

P-W

CITIES SERVICE OIL / MONSANTO-NAVAJO-C
SE/NW Sec 16-T40N-R29E, Apache Co.

COUNTY APACHE AREA 40 mi. W of Shiprock, New Mexico LEASE NO. 05-30024-01
 WELL NAME CITIES SERVICE OIL CO. MONSANTO-NAVAJO-C
 LOCATION SE/NW SEC 16 TWP 40N RANGE 29E FOOTAGE 2350' FNL - 2290' FWL
 ELEV 6092 GR _____ KB SPUD DATE 5-30-72 STATUS S.I. Gas Well TOTAL DEPTH 5753
 CONTRACTOR Mesa Drillers COMP. DATE 5-15-72 P.B.T.D. 5312
10-5-89

CASING SIZE	DEPTH	CEMENT	LINER SIZE & DEPTH	DRILLED BY ROTARY
9 5/8 "	1129	500 sks		<input checked="" type="checkbox"/>
5 1/2 "	5752	280 sks		<input type="checkbox"/>
				DRILLED BY CABLE TOOL <input type="checkbox"/>
				PRODUCTIVE RESERVOIR <u>Penn.</u>
				INITIAL PRODUCTION <u>2870 MCFD Test</u>

FORMATION TOPS	DEPTHS	SOURCE		REMARKS
		L.L.	E.L.	
Organ Rock	2755			
Cutler	3363			
Hermosa	4123			
Ismay	4723			
Desert Creek	4870			
Akah	5017			
Barker Creek	5173			
Pinkerton Trail	5298			
Molas	5500			
Mississippian <i>90%</i>	5719			

ELECTRIC LOGS	PERFORATED INTERVALS	PROD. INTERVALS	SAMPLE LOG
I.E.- 2; Neutron Porosity ⁽²⁾	5192-94, 5258-65	4785-4849,	Am Strat.
BHC-Sonic GR-2	4785-88, 4841-49	5192-5265	SAMPLE DESCRP.
			SAMPLE NO. <u>1697</u>
			CORE ANALYSIS <u>No cores</u>
			DSTs <u>5</u>

REMARKS American Fuels is the operator of the above referenced well. See letter dated July 16, 1973.
 APP. TO PLUG _____
 PLUGGING REP. _____
 COMP. REPORT

WATER WELL ACCEPTED BY _____
 BOND CO. Chuska Energy Co. / Valley National Bank C.D. # 2578904
General Insurance Company of America BOND NO. 603388-165 cancelled 11-12-86
 BOND AMT. \$ 25,000 CANCELLED 11-12-86 DATE _____ ORGANIZATION REPORT 6-10-71
 FILING RECEIPT 2916 LOC. PLAT WELL BOOK PLAT BOOK
 API NO. 02-001-20162 DATE ISSUED 5-1-72 DEDICATION All of Section 16

PERMIT NUMBER 581

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: **CITIES SERVICE OIL COMPANY** Address: **P.O. Box 69, Hobbs, New Mexico 88240**

Federal, State or Indian Lease Number or name of lessor if fee lease: **Navajo #05-30024-01, Monsanto-Navajo C** Well Number: **1** Field & Reservoir: **Wildcat**

Location: **2350 FNL & 2290 FWL** County: **Apache**

Sec. TWP-Range or Block & Survey: **Sec. 16-T40N-R29E**

Date spudded: **5-30-72** Date total depth reached: **6-20-72** Date completed, ready to produce: **7-15-72** Elevation (DF, BKB, RT or Gr.): **6092 GR** feet Elevation of casing hd. flange: **6092** feet

Total depth: **5753** P.B.T.D.: **5312** 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: **(4785-4849) (5192-5265)** Rotary tools used (interval): **0--5753** 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) **Induction-Electric Log, Neutron Porosity Log, Borehole Compensated Sonic Log-Gamma Ray** Date filed: **Attached**

CASING RECORD

Purpose	Size hole drilled	Size casing set	Weight (lb./ft.)	Depth set	Sacks cement	Amt. pulled
Surface	12 1/4"	9 5/8"	32.3#	1129'	400	None
Producing	7 7/8"	5 1/2"	14#	5752'	280	None

TUBING RECORD

Size	Depth set	Packer set at	Size	Top	Bottom	Sacks cement	Screen (ft.)
2 3/8" in.	4875 ft.	4875 ft.	None in.	ft.	ft.		

PERFORATION RECORD

Number per ft.	Size & type	Depth Interval	Amt. & kind of material used	Depth Interval
One	0.40"	5192, 93, 94, 5258, 64, 65	1500 gal. 15% acid	5192--5265
One	0.40"	4785, 86, 87, 88, 4841, 49	1500 gal. 15% acid	4785-4849

ACID, SHOT, FRACTURE, CEMENT SQUEEZE RECORD

INITIAL PRODUCTION

Date of first production: **7-15-72** Producing method (indicate if flowing, gas lift or pumping--if pumping, show size & type of pump): **Flowing**

Date of test	Hrs. tested	Choke size	Oil prod. during test	Gas prod. during test	Water prod. during test	Oil gravity
7-15-72	4 (4 point test)		0 bbls.	- MCF	- bbls.	- ° API (Corr)

Tubing pressure	Casing pressure	Cal'ed rate of Production per 24 hrs.	Oil	Gas	Water	Gas-oil ratio
-	-		- bbls.	2870 MCF D	- bbls.	-

Disposition of gas (state whether vented, used for fuel or sold): **Well Shut in waiting for pipeline connection**

CERTIFICATE: I, the undersigned, under the penalty of perjury, state that I am the Representative of the CITIES SERVICE OIL (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: July 18, 1972 Signature: C. D. Robertson
 Dist. Admin. Supervisor

RECEIVED

JUL 19 1972

O & G CONS. COMM.

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

Permit No. _____

DETAIL OF FORMATIONS PENETRATED

Formation	Top	Bottom	Description*
See attached sheet for Drill Stem Tests.			
Ismay	4733		
Desert Creek	4830		
Akah	5017		
Barker Creek	5163		
Pinkerton Trail	5298		
Molas	5500		

GEOLOGIC MARKERS		
NAME	MEAS. DEPTH	TRUE VERT. DEPTH
China	1329	
DeChelly	2340	
Organ Rock	2755	
Cutter	3363	
Herbase	4123	
Ismay	4723	
Desert Creek	4870	
Akah	5017	
Barker Creek	5173	
Pinkerton Trail-A	5298	
Pinkerton Trail-B	5346	
Pinkerton Trail-C	5406	
Pinkerton Trail-D	5450	
Molas	5500	
Hiss. Limestone	5571	
Hiss. Porosity	5719	

DEPARTMENT OF THE INTERIOR
 GEOLOGICAL SURVEY
 UNITED STATES

* 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 driller's 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.

Tech:
ULRICH

HALLIBURTON DISTRICT LABORATORY
WATER ANALYSIS DATA SHEET

Analysis Date: 8-16-93

Report No. _____

To: CHUSKA

Permit 581

Submitted By Chuska Energy Company Date Received 8-16-93

Well Number BLACK ROCK #3

Location NE/4NE/4 16-40N-29E Formation Commingled
water collected from separator dump

Data For Report

Specific Gravity 1.045

pH 6.34

Aliquot or Dilution	Ion	Calculation	ppm
	Fe Log		<u>10</u>
	K %T		
	Na %T		<u>25,700</u>
	Ca		<u>2,627</u>
	Mg		<u>710</u>
	Cl		<u>38,000</u>
	SO4 Log		<u>4,500</u>
	CO3		
	HCO3		<u>658</u>
	TDS		<u>72,205</u>

Rw .14 @ 80 °F

Notice

This report is based on sound engineering practices, but because of variable well conditions and other information which must be relied upon, Halliburton Services makes no warranty, express or implied, as to the accuracy of the data or of any calculations or opinions expressed herein. You agree that Halliburton shall not be liable for any loss or damage whether due to negligence or otherwise arising out of or in connection with such data, calculations or opinions.

**AZ OIL & GAS
CONSERVATION COMMISSION**

SUNDRY NOTICES AND REPORTS ON WELLS **OCT 25 1989**

1. Name of Operator Chuska Energy Company 315 N. Behrend Avenue, Farmington, NM 87401
 2. OIL WELL GAS WELL OTHER (Specify) _____
 3. Well Name Black Rock #3
 Location 2350' FNL & 2290' FWL
 Sec. 16 Twp. 40N Rge. 29E County Apache Arizona.
 4. Federal, State or Indian Lease Number, or lessor's name if fee lease _____
Navajo Tribal; NOG 8702-1116
 5. Field or Pool Name Black Rock Paradox

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>First delivery</u>	ABANDONMENT <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.)

First delivery of gas at 1400 hrs, 10-05-89.
 Estimated rates: 1068 MCFD, 7 BCPD, 4 BWPD.

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

Signed Donald S. Barnes Title Operations Manager Date 10-20-89

Permit No. 581

**STATE OF ARIZONA
OIL & GAS CONSERVATION COMMISSION**
 Sundry Notices and Reports On Wells
 File One Copy
 Form No. 26

Form 3160-5
November 1983
Formerly 9-331

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN TRIPlicate
(Other instructions
verse side)

Form approved
Budget Bureau No. 1004-0135
Expires August 31, 1985

581

SUNDRY NOTICES AND REPORTS ON WELLS

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

1. OIL WELL <input type="checkbox"/> GAS WELL <input checked="" type="checkbox"/> OTHER <input type="checkbox"/>		5. LEASE DESIGNATION AND SERIAL NO. NOG-8202-1116
2. NAME OF OPERATOR CHUSKA ENERGY COMPANY		6. IF INDIAN, ALLOTTEE OR TRIBE NAME NAVAJO
3. ADDRESS OF OPERATOR P.O. BOX 901 FARMINGTON, NEW MEXICO 87499		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 2350' FNL & 2290' FWL		8. FARM OR LEASE NAME NAVAJO "C"
14. PERMIT NO.	15. ELEVATIONS (Show whether DV, ST, GR, etc.) 5583 GR	9. WELL NO. #1
		10. FIELD AND POOL, OR WILDCAT Black Rock Penn
		11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA Sec. 16 T40N R29E
		12. COUNTY OR PARISH 13. STATE Apache Arizona

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

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
TEST WATER SHUT-OFF	FULL OR ALTER CASING	WATER SHUT-OFF	REPAIRING WELL
FRACTURE TREAT	MULTIPLE COMPLETE	FRACTURE TREATMENT	ALTERING CASING
SHOOT OR ACIDIZE	ABANDON*	SHOOTING OR ACIDIZING	ABANDONMENT*
REPAIR WELL	CHANGE PLANS	(Other)	
(Other) WORKOVER PROGRAM		(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.)

1. Attached is a proposed workover prognosis for the above referenced well.

APPROVED

By [Signature]
Date 8/21/88

STATE OF ARIZONA OIL & GAS CONSERVATION COMMISSION

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

SIGNED [Signature] TITLE VP Drilling Operations DATE 8-9-88

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

*See Instructions on Reverse Side

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

WORKOVER PROCEDURE

PROSPECT: Black Rock
WELL: Monsanto-Navajo "C" 1
LOCATION: Section: 16 Township: 40 N Range: 29 E
COUNTY: Apache
STATE: Arizona

TD: 5753 feet
PBD: 5312 feet - Sand Plug
RBP: Ret. Bridge Plug @ 5320 feet
CASING: 9-5/8" 32.30# @ 1129 feet (Surface)
5-1/2" 14# @ 5752 feet (Production)
TUBING: 2-3/8" 4.7# EUE
PACKER: Type - Model "D" @ 4875'

PERFORATIONS: Penn. Ismay: 4785-88, 4841, 4849
Penn. Barker Creek: 5192-94, 5258, 5264-65
Pinkerton Trail: 5351, 5356, 5408, 5435, 5442-44
PRODUCTION ZONE: Pennsylvanian

NOTE: See attached sheet for location of cement plugs and perforations.

1. Clean up roads and location. Install anchors and construct small reserve pit.
2. Inspect surface casing, install and test wellhead welds.
3. Install gauges, safety valves and flowlines as per diagram.
4. Check for H₂S.
5. Check casing back side for pressure.
6. Rig up workover rig unit and open well. Bleed off pressure.
7. Install BOP's with diverter system and test to 3,000 psi.
8. Pressure test 5-1/2" 14# casing to 500 psi.
9. Pick up on 2-3/8" 4.7# EUE tubing and attempt to unseat tubing from the packer at 4,730'.

NOTE: If unable to unseat tubing then proceed with step 9A.

- 9A. Run in hole with 2-3/8" tubing cutter and cut tubing off approximately 5' above packer.
- 9B. Circulate hole and top of packer with 2% KCL.
- 9C. Pull out of hole with tubing.

NOTE: Continue with step 12.

10. Circulate hole with 2% KCL.

NOTE: Have Gel on location for possible Loss Circulation.

11. Pull out of hole with tubing.

12. Run in hole with wash pipe and mill out top packer slips.

13. Run in hole and retrieve packer.

14. Make up 4-3/4" mill with drill collars.

15. Run in hole to PBTD at 5312'. Mill out "junk" and wash sand plug out down to 5700'.

16. Circulate and condition hole clean with 2% KCL.

17. Pull out of hole and make up bit and casing scrapper.

18. Run in hole to 5700'. Circulate and condition.

19. Pull out of hole and rig up electric logging equipment.

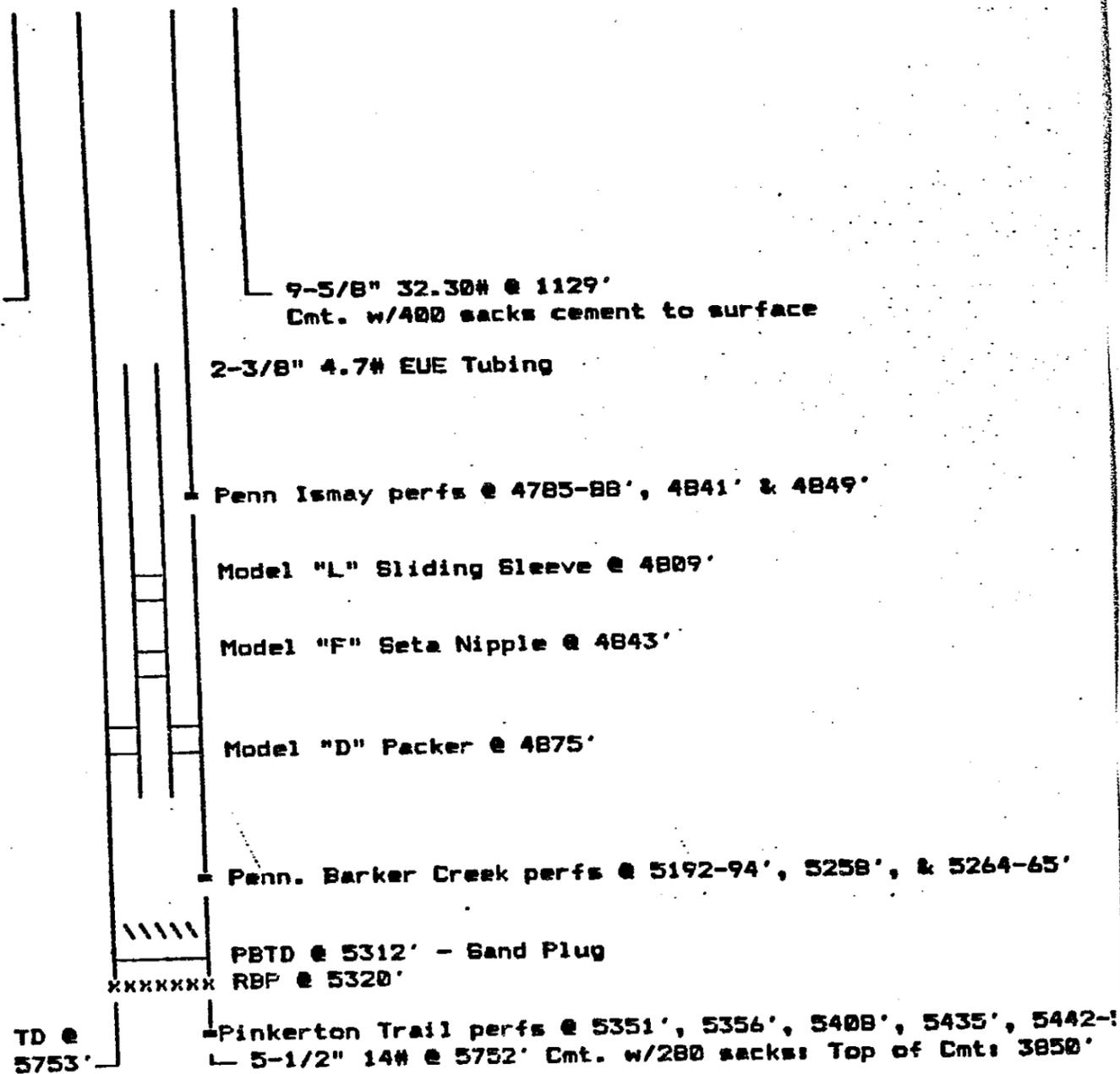
20. Run the following logs:

1. PAL from 5500' to 4500'
2. NGT from 5500' to 4500'
3. CET from 5500' to 4500'
4. CBL from 5500' to 4500'

NOTE: Cement squeezes, re-perforating and opening additional pay will be done after all logs have been evaluated.

See EXHIBIT "A" For Acid Treatment:

SCHEMATIC OF
 MONSANTO-NAVAJO "C" 1
 Sec. 16 T40N R29E
 Apache County, Arizona



(SEE ATTACHED SHEETS FOR DETAILS OF STIMULATION AND TESTS)

Information On Stimulation and Testing
Monsanto-Navajo "C" 1
2350 FNL & 2290 FWL
Sec. 16 T40N R29E
Apache County, Arizona

Penn. Barker Creeks: (5192 to 5265 feet) IP 5 BOD, 915 MCFD and
5 BWPD. Stimulation: Unknown.
Test period: 12 hr.

Penn. Ismay: (4785 to 4849 feet) IP 744 MCFD thru a
13/64" choke. Stimulate with 3000 gal of
acid. Test period 24 hrs.
IP: 820 MCF thru 13/64" choke: TP 840 psi

IP: For entire Open Interval: 2870 MCFD thru a 31/63" Choke.

7/72: 6 Day Test: 5.5 BOPD 500 MCFD

DST Information & Results:

DST #1:

4730'-4860' Ismay: No water cushion, 3/4" bottom choke, 3/4" top
choke. Tool opened for a 15 min. first flow at
8:45 am on 6-12-72, with a good blow
increasing to strong blow in 5 min. Gas to
surface in 15 min. Closed tool for 30 minutes
ISIP. Reopened tool for 90 minute flow period
with strong blow increasing to max flow rate
at end of 60 minute of 170 MCFD at 90 psi,
flow decreasing after 60 minutes. Closed tool
for 90 minute FSIP. Recovered: 620' of gas cut
mud and 30' of water cut mud that titrates
1540 ppm chlorides w/R_w of 1.48 at 80°. First
flow IFP 139 psi, First flow FFP 200 psi, 30
min ISIP 1356 psi (not stabilized), Test
Period IFP 161 psi, Test Period FFP 257 psi 90
min. FSIP 1425 psi (stabilized), initial MCP
2333 psi, Final MCP 2295 psi, BHT 95°F. Did
not have enough gas in sample to analyze.

DST #2:

5240'-5375' Barker Creeks: No water cushion, 3/4" bottom choke,
3/4" top choke. Tool open for 15 min. first
flow at 5:00 pm on 6-16-72. Had weak blow for
entire 15 min. Closed tool for 45 min. ISIP.
Reopened tool at 6:00 am on 6-16-72 with weak
blow for 90 min. test period. Well dead after
60 min.. Closed tool for 90 min. FSIP.
Recovered 240' of drilling mud. First flow IFP
118 psi, First Flow FFP 136 psi, 45 min. ISIP
169 psi (not stabilized), Test Period IFP 180
psi, Test Period FFP 202 psi, 90 min. FSIP 281
psi (stabilized) initial and final MCP 2618
psi, BHT 110°F.

DST #3:

5379'-5526' Lower Pinkerton Trails: No water cushion, 3/4" top & bottom choke. Tool opened for 15 min. flow at 6:30 pm on 6-17-72 with weak blow that increased to good blow in 5 min.. Closed tool for 45 min. ISIP. Reopened tool with a good blow for a 60 min. period test. Increased to strong blow in 5 min.. Gas to surface in 35 min.. Flared gas to pit. Max surface pressure 20 psi. Insufficient pressure to operate test equipment. Estimated gas volume 100 MCFD. Closed tool for 60 min. FSIP. Recovered 647' of gas cut mud. First flow IFP 88 psi. First flow FFP 178 psi, 45 min. ISIP 1281 psi (not stabilized), Test Period IFP 156 psi, Test Period FFP 216 psi, 60 min. FSIP 1335 psi (not stabilized), Initial MCP 2628 psi, Final MCP 2594 psi, BHT 132°F.

DST #4:

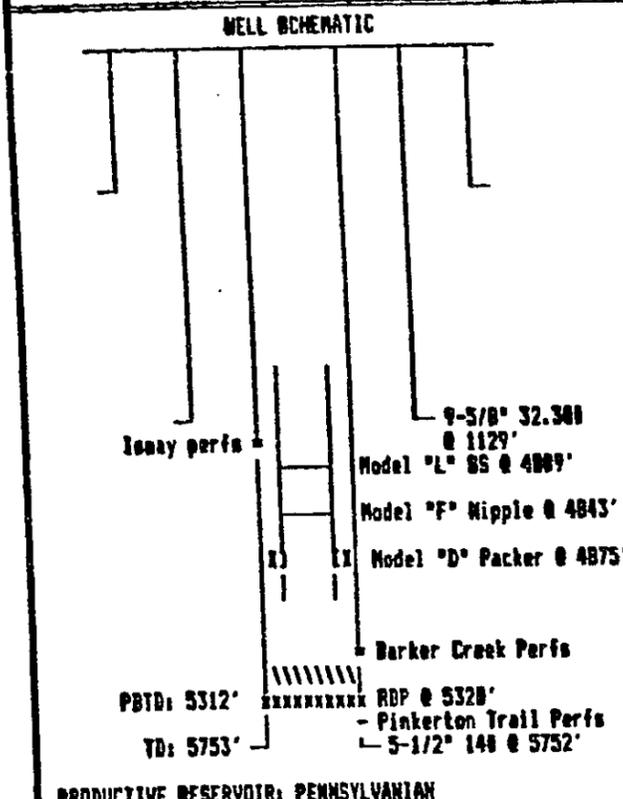
5650'-5710' Upper Miss.: 3/4" top & bottom choke. Tool opened for 15 min. first flow at 1:30 pm on 6-19-72 with a weak blow that increased to good blow in 5 min.. Closed tool for 45 min. ISIP. Reopened tool with a good blow for a 90 min. test period. Gas to surface in 5 min.. Would not burn. Gas flow too small to measure. No surface pressure. Blow diminishing toward end of flow period. Closed tool for 90 min. FSIP. Recovered 283' of gas cut drilling mud. First Flow IF 158 psi, First Flow FF 152 psi, 45 min. ISIP 1219 psi, Test Period IF 79 psi, Test Period FF 120 psi, 90 min. FSIP 658 psi, Initial MCP 2776 psi, Final MCP 2758 psi, BHT 117°F.

DST #5:

5710'-5750' Miss. Dolomite: 3/4" top & bottom choke, no water cushion. Tool opened for 15 min. first flow at 9:25 am on 6-20-72 with weak blow that increased to good blow in 5 min.. Closed tool for 45 min. ISIP. Reopened tool with good blow for a 90 min. test period. Had good blow throughout test. No gas to surface. No surface pressure. Closed tool for 90 min. FSIP. Recovered 800' of water cut mud and 2660' of salt water that titrates 7600 ppm chlorides, and R_w of 0.484 at 88°F. First Flow IF 195 psi, First Flow FF 679 psi, 45 min. ISIP 1566 psi, Test Period IF 711 psi, Test Period FF 1373 psi, 90 min. FSIP 1542 psi, Initial MCP 2824 psi, Final MCP 2784 psi, BHT 136°F.

WELL RECORD

OPERATOR: CITIES SERVICE OIL COMPANY		COUNTY/STATE: APACHE COUNTY, ARIZONA	
LEASE DESTINATION #: 05-30024-01		TRIBE NAME: NAVAJO	UNIT NAME:
LEASE NAME: MONSANTO-NAVAJO "C"	WELL #: 1	FIELD: BLACKROCK	SURVEY: 2350 FNL & 2290 FNL
SECTION: 16	TOWNSHIP: 40 N	RANGE: 29 E	ELEVATION: 6092'
			TD: 5753' PBD: 5312'



CASING DATA

SIZE	WEIGHT	TYPE	BOTTOM	BACKS CNT	TOP OF CNT
9-5/8	32.30		1129'	400	Surface
5-1/2	14		5752'	200	3850'

LOGGING DATA

COMPANY	TYPE	INTERVAL	DATE
SCHLUMBERGER	BHC/GR	5753-8000	6/21/72
SCHLUMBERGER	NEUTRON POR.	5753-4500	6/21/72
SCHLUMBERGER	INDUCTION	5753-4500	6/21/72

FORMATION LOG TOPS

CHINLE @ 1320'	BARKER CREEK @ 5173'
DeCHELLY @ 2348'	PINKERTON TRAIL @ 5298'
HERNOSA @ 4123'	MOLAS @ 5500'
ISMAY @ 4723'	MISS. LIMESTONE @ 5571'
DESERT CREEK @ 4830'	
AKAH @ 5017'	

PRODUCTIVE RESERVOIR: PENNSYLVANIAN

COMPLETION RECORD

TUBING RECORD

SIZE	WEIGHT	TYPE	LENGTH	SEAT NIPPLES
2-3/8	4.7	EUE	4875	Model "L" 4809'
				Model "F" 4843'

PERFORATIONS

FORMATION	DEPTHS	DEW & SIZE	DATE
PINKERTON TRAIL	5351-56,5403,35,5442-44	1 JSPF .5"	1972
ISMAY	4705-08, 4641,4849	1 JSPF .4"	1972
BARKER CREEK	5192-94,5250,5264,5265	1 JSPF .4"	1972

PACKER DATA

TYPE	SETTING DEPTHS
Model "D"	4875
Ret. Bridge Plug	5320

SQUEEZE & REPAIRS

DATE	DEPTH	WORK DONE

REMARKS

STATUS: SHUT-IN

STIMULATION

DATE	INTERVAL	SIZE & TYPE	AIR	BEFORE	AFTER
1972	PINKERTON TRAIL	1000 gal 15%	2	16TH	1.5M/D & E
1972	ISMAY	1500 gal 15%	3.5	0	UNKN
1972	BARKER CREEK	1500 gal 15%	3.6	0	UNKN

TEST DATA

IP: CADP = 2870 MCF P/D

DST DATA [X] PVT [] CORE [] BHP []

EXHIBIT "A"
ACID TREATMENT
(All Zones of Interest)

After the well has been worked over and all logging, squeeze jobs and perforating completed, the following acid treatment will be performed over each individual zone of interest.

NOTE: All perforating will be done prior to stimulation.

GUN TYPE: 4" Decentralized Hollow Carrier w/Select Fire
CHARGE SIZE: 41A Hyperjet III
CHARGE DEN: 1 Jet Shot per foot

1. Run Guiberson RBP-VI (or similar packer) with two 48 hour, 8,000 psi, pressure bombs contained in a perforated sub below the packer. Bombs should be protected from damage with springs both above and below.

NOTE: This packer will be run in conjunction with a treating packer. See step #2.

2. Pick up on tubing to set Guiberson HDCH-V (or similar) treating packer. Shut-in annulus loaded with 2% KCL.
3. Rig up and run gamma ray/temperature logs.
4. Pump 2% KCL down tubing until formation is loaded.
5. Perform 24,000 gallon acid fracture at 20 BPM with a maximum surface pressure of 4,000 psi as follows:
 - a. Pump 4,000 gallons WF40 plus 1 ppg 100 mesh sand.
 - b. Pump 6,000 gallons 28% HCL tagged with 1#/1,000g radioactive sand.
 - c. Pump 4,000 gallons WF40 plus 1 ppg 100 mesh sand.
 - d. Drop 800# salt diverting plug.
 - e. Repeat steps a thru d twice.
 - f. Pump 4,000 gallons WF40 plus 1 ppg 100 mesh sand.
 - g. Pump 6,000 gallons 28% HCL tagged with 1#/1,000g radioactive sand.
 - h. Pump 4,000 gallons WF40 plus 1 ppg 100 mesh sand.
 - i. Flush to bottom with 2% KCL.

