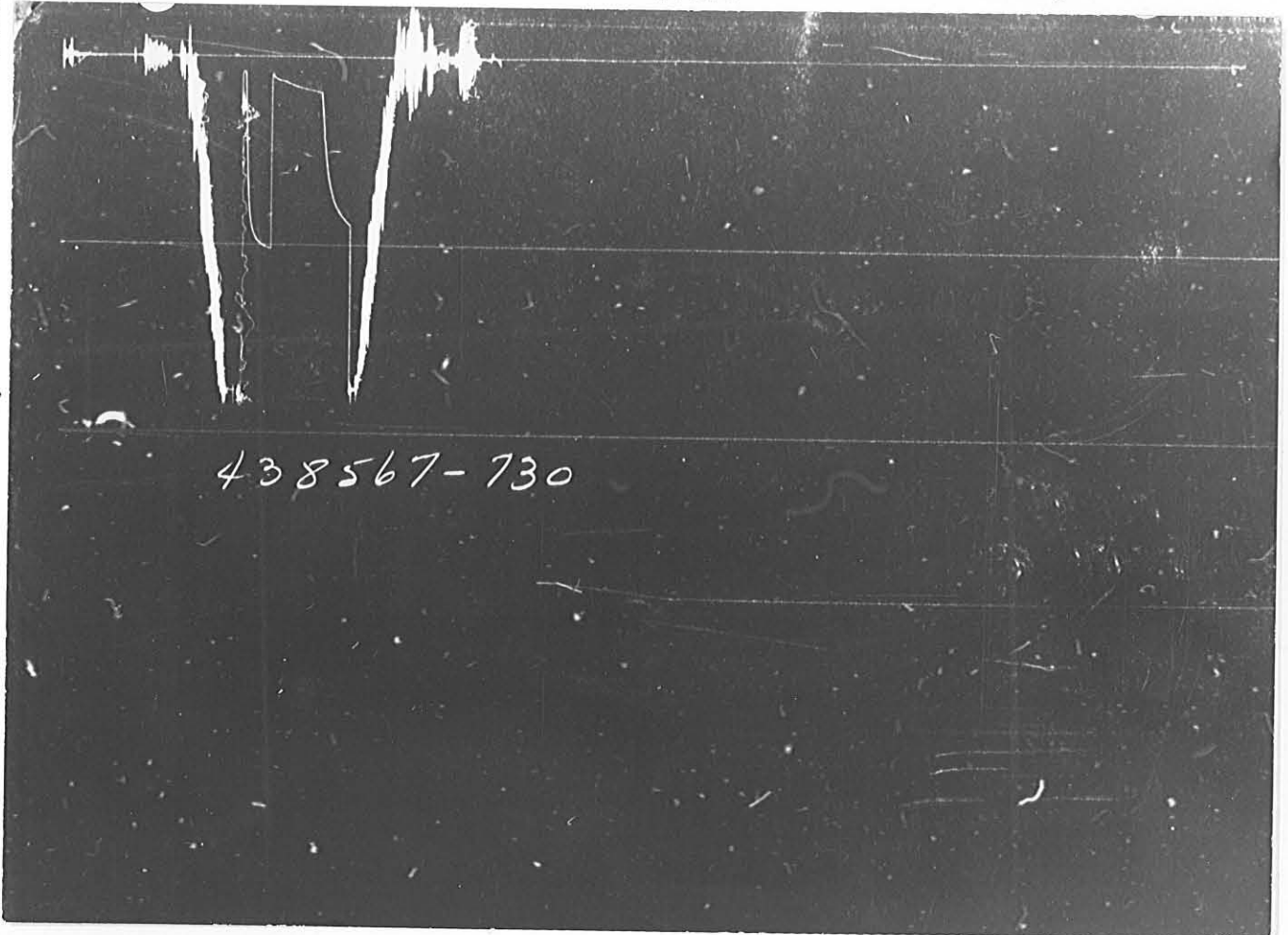
NAVAJO E #398 1 1 KERR MC GEE CORPORATION FARMINGTON  
Lease Name Well No. Test No. Lease Owner/Company Name Owner's District





PRESSURE

TIME



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

TIGHT HOLE

5

Flow Time	1st 5	Min.	2nd 60	Min.	Date	5-23-67	Ticket Number	438567 S
Closed In Press. Time	1st 30	Min.	2nd 30	Min.	Kind of Job	STRADDLE OPEN HOLE	Halliburton District	FARMINGTON
Pressure Readings	Field		Office Corrected		Tester	WHITESIDES	Witness	MR. HOOG
Depth Top Gauge	3636	Ft.	no	Blanked Off	Drilling Contractor	PICO DRILLING COMPANY	I.C.	
BT. P.R.D. No.	786		12	Hour Clock	Elevation	--	Top Packer	3645'
Initial Hydro Mud Pressure	1813		1766		Total Depth	3868'	Bottom Packer	3695'
Initial Closed in Pres.	1008		1004		Interval Tested	3645' - 3695'	Formation Tested	?
Initial Flow Pres.	108	1	85		Casing or Hole Size	8 3/4"	Casing } Top	
	-	2	74				Perfs. } Bot.	
Final Flow Pres.	108	1	69		Surface Choke	--	Bottom Choke	3/4"
Final Closed in Pres.	874		877		Size & Kind Drill Pipe	4 1/2" XH	Drill Collars Above Tester I.D. - LENGTH 2 1/2" - 170' - 85'	
Final Hydro Mud Pressure	1813		1758		Mud Weight	9.3	Mud Viscosity	69
Depth Cen. Gauge		Ft.		Blanked Off	Temperature	calc. 100 °F Est. °F Actual	Anchor Size ID & Length	2 1/2" X 3 1/2" 20'
BT. P.R.D. No.				Hour Clock	Depths Mea. From	Rotary Table	Depth of Tester Valve	3631 Ft.
Initial Hydro Mud Pres.	TIGHT HOLE				TYPE AMOUNT		Cushion	Depth Back Pres. Valve Ft.
Initial Closed in Pres.					Recovered	Foot of	<div style="border: 1px solid black; padding: 5px; text-align: center;">                 HOME MAILED                  MAY 29, 1967                  Halliburton Company                  Duncan, Oklahoma             </div>	
Initial Flow Pres.	1				Recovered	Foot of		
Final Flow Pres.	2				Recovered	Foot of		
Final Closed in Pres.	1				Recovered	Foot of		
Final Hydro Mud Pres.					Oil A.P.I. Gravity		Water Spec. Gravity	
Depth Bot. Gauge	3665	Ft.	yes	Blanked Off	Gas Gravity	-	Surface Pressure	psi
BT. P.R.D. No.	730		24	Hour Clock	Tool Opened	4:30 A.M.	A.M. Tool Closed	6:30 A.M. P.M.
Initial Hydro Mud Pres.	1798		1778		Remarks Opened tool for a 5 minute first flow. Took			
Initial Closed in Pres.	1001		1019		a 30 minute initial closed in pressure. Reopened			
Initial Flow Pres.	107	1	88		tool for a 60 minute final flow. Closed tool for			
Final Flow Pres.	-	2	90		a 30 minute final closed in pressure.			
Final Closed in Pres.	868		892		TIGHT HOLE --- NO INFORMATION RELEASED.			
Final Hydro Mud Pres.	1798		1772					

