

~~CONFIDENTIAL~~  
Address  
Release Date

P-W

Humble #2 Navajo-88  
25-36N-29E Apache County

431

sl

COUNTY Apache AREA Dineh bi Keyah LEASE NO. Nav. 14-20-0603-8812

WELL NAME ~~Kerr Mc Gee 1-1-73~~ Mtn States Petroleum (5-1-94)  
Humble #2 Navajo-88

LOCATION SE NE SEC 25 TWP 36N RANGE 29E FOOTAGE 2150 FNL - 660 FEL  
ELEV 8503 GR 8512 KB SPUD DATE 9-21-67 STATUS Oil TOTAL DEPTH 4821  
COMP. DATE 11-28-67 4365 PBD

CONTRACTOR MesaDrilling

CASING SIZE	DEPTH	CEMENT	LINER SIZE & DEPTH	DRILLED BY ROTARY
<u>9 5/8</u>	<u>736'</u>	<u>800 SKS</u>	<u>NA</u>	<u>x</u>
<u>7</u>	<u>4817</u>	<u>700 SKS</u>		

DRILLED BY CABLE TOOL \_\_\_\_\_  
PRODUCTIVE RESERVOIR Hermosa Sill  
INITIAL PRODUCTION Pmp 1631 BOPD

FORMATION TOPS	DEPTHS	SOURCE		REMARKS
		L.L.	E.L.	
Coconino	1675'	x	x	
Cutler	2394'			
Hermosa	3511'			
Ismay	3720'			
Desert Springs	3820'			
Akah	3878'			
Sill	4054'			
Mississippian	4278'			
Devonian	4425'			
McCracken	4582'			
Aneth	4700'			
Pre-Cambrian	4817'			

ELECTRIC LOGS	PERFORATED INTERVALS	PROD. INTERVALS	SAMPLE LOG
<u>IE, Borehole Com. GR</u>	<u>4045-4105'</u>	<u>4045-4105</u>	<u>Am Strat</u>
			<u>SAMPLE DESCRP.</u>
			<u>SAMPLE NO. 1442</u>
			<u>CORE ANALYSIS x</u>
			<u>DSTs x</u>
			<u>Tuc. 2515</u>

REMARKS See recompletion Report 10-8-73  
EFFECTIVE 1-1-73 OPERATIONS TRANSFERRED FROM HUMBLE OIL TO KERR-McGEE.

APP. TO PLUG \_\_\_\_\_  
PLUGGING REP. \_\_\_\_\_  
COMP. REPORT x

WATER WELL ACCEPTED BY \_\_\_\_\_ Re Completion 10-8-73

BOND CO. Firemen's Ins. Co. BIA BOND BOND NO. BND 188-98 10 528  
 BOND AMT. \$ 25,000 CANCELLED 12/1/97 DATE 6-27-69  
 FILING RECEIPT 9519 LOC. PLAT x WELL BOOK x PLAT BOOK x  
 API NO. 02-001-20055 DATE ISSUED 9-6-67 DEDICATION NE/4

PERMIT NUMBER 431



**WELL COMPLETION OR RECOMPLETION REPORT AND WELL LOG**

DESIGNATE TYPE OF COMPLETION:

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

DESCRIPTION OF WELL AND LEASE

Operator: **Kerr-McGee Corporation** Address: **P. O. Box 250, Amarillo, Texas 79105**

Federal, State or Indian Lease Number or name of lessor if fee lease: **14-20-0603-8812 Navajo Tract 88** Well Number: **2** Field & Reservoir: **Dineh-bi-Keyah Lower Hermosa**

Location: **2,150' FNL and 660' FEL of** County: **Apache**

Sec. TWP-Range or Block & Survey: **Section 25, T36N, R29E, G&SRM Survey**

Date started: **8-29-73** Date total depth reached: **--** Date completed, ready to produce: **9-12-73** Elevation (D.F. RKB, RT or Gr.): **8,503' GR** feet Elevation of casing hd. flange: **--** feet

Total depth: **4,821'** P.B.T.D.: **4,365'** Single, dual or triple completion?: **Single** If this is a dual or triple completion, furnish separate report for each completion.

Producing interval (a) for this completion: **4,045' - 4,105'** Rotary tools used (interval): **0 - 4,821'** Cable tools used (interval): **--**

Was this well directionally drilled?: **No** Was directional survey made?: **No** Was copy of directional survey filed?: **--** Date filed: **--**

Type of electrical or other logs run (check logs filed with the commission): **IES and Gamma Ray/Sonic** Date filed: **11-29-67**

CASING RECORD

Casing (report all strings set in well—conductor, surface, intermediate, producing, etc.)						
Purpose	Size hole drilled	Size casing set	Weight (lb./ft.)	Depth set	Sacks cement	Amt. pulled
Surface	13-3/4"	9-5/8"	32	736'	800	None
Production	8-3/4"	7"	23, 26, & 29	4,817'	200	None

TUBING RECORD

LINER RECORD

Size	Depth set	Packer set at	Size	Top	Bottom	Sacks cement	Screen (ft.)
2-7/8 in.	4,140 ft.	None ft.	in.	None ft.	ft.		

PERFORATION RECORD

ACID, SHOT, FRACTURE, CEMENT SQUEEZE RECORD

Number per ft.	Size & type	Depth Interval	Amt. & kind of material used	Depth Interval
2 HPF	Jets	4045' - 4105'	80,000 gals crude & 80,000# 10-20 sand	4045' - 4105'

INITIAL PRODUCTION

Date of first production <sup>After W.C.</sup>: **9-24-73** Producing method (indicate if flowing, gas lift or pumping—if pumping, show size & type of pump): **Pumping 2 1/2" x 2" x 16' Rod Pump**

Date of test	Hrs. tested	Choke size	Oil prod. during test	Gas prod. during test	Water prod. during test	Oil gravity
9-25-73	24	--	223 bbls.	5 MCF	130 bbls.	39 ° API (Corr)

Tubing pressure	Casing pressure	Cal'ed rate of Production per 24 hrs.	Oil	Gas	Water	Gas-oil ratio
--	--		223 bbls.	5 MCF	130 bbls.	22

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

CERTIFICATE: I, the undersigned, under the penalty of perjury, state that I am the **District 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: **October 8, 1973** Signature: **C. J. Breeden**

RECEIVED

OCT 10 1973

O & G CONSV. COMM.

Permit No. **431** STATE OF ARIZONA OIL & GAS CONSERVATION COMMISSION Well Completion or Recompletion Report and Well Log Form No. 4 File  Copy **2**



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

Federal, State or Indian Lease Number, or lessor's name if fee lease <b>14-20-0603-8812</b>	Field <b>Dineh-BI-Keyah</b>	Reservoir <b>Hermosa</b>
Survey or Sec-Twp-Rge <b>Sec 25, 26, 35, 36 T36N-R-99E</b>	County <b>Apache</b>	State <b>AZ</b>
Operator <b>Mountain States Petroleum Corp.</b>		
ADDRESS ALL CORRESPONDENCE CONCERNING THIS FORM TO:		
Street <b>P O Bx 1936</b>	City <b>Roswell,</b>	State <b>New Mexico 88202</b>
Above named operator authorizes (name of transporter) <b>Giant Industries</b>		
Transporter's street address <b>P O Bx 12999</b>	City <b>Scottsdale,</b>	State <b>AZ</b>
Field address <b>P O Bx 256 (Bloomfield Hwy) Farmington, N M 87499</b>		
Oil, condensate, gas well gas, casinghead gas		
To transport	<b>100% of the</b>	<b>oil</b> from said lease.
OTHER GATHERERS TRANSPORTING FROM THIS LEASE ARE AS FOLLOWS:		
Name of gatherer	% transported	Product transported
Indicate whether or not this certificate is for a new lease. If not a new lease, indicate whether or not it is a change of operator, change of lease name, change of gatherer, or a consolidation or subdivision of leases and give effective date of change.  <b>Change of Oper.</b>		

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

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

Date Aug. 11, 1995 Signature *Ruby Wickersham*

Date approved: AUG 16 1995  
STATE OF ARIZONA  
OIL & GAS CONSERVATION COMMISSION  
By: *Steven L. Rainey*  
Permit No. 431

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

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

Federal, State or Indian Lease Number, or lessor's name if fee lease <b>14-20-0603-8812 Navajo 88</b>	Field <b>Dineh-Bi-Keyah</b>	Reservoir <b>Hermosa</b>
Survey or Sec-Twp-Rge <b>S 25 - T 36 N - R 30 E</b>	County <b>Apache</b>	State <b>Arizona</b>
Operator <b>Kerr-McGee Corporation</b>		
ADDRESS ALL CORRESPONDENCE CONCERNING THIS FORM TO:		
Street <b>P. O. Box 250</b>	City <b>Amarillo</b>	State <b>Texas, 79189</b>
Above named operator authorizes (name of transporter) <b>Gary-Williams Energy</b>		
Transporter's street address <b>370 17th St., Suite 5300</b>	City <b>Denver</b>	State <b>Colorado, 80202</b>
Field address <b>P. O. Box 159, Bloomfield, NM 87413</b>		
Oil, condensate, gas well gas, casinghead gas		
To transport	<b>100 % of the Oil</b>	from said lease.
OTHER GATHERERS TRANSPORTING FROM THIS LEASE ARE AS FOLLOWS:		
Name of gatherer	% transported	Product transported
Indicate whether or not this certificate is for a new lease. If not a new lease, indicate whether or not it is a change of operator, change of lease name, change of gatherer, or a consolidation or subdivision of leases and give effective date of change.		

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

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

8/18/92 Date H. H. Rice Signature H. H. Rice

Date approved: 8-21-92

STATE OF ARIZONA  
OIL & GAS CONSERVATION COMMISSION  
By: Steven L. Rain

Fermit No. \_\_\_\_\_

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

GAS-OIL RATIO TEST REPORTS

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

Form 9-231  
(May 1963)

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

SUBMIT IN THIS FORM  
(Other instructions on  
reverse side)

Form approved.  
Budget Bureau No. 42-81421.

2. LEASE DESIGNATION AND SERIAL NO.  
14-20-0603-8812

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

Navajo

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME

Navajo Tract 88

9. WELL NO.

2

10. FIELD AND FOOD, OR WILDCAT

Dineh bi Keyah

11. SEC., T., R., H., OR BLK. AND  
SURVEY OR AREA

Sec. 25-36N-29E - G&SPM

12. COUNTY OR PARISH 13. STATE

Apache

Arizona

14. PERMIT NO.  
Arizona #431

15. ELEVATIONS (Show whether KB, ST, GR, etc.)  
8512' KB, 8503' GR

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

NOTICE OF INTENTION TO:

TEST WATER SHUT-OFF

FRACTURE TREAT

SHOOT OR ACIDIZE

REPAIR WELL

(Other)

PULL OR ALTER CASING

MULTIPLE COMPLETE

ABANDON\*

CHANGE PLANS

SUBSEQUENT REPORT OF:

WATER SHUT-OFF

FRACTURE TREATMENT

SHOOTING OR ACIDIZING

(Other)

REPAIRING WELL

ALTERING CASING

ABANDONMENT\*

(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.)\*

We propose to treat this well with an 800-gallon solvent-acid wash to clean the formation face and to squeeze the formation with 500 gallons of scale inhibitor to maintain productivity.

RECEIVED

MAY 13 1971

O & G CONS. COMM.

cc: 2-Arizona Oil & Gas Conservation Commission  
1-Minerals Supervisor-Navajo Tribe

441

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

SIGNED

Roy Dorrrough

TITLE Dist. Supt.

DATE May 10, 1971

(This space for Federal or State office use)

APPROVED BY

[Signature]

TITLE

DATE 5-13-71

CONDITIONS OF APPROVAL, IF ANY:

\*See Instructions on Reverse Side

ARIZONA SECONDARY RECOVERY PROGRAM PROPOSED

The Arizona Oil and Gas Conservation Commission will hold a hearing September 19 to consider an application by Kerr-McGee Corp for a secondary recovery program using injection of salt water into the Hermosa formation in Dineh Bi Keyah field, Apache County. The location for the project is in 29 through 33-36n-30e, 5 and 6-35n-30e, and 25 and 36-36n-29e. The field has produced more than 13.7 million bbls of oil, 1.8 billion cu ft of gas and 2.4 million bbls of water. The hearing begins at 10:00 am at the Oil and Gas Conservation Commission office, 536 North Central Avenue, Suite 106, Phoenix.

**SUNDRY NOTICES AND REPORTS ON WELLS**

1. Name of Operator Kerr-McGee Corporation  
 2. OIL WELL  GAS WELL  OTHER  (Specify) \_\_\_\_\_  
 3. Well Name Navajo Tract 88 Well Number 2  
 Location 2,150' FNL and 660' FEL of  
 Sec. 25 Twp. 36N Rge. 29E County Apache Arizona.  
 4. Federal, State or Indian Lease Number, or lessor's name if fee lease Navajo  
14-20-0603-8812  
 5. Field or Pool Name Dineh-bi-Keyah

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

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
TEST WATER SHUT-OFF <input type="checkbox"/>	PULL OR ALTER CASING <input type="checkbox"/>	WATER SHUT-OFF <input type="checkbox"/>	MONTHLY PROGRESS <input type="checkbox"/>
FRACTURE TREAT <input type="checkbox"/>	DIRECTIONAL DRILL <input type="checkbox"/>	FRACTURE TREATMENT <input checked="" type="checkbox"/>	REPAIRING WELL <input type="checkbox"/>
SHOOT OR ACIDIZE <input type="checkbox"/>	PERFORATE CASING <input type="checkbox"/>	SHOOTING OR ACIDIZING <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
REPAIR WELL <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	(OTHER) <u>Reperforating</u>	ABANDONMENT <input type="checkbox"/>
(OTHER) _____			<input checked="" type="checkbox"/>

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

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

8-29-73 Pulled rods, pump and tubing  
 8-30-73 Reperforated from 4,045' to 4,105' with 2 HPF  
 9-1-73 Fractured well with 80,000 gallons of gelled lease crude and 80,000# of 10/20 sand. Injection pressures: Maximum pressure 1900 PSI, Average pressure 1800 PSI, Instant shut down pressure 200 PSI and on vacuum in one (1) minute. Average injection rate 90 BPM. Ran Differential Temperature Survey.  
 Ran tubing  
 9-2-73 Ran pump and rods. Started pumping well.  
 9-23-73 All fracture treatment load oil recovered  
 9-24-73 Pumped 223 BOPD and 130 BWPD

**APPROVED**  
 OIL & GAS CONSERVATION COMMISSION  
 By [Signature]  
 Date 9-27-73

**RECEIVED**  
 SEP 27 1973  
 O & G CONS. COMM.

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

Signed C. J. Breeden Title Dist. Prod. Supt. Date 9-25-73

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

Permit No. 431

INDRY NOTICES AND REPORTS ON WELLS

1. Name of Operator Kerr-McGee Corporation  
 2. OIL WELL  GAS WELL  OTHER  (Specify) \_\_\_\_\_  
 3. Well Name Navajo Tract 88 Well Number 2  
 Location 2,150' FNL and 660' FNL from  
 Sec. 25 Twp. 36N Rge. 29E County Apache, Arizona.  
 4. Federal, State or Indian Lease Number, or lessor's name if fee lease 14-20-0603-8812  
 5. Field or Pool Name Dineh-bi-Keyah

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

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:					
TEST WATER SHUT-OFF	<input type="checkbox"/>	PULL OR ALTER CASING	<input type="checkbox"/>	WATER SHUT-OFF	<input type="checkbox"/>	MONTHLY PROGRESS	<input type="checkbox"/>
FRACTURE TREAT	<input checked="" type="checkbox"/>	DIRECTIONAL DRILL	<input type="checkbox"/>	FRACTURE TREATMENT	<input type="checkbox"/>	REPAIRING WELL	<input type="checkbox"/>
SHOOT OR ACIDIZE	<input type="checkbox"/>	PERFORATE CASING	<input checked="" type="checkbox"/>	SHOOTING OR ACIDIZING	<input type="checkbox"/>	ALTERING CASING	<input type="checkbox"/>
REPAIR WELL	<input type="checkbox"/>	CHANGE PLANS	<input type="checkbox"/>	(OTHER)	_____	ABANDONMENT	<input type="checkbox"/>

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

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

**Pull rods, pump and tubing. Reperforate interval from 4,045'-4,105' with 2 HPF. Fracture treat well with 80,000 gallons of lease crude and 80,000# of 10-20 sand. Run tubing, pump and rods. Resume pumping well.**

**Work to start early in September, 1973.**

*Verbal Approval  
8-29-73  
JB*

**APPROVED**  
 OIL & GAS CONSERVATION COMMISSION  
 STATE OF ARIZONA  
 By John Kammister  
 Date 8-29-73

**RECEIVED**  
 AUG 20 1973  
 O & G CONS. COMM.

8. I hereby certify that the foregoing is true and correct.  
 Signed C. J. Breeden Title Dist. Prod. Supt. Date August 16, 1973  
C. J. Breeden

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

Permit No. 431

Form 9-331  
(May 1963)

UNITED STATES DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

SUBMIT IN THE  
(Other instructions  
reverse side)

CATE\*  
OR FE-

Form approved  
Budget Bureau No. 42-R1424

5. LEASE DESIGNATION AND SERIAL NO.

4-20-0603-8812

6. INDIAN, ALLOTTEE OR TRIBE NAME

Navajo

7. UNIT AGREEMENT NAME

Navajo Tract 88

8. WELL NO.

10. FIELD AND POOL, OR WILDCAT

Dinah-bi-Kayah

11. SEC. T. R. M. OR BLM. AND

Sec. 25, 26, 29E,

28. STATE

Apache

28. 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 250, Amarillo, Texas 79105

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

SE NE (2,150' FNL & 660' FEL) of Sec. 25

14. PERMIT NO.

Arizona 6431

15. ELEVATIONS (Show whether DT, RT, GR, etc.)

8,512' KB

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"/>	FRACURE TREATMENT	<input type="checkbox"/>
FRACURE TREAT	<input type="checkbox"/>	SHOOTING OR ACIDIZING	<input type="checkbox"/>
SHOOT OR ACIDIZE	<input type="checkbox"/>	(Other) <b>Change in Operator</b>	<input checked="" type="checkbox"/>
REPAIR WELL	<input type="checkbox"/>	REPAIRING WELL	<input type="checkbox"/>
(Other) <b>Change in Operator</b>	<input checked="" type="checkbox"/>	ALTERING CASING	<input type="checkbox"/>
		ABANDONMENT*	<input type="checkbox"/>

(Note: Report results of multiple completion or 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.)\*

Effective January 1, 1973, operation of this well was transferred from Humble Oil and Refining Company to Kerr-McGee Corporation.