NOTE: Treating fluids should contain the following additives:

- 28% HCL to contain 1,000 gallons

3 gallons A200 inhibitor
2 gallons W53 nonemulsifier
1 gallon J321 friction reducer

- WF40 to contain per 1,000 gallons

40 pounds J347 gel
2 gallons F75 surfactant
2 pounds J297 breaker
167 pounds M117 kcl (2%)

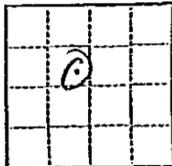
Blocking agent to contain per 100 gallons WF40:
100# J66 rock salt; total block = 2,400#

6. Obtain ISIP, 5 minute SIP, and 10 minute SIP.
7. Run gamma ray/temperature logs.
8. Allow well to clean up & then flow test for two hours.
9. Release packers and pull out of hole and/or reset over the next zone and repeat Steps 2 thru 8.
10. Run production packer and tubing.
11. Allow well to flow until it cleans up, then shut-in. Run two 72 hour clocks and BHP bombs and flow test as follows:
 - a. Flow well a minimum of 12 hours and allow to stabilize at a maximum rate for Four Point Test.
 - b. Change choke sizes to smaller size 3 times to obtain the other three points on the Four Point Test. Run all test for the EXACT same amount of time (min. of 1 hour each).
 - c. Shut-in well for 24 hour build up test.
 - d. Pull out of hole with bombs, and send results to Division Office.
12. Put well on production and report test results to Division Office for thirty (30) days.

NOTE: Data to be reported will be as follows:

Tubing Pressure
Casing Pressure
Choke Size
Gas Rates
Oil Rates
Water Rates

Form 9-593b



UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
CONSERVATION DIVISION

Not P/A 'G'
Sec. 16
T. 40 N
R. 29 E
G&SR Mer.

INDIVIDUAL WELL RECORD

INDIAN LAND:

Date Nov. 6, 1972

Ref. No. _____

Reservation Navajo Tribal State Arizona
14-20-0603-1553 County Apache
Lessee _____ Field Wildcat
Operator Cities Service Oil Co. District Farmington
Well No. 1 Monsanto-Navajo Subdivision SE1/4NW4

Location 2350 feet from north and 2290 feet from west lines of section

Drilling approved May 11, 1972 Well elevation 6092 g1 feet
Drilling commenced May 30, 1972 Total depth 5753 FB 5312' feet
Drilling ceased June 20, 1972 Initial production 2870 MCFPD (AOF)
Completed for production July 15, 1972 Gravity A. P. I. _____
Abandonment approved _____, 19____ Initial R. P. _____

Geologic Formations		Productive Horizons		
Surface	Lowest tested	Name	Depths	Contents
	<u>Mississippian</u>	<u>Paradox</u>	<u>4785-5265</u>	<u>Gas</u>

WELL STATUS

YEAR	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.
<u>1972</u>					<u>Drg</u>		<u>PGW</u>					
<u>1976</u>						<i>Shut in</i>						

Geol. Tops: Dark. Crk. 5173' E.L.
REMARKS Chinle 1329' E.L. Hermosa 4123' E.L. Emery 4391' E.L.
Shinarump 2130' " Ismay 4723' " Pink. Tr. 5298' "
DeChelly 2340' " Des. Creek 4876' " Molas 5500' "
Organ Rock 2755' " Akah 5017' " Miss. 5571' "
Cutler 3363' "



United States Department of the Interior
BUREAU OF INDIAN AFFAIRS
Navajo Area Office
Window Rock, Arizona 86515

IN REPLY REFER TO:
ARPM/322

MAR 25 1977

Rec'd 10-14-81

Cities Service Oil Co.
P. O. Box 1919
Midland, Texas 79701

Gentlemen:

Pursuant to your request dated January 24, 1977, and the Navajo Tribe's letter dated January 24, 1975, you are relieved of any further responsibility and liability to plug and abandon the "A" #1 Well under expired lease No. 14-20-0603-1522, the "C" #1 well under expired lease No. 14-20-0603-1553, and the "AC" #1 well under expired lease No. 14-20-0603-3814.

The release of responsibility is effective January 24, 1977. This will allow the Navajo Tribe to assume responsibility for the wells as they requested.

A copy of this letter is being sent to the U. S. Geological Survey for their information and records.

Sincerely yours,

John J. Bokan

ACTING
ASSISTANT

Area Director





THE NAVAJO NATION
WINDOW ROCK, NAVAJO NATION (ARIZONA) 86515

MAR 25 1977

PETER MACDONALD
CHAIRMAN, NAVAJO TRIBAL COUNCIL
WILSON C. SKEET
VICE CHAIRMAN, NAVAJO TRIBAL COUNCIL

John Bokan,
Acting Assistant) Area Director
U.S. Department of the Interior
Bureau of Indian Affairs
Navajo Area Office
Window Rock, Arizona 86515

Rec'd 10-14-81

Dear Mr. Bokan:

In response to your letter of 11 February 1977, Cities Service Oil Company is hereby released from its responsibility to plug and abandon the following three gas wells:

- (1) Cities Service Oil Company, Monsanto-Navajo "A" #1 well located 1980' FNL and 1050' FEL, Section 21, 40N-29E, Apache County, Arizona (BIA No. 14-20-0603-1522).
- (2) Cities Service Oil Company, Monsanto-Navajo "C" #1 well located 2350' FNL and 2290' FEL, Section 16, 40N-29E, Apache County, Arizona (BIA No. 14-20-0603-1553).
- (3) American Fuels Corp., Navajo "AC" #1 well located 490' FNL and 500' FEL, Section 17, 40N-29E, Apache County, Arizona (BIA No. N00-C-14-20-3814).

It is understood that all three wells are unplugged and that all equipment in connection therewith is intact.

Sincerely,

Wilson C. Skeet
for Peter MacDonald, Chairman
The Navajo Tribe

RECEIVED

MAR 25 1977

Area Branch #1

CITIES SERVICE OIL COMPANY



Box 1919
Midland, Texas 79701
Telephone (915) 684-7131

February 23, 1977

United States Department of Interior
Bureau of Indian Affairs
Navajo Area Office
Window Rock, Arizona 86515

Rec'd 10-14-81

ATTENTION: Mr. Thomas Lynch, Realty Specialist
Real Property Management

- Re: (1) Cities Service Oil Company, Monsanto-Navajo "A" #1 well located 1980' FNL and 1050' FEL Section 21 - 40N-29E, Apache County, Arizona. (Your No. 14-20-0603-1522 and our 07X6-0200109)
- (2) Cities Service Oil Company, Monsanto-Navajo "C" #1 well located 2350' FNL and 2290' FWL Section 16 - 40N-29E, Apache County, Arizona. (Your No. 14-20-0603-1553 and our 07X6-0200104)
- (3) American Fuels Corp., Navajo "AC" #1 well located 490' FNL and 500' FEL Section 17 - 40N-29E, Apache County, Arizona. (Your No. N00-C-14-20-3814 and our 07X6-0200110)

Gentlemen:

As previously discussed and more fully set out in my letter of January 24, 1977, there has been a considerable delay in receiving a decision as to the disposition of captioned wells. I shall appreciate your furnishing me with a decision as to one of the alternatives set out in my letter of January 24, 1977.

Your cooperation in this matter will be greatly appreciated.

Very truly yours,

CITIES SERVICE OIL COMPANY

A. E. Taylor
A. E. Taylor

AET:lh

RECEIVED

January 24, 1977

United States Department of Interior
Bureau of Indian Affairs
Navajo Area Office
Window Rock, Arizona 86515

Rec'd 10-14-81

ATTENTION: Mr. Thomas Lynch, Realty Specialist
Real Property Management

- Re: (1) Cities Service Oil Company, Monsanto-Navajo "A" #1 well located 1930' FNL and 1050' FEL Section 21 - 40N-29E, Apache County, Arizona. (Your No. 14-20-0603-1522 and our 07X6-0200109)
- (2) Cities Service Oil Company, Monsanto-Navajo "C" #1 well located 2350' FNL and 2290' FEL Section 16 - 40N-29E, Apache County, Arizona. (Your No. 14-20-0603-1553 and our 07X6-0200104)
- (3) American Fuels Corp., Navajo "AC" #1 well located 490' FNL and 500' FEL Section 17 - 40N-29E, Apache County, Arizona. (Your No. H00-C-14-20-3814 and our 07X6-0200110)

Gentlemen:

Cities Service Oil Company drilled its Navajo "A" and "C" No. 1 wells, more fully set out in (1) and (2) above. These two wells ^{were} completed as wells capable of producing gas; however, our leases expired before we were able to obtain a pipeline connection. Under a farmout contract from Cities Service Oil Company and Monsanto Company, American Fuels Corp. drilled their Navajo "AC" No. 1 well, which apparently was capable of producing, according to their production test on October 4, 1973. The American Fuels Navajo "AC" No. 1 well is located on an existing and valid lease owned jointly between Cities Service Oil Company and Monsanto Company.

By letter dated January 24, 1975, Mr. Robert F. Schryver, Director, Office of Minerals Development, advised they were considering several courses of action relative to the "A" & "C" No. 1 wells. He further requested us to leave these wells unplugged and leave all equipment in connection therewith intact until a decision was reached. We have abided by this request to the present time. Inasmuch as a considerable amount of time has elapsed since

This request, two of the leases have expired on which two of the wells were located and in view of anticipated benefits of these three wells to the Navajo people, we request one of the following:

1. Notification from the appropriate authority for the Navajo Tribe that they will take over the "A", "C" and "AC" No. 1 wells and furnish Cities Service Oil Company and Monsanto Company with a letter or appropriate release of all responsibility and liability for these wells.
2. Authorizations from the appropriate authority for the Navajos to properly plug these wells.

We respectfully request an early decision and consummation of this matter.

Very truly yours,

CITIES SERVICE OIL COMPANY

A. E. Taylor

AET:lh

Form 9-330
(Rev. 5-68)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN DUPLICATE
(See other instructions on reverse side)

Navajo Tribal Contract

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

WELL COMPLETION OR RECOMPLETION REPORT AND LOG*

5. LEASE DESIGNATION AND SERIAL NO.
14-20-0603-1553

6. IF INDIAN, ALLOTTEE OR TRIBE NAME
Navajo (Use #05-30024-01)

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME
Hogan-Navajo C

9. WELL NO.

10. FIELD AND POOL, OR WILDCAT
Wildcat

11. SEC. T. R. M., OR BLOCK AND SURVEY
Sec. 16-T40N-R29E

12. COUNTY OR PARISH
Apache

13. STATE
Arizona

14. PERMIT NO. DATE ISSUED

15. DATE BRUDDEN 5-30-72 16. DATE T.D. REACHED 6-20-72 17. DATE COMPL. (Ready to prod.) 7-15-72 18. ELEVATIONS (OF, BKB, RT, OR, ETC.) 6092 GR 19. ELEV. CASING HEAD 6092

20. TOTAL DEPTH, MD & TVD 5753 21. PLUG, BACK T.D., MD & TVD 5312 22. IF MULTIPLE COMPL. HOW MANY? -- 23. INTERVALS DRILLED BY -- 24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD) 4785--4849 Ismay 5192--5265 Barker Creek 25. TYPE ELECTRIC AND OTHER LOGS RUN Induction-Electrical Log, Neutron Porosity Log, Borehole Compensated Sonic Log-Gamma Ray 26. WAS WELL CORDED? NO 27. WAS DIRECTIONAL SURVEY MADE? NO

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

CASING SIZE	WEIGHT, LB./FT.	DEPTH SET (MD)	HOLE SIZE	CEMENTING RECORD	AMOUNT CEMENT
9 5/8"	32.3#	1129'	12 1/2"	400 sacks	None
5 1/2"	14#	5752'	7 7/8"	280 sacks	None

29. LINER RECORD

SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT*	SCREEN (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)
None					2 3/8"	4875'	4875'

30. TUBING RECORD

31. PREPARATION RECORD (Interval, size and number)

INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED
1 - 0.40" hole per foot @ 5192, 5193, 5194, 5258, 5264 & 5265	1500 gal 15% acid
1 - 0.40" hole per ft @ 4785, 4786, 4787, 4788, 4841 & 4849	1500 gal 15% acid

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

33. PRODUCTION

DATE FIRST PRODUCTION 7-15-72

PRODUCTION METHOD (Flowing, gas lift, pumping—size and type of pump) Flowing

DATE OF TEST 7-15-72

HOURS TESTED 4 (4-point test)

CHOKER SIZE

PROD'N. FOR TEST PERIOD

OIL—BBL. 2870 MCFD

GAS—MCF.

WATER—BBL.

OIL GRAVITY—API (CORR.)

34. DISPOSITION OF GAS (Hold, used for fuel, vented, etc.) Well shut in waiting for pipeline connection

35. LIST OF ATTACHMENTS Deviation test affidavit, above logs

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

SIGNED ORIGINAL SIGNER Q. D. ROBERTS TITLE Dist. Admin. Supervisor DATE July 18, 1972

INSTRUCTIONS

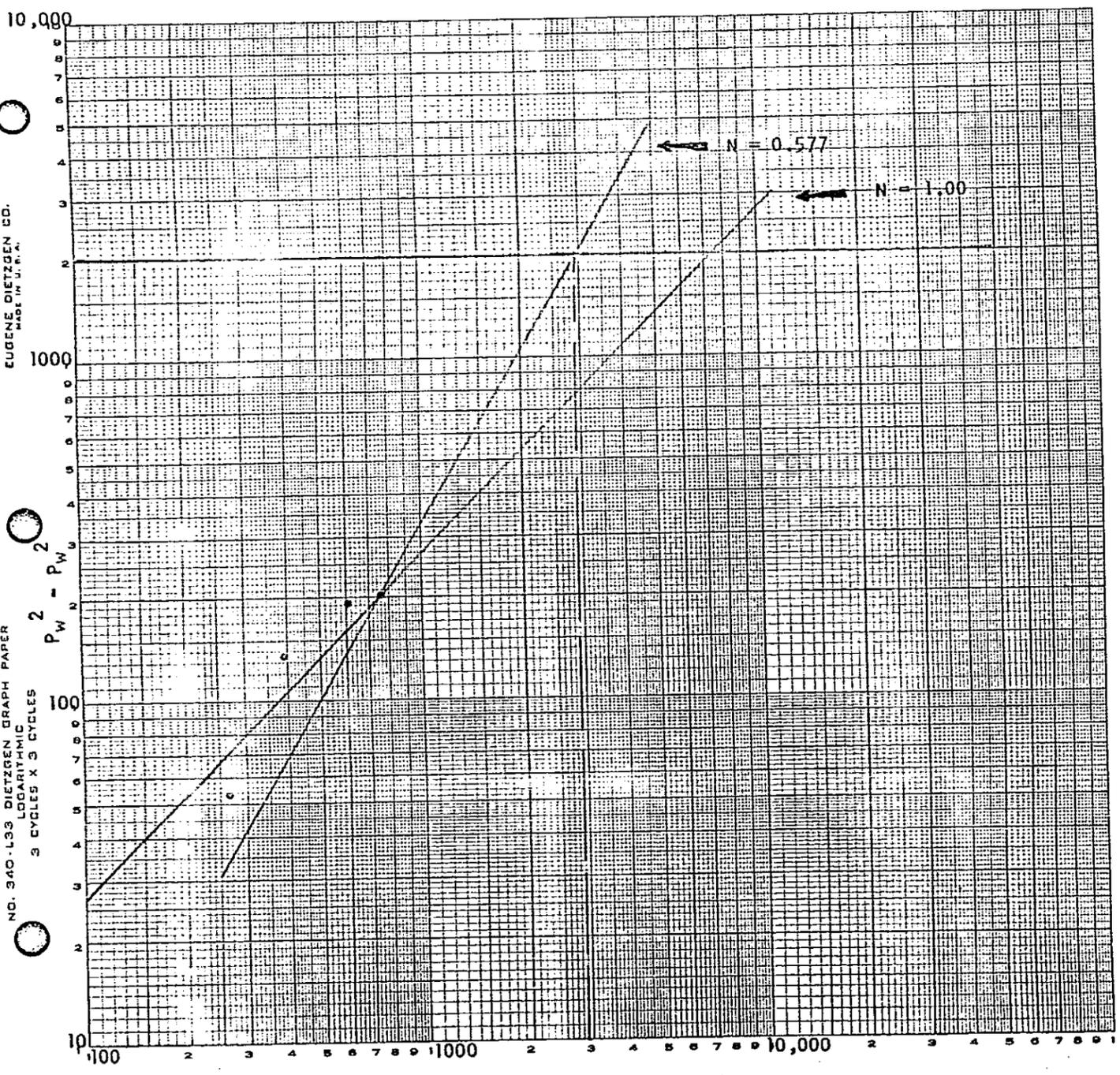
*(See Instructions and Spaces for Additional Data on Reverse Side)

ARIZONA OIL AND GAS CONSERVATION COMMISSION
MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Type Test <input checked="" type="checkbox"/> Initial <input type="checkbox"/> Annual <input type="checkbox"/> Special		Test Date 7-15-72		Well Name Monsanto-Navajo C							
Company Cities Service Oil Company			Connection --		Permit No. Lse #05-30024-01						
Pool Undesignated			Formation Pennsylvanian		Unit 14-20-0603-1553						
Completion Date 7-15-72		Total Depth 5753		Plug Back TD 5312	Elevation Farm or Lease Name Monsanto-Navajo C						
Csg. Size 5 1/2"	Wt. 14	d 4.887	Set At 5752'	Perforations: 4785--4849 From 5192 To 5265							
Tbg. Size 2 3/8"	Wt. 4.7	d 1.901	Set At 4875	Perforations: From To							
Type Well -- Single -- Bradenhead -- G.G. or G.O. Multiple Single -- Ismay & Barker Creek Commingled down hole				Packer Set At 4875'							
Producing Thru tubing		Reservoir Temp. °F 110 @ 5240	Mean Annual Temp. °F 60	Baro. Pres. -- P _a 12.2							
L 4875	H 4875	Gg. est. 0.703	% CO ₂ est. 2.85	% N ₂ est. 8.32	% He Prover Meter Run 3"						
				Taps Flange							
FLOW DATA			TUBING DATA		CASING DATA						
NO.	Prover Line Size	X	Choke Orifice Size	Press. p.s.i.g.	Diff. h _w	Temp. °F	Press. p.s.i.g.	Temp. °F	Press. p.s.i.g.	Temp. °F	Duration of Flow
1.	3		.875	418	70	90	1158	77	1168	90	1 hr.
2.	3		.875	440	42	88	1160	75	1172	90	1 hr.
3.	3		.875	455	17	87	1187	76	1195	90	1 hr.
4.	3		.875	500	7	87	1212	75	1219	90	1 hr.
5.											
RATE OF FLOW CALCULATIONS											
NO.	Coefficient (24-Hour)	$\sqrt{h_w P_m}$	Pressure P _m	Flow Temp. Factor Ft.	Gravity Factor F _g	Super Compress. Factor, F _{pv}	Rate of Flow Q, Mcfd				
1.	3.650	173.53	430.2	.9723	1.193	1.034	759				
2.	3.650	137.81	452.2	.9741	1.193	1.035	605				
3.	3.650	89.12	467.2	.9750	1.193	1.037	392				
4.	3.650	59.88	512.2	.9750	1.193	1.041	265				
5.											
NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio -- Mcf/bbl.		API Gravity of Liquid Hydrocarbons -- Deg.				
1.	0.65	550	1.51	0.936	.703						
2.	0.68	548	1.51	0.934							
3.	0.70	547	1.50	0.930	665 p.s.i.a.		p.s.i.a.				
4.	0.77	547	1.50	0.923	364 R		R				
5.											
NO.	P _t ²	P _w	P _w ²	P _c ² - P _w ²	(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 9.976$		(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 3.78$				
1.		1346.2	1812.2	201.9							
2.		1350.2	1823.0	191.1							
3.		1371.2	1880.2	133.9							
4.		1400.2	1960.6	53.5	AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 2870$		RECEIVED				
5.											
Absolute Open Flow 2870 Mcfd @ 15.025				Angle of Slope @		Slope, n 0.577		JUL 19 1972			
Remarks: BHP bomb was used				64 hr. shut-in BHP = 1407 psig		O & G CONS.					

CERTIFICATE: I, the undersigned, under the penalty of perjury, state that I am the AGENT of the CITIES SERVICE OIL (company), and that I am authorized by said company to make this report; and that this report was prepared under my supervision and direction and that the facts stated therein are true, correct and complete to the best of my knowledge.
 Date 7-18-72 Signature *W. Brad Bennett*

STATE OF ARIZONA OIL & GAS CONSERVATION COMMISSION
 Multipoint and One Point Back Pressure Tests for Gas Well
 Form No. 18 (File two copies)



EUGENE DIETZGEN CO.
MADE IN U. S. A.

NO. 340-133 DIETZGEN GRAPH PAPER
LOGARITHMIC
3 CYCLES X 3 CYCLES

$Q = \text{MCFD}$

Experience in the area dictates the use of an exponent $N = 0.577$.
CAOF = 2870 MCFD

RECEIVED

JUL 19 1972

O & G CONS. COMM.

AFFIDAVIT

State of New Mexico
 County of Lea

CITIES SERVICE OIL Company
 Lease Name Monsanto-Navajo C Well No. 1
 in Sec. 16 Twp. 40N Rge. 29E
 County of Apache
 State of Arizona

E. Y. Wilder of lawful age being first duly sworn deposes
 and says:

That he supervises development and operation of the captioned lease and is duly
 qualified and authorized to make this affidavit and is fully acquainted with all
 facts herein set out concerning Deviation test and Directional drilling.

		<u>Degrees</u>	<u>Depth</u>	<u>Degrees</u>	<u>Depth</u>
.25			140		
1.00			630		
1.00			1123		
1.25			1450		
1.00			1806		
.75			2250		
1.00			2350		
1.50			2635		
2.50			2807		
2.25			3100		
2.00			3404		
2.25			3739		
1.75			3990		
1.00			4417		
1.25			4723		
1.25			5100		
1.25			5375		
1.00			5710		
1.25			5753		

RECEIVED

JUL 19 1972

O & G CONS. COMM.

Further affiant saith not.

Subscribed and sworn to before me this 18th day of July 19 72

By Commission Expires 3-1-76 JAMES M. Eyer Notary Public
 Lea County, New Mexico

WA

DRILLING REPORT

HOBBS DISTRICT

JULY 18, 1972

DRILLING WELLS

Monsanto Navajo C No. 1:

TD 5753, PBTD 5312 Lime, 5½" at 5752, Barker Creek perfs 5192--5265, Ismay perfs 4785--4849. Well complete and shut in W.O. gas connection. CAOF of commingled Barker Creek and Ismay Zones is 2.870 MMCFD. Slope of points 0.577. Specific gravity of gas 0.703.

This is a development well in the Southeast Dry Mesa Area, Apache County, Arizona. Objective was the Miss. and Penn Carbonate Zones. Company interest 50% to casing point, then 100% Citgo when non-operator elected non-consent at the casing point. LAST REPORT.

RECEIVED

JUL 26 1972

O & G CONS. COMM.

X

DRILLING REPORT

HOBBS DISTRICT

JULY 17, 1972

DRILLING WELLS

Monsanto Navajo C No. 1:

TD 5753, PBD 5312, 5½" at 5752, Barker Creek
perfs 5192--5265, Ismay perfs 4785--4849.
Shut in.

RECEIVED

JUL 26 1972

O & G CONS. COMM.

DRILLING REPORT
HOBBS DISTRICT
JULY 16, 1972

DRILLING WELLS

Monsanto Navajo C No. 1:

TD 5753, PBD 5312, 5 $\frac{1}{2}$ " at 5752, Barker Creek perfs
5192--5265, Ismay perfs 4785--4849. Shut in.

RECEIVED

JUL 26 1972

O & G CONS. COMM.

DRILLING REPORT

HOBBS DISTRICT

JULY 15, 1972

DRILLING WELLS

Monsanto Navajo C No. 1:

TD 5753, PBTD 5312, 5½ at 5752, Barker Creek perms
5192--5265, Ismay perms 4785--4849. Shut In.

RECEIVED
JUL 26 1972
O & G CONS. COMM.

Form 9-331
(May 1963)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

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

Navajo Tribal Contract

Form approved.
Budget Bureau No. 42-R1424.

5. LEASE DESIGNATION AND SERIAL NO.
14-20-0603-1553

6. IF INDIAN, ALLOTTEE OR TRIBE NAME
Navajo (Lse #05-30024-01)

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME
Monsanto-Navajo

9. WELL NO.
1

10. FIELD AND POOL, OR WILDCAT
Wildcat

11. SEC., T., R., M., OR BLK. AND
SURVEY OR AREA
Sec. 16-T40N-R29E

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
CITIES SERVICE OIL COMPANY

3. ADDRESS OF OPERATOR
P.O. Box 69, Hobbs, New Mexico 88240

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*
See also space 17 below.)
At surface
2350 FNL & 2290 FVL Sec. 16-T40N-R29E, Apache County, Arizona

14. PERMIT NO.
--

15. ELEVATIONS (Show whether DF, RT, GR, etc.)
6092 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

REPAIRING WELL
ALTERING CASING
ABANDONMENT*

(Other) Completion
(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.)

TD 5753, PBTD 5312, 5 1/2" casing at 5752. Well complete. Perforated 7 - 3" holes in Pinkerton Trail Zone at 5351, 5356, 5408, 5435, 5442, 5443 and 5444. Ran 2 3/8" EUE tubing to 5446 with RTTS set at 5280'. Spotted acid across Pinkerton Trail perfs and acidized with 1000 gallons Dowell 15% break down acid. Max. 3000 psi. Treated at 2 B/M at 2800 psi. ISIP 2300 psi, 5 min SIP 1800 psi, 10 min SIP 1650 psi, 15 min SIP 1500 psi. All load recovered. 12 hour SITP of Pinkerton Trail Zone 450 psi. Bled to zero pressure in 5 minutes with continuing light blow of gas. T.A.'d Pinkerton Trail Zone by setting R.B.P. at 5320. Perforated Barker Creek zone with 6 - 0.40" holes 5192, 5193, 5194, 5258, 5264, and 5265. 12 hour SITP of Barker Creek zone 1500 psi. Bled well down and spotted acid across Barker Creek perfs and acidized with 1500 gallons Dowell 15% break down acid. Max 2000 psi. Treated at 3.6 B/M at 1600 psi. ISIP 400 psi, 5 min SIP vacuum. Well started flowing. All load recovered. Set R.B.P. at 4886. Perforated Ismay Zone with 6 - 0.40" holes 4765, 4786, 4787, 4788, 4841 and 4849. Reset RTTS above Ismay perfs, at 4749 with bottom of tail pipe at 4849. Spotted acid across Ismay perfs. Acidized with 1500 gallons 15% Dowell break down acid. Max 2000 psi. Treated at 2000 psi at 3.5 B/M. ISIP 1000 psi, 5 min SIP 800 psi, 10 min SIP 750 psi, 15 min SIP 600 psi. All load recovered. Ran Baker Model D packer on wire line. Set in 5 1/2" OD casing at 4875' below the Ismay perfs. Ran 2 3/8" EUE j-55 completion tubing with Baker latch type seal assembly at 4875', Model F (1.81" ID) seating nipple at 4843' and Model L (1.87" ID) sliding sleeve at 4809'. Installed Xmas tree. Ran BHP bomb to 4800' and shut well in for pressure build up test. Calculated absolute open flow 2870 MCFD.

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

SIGNED G. D. ROBERTSON TITLE District Admin. Supervisor DATE July 18, 1972

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

RECEIVED

JUL 19 1972

*See Instructions on Reverse Side

O & G CONS. COMM.