NAVAJO F #398  
 Lease Name  
 1  
 Well No.  
 1  
 Test No.  
 KERR MC GEE CORPORATION  
 Lease Owner/Company Name  
 APACHE  
 County  
 FARMINGTON  
 State  
 ARIZONA  
 Operator's District

FORMATION TEST DATA

6

Gauge No. 786		Depth 3636'			Clock 12 hour		Ticket No. 438567			
First Flow Period		Initial Closed In Pressure			Second Flow Period		Final Closed In Pressure			
Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	Log $\frac{t+\theta}{\theta}$	PSIG Temp. Corr.	Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	Log $\frac{t+\theta}{\theta}$	PSIG Temp. Corr.	
P <sub>0</sub>	.000	85	.000		69	.000	74	.000		173
P <sub>1</sub>	.0056	61	.0205		572	.0963	114	.0233		362
P <sub>2</sub>	.0112	57	.0410		838	.1926	139	.0466		547
P <sub>3</sub>	.0168	61	.0615		912	.2889	157	.0699		656
P <sub>4</sub>	.0224	64	.0820		947	.3850	173	.0932		724
P <sub>5</sub>	.0280	69	.1025		968			.1165		773
P <sub>6</sub>			.1230		981			.1398		803
P <sub>7</sub>			.1435		991			.1631		830
P <sub>8</sub>			.1640		996			.1864		850
P <sub>9</sub>			.1845		1000			.2097		866
P <sub>10</sub>			.2050		1004			.2330		877

Gauge No. 730		Depth 3665'			Clock 24 hour					
Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	Log $\frac{t+\theta}{\theta}$	PSIG Temp. Corr.	Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	Log $\frac{t+\theta}{\theta}$	PSIG Temp. Corr.	
P <sub>0</sub>	.000	88	.000		82	.000	90	.000		186
P <sub>1</sub>	.0026	76	.0112		527	.0505	126	.0123		392
P <sub>2</sub>	.0052	76	.0224		825	.1010	152	.0246		561
P <sub>3</sub>	.0078	78	.0336		915	.1515	170	.0369		668
P <sub>4</sub>	.0104	79	.0448		953	.2020	186	.0492		740
P <sub>5</sub>	.0130	82	.0560		979			.0615		783
P <sub>6</sub>			.0672		992			.0738		815
P <sub>7</sub>			.0784		1003			.0861		841
P <sub>8</sub>			.0896		1011			.0984		861
P <sub>9</sub>			.1008		1015			.1107		879
P <sub>10</sub>			.1120		1019			.1230		892

Reading Interval 1 3 15 3 Minutes

REMARKS: All readings questionable on B.T. 786 due to split stylus.

SPECIAL PRESSURE DATA

6

# NOMENCLATURE

<b>b</b>	= Approximate Radius of Investigation .....	Feet
<b>b<sub>1</sub></b>	= Approximate Radius of Investigation (Net Pay Zone h <sub>1</sub> ) .....	Feet
<b>D.R.</b>	= Damage Ratio .....	—
<b>E<sub>l</sub></b>	= Elevation .....	Feet
<b>GD</b>	= B.T. Gauge Depth (From Surface Reference) .....	Feet
<b>h</b>	= Interval Tested .....	Feet
<b>h<sub>1</sub></b>	= Net Pay Thickness .....	Feet
<b>K</b>	= Permeability .....	md
<b>K<sub>1</sub></b>	= Permeability (From Net Pay Zone h <sub>1</sub> ) .....	md
<b>m</b>	= Slope Extrapolated Pressure Plot (Psi <sup>2</sup> /cycle Gas) .....	psi/cycle
<b>OF<sub>1</sub></b>	= Maximum Indicated Flow Rate .....	MCF/D
<b>OF<sub>2</sub></b>	= Minimum Indicated Flow Rate .....	MCF/D
<b>OF<sub>3</sub></b>	= Theoretical Open Flow Potential with/Damage Removed Max. ....	MCF/D
<b>OF<sub>4</sub></b>	= Theoretical Open Flow Potential with/Damage Removed Min. ....	MCF/D
<b>P<sub>s</sub></b>	= Extrapolated Static Pressure .....	Psig.
<b>P<sub>f</sub></b>	= Final Flow Pressure .....	Psig.
<b>P<sub>ot</sub></b>	= Potentiometric Surface (Fresh Water *) .....	Feet
<b>Q</b>	= Average Adjusted Production Rate During Test .....	bbls/day
<b>Q<sub>1</sub></b>	= Theoretical Production w/Damage Removed .....	bbls/day
<b>Q<sub>g</sub></b>	= Measured Gas Production Rate .....	MCF/D
<b>R</b>	= Corrected Recovery .....	bbls
<b>r<sub>w</sub></b>	= Radius of Well Bore .....	Feet
<b>t</b>	= Flow Time .....	Minutes
<b>t<sub>o</sub></b>	= Total Flow Time .....	Minutes
<b>T</b>	= Temperature Rankine .....	°R
<b>Z</b>	= Compressibility Factor .....	—
<b>μ</b>	= Viscosity Gas or Liquid .....	CP
<b>Log</b>	= Common Log	

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

**CONFIDENTIAL**

20-36N-30E

Permit # 398

**CORE ANALYSIS REPORT  
FOR  
KERR-MC GEE CORPORATION  
NAVAJO "E" NO. 1 WELL  
DINEH-BI-KEYAH FIELD  
APACHE COUNTY, ARIZONA**



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

**CONFIDENTIAL**

REPLY TO  
8 N. W. 42ND ST.  
OKLAHOMA CITY, OKLA.  
73118

Gentlemen:

Subject: Core Analysis

The measured physical properties presented on the accompanying report were determined on samples submitted to our laboratory for analysis.