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

SIGNED E. J. Breiden TITLE District Prod. Supt. DATE 1-4-73

(This space for Federal or State office use)

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

CONDITIONS OF APPROVAL, IF ANY:

431

\*See Instructions on Reverse Side

RECEIVED  
JAN 11 1973  
GEOLOGICAL SURVEY  
WASHINGTON, D.C.

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

**Navajo Tract 88**

Federal, State or Indian Lease Number. 14-20-0603-8812	Field Dineh-bi-Keyah	Reservoir Lower Hermosa (Intrusion)
Survey or Sec-Twp-Rge Sec 25, 26, 35, 36, T36N	County R29E Apache	State Arizona

Operator  
**Kerr-McGee Corporation**

ADDRESS ALL CORRESPONDENCE CONCERNING THIS FORM TO:

Street P. O. Box 250	City Amarillo	State Texas 79105
-------------------------	------------------	----------------------

Above named operator authorizes (name of transporter)  
**Kerr-McGee Pipeline Corp.**

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

Field address  
P. O. Box 989, Farmington, New Mexico 87401

Oil, condensate, gas well gas, casinghead gas

To transport 100 % of the Oil from said lease.

OTHER GATHERERS TRANSPORTING FROM THIS LEASE ARE AS FOLLOWS:

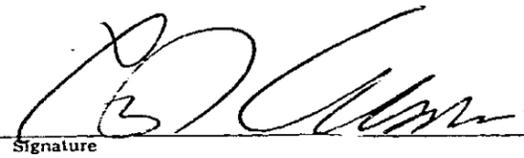
Name of gatherer	% transported	Product transported
None		

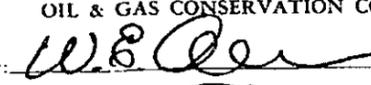
Indicate whether or not this certificate is for a new lease. If not a new lease, indicate whether or not it is a change of operator, change of lease name, change of gatherer, or a consolidation or subdivision of leases and give effective date of change.

Change in Operator: effective January 1, 1973, operator of this lease changed from Humble Oil & Refining Co. to Kerr-McGee Corporation.

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

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

Date January 3, 1973 Signature 

Date approved: 1-8-73  
STATE OF ARIZONA  
OIL & GAS CONSERVATION COMMISSION  
By:   
Permit No. 421-(431)-443  
Arizona - 2  
USGS - 2  
Tribe 1  
HCH - 1

**RECEIVED**  
JAN 08 1973  
O & G CONS. COMM.

STATE OF ARIZONA  
OIL & GAS CONSERVATION COMMISSION  
Operator's Certificate of Compliance & Authorization to  
Transport Oil or Gas from Lease  
File Two Copies

Form No. 8



OFFICE OF

**Oil and Gas Conservation Commission**

STATE OF ARIZONA

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

December 28, 1972

Memo from W. E. Allen, Director  
Enforcement Section

Memo to Files:

Humble Oil & Ref.			
Navajo #138-1	Navajo #88-1	Navajo #88-2	Navajo #88-3
Permit No. 388	Permit No. 421	Permit No. 431	Permit No. 443

Joe Breeden, Kerr-McGee, called to advise that Kerr-McGee was taking over the operations of the subject wells as of January 1, 1973. They have purchased all of Humble's holdings within the Dineh Bi Keyah Field in Apache County.

Mr. Breeden was inquiring as to what the Commission would require as evidence that Kerr-McGee had assumed the operations of the Humble properties. I told him that we would need a letter from Humble or a copy of the instruments transferring ownership from Humble to Kerr-McGee. Since Kerr-McGee has a blanket bond covering all their operations within the State of Arizona, the bonding of the above wells will be no problem.

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-R1421.

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. 14-20-0603-8812
2. NAME OF OPERATOR Humble Oil & Refining Company		6. IF INDIAN, ALLOTTEE OR TRIBE NAME Navajo
3. ADDRESS OF OPERATOR P O Box 120, Denver, Colorado 80201		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  SE NE (2150' FNL and 660' FEL) of Section 25		8. FARM OR LEASE NAME Navajo Tract 88
14. PERMIT NO. Arizona #431		9. WELL NO. 2
15. ELEVATIONS (Show whether DF, RT, GR, etc.) 8512' KB		10. FIELD AND POOL, OR WILDCAT Dineh bi Keyah
		11. SEC., T., R., M., OR B.L.K. AND SURVEY OR AREA Sec 25-36N-29E 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"/>	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 checked="" type="checkbox"/>	ABANDONMENT* <input type="checkbox"/>
REPAIR WELL <input type="checkbox"/>	CHANGE PLANS <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.)\*

7-5-72 - Treated well with 2100 gallons 15% HCl and 1500 gallons aromatic solvent.  
Displaced with 75 bbls water.  
7-6-72 to 7-10-72 Recovering acid and solvent.  
7-10-72 - Squeezed in 55 gallons H-35 scale inhibitor, 50# PD-153 polymer and 1 sack CaCl. Followed with 125 bbls water.  
7-11-72 to 7-16-72 - Testing.  
7-17-72 - Produced 144 BO and 50 BW in 24 hrs. - Job Complete.  
Production prior to job - 90 BO & 34 BW.

2cc Arizona O&G Commission  
1cc Minerals Supervisor - Navajo Tribe  
1cc Midland

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

SIGNED [Signature] TITLE District Superintendent DATE 7-19-72

(This space for Federal or State office use)

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

#431

\*See Instructions on Reverse Side

RECEIVED

JUL 19 1972

O & G

Form 9-331  
(May 1963)

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

SUBMIT IN TRIPlicate  
(Other instructions  
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 checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <input type="checkbox"/>		5. LEASE DESIGNATION AND SERIAL NO. 14-20-0603-8812
2. NAME OF OPERATOR Humble Oil & Refining Co.		6. IF INDIAN, ALLOTTEE OR TRIBE NAME Navajo
3. ADDRESS OF OPERATOR P. O. Box 120, Denver, Colorado 80201		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  SE NE (2150' FNL, 660' FEL) Sec. 25		8. FARM OR LEASE NAME Navajo Tract 88
14. PERMIT NO. Arizona #431	15. ELEVATIONS (Show whether DF, RT, GR, etc.) 8512' KB, 8503' GR.	9. WELL NO. 2
		10. FIELD AND POOL, OR WILDCAT Dineh bi Keyah
		11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA Sec. 25-36N-29E 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"/>	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 checked="" type="checkbox"/>	ABANDON* <input type="checkbox"/>	SHOOTING OR ACIDIZING <input type="checkbox"/>	ABANDONMENT* <input type="checkbox"/>
REPAIR WELL <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	(Other) <input type="checkbox"/>	

(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.)\*

In an effort to increase production, we propose to treat well with 3600 gals. of acid and solvent and squeeze formation with 55 gallons of organic phosphate to prevent scale deposition.

cc: 2 - Arizona Oil & Gas Conservation Commission  
1 - Minerals Supervisor - Navajo Tribe  
1 - Midland

RECEIVED

JUN 26 1972

O & G CONS. COMM.

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

SIGNED J. Roy Derrough TITLE Dist. Supt. DATE June 21, 1972

(This space for Federal or State office use)

APPROVED BY [Signature] TITLE \_\_\_\_\_ DATE \_\_\_\_\_

CONDITIONS OF APPROVAL, IF ANY:

\*See Instructions on Reverse Side

431

Form 9-331  
(May 1963)

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

SUBMIT IN TRIP DATE  
(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>14-20-0603-8812</b>
2. NAME OF OPERATOR <b>Humble Oil &amp; Refining Company</b>		6. IF INDIAN, ALLOTTEE OR TRIBE NAME <b>Navajo</b>
3. ADDRESS OF OPERATOR <b>P. O. Box 120, Denver, Colorado 80201</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>SE NE (2150' FNL &amp; 660' FEL) Section 25</b>		8. FARM OR LEASE NAME <b>Navajo Tract 88</b>
14. PERMIT NO. <b>Arizona #431</b>	15. ELEVATIONS (Show whether DF, RT, GR, etc.) <b>8512' KB, 8503' GR</b>	9. WELL NO. <b>2</b>
		10. FIELD AND POOL, OR WILDCAT <b>Dineh bi Keyah</b>
		11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA <b>Sec 25-36N-29E G&amp;SRM</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 checked="" type="checkbox"/>	ABANDONMENT* <input type="checkbox"/>
REPAIR WELL <input type="checkbox"/>	CHANGE PLANS <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.)\*

5-18-71 - Pumped 800 gals. BJ 1-shot acid in annulus. Displaced to perfs with 125 bbls. produced water. Returned well to production for 48 hrs.  
 5-21-71 - Pumped in 55 gals. Baroid Surflo H-35' scale inhibitor plus 50# Baroid Surflo RD-153 polymer mixed in 20 barrels fresh water down annulus and displaced with 250 barrels produced water. SI overnight. Returned well to production. Currently producing at rate of 145 BOPD. Production prior to workover 105 BOPD.

cc: 2 - Arizona Oil & Gas Conservation Commission.  
 1 - Minerals Supervisor - Navajo Tribe  
 1 - Midland

RECEIVED  
 JUN 14 1971  
 O & G CONS. COMM.

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

SIGNED *Alan J. Richards* TITLE District Chief Engineer DATE 6-9-71

(This space for Federal or State office use)

APPROVED BY 431 TITLE \_\_\_\_\_ DATE \_\_\_\_\_

CONDITIONS OF APPROVAL, IF ANY:

\*See Instructions on Reverse Side

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  GAS WELL  OTHER

2. NAME OF OPERATOR

Humble Oil & Refining Company

3. ADDRESS OF OPERATOR

P. O. Box 120, Denver, Colorado 80201

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

SE NE (2150' FNL & 660' EN FEL) of Section 25

14. PERMIT NO.

Arizona #431

15. ELEVATIONS (Show whether DF, WT, GR, etc.)

8,512' KB & 8,503' GR

5. LEASE DESIGNATION AND SERIAL NO.

14-20-0603-8812

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

Navajo

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME

Navajo Tract 88

9. WELL NO.

2

10. FIELD AND POOL, OR WILDCAT

Dish bi Keyah

11. SEC., T., R., M., OR B.L.K. AND SURVEY OR AREA

Sec. 25-36N-29E - G433M

12. COUNTY OR PARISH 13. STATE

Apache

Arizona

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

NOTICE OF INTENTION TO:

TEST WATER SHUT-OFF

FRACTURE TREAT

SHOOT OR ACIDIZE

REPAIR WELL

(Other)

PULL OR ALTER CASING

MULTIPLE COMPLETE

ABANDON\*

CHANGE PLANS

SUBSEQUENT REPORT OF:

WATER SHUT-OFF

FRACTURE TREATMENT

SHOOTING OR ACIDIZING

(Other)  CORRECTED REPORT

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

REPAIRING WELL

ALTERING CASING

ABANDONMENT\*

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.)

A portion of the details of work was inadvertently overlooked on our report of 7-21-70. Please substitute this report for the one dated 7-21-70.

Pumped in 3000 gals. 15% acid with 1000 gals. Humble aromatic solvent. Pressure on annulus 8#. As fluid started in, went on vacuum and stayed on vacuum thruout job. Flushed casing with 123 bbls. produced water. AIR 4 1/2 BPM. Let set overnight. Pumped in 55 gals. M-35 Baroid scale inhibitor with 50% of KD-153 polymer mixed with 20 bbls. fresh water. Displaced into formation with 195 bbls. water. Let set overnight and put on production. Job complete 5-21-70. On 2 1/2 hr. test on June 5, 1970, produced 23 1/2 BO & 100 BW. Production prior to job was 183 BO & 39 BW.

cc: 2 - Arizona Oil & Gas Conservation Commission  
1 - Minerals Supervisor - Navajo Tribe

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

SIGNED

TITLE Dist. Supt.

DATE 9-11-70

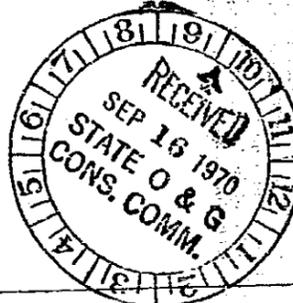
(This space for Federal or State use)

APPROVED BY

TITLE

DATE

CONDITIONS OF APPROVAL, IF ANY:



\*See Instructions on Reverse Side

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>14-20-0603-8812</b>
2. NAME OF OPERATOR <b>Humble Oil &amp; Refining Company</b>	6. IF INDIAN, ALLOTTEE OR TRIBE NAME <b>Navajo</b>
3. ADDRESS OF OPERATOR <b>P. O. Box 120, Denver, Colorado 80201</b>	7. UNIT AGREEMENT NAME <b>-</b>
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements. See also space 17 below.) At surface <b>SE NE (2150' FWL &amp; 660' FWL) of Section 25</b>	8. FARM OR LEASE NAME <b>Navajo Tract 88</b>
14. PERMIT NO. <b>Arizona #431</b>	9. WELL NO. <b>2</b>
15. ELEVATIONS (Show whether DF, ET, GR, etc.) <b>8,512' KB &amp; 8,503' GR</b>	10. FIELD AND POOL, OR WILDCAT <b>Mish bi Kayah</b>
	11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA <b>Sec. 25-36E-29E - G4000</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

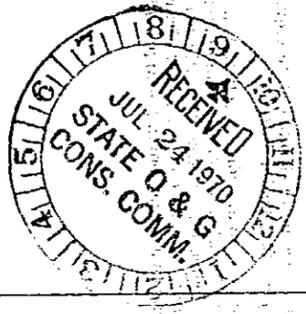
NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
TEST WATER SHUT-OFF <input type="checkbox"/>	PULL OR ALTER CASING <input type="checkbox"/>	WATER SHUT-OFF <input type="checkbox"/>	REPAIRING WELL <input type="checkbox"/>
FRACTURE TREAT <input type="checkbox"/>	MULTIPLE COMPLETE <input type="checkbox"/>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

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

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

**Pumped in 3000 gals. 15% acid with 1000 gals. Humble aromatic solvent. Pressure on annulus 8 1/2. As fluid started in, went on vacuum and stayed on vacuum thruout job. Flushed casing with 123 bbls. produced water. AIR 1/2 BPM. Job complete 5-20-70. On 24 hr. test June 5, 1970, produced 23 1/2 BO & 100 BW. Production prior to job was 183 BO & 39 BW.**

? 47 bbl. increase?



cc: 2 - Arizona Oil & Gas Conservation Commission  
1 - Minerals Supervisor - Navajo Tribe

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

SIGNED \_\_\_\_\_ TITLE **Dist. Sept.** DATE **7-21-70**

(This space for Federal or State use)

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

CONDITIONS OF APPROVAL, IF ANY:

UNITED STATES DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

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.

14-20-0603-8812

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

Navajo

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME

Navajo Tract 83

9. WELL NO.

2

10. FIELD AND POOL, OR WILDCAT

Dineh bi Keyah

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA

Sec. 25-36N-29E - GASFM

12. COUNTY OR PARISH

Apache

13. STATE

Arizona

1. OIL WELL  GAS WELL  OTHER

2. NAME OF OPERATOR  
Humble Oil & Refining Company

3. ADDRESS OF OPERATOR  
P. O. Box 120, Denver, Colorado 80201

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

SE NE (2150' FHL & 660' FEL) of Section 25

14. PERMIT NO.  
Arizona #431

15. ELEVATIONS (Show whether DF, RT, GR, etc.)  
8,512' KB & 8,503' 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 checked="" type="checkbox"/>	SHOOTING OR ACIDIZING	<input type="checkbox"/>
REPAIR WELL	<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.)	
PULL OR ALTER CASING	<input type="checkbox"/>	REPAIRING WELL	<input type="checkbox"/>
MULTIPLE COMPLETE	<input type="checkbox"/>	ALTERING CASING	<input type="checkbox"/>
ABANDON*	<input type="checkbox"/>	ABANDONMENT*	<input type="checkbox"/>
CHANGE PLANS	<input type="checkbox"/>		

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

In an effort to increase production and prevent scale deposition we propose the following:

Pump 4,000 gals. of inhibited BJ "one shot" acid (1,000 gals. of aromatic solvent and 3,000 gals. of 15% HCl acid) down annulus. Displace to perforations with 123 bbls. of produced water. Let acid soak for 30 minutes. Return well to pump and recover all load fluids.

Pump 50 gals. of Bardal Surflo H-351 scale inhibitor mixed with 10 bbls. of fresh water down annulus. Displace with 250 bbls. of water. Leave well shut in overnight. Return to production and test.



cc: 2 - Arizona Oil & Gas Conservation Commission  
1 - Minerals Supervisor - Navajo Tribe

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

SIGNED: [Signature] TITLE: Dist. Supt. DATE: 5-11-70

(This space for Federal or State office use)

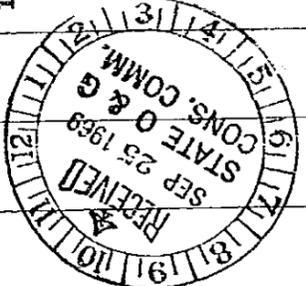
APPROVED BY: \_\_\_\_\_ TITLE: \_\_\_\_\_ DATE: \_\_\_\_\_  
CONDITIONS OF APPROVAL, IF ANY:

431

**RESERVOIR PRESSURE REPORT**

Operator **Humble Oil & Refining Company** Address **Box 120, Denver, Colorado 80201** Date **9-24-69**  
 Field **Apache** County **Apache** Datum Plane **74500'** Gas Gravity **N.A.**  
 Producing Formation **Pliocene S111** Oil Gradient **0.340** Water Gradient **0.435** Initial Completion\* **X** Special\* **X** General Survey\* **X**

Well Name	Perfor. No.	Oil Gradient	OH (G) %	Date Tested	Shut-In Tubing Pressure	Bomb Test Data		Prod. Test (Bbls per Day)		Liquid Level	Liquid Gradient	Wt. of Liquid Column	Wt. of Gas Column	Casing Pressure	Pressure at Datum
						Test Depth	B.H. Temp.	Oil	Water						
Navajo Tract 138	388	1	0	9-9-69	4	74816'	MA	92							199
Navajo Tract 88	431	2	0	9-11-69	0	74512'	MA	92							96



2431

\* Designate type of report by "X".

CERTIFICATE: I, the undersigned, under the penalty of perjury, state that I am the **District Superintendent** of the **Humble Oil & Refining Company** (company), and that I am authorized by said company to make this report; and this report was prepared under my supervision and direction and that the facts stated therein are true, correct and complete to the best of my knowledge.

**September 24, 1969**  
Date

*[Signature]*  
Signature **J. Roy Dorrrough**

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

Form No. 7

118

#### INSTRUCTIONS FOR RUNNING AND REPORTING BOTTOM HOLE PRESSURES

This report shall be mailed not later than the 15th day of the month immediately following the month in which the tests were made. All bottom hole pressure tests reported herein shall be made by a person qualified by both training and experience to make such tests.