Monsanto-Navajo C #1

- DST No. 1: 4730-4860 (130¹) Ismay. No water cushion, 3/4" bottom choke, 3/4" top choke. Tool opened for a 15 minute first flow at 8:45 A.M. 6-12-72, with a good blow increasing to strong blow in 5 minutes. Gas to surface in 15 min. Closed tool for 30 min ISIP. Reopened tool for 90 minute flow period with strong blow increasing to max flow rate at end of 60 min of 170 MCFD at 90 psi, flow decreasing after 60 min. Closed tool for 90 min FSIP. Recovered: 620¹ of gas cut mud and 30¹ of water cut mud that titrates 1540 PPM chlorides W/ R_w of 1.48 at 80⁰. First flow IFP 139 psi, First flow FFP 200 psi, 30 min ISIP 1356 psi (not stabilized), Test Period IFP 161 psi, Test Period FFP 257 psi, 90 min FSIP 1425 psi (stabilized), Initial MCP 2333 psi, Final MCP 2295 psi, BHT 95⁰F. Did not have enough gas in sample to analyze.
- DST No. 2: 5240-5375 (135¹) Barker Creek. No water cushion, 3/4" bottom choke, 3/4" top choke. Tool opened for 15 minute first flow at 5 A.M. 6-16-72. Had weak blow for entire 15 minutes. Closed tool for 45 min ISIP. Reopened tool at 6 A.M. 6-16-72 with a weak blow for a 90 minute test period. Well dead after 60 minutes. Closed tool for 90 min FSIP. Recovered 240¹ of drilling mud. First flow IFP 118 psi, First Flow FFP 136 psi, 45 min ISIP 189 psi (not stabilized), Test Period IFP 180 psi, Test Period FFP 202 psi, 90 min FSIP 281 psi (stabilized), Initial & final MCP 2618 psi, BHT 110⁰F.
- DST No. 3: 5379-5526 (147¹) Lower Pinkerton Trail. No water cushion, 3/4" bottom choke, 3/4" top choke. Tool opened for 15 min first flow at 6:30 P.M. 6-17-72 with a weak blow that increased to good blow in 5 minutes. Closed tool for 45 min ISIP. Reopened tool with a good blow for a 60 minute test period. Increased to strong blow in 5 minutes. Gas to surface in 35 minutes. Flared gas to pit. Max surface pressure 20 psi. Insufficient pressure to operate testing equipment. Estimated gas volume 100 MCFD. Closed tool for 60 minute FSIP. Recovered 647¹ of gas cut mud. First flow IFP 88 psi, First flow FFP 178 psi, 45 min. ISIP 1281 psi (not stabilized), Test Period IFP 156 psi, Test Period FFP 216 psi, 60 min FSIP 1335 psi (not stabilized), Initial MCP 2628 psi, Final MCP 2594 psi, BHT 132⁰F.
- DST No. 4: 5650-5710 (60¹) Upper Mississippian, 3/4" bottom choke, 3/4" top choke. Tool opened for a 15 min first flow at 1:30 P.M. 6-19-72 with a weak blow that increased to good blow in 5 minutes. Closed tool for 45 min ISIP. Reopened tool with a good blow for a 90 minute test period. Gas to surface in 5 minutes. Would not burn. Gas flow too small to measure. No surface pressure. Blow diminishing toward end of flow period. Closed tool for 90 min FSIP. Recovered 283¹ of gas cut drilling mud. First Flow IF 158 psi, First Flow FF 152 psi, 45 min ISIP 1219 psi, Test Period IF 79 psi, Test Period FF 120 psi, 90 min FSIP 658 psi, Initial MCP 2776 psi, Final MCP 2758 psi, BHT 117⁰F.
- DST No. 5: 5710--5750 (40¹) Miss. Dolo. 3/4" bottom choke, 3/4" top choke, no water cushion. Tool opened for a 15 min first flow at 9:25 A.M. 6-20-72 with weak blow that increased to good blow in 5 min. Closed tool for 45 min ISIP. Reopened tool with a good blow for a 90 min test period. Had good blow throughout test. No gas to surface. No surface pressure. Closed tool for 90 min FSIP. Recovered 800¹ of water cut mud and 2660¹ of salt water that titrates 7600 PPM chlorides, and R_w of 0.484 at 88⁰F. First Flow IF 195 psi, First Flow FF 679 psi, 45 min ISIP 1566 psi, Test Period IF 711 psi, Test Period FF 1373 psi, 90 min FSIP 1542 psi, Initial MCP 2824 psi, Final MCP 2784 psi, BHT 136⁰F.

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JUL 19 1972

O & G CONS. COMM.

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN DUPLICATE
(See cover instructions on reverse side)

Navajo Tribal Contract

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

WELL COMPLETION OR RECOMPLETION REPORT AND LOG*

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

1b. TYPE OF COMPLETION: NEW WELL WORK OVER DEEP-EN PLUG BACK DIFF. RESVR. Other _____

2. NAME OF OPERATOR
CITIES SERVICE OIL COMPANY

3. ADDRESS OF OPERATOR
P.O. Box 69, Hobbs, New Mexico 88240

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements)*
At surface 2350 FNL & 2290 FWL Sec 16-T40N-R29E, Apache Co. Ariz.
At top prod. interval reported below
At total depth Same

5. LEASE DESIGNATION AND SERIAL NO.
14-20-0603-1553

6. IF INDIAN, ALLOTTEE OR TRIBE NAME
Navajo (Use #05-30024-01)

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME
Monsanto-Navajo C.

9. WELL NO.
1

10. FIELD AND POOL, OR WILDCAT
Wildcat

11. SEC., T., R., M., OR BLOCK AND SURVEY OR AREA
Sec. 16-T40N-R29E

12. COUNTY OR PARISH
Apache

13. STATE
Arizona

14. PERMIT NO. _____ DATE ISSUED _____

15. DATE SPUNDED 5-30-72 16. DATE T.D. REACHED 6-20-72 17. DATE COMPL. (Ready to prod.) 7-15-72 18. ELEVATIONS (DF, REB, RT, OR, ETC.)* 6092' GR 19. ELEV. CASINGHEAD 6092'

20. TOTAL DEPTH, MD & TVD 5753 21. PLUG, BACK T.D., MD & TVD 5312 22. IF MULTIPLE COMPL., HOW MANY* --- 23. INTERVALS DRILLED BY --- ROTARY TOOLS 0--5753 CABLE TOOLS ---

24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)*
4785--4849 Ismay
5192--5265 Barker Creek

25. WAS DIRECTIONAL SURVEY MADE
No

26. TYPE ELECTRIC AND OTHER LOGS RUN
Induction-Electrical Log, Neutron Porosity Log, Borehole Compensated Sonic Log-Gamma Ray

27. WAS WELL CORED
No

23. CASING RECORD (Report all strings set in well)

CASING SIZE	WEIGHT, LB./FT.	DEPTH SET (MD)	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
9 5/8"	32.3#	1129'	12 1/4"	400 sacks	None
5 1/2"	14#	5752'	7 7/8"	280 sacks	None

29. LINER RECORD

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

30. TUBING RECORD

SIZE	DEPTH SET (MD)	PACKER SET (MD)
2 3/8"	4875'	4875'

31. PERFORATION RECORD (Interval, size and number)

1 - 0.40" hole per foot @ 5192, 5193, 5194, 5258, 5264 & 5265
1 - 0.40" hole per ft @ 4785, 4786, 4787, 4788, 4841 & 4849

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

DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED
5192--5265	1500 gal 15% acid
4785--4849	1500 gal 15% acid

33. PRODUCTION

DATE FIRST PRODUCTION 7-15-72 PRODUCTION METHOD (Flowing, gas lift, pumping—size and type of pump) Flowing WELL STATUS (Producing or shut-in) Shut in

DATE OF TEST 7-15-72 HOURS TESTED 4 (4-point test) CHOKER SIZE --- PROD'N. FOR TEST PERIOD --- OIL—BBL. --- GAS—MCF. --- WATER—BBL. --- GAS-OIL RATIO ---

FLOW. TUBING PERMS. --- CASING PRESSURE --- CALCULATED 24-HOUR RATE --- OIL—BBL. --- GAS—MCF. 2870 MCFD WATER—BBL. --- OIL GRAVITY-API (CORR.) ---

34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.)
Well shut in waiting for pipeline connection

TEST WITNESSED BY

35. LIST OF ATTACHMENTS
Deviation test affidavit, above logs

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

ORIGINAL SIGNED
SIGNED G. D. ROBERTSON TITLE Dist. Admin. Supervisor DATE July 18, 1972

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JUL 19 1972

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

INSTRUCTIONS

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

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

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

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

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

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

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

FORMATION		TOP	BOTTOM	DESCRIPTION, CONTENTS, ETC.	GEOLOGIC MARKERS	
TOP	BOTTOM	MEAS. DEPTH	TRUE VERT. DEPTH	NAME	TOP	MEAS. DEPTH
		1329		Chinle		1329
		2340		DeChelly		2340
		2755		Organ Rock		2755
		3363		Cutter		3363
		4123		Hermosa		4123
		4723		Ismay		4723
		4870		Desert Creek		4870
		5017		Akah		5017
		5173		Barker Creek		5173
		5298		Pinkerton Trail 1-A		5298
		5346		Pinkerton Trail 1-B		5346
		5406		Pinkerton Trail 1-C		5406
		5450		Pinkerton Trail 1-D		5450
		5500		Molas		5500
		5571		Miss. Limestone		5571
		5719		Miss. Porosity		5719

See attached sheet for Drill Stem Tests

WA

DRILLING REPORT

HOBBS DISTRICT

JULY 14, 1972

DRILLING WELLS

Monsanto Navajo C No. 1:

TD 5753, PBTD 5312, 5 1/2" at 5752, Barker Creek perfs 5192--5265, Ismay perfs 4785--4849. Shut in. 64 hour shut in BHP 1407 psi. Flowed well to determine absolute open flow on the basis of four one-hour flows:

Flow Periods	B.H. Flowing Pressure	Surface FTP	Surface SICP	Choke	Rate
1st rate	1334 psi	1158 psi	1168 psi	18/64"	780 MCFD
2nd rate	1338 psi	1160 psi	1172 psi	12/64"	620 MCFD
3rd rate	1359 psi	1187 psi	1195 psi	8/64"	395 MCFD
4th rate	1388 psi	1212 psi	1219 psi	4/64"	270 MCFD

No liquids produced during test. USGS approval was received to use the decreasing flow rate sequence, due to volume of fluid produced during prior testing.

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X

DRILLING REPORT

HOBBS DISTRICT

JULY 13, 1972

DRILLING WELLS

Monsanto Navajo C No. 1:

TD 5753, PBD 5312, Barker Creek perfs 5192--5265,
Ismay perfs 4785--4849. Shut in for pressure
buildup.
40 hour SITP 1219 psi and increasing at rate of
1 psi every 20 minutes (using dead weight tester).
This exceeds the maximum allowable increase
accepted by the USGS. Will leave shut in another
24 hours.

X

DRILLING REPORT

HOBBS DISTRICT

JULY 12, 1972

DRILLING WELLS

Monsanto Navajo C No. 1:

TD 5753, PBTD 5312, Barker Creek perms 5192--5265,
Ismay perms 4785--4849. Shut in for pressure build up.

Form 9-331
(May 1963)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN TRIBAL STATE*
(Other instructions on re-
verse side)

Form approved.
Budget Bureau No. 42-R1424.

SUNDRY NOTICES AND REPORTS ON WELLS

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

1. OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <input type="checkbox"/>		5. LEASE DESIGNATION AND SERIAL NO. 14-20-0603-1553
2. NAME OF OPERATOR American Fuels Corporation		6. IF INDIAN, ALLOTTEE OR TRIBE NAME Navajo (Lse#05-30024-01)
3. ADDRESS OF OPERATOR 2921 Carlisle Blvd. N.E. Suite 200 Albuquerque, N.M.		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		8. FARM OR LEASE NAME Monsanto-Navajo C
2350 FNL & 2290 FWL, Sec.16, T40N, R29E, Apache Co., Arizona		9. WELL NO. 1
14. PERMIT NO.	15. ELEVATIONS (Show whether DP, RT, GR, etc.) 6092' GR.	10. FIELD AND POOL, OR WILDCAT Wildcat
		11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA Sec.16, T40N, R29E
		12. COUNTY OR PARISH Apache
		13. STATE Arizona

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

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

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

Change of Operator:

From: Cities Service Oil Company
P.O. Box 69
Hobbs, NM 88240

To: American Fuels Corporation
2921 Carlisle N.E., Suite 200
Albuquerque, NM 87110

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JUL 16 1973

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

SIGNED Donald Morgan TITLE Agent DATE 7/11/73

(This space for Federal or State office use)

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

*See Instructions on Reverse Side

#581

DRILLING REPORT

HOBBS DISTRICT

JULY 11, 1972

DRILLING WELLS

Monsanto Navajo C No. 1:

TD 5753, PBD 5312, Barker Creek perfs 5192--5265, Ismay perfs 4785--4849. Shut in for pressure build up. Flowed commingled Barker Creek and Ismay zones 9.9 BO and 11.5 bbls formation water in 24 hrs. Stabilized gas rate 971 MCFD. FTP 430 psi, 18/64" choke. Oil gravity 44.5 @ 60°. Water titrates 16700 PPM salt and 10120 PPM chlorides with an R_w of 0.24 at 88°. Ran BHP bomb to 4800' and shut well in for pressure build up test.

X

DRILLING REPORT

HOBBS DISTRICT

JULY 9, 1972

DRILLING WELLS

Monsanto Navajo C No. 1:

TD 5753, PBD 5312, Barker Creek perms 5192--5265, Ismay perms 4785--4849. Swabbing load. Ran Baker Model D packer on wire line. Set in 5 1/2" OD casing at 4875' below the Ismay perms. Ran 2 3/8" EUE J-55 completion tubing with Baker latch type seal assembly at 4875'. Model F (1.81" ID) seating nipple at 4843' and Model L (1.87" ID) sliding sleeve at 4809'. The sliding sleeve is in open position and the Barker Creek and Ismay Zones are commingled in the well bore. Spaced out tubing with 1 - 6' and 1 - 8' sub and 1 joint 2 3/8" EUE N-80 tubing on top. Installed Xmas tree. Swabbed 75 bbls load water in 3 hours. Well started flowing in heads. Swabbed and flowed 55 BLW in 8 hours. FTP 0 to 150 psi on 1" choke, shut in casing pressure 475 psi to 750 psi. Approximately 25 BLW to recover. Well died at 8:30 P.M. 7-8-72. S.I. overnite.

X

DRILLING REPORT

HOBBS DISTRICT

JULY 10, 1972

DRILLING WELLS

Monsanto Navajo C No. 1:

TD 5753, PBTD 5312, Barker Creek perms 5192--5265, Ismay perms 4785--4849. Testing commingled Barker Creek and Ismay Zones. 12 hour SITP 1490 psi. Flared well to pit recovering trace of oil 20 BLW and varying amounts of gas for 8 hours. FTP 50 psi on 1" choke. Turned through test equipment. 12 hour stabilized flow test: 5.3 BO, 5.6 BW and gas at rate of 915 MCFD. FTP 425 psi on 17/64" choke. All load recovered.

X

DRILLING REPORT

HOBBS DISTRICT

JULY 8, 1972

DRILLING WELLS

Monsanto Navajo C No. 1:

TD 5753, PBD 5312, Barker Creek perfs 5192--5265, Ismay perfs 4785--4849. Preparing to run completion packer.

Pulled tubing and laid down RTTS and RBP. Ran gauge ring on wire line. Would not go below 5258 in Barker Creek perfs. Pulled out of hole and ran casing scraper on tubing to 5500'. Pulled out of hole. Ran CIBP on wire line. Set in 5 $\frac{1}{2}$ " OD casing at 5312 above the Pinkerton Trail perfs.

WPA

DRILLING REPORT
HOBBS DISTRICT
JULY 7, 1972

DRILLING WELLS

Monsanto Navajo C No. 1:

TD 5753, PBD 5141 Ismay, perms 4785--4849.
Preparing to run completion equipment. Ismay test
continued. Flowed 6.32 BO and 15.28 bbls spent
acid water in 12 hours. All load water recovered.
FTP 250 to 400 psi on 20/64" choke. Gas volume
varies from 577 MCFD rate to 891 MCFD rate.

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Permit 581

DRILLING REPORT

HOBBS DISTRICT

JULY 6, 1972

DRILLING WELLS

Monsanto Navajo C #1:

TD 5753, PBD 5141 Ismay, perfs 4785-4849.
Flow test.

12 hour SITP of Ismay Zone 1500 psi (after acid treatment). Cleaned up to pit recovering trace of oil, 20 BLW and increasing volume of gas for 7 hours. All load recovered. Turned through test equipment for 24 hour test. 12 hour rate 464 MCF with 1.1 BW/hr & .6 BO/hr. 24 hour rate 744 MCF with .4 BW/hr & .1 BO/hr. 24 hour FTP 400 psi thru 13/64" choke. Oil 42° API @ 60°. Water PH 6.5. Water restivity .373 @ 90°, chlorides 16,192 MPL. Total solids 26,720 MPL. Water has spent acid present.

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JUL 10 1972

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DRILLING REPORT

HOBBS DISTRICT

JULY 5, 1972

DRILLING WELLS

Monsanto Navajo C No. 1:

TD 5753, PBTD 5141 Ismay, perfs 4785--4849. Recovering acid load.

Ran RBP and RTTS. Set RBP at 5141 above Barker Creek perfs and RTTS at 5009 below Ismay perfs to pressure test RBP. Pressured RBP to 3000 psi. for 5 min. Held okay. Reset RTTS above Ismay perfs, at 4749 with bottom of tail pipe at 4849. Tested annulus to 3000 psi for 5 min. Held okay. Swabbed well dry recovering 20 BLW in 1 hour. No fluid coming in hole.

Spotted acid across Ismay perfs. Acidized with 1500 gallons 15% Dowell break down acid. Max 2000 psi. Treated at 2000 psi at 3.5 B/M. ISIP 1000 psi, 5 min SIP 800 psi, 10 min SIP 750 psi, 15 min SIP 600 psi, 105 BLW to recover. Swabbed 40 BLW lowering fluid level to 4200'. Well started flowing gas then died. Swabbed and flowed 45 BLW with trace of mud and oil and varying volumes of gas in 6 hours. Swabbing from 4500'. Well still cleaning up. 20 BLW to recover.

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DRILLING REPORT

HOBBS DISTRICT

JULY 4, 1972

DRILLING WELLS

Monsanto Navajo C No. 1:

TD 5753, PBTD 4886 Ismay, perfs 4785--4849. Prep to rerun RBP and RTTS. Released RBP and RTTS and tallied out of hole. RTTS had been set too low. Corrected tubing measurements. Dressed RBP and RTTS and reran in hole. Set RBP at 5110 above Barker Creek perfs and RTTS at 5010 below Ismay perfs to pressure test RBP. Pressured on RBP to 3000 psi. Plug failed and fell to bottom. Picked up RBP and reset at 4979. Pressured to 1000 psi. Plug failed and fell to bottom. Picked up RBP and pulled out of hole. Slips worn on RBP and would not hold. Dressed RBP.

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DRILLING REPORT

HOBBS DISTRICT

JULY 3, 1972

DRILLING WELLS

Monsanto Navajo C No. 1:

TD 5753, PBD 4886 ismay, perfs 4785--4849. Prep to pull tubing.
Swabbed 20 BLW in 3 hours lowering fluid level to 4600'. Well gassing lightly TSTM, FTP 5 psi on $\frac{1}{2}$ " choke. Spotted acid across ismay perfs. Could not break down perfs at 4500 psi and could not hold pressure in annulus. Circulated acid out of tubing. Plan to tally tubing out of hole to verify measurements and check RTTS.

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O & G CONS. COMM.

DRILLING REPORT

HOBBS DISTRICT

JULY 2, 1972

DRILLING WELLS

Monsanto Navajo C No. 1:

TD 5753, PBTD 4886 Ismay, perfs 4785--4849. Preparing to swab Ismay perfs natural. 12 hour SITP of Barker Creek Zone (after acid treatment) 1500 psi. T.A.'d Barker Creek Zone by setting R.B.P. at 4886. Perforated Ismay Zone with 6 -- 0.40" holes 4785, 4786, 4787, 4788, 4841 and 4849. Reset RTTS at 4749 with bottom of tail pipe at 4849.

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DRILLING REPORT

HOBBS DISTRICT

JULY 1, 1972

DRILLING WELLS

Monsanto Navajo C No. 1:

TD 5753, PBDT 5320 Barker Creek, perms 5192--5265. Prep to T.A. Barker Creek Zone. 12 hour SITP of Barker Creek Zone 1500 psi. Bled well down and spotted acid across Barker Creek perms and acidized with 1500 gallons Dowell 15% break down acid. Max 2000 psi. Treated at 3.6 B/M at 1600 psi. ISIP 400 psi, 5 min SIP vacuum. Total load 57 BLW. Swabbed 45 BLW in 2 hours lowering fluid level from surface to 3000'. Well started flowing. Cleaned up to pit recovering 0 BO, 13 BLW and increasing volume of gas for 2 hours. All load recovered. Turned through test equipment for 4 hour test. Flowed trace oil, 0 BW and gas at rate of 820 MCFD, FTP 840 psi, 13/64" choke.

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JUL 10 1972

O & G CONS. COMM.

WV

DRILLING REPORT

HOBBS DISTRICT

JUNE 30, 1972

DRILLING WELLS

Monsanto Navajo C No. 1:

TD 5753, PBD 5320 Barker Creek, perms 5192--5265.
Prep to acidize Barker Creek Zone.
12 hour SITP of Pinkerton Trail Zone 450 psi. Flared
dry gas to pit. Bled to zero pressure in 5 minutes
with continuing light blow of gas. T.A.'d Pinkerton
Trail Zone by setting R.B.P. at 5320. Perforated
Barker Creek zone with 6 -- 0.40" holes 5192, 5193,
5194, 5258, 5264 and 5265. Reset RTTS at 5157 with
bottom of tail pipe at 5258. Swabbed 20 BLW in 2 hrs
lowering fluid level from surface to 5000'. Well
started gassing. Flared gas to pit at rate of 301
MGFD with stabilized FTP of 41 psi on $\frac{1}{2}$ " choke.

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JUL 03 1972

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DRILLING REPORT

HOBBS DISTRICT

JUNE 29, 1972

DRILLING WELLS

Monsanto Navajo C No. 1:

TD 5753, PBD 5704 Pinkerton Trail, perms 5351--5444.
Prep to T.A. Pinkerton Trail Zone.
12 hour SITP 15 psi. Bled well down. Ran swab one
time to 5000' recovering 1/10 bbl. load water. Shut
in 30 minutes. No fluid coming in hole. Spotted
acid across Pinkerton Trail perms and acidized with
1000 gallons Dowell 15% break down acid. Max 3000
psi. Treated at 2 B/M at 2800 psi. ISIP 2300 psi,
5 min SIP 1800 psi, 10 min SIP 1650 psi, 15 min
SIP 1500 psi. Total load 46 bbls water. Swabbed
36 BLW in 3 hours lowering fluid level to 5000'.
Well started gassing. Swabbed and flowed 10 BLW
in 4 hours. All load recovered. Flowed 5 hours
at 5 psi surface pressure on 1/4" choke. Gas flow
TSTM. Shut well in. One hour SITP 45 psi.

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O & G CONS. COMM.

DRILLING REPORT

HOBBS DISTRICT

JUNE 28, 1972

DRILLING WELLS

Monsanto Navajo C No. 1: TD 5753, PBD 5704 Pinkerton Trail, perfs 5351--5444.
Prep to acidize.
Ran GR Correlation Log. Perforated 7 -- $\frac{1}{2}$ " holes in
Pinkerton Trail Zone at 5351, 5356, 5408, 5435, 5442,
5443 and 5444. Ran 2 3/8" EUE tubing to 5446 with
RTTS set at 5280'. Swabbed 20 BLW in 2 hours lowering
fluid level from surface to 5000'. No gas to surface.
No fluid entry. (Prep to acidize with 1000 gal Dowell
BDA 15% break down acid with surfactant to remove
mud.

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O & G CONS. COMM.

Form 9-331
(May 1963)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN TRIPPLICATE*
(Other instructions on reverse side)

NAVAJO TRIBAL CONTRACT

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.
14-20-0603-1553

6. IF INDIAN, ALLOTTEE OR TRIBE NAME
Navajo (Lsa #05-30024-01)

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME
Monsanto Navajo

9. WELL NO.

10. FIELD AND POOL, OR WILDCAT
Wildcat

11. SEC., T., R., OR BLK. AND
SUBRANGE
Sec. 16-T40N-R29E

12. COUNTY OR PARISH 13. STATE
Apache Arizona

1. OIL WELL GAS WELL OTHER

2. NAME OF OPERATOR
CITIES SERVICE OIL COMPANY

3. ADDRESS OF OPERATOR
P.O. BOX 69, Hobbs, New Mexico 88240

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements. See also space 17 below.)
At surface
2350 FNL & 2250 FNL of Sec. 16-T40N-R29E, Apache Co. Arizona

14. PERMIT NO.

15. ELEVATIONS (Show whether DP, RT, GR, etc.)
6092' 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)
FULL OR ALTER CASING
MULTIPLE COMPLETE
ABANDON*
CHANGE PLANS

SUBSEQUENT REPORT OF:
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.)

TD 5753 Dolo. Prep to perforate and complete. Spud @ 11:45 P.M. on 5-30-72. Ran 11 1/2' of 9 5/8" OD 32.3# H-40 casing set and cemented @ 1129' w/400 sacks Halliburton Light W/3% Calcium Chloride + 1# Floccate per sack + 100 sacks Class A W/2% Calcium Chloride cement. Plug down @ 3:15 P.M. on 6-2-72. Circulated 100 sacks to pit. WOC 18 hours. Tested 9 5/8" casing and ran to 1000 psi for 30 minutes with no drop in pressure. Drilled to a T.D. of 5753 and ran 182 jts (5740') 5 1/2" OD, 14 1/2 K-55 casing set and cemented @ 5752' w/68 sacks Halliburton Lite w/6# salt per sack + 2 1/2 sacks Class C w/6# salt & 0.5 of 1% CFR-2 per sack cement. Plug down @ 6:35 A.M. on 6-23-72. Ran Temp. Survey. Top of cement @ 4275'. WOC 48 hrs.

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

ORIGINAL SIGNED
SIGNED C. D. ROBERTSON

TITLE Dist. Administrative Sup.

DATE June 27, 1972

(This space for Federal or State office use)

APPROVED BY
CONDITIONS OF APPROVAL, IF ANY:

TITLE

DATE

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JUN 30 1972

O & G CONS. COMM.

*See Instructions on Reverse Side

581

DRILLING REPORT

HOBS DISTRICT

JUNE 27, 1972

DRILLING WELLS

Monsanto Navajo C No. 1:

**TD 5753 Miss. Dolo, 5½ at 5752. Preparing to perforate
pinkerton Trail.
HIRU pulling unit. Picked up 2 3/8" EUE J-55 tubing
and stood pipe in derrick.**

**RECEIVED
JUL 03 1972
O & G CONS. COMM.**

DRILLING REPORT

HOBBS DISTRICT

JUNE 26, 1972

DRILLING WELLS

Monsanto Navajo C No. 1:

TD 5753 Miss. Dolo. 5½" @ 5752. Prep to M/RU
pulling unit. Tubing will be hauled to location
this morning.

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O & G CONS. COMM.

DRILLING REPORT

HOBBS DISTRICT

JUNE 25, 1972

DRILLING WELLS

Monsanto Navajo C No. 1:

TD 5753 Miss Dolo 5½" @ 5752. Shut down waiting on pulling unit. State of Arizona will not permit oversize loads on week end. Will move in Monday morning. Set guy line anchors.

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JUL 03 1972
O & G CONS. COMM.

DRILLING REPORT

HOBBS DISTRICT

JUNE 24, 1972

DRILLING WELLS

Monsanto Navajo C No. 1:

Corrected TD 5753' Miss Dolo, 5 $\frac{1}{2}$ " at 5752. WOC.
Ran 182 joints 5 $\frac{1}{2}$ " OD, 14 pound, K-55, ST&C casing.
Tally 5740'. Set at 5752' and cemented with 68
sacks Halliburton Lite with 6 pounds of salt per
sack, followed by 212 sacks Class C with 6 pounds
of salt and 0.5 of 1% CFR-2. Plug down at 6:35 A.M.
6-23-72. Released rig at 10 A.M. 6-23-72. Tore
down and moved out drilling rig. Ran temperature
survey. Top of cement 4275' from surface.

June 23, 1972

Samples have been received on the
Cities Service, #1 Monsanto - Navajo C
Sec. 16-40N-29E
Apache Co. Arizona File # 581

Four Corners Sample Cut

Jo Rateliff

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JUN 26 1972

O & G CONS. COMM.

FARMINGTON
JUN 23
2-PM
1972
87401



OIL & GAS CONSERVATION COMMISSION
STATE OF ARIZONA
4515 N. 7th Ave.
TELEPHONE 271-5161
PHOENIX, ARIZONA, 85013

POSTAGE DUE

DRILLING REPORT

HOBBS DISTRICT

JUNE 23, 1972

DRILLING WELLS

Monsanto Navajo C No. 1:

TD 5750. Miss. Dolo. Running 5½" OD production casing. Started running 5½" OD 14 pound K-55 ST&C casing at 1:00 A.M. 6-23-72. Monsanto did not elect to participate in completing the well. Cost of running production casing and completing will be borne 100% by Cities Service.

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JUN 26 1972

O & G CONS. COMM.

June 23, 1972

Memo to file #581

Memo from W. E. Allen, Director
Enforcement Section

Gene Motter called to notify us of their change in plans for the above referenced well.

After reviewing the electric logs, Cities Service has made the decision to run pipe and test five possible zones. These zones are:

Ismay	4780 - 4800
Desert Creek	4950 - 5000
Akah	5030 - 5060
Border Creek	5171 - 5280
Pinkerton Trail	5300 - 5450

I have discussed this attempted completion with Phil McGrath of U.S.G.S. and P. K. Hurlbut of the Navajo Tribe. For economic reasons they think this type of completion will be OK.