Information pertaining to the well name, field, location, type of analysis, coring method and drilling fluid used is shown in the heading of the report.

Thank you for this opportunity to be of service.

Yours very truly,

CORE LABORATORIES, INC.



J. G. Evertson, Jr.  
District Manager

JGE:jc

**CONFIDENTIAL**

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

398  
 Page No. 1

**CORE ANALYSIS RESULTS**

Company KERR-McGEE CORPORATION Formation AS NOTED File CP-12-1520  
 Well NAVAJO "E" NO. 1 Core Type DIAMOND Date Report 5-25-67  
 Field DINEH-BI-KEYAH Drilling Fluid WATER BASE MUD Analysts DANIEL  
 County APACHE State ARIZONA Elev. 7027'KB Location 740'FSL 660'FEL SEC 20 T 36 N R 30 E

**Lithological Abbreviations**

BAND - SD SHALE - SH LIME - LM	DOLOMITE - DOL CHERT - CH GYPSUM - GYP	ANHYDRITE - ANHY CONGLOMERATE - CONG FOSSILIFEROUS - FOSS	SANDY - SDY SHALY - SHY LIMY - LMY	FINE - FFM MEDIUM - MED COARSE - CCE	CRYSTALLINE - CLM 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		POROSITY PER CENT	RESIDUAL SATURATION PER CENT PORE		SAMPLE DESCRIPTION AND REMARKS	GRAIN DENSITY
		PERM. MAX.	PERM. 90°		OIL	TOTAL WATER		

**CONVENTIONAL ANALYSIS**

**MC CRAKEN SAND (DEVONIAN)**

SAMPLE NUMBER	DEPTH FEET	PERM. MAX.	PERM. 90°	POROSITY PER CENT	OIL	TOTAL WATER	SAMPLE DESCRIPTION AND REMARKS	GRAIN DENSITY
1	3636.0-37.0	<0.1		1.2	0.0	83.5	Sd, gy, v/fn grn, dns	
	3637.0-38.0						Sh, rd, v/sl sdy	
2	3638.0-39.0	<0.1		2.5	0.0	92.0	Sd, gy-pk, v/fn grn, gn clay, incl	
3	39.0-40.0	<0.1		2.9	0.0	65.6	Sd, gy-pk, v/fn grn, gn clay, incl	
4	40.0-41.0	0.1		4.7	0.0	61.7	Sd, gy, v/fn grn, gn clay incl	
5	41.0-42.0	<0.1		5.4	0.0	76.0	Sd, gy-pk, v/fn grn, gn clay incl	
6	42.0-43.0	<0.1		3.4	0.0	58.9	Sd, gy-pk, v/fn grn, gn clay incl	
7	43.0-44.0	<0.1		3.7	0.0	78.4	Sd, gy-pk, v/fn grn, gn clay incl	
8	3644.0-45.0	<0.1		2.5	0.0	76.1	Sd, gy-pk, v/fn grn, gn clay incl	
	3645.0-46.0						Sh, rd, v/sl sdy, gn clay incl	
9	3646.0-47.0	0.1		6.5	0.0	75.5	Sd, gy-pk, v/fn grn, gn clay incl	
10	47.0-48.0	0.1		5.3	0.0	66.1	Sd, gy-pk, v/fn grn, branded w/ rd sh	
11	3648.0-49.0	<0.1		3.4	0.0	91.3	(Same) w/vert frac, x-bedding	
	3649.0-50.0						Sh, rd, v/sl sdy, gn clay incl	
12	3650.0-51.0	0.2		5.6	0.0	35.8	Sd, gy-pk, v/fn grn, branded w rd sh	
13	51.0-52.0	0.4		9.5	0.0	72.7	Sd, gy, fn grn	
14	52.0-53.0	15		9.3	0.0	24.8	Sd, gy-pk, fn grn, x-bdd	2.655
15	53.0-54.0	27		11.5	4.3	30.4	Sd, gy-pk, fn grn, x-bdd	
16	54.0-55.0	105		9.3	0.0	16.1	Sd, gy-pk, fn grn, x-bdd	
17	55.0-56.0	55		7.9	6.3	20.2	Sd, gy-pk, fn grn, x-bdd	2.625
18	56.0-57.0	33		7.4	0.0	18.9	Sd, gy-pk, fn grn, x-bdd	
19	57.0-58.0	33		8.4	2.4	14.3	Sd, pk, fn grn	2.660
20	58.0-59.0	21		7.1	2.8	8.5	Sd, pk, fn grn	
21	59.0-60.0	5.4		2.7	7.4	22.2	Sd, pk, fn grn	
22	60.0-61.0	0.2		4.1	4.9	14.6	Sd, pk, fn grn	
23	3661.0-62.0	<0.1		0.8	0.0	87.5	Sd, gy-pk, v/fn grn, sh incl, dns	
	3662.0-64.0						Lost Core	
24	3664.0-65.0	0.1		5.8	3.4	37.9	Sd, gy-pk, fn grn	
25	65.0-66.0	<0.1		4.3	16.3	18.6	Sd, gy-pk, fn grn	
26	3666.0-67.0	<0.1		1.5	0.0	60.0	Sd, gy-pk, v/fn grn, sl/shy, dns	