1. Oil gradient shall be in pounds per square inch per foot.
2. Water gradient shall be in pounds per square inch per foot.
3. Datum plane shall be in feet plus or minus sea level.
4. Gas gravity shall be determined from an analysis of the casinghead gas.
5. Date Tested—Enter in this column the month and day on which the bottom hole pressure test was made.
6. Shut-In Time—Shall be reported accurately to nearest hour. The well tested shall have produced its normal daily rate of production or allowable within the 24-hour period immediately preceding the time at which it was shut in. (Any deviations shall be certified to on this report)
7. Test Depth—Shall be reported in feet as the lowest point to which the bomb was run and shall be reported in feet plus or minus sea level.
8. Bottom Hole Temperature—Shall be reported in degrees Fahrenheit as determined at test depth by either a recording or maximum reading thermometer.
9. Observed Pressure—Shall be reported as the pressure in pounds per square inch gauge observed at test depth before any necessary temperature correction has been made.
10. Production Test—The oil and water reported shall be from a representative production test immediately preceding the time at which the well was shut in.
11. Fluid Level—The fluid level reported shall be in feet above the datum plane.
12. Fluid Gradient—Shall be in pounds per square inch per foot and shall be representative of both the oil and water gradient where the well produces water as well as oil.
13. Weight of Oil Column shall be in pounds per square inch.
14. Weight of Gas Column shall be in pounds per square inch.
15. Casing Pressure—Shall be reported as the pressure in pounds per square inch gauge.
16. Datum Pressure—
  - (a) In the case of bomb measurements, this pressure shall be the observed pressure after the corrections for reservoir temperature and for the difference between test depth and datum plane have been made.
  - (b) In the case of sonic measurements, this pressure shall be determined from the weight of the fluid column plus the weight of any gas present above the fluid column plus casinghead pressure after proper corrections are made for temperature.

Calibration—The subsurface pressure instrument shall be calibrated against a dead weight tester both prior and subsequent to the dates at which all tests reported hereon are made, and in no case shall this time exceed a period of one month. The prior and subsequent calibrations shall not disagree by more than one per cent (1%). The dead-weight tester used for the calibration shall be approved by the State of Arizona Oil & Gas Conservation Commission

TEFTELLER, INC.  
RESERVOIR ENGINEERING DATA  
Midland, Texas

Well : NAVAJO TRACT 88 NO. 2

Page 1 of 2

Field : DINEH BI KEYAH

File 2-2536-RU

CHRONOLOGICAL PRESSURE AND PRODUCTION DATA

1967 Date	Status of Well	Time	Elapsed Time Hrs.Min.	Wellhead Pressure Tbg Csg	BHP @ 4080' Psig
11-9	Shut in	16:00			
"	"	16:10	0 10	0 Pkr	626
"	"	16:20	0 20		631
"	"	16:40	0 40		634
"	"	17:00	1 00		637
"	"	18:00	2 00		639
"	"	19:00	3 00		640
"	"	20:00	4 00		641
"	"	22:00	6 00		644
11-10	"	00:00	8 00		645
"	"	04:00	12 00		647
"	"	08:00	16 00	29	649

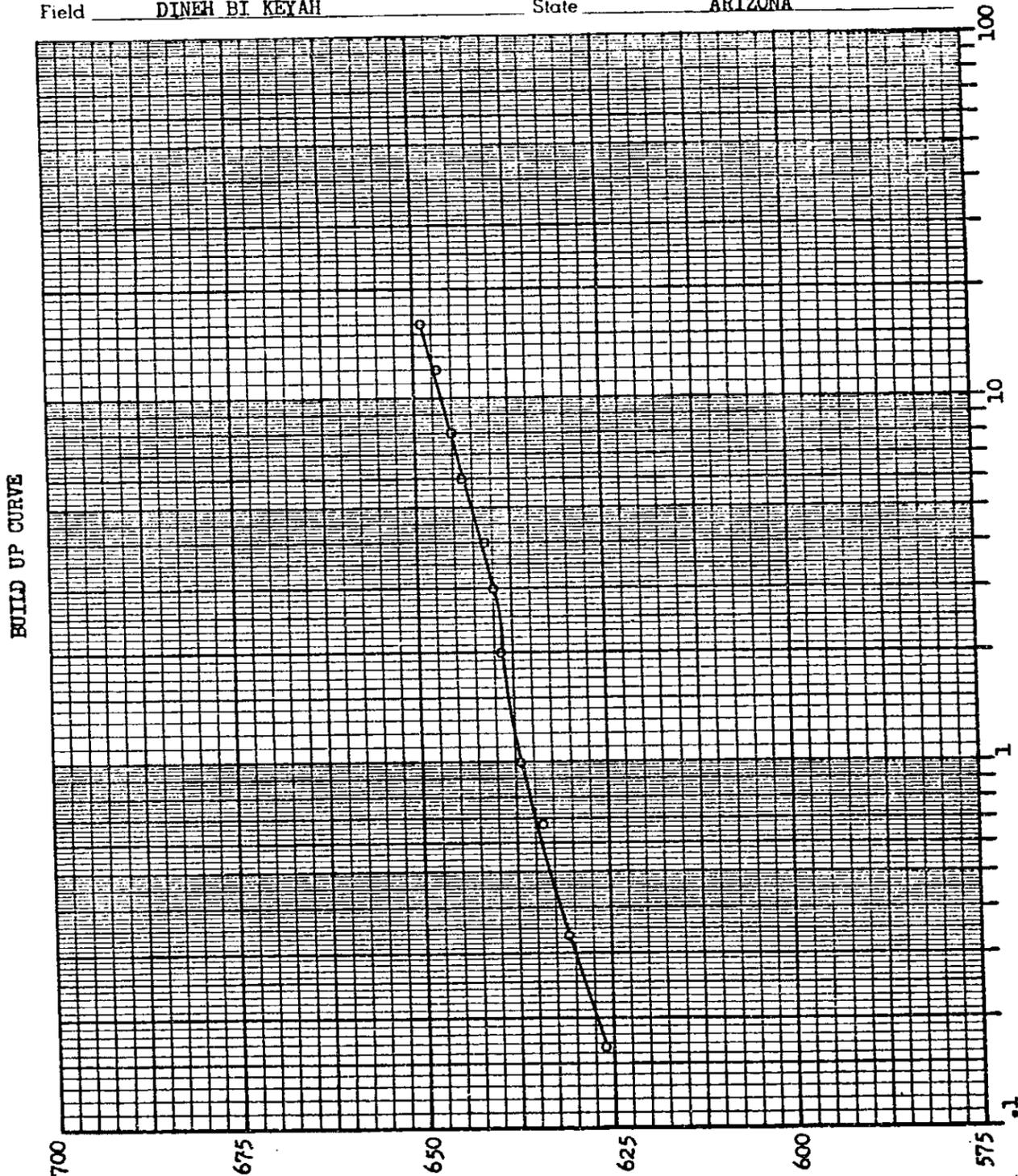
A31

35



Page 2 of 2  
File 2-2536-BU

Company HUMBLE OIL & REFINING COMPANY Formation SILL  
Well NAVAJO TRACT 88 NO. 2 County APACHE  
Field DINEH BI KEYAH State ARIZONA



36

1231

PRESSURE : PSIG @ 4080 FEET

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.

14-20-0603-8812

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

Navajo

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME

Navajo Tract 88

9. WELL NO.

2

10. FIELD AND POOL OR WILDLIFE

Dineh U. Keyah

11. SEC. 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40

Sec 36, 23, GASRM

12. COUNTY OR PARISH

Apache 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  
Humble Oil & Refining Company

3. ADDRESS OF OPERATOR  
P. O. Box 120, Denver, Colorado 80201

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

SE NE (2150' FNL & 660' FEL) of Section 25

14. PERMIT NO.  
Arizona #431

15. ELEVATIONS (Show whether DF, RT, GP, etc.)  
8512' KB & 8503' GR

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

NOTICE OF INTENTION TO:

TEST WATER SHUT-OFF   
FRACTURE TREAT   
SHOOT OR ACIDIZE   
REPAIR WELL   
(Other)

PULL OR ALTER CASING   
MULTIPLE COMPLETE   
ABANDON\*   
CHANGE PLANS

SUBSEQUENT REPORT

WATER SHUT-OFF   
FRACTURE TREATMENT   
SHOOTING OR ACIDIZING   
(Other)

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

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting and 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.)

Shut well in for 21 hours. Pumped down annulus with 75 bbls. oil ahead of 3000 gals. 15% HCl acid followed with 6000 gals. mud acid, 3% HF and 12% HCl. Followed with 5400 gals. diesel with 600 gals. butyl cellosolve and 200 bbls. heavy crude. Returned well to production immediately. Recovered all load oil and water. Mixed 120 gals. Jet-Cote 40 scale preventative in 50 bbls. oil along with 5 gals. heavy 7814 paraffin control chemical. Pumped down annulus. Followed with 150 bbls. heavy crude as flush. Shut down over night. Returned to production, recovered all load oil and produced at rate of 503 BOPD and 190 BWP. Job completed 6-6-69

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

SIGNED J. Roy Dorough TITLE Dist. Supt. DATE 6-6-69

(This space for Federal or State office use)

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



20 431

SUNDRY NOTICES AND REPORTS ON WELLS

1. Name of Operator Humble Oil & Refining Company, P. O. Box 120, Denver, Colorado 80201  
 2. OIL WELL  GAS WELL  OTHER  (Specify) \_\_\_\_\_  
 3. Well Name Navajo Tract 88 #2  
 Location SE NE (2150' FNL & 660' FEL) of Section 25.  
 Sec. 25 Twp 36N Rge 29E County Apache Arizona.  
 4. Federal, State or Indian Lease Number, or lessor's name if fee lease 14-20-0603-8812  
 5. Field or Pool Name Dineh bi Keyah

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

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
TEST WATER SHUT-OFF <input type="checkbox"/>	PULL OR ALTER CASING <input type="checkbox"/>	WATER SHUT-OFF <input type="checkbox"/>	MONTHLY PROGRESS <input checked="" type="checkbox"/>
FRACTURE TREAT <input type="checkbox"/>	DIRECTIONAL DRILL <input type="checkbox"/>	FRACTURE TREATMENT <input type="checkbox"/>	REPAIRING WELL <input type="checkbox"/>
SHOOT OR ACIDIZE <input type="checkbox"/>	PERFORATE CASING <input type="checkbox"/>	SHOOTING OR ACIDIZING <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
REPAIR WELL <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	(OTHER) _____	ABANDONMENT <input type="checkbox"/>

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

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

4<sup>u</sup> Work requested on Sundry Notice dated 4-23-69 has not commenced.

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

Signed John F. Richardson  
 John F. Richardson

Title Dist. Chief Engineer Date 5-12-69

Permit No. 431

STATE OF ARIZONA  
 OIL & GAS CONSERVATION COMMISSION  
 Sundry Notices and Reports On Wells  
 File Two Copies

Form No. 25

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  GAS WELL  OTHER

2. NAME OF OPERATOR  
**Humble Oil & Refining Company**

3. ADDRESS OF OPERATOR  
**P. O. Box 120, Denver, Colorado 80201**

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.\* See also space 17 below.)  
At surface  
**SE NE (2150' FEL & 660' FEL) of Section 25**

14. PERMIT NO.  
**Arizona #431**

15. ELEVATIONS (Show whether DF, ST, GR, etc.)  
**8512' KB & 8503' GR**

5. LEASE DESIGNATION AND SERIAL NO.  
**14-20-0603-8812**

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

7. UNIT AGREEMENT NAME  
**-**

8. FARM OR LEASE NAME  
**Navajo Tract 88**

9. WELL NO.  
**2**

10. FIELD AND, IF APPLICABLE, OF WILDLIFE  
**Dineh Jbl Keyah**

11. SEC. 17, 18, 19, OR 20, AND SURVEY OR AREA  
**Sec. 25, 36N-29E-06SRM**

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	
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 checked="" type="checkbox"/>	SHOOTING OR ACIDIZING	<input type="checkbox"/>
REPAIR WELL	<input type="checkbox"/>	(Other)	<input type="checkbox"/>
(Other)	<input type="checkbox"/>		
PULL OR ALTER CASING	<input type="checkbox"/>	ALTERING CASING	<input type="checkbox"/>
MULTIPLE COMPLETE	<input type="checkbox"/>	REPAIRING WELL	<input type="checkbox"/>
ABANDON*	<input type="checkbox"/>	ALTERING CASING	<input type="checkbox"/>
CHANGE PLANS	<input type="checkbox"/>	ALTERING CASING	<input type="checkbox"/>

(NOTE: Report results of multiple completion or 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 and 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.)\*

We propose to perform an acid-surfactant treatment to remove well bore damage indicated by casing pressure build-up test, and gyp inhibitor to prevent future gyp build-up. This will be accomplished by the use of 3,000 gal. reg. 15% HCl, followed by 6,000 gal. mud acid, followed by 5,400 gal. diesel with 600 gal. Butyl Cellosolve and flush with 125 bbls. lease crude. After acid and flush is recovered 2 drums of Jet-Cote 40 will be pumped in with 50 bbls. lease crude and flush with 200 bbls. lease crude and leave shut in for 24 hours. Plug well back on production.

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

SIGNED J. Roy Overmough TITLE Dist. Supt. DATE 4-23-83

(This space for Federal or State office use)

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

CONDITIONS OF APPROVAL, IF ANY:



\*See Instructions on Reverse Side

431

RESERVOIR PRESSURE REPORT

Operator Humble Oil & Refining Company Address P. O. Box 120, Denver, Colorado 80201 Date 8-8-68  
 Field Apache County MA Gas Gravity MA  
 Producing Formation Dineh bi Keyah Oil Gradient 0.340 Water Gradient 0.435 Initial Completion\* X Special\* X Sonic Instrument Test Data 4500'  
 Pliocene Sill 0.340

Well Name	Perforation	Gas (g)	Date Tested	Shut-In Tubing Pressure	Bomb Test Data		Prod. Test (Bbls per Day)		Liquid Level	Liquid Gradient	Wt. of Liquid Column	Wt. of Gas Column	Casing Pressure	Pressure At Datum
					Test Depth	B.H. Temp.	Oil	Water						
Navajo Tract 88	431	0	7-12-68	0	44412	NA	280							242
	443	0	7-13-68	0	44584	NA	198							235



\* Designate type of report by "X".

CERTIFICATE: I, the undersigned, under the penalty of perjury, state that I am the Dist. Supt. of the Humble Oil & Refining Company (company), and that I am authorized by said company to make this report; and this report was prepared under my supervision and direction and that the facts stated therein are true, correct and complete to the best of my knowledge.

Signature J. Roy Dorrroug

Date August 8, 1968

STATE OF ARIZONA  
OIL & GAS CONSERVATION COMMISSION

Reservoir Pressure Report  
Form No. 7  
File One Copy

20

#### INSTRUCTIONS FOR RUNNING AND REPORTING BOTTOM HOLE PRESSURES

This report shall be mailed not later than the 15th day of the month immediately following the month in which the tests were made. All bottom hole pressure tests reported herein shall be made by a person qualified by both training and experience to make such tests.

1. Oil gradient shall be in pounds per square inch per foot.
2. Water gradient shall be in pounds per square inch per foot.
3. Datum plane shall be in feet plus or minus sea level.
4. Gas gravity shall be determined from an analysis of the casinghead gas.
5. Date Tested—Enter in this column the month and day on which the bottom hole pressure test was made.
6. Shut-in Time—Shall be reported accurately to nearest hour. The well tested shall have produced its normal daily rate of production or allowable within the 24-hour period immediately preceding the time at which it was shut in. (Any deviations shall be certified to on this report)
7. Test Depth—Shall be reported in feet as the lowest point to which the bomb was run and shall be reported in feet plus or minus sea level.
8. Bottom Hole Temperature—Shall be reported in degrees Fahrenheit as determined at test depth by either a recording or maximum reading thermometer.
9. Observed Pressure—Shall be reported as the pressure in pounds per square inch gauge observed at test depth before any necessary temperature correction has been made.
10. Production Test—The oil and water reported shall be from a representative production test immediately preceding the time at which the well was shut in.
11. Fluid Level—The fluid level reported shall be in feet above the datum plane.
12. Fluid Gradient—Shall be in pounds per square inch per foot and shall be representative of both the oil and water gradient where the well produces water as well as oil.
13. Weight of Oil Column shall be in pounds per square inch.
14. Weight of Gas Column shall be in pounds per square inch.
15. Casing Pressure—Shall be reported as the pressure in pounds per square inch gauge.
16. Datum Pressure—
  - (a) In the case of bomb measurements, this pressure shall be the observed pressure after the corrections for reservoir temperature and for the difference between test depth and datum plane have been made.
  - (b) In the case of sonic measurements, this pressure shall be determined from the weight of the fluid column plus the weight of any gas present above the fluid column plus casinghead pressure after proper corrections are made for temperature.

Calibration—The subsurface pressure instrument shall be calibrated against a dead weight tester both prior and subsequent to the dates at which all tests reported hereon are made, and in no case shall this time exceed a period of one month. The prior and subsequent calibrations shall not disagree by more than one per cent (1%). The dead-weight tester used for the calibration shall be approved by the State of Arizona Oil & Gas Conservation Commission

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

Federal, State or Indian Lease Number, or lessor's name if fee lease	Field	Reservoir
Navajo Tract 88 - 14-20-0603-8812	Dineh bi Keyah	Hermosa
Survey or Sec-Twp-Rge	County	State
Sec. 25 & 36-36N-29E - G&SRM	Apache	Arizona
Operator Humble Oil & Refining Company		
ADDRESS ALL CORRESPONDENCE CONCERNING THIS FORM TO:		
Street	City	State
P. O. Box 120	Denver,	Colorado 80201
Above named operator authorizes (name of transporter) Kerr-McGee Pipeline Corporation		
Transporter's street address	City	State
Kerr-McGee Building	Oklahoma City	Oklahoma 73102
Field address P. O. Box 989, Farmington, New Mexico 87401		

Oil, condensate, gas well gas, casinghead gas

To transport 100 % of the \_\_\_\_\_ from said lease.

OTHER GATHERERS TRANSPORTING FROM THIS LEASE ARE AS FOLLOWS:

Name of gatherer	% transported	Product transported
None		

Our report dated 3-4-68 was partially in error. Please change your records as follows:

Indicate whether or not this certificate is for a new lease. If not a new lease, indicate whether or not it is a change of operator, change of lease name, change of gatherer, or a consolidation or subdivision of leases and give effective date of change.  
Permian Corporation ceased hauling oil from Navajo Tract 88 #2 as of 5:55 PM on 2-23-68, at which time the LACT on the lease went into operation. Permian continued to haul oil from Well #3 (As Humble Agent Only) to our Navajo Tract 138 battery, where it went into the pipeline, until the morning of 3-20-68. At that time all production from the Navajo Tract 88 started being run through the pipeline hooked to the Navajo Tract 88 battery.