DRILLING REPORT

HOBBS DISTRICT

JUNE 22, 1972

DRILLING WELLS

Monsanto Navajo C No. 1:

TD 5750 Miss. Dolo. Waiting on orders.
Finished logging. Electric log tops:

Chinle	1329
DeChelly	2340
Organ Rock	2755
Cutter	3363
Hermosa	4123
Ismay	4723
Desert Creek	4870
Akah	5017
Barker Creek	5173
Pinkerton Trail A Zone	5298
B Zone	5346
C Zone	5406
D Zone	5450
Molas	5500
Miss. Limestone	5571
Miss. Porosity	5719

Secured approval of plugging procedure from
M. L. Seelinger, U.S.G.S.; W. E. Allen, Arizona
O & G Conservation Commission; and George Soce,
Navajo Dept. of Water Development.

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JUN 26 1972

O & G CONS. COMM.

June 21, 1972

Memo to Cities Service Oil Co. File
Monsanto-Navajo C-1
SE/NW Sec. 16-T40N-R29E
Apache County
Our File #581

Memo from W. E. Allen, Director
Enforcement Section

Mike Daniels with Cities Service called this date requesting permission to plug the above referenced well. Total depth reached was 5750' in the Mississippian. The proposed plugging program is as follows:

Cement from 5700' to 5400'
4200' to 4000'
2400' to 2250'
1050' plugging across the 9 5/8" surface piping
50' plug at the surface
Heavy mud between all plugs.

The U.S.G.S. office in Farmington has approved this plugging program also.

DRILLING REPORT

HOBBS DISTRICT

JUNE 21, 1972

DRILLING WELLS

Monsanto Navajo C No. 1:

TD 5750 (0¹) Miss. Dolo. Logging.
Dev: 1⁰ at 5710, 1¹ at 5750
Mud: 9.1 #/gal, 38 sec, 10 cc, 2/32", PH 11
DST No. 5: 5710--5750 (40¹) Miss. Dolo. 3/4" bottom
choke, 3/4" top choke, no water cushion. Tool
opened for a 15 min first flow at 9:25 A.M. 6-20-72
with a weak blow that increased to good blow in 5 min.
Closed tool for 45 min ISIP. Reopened tool with a
good blow for a 90 min test period. Had good blow
throughout test. No gas to surface. No surface
pressure. Closed tool for 90 min FSIP. Recovered
800¹ of water cut mud and 2660¹ of salt water that
titrates 7600 PPM chlorides, and R_w of 0.484 at
88⁰ F.
1st Flow IF 195 psi
1st Flow FF 679 psi
45 min ISIP 1566 psi
Test Period IF 711 psi
Test Period FF 1373 psi
90 min FSIP 1542 psi
Initial MCP 2824 psi
Final MCP 2784 psi
BHT 136⁰ F
Started logging at midnite. Loggers TD 5756.
Have run Sonic log and dipmeter. Going in hole with
dual induction log.

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JUN 26 1972

O & G CONS. COMM.

DRILLING REPORT

HOBBS DISTRICT

JUNE 20, 1972

DRILLING WELLS

Monsanto Navajo C No. 1:

TD 5750 (40') Miss Dolo. Circulating prior to DST #5.
Dev: None reported
Mud: 9.1 #/gal, 40 sec, 10 cc, 2/32", PH 11.
DST No. 4: 5650--5710 (60') Upper Mississippian, 3/4" bottom choke, 3/4" top choke. Tool opened for a 15 min first flow at 1:30 P.M. 6-19-72 with a weak blow that increased to good blow in 5 minutes. Closed tool for 45 min ISIP. Reopened tool with a good blow for a 90 minute test period. Gas to surface in 5 minutes. Would not burn. Gas flow too small to measure. No surface pressure. Blow diminishing toward end of flow period. Closed tool for 90 min FSIP. Recovered 283' of gas cut drilling mud.

1st Flow IF	158 psi
1st Flow FF	152 psi
45 min ISIP	1219 psi
Test period IF	79 psi
Test period FF	120 psi
90 min FSIP	658 psi
Initial MCP	2776 psi
Final MCP	2758 psi
BHT	117°F

Drilled to TD 5750. DST No. 5 will test a 40' interval 5710--5750. Plan to run logs and plug if nothing else develops.

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JUN 26 1972

O & G CONS. COMM.

DRILLING REPORT

HOBBS DISTRICT

JUNE 19, 1972

DRILLING WELLS

Monsanto Navajo C No. 1:

TD 5710 (165') Miss. Dolomite. Circulating.
Dev: None reported
Mud: 9.1 #/gal, 40 sec, 10 cc, 2/32", PH 11
Had a few small gas kicks and a little scattered
porosity. DST No. 4 will test a 60' interval in
top of the Mississippian from 5650 to 5710.

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JUN 20 1972

O & G CONS. COMM.

DRILLING REPORT

HOBBS DISTRICT

JUNE 18, 1972

DRILLING WELLS

Monsanto Navajo C No. 1:

Drilling at 5545 (55') Limestone.

Dev: None reported

Mud: 9.1 #/gal, 38 sec, 10 cc, 2/32", PH 11

DST No. 3: 5379--5526 (147') Lower Pinkerton Trail.

No water cushion, 3/4" bottom choke, 3/4" top choke.

Tool opened for 15 min first flow at 6:30 P.M.

6-17-72 with a weak blow that increased to good blow in 5 minutes. Closed tool for 45 min ISIP.

Reopened tool with a good blow for a 60 minute test period. Increased to strong blow in 5 minutes. Gas to surface in 35 minutes. Flared gas to pit. Max surface pressure 20 psi. Insufficient pressure to operate testing equipment. Estimated gas volume 100 MCFD. Closed tool for 60 minute FSIP. Recovered 647' of gas cut mud.

First flow	IFP	88 psi
First flow	FFP	178 psi
45 min.	ISIP	1281 psi (not stabilized)
Test Period	IFP	156 psi
Test period	FFP	216 psi
60 min	FSIP	1335 psi (not stabilized)
Initial	MCP	2628 psi
Final	MCP	2594 psi
BHT		132°F

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JUN 26 1972

O & G CONS. COMM.

W.H.

DRILLING REPORT

HOBBS DISTRICT

JUNE 17, 1972

DRILLING WELLS

Monsanto Navajo C No. 1:

Drilling at 5490 (115') Limestone

Dev: 1 $\frac{1}{2}$ " at 5375

Mud: 9.1 #/gal, 34 sec, 9 cc, 1/32", PH 11

DST No. 2 (continued) Reopened tool at 6 A.M. 6-16-72 with a weak blow for a 90 minute test period. Well dead after 60 minutes. Closed tool for 90 min FSIP. Recovered 240' of drilling mud.

First flow IFP	118 psi
First Flow FFP	136 psi
45 min ISIP	189 psi (not stabilized)
Test Period IFP	180 psi
Test period FFP	202 psi
90 min FSIP	281 psi (stabilized)
Initial & final MCP	2618 psi
BHT	110 F

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JUN 26 1972

O & G CONS. COMM.

581

DRILLING REPORT

HOBBS DISTRICT

JUNE 16, 1972

DRILLING WELLS

Monsanto Navajo C No. 1:

TD 5375 (48') Limestone. Testing.

Dev: None reported

Mud: 9.2 #/gal, 40 sec, 10 cc, 2/32", PH 10

Had drilling break 5254--5263 from 6 min/foot to 3 min/foot. Had good fluorescence and 150 unit gas increase.

~~DST No. 2:~~ 5240-5375 (135') Barker Creek.

No water cushion, 3/4" bottom choke, 3/4" top choke. Tool opened for 15 minute first flow at

5 A.M. 6-16-72. Had weak blow for entire 15 minutes.

Closed tool for 45 min ISIP. Reopened tool at 6 A.M. with a weak blow. —

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JUN 19 1972

O & G CONS. COMM.

DRILLING REPORT

HOBBS DISTRICT

JUNE 15, 1972

DRILLING WELLS

Monsanto Navajo C No. 1:

Drilling at 5327 (187') Lime and Dolomite.
Dev: None taken.
Mud: 9.1 #/gal, 33 sec, 10 cc, 1/32", PH 10.

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JUN 19 1972

O & G CONS. COMM.

DRILLING REPORT

HOBBS DISTRICT

JUNE 14, 1972

DRILLING WELLS

Monsanto Navajo C No. 1:

Drilling at 5140 (163') Shale and Limestone.
Dev: $1\frac{1}{4}$ " at 5100.
Mud: 9.1 #/gal, 32 sec, 9.4 cc, 1/32", PH 10

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O & G CONS. COMM.

DRILLING REPORT

HOBBS DISTRICT

JUNE 13, 1972

DRILLING WELLS

Monsanto Navajo C No. 1:

Drilling at 4977 (117') Sand, Shale & Limestone.

Dev: None taken

Mud: 9.0 #/gal, 34 sec, 10 cc, 3/32", PH 11

DST No. 1: 4730 - 4860 (130') Ysmay. No water cushion, 3/4" bottom choke, 3/4" top choke.

Tool opened for a 15 minute first flow at 8:45

A.M. 6-12-72, with a good blow increasing to

strong blow in 5 minutes. Gas to surface in 15 min.

Closed tool for 30 min ISIP. Reopened tool for

90 minute flow period with strong blow increasing to

max flow rate at end of 60 min of 170 MCFD at 90 psi.

flow decreasing after 60 min. Closed tool for 90 min

FSIP. Recovered: 620' of gas cut mud, and 30' of

water cut mud that titrates 1540 PPM Chlorides

W/ RW of 1.48 at 80°.

First flow IFP 139 psi

First flow FFP 290 psi

30 min ISIP 1356 psi (not stabilized)

Test Period IFP 161 psi

Test Period FFP 257 psi

90 min FSIP 1425 psi (stabilized)

Initial MCP 2333 psi

Final MCP 2295 psi

BHT 95°F

Did not have enough gas in sample to analyze.

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O & G CONS. COMM.

Drilling Report - Cities Service Oil Company -- Monsanto Navajo C #1

June 10, 1972

Drilling at 4454 (194') Sand and Shale.
Dev: 1 deg. @ 4417
Mud: 9.1 #/gal, 30 sec, 10 cc, 2/32", PH 10

June 11, 1972

Drilling @ 4700 (246') Sandy Shale & Lime.
DeV: None taken
Mud: 9.1 #/gal, 30 sec, 12 cc, 2/32", PH 10

June 12, 1972

TD 4860 (160') Lime and Shale.
Dev: 1 1/4" at 4723
Mud: 9.1 #/gal, 40 sec, 10 cc, 2/32", PH 10.
Pulling out of hole for DST No. 1.
Will test interval 4730--4860 (130') Ismay formation.
Had drilling break 4780--4790 from 7 min/foot to
3 min/foot with 25 unit gas increase. Light stain
in samples and good porosity.

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JUN 19 1972

O & G CONS. COMM.

WHT



CITIES SERVICE OIL COMPANY

Box 69
Hobbs, New Mexico 88240
Telephone: 505 EX 3-2177

WEEKLY REPORT -- Cities Service Oil Company
Monsanto-Navajo C #1

- June 3, 1972 TD 1133 (0') Shale WOC.
Dev: None Taken
Mud: 8.9 #/gal, 43 sec.
Reamed 12 1/4" hole to 13 3/4" hole from surface to 712', then ran 12 1/4" bit to T.D. and conditioned hole. Ran 1113' of 9.576 #/OD, 32.3 pound, ST&C H-40 casing. Set at 1129 and cemented with 400 sax Halliburton Light with 3% calcium chloride and 1/2 pound Flocele per sack. Followed by 100 sax Glass A with 2% calcium chloride. Plug down at 3:15 P.M. 6-2-72. Circulated 100 sax to pit. Will WOC 18 hours.
- June 4, 1972 Drilling at 2037 (904') sand and shale. Dev: 1 1/4 deg at 1450, 1 deg. at 1806. Mud: 8.8 #/gal, 35 sec, WOC 18 hours. Installed casing head and BOP. Tested casing and rams to 1000 psi for 30 min. Held okay. Drilled plug at 10 A.M. 6-3-72. Drilling 7 7/8" hole.
- 6-5-72 Drilling at 2824 (787') Sand and Shale.
Dev: 3/4 deg. at 2250, 1 deg. at 2320, 1 1/2 deg. at 2635, 2 1/2 deg. at 2807.
Mud: 9.1 #/gal, 32 sec.
- 6-6-72 Drilling at 3278 (454') Sand and Shale.
Dev: 2 1/4 deg at 3100. Mud: 9.0 #/gal, 32 sec, 12 cc, 2/32" PH 11
- 6-7-72 Drilling at 3650 (372') Sand and Shale.
Dev: 2 deg. at 3404. Mud: 8.9 #/gal, 32 sec, 11 cc, 2/32", PH 10, MIRU testing equipment.
- 6-8-72 Drilling at 3960 (310') Sand and Shale. Dev: 2 1/4 deg at 3739.
Mud: 8.9 #/gal, 30 sec, 8 cc, 1/32", PH 10
Underwood Mud Logger on location.
- 6-9-72 Drilling at 4260 (300') Shale and Limestone.
Dev: 1 3/4 deg. at 3990.
Mud: 9.0 #/gal, 30 sec, 8 cc, 2/32" PH 11.

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JUN 12 1972

O & G CONS. COMM.

Form 9-331
(May 1963)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN TRIPLICATE
(Other instructions on reverse side)

Navajo Tribal Contract

Form approved.
Budget Bureau No. 42-R1424.

SUNDRY NOTICES AND REPORTS ON WELLS

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

1. OIL WELL <input type="checkbox"/> GAS WELL <input checked="" type="checkbox"/> OTHER <input type="checkbox"/>		5. LEASE DESIGNATION AND SERIAL NO. 14-20-0603-1553																				
2. NAME OF OPERATOR CITIES SERVICE OIL COMPANY		6. IF INDIAN, ALLOTTEE OR TRIBE NAME Navajo (Use #05-30024-01)																				
3. ADDRESS OF OPERATOR P.O. Box 69, Hobbs, New Mexico 88240		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 2350 FNL & 2290 FWL, Sec 16-40N-29E, Apache Co. Arizona		8. FARM OR LEASE NAME Monsanto-Navajo Co																				
14. PERMIT NO.	15. ELEVATIONS (Show whether DF, RT, GR, etc.) 6092' GR	9. WELL NO. 1																				
16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data		10. FIELD AND POOL, OR WILDCAT Wildcat																				
<table border="0"> <tr> <td colspan="2">NOTICE OF INTENTION TO:</td> <td colspan="2">SUBSEQUENT REPORT OF:</td> </tr> <tr> <td>TEST WATER SHUT-OFF <input type="checkbox"/></td> <td>PULL OR ALTER CASING <input type="checkbox"/></td> <td>WATER SHUT-OFF <input checked="" type="checkbox"/></td> <td>REPAIRING WELL <input type="checkbox"/></td> </tr> <tr> <td>FRACTURE TREAT <input type="checkbox"/></td> <td>MULTIPLE COMPLETE <input type="checkbox"/></td> <td>FRACTURE TREATMENT <input type="checkbox"/></td> <td>ENTERING CASING <input type="checkbox"/></td> </tr> <tr> <td>SHOOT OR ACIDIZE <input type="checkbox"/></td> <td>ABANDON* <input type="checkbox"/></td> <td>SHOOTING OR ACIDIZING <input type="checkbox"/></td> <td>ABANDONMENT <input type="checkbox"/></td> </tr> <tr> <td>REPAIR WELL <input type="checkbox"/></td> <td>CHANGE PLANS <input type="checkbox"/></td> <td>(Other) <input type="checkbox"/></td> <td>Spud Date <input checked="" type="checkbox"/></td> </tr> </table>		NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:		TEST WATER SHUT-OFF <input type="checkbox"/>	PULL OR ALTER CASING <input type="checkbox"/>	WATER SHUT-OFF <input checked="" type="checkbox"/>	REPAIRING WELL <input type="checkbox"/>	FRACTURE TREAT <input type="checkbox"/>	MULTIPLE COMPLETE <input type="checkbox"/>	FRACTURE TREATMENT <input type="checkbox"/>	ENTERING CASING <input type="checkbox"/>	SHOOT OR ACIDIZE <input type="checkbox"/>	ABANDON* <input type="checkbox"/>	SHOOTING OR ACIDIZING <input type="checkbox"/>	ABANDONMENT <input type="checkbox"/>	REPAIR WELL <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	(Other) <input type="checkbox"/>	Spud Date <input checked="" type="checkbox"/>	11. SEC., T., R., M. OR BLM. AND SURVEY OR AREA Sec. 16-40N-29E
NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:																				
TEST WATER SHUT-OFF <input type="checkbox"/>	PULL OR ALTER CASING <input type="checkbox"/>	WATER SHUT-OFF <input checked="" type="checkbox"/>	REPAIRING WELL <input type="checkbox"/>																			
FRACTURE TREAT <input type="checkbox"/>	MULTIPLE COMPLETE <input type="checkbox"/>	FRACTURE TREATMENT <input type="checkbox"/>	ENTERING CASING <input type="checkbox"/>																			
SHOOT OR ACIDIZE <input type="checkbox"/>	ABANDON* <input type="checkbox"/>	SHOOTING OR ACIDIZING <input type="checkbox"/>	ABANDONMENT <input type="checkbox"/>																			
REPAIR WELL <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	(Other) <input type="checkbox"/>	Spud Date <input checked="" type="checkbox"/>																			
		12. COUNTY OR PARISH Apache																				
		13. STATE Arizona																				

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 zone pertinent to this work.)
Spudded on 5-30-72. Drilled to TD of 1133'. Ran 1113' of 9 5/8" OD 32.37 lb/ft casing, Set at 1129' and cemented with 400 sax Halliburton Light W/3% Calcium Chloride # Flocote per sack, followed by 100 sax Class A W/2% Calcium Chloride. Plug down at 3:15 P.M. on 6-2-72. Circulated 100 sax to pit. WOC 18 hours. Tested casing and ran to 1000 feet for 30 min, held okay. Drilled plug at 10 A.M. on 6-3-72. Drilling ahead.

RECEIVED

JUN 18 1972

O & G CONS. CO.

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

SIGNED W. D. ROBERTSON ORIGINAL SIGNED W. D. ROBERTSON TITLE District Admin. Supervisor DATE June 5, 1972

(This space for Federal or State office use)

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

WA



CITIES SERVICE OIL COMPANY

Box 69
Hobbs, New Mexico 88240
Telephone: 505 EX 3-2177

DRILLING REPORT

May 27, 1972

Monsanto Navajo "C" No. 1: Location.

May 28, 1972

Monsanto Navajo "C" No. 1: Location.

May 29, 1972

Monsanto Navajo "C" No. 1: Location.

May 30, 1972

Monsanto Navajo "C" No. 1: Moving in rotary rig. Plan to spud tonight.

May 31, 1972

Monsanto Navajo "C" No. 1: Drilling at 140' (140') Gravel and Sand.
Dev: 1/4 deg. at 90'.
Mud: 8.9 #/gal., 38 sec.
MIRU Mesa Drillers. Spudded 12-1/4" hole at 11:45 PM 5-30-72.

June 1, 1972

Monsanto Navajo "C" No. 1: TD 1,133' (993') Shale. Preparing to run 9-5/8" casing.
Dev: 1 deg. at 830'.
Mud: 8.7 #/gal., 32 sec.

June 2, 1972

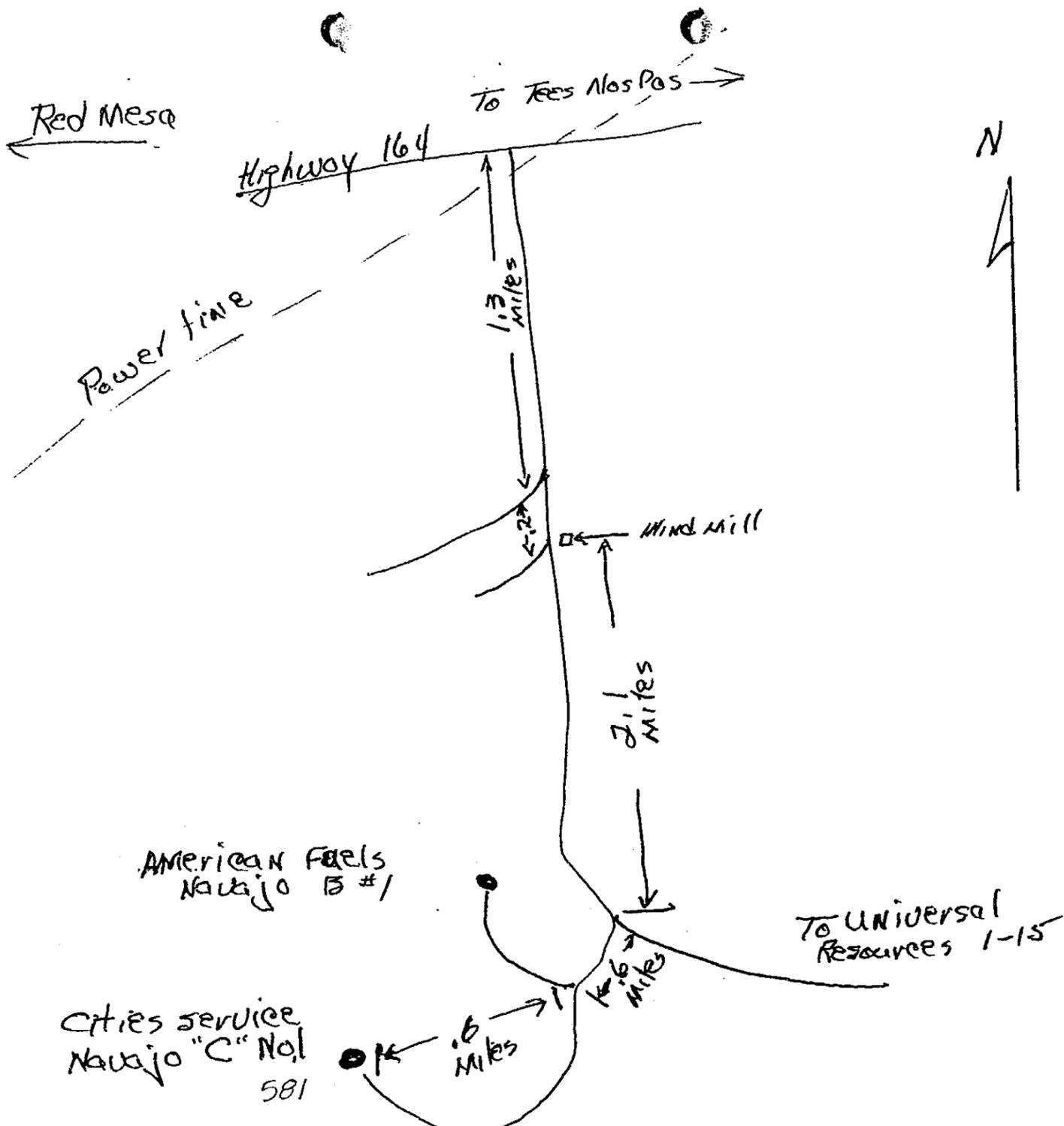
Monsanto Navajo "C" No. 1: TD 1,133' (0') Shale. Reaming at 530'.
Dev: 1° at 1,133'.
Mud: 8.9 #/gal., 34 sec.
Attempted to run 9-5/8" casing. Could not get below bridge at 641'. Pulled casing. Ran 12-1/4" bit to T.D. and conditioned hole. Attempted again to run 9-5/8" casing and could not get below 641'. Pulled casing. Ran 13-1/4" bit. Plan to ream to at least 700'.

RECEIVED

JUN 05 1972

Q & G. CONS. COMM.

#581



Permit 581

DESIGNATION OF OPERATOR

The undersigned is, on the records of the Bureau of ~~Land Management, holder of lease~~ Indian Affairs,
holder of Navajo Tribal lease

DISTRICT LAND OFFICE: Window Rock, Arizona
SERIAL No.: 14-20-0603-1553

and hereby designates

NAME: Cities Service Oil Company
ADDRESS: Box 300, Tulsa, Oklahoma 74102

as his operator and local agent, with full authority to act in his behalf in complying with the terms of the lease and regulations applicable thereto and on whom the supervisor or his representative may serve written or oral instructions in securing compliance with the Operating Regulations with respect to (describe acreage to which this designation is applicable): APACHE COUNTY, ARIZONA

Township 40 North, Range 29 East, G.S.R.M.

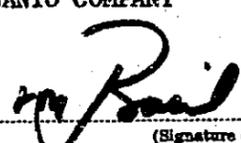
Section 16: All

It is understood that this designation of operator does not relieve the lessee of responsibility for compliance with the terms of the lease and the Operating Regulations. It is also understood that this designation of operator does not constitute an assignment of any interest in the lease.

In case of default on the part of the designated operator, the lessee will make full and prompt compliance with all regulations, lease terms, or orders of the Secretary of the Interior or his representative.

The lessee agrees promptly to notify the supervisor of any change in the designated operator.

MONSANTO COMPANY

By: 
(Signature of lessee) V. M. Basil,

Regional Exploration Manager
317 First Savings & Loan Building
Midland, Texas 79701

April 26, 1972

(Date)

(Address)

RECEIVED

MAY 01 1972

O & G CONS. COMM.

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Navajo Tribal Contract

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK
 DRILL DEEPEN PLUG BACK

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

2. NAME OF OPERATOR
CITIES SERVICE OIL COMPANY

3. ADDRESS OF OPERATOR
P.O. Box 69, Hobbs, New Mexico 88240

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)*
 At surface
2350 FWL & 2290 FWL, Sec 16-40N-29E, Apache Co. Arizona
 At proposed prod. zone **Same as above**

5. LEASE DESIGNATION AND SERIAL NO.
14-20-0603-1553

6. IF INDIAN, ALLOTTEE OR TRIBE NAME
Navajo (Lse #35-10024-01)

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME
Honsanto-Navajo C

9. WELL NO.
1

10. FIELD AND POOL, OR WILDCAT
Wildcat

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA
Sec. 16-40N-29E

12. COUNTY OR PARISH
Apache

13. STATE
Arizona

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*
40 miles West of Shiprock, New Mexico

15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. line, if any)
2290' West

16. NO. OF ACRES IN LEASE
640

17. NO. OF ACRES ASSIGNED TO THIS WELL
640

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

19. PROPOSED DEPTH
6060'

20. ROTARY OR CABLE TOOLS
Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.)
6092' FR

22. APPROX. DATE WORK WILL START*
May 25, 1972

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
12 1/2"	9 5/8"	32.3#	1100'	Circulate
7 7/8"	5 1/2"	14# & 15.5#	6060'	100 sacks

It is proposed to drill to a T.D. of 6060' and test the Mississippi formation.

The blow out prevention program is as follows:
1. One set blind rams.
2. One set drill pipe rams.

RECEIVED
MAY 01 1972
O & G CONS. COMM

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back zone. If proposal is to drill or deepen directionally, give pertinent data on subs preponder program, if any.

24. SIGNED *E. J. Fuller* TITLE **District Manager** DATE **4-27-72**

(This space for Federal or State office use)
581

PERMIT NO. _____ APPROVAL DATE _____

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

APPLICATION FOR PERMIT TO DRILL OR RE-ENTER

APPLICATION TO DRILL

RE-ENTER OLD WELL

CITIES SERVICE OIL COMPANY

NAME OF COMPANY OR OPERATOR

P.O. Box 69 Hobbs New Mexico 88240
Address City State

Unknown at this filing

Drilling Contractor

Address

DESCRIPTION OF WELL AND LEASE

Federal, State or Indian Lease Number, or if fee lease, name of lessor Navajo Tribal Contract #14-20-0603-1522	Well number 1 - 16	Elevation (ground) 6092'
Nearest distance from proposed location (Lse #05-30024-01) to property or lease line: 2290 feet E	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) 2350 FNL & 2290 FWL	Section—township—range or block and survey Sec 16-T40N-R29E	Dedication (Comply with Rule 105) 640A **
Field and reservoir (if wildcat, so state) Wildcat	County Apache	
Distance, in miles, and direction from nearest town or post office 40 miles West of Shiprock, New Mexico		
Proposed depth: 6060'	Rotary or cable tools Rotary	Approx. date work will start May 25, 1972
Bond Status Blanket	Organization Report On file X Or attached	Filing Fee of \$25.00 Attached X

Remarks:
**** All of section 16-T40N-R29E**

CERTIFICATE: I, the undersigned, under the penalty of perjury, state that I am the **District Manager** of the **Cities Service Oil 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.

RECEIVED

MAY 01 1972

O & G CONS. COMM.

