

CONFIDENTIAL

Release Date 12-31-67

4-12-71

P-W

HUMBLE #1 NAVAJO-87  
SE NE 23-36N-29E Apache County 401

COUNTY Apache AREA 15 mi SW Red Rock LEASE NO. Nav 14-20-0603-8811  
Dineh bi Keyah Field

WELL NAME HUMBLE #1 NAVAJO-87

LOCATION SE NE SEC 23 TWP 36N RANGE 29E FOOTAGE 1830 FNL 880 FEL  
 ELEV 8960 GR 8980 KB SPUD DATE 4-28-67 STATUS P&A TOTAL DEPTH 5505'  
5473'

CONTRACTOR Loffland Brothers Drilling

CASING SIZE	DEPTH	CEMENT	LINER SIZE & DEPTH	DRILLED BY ROTARY
9 5/8	1350	1100 Sks	NA	<input checked="" type="checkbox"/>
4 1/2	5505	325 Sks		<input type="checkbox"/>

DRILLED BY CABLE TOOL   
 PRODUCTIVE RESERVOIR   
 INITIAL PRODUCTION Abd. 10-16-69

FORMATION TOPS	DEPTHS	SOURCE		REMARKS
		L.L.	E.L.	
Coconino	2352'	X	x	
Cutler	3053			
Hermosa	4195'			
Ismay	4396'			
Desert Creek	4503'			
Akah	4559			
Mississippian	4909'			
Devonian	5076'			
McCracken	5212'			
Aneth	5347'			
Pre-Cambrian	5464'			

ELECTRIC LOGS	PERFORATED INTERVALS	PROD. INTERVALS	SAMPLE LOG <u>Am Strat</u>
Comp. Formation Density			SAMPLE DESCRP.
IE, Sonic-GR			SAMPLE NO. <u>1438*</u>
			CORE ANALYSIS <input checked="" type="checkbox"/>
			DSTs
			*Lucson 2091

REMARKS \_\_\_\_\_

APP. TO PLUG   
 PLUGGING REP.   
 COMP. REPORT

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

BOND CO. American Insurance Company BOND NO. 5-10-11-58  
 DATE \_\_\_\_\_  
 BOND AMT. \$ 25,000 CANCELLED 3-16-98 ORGANIZATION REPORT 3-22-67  
 FILING RECEIPT 9493 LOC. PLAT  WELL BOOK  PLAT BOOK   
 API NO. 02-001-20025 DATE ISSUED 4-25-67 DEDICATION NE/4

PERMIT NUMBER 401 **CONFIDENTIAL**  
 Release Date 12-13-67  
 (over)



## WELL COMPLETION OR RECOMPLETION REPORT AND WELL LOG

DESIGNATE TYPE OF COMPLETION:

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

### DESCRIPTION OF WELL AND LEASE

Operator: **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: **14-20-0603-8811 - Navajo Tract 87** Well Number: **1** Field & Reservoir: **Wildcat**

Location: **SE NE (1830' FNL & 880' FEL) of Sec. 23** County: **Apache**

Sec. TWP-Range or Block & Survey: **Sec. 23-36N-29E - G&SRM**

Date spudded: **4-28-67** Date total depth reached: **5-23-67** Date completed, ready to produce: **Temp. SI 5-30-67** Elevation (DE, REB, RT or Gr.): **8980' KB** Elevation of casing hd. flange: **8960'**

Total depth: **5505'** P.B.T.D.: **5473'** Single, dual or triple completion?: **-** If this is a dual or triple completion, furnish separate report for each completion.

Producing interval (s) for this completion: **No completion attempt made pending gas market** Rotary tools used (interval): **0-5505'** Cable tools used (interval): **None**

Was this well directionally drilled?: **No** Was directional survey made?: **-** 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: **June, 1967**

### 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#	1350'	1100	None
Production	8-3/4"	4-1/2"	9.5#	5505'	325	None

### TUBING RECORD

### LINER RECORD

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

### PERFORATION RECORD

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

Number per ft.	Size & type	Depth Interval	Am't. & kind of material used	Depth Interval
<b>No completion attempt made pending gas market.</b>				

### INITIAL PRODUCTION

Date of first production: **None - DST Only** Producing method (indicate if flowing, gas lift or pumping—If pumping, show size & type of pump):

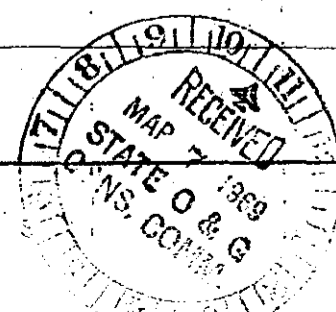
Date of test	Hrs. tested	Choke size	Oil prod. during test	Gas prod. during test	Water prod. during test	Oil gravity
			bbis.	MCF	bbis.	* API (Corr)

Tubing pressure	Casing pressure	Cal'ed rate of Production per 24 hrs.	Oil	Gas	Water	Gas-oil ratio
			bbis.	MCF	bbis.	

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

CERTIFICATE: I, the undersigned, under the penalty of perjury, state that I am the **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: **2-21-69** Signature: **J. Roy Dorrrough**



Permit No. **401** STATE OF ARIZONA OIL & GAS CONSERVATION COMMISSION Well Completion or Recompletion Report and Well Log Form No. 4 File One Copy

**DETAIL OF FORMATIONS PENETRATED**

Formation	Top	Bottom	Description*
Coconino	2352'	3053'	
Cutler	3053'	4195'	
Hermosa	4195'	4396'	
Ismay	4396'	4503'	
Desert Creek	4503'	4559'	
Akah	4559'	4909'	
Mississippian	4909'	5076'	
Devonian	5076'	5212'	
McCracken	5212'	5347'	
Aneth	5347'	5464'	
Pre-Cambrian	5464'	5505' TD	

401

The above tops vary slightly from those reported on report of 6-2-67 which were preliminary picks from field prints.

DST #1 - 5225-5505' - Misrun, packer failed.

DST #2 - 5195-5505' - Misrun, packer failed.

DST #3 - 5231-5505' - Shut in 1 hour, opened to flow 2 hours and 40 minutes, final shut in 5 hours and 20 minutes. Flowed gas at stabilized rate of 605 MCFGPD. HH 2409-2396. FP 242-87, SIP 1597-960. Gas would not burn. Analysis of gas shows helium content of 5.73%.

Core #1 - 5232-45', recovered 12'. Sandstone, buff, very hard, dense, very fine grained, calcareous and silica cement, fused.

Core #2 - 5268-88', recovered 19½'. 12' as above. 8' shale, red & green, dolomitic, sandy.

Core #3 - 5288-5344'. Shale, red & green, dolomitic, sandy.

Core #4 - 5344-51'. 4' shale as above, 1' dolomite, cobbles and 2' dolomite, slightly sandy.

\* 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.

**PLUGGING RECORD**

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 gas lease. <b>14-20-0603-0011 - Navajo Tract 87</b>		Well No. <b>1</b>	Field & Reservoir <b>Dineh bi Keyah</b>	
Location of Well <b>SE NE (1830' FNL &amp; 880' FEL) of Section 23-36N-29E - G&amp;SRM</b>		Sec-Twp-Rge or Block & Survey	County <b>Apache</b>	
Application to drill this well was filed in name of <b>Humble Oil &amp; Refining Co. - Navajo Tract 87</b>		Has this well ever produced oil or gas <b>No</b>	Character of well at completion (initial production) Oil (bbls/day)   Gas (MCF/day) <b>Casing was never perforated.</b>	Temp. Abd. <b>Non Commercial</b>
Date plugged: <b>10-16-69</b>	Total depth <b>5505'</b>	Amount well producing when plugged: Oil (bbls/day)   Gas (MCF/day)   Water (bbls/day) <b>None ;   None   None</b>		
Name of each formation con- taining oil or gas. Indicate which formation open to well- bore at time of plugging	Fluid content of each formation	Depth interval of each formation	Size, kind & depth of plugs used Indicate zones squeeze cemented, giving amount cement	
<b>Casing was never perforated for testing.</b>			<b>See attached copy of U.S.G.S Report for complete plugging summary.</b>	

**CASING RECORD**

Size pipe	Put in well (ft.)	Pulled out (ft.)	Left in well (ft.)	Give depth and method of parting casing (shot, ripped, etc.)	Packers and shoes
4-1/2"	5505'	None	5505'	-	-
9-5/8"	1350'	None	1350'	-	-

Was well filled with mud-laden fluid, according to regulations?  
**Yes**

Indicate deepest formation containing fresh water.  
**Chuska**

**NAMES AND ADDRESSES OF ADJACENT LEASE OPERATORS OR OWNERS OF THE SURFACE**

Name	Address	Direction from this well:
<b>Kerr-McGee Oil Company</b>	<b>Oklahoma City, Oklahoma</b>	<b>East</b>
<b>No other adjacent operators.</b>		
<b>Navajo Tribe of Indians owns all surface.</b>		

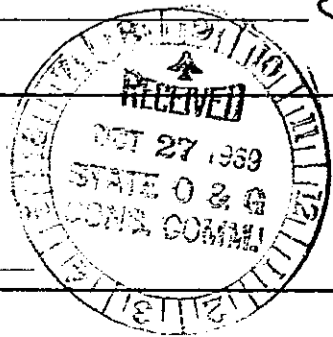
In addition to other information required on this form, if this well was plugged back for use as a fresh water well, give all pertinent details of plugging operations to base of fresh water sand, perforated interval to fresh water sand, name and address of surface owner, and attach letter from surface owner authorizing completion of this well as a water well and agreeing to assume full liability for any subsequent plugging which might be required.