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

CORE LABORATORIES, INC.  
Petroleum Reservoir Engineering  
DALLAS, TEXAS

398

File CP-12-1520 Page No. 2

Well Navajo "E" No. 1

CORE ANALYSIS RESULTS

SAMPLE NUMBER	DEPTH FEET	PERMEABILITY MILLIDARCS	POROSITY PER CENT	RESIDUAL SATURATION PER CENT PORE		SAMPLE DESCRIPTION AND REMARKS	GRAIN DENSITY
				OIL	TOTAL WATER		
27	3667.0-68.0	0.2	9.3	9.7	21.5	Sd, gy-pk, fn grn	
28	68.0-69.0	15	11.0	8.2	19.1	Sd, gy-pk, fn grn	
29	69.0-70.0	14	9.1	7.7	13.2	Sd, gy-pk, fn grn	
30	70.0-71.0	1.3	7.5	12.0	18.7	Sd, gy, fn grn	
31	71.0-72.0	0.7	7.8	11.5	15.4	Sd, gy, fn grn	2.635
32	72.0-73.0	6.9	9.0	13.3	22.2	Sd, gy, fn grn	
33	73.0-74.0	62	8.5	8.2	30.6	Sd, bn, fn grn, sh incl	2.648
34	74.0-75.0	21	9.3	25.8	16.1	Sd, bn, fn grn	
35	75.0-76.0	30	8.4	25.0	19.0	Sd, bn, fn grn	
36	76.0-77.0	39	10.0	24.0	16.0	Sd, bn, fn grn	
37	3677.0-78.0 3678.0-83.0	<0.1	2.6	0.0	65.4	Sd, gy-pk, v/fn grn, dns Sh, rd, v/sl sdy	
38	3683.0-84.0	0.1	8.2	2.4	39.0	Sd, rd, fn grn, sl/shy, sl/lmy	
39	84.0-85.0	2.3	9.3	5.4	43.0	Sd, gy-pk, fn grn	
40	85.0-86.0	8.6	10.5	4.8	23.8	Sd, gy-pk, fn grn	2.654
41	86.0-87.0	4.8	6.1	8.2	44.3	Sd, pk, fn grn	
42	87.0-88.0	1.5	8.6	5.8	14.0	Sd, pk, fn grn	2.643
43	88.0-89.0	36	8.7	10.3	25.2	Sd, pk, fn grn	
44	89.0-90.0	17	8.1	22.2	24.7	Sd, rd, fn grn, sl/shy	
45	90.0-91.0	1.0	6.1	26.2	22.7	Sd, rd, fn grn, sl/shy	2.651
46	91.0-92.0	<0.1	3.1	0.0	61.4	Sd, pk, v/fn grn, dns	
47	92.0-93.0	<0.1	3.4	0.0	61.8	Sd, rd, v/fn grn, dns	
48	3693.0-94.0 3694.0-96.0	0.1	5.1	0.0	39.2	Sd, gy, fn grn, dns Lost Core	
49	3696.0-97.0	0.2	6.1	19.7	29.5	Sd, gy, fn grn, dolomitic	
50	97.0-98.0 3698.0-3727.5	0.1	6.4	0.0	51.6	Sd, gy, fn grn, dolomitic Shale, no analysis	
ANETH FORMATION							
51	3727.5-28.0	<0.1	2.0	0.0	65.0	Dol, pk, v/fn xln, v/sl shy, sucrosic	
52	28.0-29.0	1.3	8.1	0.0	63.1	Dol, pk, v/fn xln, v/sl shy, sucrosic, v/sl vgy	
53	3729.0-30.5 3730.5-35.0 3735.0-62.0 3762.0-77.0	<0.1	1.1	18.2	63.7	Dol, gy, v/fn xln, v/sl shy, v/sl frac Lost Core Dol, gy, shy Sh, blk, w/dol	
54	3777.0-78.0 3778.0-81.0	<0.1	0.8	0.0	87.5	Dol, gy, fn xln, v/sl shy, frac Dol, gy, fn xln, shy, dns	
55	3781.0-82.0	<0.1	2.2	9.1	82.0	Dol, gy, fn xln, v/sl shy, frac	
56	3782.0-83.0	<0.1	1.3	15.3	54.0	Dol, gy, fn xln, v/sl shy, frac	

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

CORE LABORATORIES, INC.  
Petroleum Reservoir Engineering  
DALLAS, TEXAS

398

File CP-12-1520 Page No. 3  
Well Navajo "E" No. 1

CORE ANALYSIS RESULTS

SAMPLE NUMBER	DEPTH FEET	PERMEABILITY MILLIDARCS	POROSITY PER CENT	RESIDUAL SATURATION PER CENT PORE		SAMPLE DESCRIPTION AND REMARKS	GRAIN DENSITY
				OIL	TOTAL WATER		
57	3783.0-84.0 3784.0-85.0	<0.1	1.4	14.3	64.3	Dol, gy, fn xln, v/sl shy, frac Lost Core	
58	3785.0-86.0 3786.0-88.0 3788.0-92.0 3792.0-01.0  3801.0-06.0	<0.1	1.3	15.4	53.9	Dol, gy, fn xln, shy, frac Dol, gy, fn xln, v/shy Dol, gy, fn xln, carb, inter lam sh Dol, gy, fn xln, inter lam sh, dolomitic Sh, blk, carb, thin lam dol	
59	3806.0-07.0	0.1	4.0	20.0	37.6	Dol, gy, fn xln, shy, carb	2.819
60	07.0-08.0	<0.1	2.0	0.0	90.0	Dol, gy, fn xln, sl/shy	
61	08.0-09.0	<0.1	2.4	0.0	75.0	Dol, gy, fn xln, sl/shy	
62	09.0-10.0	<0.1	3.4	0.0	88.1	Dol, gy, fn xln, sl/shy	
63	10.0-11.0	0.1	7.0	0.0	51.5	Dol, gy, med xln, sh lam	
64	11.0-12.0	6.3	11.7	1.7	51.4	Dol, gy, med xln, sh lam, v/sl frac, sl/vgy	2.836
65	12.0-13.0	157	12.6	1.6	92.0	Dol, gy, med xln, sh lam, v/ sl vgy	2.864
66	3813.0-14.0 3814.0-15.0 3815.0-18.0 3818.0-22.0 3822.0-50.0	1.0	10.6	0.0	78.2	Dol, gy, med xln, sh lam Qtzite, brn, fn med Sh, red, brn Lost Core No analysis	

THIS IS A FINAL REPORT.

DISTRIBUTION: 4CC: KERR-McGEE CORPORATION  
ATTN: MR. R. W. KING  
612 PETROLEUM BUILDING  
AMARILLO, TEXAS

8CC: KERR-McGEE CORPORATION  
ATTN: MR. J. W. McKENNY  
KERR-McGEE BUILDING  
OKLAHOMA CITY, OKLAHOMA



CORE LABORATORIES, INC. Petroleum Reservoir Engineering

COMPANY KERR-MCGEE CORPORATION FIELD DINEH-BI-KEYAH FILE CP-12-1520  
WELL NAVAJO "E" NO. 1 COUNTY APACHE DATE MAY 15, 1967  
LOCATION 740' FSL & 660' FSL SEC 20 STATE ARIZONA ELEV. 7027' KB  
T 36N R 30E

# CORE-GAMMA CORRELATION

398

U.S. PATENT NO. 3,034,393 CANADA PATENT NO. 819187  
These analyses, opinions or interpretations are based on observations and material supplied by the client to whom, and for whose exclusive and confidential use, this report is made. The interpretation or opinion expressed represents 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 representation as to the productivity, proper operation, or profitability of any oil, gas or other mineral well or land in connection with which such report is used or relied upon.