Signature *E. J. ...*
 Date **4-27-72**

Permit Number: **581**
 Approval Date: **5-1-72**
 Approved By: *W. C. ...*

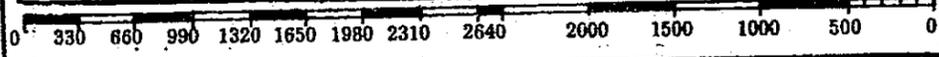
STATE OF ARIZONA
OIL & GAS CONSERVATION COMMISSION
 Application to Drill or Re-enter
 File Two Copies

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

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 X
- If the answer to question four is "no," have the interests of all the owners been consolidated by communitization agreement or otherwise? YES X NO _____. If answer is "yes," Type of Consolidation Operating Agreement
(Designation of Operator filed April 26, 1972) Copy attached.
- If the answer to question four is "no," list all the owners and their respective interests below:

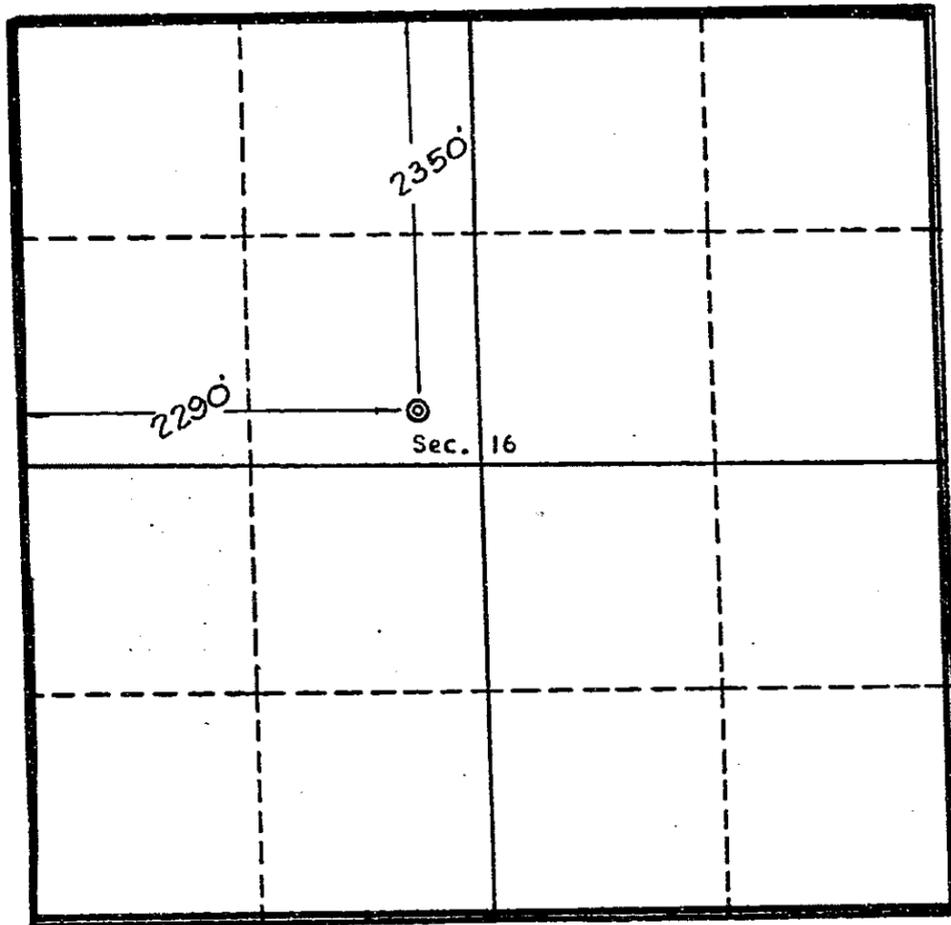
Owner	Land Description
	<p align="center">CERTIFICATION</p> <p>I hereby certify that the information above is true and complete to the best of my knowledge and belief.</p> <p>Name E. Y. Wilder</p> <p>Position District Manager</p> <p>Company Cities Service Oil Company</p> <p>Date April 27, 1972</p> <p>I 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 2-7-72</p> <p>Registered Professional Engineer and/or Land Surveyor E. V. Echohawk</p> <p>Certificate No. 2311</p>



PROPOSED CASING PROGRAM

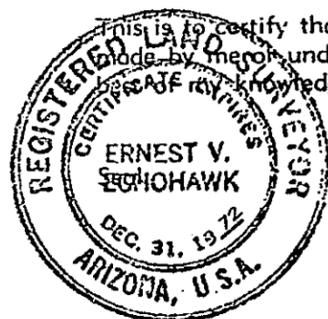
Size of Casing	Weight	Grade & Type	Top	Bottom	Cementing Depths	Sacks Cement
9 5/8"	32.3#	H-40 ST&C	-0-	1100	1100-0	Circulate
5 1/2"	14 & 15.5#	J-55 ST&C	-0-	6060'	4500--6060	400 sacks

Company CITIES SERVICE OIL CO.
Well Name & No. Monsanto-Navajo "C" No. 1
Location 2350 feet from the North line and 2290 feet from the West line.
Sec. 16, T. 40 N., R. 29 E., G. & S. R. M., County Apache, Arizona
Ground Elevation 6092



Scale, 1 inch = 1,000 feet

Surveyed February 7, 19 72



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

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

581

RECEIVED
MAY 01 1972
O & G CONS. COMM.



PERMIT TO DRILL

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

To: CITIES SERVICE OIL COMPANY
(OPERATOR)

to drill a well to be known as

CITIES SERVICE OIL COMPANY MONSANTO-NAVAJO "C" 1-16
(WELL NAME)

located 2350' FWL & 2290 FWL

Section 16 Township 40N Range R29E, Apache County, Arizona.

The All of Section 16 T40N-R29E 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 1st day of May, 19 72.

OIL AND GAS CONSERVATION COMMISSION

By W.B. Allen for J.B.
EXECUTIVE SECRETARY

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

PERMIT No 581

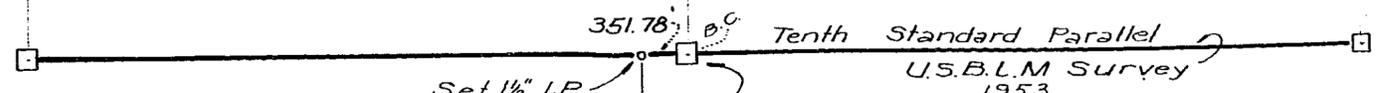
RECEIPT NO. 2916
API NO. 02-001-20162

SAMPLES ARE REQUIRED

State of Arizona
Oil & Gas Conservation Commission
Permit to Drill

FORM NO. 27

R-29-E



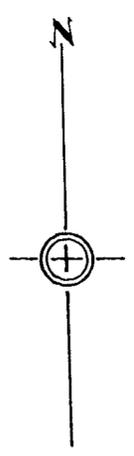
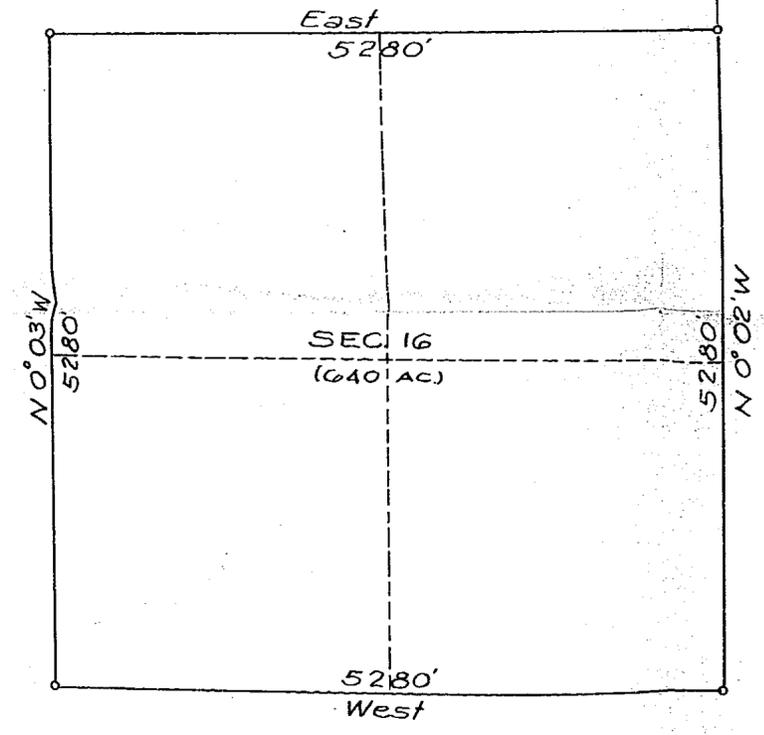
Set 1 1/2" I.P.

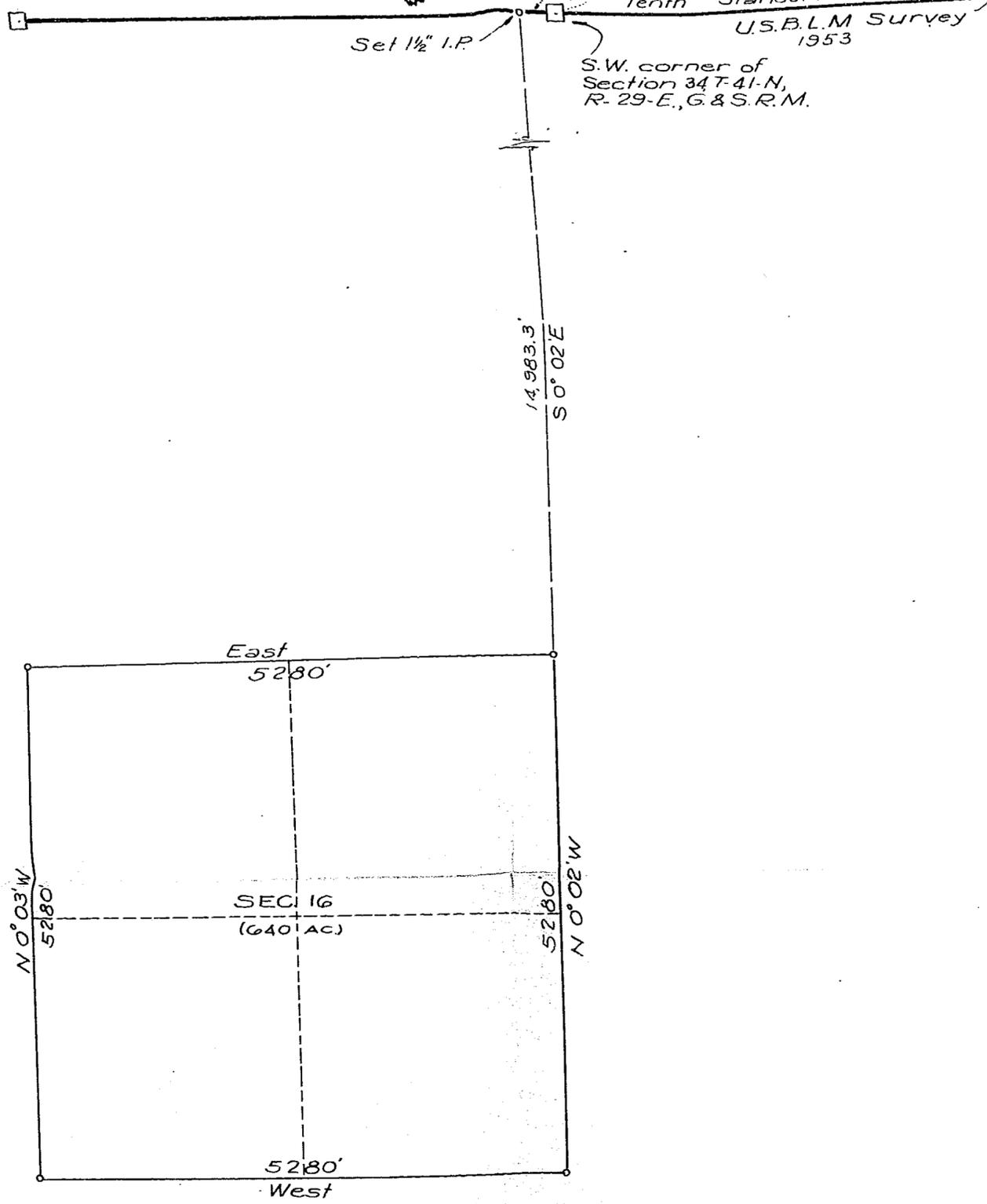
U.S.B.L.M Survey 1953

S.W. corner of Section 34 T-41-N, R-29-E, G. & S.R.M.

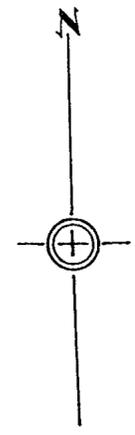
14,983.3' S 0° 02' E

T-40-N





T-40-N



Surveyed by:

E. V. Echohawk
 Ernest V. Echohawk
 Reg. Land Surveyor
 Arizona Reg. Surveyor
 02/31/72
 ARIZONA, U.S.A.



581

CITIES SERVICE OIL CO.

SURVEY OF NAVAJO TRIBAL LEAS
 CONTRACT NO. 14-20-0603-1553
 COMPRISED OF ALL SECTION 16
 T-40-N, R-29-E, G. & S.R.M., APACH
 COUNTY, ARIZONA.

FEBRUARY, 1972 SCALE, 1"=100'

351.78
Tenth Standard Parallel
U.S.B.L.M Survey
1953
Set 1 1/2" I.P.
S.W. corner of
Section 34 T-41-N,
R-29-E, G. & S.R.M.

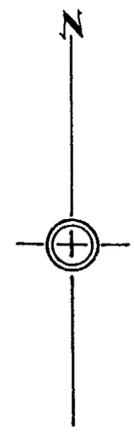
14,983.3'
S 0° 02' E

East
5280'

SEC 16
(640 AC)

5280'
N 0° 02' W

5280'
West



CITIES SERVICE OIL CO.

SURVEY OF NAVAJO TRIBAL LEASE,
CONTRACT NO. 14-20-0603-1553 &
COMPRISED OF ALL SECTION 16,
T-40-N, R-29-E, G. & S.R.M., APACHE
COUNTY, ARIZONA.

FEBRUARY, 1972 SCALE, 1"=1000'

CITIES SERVICE OIL CO. / MONSANTO-NAVAJO
16-T40N-R29E, Apache Co.,

BLACK ROCK FIELD

Operator: RIM Southwest Corporation

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

RLI Insurance Co. \$150,000 BIA Nationwide Bond No. RLB0003993

Date of Bond: 11/26/01

Date approved: _____

*** 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:

Dry Mesa Field 077
 106
 115
 852
 907

Black Rock Field 559
 581 ✓
 868
 871
 875
 882



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

February 13, 2001

CERTIFIED MAIL

Mr. Robert L. Vesco
Vice-President
RIM Southwest Corporation
5 Inverness Drive East
Denver CO 80112

Re: Release of State-wide Performance Bond CD #2578904

Dear Mr. Vesco:

This will acknowledge evidence of RIM Southwest Corporation's bonding with the U.S. Department of the Interior, Bureau of Indian Affairs. As a result, the referenced certificate of deposit and executed release form are enclosed.

Sincerely,

A handwritten signature in cursive script, reading "Steven L. Rauzi".

Steven L. Rauzi
Oil & Gas Administrator

Enclosures

SECURITIES SAFEKEEPING
 1700 WEST WASHINGTON ST. - PHOENIX, ARIZONA 85007

DATE: 02/05/01

STATE AGENCY NO. _____

STATE AGENCY ARIZONA GEOLOGICAL SURVEY/OIL&GAS COMM.
 COMPANY CHUSKA ENERGY CO. / Harken Southwest Corp.
1850 MT DIABLO BLVD STE 640
WALNUT CA 94500

State Treasurer's Use Only

DOMESTIC FOREIGN

DEPOSIT

C.D. NO.:

BANK:

MATURITY DATE:

INTEREST RATE:

%

AMOUNT \$

C.D. ASSIGNMENT MUST BE ATTACHED UNLESS C.D. IS PAYABLE TO STATE TREASURER

RELEASE

C.D. NO.: 2578904 ✓
 ACCT NO.: 8272-4968 ✓
 BANK: VALLEY NATIONAL BANK OF ARIZONA ✓

MATURITY DATE: 05/30/90 ✓

INTEREST RATE: 7.30 %

AMOUNT \$ 25,000.00 ✓

STATE TREASURER VALIDATION NO. _____

<p align="center">RECEIVED THE ABOVE RELEASE</p> <p>BY <u>Jerry D. Teller</u> <u>05 Feb 01</u> Authorized Signature Date</p> <p align="center">ARIZONA GEOLOGICAL SURVEY Bank or Firm</p> <p align="center">FOR BANK USE ONLY</p> <p>Checked by _____ Verified by _____</p>	<p align="center">STATE AGENCY AUTHORIZATION</p> <p>BY <u>Jerry D. Teller</u> <u>05 Feb 01</u> Authorized Signature</p> <p align="center">STATE TREASURER AUTHORIZATION</p> <p>BY <u>Katherine S. Liberton</u> Authorized Signature</p> <p align="center">BANK AUTHORIZATION</p> <p>BY _____ Authorized Signature</p> <p align="center">STATE'S DEPOSITORY BANK</p>
---	--



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

February 5, 2001

Ms. Debby Harrington
RIM Southwest Corporation
5 Inverness Drive East
Denver CO 80112

Dear Ms. Harrington:

This will acknowledge receipt of documentation of name change, Organization Report (Form 1) and updated Operator's Certificate of Compliance and Authorization to Transport Oil or Gas from Lease (Form 8).

I have enclosed approved duplicate originals of Form 8 for your files.

Sincerely,

Steven L. Rauzi
Oil & Gas Administrator

Enclosures

RIM SOUTHWEST CORPORATION
5 INVERNESS DRIVE EAST
ENGLEWOOD, COLORADO 80112
303-799-9828

January 30, 2001

Mr. Steven Rauzi
Oil & Gas Program Administrator
Arizona Geological Survey
416 W. Congress, #100
Tucson, AZ. 85701



Re: RIM Southwest Corporation

Dear Mr. Rauzi,

As you requested, please find an Organization Report and documentation evidencing the name change from Harken Southwest Corporation for RIM Southwest Corporation.

Also enclosed is Form 8, in duplicate, for NOG 8707-1139, NOG 8707-1140 and NOG 8707-1142.

Please call me at (303) 799-9828, extension 305, if you have any questions or need anything further. Thank you for your assistance.

Very truly yours,


Debby Harrington
Senior Landman

The RIM Companies
5 Inverness Drive East
Englewood, Colorado 80112
303-799-9828
Fax 303-799-4259
E-Mail: rvesco@rimop.com



Oil & Gas
Acquisitions & Management
Rocky Mountains / Texas

January 25, 2001

Mr. Steven Rauzi (520) 770-3500
Oil & Gas Program Administrator Fax (520) 770-3505
Arizona Geological Survey
416 W. Congress, #100
Tucson, AZ. 85701

RE: Bonding for RIM Southwest Corporation

Dear Mr. Rauzi:

Enclosed please a copy of the approval letter dated May 18, 2000, from the United States Department of the Interior, Bureau of Indian Affairs for RIM's \$150,000 nationwide bond.

Additionally, RIM Southwest Corporation, (formerly known as Harken Southwest Corporation) has a \$25,000 certificate of deposit, certificate # 2578904, with the State of Arizona, maturing April 2, 2001. Please take the necessary action to release this certificate of deposit.

If you need any further information regarding the above referenced information, please contact me at extension 206. Thank you for your help.

Sincerely yours,

Robert L. Vesco, Vice-President
Secretary/Treasurer

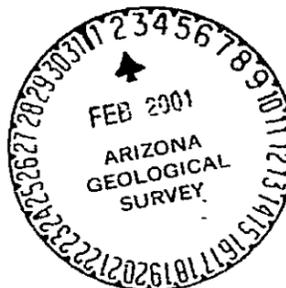
The RIM Companies
5 Inverness Drive East
Englewood, Colorado 80112
303-799-9828
Fax 303-799-4259
E-Mail: rvesco@rimop.com



Oil & Gas
Acquisitions & Management
Rocky Mountains / Texas

January 25, 2001

Mr. Steven Rauzi
Oil & Gas Program Administrator
Arizona Geological Survey
416 W. Congress, #100
Tucson, AZ. 85701



RE: Name Change of Harken Southwest Corporation

Dear Mr. Rauzi:

Enclosed please find the State of New Mexico filed copy of "Articles of Amendment to the Articles of Incorporation" changing "Harken Southwest Corporation's" name to "RIM Southwest Corporation" ("RIM"). The corporation's federal tax identification number has not changed (85-0284260). RIM's address is 5 Inverness Drive East, Englewood, Colorado 80112.

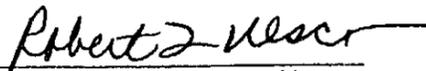
Additionally, the officers of RIM Southwest Corporation are as follows:

President	Stephen W. Rector
Vice President	Rene' Morin
Vice President	William J. Holcomb
VP, Secretary/Treasurer	Robert L. Vesco

Additionally, enclosed is a copy of RIM Operating, Inc. and RIM Offshore, Inc.'s "United States Department of the Interior, Bureau of Indian Affairs, Nationwide Oil and Gas Bond Number RLB0001937" in the amount of \$150,000, along with Bond Rider to Assume Liability Number 1 and RLI Insurance Company's Power of Attorney. With your concurrence, RIM would like to add RIM Southwest Corporation as an additional principal to this bond. Please coordinate with us regarding this matter.

If you need any further information regarding the above referenced information, please contact me at extension 206.

Sincerely yours,


Robert L. Vesco, Vice-President
Secretary/Treasurer

Operator CHUSKA ENERGY COMPANY (Harkon Southwest Corp.)
Bond Company VALLEY NATIONAL BANK - ARIZONA Amount \$25,000
Bond No. G.D. #257890A Date Approved 12/01/89

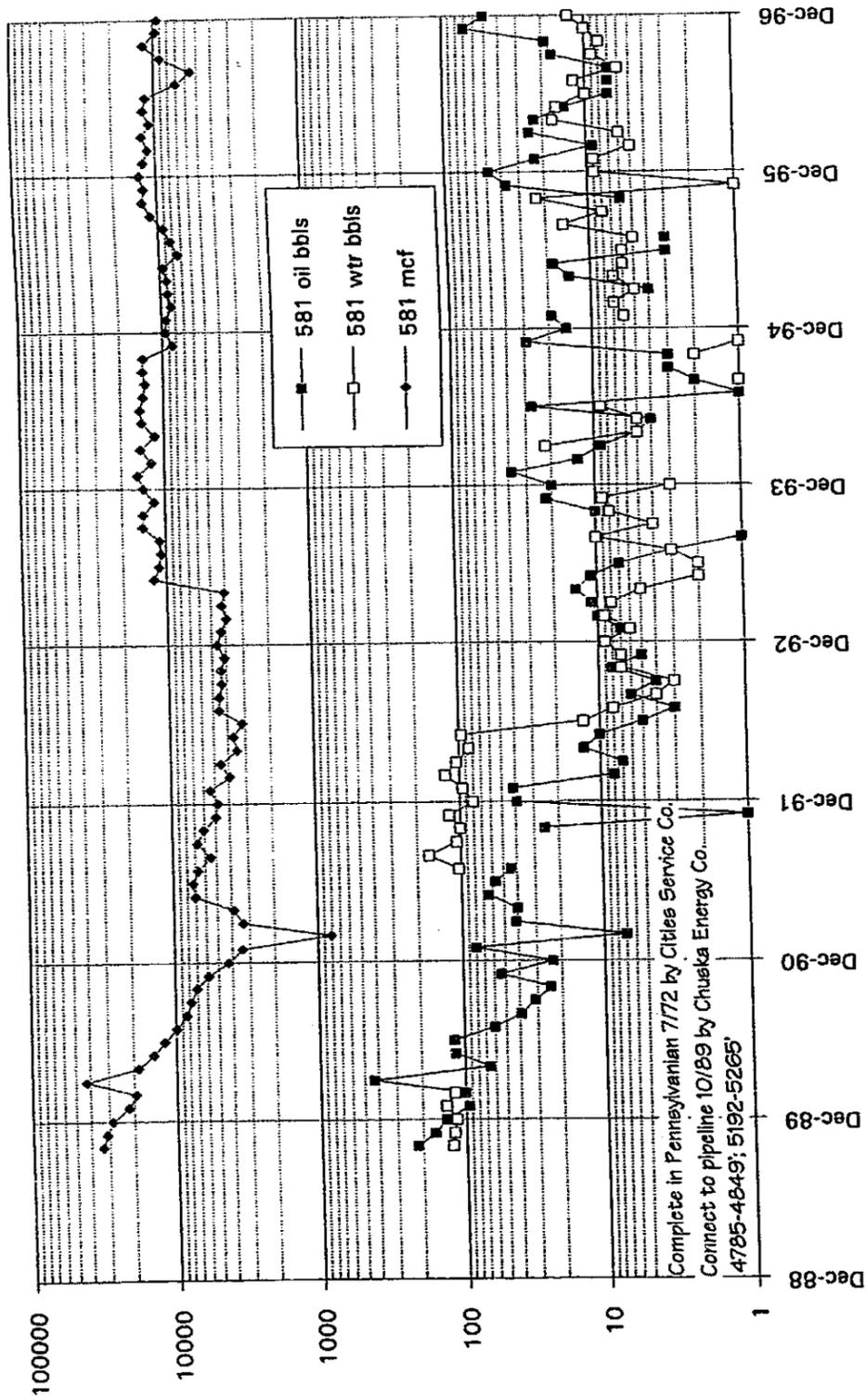
~~DATE~~ Permits covered by this bond:

- 559
- 581
- 610 (P & A 11-21-95)
- 615 (P & A 5/10/91)
- 868
- 869 expired
- 870 (J & A 5/90)
- 871
- 872 expired
- 873 (P & A 8/4/93)
- 874 expired
- 875
- 881
-
-
-
-
-
-
-
-

~~CANCELLED~~

~~DATE~~

MONTHLY PRODUCTION AT 3 BLACK ROCK (581), ARIZONA: OCT 1989 - DEC 1996
 (Cities Service Co. 1 Navajo-C, se nw 16-40n-29e, Black Rock Field, Apache County)



HARKEN
ENERGY
CORPORATION



581

March 11, 1994

State of Arizona
Oil & Gas Conservation Commission
845 N. Park Avenue, Suite 100
Tucson, AZ 85719

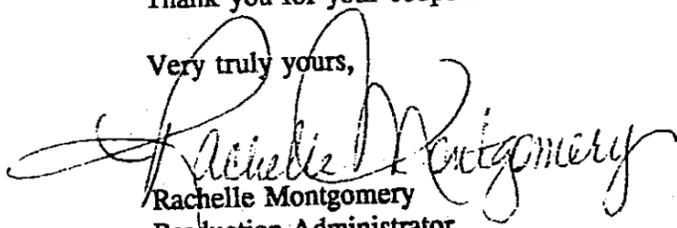
Re: NOG 8702-1139
NOG 8702-1140
NOG 8702-1142
Black Rock Well No.'s 1, 3, 5, 8 and 12

Gentlemen:

Please be advised that Harken Southwest Corporation no longer has a Farmington, New Mexico office. Therefore, please direct all future correspondence, regarding regulatory issues, to the undersigned at the letterhead address.

Thank you for your cooperation.

Very truly yours,


Rachelle Montgomery
Production Administrator

RM/jkw



HARKEN SOUTHWEST CORPORATION

(formerly Chuska Energy Company)

March 2, 1994



Mr. Steven Rauzi
Oil & Gas Program Administrator
Arizona Geological Survey
845 Northpark Ave., Suite 100
Tucson, Arizona 85719

Re: Chuska Energy Company-Arizona Statewide Bond for Drilling of Wells

Dear Mr. Rauzi:

Please be advised that with regard to the above referenced bond we are herewith enclosing documentation relating to a name change. Chuska Energy Company has now changed its name to Harken Southwest Corporation. Copies of the official documentation relating to this change of name are enclosed. We would appreciate the Arizona Geological Survey changing their records to style the above referenced bond as follows:

Harken Southwest Corporation, formerly Chuska Energy Company

Sincerely

HARKEN SOUTHWEST CORPORATION

Dale Brooks
Treasurer

DB:le
Enclosures
cc:Bruce N. Huff



HARKEN SOUTHWEST CORPORATION

(formerly Chuska Energy Company)

January 28, 1994

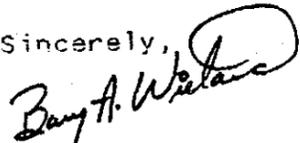
We are pleased to announce that Chuska Energy Company has changed its name to Harken Southwest Corporation. This is in line with the February, 1993 merger with Harken Exploration Company.