Use reverse side for additional detail.

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 10-24-69

Signature J. Roy Dorrrough



STATE OF ARIZONA  
OIL & GAS CONSERVATION COMMISSION  
Plugging Record  
File One Copy

Permit No. 401

Form No. 10

APPLICATION TO ABANDON AND PLUG

FIELD Dineh bi Keyah  
OPERATOR Humble Oil & Refining Company ADDRESS P. O. Box 120, Denver, Colorado 80201  
Federal, State, or Indian Lease Number  
or Lessor's Name if Fee Lease 14-20-0603-8811 - Navajo Tract 87 WELL NO. 1  
SURVEY 36N-29E G&SRM SECTION 23 COUNTY Apache  
LOCATION SE NE (1830' FNL & 880' FEL) of Section 23

TYPE OF WELL Non Commercial - Temp. Abandoned TOTAL DEPTH 5505' - PHTD 5473'  
(Oil, Gas or Dry Hole)

ALLOWABLE (If Assigned)

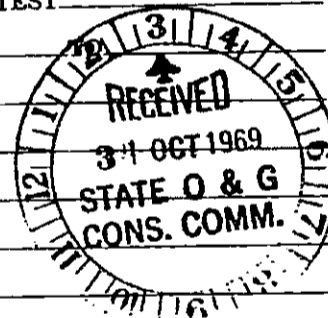
LAST PRODUCTION TEST OIL \_\_\_\_\_ (Bbls.) WATER \_\_\_\_\_ (Bbls.)  
GAS \_\_\_\_\_ (MCF) DATE OF TEST \_\_\_\_\_

PRODUCING HORIZON None PRODUCING FROM \_\_\_\_\_

1. COMPLETE CASING RECORD

Surface - 9-5/8" 32# set at 1350'.

Production - 4 1/2" 9.5# set at 5505'.



2. FULL DETAILS OF PROPOSED PLAN OF WORK See attached well bore sketch.

A regulation Dry Hole Marker will be installed.

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

DATE COMMENCING OPERATIONS Immediately after approval.

NAME OF PERSON DOING WORK Mr. H. L. Farris ADDRESS P. O. Box "I", Farmington, N.M. 87401

CORRESPONDENCE SHOULD BE SENT TO \_\_\_\_\_  
Name F. Roy Dorrrough  
Dist. Supt.

Title \_\_\_\_\_  
Address P. O. Box 120, Denver, Colorado 80201  
Date 9-30-69

Date Approved 10-6-69  
STATE OF ARIZONA  
OIL & GAS CONSERVATION COMMISSION  
By: John J. Gannister

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

Permit No. 401

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

Form approved.  
Budget Bureau No. 42-R356.5.  
LAND OFFICE \_\_\_\_\_  
LEASE NUMBER 14-20-0603-8811  
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, 1969.  
Agent's address P. O. Box 120 Company Humble Oil & Refining Company  
Denver, Colorado 80201 Signed [Signature]  
Phone 534-1251 Agent's title Dist. Supt.

SEC. AND 1/4 OF 1/4	TWP.	RANGE	WELL NO.	DATE PRODUCED	BARRELS OF OIL	GRAVITY	CU. FT. OF GAS (In thousands)	GALLONS OF GASOLINE RECOVERED	BARRELS OF WATER (If none, so state)	REMARKS (If drilling, depth; if shut down, cause; date and result of test for gasoline content of gas)
<b>NAVAJO TRACT 87 - ARIZONA PERMIT NO. 401</b>										
Sec. 23 SE NE 4	36N	29E	1	0						Well plugged and abandoned 10-16-69.
<b>FINAL REPORT</b>										

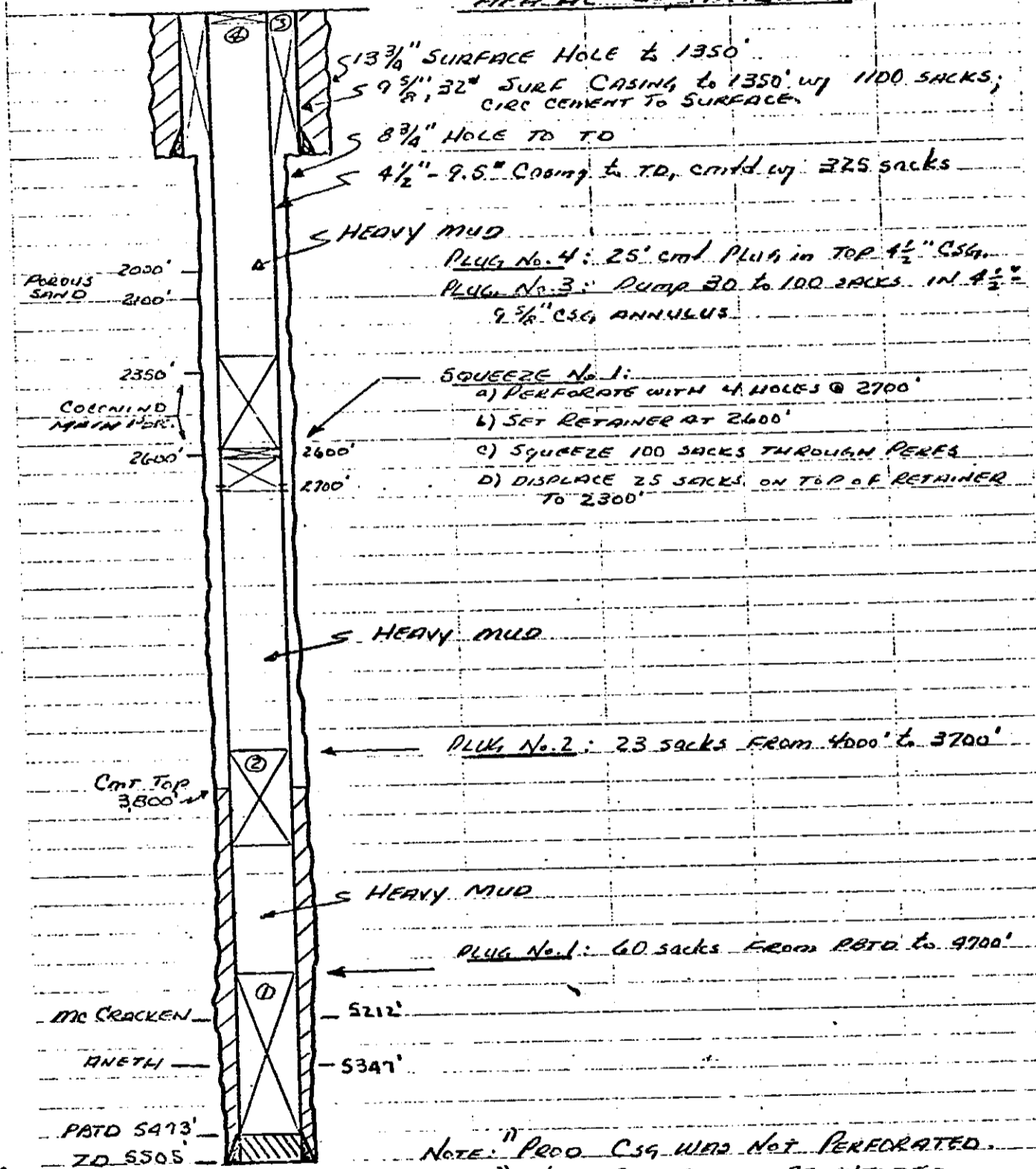
cc: 2 - Arizona Oil & Gas Conservation Commission  
1 - Minerals Supervisor - Navajo Tribe



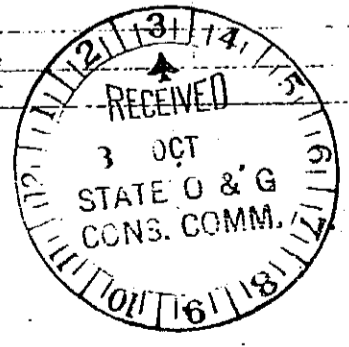
NOTE.—There were No runs or sales of oil; No M cu. ft. of gas sold;

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.