VERTICAL SCALE: 5" = 100'

## CORE-GAMMA SURFACE LOG

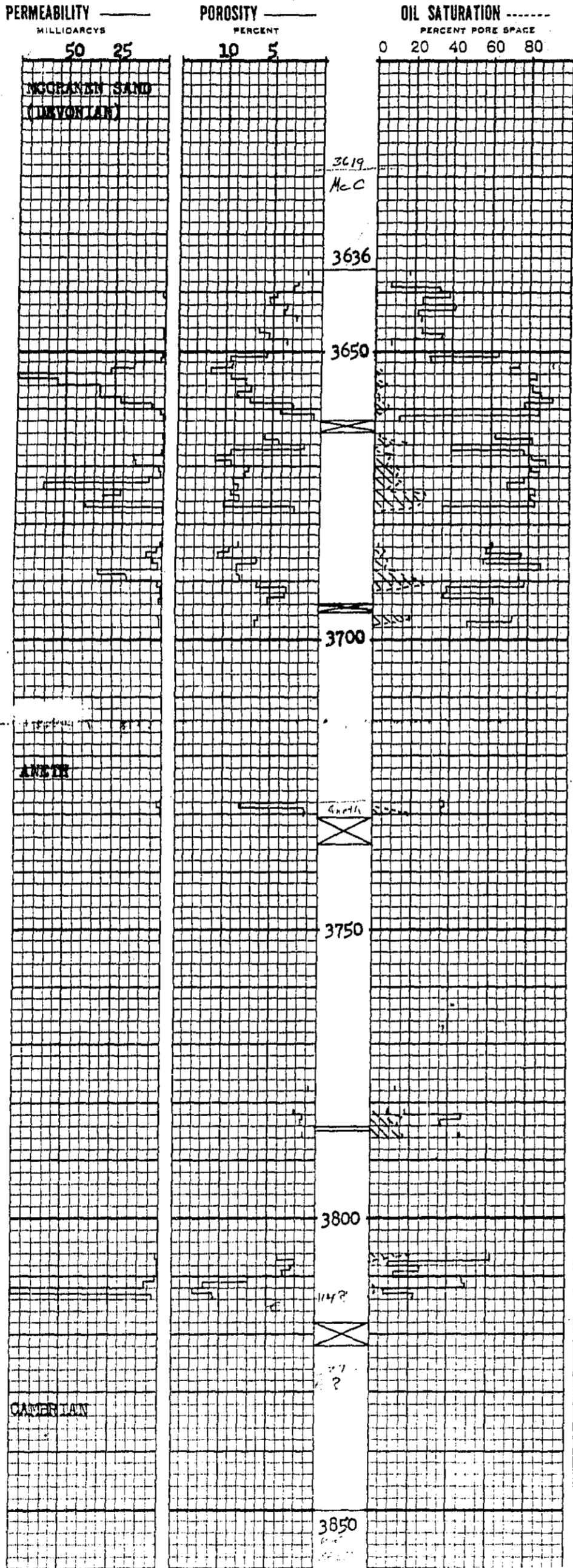
(PATENT APPLIED FOR)

GAMMA RAY

RADIATION INCREASE →

## COREGRAPH

TOTAL WATER ———  
PERCENT TOTAL WATER  
80 60 40 20 0



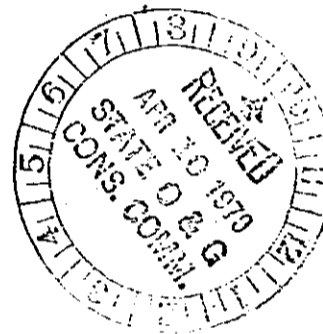
NAVAJO "E" NO. 1 T 36N R 30E SEC 20



**KERR-MCGEE CORPORATION**  
 KERR-MCGEE BUILDING • OKLAHOMA CITY, OKLAHOMA 73102

#398

May 24, 1967



Kerr-McGee Navajo "E" #1  
 Dineh-bi-Keyah Field  
 Apache County, Arizona

Total Depth - 3868'.

Core Descriptions -

*Hermosa*

Core #1 3033 - 43' Cut 10' - recovered 10'.  
 1½' Sh Gry - grn  
 1½' SS Med - Crs, cong., calc, shly, tite NS  
 6' Sh Gry - grn  
 1' Ls Gry - f-x, dns, tite, NS

*McC*

Core #2 3636 - 64' Cut 28' - recovered 26'.  
 3636 - 50 14' hd - qtz - tite - NS (Sd)  
 50 - 51 Sd gry - sugary - trickle - some por - NS  
 51 - 55 Sd - med crs gr - sugary - spotty flour - fair cut - fair por in stks.  
 55 - 61 Sd - med crs gr - fair good por in stks - good even flour - excellent cut - sli bleeding (brown oil)  
 Gas show on logger.

*McC*

Core #3 3664 - 95½' Cut 31½' - recovered 30'.  
 3664 - 65 1' Sd., dolo. - tite - NS  
 65 - 77 12' Sd buff-tan med - crs gr - sugary, even lite brn oil stn, fair-gd por., brite yellow flour, excellent cut, scattered pin point bleeding oil.  
 77 - 78 1' Sd - pink dolo - NS (tite)  
 78 - 83 5' dolo, sdy - tite - NS  
 83 - 87 4' sd, med - crs, gr, fair por, spotty dull flour., fair cut, no stain

Core Descriptions  
Kerr-McGee Navajo "E" #1  
Dineh-bi-Keyah Field  
Apache County, Arizona  
May 24, 1967

Page Two

87 - 91 4' Sd, med - crs gr., spotty flour, fair por,  
good cut, stks stain, scattered pin point bleed  
oil.  
91 - 93 Sd - NS No Por.  
93 - 94 Sd - Qtzit - NS Tite

8 units methane throughout core (reverse kick throughout - indicates  
He or Co<sub>2</sub>)

Core #4 3695 $\frac{1}{2}$  - 3734 $\frac{1}{2}$  Cut 39' - recovered 34 $\frac{1}{2}$ '  
3696 - 98 2' Quartzite - ltd, tite, w/strks, lite brn oil stn,  
flour & cut, pin point bleeding.  
3698 - 3704 6' Sh, red to brown  
3704 - 07 3' interbedded sh and Quartzite - tite - NS  
3707 - 09 2' Sh - red to brn  
3709 - 10 1' Quartzite - NS  
3710 - 12 2' Sh  
3712 - 15 3' Quartzite - NS  
3715 - 19 4' Dolo. - Dns - NS  
3719 - 21 2' Sh  
3721 - 22 1' Dolo - NS  
3722 - 24 2' Sh  
3724 - 27 3' Dolo - Dns - NS  
3727 - 29 2' Dolo - NS - fair por  
3729 - 30 $\frac{1}{2}$  1 $\frac{1}{2}$ ' Dolo - lite gry - fn xln - dns matrix, thin strks  
lite brn stain, and bleeding, Ver. hairline frac, few  
vugs - w/stain

Top of Aneth 3724'.