Harken Southwest Corporation will continue to be located at 3315 Bloomfield Highway, Farmington, New Mexico 87401. Our telephone number will remain (505) 326-5525.

Please reflect this name change on all future correspondence.

Thank you for your assistance in this matter. We look forward to working with you as Harken Southwest Corporation.

Sincerely,


BARRY A. WIELAND
Operations Manager





CHUSKA ENERGY COMPANY

3315 BLOOMFIELD HIGHWAY • FARMINGTON, NEW MEXICO 87401 • PHONE: (505) 326-5525

FAX COVER LETTER

Date: August 17, 1993

Telephone # (505)326-5525

From: Barry A. Wieland

Facsimile # (505) 325-5423

To: Steve Rauzi

Transmitted from: Ricoh Fax 35

.....

Number of Pages (including this page) 4

Please advise at the above telephone number if any problems are encountered.
.....

Message/instructions:

Steve,

Enclosed please find a Halliburton District Laboratory Water Analysis Data Sheet on Chuska Energy Company's Black Rock #3, #5, and #8 water production. Said samples were collected from the separator dump, due to low water production from the three referenced wells.

If you should have any further questions, please don't hesitate to let me know. I look forward to meeting you on Friday.

Sincerely,

A handwritten signature in cursive script that reads "Barry".

Barry A. Wieland
Operations Manager

Encl:





CHUSKA ENERGY COMPANY

315 N. BEHREND • FARMINGTON, NEW MEXICO 87401 • PHONE: (505) 326-5525

P.O. BOX 780 • FARMINGTON, NEW MEXICO 87499

581

April 26, 1990

Mr. Daniel J. Brennan
Oil and Gas Conservation Commission
5150 N. 16th Street, Suite B-141
Phoenix, Arizona 85016

Dear Dan:

Chuska has received and reviewed your letter dated April 17, 1990. Our comments pertaining to that letter are discussed below.

Chuska did not file completion reports for the Black Rock No. 1 and No. 3, and does not intend to. In the case of the Black Rock No. 1, the well was tested for five days and later production into a pipeline was initiated. These activities are reported by Sundry Notice. Since Chuska did not work over the well, a completion report is not appropriate.

The Black Rock No. 3 was simply turned on for gas sales. This activity is reported by Sundry Notice.

As you are aware, Chuska operates a central facility at Black Rock Field where separation of condensate, gas, and water occurs, along with compression. The installation of separation equipment on individual wells is not practical since oil and water trucks cannot negotiate the mountain roads during the winter months. Wet gas is produced from each well into the gathering system, and ultimately to the facility. The measurement of this wet gas at each well is not practical or accurate due to slugs of fluid hitting the orifice plate and "painting" the meter chart.

Chuska addresses this problem by periodically moving a test separator on to each well, which measures gas, condensate, and water rates. These tests are used to allocate monthly production to each well. We believe the resulting production reported for each well is accurate.

Chuska cannot comply with your request for individual meters on each well. The cost involved to facilitate accurate measurement is extreme, and the winter operation of the field would be very difficult.

The Black Rock Field central facility does not include a gas plant. It's major purpose is compression of gas from the Black Rock No. 2. Condensate and water are removed from the wet gas produced to comply with the gas quality provisions of our gas sales contract.

We hope this answers the concerns you raised in your letter of April 17, 1990. Should you wish to discuss these matters further, please contact Tom McCarthy at 505-326-5525.

Sincerely,

H. Merle Myers

H. MERLE MYERS
Vice President of Production

HMM:bnp
File:TRM\BRPIPELN.1&3



Oil and Gas Conservation Commission

STATE OF ARIZONA

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

April 17, 1990

Mr. Don S. Barnes
Operations Manager
Chuska Energy Company
315 N. Behrend
Farmington, NM 87401

Dear Don:

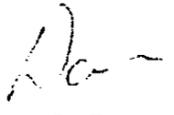
It has been brought to my attention that we have not received a completion report on the Black Rock No. 1 or on the Black Rock No. 3 well. We are enclosing copies of Commission Form No. 4 Well Completion or Recompletion Report for your convenience.

You may recall our trip to Black Rock last year. At that time we reminded you that each well's production should be metered separately. You told us that you would be having the meters installed in a few weeks. We notice, however, that you are still flowing the wells through a central meter. Please arrange to have this corrected.

We are also enclosing copies of Form 21, Gasoline Plant Report, for your convenience in reporting liquid hydrocarbons separated from the gas stream there at Black Rock. If you have a computerized reporting system which includes the information we require, either for gas production, our Form 16 - Monthly Producers Report, for separated liquid hydrocarbons, Form 21 - The Gasoline Plant Report, we will accept certified copies to save you additional overhead.

Thank you for your cooperation.

Very truly yours,


Daniel J. Brennan
Executive Director

Encl.



CHUSKA ENERGY COMPANY

315 N. BEHREND • FARMINGTON, NEW MEXICO 87401 • PHONE: (505) 326-5525

581

November 9, 1989

STATE OF ARIZONA
OIL & GAS CONSERVATION COMMISSION
5150 N 16th STREET
SUITE B141
PHOENIX AZ 85016
ATTN: DANIEL J BRENNAN

Mr Brennan:

Enclosed is the Monthly Production Report for the month of October for the Black Rock Lease NOG-8702-1116.

As you are aware, we are currently producing into a common production facility and pipeline. Currently, we are in the process of obtaining a portable test unit in which individual well tests can be obtained.

If you have any questions regarding this please do not hesitate to contact me at (505) 326-5525.

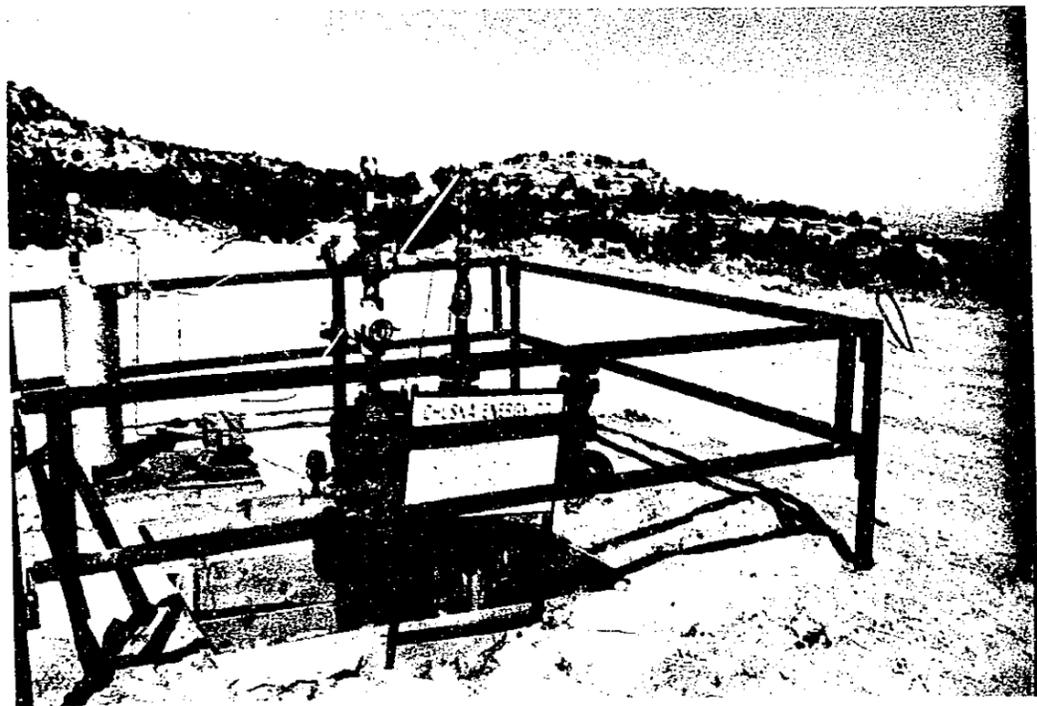
Sincerely,


DONALD S BARNES
Operations Manager

DSB/tlb
Enclosures

File: WP\BRENNAN.TLB

P/N 581

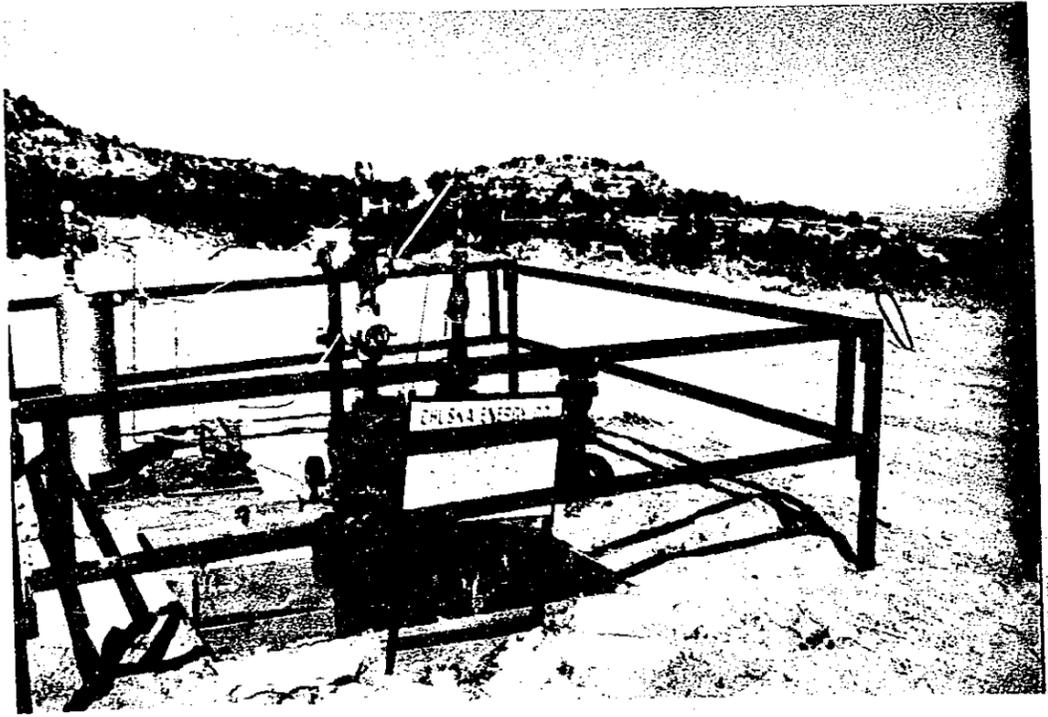


P/W (581)

Chesha (EmFuel) Black Rock (1 Mousato Navjoc)

16, 40N-29E

1989



Chuska (Am Fuel) Black Rock (Mansanto - Navajo)

Sec 16, T40N 229E

P/N # 581 1189



Oil and Gas Conservation Commission

STATE OF ARIZONA

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

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

In the matter of the Hearing called
by the Oil and Gas Conservation
Commission of the State of Arizona
for the purpose of considering:

CASE NO. 62
ORDER NO. 56

The application of Chuska Energy Company
to establish a rule for 160-acre spacing
in the Black Rock Field, Apache County,
Arizona

ORDER OF THE COMMISSION

This cause was considered at 10:05 A.M. on September
15, 1989 at Phoenix, Arizona by the OIL AND GAS CONSERVATION
COMMISSION OF THE STATE OF ARIZONA, hereinafter referred to
as the COMMISSION.

The COMMISSION, a quorum being present, having
considered the facts presented and being fully advised in
the premises, finds as follows:

FINDINGS:

(1) THAT the COMMISSION has jurisdiction of the
subject matter thereof, pursuant to ARS 27-504 and 27-516 A.12.

(2) THAT adequate geological and engineering data has
been presented to the COMMISSION to conclude that the
Paradox formation in the subject area is a pool and a
separate common source of supply of gas and associated
hydrocarbons.

(3) THAT 640-acre spacing will not adequately drain
the reservoir, resulting in waste of the resource.

(4) THAT spacing of less than 160 acres per well would
result in drilling of unnecessary wells.

Chuska Energy Company
Page - 2 -

(5) THAT 160 acres is not less than the maximum area that can be effectively drained in an efficient and economical manner by a single well producing gas and associated hydrocarbon from the Paradox formation in subject area.

(6) THAT it is in the best interest of the people of the STATE OF ARIZONA that the application for 160-acre spacing in Black Rock Field, Apache County, Arizona be approved.

THEREFORE the COMMISSION orders:

(1) THAT there be established 160-acre spacing units for the production of gas and associated hydrocarbons in the following area:

T40N-R29E G&SRB&M

Sec 7, W 1/2 and SE 1/4	Sec 18, N 1/2 and SE 1/4
8, S 1/2	20, NE 1/4
9, S 1/2	21, All
15, W 1/2	22, All
16, All	23, SW 1/4
17, All	26, NW 1/4
	27, N 1/2

T40N-R28E G&SRB&M

Sec 1, All	Sec 11, All
Sec 2, All	Sec 12, All

(2) THAT the 160-acre spacing units shall correspond with governmental quarter sections according to the protracted governmental survey of the area.

(3) THAT except as provided in Section 4 below, no gas well shall be drilled closer than 660 feet from the outer boundary of any quarter section, in the area spaced.

(4) THAT the following existing wells are designated as the unit wells for the spacing unit in which they are located even though they are exceptional locations.

O&G Permit #	Name	Spacing Unit
115	Dry Mesa (Texas Pacific) 138-3Navajo	SE 1/4 Sec 2 T40N-R28E
615	Chuska (American Fuels) Black Rock 2 (1Navajo AC)	NE 1/4 Sec 17 T40N-R29E
581	Chuska (Am Fuel, CSO) Black Rock 3 (1-16 Navajo)	NW 1/4 Sec 16 T40-R29E

Chuska Energy Company
Page - 3 -

(5) THAT the producing interval to which this order applies is the Pennsylvanian Paradox formation correlative with the interval 4567 feet to 5558 feet in the well Chuska Energy (American Fuels) Black Rock #2 (1Navajo AC) located in Section 17, T40N-R29E, Apache County, Arizona.

OIL AND GAS CONSERVATION COMMISSION

By J. Dale Nations
J. Dale Nations, Chairman

DATE 9/29/89

(SEAL)

ATTEST:

Daniel J. Brennan
Daniel J. Brennan
Executive Director

DATE October 2, 1989



CHUSKA ENERGY COMPANY

315 N. BEHREND • FARMINGTON, NEW MEXICO 87401 • PHONE: (505) 326-5525

January 26, 1989

State of Arizona
Oil and Gas Commission
3110 N. 19th Ave., Ste. 190
Phoenix, Arizona 85015

Attention: Mr. Dan Brennan, Director

Re: Commingling Zones In Black Rock Field, Apache County

Dear Mr. Brennan:

Chuska Energy Company has received permission to re-enter three (3) wells in the Black Rock Field, Apache County Arizona, Township 40N Range 29E. Through conversations with your office, it was discovered that all of the zones we intend to re-enter and test had been commingled. No commingling order had been issued by The Oil and Gas Commission. Chuska is ready to go forward with this project but we need to resolve the commingle problem. Our contention is that since the field is already commingled we should be allowed to administratively receive permission to produce the zones together. We will submit a formal request to this effect, but would like to have permission to proceed with our present plans, which do not call for the zones to be separated. We can not see that any benefit will result from separation of the intervals. Great expense will result from having to change procedures that would require us to set plugs between zones just to separate zones that are already commingled. This expense would come not only from the extra time required to set the plugs, but from the need to then move a rig to location and retrieve the plugs so that the well can be placed on production. We realize and appreciate that this is unorthodox, but the mitigating circumstances lead us to believe that our request is justified in this case. It is critical to all parties concerned, especially Chuska and The Navajo Nation, that this work be allowed to proceed without being hindered by the need to wait on permission to commingle zones.

The attached pages contain a table showing all wells on Chuska's lease, a map showing well locations, structure maps on top of the Pinkerton Trail and Mississippian Formations, and information on each well. The table is arranged so that pressure data on each zone can be easily compared. The well name number and location are listed first. The "Notes" column contains information that is not listed elsewhere in the table. This information contains DST data on zones that are not of primary interest to Chuska. It has any message of interest concerning the well and its productive characteristics and if it is plugged. Following the "Notes" column are separate columns for each of the primary zones of interest. In these columns are listed any pressure information available. Pressure measurements come from two sources; the primary source is DST (Drill Stem Test) data;

the secondary source is production tests. The DST data is best suited to determine formation pressure because the bottom hole pressure (BHP) is measured directly. Production test pressure information requires that the fluid level in the production string be known in order to calculate BHP's (if a bottom hole pressure bomb was not in place during the test). Determination of this fluid level is often only a good guess, making the BHP difficult to determine. Unfortunately not all wells have DST information, but there is enough DST data in different zones to see the small pressure differential between all zones of interest to Chuska. Numerous production tests were run on many of the wells, however not much pressure data was reported. Pressure measurements on production tests are often flowing pressures with little way to convert them to accurate BHP's. For this reason, not all production tests were recorded in the table. Only those tests that had shut-in or bottom hole recorded gauges were reported. The well data sheets show a well bore schematic with casing strings, packers, plugs (both mechanical and cement), and perforations. The perforated intervals are listed along with stimulation treatments. Other data such as logs run, production tests, initial potential, and well status is recorded.

Examination of the pressure data will demonstrate that in most zones the bottom hole pressure ranges from 1200 to 1500 psi across the field. The fluctuation of pressure in different zones of the same well is also in the 1200 to 1500 psi range. For this reason, we do not feel that significant cross flow will occur between any of the intervals if they are produced into a common well bore. Should our production testing reveal substantial pressure differential, we would of course want to separate zones. Our best economic interest is served in this manner.

Water is produced from different formations at Black Rock. We do not have water analyses that enable us to determine compatibility of waters from different formations. There is no data to support any scaling or other damaging tendencies of mixing waters from separate zones.

The structure maps show that the Pennsylvanian and Mississippian formations are closed. Zones commingled in this field will not effect other fields in the area.

Our plans call for commencement of work on February 3, 1989. You have scheduled a hearing for February 10, 1989. In all likelihood, we will begin work prior to the hearing. We have confidence The Commission will see the benefits of allowing this request.

Sincerely,

John Alexander

John Alexander
Production Manager

CHUSKA ENERGY COMPANY



Oil and Gas Conservation Commission
STATE OF ARIZONA

3110 N. 19th AVENUE, SUITE 190
PHOENIX, ARIZONA 85015
PHONE: (602) 255-5161

September 21, 1988

Chuska Energy Company
P.O. Box 98
Farmington, New Mexico 87499

Attention: Bill Bunton

Dear Bill:

Enclosed are three approved plans of workover for the following wells.

<u>Permit #</u>	<u>Operator</u>	<u>Lease</u>	<u>Location</u>
581	Chuska	1 Navajo "C"	16,40N-29E.
559	Chuska	1 Monsanto, Navajo "A"	21,40N-29E.
615	Chuska	1 Navajo "AC"	17,40N-29E.

Upon successful completion of any of these wells, please send in a completed copy of Form 4 for our records. (copy enclosed). We are also enclosing copies of other forms you will need when you have a successful gas well completion. (Forms 3, 7, 8, 11, 12, 13, 14, 18, 20).

If you should have to plug any of them, our rules require approval of the plan (copy of application enclosed) and at least 24 hours notice to allow us time to get up there to witness the plugging (Form 9, Form 10 enclosed).

You have our best wishes and hopes for successful completion.

Very truly yours,

Dan
Daniel J. Brennan
Director

DJB:lr
Encl.

March 5, 1975

Mr. Daymon Gililand
Northwest Pipeline Corp.
P. O. Box 1526
Salt Lake City, Utah 84402

Dear Mr. Gililand:

Enclosed are the followings logs you requested this date:

1. Marathon Oil Navajo #1, Permit #274
Dual Induction-Laterolog & Sonic Log-Gamma Ray
2. Cities Service Monsanto Navajo #1, Permit #559
Perforating Depth Control, Borehole Compensated
Sonic Log-Gamma Ray, Sidewall Neutron Porosity Log,
Proximity Log-Microlog and Dual Induction-Laterolog
3. Cities Service Monsanto C#1, Permit #581
Borehole Compensated Sonic Log-Gamma Ray
Sidewall Neutron Porosity Log

You are free to make copies of these logs as you wish. Please
return them as soon as possible.

Also see attached invoice for reproduction costs on the miscellaneous
data sheets enclosed.

Very truly yours,

Mrs. Rhema Brandt
Secretary to W. E. Allen
Director, Enforcement Section

/rlb

Encs.

Log returned 3-17-75



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

DATE: November 14, 1974

TO: All American Fuels Wells
Apache County

FROM: W. E. Allen, Director
Enforcement Section

Talked with Robert Schreiber, Navajo Tribe, today regarding the above referenced wells. The leases have expired on all but one well, I think it is the Navajo #B-1, SE/SW Section 9-T40N-R29E. The Tribe has taken over all wells except the one with the unexpired lease, including the two drilled by Cities Service.

The final disposition of these wells are under consideration by the Tribe. They may try to produce some wells themselves or may offer some or all for sale to the highest bidder. Supposedly they will notify this office of their ultimate decision. In the meantime our hands are tied. We can do nothing except hold unto the cash bond posted by American Fuels.

October 24, 1974

Memo from W. E. Allen, Director
Enforcement Section

Memo to the following files:

Cities Service Monsanto 1-A Navajo
Sec 21-T40N-R29E, Apache Co., #559

American Fuels Navajo B-1
Sec 9-T40N-R29E, Apache Co., #608

American Fuels Navajo C-1
Sec 6-T40N-R29E, Apache Co., #610

American Fuels Navajo E-1
Sec 31-T41N-R28E, Apache Co., #613

Cities Service Monsanto C-1 Navajo
Sec 16-T40N-R29E, Apache Co., #581

American Fuels Navajo M-1
Sec 16-T41N-R30E, Apache Co., #609

American Fuels Navajo O-1
Sec 3-T36N-R28E, Apache Co., #612

American Fuels Navajo AC-1
Sec 17-T40N-R29E, Apache Co., #615

On this date I contacted Thomas Lynch, Minerals Supervisor, Bureau of Indian Affairs, Window Rock, Arizona, regarding the wells drilled on the Reservation by American Fuels. Mr. Lynch informed me that all the leases on which American Fuels had drilled holes had reverted to the Navajo Tribe. The Tribe is considering leaving the wells in their present shut-in status and offering them for sale to the highest bidder. A final decision has not been made at this time.

Mr. Lynch also said that the Tribe was considering the pros and cons of producing the two Cities Service wells or offering them for sale.

Mr. Lynch requested that this office not bring any action against American Fuels for the time being. He will keep us informed of any decision or action taken by the Tribe.

September 17, 1974

Memo from W. E. Allen, Director
Enforcement Section

Memo to files:

Cities Service Monsanto 1-A Navajo
Sec 21-T40N-R29E
Apache County, Permit #559

Cities Service Monsanto C-1 Navajo
Sec 16-T40N-R29E
Apache County, Permit #581

Ted Boston with the Land Department of Cities Service informed me during telephone conversations on the 9th and 16th that ownership of the above referenced wells had apparently reverted to the Navajo Tribe. Approximately one year ago Cities Service assigned and sold these two wells to American Fuels. American Fuels was never able to produce the wells or never made an effort to produce the wells and the lease on these wells expired thereby allowing the Tribe to assume ownership.

W.H.



OFFICE OF
Oil and Gas Conservation Commission

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

April 1, 1974

Mr. C. R. Robinson
American Fuels Corporation
2921 Carlisle Blvd., N.E., Suite 200
Albuquerque, New Mexico 87110

Re: Cities Service Monsanto 1-A Navajo Sec 21-T40N-R29E Apache County, Permit #559
Cities Service Monsanto C-1 Navajo Sec 16-T40N-R29E Apache County, Permit #581

Dear Mr. Robinson:

The above referenced wells at your request are being placed under your \$25,000 cash blanket bond.

To avoid confusion regarding the wells now covered by your \$25,000 bond, we are listing the following wells that this Commission shows to be under this bond. If the following inventory of wells agrees with your list, please sign and return one copy to this Commission.

- | | | | |
|---------------------|---|---------------------|---|
| <i>Chuska 12/85</i> | Cities Service Monsanto 1-A Navajo Sec 21-T40N-R29E, Apache Co., #559 | <i>Chuska 12/85</i> | Cities Service Monsanto C-1 Navajo Sec 16-T40N-R29E, Apache Co., #581 |
| <i>PA 1-27-84</i> | American Fuels Navajo B-1 Sec 9-T40N-R29E, Apache Co., #608 | <i>PA 4-20-83</i> | American Fuels Navajo M-1 Sec 16-T41N-R30E, Apache Co., #609 |
| <i>Chuska 12/85</i> | American Fuels Navajo C-1 Sec 6-T40N-R29E, Apache Co., #610 | <i>PA 11-16-74</i> | American Fuels Navajo O-1 Sec 3-T36N-R28E, Apache Co., #612 |
| | American Fuels Navajo E-1 Sec 31-T41N-R28E, Apache Co., #613 | <i>Chuska 12/85</i> | American Fuels Navajo AC-1 Sec 17-T40N-R29E, Apache Co., #615 |
| | American Fuels Navajo B-2 Sec 10-T40N-R29E, Apache, #621 | | |

Very truly yours,

W. E. Allen
W. E. Allen, Director
Enforcement Section

WEA/rlb

APPROVED

By *W. E. Allen*
Date *April 12, 1974*

RECEIVED

MAY 10 1974

O & G CON. COMM.

April 30, 1974

Mr. C. R. Robinson
American Fuels Corporation
2917 Carlisle Blvd., N.E.
Albuquerque, New Mexico 87110

Re: Cities Service Monsanto 1-A Navajo Cities Service Monsanto C-1 Navajo
 Sec 21-T40N-R29E Sec 16-T40N-R29E
 Apache County, Permit #559 Apache County, Permit #581

Dear Mr. Robinson:

Your letter to this Commission dated March 26, 1974 requested the above referenced wells to be placed under your bond. In our reply to this request dated April 1, 1974, we requested that you sign and return to this Commission one copy of this letter to insure that your records were in agreement with ours. As of this date we have not received the signed copies.

Until we receive your approval of the number of wells that American Fuels presently has under bond, we cannot release Cities Service from their bonding obligations.

Very truly yours,

W. E. Allen, Director
Enforcement Section

WEA/rlb



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

April 1, 1974

Mr. C. R. Robinson
American Fuels Corporation
2917 Carlisle Blvd., N.E.
Albuquerque, New Mexico 87110

Re: Cities Service Monsanto 1-A Navajo Cities Service Monsanto C-1 Navajo
 Sec 21-T40N-R29E Sec 16-T40N-R29E
 Apache County, Permit #559 Apache County, Permit #581

Dear Mr. Robinson:

The above referenced wells at your request are being placed under your \$25,000 cash blanket bond.

To avoid confusion regarding the wells now covered by your \$25,000 bond, we are listing the following wells that this Commission shows to be under this bond. If the following inventory of wells agrees with your list, please sign and return one copy to this Commission.

Cities Service Monsanto 1-A Navajo
Sec 21-T40N-R29E, Apache Co., #559

Cities Service Monsanto C-1 Navajo
Sec 16-T40N-R29E, Apache Co., #581

American Fuels Navajo B-1
Sec 9-T40N-R29E, Apache Co., #608

American Fuels Navajo M-1
Sec 16-T41N-R30E, Apache Co., #609

American Fuels Navajo C-1
Sec 6-T40N-R29E, Apache Co., #610

American Fuels Navajo O-1
Sec 3-T36N-R28E, Apache Co., #612

American Fuels Navajo E-1
Sec 31-T41N-R28E, Apache Co., #613

American Fuels Navajo AC-1
Sec 17-T40N-R29E, Apache Co., #615

American Fuels Navajo B-2
Sec 10-T40N-R29E, Apache, #621

Very truly yours,


W. E. Allen, Director
Enforcement Section

WEA/rlb

American Fuels Corporation

TELEPHONES
(505) 342-3507
(505) 342-5518

SUITE 200
2921 CARLISLE BOULEVARD, N. E.
ALBUQUERQUE, NEW MEXICO 87110

March 26, 1974

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

Attention: Mr. W. E. Allen, Director
Enforcement Section

Re: Cities Service-Monsanto #1-A Navajo
Section 21-T40N-R29E
Apache County
Permit No. 559

Cities Service-Monsanto #1-C Navajo
Section 16-T40N-R29E
Apache County
Permit No. 581

Dear Sir:

We request that the above referenced wells be placed under our bond, thereby releasing Cities Service from their obligations.

If there are any questions, please contact us at the above address.

Very truly yours,

Barbara Cunningham
Barbara Cunningham
Secretary to C. R. Robinson

BAC/s

RECEIVED

MAR 29 1974

O. R. G. 1974



OFFICE OF
Oil and Gas Conservation Commission

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

September 24, 1973

American Fuels Corporation
2917 Carlisle Blvd., N.E.
Albuquerque, New Mexico 87110

Re: Cities Service Monsanto #1-A Navajo
Section 21-T40N-R29E
Apache County
Permit No. 559

Cities Service Monsanto #C-1 Navajo
Section 16-T40N-R29E
Apache County
Permit No. 581

Attention: Ms. Nita I. Macaw

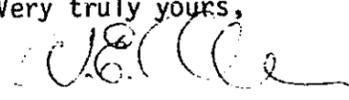
Gentlemen:

You have previously advised this Commission that you have assumed ownership and operation of the above referenced wells. Will you please indicate to this Commission your willingness for these wells to be covered under your existing bond.

Your letter indicating your acceptance of these wells under your existing bond should list the wells by name and legal description. This information is necessary before the Commission can release Cities Service from their bonding obligations.

Thank you for your cooperation.

Very truly yours,


W. E. Allen, Director
Enforcement Section

WEA/rlb



CITIES SERVICE OIL COMPANY

Cities Service Building
Box 300
Tulsa, Oklahoma 74102

September 19, 1973

918-586-2211

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

Attention Mr. W. E. Allen, Director
Enforcement Section

Re: Cities Service Monsanto #1-A Navajo
Section 21-T40N-R29E
Apache County, Arizona
Permit No. 559

Cities Service Monsanto #C-1 Navajo
Section 16-T40N-R29E
Apache County, Arizona
Permit No. 581

Gentlemen:

In reference to your letter of September 4, 1973, please be advised that Cities Service Oil Company and Monsanto Company assigned and sold the subject leases and wells to American Fuels Corporation. The assignment was dated May 18, 1973 and delivered to American Fuels Corporation on June 14, 1973. The address of the purchaser and the locations of the wells are as follows:

American Fuels Corporation
2921 Carlisle Boulevard, N.E.
Albuquerque, New Mexico 87110

Cities Service Monsanto #1-A Navajo Well
located 1,980' FNL and 1,050' FEL of Section 21,
Township 40 North, Range 29 East, G.S.R.M.,
Apache County, Arizona;

and

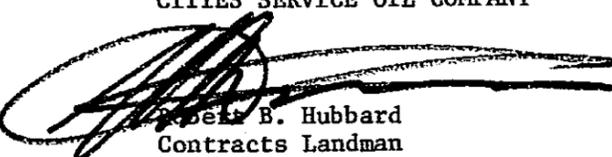
RECEIVED
SEP 24 1973
O & G CONS. COMM.

Oil and Gas Conservation Commission
State of Arizona
September 19, 1973
Page Two

Cities Service Monsanto #C-1 Navajo Well
located 2,350' FNL and 2,290' FWL of Section 16,
Township 40 North, Range 29 East, G.S.R.M.,
Apache County, Arizona

Yours very truly,

CITIES SERVICE OIL COMPANY



Robert E. Hubbard
Contracts Landman

RBH/tmb

cc: Mr. C. Robert Crawford

American Fuels Corporation
2921 Carlisle Boulevard, N.E.
Albuquerque, New Mexico 87110
Attn: Mr. E. M. Riebold

Monsanto Company
317 First Savings & Loan Building
Midland, Texas 79701
Attn: Mr. V. M. Basil



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

September 4, 1973

Mr. C. Robert Crawford
Cities Service Oil Company
800 Vaughn Building
Midland, Texas 79701

Re: Cities Service Monsanto #1-A Navajo
Sec 21-T40N-R29E
Apache County
Permit No. 559

Cities Service Monsanto #C-1 Navajo
Sec 16-T40N-R29E
Apache County
Permit No. 581

Dear Mr. Crawford:

We are aware that Cities Service no longer is the operator of the above referenced wells, however, we have received no notification from Cities Service that the leases involved have been assigned to American Fuels. Therefore, according to our records, Cities Service is still the operator responsible to the State of Arizona.

Will you please submit a copy of the assignment of the leases from Cities Service to American Fuels or a letter advising this Commission of the assignment in order that we may keep our records square.

We are enclosing a copy of the Arizona Revised Statutes that pertain to the change of ownership.

Very truly yours,


W. E. Allen, Director
Enforcement Section

WEA/rlb

Enc.



CITIES SERVICE OIL COMPANY

800 Vaughn Building
Midland, Texas 79701
Telephone: 915 684-7131
August 7, 1973

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

Attention: Mr. W. E. Allen, Director
Enforcement Section

Re: Cities Service Monsanto #1-A Navajo
Sec 21-T40N-R29E
Apache County
Permit No. 559

Cities Service Monsanto #C-1 Navajo
Sec 16-T40N-R29E
Apache County
Permit No. 581

Gentlemen:

Reference is made to your letter of July 16, 1973, addressed to our Hobbs, New Mexico, office wherein you enclosed certain Designation of Operator forms for execution by Cities Service Oil Company. This is to advise that the captioned two wells and the leases upon which they are located have been assigned to American Fuels Corporation and, therefore, Cities is no longer the record title holder of these leases.

Please advise if further information is required.

Yours truly,

CITIES SERVICE OIL COMPANY

C. Robert Crawford
C. Robert Crawford
Landman

CRCbd

cc: American Fuels Corporation
2921 Carlisle Blvd., NE
Albuquerque, New Mexico 87110
Attention: Mr. E. M. Riebold

RECEIVED
AUG 09 1973
O & G CONS. COMM.

July 16, 1973

Mr. C. R. Robinson
American Fuels Corporation
2917 Carlisle Blvd. N.E.
Albuquerque, New Mexico 87110

Re: Cities Service Monsanto #1-A Navajo
Sec 21-T40N-R29E
Apache County - Permit No. 559

Cities Service Monsanto #C-1 Navajo
Sec 16-T40N-R29E
Apache County - Permit No. 551

Dear Mr. Robinson:

We have received your notification advising this Commission that American Fuels is now the operator of the above referenced wells. We notice on your Sundry Notice and Reports on Wells that each well is indicated to be an oil well.

On the basis of the Potential Tests submitted by Cities Service, these wells are declared to be gas wells. The Cities Service Monsanto #1-A Navajo was drilled as an oil location and does not have proper spacing for a gas well, (See Rule 105, Paragraph B).

Before the Monsanto #1-A Navajo well can be produced, permission to produce this well must be secured from this Commission after Notice and Hearing.

Incidentally, the field in which these wells are located has been designated by Cities Service as the Black Rock (Pennsylvanian).

If you need additional information, please advise.

Very truly yours,

W. El Allen, Director
Enforcement Section

WEA/rlb

July 16, 1973

Mr. C. R. Robinson
American Fuels Corporation
2917 Carlisle Blvd. N.E.
Albuquerque, New Mexico 87110

Re: Cities Service Monsanto #1-A Navajo
Sec 21-T40N-R29E
Apache County - Permit No. 559

Cities Service Monsanto #C-1 Navajo
Sec 16-T40N-R29E
Apache County - Permit No. 561

Dear Mr. Robinson:

We have received your notification advising this Commission that American Fuels is now the operator of the above referenced wells. We notice on your Sundry Notice and Reports on Wells that each well is indicated to be an oil well.

On the basis of the Potential Tests submitted by Cities Service, these wells are declared to be gas wells. The Cities Service Monsanto #1-A Navajo was drilled as an oil location and does not have proper spacing for a gas well, (See Rule 105, Paragraph B).

Before the Monsanto #1-A Navajo well can be produced, permission to produce this well must be secured from this Commission after Notice and Hearing.

Incidentally, the field in which these wells are located has been designated by Cities Service as the Black Rock (Pennsylvanian).

If you need additional information, please advise.

Very truly yours,

W. E. Allen, Director
Enforcement Section

WEA/rlb



OFFICE OF
Oil and Gas Conservation Commission

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

July 16, 1973

Cities Service Company
P. O. Box 69
Hobbs, New Mexico 88240

Re: Cities Service Monsanto #1-A Navajo
Sec 21-T40N-R29E
Apache County
Permit No. 559

Cities Service Monsanto #C-1 Navajo
Sec 16-T40N-R29E
Apache County
Permit No. 551

Gentlemen:

We have been advised that the operations of the above referenced wells have been assigned to American Fuels Corporation.

Please complete the enclosed Designation of Operator forms and return one copy of this form for each well involved to this office.

Very truly yours,

W. E. Allen, Director
Enforcement Section

WEA/rlb

Enc.

November 14, 1972

Mr. K. D. Van Horn
Cities Service Oil Company
P. O. Box 4906
Midland, Texas 79701

Re: Monsanto #1-A Navajo, Permit #559
Monsanto-Navajo C-1, Permit #581
T-40N-R29E
Apache County

Sec 21
Sec 14

Dear Mr. Van Horn:

Thank you for your suggested names for the field in which the above referenced wells are located. This Commission has named the field the Black Rock (Pennsylvanian) Field.

We hope this meets with your approval.

Very truly yours,

W. E. Allen, Director
Enforcement Section

WEA/r1b

cc



CITIES SERVICE OIL COMPANY

Box 4906
Midland, Texas 79701
Telephone: 915 684-7131

November 3, 1972

Mr. W. E. Allen
Oil and Gas Conservation Commission
State of Arizona
4515 N 7th Avenue
Phoenix, Arizona 85013

Dear Mr. Allen:

Your letter of October 25, 1972 addressed to our Mr. Ed Wilder requested our recommendation for a field name to be assigned to our discovery well Monsanto Navajo #1 in Apache County, Arizona. Our three choices of names for this field listed in their preferential order are as follows:

1. Black Rock
2. Black Point
3. Carrizo

Yours very truly,

K. D. Van Horn
K. D. Van Horn
Manager, Southwestern Region
Production Division

KDV:REG:ii

RECEIVED

NOV 10 1972

O & G CONS. COMM.

October 25, 1972

Mr. Ed Wilder
Cities Service Oil Company
P. O. Box 69
Hobbs, New Mexico 88240

Re: Monsanto #1-A Navajo, Permit 559
Monsanto-Navajo C-1, Permit 581
T-40N-R29E
Apache County

Dear Mr. Wilder:

The above referenced No. 1-A Navajo is the discovery well in this field. In as much as this is a new field, the Commission desires to give a name to this field for identification purposes.

It would be appreciated if you would submit three choices of names. From this list of three, the Commission will pick one to officially apply to this field. Should you have no desire to assist in the naming of this field, the Commission will arbitrarily assign a name.

Your cooperation is appreciated.

Very truly yours,

W. E. Allen, Director
Enforcement Section

WEA/r1b

May 1, 1972

Mrs. Jo Ratcliff
Four Corners Sample Cut Association
P. O. Box 899
Farmington, New Mexico 87401

Dear Mrs. Ratcliff:

The following permit has been issued since April 24, 1972.

Cities Service Oil Company, Monsanto-Navajo "C" #1-10
SE/NW Section 16 - T40N-R29E
Apache County
Our File #581

Very truly yours,

W. E. Allen, Director
Enforcement Section

WEA/r1b

May 1, 1972

Mr. Frank Getscher
P. O. Box 98
Scottsdale, Arizona 85252

Dear Mr. Getscher:

The following permit was issued on May 1, 1972.

Cities Service Oil Company, Monsanto-Navajo "C" #1-1
SE/NW Section 16-T40N-R29E, Elevation - 6092'
Apache County
Permit #581

Very truly yours,

W. E. Allen, Director
Enforcement Section

WEA/r1b

May 1, 1972

Mr. Ed Wilder
Cities Service Oil Company
P. O. Box 69
Hobbs, New Mexico 88240

Re: Cities Service Oil Company Monsanto-Navajo "C" 1-16
SE/NW Section 16-T40N-R29E
Apache County
Permit #581

Dear Mr. Wilder:

Enclosed please find Receipt No. 2916, covering the \$25 filing fee,
a copy of your approved Application for Permit to Drill and Permit
to Drill #581.

Also enclosed are miscellaneous instruction sheets concerning samples
and other Commission requirements.

You will also note that we added No. 16 after the well number to
distinguish this from your other wells.

Very truly yours,

W. E. Allen, Director
Enforcement Section

WEA/rlb

Encs.

ORGANIZATION REPORT

RECEIVED

MAY 3 1981

O & G CONS. COMM.

Full Name of the Company, Organization, or Individual

Cities Service Company

Post Office Address (Box or Street Address)

P. O. Box 300 Tulsa, Oklahoma 74102

Plan of Organization (State whether organization is a corporation, joint stock association, firm or partnership, or individual)

Corporation - Oil, gas, hydrocarbon, chemical & metal operations and all their phases

Purpose of Organization (State type of business in which engaged)

See above

If a reorganization, give name and address of previous organization.

If a foreign corporation, give (1) State where incorporated

Delaware

(2) Name and post office address of state agent

United States Corp. Co.
Luhrs Tower
Phoenix, Arizona

(3) Date of permit to do business in state

January 5, 1970

Principal Officers or Partners (if partnership) NAME

TITLE

POST OFFICE ADDRESS

See attached list

DIRECTORS NAME

See attached list

POST OFFICE ADDRESS

CANCELLED

CERTIFICATE: I, the undersigned, under the penalty of perjury, state that I am the Assistant Secretary of the Cities Service 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

Linda Frick

Date

May 5, 1981

STATE OF ARIZONA
OIL & GAS CONSERVATION COMMISSION
Organization Report
File One Copy
Form No. 1



Oil and Gas Conservation Commission

STATE OF ARIZONA

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

November 1, 1990

Mr. K. R. Murphy
OXY USA Inc.
P. O. Box 300
Tulsa, OK 74102

RE: Statewide Performance Bond #931-27-23

Dear Mr. Murphy:

This Commission approves the cancellation of the captioned bond effective November 1, 1990.

Sincerely,

Steven L. Rauzi

Steven L. Rauzi
Oil & Gas Program Administrator

Enclosure

INSURANCE FROM
CNA

RECEIVED

APR 21 1988

U & S CONS. COMM.

GENERAL PURPOSE RIDER

To be attached to and form part of Bond Number 931 27 23 effective October 6, 1986
issued by the National Fire Insurance Company of Hartford in the amount of
Twenty-five thousand & 00/100 DOLLARS, on behalf of Cities Service Oil and Gas Corporation
as Principal and in favor of State of Arizona and Oil and Gas Conservation Commission as obligee:

Now, Therefore, it is agreed that:

The Principal name is changed to OXY USA Inc.

CANCELLED
DATE 11-1-90

It is further understood and agreed that all other terms and conditions of this bond shall remain unchanged.

This rider is to be effective the 1st day of April 19 88

Signed, sealed and dated this 6th day of April 19 88

OXY USA Inc. _____

National Fire Insurance Company of Hartford

By: H. C. Frank
H. C. Frank, Assistant Treasurer

By: Evelyn M. McCreary
Evelyn M. McCreary Attorney-in-Fact

Accepted By:

National Fire Insurance Company
of Hartford



For All the Commitments You Make

Office/Chicago, Illinois

POWER OF ATTORNEY APPOINTING INDIVIDUAL ATTORNEY-IN-FACT

Know All Men by these Presents, That the NATIONAL FIRE INSURANCE COMPANY OF HARTFORD, a corporation duly organized and existing under the laws of the State of Connecticut, and having its general administrative office in the City of Chicago, and State of Illinois, does hereby make, constitute and appoint K. R. Murphy, Evelyn M. McCreary, James E. Garrett,
Individually

of Tulsa, Oklahoma
its true and lawful Attorney-in-Fact with full power and authority hereby conferred to sign, seal and execute in its behalf bonds, undertakings and other obligatory instruments of similar nature
provided no one bond, undertaking or other instrument exceeds the sum of
\$500,000.00 Dollars for Occidental Petroleum Corporation and/or any of its subsidiary companies only.

and to bind the NATIONAL FIRE INSURANCE COMPANY OF HARTFORD thereby as fully and to the same extent as if such instruments were signed by the duly authorized officers of NATIONAL FIRE INSURANCE COMPANY OF HARTFORD and all the acts of said Attorney, pursuant to the authority hereby given are hereby ratified and confirmed.

This Power of Attorney is made and executed pursuant to and by authority of the following Resolution duly adopted on February 21, 1955 by the Board of Directors of the Company.

RESOLVED: That the President, an Executive Vice President or any Vice President of the Corporation may, from time to time, appoint, by written certificates, Attorneys-in-Fact to act in behalf of the Corporation in the execution of policies of insurance, bonds, undertakings and other obligatory instruments of like nature. Such Attorneys-in-Fact, subject to the limitations set forth in their respective certificates of authority, shall have full power to bind the Corporation by their signature and execution of any such instrument and to attach the seal of the Corporation thereto. The President, an Executive Vice President, any Vice President or the Board of Directors may at any time revoke all power and authority previously given to any Attorney-in-Fact.

This Power of Attorney is signed and sealed by facsimile under and by the authority of the following Resolution adopted by the Board of Directors of the Company at a meeting duly called and held on the 14th day of May, 1964.

RESOLVED: That the signature of the President, an Executive Vice President or a Vice President and the seal of the Corporation may be affixed by facsimile on any power of attorney granted pursuant to the Resolution adopted by this Board of Directors on February 21, 1955 and the signature of a Secretary or an Assistant Secretary and the seal of the Corporation may be affixed by facsimile to any certificate of any such power, and any power or certificate bearing such facsimile signatures and seal shall be valid and binding on the Corporation. Any such power so executed and sealed and certified by certificate so executed and sealed, shall, with respect to any bond or undertaking to which it is attached, continue to be valid and binding on the Corporation.

In Witness Whereof, the NATIONAL FIRE INSURANCE COMPANY OF HARTFORD has caused these presents to be signed by its Vice President and its corporate seal to be hereto affixed this 18th day of August, 1987

NATIONAL FIRE INSURANCE COMPANY OF HARTFORD



J. E. Purtell
J. E. Purtell Vice President.

State of Illinois, County of Cook, ss:

On this 18th day of August, 1987, before me personally came J. E. Purtell, to me known, who, being by me duly sworn, did depose and say: that he resides in the Village of Glenview, State of Illinois; that he is a Vice-President of the NATIONAL FIRE INSURANCE COMPANY OF HARTFORD, the corporation described in and which executed the above instrument; that he knows the seal of said Corporation; that the seal affixed to the said instrument is such corporate seal; that it was so affixed pursuant to authority given by the Board of Directors of said corporation and that he signed his name thereto pursuant to like authority, and acknowledges same to be the act and deed of said corporation.



Leslie A. Smith
Leslie A. Smith Notary Public.

My Commission Expires November 12, 1990

CERTIFICATE

I, M. C. Vonnahme, Assistant Secretary of the NATIONAL FIRE INSURANCE COMPANY OF HARTFORD, do hereby certify that the Power of Attorney herein above set forth is still in force, and further certify that the Resolutions of the Board of Directors, set forth in said Power of Attorney are still in force. In testimony whereof I have hereunto subscribed by name and affixed the seal of the said Company this 6th day of April, 1988.



M. C. Vonnahme
M. C. Vonnahme Assistant Secretary.

PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS

Bond Serial No. 931 27 23

That we: CITIES SERVICE OIL AND GAS CORPORATION

of the County of TULSA in the State of OKLAHOMA

as principal, and NATIONAL FIRE INSURANCE COMPANY OF HARTFORD

of LOS ANGELES, CALIFORNIA

AUTHORIZED TO DO BUSINESS WITHIN the State of Arizona.

as surety, are held and firmly bound unto the State of Arizona and the Oil and Gas Conservation Commission, hereinafter referred to as the "Commission", in the penal sum of Twenty-Five Thousand and no/100 dollars (\$25,000.00) lawful money of the United States, for which payment, well and truly to be made, we bind ourselves, and each of us, and each of our heirs, executors, administrators or successors, and assigns jointly and severally, firmly by these presents.

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

To cover exploration, drilling, producing and abandonment
Oil & Gas operations in the State of Arizona

(May be used as blanket bond or for single well)

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

Whenever the principal shall be, and declared by the Oil and Gas Conservation Commission in violation of the Laws of this State and the rules, regulations and orders of the Commission, the surety shall promptly:

1. Remedy the violation by its own efforts, or
2. Obtain a bid or bids for submission to the Commission to remedy the violation, and upon determination by the Commission and the Surety of the lowest responsible bidder, arrange for a contract between such bidder and the Commission, and make available as work progresses sufficient funds to pay the cost of remedying the violation; but not exceeding, including other costs and damages for which the surety may be liable hereunder, the amount set forth in the first paragraph hereof.

Liability under this bond may not be terminated without written permission of this Commission.

WITNESSE our hands and seals, this 6th day of October, 1986

ATTESTED:

CITIES SERVICE OIL AND GAS CORPORATION

[Signature]
Assistant Secretary

[Signature]
H.C. Frank, Assistant Treasurer Principal

WITNESS our hands and seals this 6th day of October, 1986

NATIONAL FIRE INSURANCE COMPANY OF HARTFORD

[Signature]
K. R. Murphy, Attorney-in-Fact Surety

Surety, Resident Arizona Agent
If issued in a state other than Arizona)

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

Approved
Date _____

**STATE OF ARIZONA
OIL & GAS CONSERVATION COMMISSION**

By _____

**STATE OF ARIZONA
OIL & GAS CONSERVATION COMMISSION**

Seal

File Two Copies

Form No. 2

Permit No. _____

National Fire Insurance Company
of Hartford



Office/Chicago, Illinois

POWER OF ATTORNEY APPOINTING INDIVIDUAL ATTORNEY-IN-FACT

Know All Men by these Presents, That the NATIONAL FIRE INSURANCE COMPANY OF HARTFORD, a corporation duly organized and existing under the laws of the State of Connecticut, and having its general administrative office in the City of Chicago, and State of Illinois, does hereby make, constitute and appoint K. R. Murphy, Evelyn M. McCreary, Individually

of Tulsa, Oklahoma

its true and lawful Attorney-in-Fact with full power and authority hereby conferred to sign, seal and execute in its behalf bonds, undertakings and other obligatory instruments of similar nature

provided no one bond, undertaking or other instrument exceeds the sum of \$500,000.00 Dollars for Occidental Petroleum Corporation and/or any of its subsidiary companies only.

and to bind the NATIONAL FIRE INSURANCE COMPANY OF HARTFORD thereby as fully and to the same extent as if such instruments were signed by the duly authorized officers of NATIONAL FIRE INSURANCE COMPANY OF HARTFORD and all the acts of said Attorney, pursuant to the authority hereby given are hereby ratified and confirmed.

This Power of Attorney is made and executed pursuant to and by authority of the following Resolution duly adopted on February 21, 1955 by the Board of Directors of the Company.

RESOLVED: That the President, an Executive Vice President or any Vice President of the Corporation may, from time to time, appoint, by written certificates, Attorneys-in-Fact to act in behalf of the Corporation in the execution of policies of insurance, bonds, undertakings and other obligatory instruments of like nature. Such Attorneys-in-Fact, subject to the limitations set forth in their respective certificates of authority, shall have full power to bind the Corporation by their signature and execution of any such instrument and to attach the seal of the Corporation thereto. The President, an Executive Vice President, any Vice President or the Board of Directors may at any time revoke all power and authority previously given to any Attorney-in-Fact.

This Power of Attorney is signed and sealed by facsimile under and by the authority of the following Resolution adopted by the Board of Directors of the Company at a meeting duly called and held on the 14th day of May, 1964.

RESOLVED: That the signature of the President, an Executive Vice President or a Vice President and the seal of the Corporation may be affixed by facsimile on any power of attorney granted pursuant to the Resolution adopted by this Board of Directors on February 21, 1955 and the signature of a Secretary or an Assistant Secretary and the seal of the Corporation may be affixed by facsimile to any certificate of any such power, and any power or certificate bearing such facsimile signatures and seal shall be valid and binding on the Corporation. Any such power so executed and sealed and certified by certificate so executed and sealed, shall, with respect to any bond or undertaking to which it is attached, continue to be valid and binding on the Corporation.

In Witness Whereof, the NATIONAL FIRE INSURANCE COMPANY OF HARTFORD has caused these presents to be signed by its Vice President and its corporate seal to be hereto affixed this 1st day of July, 19 85.

NATIONAL FIRE INSURANCE COMPANY OF HARTFORD



J. E. Purtell
Vice President.

State of Illinois, County of Cook, ss:

On this 1st day of July, 19 85, before me personally came

J. E. Purtell, to me known, who, being by me duly sworn, did depose and say: that he resides in the Village of Glenview, State of Illinois; that he is a Vice-President of the NATIONAL FIRE INSURANCE COMPANY OF HARTFORD, the corporation described in and which executed the above instrument; that he knows the seal of said Corporation; that the seal affixed to the said instrument is such corporate seal; that it was so affixed pursuant to authority given by the Board of Directors of said corporation and that he signed his name thereto pursuant to like authority, and acknowledges same to be the act and deed of said corporation.



Leslie A. Smith
Notary Public.

My Commission Expires November 12, 1986

CERTIFICATE

I, P. F. Granahan, Assistant Secretary of the NATIONAL FIRE INSURANCE COMPANY OF HARTFORD, do hereby certify that the Power of Attorney herein above set forth is still in force, and further certify that the Resolutions of the Board of Directors, set forth in said Power of Attorney are still in force. In testimony whereof I have hereunto subscribed by name and affixed the seal of the said Company this 6th day of October, 19 86.



P. F. Granahan
Assistant Secretary.



RECEIVED
OCT 29 1986

O & G CONS. COMM.

CITIES SERVICE OIL AND GAS CORPORATION
P. O. BOX 1919 MIDLAND, TEXAS 79702

(915) 685-5600

October 17, 1986

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

CANCELLED
Re: Blanket Performance Bond
State of Arizona
Bond #931 27 23

Gentlemen:

Enclosed is National Fire Insurance Company of Hartford Bond #931 27 23. This bond is to replace, as of October 6, 1986, Safeco Insurance Company of America Bond #603388-165, which is currently on file with the authorities.

Please confirm release of surety with respect to the Safeco Bond #603388-165.

(see p/N 581)

Very truly yours,

CITIES SERVICE OIL & GAS CORP.

J. S. Smith
J. S. Smith
Manager - Finance & Accounting
Southwest Region
E & P Division

JSS:BP:bg

enclosure



Oil and Gas Conservation Commission

STATE OF ARIZONA

3110 N. 19th AVENUE, SUITE 190

PHOENIX, ARIZONA 85015

PHONE: (602) 255-5161

November 12, 1986

Mr. J. S. Smith
Manager-Finance & Accounting
Cities Service Oil & Gas Corporation
P. O. Box 1919
Midland, TX 79702

Re: Blanket Performance Bond
931 27 23 11-1-90

DATE
Dear Mr. Smith:

This letter is to confirm receipt of National Fire Insurance Company of Hartford Bond No. 931 27 23 on October 29, 1986. This bond replaces Safeco Insurance Company of America Bond No. 603388-165, effective on the date of receipt.

If we can be of further assistance, please advise.

↓
see P/N 581

Sincerely,

R. A. Ybarra
R. A. Ybarra
Enforcement Director

lr

W.H.



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

April 1, 1974

Mr. C. R. Robinson
American Fuels Corporation
2921 Carlisle Blvd., N.E., Suite 200
Albuquerque, New Mexico 87110

Re: Cities Service Monsanto I-A Navajo Cities Service Monsanto C-1 Navajo
 Sec 21-T40N-R29E Sec 16-T40N-R29E
 Apache County, Permit #559 Apache County, Permit (#581)

Dear Mr. Robinson:

The above referenced wells at your request are being placed under your \$25,000 cash blanket bond.

To avoid confusion regarding the wells now covered by your \$25,000 bond, we are listing the following wells that this Commission shows to be under this bond. If the following inventory of wells agrees with your list, please sign and return one copy to this Commission.

- | | | |
|---------------------|--|--|
| <i>Chuska 12/85</i> | Cities Service Monsanto I-A Navajo
Sec 21-T40N-R29E, Apache Co., #559 | Cities Service Monsanto C-1 Navajo
Sec 16-T40N-R29E, Apache Co., #581 <i>Chuska 12/85</i> |
| <i>PA 1-27-84</i> | American Fuels Navajo B-1
Sec 9-T40N-R29E, Apache Co., #608 | American Fuels Navajo M-1
Sec 16-T41N-R30E, Apache Co., #609 <i>PA 4-20-83</i> |
| <i>Chuska 12/85</i> | American Fuels Navajo C-1
Sec 6-T40N-R29E, Apache Co., #610 | American Fuels Navajo O-1
Sec 3-T36N-R28E, Apache Co., #612 <i>PA 11-16-74</i> |
| | American Fuels Navajo E-1
Sec 31-T41N-R28E, Apache Co., #613 | American Fuels Navajo AC-1
Sec 17-T40N-R29E, Apache Co., #615 <i>Chuska 12/85</i> |
| | American Fuels Navajo B-2
Sec 10-T40N-R29E, Apache, #621 | |

Very truly yours,

W.E. Allen
W. E. Allen, Director
Enforcement Section
WEA/rlb

APPROVED

By: *[Signature]*
Date: *April 12, 1974*

This letter releases
Cities Service bonding
obligation per
W.E. Allen letter of
4-30-74

RECEIVED

MAY 10 1974

O & G COMM. OFFICE



Oil and Gas Conservation Commission
STATE OF ARIZONA
3110 N. 19th AVENUE, SUITE 190
PHOENIX, ARIZONA 85015
PHONE: (602) 255-5161

November 12, 1986

Mr. J. S. Smith
Manager-Finance & Accounting
Cities Service Oil & Gas Corporation
P. O. Box 1919
Midland, TX 79702

Re: Blanket Performance Bond
931 27 23

Dear Mr. Smith:

This letter is to confirm receipt of National Fire Insurance Company of Hartford Bond No. 931 27 23 on October 29, 1986. This bond replaces Safeco Insurance Company of America Bond No. 603388-165, effective on the date of receipt.

If we can be of further assistance, please advise.

Sincerely,

R. A. Ybarra
R. A. Ybarra
Enforcement Director

lr

CITIES SERVICE COMPANY
ENERGY RESOURCES GROUP



Box 1919
Midland, Texas 79702
(915) 685-5600

April 6, 1983

RECEIVED

APR 21 1983

O & G COMM.

*AKS
24*

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

Gentlemen:

Effective February 1, 1983, Cities Service Company desires to include the name of Cities Service Oil & Gas Corporation with Cities Service Company as the name of the Principals for Performance Bond No. 603388-165 that covers drilling, etc. We are forwarding herewith Surety Rider for this bond reflecting this change.

11-12-86

Yours very truly,

Bob L. Emerson

Bob L. Emerson
Manager-Administration
Southwest Region
E & P Division

BLE:RHS:lk1

Attachment



SURETY RECEIVED
 APR 21 1983
 O & G CONS. COMM.

SAFECO INSURANCE COMPANY OF AMERICA
 GENERAL INSURANCE COMPANY OF AMERICA
 FIRST NATIONAL INSURANCE COMPANY
 OF AMERICA
 HOME OFFICE: SAFECO PLAZA
 SEATTLE, WASHINGTON 98185

To be attached to and form a part of Bond No. 603388-165
 executed by Cities Service Company, as
 Principal and by General Insurance Company of America as Surety,
 in favor of Oil & Gas Conservation Commission, State of Arizona
 and effective as of October 6, 1971

In consideration of the mutual agreements herein contained the Principal and the Surety hereby consent to changing
 the name of the Principal

From: Cities Service Company

CANCELLED
 DATE 11-12-86

- To: 1. Cities Service Company,
- 2. Cities Service Oil and Gas Corporation

Nothing herein contained shall vary, alter or extend any provision or condition of this bond except as herein expressly

stated. This rider is effective on the 1st day of February 19 83.
 Signed and sealed this 15th day of February 19 83.

ATTEST: H. E. Bockelken
H. E. Bockelken
 ASSISTANT SECRETARY

Accepted: _____

By: Cities Service Company Principal
C. A. Johnson Title
 General Insurance Company of America Surety

By: K. R. Murphy Attorney-in-Fact
 Oblige

By: _____ Title



LIMITED POWER
OF ATTORNEY

SAFECO INSURANCE COMPANY OF AMERICA
GENERAL INSURANCE COMPANY OF AMERICA
HOME OFFICE: SAFECO PLAZA
SEATTLE, WASHINGTON 98185

No. 3112

KNOW ALL BY THESE PRESENTS:

That **SAFECO INSURANCE COMPANY OF AMERICA** and **GENERAL INSURANCE COMPANY OF AMERICA**, each a Washington corporation, does hereby appoint

-----**RICHARD J. KELLY; K. R. MURPHY; C. R. MARSHALL**, Tulsa, Oklahoma-----

its true and lawful attorney(s)-in-fact, with full authority to execute on its behalf fidelity and surety bonds or undertakings and other documents of a similar character issued by the company in the course of its business, and to bind the respective company thereby in amounts or penalties not exceeding the sum

of FIVE HUNDRED THOUSAND AND NO/100----- DOLLARS (\$ 500,000.00)

IN WITNESS WHEREOF, SAFECO INSURANCE COMPANY OF AMERICA and **GENERAL INSURANCE COMPANY OF AMERICA** have each executed and attested these presents

this 4th day of January, 1983

CERTIFICATE

Extract from the By-Laws of **SAFECO INSURANCE COMPANY OF AMERICA**
and of **GENERAL INSURANCE COMPANY OF AMERICA**:

"Article V, Section 13. — **FIDELITY AND SURETY BONDS** . . . the President, any Vice President, the Secretary, and any Assistant Vice President appointed for that purpose by the officer in charge of surety operations, shall each have authority to appoint individuals as attorneys-in-fact or under other appropriate titles with authority to execute on behalf of the company fidelity and surety bonds and other documents of similar character issued by the company in the course of its business . . . On any instrument making or evidencing such appointment, the signatures may be affixed by facsimile. On any instrument conferring such authority or on any bond or undertaking of the company, the seal, or a facsimile thereof, may be impressed or affixed or in any other manner reproduced; provided, however, that the seal shall not be necessary to the validity of any such instrument or undertaking."

Extract from a Resolution of the Board of Directors of
SAFECO INSURANCE COMPANY OF AMERICA
and of **GENERAL INSURANCE COMPANY OF AMERICA** adopted July 28, 1970.

"On any certificate executed by the Secretary or an assistant secretary of the Company setting out,

- (i) The provisions of Article V, Section 13 of the By-Laws, and
 - (ii) A copy of the power-of-attorney appointment, executed pursuant thereto, and
 - (iii) Certifying that said power-of-attorney appointment is in full force and effect,
- the signature of the certifying officer may be by facsimile, and the seal of the Company may be a facsimile thereof."

I, **W.D. Hammersla**, Secretary of **SAFECO INSURANCE COMPANY OF AMERICA** and of **GENERAL INSURANCE COMPANY OF AMERICA**, do hereby certify that the foregoing extracts of the By-Laws and of a Resolution of the Board of Directors of these corporations, and of a Power of Attorney issued pursuant thereto, are true and correct, and that both the By-Laws, the Resolution and the Power of Attorney are still in full force and effect.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the facsimile seal of said corporations

this 15th day of February, 1983



CITIES SERVICE COMPANY
ENERGY RESOURCES GROUP

Box 1919
Midland, Texas 79701
(915) 684-7131

RECEIVED

OCT 24 1977

O & G CONS. COMM.

October 13, 1977

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

Gentlemen:

Effective October 1, 1977, Cities Service Oil Company has assigned all of its producing and non-producing oil and gas properties in the State of Arizona to Cities Service Company. We have on file with your office Performance Bond No. 603388-165 in the amount of \$25,000 covering drilling and etc. We are forwarding herewith Surety Rider for this Bond changing the name of principal to Cities Service Company.

Yours very truly,

CITIES SERVICE COMPANY

R. E. Groves
Manager Administration
Energy Resources Group
Southwest Region

REGbc

Attachments

GENERAL INSURANCE COMPANY OF AMERICA

Home Office: 4347 Brooklyn Ave. N.E., Seattle, Washington 98105



SURETY RIDER

To be attached to and form a part of Bond No. 603388-165
executed by Cities Service Oil Company, as
Principal and by GENERAL INSURANCE COMPANY OF AMERICA, as Surety,
in favor of the State of Arizona and the Oil and Gas Conservation Commission, and effec-
tive as of October 6, 1971.

In consideration of the mutual agreements herein contained the Principal and the Surety hereby consent to changing
the name of Principal

From: Cities Service Oil Company

To: Cities Service Company

CANCELLED
DATE 11-12-88

RECEIVED

OCT 24 1977

O & G CONS. COMM.

Nothing herein contained shall vary, alter or extend any provision or condition of this bond except as herein ex-
pressly stated. This rider is effective on the 1st day of October 19 77.

CITIES SERVICE COMPANY

Principal

H. D. Sacher
ASSISTANT SECRETARY

By C. A. Johnson, Assistant Treasurer

GENERAL INSURANCE COMPANY OF AMERICA

By T. B. Pennypacker, Attorney-in-Fact

Accepted:

OIL & GAS CONSERVATION COMMISSION
STATE OF ARIZONA Oblige

By W. B. Allen

Date 10-24-77
Title



LIMITED POWER
OF ATTORNEY

SAFECO INSURANCE COMPANY OF AMERICA
GENERAL INSURANCE COMPANY OF AMERICA
HOME OFFICE: SAFECO PLAZA
SEATTLE, WASHINGTON 98185

No. 3112

KNOW ALL MEN BY THESE PRESENTS:

That SAFECO Insurance Company of America and General Insurance Company of America, each a Washington corporation, does each hereby appoint

----- FREDERICK G. SCHMIDT; RICHARD J. KELLY; K. R. MURPHY; T. B. PENNYPACKER, Tulsa, Oklahoma -----

its true and lawful attorney(s)-in-fact, with full authority to execute on its behalf fidelity and surety bonds or undertakings and other documents of a similar character issued in the course of its business, and to bind the respective company thereby in amounts or penalties not exceeding the sum

of FIVE HUNDRED THOUSAND AND NO/100 ----- DOLLARS (\$ 500,000.00)

IN WITNESS WHEREOF, SAFECO Insurance Company of America and General Insurance Company of America have each executed and attested these presents

this 21st day of October, 1974

W. D. Hammersla
W. D. HAMMERSLA, SECRETARY

Gordon H. Sweany
GORDON H. SWEANY, PRESIDENT

CANCELLED
DATE 11-12-86

CERTIFICATE

Extract from Article VI, Section 12, of the By-Laws of SAFECO Insurance Company of America and of General Insurance Company of America:

"Article VI, Section 12, - FIDELITY AND SURETY BONDS . . . the President, any Vice President, and the Secretary shall each have authority to appoint individuals as attorneys-in-fact or under other appropriate titles with authority to execute on behalf of the company fidelity and surety bonds and other documents of similar character issued by the company in the course of its business . . . On any instrument making or evidencing such appointment, the signatures may be affixed by facsimile. On any instrument conferring such authority or on any bond or undertaking of the company, the seal, or a facsimile thereof, may be impressed or affixed or in any other manner reproduced; provided, however, that the seal shall not be necessary to the validity of any such instrument or undertaking."

Extract from a Resolution of the Board of Directors of SAFECO Insurance Company of America and of General Insurance Company of America adopted July 28, 1970:

"On any certificate executed by the Secretary or an assistant secretary of the company setting out,
(i) The provisions of Article VI, Section 12 of the By-Laws, and
(ii) A copy of the power-of-attorney appointment, executed pursuant thereto, and
(iii) Certifying that said power-of-attorney appointment is in full force and effect,
the signature of the certifying officer may be by facsimile, and the seal of the company may be a facsimile thereof."

I, William Hammersla, Vice-President and Secretary of SAFECO Insurance Company of America and of General Insurance Company of America, do hereby certify that the foregoing extracts of the By-Laws and of a Resolution of the Board of Directors of these corporations, and of a power-of-attorney issued pursuant thereto, are true and correct, and that the By-Laws, the Resolution and the power-of-attorney are still in full force and effect.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the seal of said corporations

this 1st day of October, 1977

RECEIVED

OCT 24 1977

O & G CONS. COM



W. D. Hammersla
W. D. HAMMERSLA, SECRETARY

PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS

Bond Serial No. 603388-165

That we: CITIES SERVICE OIL COMPANY

of the County of TULSA in the State of OKLAHOMA

as principal, and GENERAL INSURANCE COMPANY OF AMERICA

of Seattle, Washington

AUTHORIZED TO DO BUSINESS WITHIN the State of Arizona.

as surety, are held and firmly bound unto the State of Arizona and the Oil and Gas Conservation Commission, hereinafter referred to as the "Commission", in the penal sum of Twenty-Five Thousand and no/100 dollars (\$25,000.00) lawful money of the United States, for which payment, well and truly to be made, we bind ourselves, and each of us, and each of our heirs, executors, administrators or successors, and assigns jointly and severally, firmly by these presents.

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

To cover exploration, drilling, producing and abandonment Oil & Gas operations in the State of Arizona

(May be used as blanket bond or for single well)

NOW, THEREFORE, if the above bounden principal shall comply with all the provisions of the Laws of this State and the rules, regulations and orders of the Commission, especially with reference to the requirements of A.R.S. §27-515, providing for the proper drilling, casing and plugging of said well or wells, and filing with the Oil and Gas Conservation Commission all notices and records required by said Commission, then in the event said well or wells do not produce oil or gas in commercial quantities, or cease to produce oil or gas in commercial quantities, this obligation is void; otherwise it shall remain in full force and effect.

Whenever the principal shall be, and declared by the Oil and Gas Conservation Commission in violation of the Laws of this State and the rules, regulations and orders of the Commission, the surety shall promptly:

- 1. Remedy the violation by its own efforts, or
2. Obtain a bid or bids for submission to the Commission to remedy the violation, and upon determination by the Commission and the Surety of the lowest responsible bidder, arrange for a contract between such bidder and the Commission, and make available as work progresses sufficient funds to pay the cost of remedying the violation; but not exceeding, including other costs and damages for which the surety may be liable hereunder, the amount set forth in the first paragraph hereof.

Liability under this bond may not be terminated without written permission of this Commission.

WITNESS our hands and seals, this 6th day of October, 1971

ATTESTED: CITIES SERVICE OIL COMPANY

W. O. Brown, Sec'y. T. H. Rubey, Insurance Manager

WITNESS our hands and seals this 6th day of October, 1971

GENERAL INSURANCE COMPANY OF AMERICA

Richard J. Kelly, Attorney-in-Fact
Gilbert Katt, Surety, Resident Arizona Agent

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

Approved Date: Oct. 12, 1971
STATE OF ARIZONA OIL & GAS CONSERVATION COMMISSION
By: [Signature]

STATE OF ARIZONA OIL & GAS CONSERVATION COMMISSION
Form No. 3

Permit No. 559



GENERAL INSURANCE COMPANY OF AMERICA
Home Office 17 Brooklyn Ave. N.E., Seattle, Washington 98105

LIMITED POWER OF ATTORNEY

No. 3112

KNOW ALL MEN BY THESE PRESENTS:

That General Insurance Company of America, a Washington corporation, does hereby appoint

-----FREDERICK G. SCHMIDT &/or RICHARD J. KELLY, Tulsa, Oklahoma-----

its true and lawful attorney(s)-in-fact, with full authority to execute on behalf of the company fidelity and surety bonds or undertakings and other documents of a similar character issued by the company in the course of its business, and to bind General Insurance Company of America thereby as fully as if such instruments had been duly executed by its regularly

elected officers at its home office, in amounts or penalties not exceeding the sum of _____

FIVE HUNDRED THOUSAND AND NO/100----- DOLLARS (\$ 500,000.00)

IN WITNESS WHEREOF, General Insurance Company of America has executed and attested these presents

this 24 day of February, 19 71

W. D. Hammersla
W. D. HAMMERSLA, SECRETARY

CANCELLED

Gordon H. Sweany
GORDON H. SWEANY, PRESIDENT

CERTIFICATE

Extract from the By-Laws of General Insurance Company of America:

"Article VI, Section 12. - FIDELITY AND SURETY BONDS ... the President, any Vice President, and the Secretary shall each have authority to appoint individuals as attorneys-in-fact or under other appropriate titles with authority to execute on behalf of the company fidelity and surety bonds and other documents of similar character issued by the company in the course of its business ... On any instrument making or evidencing such appointment, the signatures may be affixed by facsimile. On any instrument conferring such authority or on any bond or undertaking of the company, the seal, or a facsimile thereof, may be impressed or affixed or in any other manner reproduced; provided, however, that the seal shall not be necessary to the validity of any such instrument or undertaking."

Extract from a Resolution of the Board of Directors of
General Insurance Company of America adopted July 28, 1970

"On any certificate executed by the Secretary or an assistant secretary of the Company setting out,
(i) The provisions of Article VI, Section 12 of the By-Laws, and
(ii) A copy of the power-of-attorney appointment, executed pursuant thereto, and
(iii) Certifying that said power-of-attorney appointment is in full force and effect,
the signature of the certifying officer may be by facsimile, and the seal of the Company may be a facsimile thereof."

I, W. D. Hammersla, Secretary of General Insurance Company of America, do hereby certify that the foregoing extracts of the By-Laws and of a Resolution of the Board of Directors of this corporation, and of a Power of Attorney issued pursuant thereto, are true and correct, and that both the By-Laws, the Resolution and the Power of Attorney are still in full force and effect.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the facsimile seal of said corporation

this 6th day of October, 19 71.



W. D. Hammersla
W. D. HAMMERSLA, SECRETARY

CITIES SERVICE OIL COMPANY

Certified Copy of Directors' Resolutions

"RESOLVED, that the President, Vice President-Finance, the Treasurer, or the Manager, Insurance Department, be and they hereby are authorized and empowered in the name of and on behalf of this Corporation to sign or execute insurance proofs of loss, including subrogation agreements or loan releases, releases in settlement of claims for loss of and damage to property of this Corporation for amounts not in excess of twenty-five thousand dollars (\$25,000), surety bonds, and their application and/or indemnity agreements, and to furnish letters evidencing the existence of company insurance coverage; and be it further

RESOLVED, that the Property Claims Supervisor, Insurance Department, be and he hereby is authorized and empowered, in the name of and on behalf of this corporation, to sign or execute insurance proofs of loss, including subrogation agreements, for losses not in excess of five thousand dollars (\$5,000), and sign or execute releases in settlement of claims for damages to property of this corporation for amounts not in excess of one thousand dollars (\$1,000); and be it further

RESOLVED, that the President or any Vice President be, and they hereby are, authorized and empowered in the name of and on behalf of this corporation to sign or execute releases in settlement of claims for loss of and damage to property of this corporation."

I, W. O. BROWN, Secretary of CITIES SERVICE OIL COMPANY, do hereby certify that the above and foregoing is a true and correct copy of resolutions regularly and unanimously adopted at a meeting of the Board of Directors of said corporation, duly called and held on the 18th day of March, 1971, at which said meeting a majority of the Directors was present and voted.

W. O. Brown

Dated: October 6, 1971

See Assignment

RECEIVED

OCT 12 1971

O & G CONS. COMM.

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 NOG 8707-1139	Field Black Rock	Reservoir Paradox
Survey or Sec-Twp-Rge Section 16&21-40N-29E	County Apache	State Arizona
Operator Harken Southwest Corporation		
ADDRESS ALL CORRESPONDENCE CONCERNING THIS FORM TO:		
Street 5605 N. MacArthur Blvd. Suite	City 400 Irving	State Texas 75038-2617
Above named operator authorizes (name of transporter) Giant Industries		
Transporter's street address 5764 Hwy 64	City Farmington	State New Mexico 87401
Field address		
To transport 100 % of the Oil, condensate, gas well gas, casinghead gas Condensate from said lease.		
OTHER GATHERERS TRANSPORTING FROM THIS LEASE ARE AS FOLLOWS:		
Name of gatherer Western Gas	DATE 100	% transported Product transported Gas
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 Condensate Purchaser (Black Rock #1 & #3)		

CANCELLED

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

CERTIFICATE: I, the undersigned, under the penalty of perjury, state that I am the Production Administrator of the Harken Southwest 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 11-29-95 SIGNATURE Lachelle Montgomery

Date approved: 11-30-95
 STATE OF ARIZONA
 OIL & GAS CONSERVATION COMMISSION
 By: Steven L. Rain
 Permit No. 581

NOV 1995

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

ORGANIZATION REPORT

Full Name of the Company, Organization, or Individual

Harken Southwest Corporation

Post Office Address (Box or Street Address)

P. O. Drawer 612007, Dallas, TX 75261 -or- 2505 N. Hwy 360, Suite 800, Grand Prairie, TX

Plan of Organization (State whether organization is a corporation, joint stock association, firm or partnership, or individual)

Corporation

75050

Purpose of Organization (State type of business in which engaged)

Oil & Gas Exploration

If a reorganization, give name and address of previous organization.

Changed name from Chuska Energy Company

If a foreign corporation, give (1) State where incorporated	(2) Name and post office address of state agent	(3) Date of permit to do business in state
Nevada	Corporation Service Co 530 South 4th Street Las Vegas, Nevada 89101	1980
Principal Officers or Partners (if partnership) NAME	TITLE	POST OFFICE ADDRESS
Mikel D. Faulkner	Chairman of the Board Chief Executive Officer	P. O. Drawer 612007 Dallas, TX 75261
Richard Schroeder	President Chief Operating Officer	" "
Bruce Huff	Senior Vice President Chief Financial Officer	" "
Larry Cummings	Vice President General Council	" "

DIRECTORS NAME	POST OFFICE ADDRESS
/ All of the above	P. O. Drawer 612007, Dallas, TX 75261
Don Raymond	P. O. Drawer 612007, Dallas, TX 75261

CERTIFICATE: I, the undersigned, under the penalty of perjury, state that I am the Production Administrator of the Harken Southwest 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.

Signature Rachelle L. Montgomery

Date 6/24/94

Date

STATE OF ARIZONA
OIL & GAS CONSERVATION COMMISSION
Organization Report
File One Copy
Form No. 1



581

(Black Rock #1 & #3)

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 NOG 8707-1139	Field Black Rock	Reservoir Paradox
Survey or Sec-Twp-Rge Section 16&21-40N-29E	County Apache	State Arizona
Operator RIM Southwest Corporation		
ADDRESS ALL CORRESPONDENCE CONCERNING THIS FORM TO:		
Street 5 Inverness Drive East	City Englewood	State Colorado 80112
Above named operator authorizes (name of transporter) Giant Industries		
Transporter's street address 5764 Hwy 64	City Farmington	State New Mexico 87401
Field Address		
Oil, condensate, gas well gas, casinghead gas		
To transport	100 % of the	Condensate from said lease
OTHER GATHERERS TRANSPORTING FROM THIS LEASE ARE AS FOLLOWS:		
Name of gatherer	% transported	Product transported
Western Gas	100%	Gas
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. Harken Southwest Corporation changed its name to RIM Southwest Corporation See attached copy of Articles of Amendment to the Articles of Incorporation.		

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 Vice President of the RIM Southwest Corporation (company), and that I am authorized by said company to make this report; 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 1/26/01

Signature Rene Morin
Signature Rene Morin, Vice President

Date approved: 2-5-01

STATE OF ARIZONA
OIL & GAS CONSERVATION COMMISSION

By: Steven L. Ranz

Permit No. 559,581

Mail two copies of completed form to:
Oil & Gas Program Administrator
Arizona Geological Survey
418 W. Congress #100
Tucson, AZ 85701-1315



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

TYPE OR PRINT LEGIBLY
FILE DUPLICATE ORIGINALS
FILING FEE: \$100.00

ARTICLES OF AMENDMENT
TO THE
ARTICLES OF INCORPORATION

3214384

FILED IN OFFICE OF
NM STATE CORPORATION COMMISSION
DEC 22 2000
CORPORATION DEPARTMENT

Pursuant to the provisions of Section 53-13-4, NMSA 1978, the undersigned corporation adopts the following Articles of Amendment to its Articles of Incorporation:

ARTICLE ONE: (Note 1) The Corporate name and NMSCC# of the corporation is
Marken Southwest Corporation ~~5308888~~ 1070770

ARTICLE TWO: (Note 2) The following amendment to the Articles of Incorporation was adopted by the Sole Shareholder of the corporation on December 21, 2000 in the manner prescribed by the New Mexico Business Corporation Act:
(Insert amendment or attach exhibit, if needed - Indication should be given to reflect which article(s) number has been amended.)

ARTICLE ONE is amended and shall read as follows:

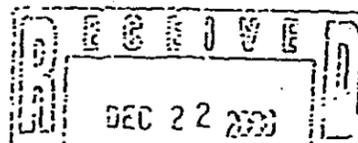
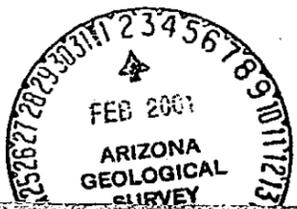
"The name of the corporation is RIM Southwest Corporation."

ARTICLE THREE: (Note 3) The number of shares of the corporation outstanding at the time of such adoption was 20,000 and the number of shares entitled to vote thereon was 20,000

ARTICLE FOUR: (Note 4) The designation and number of outstanding shares of each class entitled to vote thereon as a class were as follows:

CLASS	NUMBER OF SHARES
One class only of Common Stock	20,000

ARTICLE FIVE: (Note 3) The number of shares voting for such amendment was 20,000 and the number of shares voting against such amendment was 0



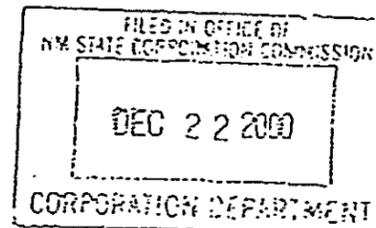
ARTICLE SIX: (Note 3) The number of shares of each class entitled to vote thereon as a class voted for and against such amendment, respectively, is as follows:

CLASS	FOR	AGAINST
Common -- only one class	20,000	0

ARTICLE SEVEN: (Note 4) The manner, if not set forth in such amendment, which any exchange, reclassification, or cancellation of issued shares provided for in the amendment shall be affected, is as follows:

inapplicable

DATED: December 21, 2000



Harken Southwest Corporation
(Note 1) CORPORATE NAME

BY: Stephen W. Rector
(Note 5) Its President
Stephen W. Rector

AND: Rene Marin
(Note 5) Its Vice President
Rene Marin

Under penalty of perjury, the undersigned declares that the foregoing document executed by the corporation and that the statements contained therein are true and correct to the best of my knowledge.

Harken Southwest Corporation

By: Stephen W. Rector
(Note 5) (One of the above officers signs)
Stephen W. Rector, President



RESOLUTION OF THE SOLE SHAREHOLDER
OF
HARKEN SOUTHWEST CORPORATION

A Special Meeting of the sole shareholder of HARKEN SOUTHWEST CORPORATION,
(the "Corporation"), was held beginning at 3:30, Mountain Time, on Thursday December
21, 2000, pursuant to which the sole shareholder consented to, voted in favor of and adopted the
following resolution:

RESOLVED, that the Articles of Incorporation of the Corporation be amended in
the form attached hereto by changing the name of the Corporation as follows:

ARTICLE I

NAME

The name of the corporation is RIM Southwest Corporation.

IN WITNESS WHEREOF, the undersigned has executed this written consent to be
effective as of the 21 day of December 2000.

RIM SW HOLDING CORPORATION, a Colorado
corporation

By: Stephen W. Rector
Name: Stephen W. Rector
Its: President



ORGANIZATION REPORT

Full Name of the Company, Organization, or Individual
RIM SOUTHWEST CORPORATION (FORMERLY KNOWN AS HARKEN SOUTHWEST CORPORATION)
 Mailing Address and Phone Number
5 INVERNESS DRIVE EAST, ENGLEWOOD, COLORADO 80112 (303) 799-9828
 Plan of Organization (State whether organization is a corporation joint stock association, firm or partnership, or Individual)
Corporation
 Purpose of Organization (State type of business in which engaged)
Oil & Gas Production/Sales
 If a reorganization, give name and address of previous organization
N/A

(1) State where incorporated	(2) Name and mailing address of state agent	(3) Date of permit to do business in state
New Mexico	CT Corporation 322 5 N. Central Avenue Phoenix, AZ 85012	1/16/88
Principal Officers or Partners (if partnership) NAME	TITLE	MAILING ADDRESS
V. A. Isaacs, Jr.	Chairman, Board of Directors	5 Inverness Drive East Englewood, CO 80112
Stephen W. Rector	President	5 Inverness Drive East Englewood, CO 80112
Rene' Morin	Vice President	5 Inverness Drive East Englewood, CO 80112
Robert L. Vesco	Vice President/Secretary/ Treasurer	5 Inverness Drive East Englewood, CO 80112
William J. Holcomb	Vice President	Post Office Box 2058 Farmington, NM 87499

DIRECTORS NAME	MAILING ADDRESS
V. A. Isaacs, Jr.	SAME AS ABOVE
Stephen W. Rector	" "
Rene' Morin	" "
Robert L. Vesco	" "
William J. Holcomb	" "

CERTIFICATE I, the undersigned, under the penalty of perjury state that I am the Secretary of the RIM Southwest 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.

Robert L. Vesco
 Signature Robert L. Vesco, Secretary
 1/25/01
 Date



Mail completed form to
 Oil and Gas Program Administrator
 Arizona Geological Survey
 416 W Congress, #100
 Tucson, AZ 85701

STATE OF ARIZONA OIL & GAS CONSERVATION COMMISSION Organization Report File One Copy Form No. 1