HUMBLE OIL & REFINING Co.  
 PROPOSED PLUGGING PROCEDURE  
 NAVHOD TR. 87, WELL No. 1  
 SE NE SEC 23-36N-29E  
 ARIZONA CO. ARIZONA



NOTE: 1) PROD. CSG. WAS NOT PERFORATED.  
 2) STEEL PLATE WILL BE WELDED  
 ACROSS TOP OF 4 1/2\" Casing AND  
 CASING ANNULUS. CASING HEAD  
 SIDE OUTLETS WILL BE CAPPED WITH  
 WELDED PLATES.



461

6

Form 9-311  
(May 1983)

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

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

Form approved.  
Budget Bureau No. 42-R1424.

SUNDRY NOTICES AND REPORTS ON WELLS

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

5. LEASE DESIGNATION AND SERIAL NO. 14-20-0603-8811	
6. IF INDIAN, ALLOTTEE OR TRIBE NAME Navajo	
7. UNIT AGREEMENT NAME -	
8. FARM OR LEASE NAME Navajo Tract 87	
9. WELL NO. 1	
10. FIELD AND POOL, OR WILDCAT Dineh bi Keyah	
11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA Sec. 23-36N-29E - G&SRM	
12. COUNTY OR PARISH Apache	13. STATE Arizona
14. PERMIT NO. Arizona #401	15. ELEVATIONS (Show whether DF, RT, CR, etc.) 8980' 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"/>	REPAIRING WELL <input type="checkbox"/>
FRACTURE TREAT <input type="checkbox"/>	MULTIPLE COMPLETE <input type="checkbox"/>	FRACTURE TREATMENT <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
SHOOT OR ACIDIZE <input type="checkbox"/>	ABANDON* <input type="checkbox"/>	SHOOTING OR ACIDIZING <input type="checkbox"/>	ABANDONMENT* <input checked="" type="checkbox"/>
REPAIR WELL <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	(Other) <input type="checkbox"/>	

(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.)\*

Ran tubing to PBTD 5473'. Displaced water out of casing with mud. Placed cement plug (60 sx) 5473-4700'. Pulled tubing to 4000'. Placed 23 sx cement plug 4000-3700'. Pulled tubing completely out of hole. Ran in with Schlumberger gun and found top of cement at 3686'. Pulled gun up to 2700'. Shot 3 holes around casing. Ran tubing and 4 1/2" permanent type cement retainer and set at 2600'. Squeezed in 100 sx cement through perforations. Maximum pressure 1500 psi, minimum pressure 250 psi. Pulled loose from retainer and put 25 sx cement plug on top of retainer. Pulled tubing. Left 1 joint in top of 4 1/2" casing. Filled 4 1/2" casing 31' to surface with cement. Pulled joint out. Pumped 110 sx cement through bradenhead between 4 1/2" and 9-5/8" surface casing. Maximum pressure 250#, 10-12-69. On 10-16-69 added 50 sx cement to annulus between 4 1/2" and 9-5/8". Checked later - annulus standing full of cement.

Welded a steel plate across top of 4 1/2" casing and casing annulus. Capped casing head side outlets with welded steel plates. Regulation dry hole marker welded onto steel plate. Job complete 10-16-69.

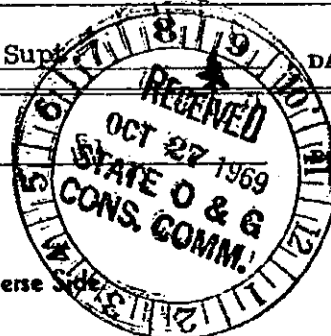
Location is cleaned and ready for inspection.

cc: Mr. Perry K. Hurlbut - Minerals Supervisor - Navajo Tribe  
Mr. Cato Sells - Water Development - Navajo Tribe

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

SIGNED J. Roy Dorrrough TITLE Dist. Sup DATE 10-24-69  
(This space for Federal or State office use)

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



\*See Instructions on Reverse

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

Form approved.  
Budget Bureau No. 42-8356.5.

LAND OFFICE \_\_\_\_\_  
LEASE NUMBER 14-20-0603-8811  
UNIT \_\_\_\_\_

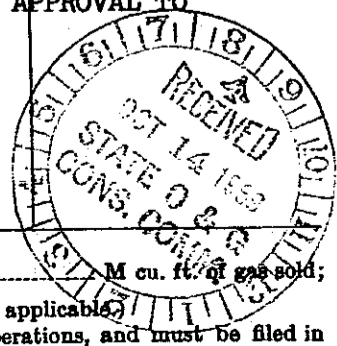
**LESSEE'S MONTHLY REPORT OF OPERATIONS**

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, 1969,  
Agent's address P. O. Box 120 Company Humble Oil & Refining Company  
Denver, Colorado 80201 Signed \_\_\_\_\_  
Phone 534-1251 Agent's title Dist. Supt.

SEC. AND 1/4 OF 1/4	TWP.	RANGE	WELL NO.	DATE PRODUCED	BARRELS OF OIL	GRAVITY	CU. FT. OF GAS (In thousands)	GALLONS OF GASOLINE RECOVERED	BARRELS OF WATER (If none, so state)	REMARKS (If drilling, depth; if shut down, cause; date and result of test for gasoline content of gas)
<b>NAVAJO TRACT 87 - ARIZONA PERMIT NO. 401</b>										
Sec. 23 SE NE	36N	29E	1	0						Operations suspended 5-30-67. See Sundry Notice dated 6-2-67. No work has been done since this date.
<b>SUNDRY NOTICE APPLICATION TO PLUG AND ABANDON SUBMITTED 9-30-69.</b>										
NOTE: CONTINUE IN TEMPORARY ABANDONED STATUS PER LETTER DATED 6-15-67 AND YOUR APPROVAL OF 6-20-67. ALSO YOUR LETTER DATED 6-12-69 GRANTING APPROVAL TO CONTINUE IN THIS STATUS UNTIL 6-16-70.										
cc: 2 - Arizona Oil & Gas Conservation Commission 1 - Minerals Supervisor - 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.



UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

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

LAND OFFICE \_\_\_\_\_  
LEASE NUMBER 14-20-0603-8811  
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 August, 1969,  
Agent's address P. O. Box 120 Company Humble Oil & Refining Company  
Denver, Colorado 80201 Signed \_\_\_\_\_  
Phone 534-1251 Agent's title Dist. Supt.

SEC. AND 1/4 OF 1/4	TWP.	RANGE	WELL NO.	DATE PRODUCED	BARRELS OF OIL	GRAVITY	CU. FT. OF GAS (In thousands)	GALLONS OF GASOLINE RECOVERED	BARRELS OF WATER (If none, so state)	REMARKS (If drilling, depth; if shut down, cause; date and result of test for gasoline content of gas)
<b>NAVAJO TRACT 87 - ARIZONA PERMIT NO. 401</b>										
4 <sup>v</sup> Sec. 23 SE NE	36N	29E	1	0						Operations suspended 5-30-67. See Sundry Notice dated 6-2-67. No work has been done since this date.
NOTE: CONTINUE IN TEMPORARY ABANDONED STATUS PER LETTER DATED 6-15-67 AND YOUR APPROVAL OF 6-20-67. ALSO YOUR LETTER DATED 6-12-69 GRANTING APPROVAL TO CONTINUE IN THIS STATUS UNTIL 6-16-70.										
cc: 2 - Arizona Oil & Gas Conservation Commission 1 - Minerals Supervisor - Navajo Tribe										

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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.

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

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

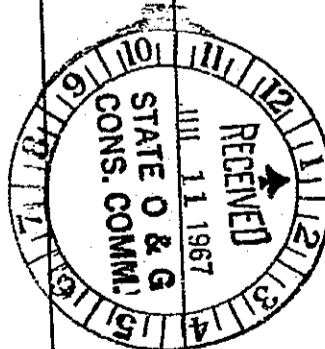
LAND OFFICE 14-20-0603-8811  
LEASE NUMBER \_\_\_\_\_  
UNIT \_\_\_\_\_

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

SEC. AND 1/4 OF 1/4	TWP.	RANGE	WELL NO.	DATA 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; data and result of test for gasoline content of gas)
<b>NAVAJO TRACT 87</b>										
Sec. 23 SE NE	36N	29E	1							<del>Temp. and 5-30-67.</del> TD 5505'.