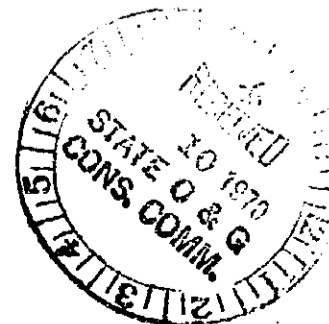
(2' show in Basal McCracken)

Core #5 3735 - 85' Cut 50' - recovered 50'.  
3735 - 62 27' Dolo - gry - grn, f xln to litho, dns tite - few  
hairline fracs - v. sli show of oil 46-47 in frac.  
62 - 77 15' Sh - & Dolo - blk SS - Dolo, shly dns tite - two  
frac with faint tr bleed oil.  
77 - 85 8' Dolo - V. f xln, dns, hd, (has shattered appearance  
with numerous hairline fracs and contorted sh - v. sli  
bleed oil 78-79 & 80-85.

Core Descriptions  
Kerr-McGee Navajo "E" #1  
Dineh-bi-Keyah Field  
Apache County, Arizona  
May 25, 1967

Page Three

Core #6 3785 - 3822' Cut 37' - recovered 33' - bbl jammed  
3785 - 86' 1' Dolo, brn - sub-sucros - w/blk sh lam. - numerous  
hairline fracs - tr stn and bleed oil - matrix tite  
86 - 88' 2' Dolo - gry - f stn - litho - shly & dns - tr stn  
on one hairline frac.  
88 - 92 4' Dolo & sh - dolo dns shly NS.  
92 - 3801 9' sh & Dolo - dns NS  
3801 - 06 5' sh, blk with thin Dolo lam dns NS  
06 - 14 8' Dolo, gry brn - f-m xlm - w/lam blk sh - dns NS  
06 - 12, 12 - 14 fair - gd dns vugg & inter xln por w/  
good lite brn stain - gd flour - excellent cut - tr  
bleed oil  
14 - 15 1' Qtz - glassy tite NS  
15 - 18 3' Sh - red - grn & brn mottled.  
Poss. Camb at 3814 (+3213')



DRILL STEM TEST  
Kerr-McGee Navajo "E" #1  
Dineh-bi-Koyah Field  
Apache County, Arizona  
May 24, 1967

# 398

DST

3645 - 95' straddle packer

Op 5" good blow

SI 30"

Op 1 hour

fair blow throughout

would not burn

Recovered 520' fluid

(280' sli GCM; 180' salt water cut mud; 60' mud cut salt water)

FP 107 - 149

IS 1000/30"

FSI 868/30"

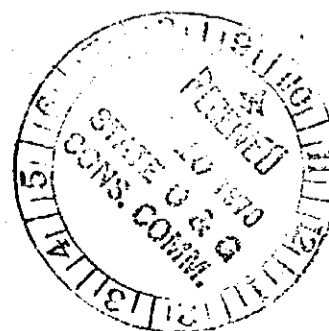
HP 1798 - 1798

DST #1 -

Sample #1 (in 280') chlor 3124 ppm

Sample #2 (180') 11,500 ppm

Sample #3 (60') 15,052 ppm



Kerr-McGee Navajo "E" #1  
Dineh-bi-Keyah Field  
Apache County, Arizona  
May 26, 1967

# 398

Formation Test #1 3658 -

SI 55"  
Stab. @ 1050#/45"  
op. 4" on both chambers  
No spl. poss.  
Rec. in 6 gal chamber  
No gas  
1300 cc filtrate wtr  
Rw .2  
Rmf 2.5  
Had flour on wtr  
Segerated chamber  
Rec. .1 cc gas  
1300 cc filtrate wtr  
Rr 2.7  
scum flour

Formation Test #2 3677 - 80 Failed

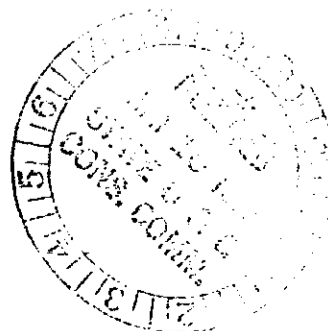
Formation Test #3 3690

SI 60" Stab 52"/1225#  
op 6 gal cham. 70", Seg. chamb. - 30" /No press  
6 gal cham - Rec. 900 cc filtrate wtr  
Rw 1.8  
Seg chamb 4500 cc filtrate  
Rw 2.3  
No flour - No shows

Formation Test #4 3671 Pkr. failed

Formation Test #5 3656 - 59

SI 60"/1060#  
6 gal chamb - 1900 cc wtr  
Seg. chamb - Mal faction



Kerr-McGee Navajo "E" #1  
Dineh-bi-Keyah Field  
Apache County, Arizona  
May 26, 1967

#398

Formation Test #6 3678

SI 55" - Stab @ 1040#/40"

6 gal. chamb - op 15", Rec 1700 cc  
filtrate Rw 2.1

w/seum oil

.6 cc free gas

Seg. chamb - 2000 cc filtrate

Rw 2.3

rainbow

Formation Test #7 3657 - 59

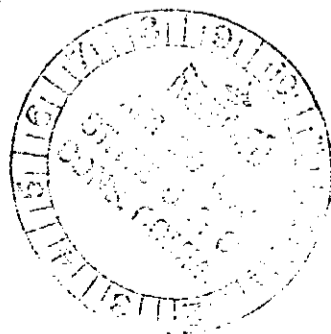
No SI

6 gal. op 20" - 1300 cc fil

w/ sli gas sho

Seg. chamb - 21 cc filtrate

Rw 2.2 No shows





Jane Dee Hull  
Governor

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



Larry D. Fellows  
Director and State Geologist

June 8, 2001

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

*file 398*

Dear Mel:

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

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

*398*

Sincerely,

*Steve*

Steven L. Rauzi  
Oil & Gas Administrator

Enclosures

April 1, 1970

Mr. Fred Berry  
719 Cragmont Avenue  
Berkeley, California 94708

Dear Fred:

I have written to Kerr-McGee asking them for drill stem tests and core data on the #E-1 Navajo. If we get anything I will forward you a copy.