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

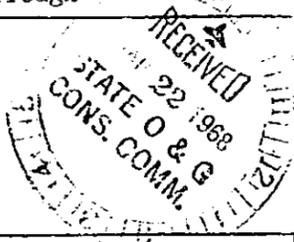
CERTIFICATE: I, the undersigned, under the penalty of perjury, state that I am the Dist. Supt. of the Humble Oil & Refining Company (company), and that I am authorized by said company to make this report; and that this report was prepared under my supervision and direction and that the facts stated therein are true, correct and complete to the best of my knowledge.

Date March 20, 1968  
Signature J. Roy Dorrrough

Date approved: 3-22-68  
STATE OF ARIZONA  
OIL & GAS CONSERVATION COMMISSION  
By: John Bamister  
Permit No. 421, 431, 443, 447

cc: Minerals Supervisor, Navajo Tribe  
U. S. Geological Survey - Farmington  
431

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



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

Federal, State or Indian Lease Number, <b>Navajo Tract 88 - 14-20-0603-8812</b>	Field <b>Dineh bi Keyah</b>	Reservoir <b>Hermosa</b>
Survey or Sec-Twp-Rge <b>Sec. 25-36N-29E - G&amp;SRM</b>	County <b>Apache</b>	State <b>Arizona</b>
Operator <b>Humble Oil &amp; Refining Company</b>		
ADDRESS ALL CORRESPONDENCE CONCERNING THIS FORM TO:		
Street <b>P. O. Box 120</b>	City <b>Denver,</b>	State <b>Colorado 80201.</b>
Above named operator authorizes (name of transporter) <b>Kerr-McGee Pipeline Corporation (No change - See Below).</b>		
Transporter's street address <b>Kerr-McGee Building</b>	City <b>Oklahoma City</b>	State <b>Oklahoma 73102</b>
Field address <b>P. O. Box 989, Farmington, New Mexico 87401</b>		
Oil, condensate, gas well gas, casinghead gas		
To transport	<b>100</b> % of the <b>Oil</b>	from said lease.
OTHER GATHERERS TRANSPORTING FROM THIS LEASE ARE AS FOLLOWS:		
Name of gatherer <b>None</b>	% transported	Product transported

Indicate whether or not this certificate is for a new lease. If not a new lease, indicate whether or not it is a change of operator, change of lease name, change of gatherer, or a consolidation or subdivision of leases and give effective date of change.  
**This is to advise of a change of method in moving oil from the above lease. LACT equipment has been installed and pipeline connection made with Kerr-McGee Pipeline. The Permian Corporation will no longer haul the oil (As Humble Agent Only) as stated in our certificate dated 11-22-67. LACT operation began at 5:55 PM on 2-28-68.**

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

CERTIFICATE: I, the undersigned, under the penalty of perjury, state that I am the Dist. Supt. of the Humble Oil & Refining Company (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.

March 4, 1968

Date

*J. Roy Dorrrough*  
Signature **J. Roy Dorrrough**

Date approved: 3-7-68

STATE OF ARIZONA  
OIL & GAS CONSERVATION COMMISSION

By: John W. Bannister

Permit No. 421, 431, 447

cc: Minerals Supervisor, Navajo Tribe



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

*John R. Peterson*  
*John R. Peterson*



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

RECEIVED  
 JAN 10 1968  
 FEDERAL  
 INDIAN  
 WISE  
 GOOD  
 FILE ✓

File RP-3-WA-754

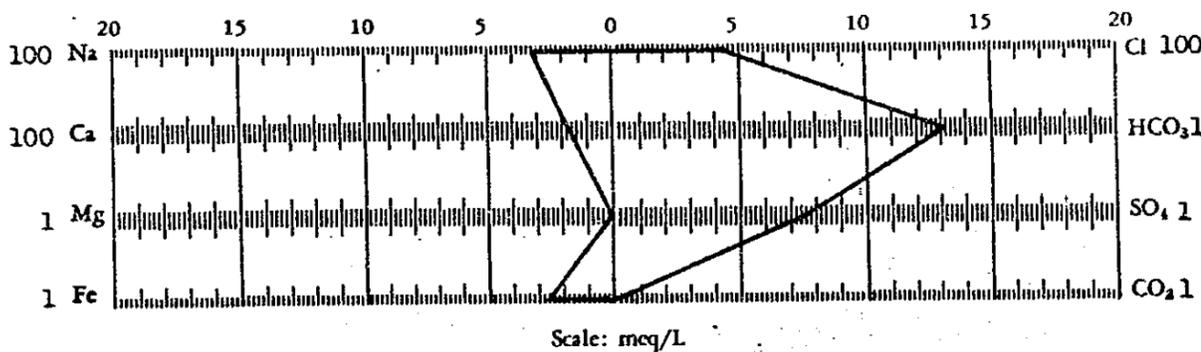
Company HUMBLE OIL & REFINING COMPANY Well Name NAVAJO TRACT 88 NO. 2 Sample No. 1  
 Formation INTRUSIVE Depth 3800' Sampled From PRODUCED FLUID  
 Location SEC 25-T36N-R29E Field DINEH BI KEYAH County APACHE State ARIZONA  
 Date Sampled 1-5-68 Date Analyzed 1-8-68 Engineer GALLOP

Total Dissolved Solids 25,187 <sup>PPM</sup> mg/L Calculated Sp. Gr. 1.025 @ 62 °F.  
 Resistivity 0.26 ohm-meters @ 62 °F. Measured Hydrogen Sulfide Absent

pH 6.6 @ 62 °F.

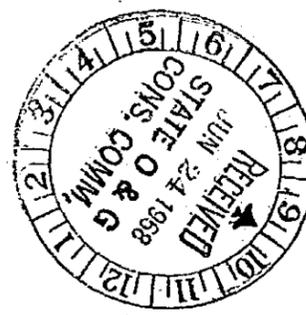
*Constituents	meq/L	<sup>PPM</sup> mg/L	Constituents	meq/L	<sup>PPM</sup> mg/L
Sodium	307	7,068	Chloride	149	15,120
Calcium	160	3,200	Bicarbonate	13.2	804
Magnesium	Absent		Sulfate	7.5	360
Iron	2.1	67	Carbonate	Absent	
Barium		(Grav.)	Hydroxide	Absent	

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



MILLIPORE ANALYSIS

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_



431

POTENTIAL TEST AND REQUEST FOR ALLOWABLE OIL WELLS											
DESIGNATE TYPE OF COMPLETION:											
New Well	<input checked="" type="checkbox"/>	Work-over	<input type="checkbox"/>	Deepen	<input type="checkbox"/>	Plug Back	<input type="checkbox"/>	Same Reservoir	<input type="checkbox"/>	Different Reservoir	<input type="checkbox"/>
Other Reason For Filing:											
Humble Oil & Refining Company											
Operator											
P. O. Box 120, Denver, Colorado 80201											
Address											
DESCRIPTION OF WELL AND LEASE											
Federal, State or Indian Lease Number, or Lessor's Name if Fee Lease				Well Name				County			
14-20-0603-8812 - Navajo Tract 88				Navajo Tract 88 #2				Apache			
Footage Location											
SE NE (2150' FNL & 660' FEL) of Section 25											
Sec. Twp. Rge.											
Section 25-36N-29E - G&SRM											
Date spudded		Date completed, ready to produce		Total depth		P.B.T.D.					
9-21-67		11-28-67		4,821'		4,365'					
Field and reservoir				Top of pay		Producing interval					
Dineh bi Keyah - Hermosa				4,045'		4,045-4,111'					
TEST DATA											
Date of first production		Date of test		Length of test		Producing method (flow pump, gas lift)		Amount of load oil injected if any.			
11-21-67 on pump		12-8-67		24 hrs.		Pump		1122 - All Recovered.			
Number of barrels of oil produced from completion or recompletion date to test date				If well is produced by pumping, give pump size, length of stroke and strokes per minute.							
				2-3/4" Pump - 144" Stroke - 14 SPM							
Tubing pressure		Casing pressure		Choke size							
35		35		Open							
*Actual production during test:		Oil (bbls)		Water (bbls)		Gas (MCF)					
		1591		18		132					
*Production must actually equal or exceed wells daily allowable or test must be for full 24 hours											
Gas-oil ratio		Oil gravity		* A.P.I. corrected		Name of transporter of oil					
83 cu. ft. gas/bbl.		43.5				Kerr-McGee Pipeline Corp.					
Number of acres attributed to this well		Number of producing wells in this reservoir on this lease, including this well		Single, dual or triple completion?		Daily allowable requested (bbls)					
160		1		Single		1591					
Plat showing acreage attached—plat should show leases, offset wells, distance from this well to the nearest well on the same lease completed in or drilling to the same reservoir, and the boundaries of drilling and producing, or proration, units attributed to this well and other wells on the same lease completed in or drilling to the same reservoir, the number of acres in each unit and the number of acres in the lease.											
NE 1/4 of Section 25											
CERTIFICATE: I, the undersigned, under the penalty of perjury, state that I am the <u>District Chief Engineer</u> of the <u>Humble Oil &amp; Refining Company</u> (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		Signature									
December 13, 1967		John F. Richardson									
Witnessed by:		Signature									
Date											
Permit No. 431		STATE OF ARIZONA OIL & GAS CONSERVATION COMMISSION Potential Test & Request for Allowable—Oil Wells File One Copy									
		Form No. 6									

**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: Humble Oil & Refining Company Address: P. O. Box 120, Denver, Colorado 80201

Federal, State or Indian Lease Number or name of lessor if fee lease: Navajo Tract 88 - 14-20-0603-8812 Well Number: 2 Field & Reservoir: Dineh bi Keyah

Location: SE NE (2150' FNL & 660' FEL) of Section 25 County: Apache

Sec. TWP-Range or Block & Survey: Section 25-36N-29E - G&SRM

Date spudded: 9-21-67 Date total depth reached: 10-17-67 Date completed, ready to produce: 11-28-67 Elevation (DF, REKB, RT or Gr.) feet: 8512' KB Elevation of casing hd. flange feet: 8503'

Total depth: 4821' P.B.T.D.: 4365' Single, dual or triple completion?: Single If this is a dual or triple completion, furnish separate report for each completion.

Producing interval (s) for this completion: 4045-4111' Rotary tools used (interval): 0-4821' Cable tools used (interval): None

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

Type of electrical or other logs run (check logs filed with the commission): IES & Gamma Ray/Sonic Date filed: 11-29-67

CASING RECORD

Casing (report all strings set in well—conductor, surface, intermediate, producing, etc.)						
Purpose	Size hole drilled	Size casing set	Weight (lb./ft.)	Depth set	Sacks cement	Amt. pulled
Surface	13-3/4"	9-5/8"	32#	736'	800 Sacks	None
Production	8-3/4"	7"	23-26 & 29#	4817'	200 Sacks	None

TUBING RECORD

LINER RECORD

Size	Depth set	Packer set at	Size	Top	Bottom	Sacks cement	Screen (ft.)
3 1/2" OD in.	4100 ft.	- ft.	- in.	- ft.	- ft.	-	-

PERFORATION RECORD

ACID, SHOT, FRACTURE, CEMENT SQUEEZE RECORD

Number per ft.	Size & type	Depth Interval	Amt. & kind of material used	Depth Interval
12 total	Hyper Jet	4626-4686'	None	
1 each 3'	Hyper Jet	4045-4105'	1200 gal Mud Acid & 36000 gal oil w/37500# sand.	

INITIAL PRODUCTION

Date of first production: 11-9-67 Producing method (indicate if flowing, gas lift or pumping—if pumping, show size & type of pump.): Swab test  
11-21-67 Beam pump - 2-3/4" BH pump.

Date of test: 11-28-67 Hrs. tested: 24 Choke size: - Oil prod. during test: 1631 bbls. Gas prod. during test: 110 MCF Water prod. during test: 0 bbls. Oil gravity: 42 ° API (Corr)

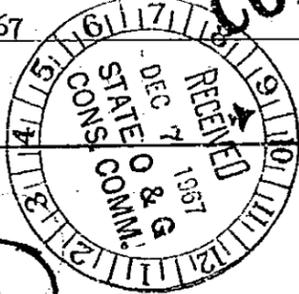
Tubing pressure: 30# Casing pressure: 30# Cal'd rate of Production per 24 hrs.: 1631 bbls. Oil Gas Water Gas-oil ratio: 110 MCF 0 bbls. 67

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

CERTIFICATE: I, the undersigned, under the penalty of perjury, certify that I am the Dist. Supervising Engineer of the Humble Oil & Refining 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: 12-6-67

Signature: John F. Richardson



Permit No. 431

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

Form No. 4

**DETAIL OF FORMATIONS PENETRATED**

Formation	Top	Bottom	Description*
Coconino	1675'	2394'	
Cutler	2394'	3511'	
Hermosa	3511'	3720'	
Ismay	3720'	3820'	
Desert Springs	3820'	3878'	
Akah	3878'	4054'	
Sill	4054'	4278'	
Mississippian	4278'	4425'	
Devonian	4425'	4582'	
McCracken	4582'	4700'	
Aneth	4700'	4817'	
Pre-Cambrian	4817'	4821' TD	
<u>SEE ATTACHED FOR DST &amp; CORE SUMMARY</u>			

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

**INSTRUCTIONS:**

Attach drillers log or other acceptable log of well.

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

Form No. 4

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

Form approved.  
Budget Bureau No. 42-R356.6.

LAND OFFICE \_\_\_\_\_  
LEASE NUMBER 14-20-0603-8812  
UNIT \_\_\_\_\_

**LESSEE'S MONTHLY REPORT OF OPERATIONS**

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 November, 1967.

Agent's address P. O. Box 120 Company Bumble Oil & Refining Company  
Denver, Colorado 80201 Signed [Signature]  
Phone 534-1251 Agent's title Dist. Supervising Engineer

SEC. AND 1/4 OF 1/4	TWP.	RANGE	WELL No.	DAYS 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)
<b>NAVAJO TRACT 88 - ARIZONA PERMIT NOS. 421 &amp; 431</b>										
Sec. 25 SE SE	36N	29E	1							Ramping to recover load oil.
Sec. 25 SE NE	36N	29E	2							Production report will be furnished by our Oklahoma City Office. Completed as an oil well on 11-28-67.

**CONFIDENTIAL**



cc: 2 - Arizona Oil & Gas Conservation Commission  
1 - Mr. Henry F. Pohlmann, Minerals Supervisor, Navajo Tribe.

NOTE.—There were \_\_\_\_\_ runs or sales of oil; \_\_\_\_\_ M cu. ft. of gas sold; \_\_\_\_\_ 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.

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

Federal, State or Indian Lease Number. <b>Navajo Tract 88 - 14-20-0603-8812</b>	Field <b>Dineh bi Keyah</b>	Reservoir <b>Hermosa</b>
Survey or Sec-Twp-Rge <b>Sec. 25-36N-29E - G&amp;SRM</b>	County <b>Apache</b>	State <b>Arizona</b>
Operator <b>Humble Oil &amp; Refining Company</b>		
ADDRESS ALL CORRESPONDENCE CONCERNING THIS FORM TO:		
Street <b>P. O. Box 120</b>	City <b>Denver</b>	State <b>Colorado 80201</b>
Above named operator authorizes (name of transporter) <b>Kerr-McGee Pipe Line Corporation</b>		
Transporter's street address <b>Kerr-McGee Building</b>	City <b>Oklahoma City</b>	State <b>Oklahoma 73102</b>
Field address <b>P. O. Box 989, Barmington, New Mexico 87401</b>		

Oil, condensate, gas well gas, casinghead gas

To transport **100** % of the **Oil** from said lease.

OTHER GATHERERS TRANSPORTING FROM THIS LEASE ARE AS FOLLOWS:

Name of gatherer	% transported	Product transported
<b>None</b>		

Indicate whether or not this certificate is for a new lease. If not a new lease, indicate whether or not it is a change of operator, change of lease name, change of gatherer, or a consolidation or subdivision of leases and give effective date of change.  
**Change of transporter from Permian Corp. to Kerr-McGee Pipeline Corp. Oil will be hauled by the Permian Corp. (As Humble Agent Only) from this lease to the Humble Navajo Tract 138 tank battery location where a pipeline connection is now available. This will be only a temporary situation until a pipeline can be laid from Navajo Tract 88 tank battery for a permanent pipeline hookup to the Kerr-McGee Pipeline.**

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

CERTIFICATE: I, the undersigned, under the penalty of perjury, state that I am the **District Supervising Engineer** of the **Humble Oil & Refining Company** (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 November 22, 1967 Signature *John F. Richardson*  
 Date approved: 11-27-67  
 STATE OF ARIZONA  
 OIL & GAS CONSERVATION COMMISSION

By: *John Bamister*  
 Permit No. 421 & 431  
 cc: Mr. Henry F. Pohlmann, Minerals Supr.,  
 Navajo Tribe

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

38 431

**CERTIFICATE FOR LOAD OIL CREDIT AND  
PERMIT TO TRANSPORT RECOVERED LOAD OIL**

Operator <b>Humble Oil &amp; Refining Company</b>		Address <b>P. O. Box 120, Denver, Colorado 80201</b>	
Federal, State or Indian Lease Number, or lessor's name if fee lease <b>Navajo Tract 88 - 14-20-0603-8812</b>	Well No. <b>#2</b>	Field and Pool <b>Dineh bi Keyah</b>	County <b>Apache</b>
Location <b>Sec. 25-36N-29E - G&amp;SRM</b>			Sec-Twp-Rge or Block & Survey

1122      Barrels load oil recovered

Oil was purchased from* <b>Navajo Tract 138 Well #1</b>	Address <b>Sec. 6-35N-30E, Apache County, Arizona</b>
	Date purchased <b>11-1-67 thru 11-3-67</b>

Oil from the lease and well first above described is gathered and transported by:  
**The Permian Corporation.**

This report will certify that the number of barrels of load oil, shown above, was recovered from the property first above described; also that this load oil was purchased from the named firm (or lease), and permission is hereby requested for the running of the said number of barrels of oil by the gatherer and transporter.

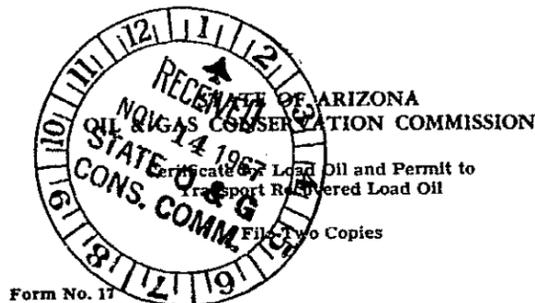
This is a change of transporter & purchaser from Kerr-McGee Pipeline Corporation as indicated on Form No. 17 submitted on 11-6-67.

CERTIFICATE: I, the undersigned, under the penalty of perjury, state that I am the District Supervising Engineer of the Humble Oil & Refining Company (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.

*John F. Richardson*  
Signature      **John F. Richardson**  
Date            **November 13, 1967**

Note: This report required only when load oil was obtained from a source other than the lease on which used.  
\*Insert lease name, location and pool if oil supplied from a lease.

Date Approved <u>11-16-67</u>
STATE OF ARIZONA OIL & GAS CONSERVATION COMMISSION
By: <i>John Gannister</i>
Permit No. <u>431</u>



cc: Mr. Henry F. Pohlmann, Minerals Supr., Navajo Tribe

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

Federal, State or Indian Lease Number, or Lessor's name if the lease	Field	Reservoir
Navajo Tract 83 - 14-20-0603-8812	Dineh Bi Keyah	Hermosa
Survey or Sec-Twp-Rge	County	State
Sec. 25-36N-29E - G&SRM	Apache	Arizona
Operator <b>Humble Oil &amp; Refining Company</b>		
ADDRESS ALL CORRESPONDENCE CONCERNING THIS FORM TO:		
Street	City	State
P. O. Box 120	Denver,	Colorado 80201
Above named operator authorizes (name of transporter)		
<b>The Permian Corporation</b>		
Transporter's street address	City	State
P. O. Box 3119	Midland	Texas 79764
Field address <b>Farmington, New Mexico</b>		
Oil, condensate, gas well gas, casinghead gas		
To transport	100 % of the Oil	from said lease.
OTHER GATHERERS TRANSPORTING FROM THIS LEASE ARE AS FOLLOWS:		
Name of gatherer	% transported	Product transported
None		
Indicate whether or not this certificate is for a new lease. If not a new lease, indicate whether or not it is a change of operator, change of lease name, change of gatherer, or a consolidation or subdivision of leases and give effective date of change. <b>New Lease. Change of transporter from Kerr-McGee Pipeline Corporation as indicated on Form No. 8 submitted on 11-6-67. This will be a temporary setup until permanent installation of battery &amp; pipeline can be accomplished.</b>		

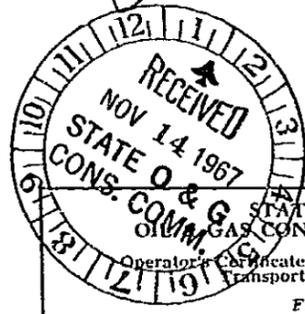
The undersigned certifies that the rules and regulations of the State of Arizona Oil & Gas Conservation Commission have been complied with in drilling and producing operations on this lease, except as noted above, and that the above transporter is authorized to transport the above specified percentage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

CERTIFICATE: I, the undersigned, under the penalty of perjury, state that I am the District Supervising Engineer of the Humble Oil & Refining Company (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 November 13, 1967 Signature John F. Richardson

Date approved: 11-16-67  
STATE OF ARIZONA  
OIL & GAS CONSERVATION COMMISSION  
By: John J. Danmister  
Permit No. 421 & 431

cc: Mr. Henry F. Pohlmann, Minerals Supr., Navajo Tribe.



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

431

(Drake Completion rig on location) WELL SITE CHECK

By [Signature]  
Date 11-8-67

Contractor MESA

Person(s) Contacted BART HIGHLAND - DRLG. Foreman from Cortez.

Spud date \_\_\_\_\_

Type Rig \_\_\_\_\_ Rotary Cable

Present Operations Swb Testing.

Samples \_\_\_\_\_

Pipe \_\_\_\_\_

Drilling with Air \_\_\_\_\_ Mud \_\_\_\_\_

Water Zones \_\_\_\_\_

Size Hole \_\_\_\_\_

Lost Circ. Zones \_\_\_\_\_

Size Drill Pipe \_\_\_\_\_

Formation Tops \_\_\_\_\_

Type Bit \_\_\_\_\_

Cores, Logs, DST \_\_\_\_\_

No. Bit \_\_\_\_\_ Drilling Rate \_\_\_\_\_

Crews \_\_\_\_\_

Formation \_\_\_\_\_

Lithology \_\_\_\_\_

REMARKS, PHOTO, MAP

Swabbing 4045-4105. Is swabbing @ rate of 40-50  
Bbls. Load oil per hour. (load oil from  
#138-1)

TD 4821; PBTD 4774 (Baker bridge plug @ 4375  
w/ 2 sx cement on top)

Set 7" log. @ 4817

McCracken Spigs 4626-4686 tested - made about  
2 million (plus).

WELL NAME Humble 88-2

Permit No. 431  
Confidential:  Yes  No

Drake Completion now  
on location.

WELL SITE CHECK

By JR  
Date 11-8-67

Contractor Mesa Person(s) Contacted Bart Highland - Drk. foreman from Carter.

Spud date \_\_\_\_\_ Present Operations Swabbing

Type Rig \_\_\_\_\_ Rotary  Cable  Drilling with Air  Mud

Samples \_\_\_\_\_

Pipe \_\_\_\_\_

Water Zones \_\_\_\_\_ Size Hole \_\_\_\_\_

Lost Circ. Zones \_\_\_\_\_ Size Drill Pipe \_\_\_\_\_

Formation Tops \_\_\_\_\_ Type Bit \_\_\_\_\_

Cores, Logs, DST \_\_\_\_\_ No. Bit \_\_\_\_\_ Drilling Rate \_\_\_\_\_

Formation \_\_\_\_\_

Crews \_\_\_\_\_ Lithology \_\_\_\_\_

REMARKS, PHOTO, MAP

Fluid level 2000'

4821 TD

4774 PBTD

Set 7" CS9 at 4817'

Set Baker bridge plug

@ 4375 w/ 2 sx cement on top.

perf 4045 - 4105 - Swabbing 40-50 Bbls.  
Load oil per hour.

WELL NAME Humble Navajo 88-21

Permit No. 131  
Confidential:  Yes  No

**CERTIFICATE FOR LOAD OIL CREDIT AND  
PERMIT TO TRANSPORT RECOVERED LOAD OIL**

Operator <b>Humble Oil &amp; Refining Company</b>		Address <b>P. O. Box 120, Denver, Colorado 80201</b>	
Federal, State or Indian Lease Number, or lessor's name if fee lease. <b>Navajo Tract 88 - 14-20-0603-8812 #2</b>	Well No. <b>#2</b>	Field and Pool <b>Dineh bi Keyah</b>	County <b>Apache</b>
Location <b>Sec. 25-36N-29E - G&amp;SRM</b>		Sec-Twp-Rge or Block & Survey	

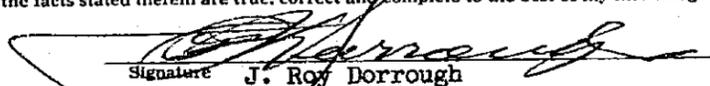
1122      Barrels load oil recovered

Oil was purchased from* <b>Navajo Tract 138 Well #1</b>	Address <b>Sec. 6-35N-30E, Apache County, Arizona</b>
	Date purchased <b>11-1 thru 11-3-67</b>

Oil from the lease and well first above described is gathered and transported by: **The Permian Corp. will truck (As Humble Agent Only) to Navajo Tract 138 battery where Kerr-McGee Pipeline Corp. will transport the oil.**

This report will certify that the number of barrels of load oil, shown above, was recovered from the property first above described; also that this load oil was purchased from the named firm (or lease), and permission is hereby requested for the running of the said number of barrels of oil by the gatherer and transporter.

CERTIFICATE: I, the undersigned, under the penalty of perjury, state that I am the Dist. Supt. of the Humble Oil & Refining Company (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.

  
 Signature **J. Roy Dorrrough**  
 Date **11-6-67**

Note: This report required only when load oil was obtained from a source other than the lease on which used.  
\*Insert lease name, location and pool if oil supplied from a lease.

Date Approved 11-7-67  
 STATE OF ARIZONA  
 OIL & GAS CONSERVATION COMMISSION  
 By: John Bannister

STATE OF ARIZONA  
 OIL & GAS CONSERVATION COMMISSION  
 Certificate for Load Oil and Permit  
 Transport Recovered Load Oil  
 File Two Copies  


Permit No. 431      Form No. 17

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

Federal, State or Indian Lease Number, or lessor's name if fee lease	Field	Reservoir
Navajo Tract 83 - 14-20-0603-8812	Dineh bi Keyah	Hermosa
Survey or Sec-Pwp-Rge	County	State
Sec. 25-36N-29E - G&SRM	Apache	Arizona
Operator <b>Humble Oil &amp; Refining Company</b>		
ADDRESS ALL CORRESPONDENCE CONCERNING THIS FORM TO:		
Street	City	State
P. O. Box 120	Denver,	Colorado 80201
Above named operator authorizes (name of transporter)		
<b>Kerr-McGee Pipe Line Corporation</b>		
Transporter's street address	City	State
Kerr-McGee Building	Oklahoma City,	Oklahoma 73102
Field address		
P. O. Box 989, Farmington, New Mexico 87401		
Oil, condensate, gas well gas, casinghead gas		
To transport	% of the	Oil
100		from said lease.
OTHER GATHERERS TRANSPORTING FROM THIS LEASE ARE AS FOLLOWS:		
Name of gatherer	% transported	Product transported
None		

Indicate whether or not this certificate is for a new lease. If not a new lease, indicate whether or not it is a change of operator, change of lease name, change of gatherer, or a consolidation or subdivision of leases and give effective date of change.  
 New Well, Navajo Tract 83 Well #2. The Permian Corporation will truck the oil (As Humble Agent Only) from Well #2 to the Humble Navajo Tract 133 tank battery where a pipeline connection is now available. This will be only a temporary situation until a tank battery & pipeline can be laid for permanent pipeline hookup.

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

CERTIFICATE: I, the undersigned, under the penalty of perjury, state that I am the Dist. Supt. of the Humble Oil & Refining Company (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 November 6, 1967

Signature J. Roy Dorrrough

Date approved: 11-7-67

STATE OF ARIZONA  
OIL & GAS CONSERVATION COMMISSION  
By: John Bannister  
Permit No. 421

cc: Mr. Henry F. Pohlmann, Minerals Supr.,  
Navajo Tribe.



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

A3 421 & 431

Form 9-331  
(May 1963)

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

SUBMIT IN TRIPLICATE  
(Other instructions on reverse side)

Form approved.  
Budget Bureau No. 42-R1424.

5. LEASE DESIGNATION AND SERIAL NO.

14-20-0603-8812

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

Navajo Tract 88

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME

Navajo Tract 88

9. WELL NO.

2

10. FIELD AND POOL, OR WILDCAT

Dineh bi Keyah

11. SEC., T., R., M., OR BLE. AND SURVEY OR AREA

Sec. 25-36N-29E - G&RM

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  
Humble Oil & Refining Company

3. ADDRESS OF OPERATOR  
P. O. Box 120, Denver, Colorado 80201

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.\* See also space 17 below.)  
At surface  
SE-NE (2150' FNL & 660' FBL) of Section 25

14. PERMIT NO.  
Arizona #431

15. ELEVATIONS (Show whether DP, ST, GR, etc.)  
8512' DP & 8503' GR

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

NOTICE OF INTENTION TO:

TEST WATER SHUT-OFF

FRACTURE TREAT

SHOOT OR ACIDIZE

REPAIR WELL

(Other)

PULL OR ALTER CASING

MULTIPLE COMPLETE

ABANDON\*

CHANGE PLANS

SUBSEQUENT REPORT OF:

WATER SHUT-OFF

FRACTURE TREATMENT

SHOOTING OR ACIDIZING

(Other) Running Production Casing

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

REPAIRING WELL

ALTERING CASING

ABANDONMENT\*

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

Drilled 8-3/4" hole to a TD of 4821' driller's measurement. Set 7" 23#; 26# & 29# N-80 casing at 4817' and cemented with 200 sacks API Class C 6% gell cement. Good returns throughout job and top plug down on 19-19-67. Top of cement by temperature survey, 3550'.

cc: 2 - Arizona Oil & Gas Conservation Commission  
1 - Mr. Henry F. Pohlmann, Minerals Supr., Navajo Tribe.

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

SIGNED

J. Roy Dorrigan

TITLE

Dist. Supt.

DATE

7-7-67

(This space for Federal or State office use)

APPROVED BY

TITLE

CONDITIONS OF APPROVAL, IF ANY:

\*See Instructions on Reverse Side



431

NAVAJO TRACT 88 #2

CORE SUMMARY

431

CORE #1: 4560-4608'. Cut and recovered 48'.

- 19' Interbedded brick-red and variegated shale and lite grey to tan tite shaly dolomite.
- 5' Sandstone, white to lite grey, very fine to coarse grained, hard and tite, siliceous, some spotty stain.
- 2' Shale, brick-red, dolomitic.
- 12' Sandstone, white to lite grey, fine to coarse grained, silicious, some stain and bleeding oil in top foot.
- 1' Shale, red to grey-green.
- 1' Sandstone, lite grey, fine to medium grained, silicious.
- 2' Dolomite, lite grey, sandy.
- 6' Sandstone, red, very fine to fine grained, dolomitic, some red to green dolomitic shale.

CORE #2: 4608-4659'. Cut 51', recovered 50'.

- 6' Sandstone, lite grey, very fine to medium grained, silicious, hard and tite, some scattered stain in upper 4'.
- 6' Shale, grey-green, dolomitic, some sand stringers.
- 15' Sandstone, white to lite grey, very fine to coarse grained, poor to fair porosity, some blue fluorescence.
- 1' Shale, grey-green.
- 21' Sandstone, white to lite grey, very fine to coarse grained, poor to fair porosity, some blue and yellow fluorescence.
- 1' Shale, red-green.

CORE #3: 4659-4686'. Cut and recovered 27'.

- 3' Shale, red, waxy, dolomitic.
- 20' Sandstone, white to lite grey, very fine to coarse grained, conglomeratic in part, silicious, dolomitic, some fluorescence.
- 2' Shale, dull red, waxy, dolomitic.
- 2' Dolomite, lite dull red, crystalline, shaly.

CORE #4: 4686-4715'. Cut and recovered 29'.

- 1' Sandstone, red, very fine to coarse, dolomitic, shaly.
- 18' Dolomite, lite pink, crystalline, sandy and interbedded shale, red to green, dolomitic.
- 10' Dolomite, lite grey, crystalline, fractured, trace bleeding oil with some tarry residue in fractures.

CORE #5: 4715-4775'. Cut and recovered 60'.

- 16' Dolomite, lite grey to buff, crystalline, some lite blue fluorescence.
- 9' Shale, medium grey, very dolomitic, some calcite filled fractures.
- 35' Interbedded medium to dark grey, finely crystalline, shaly dolomite and medium to dark grey, dolomitic shale. Some fractures.

CORE #6: 4775-4821'. Cut and recovered 46'.

- 6' Shale, dark grey, dolomitic, some dark grey shaly dolomite.
- 9' Dolomite, dark grey, crystalline, shaly, some bleeding oil from vugs and fractures.
- 2' Sandstone, lite grey-green, tite, very shaly.
- 5' Shale, grey-green, dolomitic.
- 3' Sandstone, medium grey, fine to medium grained, hard and tite, trace pale blue fluorescence.
- 5' Shale, grey-green, sandy dolomitic.
- 5' Dolomite, grey-green, sandy, shaly.
- 6' Sandstone, lite grey, fine to coarse grained, dolomitic, poor porosity.
- 1' Conglomerate, white, fine to coarse grained sand with inclusions of igneous material
- 4' Granite wash, highly weathered, coarsely crystalline.

**CONFIDENTIAL**

431

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NAVAJO TRACT 88 #2

SUMMARY OF DRILL STEM TESTS

- DST #1: 4045-75', open 3 mins., very weak blow, SI 1 hr., open 2 hrs., weak blow thruout test. SI 2 hrs. Rec. 120' very slightly gas-cut mud with scum of oil on top. Bottom 30' heavily gas-cut and slightly oil-cut. IFP & FFP 112#, ISIP & FSIP 615#, IHP & FHP 1959#.
- DST #2: 4045-95', initial open 3 mins., very weak blow. SI 1 hr. Reopened 2½ hrs., very weak blow, increased to fair blow after 1 hr. No GTS. SI 2½ hrs. Recovered 105' gas-cut and slightly oil-cut mud. IHP 1997#, ISIP 641#, IFP 53#, FFP 80#, FSIP 668#, FHP 1997#, Temperature 98°.
- DST #3: 4543-4659', open 3 mins., good blow, SI 1 hr., open 1 hr. Gas to surface immediately. After 15 mins. gauged 2955 MCF, after 30 mins. 3099 MCF, after 45 mins. 3244 MCF, after 50 mins. had rathole mud to surface. SI 2 hrs. Recovered 900' gas-cut mud. IHP 2240#, ISIP 1314#, IFP 588#, FFP 671#, FSIP 839#, FHP 2240#, Temperature 102°.
- DST #4: 4692-4821', initial open 3 mins., very weak blow. SI 1 hr. Open 1½ hrs., opened with weak blow, decreased to very weak. No GTS. SI 1½ hrs. Recovered 30' drilling fluid, slightly gas-cut. IHP 2256#, ISIP 732#, IFP 45#, FFP 91#, FSIP 503#, FHP 2256#, Temperature 120°.

SUMMARY OF TESTING - 4626 to 4686'

Perforated with 1 shot each 3' from 4626-86'. Well did not flow. Swabbed CaCl water to 3500' and well started flowing CaCl water. Flowed to clean up and tested for two days at an average rate of 1150 MCFPD, tubing pressure 735#. Killed well with CaCl water. Set bridge plug at 4375', dumped 2 sacks cement on top of bridge plug approximately 10', Pressured to 3000# on casing for 15 minutes, held okay.

**CONFIDENTIAL**

A31

November 6, 1967

Memo: Humble #88-2 Navajo  
Permit 431

From: John Bannister, Executive Secretary

Telephone call from Harold Ferris:

Tested McCracken from 4582 to 4700. Produced 3000 MCF of  
4-5% helium.

Plug off: set bridge plug at 4375 with 10 feet of cement  
on top.

The sill (lower Hermosa) was encountered from 4054 to 4110.  
Perforated with 1 shot to each 3 feet from 4045 to 4105.  
Fracted with 36,000 gallons lease crude and 37,000 pounds  
of #10-20 sand.

Form approved.  
Budget Bureau No. 42-R356.6.

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

LAND OFFICE \_\_\_\_\_  
LEASE NUMBER 14-20-0603-8812  
UNIT \_\_\_\_\_

**LESSEE'S MONTHLY REPORT OF OPERATIONS**

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 October, 19 67

Agent's address P. O. Box 120 Company Humble Oil & Refining Company  
Denver, Colorado 80201 Signed [Signature]

Phone 534-1251 Agent's title Dist. Supervising Engineer

SEC. AND 1/4 OF 1/4	TWP.	RANGE	WELL NO.	DAYS 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)
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**NAVAJO TRACT 88 - ARIZONA PERMIT NUMBERS 421 & 431.**

SE SE  
Sec. 25 36E 29E 1

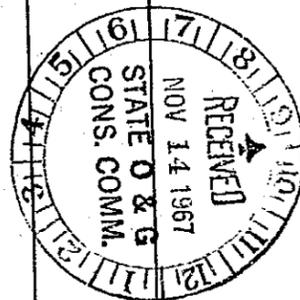
TD 3850', PBD 3550'.  
Testing interval of 3407-63'. Flowing at an average rate of 1900 MCFPD.

SE NE  
Sec. 25 36E 29E 2

TD 4814', PBD 4774'.  
Tested interval of 4626-86' at a rate of 1150 MCFPD. Now running pressure buildup.

**CONFIDENTIAL**

*Devinian  
McCracken*



cc: 2 - Arizona Oil & Gas Conservation Commission  
1 - Mr. Henry F. Pohlmann, Minerals Supr., Navajo Tribe.

NOTE.—There were no runs or sales of oil; no M cu. ft. of gas sold;

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.

52 431

REPORT OF ANALYSIS

F.S.- 11196 M.S. N-35879, H 3.71 OBS. PRES. 63.1 CAL. PRES. 62.1

STATE- ARIZONA

COUNTY- APACHE

FIELD- DINEH BI KEYAH

WELL NAME- NAVAJO TRACT 68 NO. 2

LOCATION- SEC. 25, T36N, R29E

OWNER- HUMBLE OIL + REFINING CO.

DATE COMPLETED- D.S.T.

DATE SAMPLED- 10-30-67

SAMPLED BY-

NAME OF PRODUCING FORMATION- MCCRACKEN

DEPTH IN FEET- 4626

THICKNESS IN FEET- 60

SHUT IN WELLHEAD PRES., PSIG- 737

OPEN FLOW, MCF/D- 2

CHECK OF DATA-  
THE WELL DATA ARE ACCURATE, ....WITHOUT CORRECTION, ....AS CORRECTED ABOVE.

REMARKS-

ANALYSIS-

METHANE	2.7 %	NORMAL PENTANE	0.0 %	OXYGEN	0.0 %
ETHANE	.4 %	ISOPENTANE	0.0 %	ARGON	.6 %
PROPANE	.1 %	CYCLOPENTANE	0.0 %	HYDROGEN	0.0 %
NORMAL BUTANE	.3 %	HEXANES PLUS	0.0 %	H2S	0.0 %
ISOBUTANE	0.0 %	NITROGEN	77.3 %	CO2	13.3 %
SPECIFIC GRAV	1.001	***		HELIUM	5.17 %
				TOTAL	100.0 %

CALCULATED GROSS BTU/CU FT, DRY AT 60 DEG F AND 30 IN. MERCURY- 47.

PERMISSION FOR RELEASE-  
PERMISSION IS HEREBY GRANTED FOR THE BUREAU OF MINES TO RELEASE THE ABOVE DATA, TOGETHER WITH SIMILAR DATA RELEASED BY OTHER OPERATORS AS PUBLIC INFORMATION AND AS PARTS OF A SERIES OF PAPERS ON ANALYSES OF GASES FROM VARIOUS FIELDS, STATES, OR REGIONS.



1-21-69  
COMPANY Humble Oil & Refining Company  
BY J. Roy Dorrrough  
TITLE District Superintendent  
Denver, Colorado

431

REPORT OF ANALYSIS

F.S.- 11167 M.S. N-35636 ,H 5.05 OBS. PRES. 58.8 CAL. PRES. 58.8  
 STATE- ARIZONA COUNTY- APACHE  
 FIELD- DINEH BI KEYAH WELL NAME- NAVAJO TRACT 88 NO. 2  
 LOCATION- SEC. 25, T36N, R25E OWNER- HUMBLE OIL + REFINING CO.  
 DATE COMPLETED- D.S.T. NO. 3 DATE SAMPLED-  
 SAMPLED BY-  
 NAME OF PRODUCING FORMATION- MCCRACKEN  
 DEPTH IN FEET- THICKNESS IN FEET-  
 SHUT IN WELLHEAD PRES., PSIG- OPEN FLOW, MCF/D-

CHECK OF DATA-  
 THE WELL DATA ARE ACCURATE, .....WITHOUT CORRECTION, .....AS CORRECTED ABOVE.

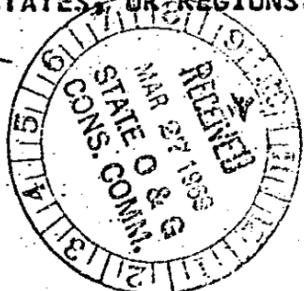
REMARKS-

ANALYSIS-

METHANE	2.7 %	NORMAL PENTANE	0.0 %	OXYGEN	.1 %
ETHANE	.4 %	ISOPENTANE	0.0 %	ARGON	.8 %
PROPANE	.1 %	CYCLOPENTANE	0.0 %	HYDROGEN	0.0 %
NORMAL BUTANE	.2 %	HEXANES PLUS	0.0 %	H2S	0.0 %
ISOBUTANE	0.0 %	NITROGEN	78.1 %	CO2	12.6 %
SPECIFIC GRAV	.992			HELIUM	5.16 %
				TOTAL	100.2 %

CALCULATED GROSS BTU/CU FT, DRY AT 60 DEG F AND 30 IN. MERCURY- 44.

PERMISSION FOR RELEASE-  
 PERMISSION IS HEREBY GRANTED FOR THE BUREAU OF MINES TO RELEASE THE ABOVE  
 DATA, TOGETHER WITH SIMILAR DATA RELEASED BY OTHER OPERATORS AS PUBLIC  
 INFORMATION AND AS PARTS OF A SERIES OF PAPERS ON ANALYSES OF GASES FROM  
 VARIOUS FIELDS, STATES, OR REGIONS.



1-21-69  
 COMPANY Humble Oil & Refining Company  
 BY J. Roy Dorrrough  
 TITLE District Superintendent.....  
 Denver, Colorado

431

23

REPORT OF ANALYSIS

F.S.- 11168 M.S. N-35647 ,H 3.03 OBS. PRES. 60.9 CAL. PRES. 58.5  
 STATE- ARIZONA COUNTY- APACHE  
 FIELD- DINEH BI KEYAH WELL NAME- NAVAJO TRACT 88 NO. 2  
 LOCATION- SEC. 25, T36N, R29E OWNER- HUMBLE OIL + REFINING CO.  
 DATE COMPLETED- D.S.T. DATE SAMPLED- 10-12-67  
 SAMPLED BY-  
 NAME OF PRODUCING FORMATION- DEVONIAN MCCRACKEN  
 DEPTH IN FEET- 4580 THICKNESS IN FEET- 85  
 SHUT IN WELLHEAD PRES., PSIG- OPEN FLOW, MCF/D-

CHECK OF DATA-  
 THE WELL DATA ARE ACCURATE, .....WITHOUT CORRECTION, .....AS CORRECTED ABOVE.

REMARKS-

ANALYSIS-

METHANE	2.6 %	NORMAL PENTANE	0.0 %	OXYGEN	0.0 %
ETHANE	.4 %	ISOPENTANE	0.0 %	ARGON	.8 %
PROPANE	.1 %	CYCLOPENTANE	0.0 %	HYDROGEN	0.0 %
NORMAL BUTANE	.2 %	HEXANES PLUS	0.0 %	H2S	0.0 %
ISOBUTANE	0.0 %	NITROGEN	78.4 %	CO2	13.0 %
SPECIFIC GRAV	1.003	***		HELIUM	<u>4.60 %</u>
				TOTAL	100.1 %

CALCULATED GROSS BTU/CU FT, DRY AT 60 DEG F AND 30 IN. MERCURY- 43.

PERMISSION FOR RELEASE-  
 PERMISSION IS HEREBY GRANTED FOR THE BUREAU OF MINES TO RELEASE THE ABOVE  
 DATA, TOGETHER WITH SIMILAR DATA RELEASED BY OTHER OPERATORS AS PUBLIC  
 INFORMATION AND AS PARTS OF A SERIES OF PAPERS ON ANALYSES OF GASES FROM  
 VARIOUS FIELDS, STATES, OR REGIONS.

1-21-69  
 COMPANY. Humble Oil & Refining Company  
 BY J. Roy Dorrrough  
 TITLE. District Superintendent  
 Denver, Colorado



431

REPORT OF ANALYSIS

F.S.- 11168 M.S. N-35647 ,H 3.03 OBS. PRES. 60.9 CAL. PRES. 58.5  
 STATE- ARIZONA COUNTY- APACHE  
 FIELD- DINEH BI KEYAH WELL NAME- NAVAJO TRACT 88 NO. 2  
 LOCATION- SEC. 25, T36N, R29E OWNER- HUMBLE OIL + REFINING CO.  
 DATE COMPLETED- D.S.T. DATE SAMPLED- 10-12-67  
 SAMPLED BY-  
 NAME OF PRODUCING FORMATION- DEVONIAN MCCRACKEN  
 DEPTH IN FEET- 4580 THICKNESS IN FEET- 85  
 SHUT IN WELLHEAD PRES., PSIG- OPEN FLOW, MCF/D-

CHECK OF DATA-  
 THE WELL DATA ARE ACCURATE, ....WITHOUT CORRECTION, .....AS CORRECTED ABOVE.

REMARKS-

ANALYSIS-

METHANE	2.0 %	NORMAL PENTANE	0.0 %	OXYGEN	5.1 %
ETHANE	.3 %	ISOPENTANE	0.0 %	ARGON	.8 %
PROPANE	.1 %	CYCLOPENTANE	0.0 %	HYDROGEN	0.0 %
NORMAL BUTANE	.1 %	HEXANES PLUS	0.0 %	H2S	0.0 %
ISOBUTANE	0.0 %	NITROGEN	78.3 %	CO2	9.9 %
SPECIFIC GRAV	.999			HELIUM	3.49 %
				TOTAL	100.1 %

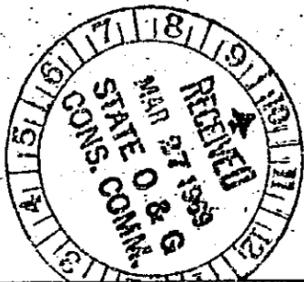
*Contaminated Sample*

CALCULATED GROSS BTU/CU FT, DRY AT 60 DEG F AND 30 IN. MERCURY- 32.

PERMISSION FOR RELEASE-  
 PERMISSION IS HEREBY GRANTED FOR THE BUREAU OF MINES TO RELEASE THE ABOVE DATA, TOGETHER WITH SIMILAR DATA RELEASED BY OTHER OPERATORS AS PUBLIC INFORMATION AND AS PARTS OF A SERIES OF PAPERS ON ANALYSES OF GASES FROM VARIOUS FIELDS, STATES, OR REGIONS.

1-21-69

COMPANY Humble Oil & Refining Company  
 BY J. Roy Dorrrough  
 TITLE District Superintendent.....  
 Denver, Colorado



431

25

October 13, 1967

Re: Humble #2-88 Navajo  
Permit 431

Bill Green, Humble Oil, telephoned and reported on DST #3.

Tested McCracken formation from 4543-4659. Tool open 3 minutes, shut-in for one hour. Flowed one hour. Shut in 2 hours. Gas to surface immediately. After 15 minutes gauged 2555 MCF gas. After 30 minutes, 3099 MCF; after 45 minutes, 3244 MCF; after 50 minutes mud came to surface. Shut-in 10 minutes.

Gas non-flammable. Recovered 900 feet gas cut mud.

Initial flowing pressure 558 lbs. Final flow pressure 671 lbs.  
Initial shut-in pressure 13-14. Final shut-in pressure 839 lbs.  
Initial hydrostatic and final 2240. Bottom hole temperature 102°.

Analyzed as 4.9% helium.

Now coring below 4710. Will cut continuous core and test Aneth.

431

49

October 10, 1967

Re: Humble #2-88 Navajo  
Permit 431

Bill Green, Humble Oil & Refining, telephoned today. Advised they will start coring at 4560 and probably continually core to TD. Expect to reach McCrack by end of initial core run (probably 4580 feet). Will run a DST tonight or tomorrow at end of this core run. Have encountered 60 feet of sill.

10-5-67

Telcon Bill Green, Humble

Re: #2-88 Navajo  
Permit 431

DST #1 from 4045 - 4075. Tool open 3 minutes. Shutin one hour. Opened two hours. Had weak blow. Shutin another two hours. No gas to surface.

Flowing pressure at atart and finish 112. Shutin pressure 615 shart and finish.

Recoverd 120 feet of gas cut mud and slight stain of oil. Bottom 30 feet had heavy gas

Going to drill another 20 feet and will run DST tomorrow.

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

Form approved.  
Budget Bureau No. 42-R356.5.

LAND OFFICE \_\_\_\_\_  
LEASE NUMBER 14-20-0603-8812  
UNIT \_\_\_\_\_

LESSEE'S MONTHLY REPORT OF OPERATIONS

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 September, 1967  
Agent's address P. O. Box 120 Company Humble Oil & Refining Company  
Denver, Colorado 80201 Signed JOHN R. CROUCH  
Phone 534-1251 Agent's title Dist. Administrative Supr.

SEC. AND 1/4 OF 1/4	TWP.	RANGE	WELL NO.	DAYS 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)
<b>NAVAJO TRACT 88 - ARIZONA PERMIT NUMBERS 421 &amp; 431.</b>										
SE SE Sec. 25	36N	29E	1	0						TD 3850', PBD 3550'. Temporarily shut in on 9-29-67 awaiting completion of drilling & testing Well #2.
SE NE Sec. 25	36N	29E	2	0						Drilling at 3553'.

**CONFIDENTIAL**

cc: 2 - Arizona Oil & Gas Conservation Commission.  
1 - Mr. Henry F. Pohlmann, Minerals Supr., Navajo Tribe.

NOTE.—There were No runs or sales of oil; No M cu. ft. of gas sold;  
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 9-331  
(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  GAS WELL  OTHER

2. NAME OF OPERATOR  
**Humble Oil & Refining Company**

3. ADDRESS OF OPERATOR  
**P. O. Box 120, Denver, Colorado 80201**

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements. See also space 17 below.)  
At surface  
**SE-NE (2150' PNL & 660' FEL) of Section 25**

5. LEASE DESIGNATION AND SERIAL NO.  
**14-20-0603-8812**

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

7. UNIT AGREEMENT NAME  
**-**

8. FARM OR LEASE NAME  
**Navajo Tract 88**

9. WELL NO.  
**2**

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

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA  
**Sec. 25-36N-29E - GASRM**

12. COUNTY OR PARISH  
**Apache**

13. STATE  
**Arizona**

14. PERMIT NO.  
**Arizona #431**

15. ELEVATIONS (Show whether DF, RT, GR, etc.)  
**8499' Ungraded Ground**

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 ACIDISE <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>Spud &amp; 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.)

**Drilling Contractor: Mesa Drillers  
P. O. Box 108  
Lubbock, Texas 79408**

Spudded 9-21-67. Drilled 13-3/4" hole to a TD of 736'. Ran 9-5/8" OD 32# casing, set at 736' and cemented with 800 sacks of regular cement plus 2% CaCl. Had good cement returns. Job complete 12 Midnite 9-22-67.

**CONFIDENTIAL**



cc: 2 - Arizona Oil & Gas Conservation Commission.  
1 - Mr. Henry F. Pohlmann, Minerals Supervisor, Navajo Tribe.

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

SIGNED **COPY (Original) J. ROY DORROUGH** TITLE **Dist. Supt.** DATE **9-25-67**  
**J. Roy Dorrough**

(This space for Federal or State office use)

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

\*See Instructions on Reverse Side

154

Humble 88.2

(Telephone  
9-18-67  
Mr. Farris)

Location. Waiting On Riv. Mesa Delg.  
Will probably spend about Friday.

48'

55

APPLICATION FOR PERMIT TO DRILL OR RE-ENTER

APPLICATION TO DRILL

RE-ENTER OLD WELL

Humble Oil & Refining Company  
NAME OF COMPANY OR OPERATOR

P. O. Box 120, Denver, Colorado 80201

Address City State

This information will be furnished when a contractor is selected.  
Drilling Contractor

Address

DESCRIPTION OF WELL AND LEASE

Federal, State or Indian Lease Number, or if fee lease, name of lessor <b>Navajo Tract 88 (14-20-0603-8812)</b>	Well number <b>2</b>	Elevation (ground) <b>8499' Ungraded Ground</b>
Nearest distance from proposed location to property or lease line: <b>660 feet</b>	Distance from proposed location to nearest drilling, completed or applied—for well on the same lease: <b>2470 feet</b>	
Number of acres in lease: <b>2560</b>	Number of wells on lease, including this well, completed in or drilling to this reservoir: <b>Two</b>	

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

Well location (give footage from section lines) Section—township—range or block and survey Dedication (Comply with Rule 105)  
**SE-NE 1/4 2150' ENL & 660' FEL) Sec. 25 Sec. 25-36N-29E - G&SRM 160 - (NE 1/4)**

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

Distance, in miles, and direction from nearest town or post office  
**Appr. 40 miles SW of Shiprock, New Mexico**

Proposed depth: **4100'** Rotary or cable tools: **Rotary** Approx. date work will start: **Road & location as soon as possible.**  
Bond Status: **Blanket Bond** Organization Report: **On file X Or attached** Filing Fee of \$25.00: **Attached X - Check No. 5582**

Remarks: **Mud Program: 0 - 800' Native mud with sufficient properties to maintain hole for safe drilling. 800' - TD - Low solids water base or air if conditions dictate.**  
**Testing: Possibly 3 cores in the Hermosa Formation. No DST's.**  
**Logs: IES & Gamma Ray/Sonic with Caliper from 800' to TD.**  
**Stimulation: Fracture treat if necessary.**

CERTIFICATE: I, the undersigned, under the penalty of perjury, state that I am the **Dist. Supt.** of the **Humble Oil & Refining Company** (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.

Signature: *J. Roy Dorrrough*  
Date: **August 31, 1967**

Permit Number: **431**  
Approval Date: **9-6-67**  
Approved By: *John Gannister*  
Notice: Before sending in this form be sure that you have given all information requested. Much unnecessary correspondence will thus be avoided.

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

RECEIVED  
SEP 6 1967  
STATE O & G  
COMM.

Form No. 3

- Operator shall outline the dedicated acreage for both oil and gas wells on the plat.
- 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.
- All distances shown on the plat must be from the outer boundaries of the Section.
- Is the Operator the only owner in the dedicated acreage outlined on the plat below? YES  NO
- 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 \_\_\_\_\_
- If the answer to question four is "no," list all the owners and their respective interests below:

Owner	Land Description
	<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>Name <u>J. Roy Dorrrough</u></p> <p>Position <u>Dist. Supt.</u></p> <p>Company <u>Humble Oil &amp; Refining Co.</u></p> <p>Date <u>August 31, 1967</u></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 <u>June 29, 1967</u></p> <p>Registered Professional Engineer and/or Land Surveyor</p> <p>See attached surveyor plat</p> <p>Certificate No. _____</p>

**PROPOSED CASING PROGRAM**

Size of Casing	Weight	Grade & Type	*Top	*Bottom	Cementing Depths	Sacks Cement
9-5/8"	32.30#	H-40	0	800'	800'	Circulate to surface. Sufficient to cover all pays.
7"	20#	J-55	0	4100'	4100'	

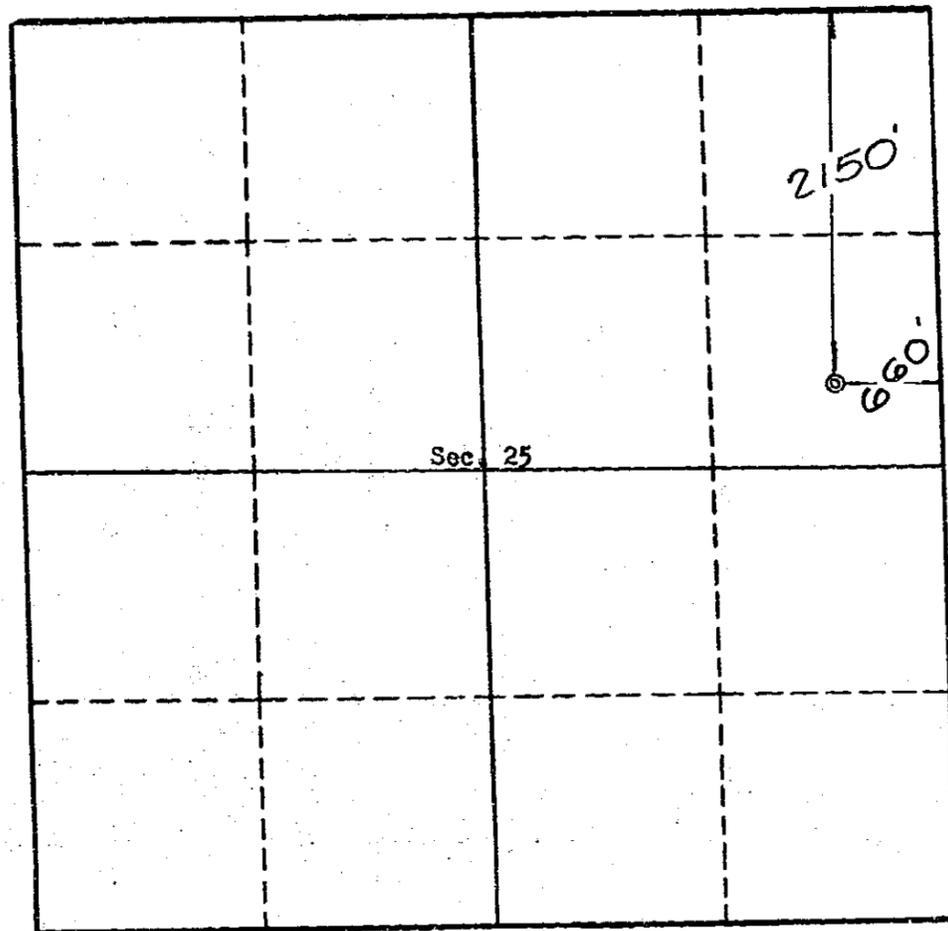
Company Humble Oil & Refining Company

Well Name & No. Navajo Tract 88 #2

Location 2150 feet from the North line and 660 feet from the East line.

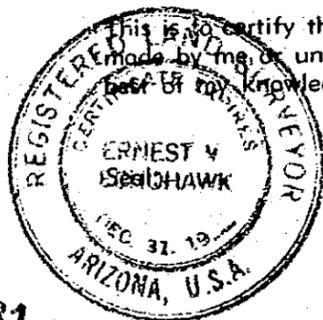
Sec. 25, T. 36 N., R. 29 E., G. & S. R. M., County Apache, Arizona

Ground Elevation 8499, ungraded.



Scale, 1 inch = 1,000 feet

Surveyed June 29, 1967



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



431



## PERMIT TO DRILL

This constitutes the permission and authority from the

OIL AND GAS CONSERVATION COMMISSION,  
STATE OF ARIZONA,

To: HUMBLE OIL & REFINING COMPANY  
(OPERATOR)

to drill a well to be known as

Humble #2 Navajo 88  
(WELL NAME)

located 2150' FNL and 660' FEL (SE4/NE4)

Section 25 Township 36N Range 29E, Apache County, Arizona.

The NE/4 of said

Section, Township and Range is dedicated to this well.

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

Issued this 6th day of September, 1967.

OIL AND GAS CONSERVATION COMMISSION

By John V. Bannister  
EXECUTIVE SECRETARY

PERMIT No 431

RECEIPT NO. 9519  
API 02-001-20055

State of Arizona  
Oil & Gas Conservation Commission  
Permit to Drill

FORM NO. 27

**DINEH-BI-KEYAH FIELD**

**Operator:** Mountain States Petroleum Corporation

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

**Amount:** \$325,000\*

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

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

**Permits covered by this bond posted with the BIA:**

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



Jane Dee Hull  
Governor

State of Arizona  
**Arizona Geological Survey**

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



Larry D. Fellows  
Director and State Geologist

December 1, 1997

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

431

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

Dear Ms. Roberts:

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

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

Please advise if we may be of further service.

Sincerely,

Steven L. Rauzi  
Oil & Gas Program Administrator

Enclosure

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

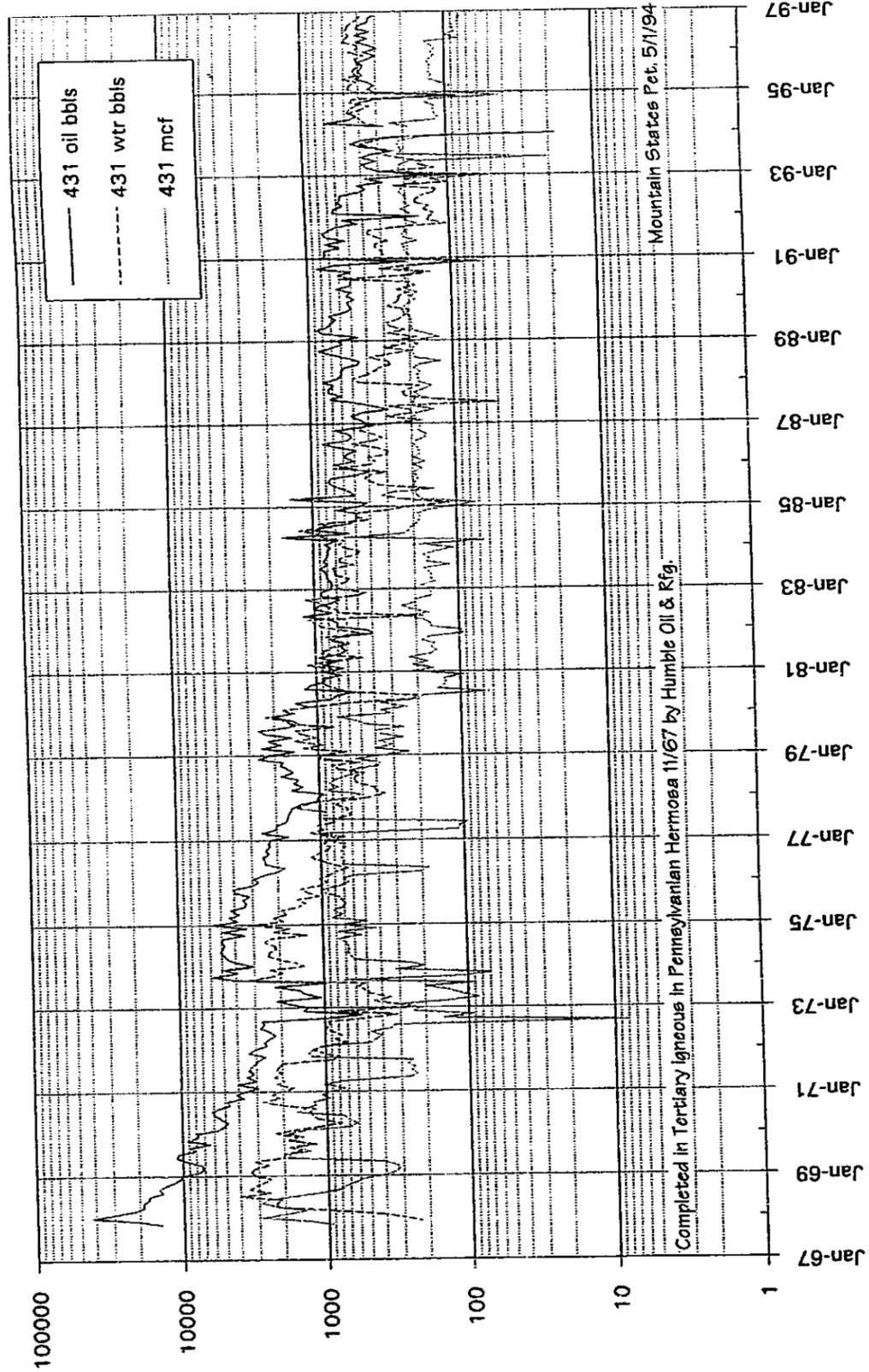
**CANCELLED**

ACTIVE

Permits covered by this bond:

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

MONTHLY PRODUCTION AT 2 NAVAJO-138 (431), ARIZONA: NOV 1967 - DEC 1996  
se ne 25 36n-29e, Dineh-bi-Keyah Field, Apache County





Fife Symington  
Governor

State of Arizona  
**Arizona Geological Survey**

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



Larry D. Fellows  
Director and State Geologist

June 8, 1994

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

Dear Ms. Burkhart:

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

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

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

Sincerely,

Steven L. Rauzi  
Oil & Gas Program Administrator

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

### CHANGES TO REPORTER INFORMATION

**OLD INFORMATION:**  
MMS OPERATOR CODE: X0217  
COMPANY NAME: KERR MCGEE CORPORATION

**NEW INFORMATION:**  
MMS OPERATOR CODE: X0274  
COMPANY NAME: MOUNTAIN STATES PETROLEUM CORP  
CONTACT NAME: RUBY WICKERSHAM  
STREET ADDRESS: 213 E. FOURTH  
CITY: ROSWELL  
STATE: NM ZIP CODE: 88201  
PHONE: 505 623-7184  
AREA CODE

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

COMPANY SOLD TO: \_\_\_\_\_ EFFECTIVE DATE: \_\_\_\_\_

LEASES / AGREEMENTS AFFECTED: NAVAJO # 88-2 (431) AZ OIL & GAS CONSERVATION COMMISSION

Dineh Bi Keyah Field - Apache County, Arizona JUN 8 1994

Lease #: 14-20-0603-8812 API #: 020012005500S1

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

SIGNATURE: Judy Buckhart  
DATE: 5/13/94

MAIL TO:  
MINERALS MANAGEMENT SERVICE  
ROYALTY MANAGEMENT PROGRAM  
P.O. BOX 25165 MS3122  
DENVER, CO 80225

P. O. BOX 1936

505 623-7184

**MOUNTAIN STATES PETROLEUM CORPORATION**

213 EAST FOURTH STREET  
ROSWELL, NEW MEXICO  
88202

June 6, 1994

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

**AZ OIL & GAS  
CONSERVATION COMMISSION**

JUN 8 1994

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

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

Dear Sir;

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

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

Sincerely,

*Judy Burkhardt*

Judy Burkhardt,  
Secretary

Enclosures

P. O. BOX 1936

505 623-7184

**MOUNTAIN STATES PETROLEUM CORPORATION**

213 EAST FOURTH STREET  
ROSWELL, NEW MEXICO  
88202

May 24, 1994

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

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

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

Dear Sir;

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

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

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

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

Sincerely,

*Judy Burkhart*

Judy Burkhart,  
Secretary

Attachment

CONSERVATION COMMISSION

MAY 31 1994

WA

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

November 5, 1973

PHONE  
806 376-7256

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

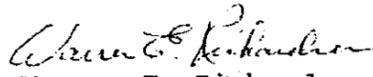
Attention: Mr. W. E. Allen  
Director

Dear Mr. Allen:

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

Yours truly,

KERR-McGEE CORPORATION

  
Warren E. Richardson  
District Manager  
Southwestern District

WER/mm

RECEIVED

NOV 13 1973

O & G CON. COM.

431

431



OFFICE OF

**Oil and Gas Conservation Commission**

STATE OF ARIZONA

4515 NORTH 7TH AVE.

PHOENIX, ARIZONA 85013

PHONE: (602) 271-5161

October 22, 1973

Ms. Kay Waller  
Petro-Well Libraries Inc.  
150 Security Life Building  
1616 Glenarm Place  
Denver, Colorado 80202

Re: October Current File Material

Dear Kay:

Enclosed is the current material for the month of October.

Data on File #588 - Humble Oil & Refining Company Well No. 1  
State (14)

Plugging Record on File #392 - Kerr-McGee Corporation Well No. 5

Completion Report on File #386 - Kerr-McGee Corporation Navajo  
No. 3-x

Completion Report on File #379 - Kerr-McGee Corporation Navajo  
No. 2

Completion Report on File #431 - Kerr-McGee Navajo Tract #88-2

Data on File #616 - Zoller & Danneberg Inc. Navajo E-2X

By certified mail you will receive logs on File #588 - Humble Oil  
and Refining Company Well No. 1 State (14).

Very truly yours,

W. E. Allen, Director  
Enforcement Section

Rhema Brandt  
Secretary to W. E. Allen

/rlb

Encs.

431

W.A.

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

PHONE  
806 376-7256

October 8, 1973

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

Attention: Mr. W. E. Allen

Dear Mr. Allen:

Enclosed is one copy each of a completed Form Number 4, Recompletion Report, for the Kerr-McGee Corporation Navajo Well Numbers 2 and 3-X, and Navajo Tract 88, Well Number 2 in the Dineh-bi-Keyah Field, Apache County, Arizona. All of these wells were reperforated and fractured.

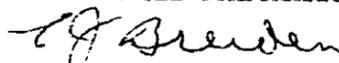
The Navajo Number 2 was originally perforated from 3,060' to 3,114' with two JHPF in the Hermosa. It was reperforated from 3,060' to 3,130' with two JHPF during the workover and fractured with 80,000 gallons of lease crude and 80,000# of 10-20 sand.

The Navajo Number 3-X was originally perforated from 3,437' to 3,457' with five JHPF in the Hermosa. It was reperforated from 3,437' to 3,477' with two JHPF during the workover and fractured with 77,674 gallons of lease crude and 80,000# of 10-20 sand.

The Navajo Tract 88, Number 2 was originally perforated 4,045' to 4,105' with one hole per three feet in the Hermosa. It was reperforated from 4,045' to 4,105' with two JHPF during the workover and fractured with 80,000 gallons of lease crude and 80,000# of 10-20 sand.

Sincerely yours,

KERR-McGEE CORPORATION



C. J. Breeden  
District Production Superintendent

CJB:lp

431

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OCT 10 1973  
O&G CON. COMM.

WA



**KERR-McGEE CORPORATION**

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

September 25, 1973

PHONE  
806 376-7256

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

Gentlemen:

Enclosed are two (2) completed copies of your Form Number 25 for the Kerr-McGee Corporation Navajo Tract 88 Well Number 2 in the Dineh-bi-Keyah Field, Apache County, Arizona. This is the subsequent report of reperforating and fracturing this well.

Sincerely yours,

KERR-McGEE CORPORATION

*C. J. Breeden*

C. J. Breeden  
District Production Superintendent

CJB/mm

Enclosures

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SEP 27 1973

O & G CONS. COMM.

431



OFFICE OF  
**Oil and Gas Conservation Commission**  
STATE OF ARIZONA  
4515 NORTH 7TH AVE.  
PHOENIX, ARIZONA 85013  
PHONE: (602) 271-5161

September 18, 1973

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

Dear Mr. Richardson:

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

This information will be considered confidential if you so desire.

Thank you for your cooperation.

Very truly yours,

W. E. Allen, Director  
Enforcement Section

WEA/rlb



**KERR-McGEE CORPORATION**

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

August 16, 1973

PHONE  
806 376-7256

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

Gentlemen:

Enclosed are two (2) completed copies of your Form 25 for the Kerr-McGee Corporation Navajo Tract 88 Well Number 2 in the Dineh-bi-Keyah Field, Apache County, Arizona.

The present perforations in this well are from 4,045' to 4,105' with one (1) hole per three (3) feet. Kerr-McGee proposes to reperfurate the interval from 4,045'-4,105' with two (2) HPF and fracture with 80,000 gallons of lease oil and 80,000# of 10-20 sand with a scale preventive in the treatment.

Work will commence in early September, 1973.

Sincerely yours,

KERR-McGEE CORPORATION

*C. J. Breeden*

C. J. Breeden  
District Production Superintendent

CJB/mm

Enclosures

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AUG 20 1973

O & G CONS. COMM.

431



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

February 23, 1973

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

Attention Mr. John Bannister

As advised in our letter of January 2, 1973, we are enclosing for your file one xerox copy each of approved Assignment of Oil and Gas leases on Contract Nos. 14-20-0603-8812 and 14-20-0603-8879. The Bureau of Indian Affairs furnished us a carbon copy of each of these Assignments retaining the originals for their files.

*B. G. Taylor*

B. G. Taylor

BGT/bs

Enclosures

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MAR 03 1973

O & G CONS. COMM.



UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF INDIAN AFFAIRS  
Navajo Area Office  
Window Rock, Arizona 86515

IN REPLY REFER TO:  
ARPM/Minerals

February 20, 1973

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

Attention: B. G. Taylor

Dear Mr. Taylor:

Enclosed are your copies of Assignment of Oil and Gas  
leases on Contract Nos. 14-20-0603-8812 and 14-20-0603-  
8879 which are approved effective February 15, 1973.

We have retained the original copies for our files.

Sincerely yours,

*Thomas J. Fitch*  
Realty Officer

Enclosures

RECEIVED

MAR 03 1973

O & G CONS. COMM.

431



OFFICE OF  
**Oil and Gas Conservation Commission**  
STATE OF ARIZONA  
4515 NORTH 7TH AVE.  
PHOENIX, ARIZONA 85013  
PHONE: (602) 271-5161

January 8, 1973

Mr. C. D. Williams  
District Manager  
Kerr-McGee Corporation  
P. O. Box 250  
Amarillo, Texas 79105

Re: Humble Oil & Refining Navajo Tract 88 and Tract 138  
Dineh-bi-Keyah Field, Apache County

Dear Mr. Williams:

In my telephone conversation with Mr. Breeden concerning the transferring of ownership on the above referenced leases from Humble to Kerr-McGee, we advised Mr. Breeden that we would need a copy of the instruments transferring ownership from Humble to Kerr-McGee or some other acceptable expression. Since talking with Mr. Breeden, we have notified him by letter dated January 2, 1973, that we would also need an affidavit from your bonding company accepting the responsibility of all the unplugged holes formerly belonging to Humble that your Company is now operating. We would appreciate this information as quickly as possible.

Attached are the approved copies of the Operator's Certificate of Compliance, Form 8.

Very truly yours,

W. E. Allen, Director  
Enforcement Section

WEA/r1b

Enc.



January 4, 1973

PHONE  
806 376-7256

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

Attention John Bannister,  
Executive Secretary

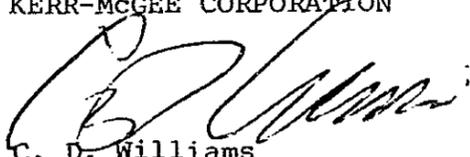
Dear Mr. Bannister:

As per the telephone conversation between Mr. Bill Allen with the Arizona Commission and Mr. Joe Breeden of Kerr-McGee's Amarillo office, Kerr-McGee Corporation took over operation of wells on Navajo Tract 138 and Navajo Tract 88, Dineh-bi-Keyah Field, Apache County, Arizona, from Humble Oil and Refining Company, effective January 1, 1973. Enclosed please find two copies of Form #8, Operator's Certificate of Compliance and Authorization to Transport Oil or Gas From Lease for Navajo Tract 138 and two copies for Navajo Tract 88.

Also enclosed for your files and records are two copies of U.S.G.S. Form 9-331, Sundry Notice and Reports on Wells, reporting the change in Operator for each of the wells on the two tracts. If additional information is needed at this time, please advise.

Yours very truly,

KERR-McGEE CORPORATION

  
C. D. Williams  
District Manager  
Southwestern District  
Production Department

mw

cc: Navajo Tribe  
Minerals Dept.

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JAN 08 1973

O & G CONS. COMM.



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

January 2, 1973

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

Attention Mr. John Bannister

This will confirm verbal advice by our Mr. C. J. Breeden to Mr. Bill Allen with the Arizona Oil & Gas Conservation Commission December 28, 1972, that Humble Oil & Refining Company has assigned to Kerr-McGee Corporation Lease #40678, Contract #14-20-0603-8812, covering Sections 25, 26, 35 and 36-T36N-R29E, Apache County, Arizona, and Lease #40915, Contract #14-20-0603-8876, covering Section 6-T35N-R30E, Apache County, Arizona, both being in the Navajo Tribal Indian Lands. Such Assignments effective 11:59 p.m., EST, December 31, 1972.

Fully executed copy of the Assignments will be furnished you when approved by the Bureau of Indian Affairs, Department of Interior. Necessary Arizona Oil & Gas Conservation Commission lease operating forms will be filed with you by our Amarillo, Texas office.

A handwritten signature in cursive script that reads 'B. G. Taylor'.

B. G. Taylor, Vice President  
Oil and Gas Production Division

BGT/bs

RECEIVED

JAN 03 1973

O & G CONS. COMM.

431

Arizona Oil & Gas  
Conservation Commission  
January 2, 1973  
Page -2-

cc: Kerr-McGee Pipeline Corporation  
Oklahoma City, Oklahoma

Mr. P. K. Hurlbut  
Navajo Tribe  
Window Rock, Arizona 86515

Humble Oil & Refining Company  
P. O. Box 1600  
Midland, Texas 79701

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JAN 05 1973  
O & G CON. COMM.



OFFICE OF  
**Oil and Gas Conservation Commission**  
STATE OF ARIZONA  
4515 NORTH 7TH AVE.  
PHOENIX, ARIZONA 85013  
PHONE: (602) 271-5161

January 2, 1973

Mr. C. J. Breeden  
Kerr-McGee Corporation  
P. O. Box 250  
Amarillo, Texas 79105

Re: Humble Navajo #138-1  
SE/NW Sec 6-T35N-R30E  
Apache County  
Permit No. 388

Humble Navajo #88-1  
SE/SE Sec 25-T36N-R29E  
Apache County  
Permit No. 421

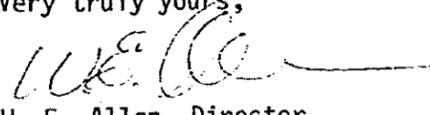
Humble Navajo #88-2  
SE/NE Sec 25-T36N-R29E  
Apache County  
Permit No. 431

Humble Navajo #88-3  
SE/NE Sec 36-T36N-R29E  
Apache County  
Permit No. 443

Dear Mr. Breeden:

Please have your bonding company issue a statement to this Commission that they are willing to accept the responsibility on the above referenced wells and any other holes that you may have acquired from Humble. This statement from the bonding company will need to name the wells and give the legal description. Your early attention to this matter will be appreciated.

Very truly yours,

  
W. E. Allen, Director  
Enforcement Section

WEA/r1b



OFFICE OF  
**Oil and Gas Conservation Commission**  
STATE OF ARIZONA  
4515 NORTH 7TH AVE.  
PHOENIX, ARIZONA 85013  
PHONE: (602) 271-5161

January 25, 1972

Mr. J. Roy Dorrrough  
Humble Oil & Refining Co.  
Denver, Colorado 80201

Re: Humble #1 Navajo Tract #138      Humble #2, Navajo 88  
SE/NW Section 6-T35N-R30E      SE/NE Section 25-T36N-R29E  
Apache County      Apache County  
Our File #388      Our File #431

Humble #3-88 Navajo  
SE/NE Section 36-T36N-R29E  
Apache County  
Our File #443

Dear Mr. Dorrrough:

As of this date we have not received the Well Status Report and Gas Oil Ratio Test, Form 5, on the above referenced wells. This quarterly report is due January 20, 1972. Please arrange to forward these reports at your earliest convenience.

Very truly yours,

W. E. Allen, Director  
Enforcement Section

WEA/rlb

Enc.

ACKNOWLEDGMENT OF CORPORATION

STATE OF Texas
COUNTY OF Harris ss:

Before me, a notary public, in and for said county and State on this 22 day of December, 1972
personally appeared H. L. Siegele
to me known to be the identical person who subscribed the name of the maker thereof to the foregoing instrument as its Vice President and acknowledged to me that he executed the same as his free and voluntary act and deed, and as the free and voluntary act and deed of such corporation, for the uses and purposes therein set forth.

My commission expires June 1, 1973

JERRY G. MIDDLESTON Notary Public.

ACKNOWLEDGMENT OF INDIVIDUAL 1, 1973

STATE OF
COUNTY OF ss:

Before me, a notary public, in and for said county and State, on this day of 19
personally appeared
to me known to be the identical person who executed the within and foregoing instrument, and acknowledged to me that executed the same as free and voluntary act and deed for the uses and purposes therein set forth.

My commission expires 19
Notary Public.

ACCEPTANCE BY ASSIGNEE

The assignee in the above and foregoing assignment, made subject to the approval of the Secretary of the Interior, hereby accepts such assignment and agrees to fulfill all the obligations, conditions, and stipulations in said described indenture of lease, when assigned, and the rules and regulations of the Secretary of the Interior applicable thereto, and to furnish proper bond guaranteeing a faithful compliance with said lease and this agreement.

IN WITNESS WHEREOF, the said assignee has hereunto set 113 hand and seal this 29th day of December, 1972.

ATTEST:

Assistant Secretary

KERR-LOGEE CORPORATION

By B. J. Taylor Vice President - B. G. Taylor

CONSENT OF SURETY

The, of
surety for
on the bond accompanying the lease above described, hereby consents to the assignment and transfer of said lease as above made and agrees that said bond shall remain in force and effect covering obligations of assignee.

Dated at this day of 19

DEPARTMENT OF THE INTERIOR
BUREAU OF INDIAN AFFAIRS

FEB 15 1973

APPROVED:

Area Director
GOVERNMENT PRINTING OFFICE

Humble No. 607386  
KM No. P689-73

LEASE No. 40678  
CONTRACT NO. 14-20-0603-8812

FORM 5-5429  
AUG. 1961

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF INDIAN AFFAIRS

ASSIGNMENT OF MINING LEASE

WHEREAS, the Secretary of the Interior or his authorized representative has heretofore approved  
oil and gas mining lease, dated October 12, 1972,  
entered into by and between Chairman, Navajo Tribal Council, lessor,  
and Humble Oil & Refining Company, lessee,

covering the following-described lands in the Navajo Tribal Indian Lands  
(Insert name of Reservation, Pueblo, Nation, etc., as needed)  
in the State of Arizona, County of Apache, to-wit:

All of Sections 25, 26, 35 and 36, Township 36 North, Range 29 East,  
G&SRM, Apache County, Arizona, containing 2560.00 acres, more or less.

Now, THEREFORE, for and in consideration of TEN DOLLARS (\$10.00) and other good  
and valuable considerations ~~to be hereinafter specified~~, the receipt of which is hereby acknowl-  
edged, the said Humble Oil & Refining Company  
the owner of the above-described lease, hereby bargains, sells, transfers, assigns, and conveys  
all of its right, title, and interest in and to said lease,

subject to the approval of the Secretary of the Interior or his authorized representative to Kerr-McGee  
Corporation, Kerr-McGee Building, Oklahoma City, Oklahoma 73102  
December 31, 1972 at 11:59 p. m., F. S. T., upon  
Said assignment to be effective from date of approval hereby by the Secretary  
of the Interior or his authorized representative.

IN WITNESS WHEREOF, the said assignor has hereunto set its hand and seal, this 12  
day of December, 1972.

ATTEST:  
J. F. P...  
Assistant Secretary

HUMBLE OIL & REFINING COMPANY  
By: [Signature]  
Vice President



# HUMBLE OIL & REFINING COMPANY

DENVER, COLORADO 80201

PRODUCTION DEPARTMENT  
DENVER DISTRICT  
J. R. DORROUGH  
SUPERINTENDENT

September 24, 1969

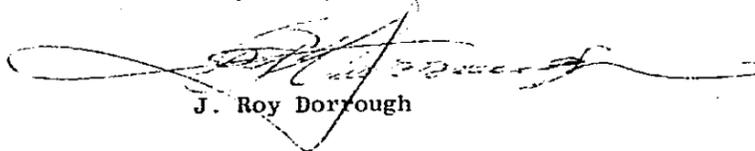
POST OFFICE BOX 120  
TELEPHONE 534-1251

Mr. John Bannister  
Executive Secretary  
Oil & Gas Conservation Commission  
State of Arizona  
1624 West Adams, Room 202  
Phoenix, Arizona

Dear Mr. Bannister:

Attached are two copies of Reservoir Pressure Report (Form No. 7) covering recent shut in subsurface pressures recorded at Navajo Tract 138 Well No. 1 and Navajo Tract 88 Well No. 2, Dineh bi Keyah Field, Apache County, Arizona.

Very truly yours,



J. Roy Dorrough

Attach:



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OFFICE OF  
**Oil and Gas Conservation Commission**  
STATE OF ARIZONA  
ROOM 202  
1824 WEST ADAMS  
Phoenix, Arizona 85007  
PHONE: 271-5161

July 18, 1969

Mr. R. Brand  
Section Head-Oil & Gas Accounting  
Humble Oil & Refining Company  
2000 Classen Center - North Building  
Oklahoma City, Oklahoma 73106

Re: Monthly Producer's Report

Dear Mr. Brand:

Please review the attached report and submit a corrected report if such be needed. We are particularly interested in the relationship between gas produced and the disposition of the gas; specifically, how much was flared and how much was used on the lease. A prompt reply will be a favor.

Yours truly,

James A. Lambert  
Administrative Assistant

JAL:jf

Enc.

July 23, 1969

Gentlemen:

The amount shown as used and flared is a lease total; for Navajo Tract 88. All future reports will designate this as a lease total.

George P. Harber, Jr.  
Oil & Gas Accounting Section



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MONTHLY PRODUCERS REPORT

Field Ditch Rd Keyah  
 County Apache

Field Office Address Box 1, Hiram, N. Mexico

Month June, 1969

Humble Oil & Refining Company  
 2600 Oregon Street, North Platte,  
 Nebraska 68901 - 73106

Federal, State or Indian Lease Number or Lessor's Name if Fee Lease	Well No.	State Permit No.	Status Code	Actual Oil Produced	Bbls. Water Produced	Gas Produced MCF	Produced Systems	Disposition of Gas - MCF		Disposition of Oil - Bbls.			
								Sold	Other	Oil on Hand Beg. of Month	Bbls. to Transporter	Other	Oil on Hand End of Month
Apache Tract 88 L-20-0503-8812	2	L31	P C	10996	2032	1869	38	—	—	0	10996	101	0
Apache Tract 88 L-20-0603-8812	3	L13	P O	1378	104	2205	30	2833	1341	0	1378	101	0
Apache Tract 138 L-20-0603-8876	1	388	P O	9758	302	2849	30	1871	978	0	9758	101	0
								4074	—				
								2833	1341				
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OFFICE OF  
**Oil and Gas Conservation Commission**  
STATE OF ARIZONA  
ROOM 202  
1624 WEST ADAMS  
Phoenix, Arizona 85007  
PHONE: 271-5161

April 10, 1969

Mr. J. Roy Dorrrough  
Humble Oil & Refining Company  
P. O. Box 120  
Denver, Colorado 80201

Re: Humble #1 Navajo Tract 138  
Humble #2 Navajo 88  
Humble #2 Navajo 88  
Humble Navajo #1-E  
Humble Navajo #1

Our Permit 388 X  
Our Permit 431 X  
Our Permit 448 X  
Our Permit 60 X  
Our Permit 28 X

Recd 4/14/69

Dear Mr. Dorrrough:

This is in reference to our reminder letters dated March 2 and February 28. Please furnish this Commission a Gas-Oil-Ratio Test on each of the captioned wells.

Yours truly,

James A. Lambert  
Administrative Assistant

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# HUMBLE OIL & REFINING COMPANY

DENVER, COLORADO 80201

DENVER DISTRICT

March 24, 1969

POST OFFICE BOX 129



Mr. John Bannister  
Arizona Oil & Gas Conservation Commission  
1624 West Adams - Suite 202  
Phoenix, Arizona 85007

Dear Mr. Bannister:

Attached please find Bureau of Mines "Report of Analysis" of gas samples on all wells drilled by Humble Oil & Refining Company in the Dineh bi Keyah Area, Apache County, Arizona.

Well Name & No.	No. of Reports
Navajo Tract 87 #1-401	1
Navajo Tract 83 #1-431	3
Navajo Tract 83 #2-431	4
Navajo Tract 83 #3-443	1
Navajo Tract 140 #1-393	3
Navajo Tract 151 #1-454	3

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These reports should complete all records on the well in this area. Analysis were not made on wells not listed above.

Very truly yours,

*J. Roy Dorrrough*  
J. Roy Dorrrough  
Dist. Supt.

Attach.

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○ y - Chrono Log  
x - Lambert Log

March 3, 1938

Mr. J. Roy Burroughs  
Humble Oil & Refining Company  
P. O. Box 136  
Denver, Colorado 80201

Re: Humble Oil Savano Prod. Les X-388  
Humble Oil Savano Co. X-431  
Humble Oil Savano X-443

Dear Mr. Burroughs:

We remind you that Rule 501, paragraph 2, of our Rules and Regulations directs the operator to make a semi-annual gas-oil test of each producing oil well. The next test should be taken in March, 1938, and reported to this office by April 15, 1938.

Enclosed are forms for your convenience.

Yours truly,

James L. Lassery  
Administrative Assistant

jl

Enc.

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November 28, 1967

Humble Oil & Refining Company  
P.O. Box 120  
Denver, Colorado 80201

Attention: Mr. J. Roy Dorrough, District Superintendent

Gentlemen:

Enclosed are the following:

1. A supply of the revised Monthly Producers Report which supersedes the previous individual oil and gas production forms. Use of these revised forms should begin immediately.
2. Permit to Drill, and supporting papers, for the Humble #3-88 Navajo.
3. Authorization to Transport Oil or Gas From Lease, executed November 22, 1967 (Tract 88), changing the transporter.

In reviewing our files it is noted that the Humble #1-88 Navajo was temporarily abandoned September 29, 1967, and that sometime during the month of October you report "Testing interval of 3407-73'."

The file on the Humble #2-88 Navajo reflects that in October you "Tested interval 4626-86' . . . now running pressure buildup." BHP report through November 10, 1967 has been received.

As you are aware, this Commission should be kept current informed as to operations on any well within the State of Arizona. Therefore, will you file immediately the information necessary to reflect your operations to bring these files to a current status, as well as the reports of IP, GOR, and well completion.

Your cooperation is appreciated.

Very truly yours,

John Bannister  
Executive Secretary  
mr

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*Mr. John Bannister*

KAS / FARMINGTON, NEW MEXICO

Associated with Donald Owens Co.

P. O. Box 5247  
Midland, Texas 79702

November 14, 1967

Humble Oil & Refining Co.  
Production Dept.  
P. O. Box "I"  
Farmington, New Mexico

Attention: Mr. H. L. Farris

Subject: Build Up Measurement  
Navajo Tract 88 No. 2  
Dineh Bi Keyah Field  
Apache County, Arizona  
Our File No. 2-2536-BU

Gentlemen:

Attached hereto are the results of a build up measurement which was made on the above captioned well November 9 through November 10, 1967.

The data presented are in tabular and graphical form.

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

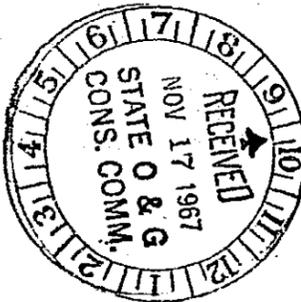
Respectfully submitted,

TEFTELLER, INC.

*Neil Tefteller*  
Neil Tefteller

NT:cc

4cc Box 120  
Denver, Colorado



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Serving the Permian Basin & Rocky Mountain Area



# HUMBLE OIL & REFINING COMPANY

DENVER, COLORADO 80201

DENVER DISTRICT

August 31, 1967

POST OFFICE BOX 120

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

Attention: Mr. John Bannister

Gentlemen:

By this letter we request the Oil and Gas Conservation Commission,  
State of Arizona, to keep all information on the following well confi-  
dential:

Navajo Tract 88 No. 2  
SE NE Section 25-36N-29E  
Apache County, Arizona

All reports on this well will be clearly marked "CONFIDENTIAL."  
Your cooperation will be greatly appreciated.

If any additional information is needed, please notify us and  
it will be furnished.

Very truly yours,

  
J. Roy Derrough  
District Superintendent

cc: United States Geological Survey  
Navajo Tribe - Mr. Henry F. Pohlmann



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