**CONFIDENTIAL**



cc: 2 - Arizona Oil & Gas Conservation Commission  
1 - Mr. Henry F. Pohlman, 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.

etterette

TO	Oil & Gas Conservation Commission	LOCATION	1624 West Adams - Suite 202, Phoenix, Ariz. 85007
FROM	Humble Oil & Refining Company	LOCATION	P. O. Box 120, Denver, Colorado 80201
SUBJECT	Gas Analysis - Navajo Tract 87 #1	DATE	6-27-67

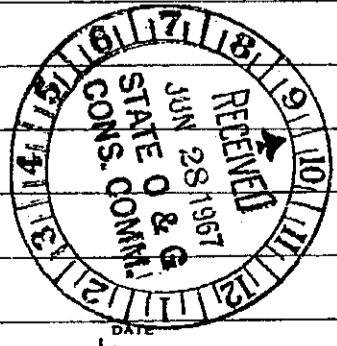
MESSAGE

Attached find Bureau of Mines analysis for the above well. This should be used in lieu of the one furnished with other data on 6-26-67 which was tabulated from phone information.

SIGNATURE *M. D. Smith*

REPLY

# 401



SIGNATURE

DATE

UNITED STATES DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

Form approved.  
Budget Bureau No. 42-R1424.

5. LEASE DESIGNATION AND SERIAL NO.  
14-20-0603-8811

6. IF INDIAN, ALLOTTEE OR TRIBE NAME  
Navajo

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME  
Navajo Tract 87 #1

9. WELL NO.  
1

10. FIELD AND POOL, OR WILDCAT  
Wildcat

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA  
Sec. 23-36N-29E G&SRM

12. COUNTY OR PARISH 13. STATE  
Apache Arizona

14. PERMIT NO.  
401 - Arizona

15. ELEVATIONS (Show whether OF, RT, OR, etc.)  
8960' GR & 8980' 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"/>	WATER SHUT-OFF	<input type="checkbox"/>
FRACTURE TREAT	<input type="checkbox"/>	FRACTURE TREATMENT	<input type="checkbox"/>
SHOOT OR ACIDIZE	<input type="checkbox"/>	SHOOTING OR ACIDIZING	<input type="checkbox"/>
REPAIR WELL	<input type="checkbox"/>	REPAIRING WELL	<input type="checkbox"/>
(Other)	<input type="checkbox"/>	(Other)	<input checked="" type="checkbox"/>
PULL OR ALTER CASING	<input type="checkbox"/>	ALTERING CASING	<input type="checkbox"/>
MULTIPLE COMPLETION	<input type="checkbox"/>	ABANDONMENT*	<input type="checkbox"/>
ABANDON*	<input type="checkbox"/>		
CHANGE PLANE	<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.)

Drilled 8-3/4" hole to TD of 5505'. Set 4 1/2" OD 9.5# J-55 casing at 5505' and cemented with 325 sacks 50-50 Pozmix cement with 2% gel and 25# Gilsomite per sack. Job complete 5-29-67. Top of cement by temperature survey 4100'.

CORE #1: 5232-45' - See attached core analysis.  
 CORE #2: 5268-80' - See attached core analysis.  
 5280-88' - Shale, red & green, dolomitic, sandy.  
 CORE #3: 5288-5344' - Shale as above.  
 CORE #4: 5344-51' - 4' Shale as above; 1' Dolomite, nodules and 2' Dolomite, slightly sandy.  
 DST #1: 5505-5225'. Miarum - packer failed.  
 DST #2: 5505-5195'. Miarum - packer failed.  
 DST #3: 5505-5231'. Shut in 1 hour, open 2 hours 40 minutes, shut in 5 hours 20 minutes. Flowed gas at stabilized rate of 605 MCFPD. IHP 2409#, ISIP 1597#, IFP 242#, FFP 87#, FSIP 960#, FRP 2396#. Gas would not burn. Preliminary analysis of gas by Bureau of Mines at Shiprock shows helium content of 5.73% on DST #3. Complete analysis will be furnished when available from Bureau of Mines. Operations will now be suspended for an indeterminate time pending possible market, and no completion attempt will be made at this time. You will be notified when operations resume and after completion or other disposition is completed a "Log of Well" will be submitted. One copy of Electric Logs furnished previously and one additional copy enclosed.

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

SIGNED BY: *H. L. Spiller*  
*Marvin D. Smith*

TITLE Exploration  
District Operations Supt.

DATE 6-2-67

APPROVED BY  
CONDITIONS OF APPROVAL, IF ANY:

TITLE DATE

cc: 2 - Arizona Oil & Gas Conservation Commission  
1 - Mr. Henry F. Pohlmann, \*See Instructions on Reverse Side  
Minerals Supr., Navajo Tribe

CONFIDENTIAL

*Well Not Complete.*

401

**Instructions**

General: This form is designed for submitting proposals to perform certain well operations, and reports of such operations when completed, as indicated, on Federal and Indian lands pursuant to applicable Federal law and regulations, and, if approved or accepted by any State, on all lands in such State, pursuant to applicable State law and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from, the local Federal and/or State office.

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

Item 17: Proposals to abandon a well and subsequent reports of abandonment should include such special information as is required by local Federal and/or State offices. In addition, such proposals and reports should include reasons for the abandonment; data on any former or present productive zones, or other zones with present significant fluid contents not sealed off by cement or otherwise; depths (top and bottom) and method of placement of cement plugs; mud or other material placed below, between and above plugs; amount, size, method of parking of any casing, liner or tubing pulled and the depth to top of any left in the hole; method of closing top of well; and date well site conditioned for final inspection looking to approval of the abandonment.

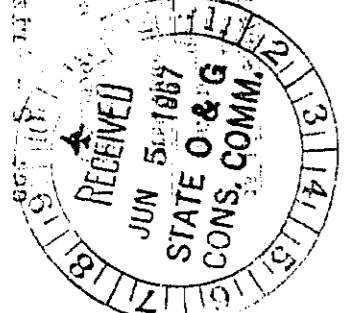
U.S. GOVERNMENT PRINTING OFFICE: 1961-O-685229  
607-831

**DETAIL OF FORMATIONS PENETRATED**

Formation	Top	Bottom	Description
Surface	1187'	1187'	Loose sand.
Chuska	1187'	1338'	Sandstone & brown silt.
Wingate	1338'	2355'	Siltstone; red & grey-green (some sandstone).
Chinle	2355'	2820'	Sandstone; tan & orange.
Coconino	2820'	3050'	Sandstone; tan & orange with red siltstone.
Organ Rock	3050'	4018'	Siltstone; brown & green with some limestone.
Rico	4018'	4386'	Shale; brown & green with streaks cherty limestone.
Hermosa	4386'	4504'	Limestone; cherty & fossiliferous with some sandstone.
Isahby	4504'	4560'	Limestone; buff, cherty, fossiliferous.
Desert Creek	4560'	4848'	Limestone; fossiliferous with variegated & dark shale streaks.
Akiah	4848'	4866'	Igneous sill injected into limestone & shale.
Sill	4866'	4933'	Shale; variegated with limestone streaks.
Molas	4933'	5075'	Limestone & dolomite; crinoidal, cherty, oolitic.
Mississippian	5075'	5148'	Dolomite; cherty, with some green shale.
Oursay	5148'	5218'	Dolomite; dense with some variegated silt.
Upper Elbert	5218'	5297'	Sandstone; fine to coarse, glauconitic.
McCracken	5297'	5350'	Shale; brown & green, silty.
Lower Elbert	5350'	5445'	Dolomite; dense with dark grey shale streaks.
Ameth	5445'	5465'	Shale; red & brown with some quartzitic sand.
Cambrian	5465'	5505'	Granite; pink, biotitic.
Pre-Cambrian			

See Report dated 2-21-69

COMPLETION



10A

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

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

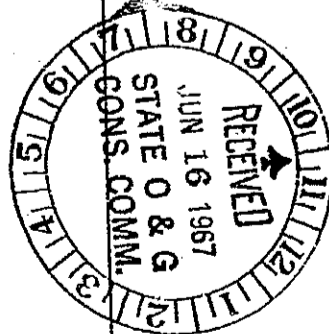
LAND OFFICE \_\_\_\_\_  
LEASE NUMBER 14-20-0603-8811  
UNIT \_\_\_\_\_

**CONFIDENTIAL**  
MONTHLY REPORT OF OPERATIONS

State Arizona County Apache Field Wildcat  
The following is a correct report of operations and production (including drilling and producing wells) for the month of May, 19 67,  
Agent's address P. O. Box 120 Company Humble Oil & Refining Company  
Denver, Colorado 80201 Signed ORIGINAL JOHN R. CROUCH  
Phone 534-1251 Agent's title Dist. Administrative Supr.

SEC. AND 1/4 OF 1/4	TWP.	RANGE	WELL NO.	DATE PRODUCED	BARRELS OF OIL	GRAVITY	CU. FT. OF GAS (in thousands)	GALLONS OF GASOLINE RECOVERED	BARRELS OF WATER (if none, so state)	REMARKS (if drilling, depth; if shut down, cause; date and result of test for gasoline content of gas)
<b>NAVAJO TRACT 87 - ARIZONA PERMIT #401</b>										
Sec. 23 SE NE		36N 29E	1	0	0		0			Operations suspended 5-30-67. See Sundry Notice dated 6-2-67.

**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.

**SUNDRY NOTICES AND REPORTS ON WELLS**

1. Name of Operator Humble Oil & Refining Company, 2000 Classen Center, North Building, Oklahoma City, Oklahoma 73106 - Attn: Mr. H. L. Spiller

2. OIL WELL  GAS WELL  OTHER  (Specify) \_\_\_\_\_

3. Well Name Navajo Tract 87 #1  
 Location SE NE (1830' FNL & 880' FEL) of Section 23-36N-29E G&SRM  
 Sec. 23 Twp. 36N Rge. 29E County Apache Arizona.

4. Federal, State or Indian Lease Number, or lessor's name if fee lease 14-20-0603-8811

5. Field or Pool Name Wildcat

**CONFIDENTIAL**

6. Check Appropriate Box to Indicate Nature of Notice 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 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>Change of Acreage Dedication</u>	ABANDONMENT <input type="checkbox"/>
(OTHER) _____			<input checked="" type="checkbox"/>

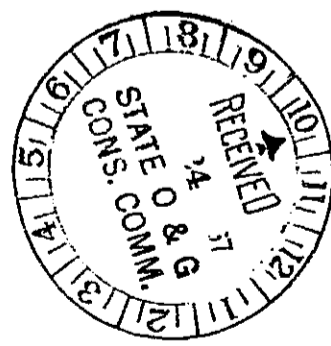
(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

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.)

As requested by your letter of May 19, 1967, and to comply with Commission Order dated May 10, 1967, please change the acreage dedication of the above well to read as follows:

160 acres - NE  $\frac{1}{4}$  Sec. 23-36N-29E Apache County, Arizona.

**CONFIDENTIAL**



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

Signed H. L. Spiller Title Expl. Drilling Supt. Date May 23, 1967

By: Marvin D. Smith

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

Permit No. 401

12

5-23-67

Telcon w/Roger Frazier, Humble

Re: 1-87

Drill pipe will be out of hole tonight at about 11:00 p.m.  
Plan to be logging by midnight.

401

13

5-10-67 Humble 87-1  
Mr. H.L. Spitzer  
2000 Gassen Center  
North Building  
O.K. City

Wrote letter asking him to notify me  
in time so that I might be  
present when log.

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 87 #1  
 Location SE NE (1830' FNL & 880' FEL) Section 23  
 Sec. 23 Twp. 36N Rge. 29E County. Apache Arizona.  
 4. Federal, State or Indian Lease Number, or lessor's name if fee lease 14-20-0603-8811

**CONFIDENTIAL**

5. Field or Pool Name Wildcat

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

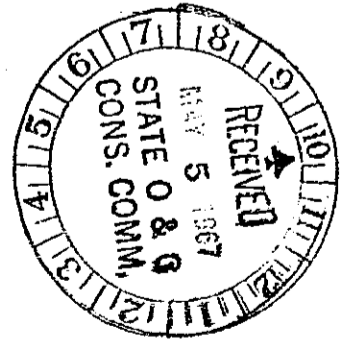
NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
TEST WATER SHUT-OFF <input type="checkbox"/>	PULL OR ALTER CASING <input type="checkbox"/>	WATER SHUT-OFF <input type="checkbox"/>	MONTHLY PROGRESS <input type="checkbox"/>
FRACTURE TREAT <input type="checkbox"/>	DIRECTIONAL DRILL <input type="checkbox"/>	FRACTURE TREATMENT <input 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>Spudding &amp; Surface Casing</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.)

Spudded 4-28-67. Drilled to a TD of 1350'. Set 9-5/8" OD 32.30# H-40 casing at 1350' and cemented with 1100 sacks of regular cement with 2% CaCl. Circulated OK with cement to surface.

**CONFIDENTIAL**



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

Signed H. L. Spiller Title Expl. Drilling Supt. Date 5-4-67  
 By: Marvin H. Smith

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

Permit No. 401

15

**CONFIDENTIAL**

JUN 15 1967

REPORT OF ANALYSIS

*W. E. Ferrell*  
401

F.S.- 10971 M.S.N-31683, H 5.47 OBS. PRES. 63.9 CAL. PRES. 63.7

STATE- ARIZONA COUNTY- APACHE  
 FIELD- DINEH BI KEYAH WELL NAME-NAVAJO TRACT 87 NO. 1  
 LOCATION-SEC. 23, T36N, R29E OWNER- HUMBLE OIL & REFINING CO.  
 DATE COMPLETED- DRILLING DATE SAMPLED- 05-26-67  
 SAMPLED BY- BERT HILAND  
 NAME OF PRODUCING FORMATION- DEVONIAN *M<sup>s</sup> Creek*  
 DEPTH IN FEET- 5223 THICKNESS IN FEET- 70  
 SHUT IN WELLHEAD PRES., PSIG- OPEN FLOW, MCF/D-

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

REMARKS-

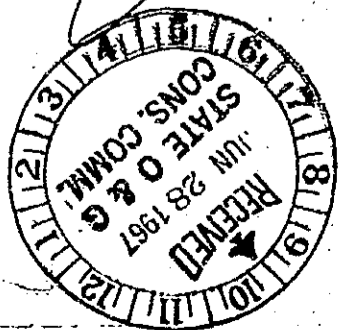
**CONFIDENTIAL**

ANALYSIS-

METHANE	3.1 %	NORMAL PENTANE	0.0 %	OXYGEN	.3 %
ETHANE	.4 %	ISOPENTANE	0.0 %	ARGON	.8 %
PROPANE	.2 %	CYCLOPENTANE	0.0 %	HYDROGEN	TRACE %
NORMAL BUTANE	.1 %	HEXANES PLUS	0.0 %	H2S	0.0 %
ISOBUTANE	0.0 %	NITROGEN	78.8 %	CO2	10.6 %
SPECIFIC GRAV	.973			HELIUM	5.58 %
				TOTAL	99.9 %

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.



COMPANY.....  
BY.....  
TITLE.....

#401

**CONFIDENTIAL**

CORE LABORATORIES, INC.  
Petroleum Reservoir Engineering  
DALLAS, TEXAS

Page No. 1  
401

**CORE ANALYSIS RESULTS**

Company Humble Oil & Refining Company Formation Undesignated File RP-3-2212  
Well Navajo #1 Tract 87 Core Type D/C Date Report 5/25/67  
Field Undesignated Drilling Fluid Chem Gel Analysts Graham  
County Apache State Arizona Elev 8963 Grd. Location Sec. 23-T36N-R29E

**Lithological Abbreviations**

SAMPLE NUMBER	DEPTH FEET	PERMEABILITY MILLIDARCYs	POROSITY PER CENT	RESIDUAL SATURATION PER CENT PORE		SAMPLE DESCRIPTION AND REMARKS
				OIL	TOTAL WATER	
		MAX. 90°				
1	5232 -33.5	0.14	0.12	7.4	1.6	25.4 SS:LT GRY, FN-MED, WELL CMTD, SLI/SHLY
2	5233.5-35.5	7.26	5.55	8.3	3.4	26.6 SS:GRY, FN, CLEAN, WELL CMTD
3	5235.5-37	4.07	3.03	5.9	3.6	27.8 SS:LT GRY, FN-CSE, V/SLI/CALC, SH STRNGRS
4	5237 -39	1.07	0.74	5.3	3.6	25.6 SS:GRY, FN-CSE, WELL CMTD
5	5239 -40	2.18	2.18	5.5	5.1	14.4 SS:GRY, CSE, WELL CMTD, PIN PT POR, SHLY
6	5240 -41	3.41	3.26	5.8	3.5	14.5 SS:LT GRY, FN-CSE, WELL CMTD, PIN PT POR, SHLY
7	5241 -42	0.42	0.26	3.0	6.3	19.3 SS:GRY, FN-MED, V/DENS, VERT FRAC
8	5242 -43.5	0.15	0.13	4.1	4.6	46.4 SS:GRY, MED-CSE, PIN PT POR, VERT FRAC
9	5243.5-45	0.20	0.14	3.9	4.9	76.4 SS:GRY, FN-CSE, WELL CMTD
10	5268 -69.5	2.57	2.26	10.6	1.1	23.7 SS:GRY, FN-MED, PIN PT POR, SHLY
11	5269.5-71	21.2	13.7	8.4	2.1	34.2 SS:GRY, FN-CSE, PIN PT POR, VERT FRAC
12	5271 -72.5	7.0	6.8	7.2	1.7	30.0 SS:GRY, FN-MED, PIN PT POR
13	5272.5-74	6.56	3.37	8.4	4.2	24.6 SS:LT GRY, MED, PIN PT POR, SHLY, VERT FRAC
14	5274 -75.5	3.64	3.22	7.0	2.4	33.4 SS:GRY, FN-MED, PIN PT POR, SHLY
15	5275.5-77	38.3	33.9	8.3	1.6	34.4 SS:DK GRY, MED-V/CSE, CLEAN,
16	5277 -78.5	55.2	42.7	8.0	3.9	34.0 SS:GRY, CSE-V/CSE, CLEAN
17	5278.5-80	0.05	0.05	2.2	4.5	62.7 SH:BUFF, DENS, SLI/CALC, FEW CSE SD GRNS

**CONFIDENTIAL**



SERVICE #5-B 401

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

**CONFIDENTIAL**

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

Budget Bureau No. 42-R714.4  
Approval expires 12-31-60.

ALLOTTEE \_\_\_\_\_  
TRIBE Navajo  
LEASE NO. 14-20-0503-8811

**LESSEE'S MONTHLY REPORT OF OPERATIONS**

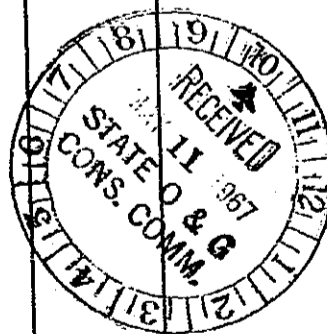
State Arizona County Apache Field Wildcat

The following is a correct report of operations and production (including drilling and producing wells) for the month of April, 1967,

Agent's address 2000 Classen Center North Company Humble Oil & Refining Company  
Oklahoma City, Oklahoma Signed H. L. Spillar - By: [Signature]

Phone JAG-2411 Agent's title Expl. Drilling Supt.

SEC. AND 1/4 OF 1/4	TWP.	RANGE	WELL NO.	DATE PRODUCED	BARRELS OF OIL	GRAVITY	CU. FT. OF GAS (In thousands)	GALLONS OF GASOLINE RECOVERED	BARRELS OF WATER (If none, so state)	REMARKS (If drilling, depth; if shut down, cause; date and result of test for gasoline content of gas)
<b>NAVAJO TRACT 67</b>										
Sec. 23 SE NE	36N	29E	1							Spudded 4-28-67. Drilling at 985'.



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.

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

**CONFIDENTIAL**

This information will be furnished by letter when contract is awarded.

Drilling Contractor

Address

DESCRIPTION OF WELL AND LEASE

Federal, State or Indian Lease Number, or if fee lease, name of lessor

Navajo Tract 87 (14-20-0603-8811)

Well number

1

Elevation (ground)

8960' Ungraded

Nearest distance from proposed location to property or lease line:

880 feet

Distance from proposed location to nearest drilling completed or applied—for well on the same lease:

feet

Number of acres in lease:

640

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

1

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

Name

Address

Well location (give footage from section lines)

SE NE - 1830' FNL & 880' FEL

Section—township—range or block and survey

Sec. 23-36N-29E - G & SRM

Dedication (Comply with Rule 105)

80 acres (E/2 NE/4)

Field and reservoir (if wildcat, so state)

Dineh bi Keyah

County

Apache

Distance, in miles, and direction from nearest town or post office

Appr. 40 - 45 miles Southwest of Shiprock, N. M.

Proposed depth:

4,500'

Rotary or cable tools

Rotary

Approx. date work will start

As soon as possible.

Bond Status Blanket Bond

Organization Report

Filing Fee of \$25.00

Amount

On file  Or attached

Attached Check No. 4925

Remarks:

**CONFIDENTIAL**

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

*[Handwritten Signature]*

Date

April 21, 1967

Permit Number:

401

Approval Date:

4-25-67

Approved By:

*John Bannister*

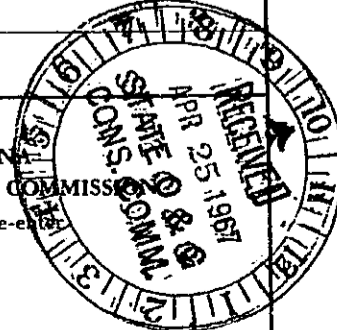
Notice: Before sending in this form be sure that you have given all information requested. Much unnecessary correspondence will thus be avoided.

STATE OF ARIZONA  
OIL & GAS CONSERVATION COMMISSION

Application to Drill or Re-enter

File Two Copies

Form No. 3



- 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								
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%;"></td> <td style="width: 25%;"></td> <td style="width: 25%; text-align: center;">23</td> <td style="width: 25%;"></td> </tr> <tr> <td colspan="4" style="text-align: center;">SEE SURVEYORS PLAT ATTACHED</td> </tr> </table>			23		SEE SURVEYORS PLAT ATTACHED				<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 <b>Roger S. Frazier</b></p> <p>Position <b>Dist. Operations Supt.</b></p> <p>Company <b>Humble Oil &amp; Refining Co.</b></p> <p>Date <b>April 21, 1967</b></p> <p>I hereby certify that the well location shown on the plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief.</p> <p>Date Surveyed</p> <p>Registered Professional Engineer and/or Land Surveyor</p> <p><b>See Surveyors Plat Attached.</b></p> <p>Certificate No.</p>
		23							
SEE SURVEYORS PLAT ATTACHED									

**PROPOSED CASING PROGRAM**

Size of Casing	Weight	Grade & Type	Top	Bottom	Cementing Depths	Sacks Cement
9-5/8"	32.30#	H-40	0	900'	900'	Circ. to surface. Sufficient to cover all pays.
7"	20#	J-55	0	4,500'	4,500'	



# 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 #1 NAVAJO 87

(WELL NAME)

located 1830' FNL and 880' FEL (SE/4NE/4)

Section 23 Township 36N Range 29E, Apache County, Arizona.

The E/2 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 25th day of April, 19 67.

OIL AND GAS CONSERVATION COMMISSION

By John Gannister  
EXECUTIVE SECRETARY

PERMIT N<sup>o</sup> 401

RECEIPT NO. 9493

State of Arizona  
Oil & Gas Conservation Commission  
Permit to Drill

FORM NO. 27

API 02-001-20025

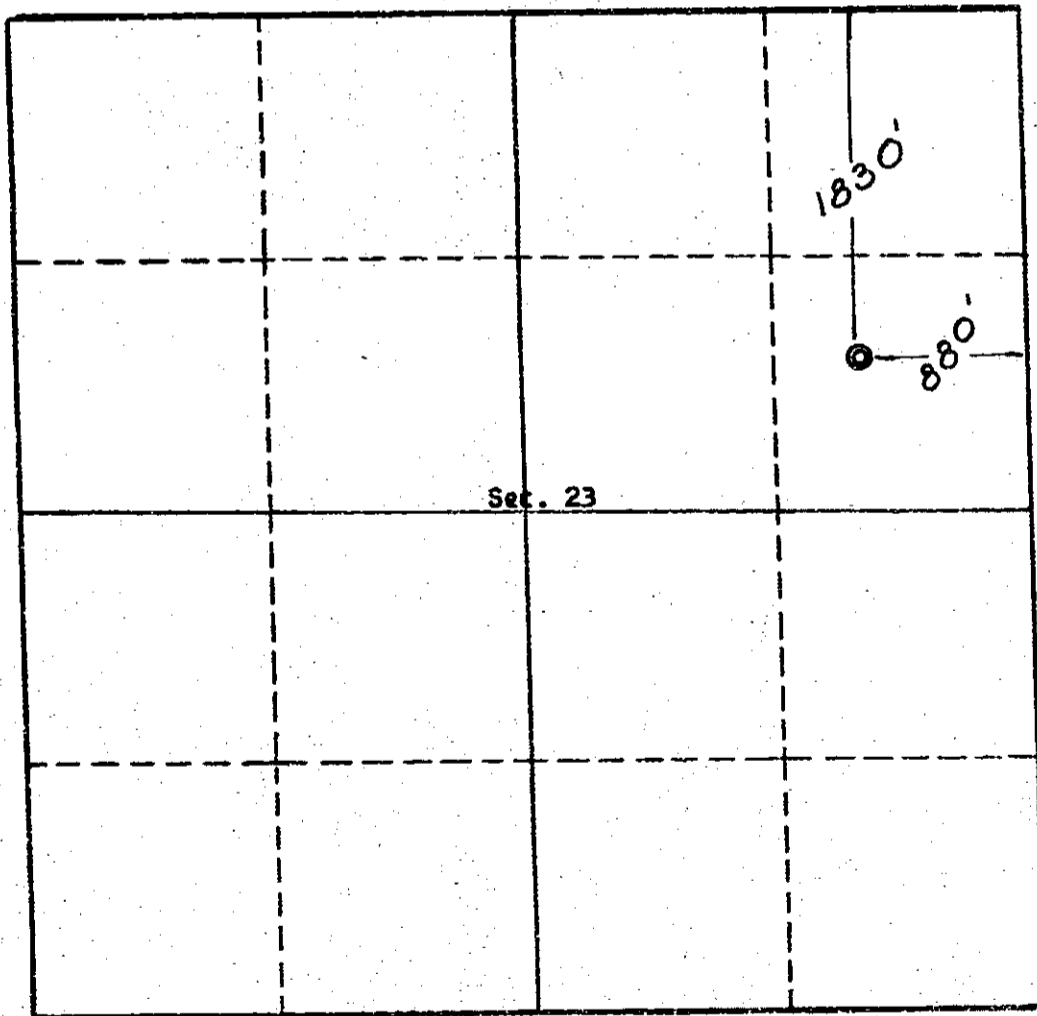
Company HUMBLE OIL & REFINING COMPANY

Well Name & No. Navajo Tract 87 #1

Location 1830 feet from the North line and 880 feet from the East line.

Sec. 23, T. 36 N., R. 29 E., G. & S. R. M., County Apache, Arizona

Ground Elevation 8960



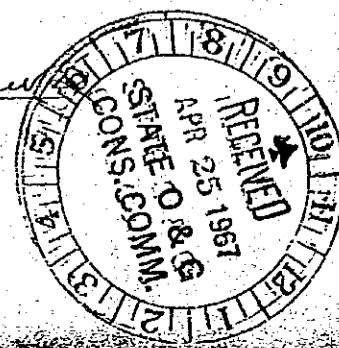
Scale, 1 inch = 1,000 feet

Surveyed April 15, 1967

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



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



As 401

X-Chrono  
X-Lambert

June 12, 1969

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

Re: Humble #2 Navajo 138  
T36N, R20E, G & SRM  
Sec. 6: SE/4 SE/4  
Permit #400 X  
Apache County

Humble #1 Navajo 146  
T36N, R20E, G & SRM  
Sec. 15: SE/4 SW/4  
Apache County  
Permit #452 X

Humble #1 Navajo 87  
T36N, R29E, G & SRM  
Sec. 23: SE/4 NE/4  
Apache County  
Permit #401

Humble #1 Navajo 151  
T36N, R20E, G & SRM  
Sec. 35: SE/4 NE/4  
Apache County  
Permit #454 X

Dear Mr. Dorrough:

Authorization from this Commission is hereby granted to continue the captioned wells in a temporary abandoned status. This temporary abandoned status will expire June 16, 1970. We will require our Form #25 (or U.S.G.S. Sundry Notice Report) to be submitted monthly as you have done in the past.

Yours truly,

James A. Lambert  
Administrative Assistant

JAL:jf

401

HUMBLE OIL & REFINING COMPANY

DENVER, COLORADO 80201

PRODUCTION DEPARTMENT  
DENVER DISTRICT  
J. R. DORRHOUGH  
SUPERINTENDENT

June 5, 1969

POST OFFICE BOX 120  
TELEPHONE 534-1251

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

Attn: Mr. James A. Lambert

Gentlemen:

Re: Humble #2 Navajo 138  
T35N, R30E, G & SRM  
Sec. 6: SE/4 SE/4  
Apache County  
Permit 400

Humble #1 Navajo 87  
T36N, R29E, G & SRM  
Sec. 23: SE/4 NE/4  
Apache County  
Permit 401

Humble #1 Navajo 146  
T36N, R30E, G & SRM  
Sec. 15: SE/4 SW/4  
Apache County  
Permit 452

Humble #1 Navajo 151  
T35N, R30E, G & SRM  
Sec. 35: SE/4 NE/4  
Apache County  
Permit 454

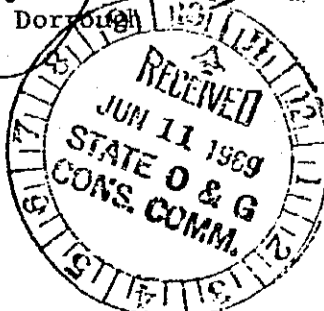
In answer to your letter of June 2, 1969, relating to the above, this is to advise that the working interest owners in the immediate vicinity of the above listed wells are currently actively attempting to form a unit which might eventually lead to the economic exploitation and production of helium bearing gas wells in the area.

Each of the above listed wells could become involved as a producer of helium bearing gas. We therefore request extension of the temporary abandoned status of these wells.

Very truly yours,

*J. Roy Dorrough*  
J. Roy Dorrough

JRD:mg



X-Charo  
X-Lambert

June 2, 1969

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

Re: Humble #2 Navajo 138  
T35N, R30E, G & SRM  
Sec. 6: SE/4 SE/4  
Apache County  
Permit 400 X

Humble #1 Navajo 87  
T36N, R29E, G & SRM  
Sec. 23: SE/4 NE/4  
Apache County  
Permit 401

Humble #1 Navajo 146  
T35N, R30E, G & SRM  
Sec. 15: SE/4 SW/4  
Apache County  
Permit 453 X

Humble #1 Navajo 151  
T35N, R30E, G & SRM  
Sec. 35: SE/4 NE/4  
Apache County  
Permit 454 X

Dear Mr. Dorrrough:

For the past year these wells have been carried in the temporary abandoned status. Please advise us what plans you have for each of the wells in the ensuing year and make new request for extending temporary abandon status should you wish that these wells remain in that status.

Yours truly,

James A. Lambert  
Administrative Assistant

JAL:jj

401



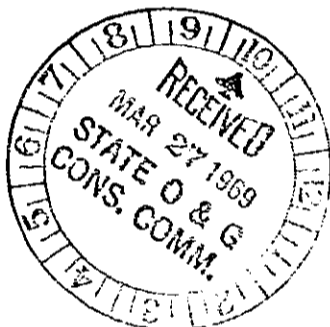
# HUMBLE OIL & REFINING COMPANY

DENVER, COLORADO 80201

DENVER DISTRICT

March 24, 1969

POST OFFICE BOX 120



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.

42

Well Name & No.	No. of Reports
Navajo Tract 87 #1-401	1
Navajo Tract 88 #1-421	3
Navajo Tract 88 #2-431	4
Navajo Tract 88 #3-443	1
Navajo Tract 140 #1-393	3
Navajo Tract 151 #1-454	3

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 Borrough  
Dist. Supt.

Attach.

401

June 21, 1968

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

Dear Mr. Dorrrough:

Your letter of May 31, 1968 requests that certain gas wells be exempt from Capacity Testing in compliance with Rule 401. Our records do not reflect that any of these have been completed gas wells. Therefore, we will need the information indicated on the attached sheet.

We do have on file the application that the Humble 488 be considered as a salt water injection well.

As soon as we receive clarification on the above points, consideration will be given to your request.

Very truly yours,

John Bannister  
Executive Secretary  
ir

Humble Oil & Refining

Well	Completion Report	Samples		
# 1 - 140 Permit 393	due			
# 2 - 138 Permit 400	due			
# 87 Permit 401	due			
# 1-88 Permit 421	due			
# 4-88 Permit 447	due	due		Apply to convert to salt water injec
# 1-146 Permit 452	due	due		

ENCO

HUMBLE OIL & REFINING COMPANY

DENVER, COLORADO 80201

DENVER DISTRICT

May 31, 1968

POST OFFICE BOX 120

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

Attn: Mr. John Bannister


Dear Sir:

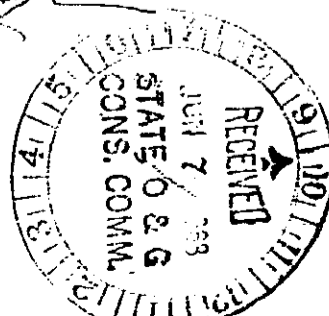
In compliance with Rule 401 and Directive D-2-67, we hereby request exemption from Capacity Tests of Gas Wells on the following shut-in gas wells during the month of June, 1968.

- 401 #1 Navajo Tract 87  
SE NE Section 23-36N-29E, Apache County
- 421 #1 Navajo Tract 88  
SE SE Section 25-36N-29E, Apache County
- 447 #4 Navajo Tract 88  
SE NW Section 25-36N-29E, Apache County
- 400 #2 Navajo Tract 138  
SE SE Section 6-35N-30E, Apache County
- 393 #1 Navajo Tract 140  
SE NE Section 8-35N-30E, Apache County
- 452 #1 Navajo Tract 146  
SE SW Section 15-35N-30E, Apache County

Your approval of these exemptions will be appreciated.

Very truly yours,

  
J. Roy Dorrrough



JACK WILLIAMS  
GOVERNOR  
LYNN LOCKHART  
CHAIRMAN  
LUCIEN B. OWENS  
VICE CHAIRMAN  
HIRAM S. CORBETT  
MEMBER  
GEORGE T. SILER  
MEMBER  
KENNETH G. BENTSON  
MEMBER

OFFICE OF  
**Oil and Gas Conservation Commission**

STATE OF ARIZONA  
ROOM 202  
1624 WEST ADAMS  
Phoenix, Arizona 85007  
PHONE: 271-5161

JOHN BANNISTER  
EXECUTIVE SECRETARY  
J. R. SCURLOCK  
PETROLEUM GEOLOGIST

July 10, 1967

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

Attention: Mr. Roger Frazier

Re: Humble #1 Navajo 140 (Permit 393)  
SE NE 8-35N-30E, Apache County, Arizona

Humble #2 Navajo 138 well (Permit 400)  
SE SE 6-35N-30E, Apache County, Arizona

Humble #1 Navajo 87 well (Permit 401)  
SE NE 23-36N-29E, Apache County, Arizona

Gentlemen:

Attached please find Directive 1-78 adopted during the Commission's meeting of June 21, 1967.

The effect of this directive will be to remove all wells in temporarily abandoned status prior to June 21, 1967 from the status of confidential as of December 31, 1967. All obligations owed to this Commissioner concerning the filing of logs, reports, samples, will be due within the schedules as set forth in the Rules and Regulations from July 1, 1967. Of course an application to plug and plugging report will not be needed at this time. In lieu of our Form 4, Well Completion Report, it will be necessary that you file a status report covering the complete history of the well to the date of its temporary abandonment.

Should you have any questions concerning this directive or this letter, please advise at your earliest convenience.

Very truly yours,

John Bannister  
Executive Secretary  
mr

cc: Mr. H.L. Spiller, Oklahoma City

June 20, 1967

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

Attention: Mr. J. Roy Dorrrough

Re: Humble #1 Navajo 140 well (Permit 393)  
SE NE 8-35N-30E, Apache County, Arizona

Humble #2 Navajo 138 well (Permit 400)  
SE SE 6-35N-30E, Apache County, Arizona

Humble #1 Navajo 87 well (Permit 401)  
SE NE 23-36N-29E, Apache County, Arizona

Gentlemen:

By your letters of June 15, 1967 you requested permission from this Commission to temporarily abandon the captioned wells pending the development of a helium market and additional drilling.

This letter constitutes permission from this Commission to temporarily abandon captioned wells for the reasons stated in your requests.

This Commission should of course be notified when you plan to again commence operations on these wells.

Very truly yours,

John Bannister  
Executive Secretary  
MB



# HUMBLE OIL & REFINING COMPANY

DENVER, COLORADO 80201

DENVER DISTRICT

June 15, 1967

POST OFFICE BOX 120

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

Attn: Mr. John Bannister

Gentlemen:

In accordance with Rule 202.B of the Arizona Oil and Gas Conservation Commission Rules and Regulations, we request permission for temporary abandonment of the following well:

Navajo Tract 87 #1 - Permit #401  
SE NE Section 23-36N-29E, Apache County, Arizona

Operations on this well have been suspended and the well is temporarily abandoned pending development of a helium market for the field, which may take some time, and additional development in other wells in the helium bearing formations in the area.

Pending development of a helium market and additional drilling, we request approval to keep this well in the temporarily abandoned status for an indefinite period.

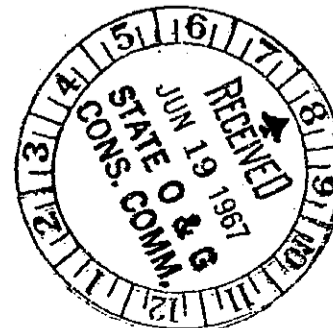
OK  
JB

Very truly yours,

J. ROY DORROUGH

By

  
Roger S. Frazier



401

June 9, 1967

Mr. H.L. Spiller  
Humble Oil & Refining Company  
2000 Classen Center-North  
Oklahoma City, Oklahoma 73106

Re: Humble #1 Navajo S7  
SE NE 23-36N-29E Apache County, Arizona  
Permit 401

Dear Mr. Spiller:

We have received notice that operations on captioned well, which you indicated is a helium well, will be temporarily suspended.

Please be advised that should Humble decide to keep this as a shut-in helium well it will be necessary that 640 acres be dedicated to this well (rule 105.B) and that an application for an unorthodox location (rule 105.D) be made prior to production.

I would further remind you that should work be suspended on this well in excess of 60 days, Rule 202.B would become applicable. Of course if this well is completed and then shut-in this latter step will not be necessary.

Should you have any questions, would you please advise.

Very truly yours,

John Bannister  
Executive Secretary  
mr

*AS*  
*AS*

# HUMBLE OIL & REFINING COMPANY

OKLAHOMA CITY, OKLAHOMA 73106

EXPLORATION DEPARTMENT  
CENTRAL DIVISION

April 27, 1967

2000 CLASSEN CENTER-NORTH  
JACKSON 8.2411

Re: Navajo Tract 87 #1  
SE NE Section 23-36N-29E  
Apache County, Arizona

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

Attention: Mr. John Bannister

Gentlemen:

By his letter of April 26, 1967, Mr. J. Roy Dorrough requested you to keep all information on the above well confidential. We recognize that your agency is entitled to receive information regarding this well and we want to assure you that we will cooperate in every possible way to make this information available.

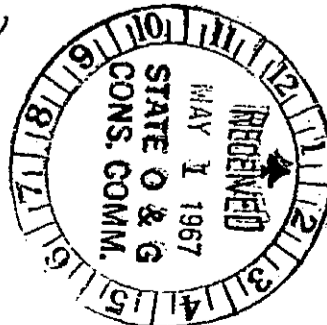
Based on past experience, we anticipate that there will be a number of visitors to this location. In order to insure that no unauthorized persons are permitted at the drillsite and to insure that information on this well is kept confidential, we request that you advise any of your personnel who may contemplate visiting this well that before being admitted to the location they will be required to show positive identification and to acknowledge that they are aware that all information concerning the well is to be held in strict confidence. We will also want to assure ourselves that any visitor from your agency is familiar with the regulations pertaining to dissemination of any information obtained.

Should this request cause any problems with your agency or if any additional information is required, we will be pleased to discuss the matter at your convenience.

Very truly yours,

*H. L. Spiller*  
H. L. Spiller

ACM:sr



401



# HUMBLE OIL & REFINING COMPANY

DENVER, COLORADO 80201

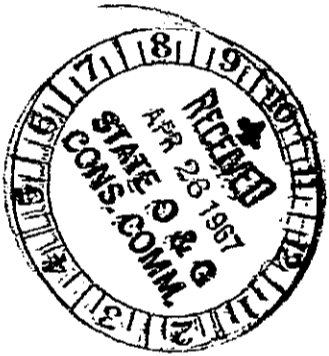
DENVER DISTRICT

P. O. Box 120

POST OFFICE BOX 120

April 25, 1967

**CONFIDENTIAL**



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

Dear Mr. Bannister:

At the time the "Application for Permit to Drill" our Navajo Tract 87 #1 was submitted a Drilling Contractor had not been selected. This is to inform you that the contract as been awarded to the following:

Loffland Brothers Company  
P. O. Box 4567  
Tulsa, Oklahoma 74114

If any further information is desired at any time, please do not hesitate to call on us.

Very truly yours,

*Roger S. Frazier*  
Roger S. Frazier  
Dist. Operations Supt.

**CONFIDENTIAL**

401



HUMBLE OIL & REFINING COMPANY

DENVER, COLORADO 80201

April 25, 1967

POST OFFICE BOX 120



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

Attn: 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 confidential:

Navajo Tract 87 No. 1  
SE NE Section 23-36N-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 Dorrrough

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

4-27-67

Telcon, Mr. Roger Frazier, Denver

Re: Humble #1 Navajo 140

Spudded 4:00 a.m. 4-27-67

Re: Humble #1 Navajo 87

Road permitting, will spud sometime today

*Drilling under supervision of  
Mr. Spuller, Okla. city office*