Meanwhile, take it easy. Bring your clubs and come see us.

Yours truly,

James Scurlock  
Geologist

JS:jd

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April 1, 1970

Mr. John Meyer  
Kerr-McGee Corporation  
Kerr-McGee Building  
Oklahoma City, Oklahoma 73102

Re: Kerr-McGee #E-1 Navajo  
SE/4 SE/4 Sec. 20-T36N-R30E  
Apache County  
Our File #398

Dear John:

Wonder if you would be so kind as to look in the file on the subject well to see if you have any drill stem test or core data. Would appreciate any such data that you can send us.

Say hello to Tom West. Bring clubs.

Best regards,

James Scurlock  
Geologist

JS:jd

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Operator KERR MC GEE ~~OIL~~ <sup>Corporation</sup> ~~INDUSTRIES INC.~~  
 Bond Company Insurance Co. of N. America Amount 25,000  
 Bond No. M 41 95 25 (KM528) Date Approved 10-28-65


Permits covered by this bond:

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

**CANCELLED**

DATE 10-24-68

superseded by  
 American Casualty Co. Bond  
 \$25,000  
 #5471020-52

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

October 26, 1967

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

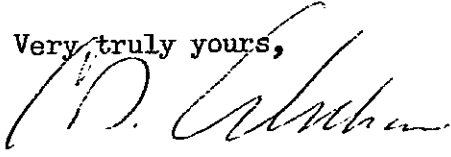
Attention: Mr. John Bannister  
Executive Secretary

Re: Commission Order No. 25  
Kerr-McGee Application  
To Dispose Of Salt Water  
In Its Navajo "E" Well No. 1  
Sec. 20, T36N, R30E  
Apache County, Arizona

Dear Mr. Bannister:

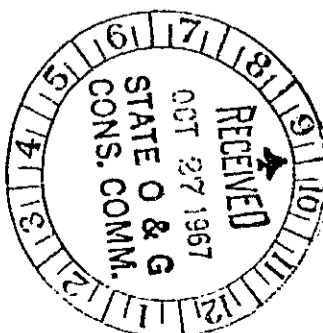
In accordance with Paragraph C of Order No. 25, enclosed please find a copy of an analysis of the salt water recovered from the McCracken formation in the Navajo "E" No. 1 well and a copy of the analysis of the Lower Hermosa produced water taken from the Consolidated Navajo Tank Battery. The McCracken water was recovered during a drill stem test of the sand, while drilling the Navajo "E" No. 1. As you will note, this sample was taken from the top of the test tool, and it is felt to be representative of the water in the formation.

Very truly yours,

  
C. D. Williams  
Production Superintendent

CDW:la

Enclosures



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

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

CASE NO. 29  
ORDER NO. 25

THE APPLICATION OF KERR-MCGEE COR-  
PORATION TO DISPOSE OF SALT WATER  
INTO THE MCCRACKEN FORMATION IN ITS  
NAVAJO E-1 WELL, LOCATED IN THE SE/4  
OF SECTION 20, TOWNSHIP 36 NORTH,  
RANGE 30 EAST, APACHE COUNTY, ARIZONA.

ORDER OF THE COMMISSION

BY THE COMMISSION

This cause having come regularly on for hearing at 1:30 a.m.  
on October 18, 1967, at Phoenix, Arizona, before the OIL AND GAS CON-  
SERVATION COMMISSION OF THE STATE OF ARIZONA, hereinafter referred to as  
the "COMMISSION".

Now, on this 18th day of October, 1967, the COMMISSION, a  
quorum being present, having considered the testimony presented and the  
exhibits received at said hearing, and being fully advised in the prem-  
ises, finds as follows,

FINDINGS:

(1) THAT due public notice having been given as required by  
law, the COMMISSION has jurisdiction of the cause and the subject matter  
thereof.

(2) a. THAT the McCracken formation in the SE/4 of Section 20,  
Township 36 North, Range 30 East, Apache County, Arizona, does contain  
salt water and does not contain any fresh water, and that the injection  
of additional salt water into this formation will not cause any damage  
to any known fresh water source.

b. THAT the McCracken formation can accept up to 2,000  
barrels of salt water per day.

Case No. 29  
Order No. 25

(3) Additional cement should be set to further protect the Coconino formation.

(4) THAT it is in the best interests of the State of Arizona and of its people that proper disposition of salt water should be made into the McCracken formation in the SE/4 of Section 20, Township 36 North, Range 30 East, and that this application be approved.

IT IS THEREFORE ORDERED:

(a) THAT the application of Kerr-McGee Corporation to inject up to a maximum of 2,000 barrels per day of salt water into the McCracken formation in its #1 Navajo well, located in the southeast quarter of Section 20, Township 36 North, Range 30 East, Apache County, Arizona, is hereby approved.

(b) THAT in addition to the method of well completion presented to the COMMISSION by Kerr-McGee Corporation in its Exhibit #3, Kerr-McGee Corporation shall place a DV tool at 1250 feet and shall cement the casing from said 1250 feet up to 1050 feet.

(c) It is further ordered that Kerr-McGee Corporation shall immediately file with the COMMISSION an analysis of the salt water as found in the McCracken formation in its Navajo E-1 well and an analysis of the salt water to be injected into said formation in said well.

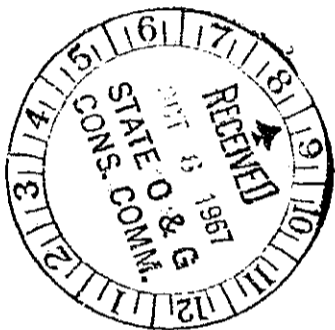
IT IS FURTHER ORDERED that this order shall be effective immediately.

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

OIL AND GAS CONSERVATION COMMISSION  
STATE OF ARIZONA

( S E A L )

By \_\_\_\_\_  
Lucien B. Owens, Vice Chairman



**KERR-MCGEE CORPORATION**

KERR-MCGEE BUILDING • OKLAHOMA CITY, OKLAHOMA 73102

215 Petroleum Center Building

Farmington, New Mexico

October 5, 1967

State of Arizona  
O&G Conservation Commission  
Room 202 - 1624 W. Adams  
Phoenix, Arizona 85007

Attn: Mr. John Bannister

RE: Well Logs  
Navajo "E" Well No. 1  
SE SE Sec. 20, T26N, R30E  
Apache County, Arizona

Gentlemen:

Enclosed please find a copy of each of the well logs indicated

below:

1. Induction-Electric Log
2. Sonic Log - Gamma Ray
3. Microlog
4. Formation Density Log

Very truly yours,  
KERR-MCGEE CORPORATION

*C. D. Williams*  
C. D. Williams  
Production Supt.

CDW/hs

Enclosures

cc: J.I. Fisher  
WRF  
RF

*Wiley  
Corrected*

**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 - 152 1/2 W. Adams St.  
Phoenix, Arizona

Attn: Mr. John Bannister, Executive Sec.

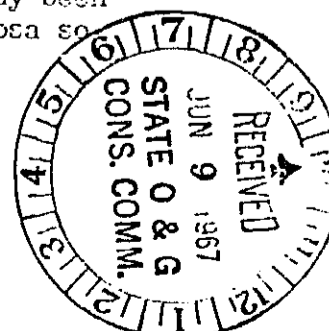
RE: 160 Acre Units  
Lower Hermosa Formation  
Dinsh-bi-Keyah Field  
Apache County, Arizona

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 - 20E
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

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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Attn: Mr. J. Bannister

Page 2

June 5, 1967

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

398



**KERR-McGEE CORPORATION**

KERR-McGEE BUILDING • OKLAHOMA CITY, OKLAHOMA 73102

215 Petroleum Center Building

Farmington, New Mexico

May 31, 1967

State of Arizona  
Oil & Gas Conservation Comm.  
Room 202 - 1624 W. Adams  
Phoenix, Arizona 85007

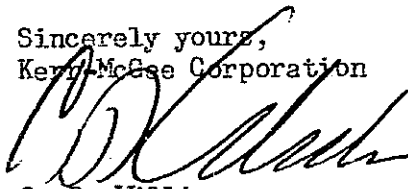
Attn: Mr. John Bannister

RE: State of Arizona  
O&G Form No. 9  
Navajo "E" No. 1

Gentlemen:

Enclosed please find copies of Arizona Conservation Commission  
Form No. 9, Application To Abandon And Plug", for our Navajo "E" Well  
No. 1 located in Apache County, Arizona.

Sincerely yours,  
Kerr-McGee Corporation

  
C. D. Williams  
Prod. Supt.

hs

Enclosures

cc: Navajo Tribe  
J.I.F.  
WRF  
RF

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**KERR-MCGEE CORPORATION**

KERR-MCGEE BUILDING • OKLAHOMA CITY, OKLAHOMA 73102

215 Petroleum Center Building  
Farmington, New Mexico  
May 29, 1967

COPY

United States Geological Survey  
Post Office Box 959  
Farmington, New Mexico

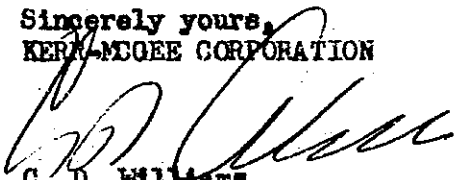
Attn: Mr. P. T. McGrath

RE: USGS Form 9-331  
Navajo "E" No. 1  
Apache County,  
Arizona

Gentlemen:

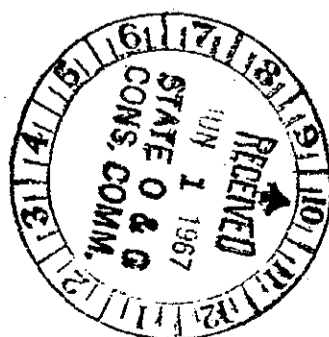
Attached please find U.S.G.S. Form 9-331, Sundry Notices and Reports on Wells, for our Navajo "E" No. 1 Well. This well is located in the Dineh-bi-Keyah Field of Apache County, Arizona. Please keep all information confidential.

Sincerely yours,  
KERR-MCGEE CORPORATION

  
C. D. Williams  
Production Supt.

hs

cc: Arizona O&G Conserv. Comm. ✓  
Navajo Tribe  
J.I.F.  
WRF  
RF





POST OFFICE BOX "K" • SUNRAY, TEXAS 79086

April 26, 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 U.S.G.S. Form No. 9-331, Sundry Notices and Reports on Wells, covering a change in the proposed casing program for the Kerr-McGee Corporation Navajo No. E-1, located 740' FSL and 660' FEL of Section 20, T36N, R30E, Apache County, Arizona.

Please keep all information concerning this well confidential.

Yours very truly,

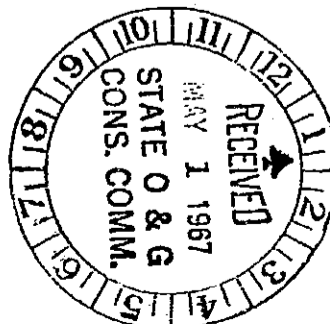
Kerr-McGee Corporation

*E. C. Reish, jr.*

Ed C. Reish, jr.

ECR:jh

Enclosures:



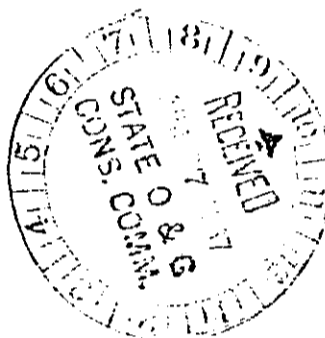
398

*Copy to file*



INCORPORATED BY CHARTER IN TEXAS 1908

April 25, 1967



State of Arizona  
Oil and Gas Conservation Commission  
Room 202, 1624 West Adams  
Phoenix, 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 Dinah bi Leven 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 potentialled because mechanical 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 B-1 and C-1. Most of the road and location work has been completed on these locations.

Yours very truly,  
Kerr-McGee Corporation

Division Supt. Oil & Gas Production  
Sunny, Texas.

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**KERR-MCGEE CORPORATION**

POST OFFICE BOX "K" • SUNRAY, TEXAS 79086

April 17, 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, and one copy of U.S.G.S. Form No. 9-331C, Application for Permit to Drill, for the Kerr-McGee Corporation Navajo No. C-1, located 350' FSL and 1650' FWL of Section 33, T36N, R30E, Apache County, Arizona and the Navajo No. E-1, located 740' FSL and 660' FEL of Section 20, T36N, R30E, Apache County, Arizona. Also enclosed is a draft of \$ 50.00 for the filing fee for the two wells. Two copies of the surveyed location plat for each well will be sent to you as soon as we receive them from our surveyor.

Please keep all information concerning these wells confidential.

Yours very truly,

E. C. Reish, jr.  
Kerr-McGee Corporation

ECR:bb

Enclosures:

