P-W

BHP Petroleum, Inc. (Monsanto)
SE SE Sec. 1-39N-29E, Apache Cty 503

[redacted]

s1

COUNTY Apache AREA 12 mi S/Teec Nos Pos LEASE NO. 14-20-0603-717

WELL NAME Monsanto Carrizo #1 Navajo [redacted]

LOCATION SE SE SEC 1 TWP 39N RANGE 29E FOOTAGE 554' FEL - 866' FSL

ELEV 8895' GR 8914 KB SPUD DATE 7-11-69 STATUS P&A COMP. DATE 10-17-69 TOTAL DEPTH 8461'

CONTRACTOR Cactus Drilling Corp.

CASING SIZE	DEPTH	CEMENT	LINER SIZE & DEPTH
16"	58'	60 SKS	NA
11 3/4"	449'	300 SKS	

DRILLED BY ROTARY x
DRILLED BY CABLE TOOL
PRODUCTIVE RESERVOIR P&A
INITIAL PRODUCTION

FORMATION TOPS	DEPTHS	SOURCE L.L.	SOURCE E.L.	REMARKS
DeChelley	3036'	X	X	Amst. t
Organ Rock	3323			
Hermosa	6010			
Ismay	7034			
Desert Creek	7173			
Akah	7309			
Barker Creek	7428			
Molas	8126			
~~Mississippi~~	8182			
Devonian	8372			
Pre-Cambrian	8431			

ELECTRIC LOGS	PERFORATED INTERVALS	PROD. I
IE log -2; BCSL -2;		
GR;Compressional/		
Amplitude - 2		

AMSTRAT FOOTNOTES

1. The sections from 2390' to 2585', 2850' to 2950' & 3010 to 3037' show evidence, primarily through color, of having been baked during the intrusions.
2. The highly altered, fine grained condition of the hornblende diorite porphyry intrusions that occur in the section from 3307 to 4540' are typical for intrusives of this type.
3. The sediments from 4375 to 4470' show a high degree of alteration resulting from contact metamorphism.
4. It is believed the hornblende diorite porphyry was intruded into a large mass of quartz diorite.
5. The sediments from 6065 to 6990', 7500 to 7585' & 8070 to 8150' show evidence of having undergone contact metamorphism, one of the results of which was partial silicification.
6. The dolomite occuring from 8409 to 8432 has undergone a high degree of metamorphism.
7. Reconstruction of the sedimentary sections by removal of the intrusions show that there was little, if anhy, assimilation of the intruded country rock when correlated with sections in the immediate area.

NB

REMARKS Note comments on location of this well in Carrizo Mts, volcanic material present, etc by Scurlock. Also see attached ~~footnotes by AMSTRAT.~~

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

WATER WELL ACCEPTED BY

BOND CO. American Insurance Company BOND NO. 3286165 P/N 115

BOND AMT. $ 25,000 CANCELLED DATE ORGANIZATION REPORT 6-5-69

FILING RECEIPT 9585 LOC. PLAT x WELL BOOK x PLAT BOOK x

API NO. 02-001-20103 DATE ISSUED 6-20-69 DEDICATION E/2 SE/4

PERMIT NUMBER 503

(over)

[redacted]

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PERMIT NUMBER 503

(over)

DRILL STEM TEST

NO.	FROM	TO	RESULTS
1	2974'	3091	See Completion report.
2	4345	4445	
3	8236	8304	

CORE RECORD

NO.	FROM	TO	RECOVERY	REMARKS

REMEDIAL HISTORY

DATE STARTED	COMPLETED	WORK PERFORMED	NEW PERFORATIONS

ADDITIONAL INFORMATION

16

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: MONSANTO COMPANY	Address: Suite 1102 Lincoln Tower Bldg., Denver, Colo.
Federal, State or Indian Lease Number or name of lessor if fee lease: 14-20-0603-717	Well Number:	Field & Reservoir:
Location: SE SE 546' FEL, 853' FSL	County: APACHE
Sec. TWP-Range or Block & Survey: 1 T39N R29E	

Date spudded	Date total depth reached	Date completed, ready to produce	Elevation (DF, RKB, RT or Gr.) feet	Elevation of casing hd. flange feet
7/11/69	10/14/69	----	8913 DF	8901

Total depth	P.B.T.D.	Single, dual or triple completion?	If this is a dual or triple completion, furnish separate report for each completion.
8461	P&A	-----	------

Producing interval (s) for this completion	Rotary tools used (interval)	Cable tools used (interval)
None	8461	------

Was this well directionally drilled?	Was directional survey made?	Was copy of directional survey filed?	Date filed
No	Routine Deviation	--------	------

Type of electrical or other logs run (check logs filed with the commission)	Date filed
Schlumberger IES, Sonic & Fracture	

CASING RECORD

Casing (report all strings set in well—conductor, surface, intermediate, producing, etc.)

Purpose	Size hole drilled	Size casing set	Weight (lb./ft.)	Depth set	Sacks cement	Amt. pulled
Conductor	20"	16"	65.0	58	60 sacks reg	None
Surface	15"	11 3/4	42.0	449	300 " "	None

TUBING RECORD

Size	Depth set	Packer set at
None in.	ft.	ft.

LINER RECORD

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

PERFORATION RECORD

Number per ft.	Size & type	Depth Interval
None		

ACID, SHOT, FRACTURE, CEMENT SQUEEZE RECORD

Am't. & kind of material used	Depth Interval
None	

INITIAL PRODUCTION

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

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

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

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

CERTIFICATE: I, the undersigned, under the penalty of perjury, state that I am the DISTRICT PRODUCTION MANAGER of the MONSANTO 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.

JANUARY 30, 1970
Date

Signature

Permit No. 503

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

2

(Complete Reverse Side)

DETAIL OF FORMATIONS PENETRATED

Formation	Top	Bottom	Description*
DeChelley	3036		
Organ Rock	3323		
Hermosa	6010		
Ismay	7034		
Desert Creek	7173	Amst	tops don't agree
Akah	7309		
Barker Creek	7428		
Molas	8126		
Mississippi	8182		
Devonian	8372 ~ Amst		
Pre-Cambrian	8431 ~ No Amst		
DeChelley DST #1 in DeChelly	2974	3091	Tool Open 75 min. Weak blow Decreasing to very weak blow In 55 min. recovered 270' mud No oil or gas shows 1st flow 80-107# in 15 min. 1st S.I. 160# in 30 min. Final Flow 107-188# in 60 min. Final S.I. 293# in 60 min.
DST #2 in Cutler or Supai	4345	4445	Tool Open 90 min. weak blow To Fair throughout. Recovered 125' mud. 1st flow 44# in 15 min. 1st S.I. 571# in 35 min. Final Flow 88-132# in 75 min. Final S.I. 615# in 90 min.
DST #3 in Miss	8236	8304	Recovered 5' mud 1st Flow 74# in 15 min. 1st S.I. 464# in 30 min. Final Flow : 74-77# in 45 min. Final S.I. 109# in 45 min.

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

INSTRUCTIONS:

Attach drillers log or other acceptable log of well.

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

Form No. 4

PLUGGING RECORD

Operator: Monsanto Company	Address: Suite 1102 Lincoln Tower Bldg., Denver, Colo.

Federal, State, or Indian Lease Number, or lessor's name if fee lease.	Well No.	Field & Reservoir
14-20-0603-717	1	Wildcat

Location of Well	Sec-Twp-Rge or Block & Survey	County
SE SE 546' FEL 853' FSL	1 T39N R29E	Apache

Application to drill this well was filed in name of	Has this well ever produced oil or gas	Character of well at completion (initial production): Oil (bbls/day)	Gas (MCF/day)	Dry?
Monsanto Company	No	0		Yes

Date plugged	Total depth	Amount well producing when plugged: Oil (bbls/day)	Gas (MCF/day)	Water (bbls/day)
October 17, 1969	8461	0	0	0

Name of each formation containing oil or gas. Indicate which formation open to well-bore at time of plugging	Fluid content of each formation	Depth interval of each formation	Size, kind & depth of plugs used. Indicate zones squeeze cemented, giving amount cement
None			

CASING RECORD

Size pipe	Put in well (ft.)	Pulled out (ft.)	Left in well (ft.)	Give depth and method of parting casing (shot, ripped, etc.)	Packers and shoes
16	59.5	--	59.5	--	None
11 3/4	472.8	--	472.8	--	Guide Shoe + 3 Centralizers

Was well filled with mud-laden fluid, according to regulations?	Indicate deepest formation containing fresh water.
Yes	

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

Name	Address	Direction from this well:
W. T. Blackburn	1650 Denver Club Building, Denver	East and South
Texaco, Inc.	P.O. Box 2100, Denver, Colorado	Southeast

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

Use reverse side for additional detail.

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

Date 10/17/69 Signature [signature]

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

Permit No. 503

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

Form No. 10

APPLICATION TO ABANDON AND PLUG

FIELD Wildcat

OPERATOR Monsanto Company ADDRESS Suite 1102 Lincoln Tower Bldg., Denver

Federal, State, or Indian Lease Number or Lessor's Name if Fee Lease 14-20-0603-717 WELL NO. 1

SURVEY SE SE SECTION 1 COUNTY Apache

LOCATION 546' FEL 853' FSL, Sec. 1, T39N, R29E

TYPE OF WELL Dry Hole (Oil, Gas or Dry Hole) TOTAL DEPTH 8461

ALLOWABLE (If Assigned) None

LAST PRODUCTION TEST OIL None (Bbls.) WATER (Bbls.)

GAS (MCF) DATE OF TEST

PRODUCING HORIZON None PRODUCING FROM TO

1. COMPLETE CASING RECORD

58' 16" 65.0# H-40 Set with 60 sacks cement

449' 11 3/4" 42.0# H-40 Set with 300 sacks cement

2. FULL DETAILS OF PROPOSED PLAN OF WORK Pump cement through drill pipe at intervals outlined below. Heavy mud laden fluid to remain between cement plugs.

Plug No. 1 8372-8272 with 28 sacks cement

2 8182-8082 with 28 sacks cement

3 6010-5910 with 28 sacks cement

4 3036-2936 with 61 sacks cement

5 18 0 with 10 sacks cement

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

DATE COMMENCING OPERATIONS Spud 7/11/69 P & A 10/17/69

NAME OF PERSON DOING WORK Monsanto Company ADDRESS 1102 Lincoln Tower Bldg. Denver

CORRESPONDENCE SHOULD BE SENT TO J. Murphy

Name J. Murphy, Jr.

Title District Production Manager

Address Suite 1102 Lincoln Tower Bldg., Denver, Colorado

Date 10/17/69

Date Approved 10-22-69

STATE OF ARIZONA
OIL & GAS CONSERVATION COMMISSION

By: John Bannister

Permit No. 503

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

STATE OF ARIZONA
OIL & GAS CONSERVATION COMMISSION
Application to Abandon and Plug
File Two Copies

Form No. 9

10/16/69 Carrizo #1 - TD 8461'. Waiting on logs.
Ran Logs. Log TD 8461'. Tops:

RECEIVED
OCT 21 1969
STATE O & G
CONS. COMM.

DeChelly	3036	Akali	7309
Organ Rock	3323	Barker Crk.	7428
Hermosa	6010	Molas	8126
Upper Ismay	7034	Miss.	8182 ÷ 732
Lower Ismay	7122	Devonian	8372 ÷ 542 SS
Desert Creek	7173	Pre-Cambrian	8431 + 483 SS

October 14, 1969

The following samples have been received.

Eastern(Thonreen) #1 Navajo
Sec.25-21N-25E
Apache Co. Ariz. Permit # 505

Monsanto,#1 Carrizo
Sec.1-39N-29E
Apache Co. Ariz. Permit # 503

This well is still drilling but we are receiving samples and therefore it is on the last order list.

Jo Ratcliff

FOUR CORNERS SAMPLE CUT

503

MONSANTO #1 CARRIZO
Thin Section Descriptions

Sill #8 - 3300-3320' (20' thick)

3310-20' Quartz Latite Porphyry (227 H Granodiorite)
Phenocrysts are Quartz and Augite (0.3 mm) in granular groundmass of feldspar 70%, Augite 10%, and Quartz 20%. Groundmass grains are 0.03 mm in diameter. Feldspars are badly altered to Sericite and Calcite. This combined w/the small grain size make it very difficult to determine K-spar to Plagioclase ratio.

Sill #11 - 4490-5506' (1016' thick)

Summary of 14 thin sections:
Quartz Latite Porphyry (227 H Granodiorite)

Sill has apparent homogeneous composition vertically phenocrysts are hornblend, Augite, Andesine (An_{46}), Quartz and Oligioclase that vary in total percentage from 1% to 40% of thin sections examined. Each of the phenocryst minerals appears as subhedral crystals (0.5 mm to 2 mm) in a granular groundmass w/granules of 0.03 mm in diameter. Of the phenocrysts, the Andesine is slightly altered to Sericite and Calcite along fractures, Orthoclase is highly altered to Sericite and Calcite, and hornblend is highly altered to Chlorite, Calcite and Magnetite. The groundmass feldspars are highly altered to Sericite and Calcite.

Groundmass feldspars cannot accurately be identified in these thin sections unless staining technique is used. The Plagioclase--Orthoclase ratio determines the rock type (Rhyolite--Latite--Dacite), and for this reason the designation Quartz Latite Prophyry is subject to change pending final identification of the groundmass feldspars.

5 503

Sample Description
Monsanto #1 Carrizo

595- 625	ss wh-gry v-f-gr to med-f-gr, spotty iron stng
630- 700	ss as above w/some pale grn, trace pale pk
700- 720	ss wh-pale gry some w/sli pk caste, v-f-gr to f-gr
720- 800	Sill, wh-gry to tn matrix w/phenocrysts of hornblend and grn anphibole
800- 810	Sill, wh xln matrix w/small phenocrysts hornblend
810- 850	ss as above w/some matrix gry
850- 870	ss as above w/tr org-rd sltst & sh
	B/Sill II 870'
870- 900	Sltst & v-f-s org-rd to blk ss v-f-gr gry
900- 910	ss gry-pk, tn v-f-gr sltst ss org to red
910- 920	ss wh f-gr
920-1000	ss wh v-f to f-gr
1000-1050	ss pale tn, v-f-gr well sorted
1150-1100	Sill III 1060', Sill blk, grn, wh phenocrysts, gry matrix
1100-1140	Sill sh xln hornblend phenocrysts yellow to yellow gry
1140-1170	ss as above w/inc in gry matrix
1170-1200	ss as above w/sli pk caste to matrix of some grams
1200-1260	B/Sill III 1260', Sill, hornblend (?) phenocrysts wh-gry matrix
1260-1270	ss pale tn f-gr; some Sill as above
1270-1300	ss as above s-f-gr to v-f-gr
1300-1500	ss pale tn v-f-gr to f-gr
1500-1520	ss pale tn v-f-gr well sorted
1520-1550	ss as above w/small tr porphy
1550-1560	ss as above w/tr ss v-f-gr, pk-tn (blk rasberry)
1560-1570	sh stn & f-gr ss pk, rd ss v-f-gr pale tn as above
1570-1580	ss v-f-gr pale tn (colored ss & shst as above totally absent)
1580-1590	ss pk , sli mottled v-f-gr to f-gr ss, ss as above
1590-1600	ss pk, sli mottled
1600-1650	ss pk, (blk rasberry) med-f-gr to v-f-gr porrly sorted, mottled
	T/Chinle 1650'
1650-1660	ss as above w/v small tr org-rd sltst
1660-1690	sh org-rd v slty some ss wh v-f-gr
1690-1700	ss wh "S & P" f to v-f-gr; sltst & sh as above
1700-1710	ss wh pk, dk flks, sh org-rd slty
1710-1720	sltst org-rd, brk rd, ss rd, pk, ss as above wh med-fine
1720-1730	ss wh v-f-gr some pale pk, pale gry; dry spl generally pale pk & v sli calcareous
1730-1740	sltst pale gry to pale lav
	Sill IV 1750
1740-1760	Sill
1760-1780	No spls
1780-1800	Sill fine matrix w/pyroxene phenocrysts
1800-1960	Sill as above, w/v small tr fluor w/wk out (Pipe dope) - Ignore ?
	B/sill IV 1960
1960-1970	sh, org-rd, rd-brn, sltst maroon; tr dacite prophry
1970-1990	sltst org-rd, shly, sh org-rd
1990-2000	ss as above w/inc in blk sltst
2000-2010	sh org-rd to brk rd sltst, ss sh-buff v-f-gr
2010-2030	sh as above sltst brk rd
2030-2040	ss as above w/tr ss gry-pk f-gr
2040-2050	Conglom ls & frag brk rd sh, org-rd
2050-2070	sh org-rd, sft & silicon

2070-2080	ss as above some conglom as above
2080-2100	ss as above org-rd sh no conglom
2100-2110	sltst pale org-brn, sh rd
2110-2120	sh org-rd, brk rd, sltst as above
2120-2150	ss as above w/gry-tn sltst & sh
2150-2160	sh brk rd slty, sh & sltst as above
2160-2170	sh org-rd, sh pk-rd mottled
2170-2180	ss as above w/small tr gry ss v-f-gr
2180-2240	ss as above w/o ss
2240-2280	sh org-rd,brk rd, sltst shly brk rd, sh pk-wh mottled
2280-2300	sltst brk rd shly
2300-2340	Sill wh matrix w/grn & blk phenocrysts
2340-2600	sh & shly sltst org-rd at top grading through reddish brn to brn & purple brn, calcareous shs & shly sltst w/interbedded org-rd sh & some grn-gry sh, thin interbeds of ls & marls wh-lite grn
2600-2620	ss wh-lite grn calcareous & clay filled T/ Sill VI 2626'
2620-2630	s as above w/approx 60% Sill, wh matrix w/grn phenocrysts
2630-2640	Sill Gray to tn matrix w/grn & glk phenocrysts
2640-2750	s as above
2750-2760	ss wh med to f-gr some w/calcareous cem, some w/f-wh one-calcareous cem some w/grn cem, no visible poro.
2760-2780	No spl
2780-2790	s as above w/sh gry slty
2790-2810	s as above
2810-2820	sh gry slty, ss as above, tr of blk cabonaceous ls plus non-cabonaceous matrix
2820-2830	sltst gry shly sli calcareous hard
2830-2840	s as above
2840-2850	s as above w/sli increase in sh gry calcareous
2850-2860	sh brk rd to brn,sft to hard, sli calcareous but probably hematitic sltst & sh gry as above
2860-2870	s as above w/mottled rd gry sltst
2870-2880	s as above w/decrease in mottled sltst as above
2880-2890	sh as above tr of gry sltst as above
2890-2900	s as above w/sh purple mottled gypsiferous (?)
2900-2910	sh org red to org brn
2910-2920	sh as above hard silicous
2920-2930	sh as above
2930-2940	sh lite to drk gry mottle sft
2940-2950	sh med-drk gry hard
2950-2960	Sill, gry matrix w/phenocrysts of plagioclase & hornblend
2960-3010	S as above
3010-3030	Sh mottled gry blk, sft, Sill as above
3030-3040	Cavings after trip @ 3032' some ss wh f-gr
3040-3050	ss f-gr wh
3050-3060	ss as above f to med-gr
3060-3080	ss wh med to f-gr much loose sand
3080-3100	as above some finer grained
3100-3120	as above wh w-f-gr some f to med-gr
3120-3140	as above w/some coarse sand
3140-3150	as above predom of me-gr size
3150-3180	ss wh to pale buff f-med-gr
3180-3190	ss salmon pk f-med-gr rather friable, also ss as above

3190-3230	ss salmon pk as above f-med-gr w/some coarse to v coarse gr
3230-3280	ss pk-gry med-coarse-gr, poorly sorted
3280-3290	ss as above predom med-gr
3290-3300	ss as above w/much coarse-gr sand, poorly sorted
3300-3310	sd wh-pk, f-coarse-gr, shly in part few pieces lit grn-wh dol
3310-3320	dol as above
3320-3330	sd wh-pk, f-coarse-gr
3330-3390	as above
3390-3400	sd as above w/few pieces choc-brn sh
3400-3410	sd as above becoming mostly brn & shly
3410-3420	sd med-gr brn shly
3420-3460	sd as above
3460-3470	sd as above w/few pieces dk brn-rd sh
3470-3480	sh dk brn-rd silty
3480-3490	as above
3490-3520	sh as above w/few pieces bufs f-med-gr sd
3520-3550	sh as above w/considerable gry & grn silt
3550-3650	sh as above becoming more silty some f-med-gr sd, yellow mineral fluor no cut
3650-3660	sh rd-brn silty in part, some tn, wh & grn silt & silty sd
3660-3710	sh,silt & sd as above w/10% andesite (mixing mud recirculated)
3710-3720	sh, silt & sd as above
3720-3800	sh, silt & sd as above w/trace clear glassy med-gr sd
3800-3830	sh & silt as above
3830-3840	sh rd trace brn shly ls
3840-3850	sh red to brn
3850-3854	sh as above w/10% andicite prophry
3854-3920	andicite porphry
3920-3930	andicite as above w/10% rd sh
3930-3940	red sh
3940-3960	rd sh as above w/trace tn coarse-gr sd come conglomeratic
3960-3970	sh rd
3970-3980	sh as above w/med-gr glassy sd
3980-3990	sh rd few pieces gry silt trace of tn shly ls
3990-4000	as above w/trace anhydrite
4000-4030	sh rd
4030-4033	sd conglom f-coarse some rd sh grains (lost circulation)
4033-4040	sh rd trace of gry-tn f-cyst ls trace anhyd
4040-4070	sh rd w/wh f-med-gr anhy sd
4070-4080	sh rd anhy in part some gry ls (spls very poor since lost circulation zone @ 4033')
4080-4090	sh rd w/gry ls & anhy
4090-4120	sh rd & gry w/grn calcareous claystone & gry to grn argillaceous
4120-4130	ls gry-grn argil w/sh & claystone as above
4130-4140	ls & sh as above w/few pieces andicite
4140-4190	andicite porphry
4190-4200	Sill matrix gry w/pale org brn Feldspar phenocrysts & Hornblend Phenocrysts
4200-4330	As above
4330-4340	As above w/yel grn needle like phenocrysts
4340-4360	As above
4360-4370	Smpl is mixed Sill as above; sltst wh calcareous; sltst rd calcareous w/crystalline wh anhydrite inclusions; sh rd, hard

4370-4380	As above
4380-4390	As above some sltst pale tn
4390-4400	Sltst pale grn-buff calcareous - [illegible] AM97 [illegible] 4395-4410' + 4430-4448'
4400-4440	As above
4440-4450	As above circ smpl ½ hr as above; 1 hr as above; 1½ hrs in Sill, gry matrix w/hornblend & Feldspar phenocrysts [illegible]
4450-4460	Sltst as above
4460-4480	Sltst as above; some Sill gry without phenocrysts; igneous rock finely crystalline, drk grn
4480-4490	Sltst pale grn some sli calcareous; Sill wh to pale gry aphanitic, hard
4490-4500	As above
4500-4520	Sill as above
4520-4530	As above gry wh Translucent non calcareous, hard, no phenocrysts
4530-4540	Sill wh to gry trace blk phenocrysts
4540-4550	As above
4550-4560	As above w/increasing gry caste
4560-4570	Sill med to dk gry w/hornblend & some brn Feldspar phenocrysts
4570-4600	As above
4600-4610	Sill gry tn matrix finely peppered no phenocrysts
4610-4640	As above
4640-4650	Sill tn translucent dense v-sli calcareous, occasion hornblend phenocrysts
4650-4670	As above
4670-4680	As above becoming more crystalline
4680-4730	As above
4730-4740	As above w/sli finer crystalline w/Muscovite Phenocrysts
4740-4800	As above
4800-4810	Sill v pale pk sucrosic matrix w/phenocrysts of Muscovite orthoclay (?) roughly 2 mm in size
4810-4860	As above
4860-4870	As above sli finer gr & gryer, decrease in Mica phenocrysts
4870-4880	As above w/continuing decrease in gr size
4880-4890	As above sli pker caste
4890-4900	As above w/gry tn caste continuing decrease in Mica
4900-4910	As above
4910-4920	Andesite wh to cream sli calcareous
4920-4960	As above
4960-4970	Andesite wh, some micro crystalline to v-f-crystalline, sli friable, few pieces w/bright wh fluor, no cut
4970-5010	As above
5010-5020	Andesite as above becoming mostly li gry
5020-5030	Andesite gry to wh micro-crystalline 1-2% fluor, no cut
5030-5040	Andesite gry to wh porphyritic, many dk grn to blk phenocrysts, material similar to upper Sills
5040-5080	As above
5080-5090	Andesite most wh to li gry micro-crystalline
5090-5160	As above
5160-5280	As above
5280-5290	Andesite as above, few pieces fluor, no cut
5290-5300	Andesite as above, occassional piece bright yellow to wh fluor & li wh cut & carb tet

5300-5350	Andesite wh, micro-crystalline
5350-5380	Andesite as above, few pieces bright yellow fluor, no cut
5380-5390	Andesite as above, few pieces bright yellow to wh fluor, faint cut
5390-5400	As above
5400-5420	Andesite wh micro-crystalline, few pieces wh to yellow fluor, no cut
5420-5430	Andesite wh to gry quartzitic, pin point dk crystalline
5430-5440	Sill, gry matrix, aphenitic peppered w/v. f. blk & dk trn crystalline
5440-5450	As above; also pale buff w/pk feldspar & qtz phenocrysts; buff w/hornblend & plug pheno.
5450-5470	Pred. pale-gry-buff finely crystalline w/mica flecks & pk feldspar pheno.
5470-5520	As above, also gry matrix aphenitic w/qtz pheno & occasion dk min.
5520-5570	Mixed spl 60% sedimentary rock; sltst grn calc; sltst rd calc, anhy incl; ls grn to gry; sh rd; ls gry; 40% sill as above
5570-5630	sltst rd calc; sltst wh to buff; sh rd; some ls gry to grn anhy incl,fossil plant
5630-5650	sltst rd as above; sltst pk (trace)
5650-5690	shale rd, slty; sltst as above
5690-5700	sltst, rd, calc; sh rd, slty calc
5700-5710	sltst rd, calc, mica; sh rd calc
5710-5720	mixed spl after trop @ 5715'
5720-5780	sh rd mica slty calc; sltst rd calc approx 50%
5780-5790	sltst rd calc, mica, agr; sh as above
5790-5800	sh as above; sltst as above
5850-5860	Sh rd to brn slty in part
5860-5890	As above
5890-5900	Sh rd & brn w/rd-brn shly ls
5900-5920	As above
5920-5930	Sh as above w/30% andesite Porphyry
5930-5940	Andesite Porphyry 5924-5984 - Mon.
5940-5980	As above
5980-5990	Sh rd-brn slty, some rd & brn silt
5990-6000	Silt brn-tn w/rd sh trace tn ls
6000-6010	sh brn-rd w/brn slt Top Hermosa 1st 6020'
6010-6020	No spls
6020-6030	slt tn-brn & grn w/rd & brn sh some gry-grn calcareous silt
6030-6040	Ls wh-gry slty w/brn calc slt
6040-6070	As above
6070-6080	ls wh-li gry slty
6080-6090	no spls
6090-6100	Ls gry-wh & buff f-crystalline slty in part
6100-6110	Ls wh slty w/gry slty ls to calc slt
6110-6120	Ls gry slty to gry v-calc slt
6120-6130	As above
6130-6140	Ls gry slty
6140-6150	Ls gry slty w/brn slt some li gry-grn slt
6150-6160	Ls gry fossiliferous, some wh sdy ls trace of gry-grn calc sh & rd & brn sh
6160-6170	Ls gry foss in part slty in part trace drk gry calc sh
6170-6180	Sh rd & brn slty some drk gry calc sh & drk gry shly ls
6180-6190	As above
6190-6200	Ls li gry-li grn slty & shly w/rd & grn & drk gry calc sh.
6200-6210	Sh brn slty calc w/ls as above trace wh foss ls.
6210-6230	As above
6230-6240	Ls cream-tn slty w/sh as above

6240-6250 Ls as above w/li gry f-crystalline, ls & sh as above
6250-6260 Ls wh slty w/gry slty ls & red & brn slty calc sh.
6260-6270 As above
6270-6280 Ls & sh as above 20% andesite porphyry
6280-6290 Andesite porphyry
6290-6300 Andesite as above mostly gry some li brn to salmon colored w/bri yel fluor on brn to pk pieces. No cut
6300-6310 Andesite as above w/gry ls
6310-6320 Wh & gry f-crystalline ls slty in part some wh opique chert
6320-6330 Ls wh-gry v-f-crystalline trace chert
6330-6340 As above
6340-6350 Ls & chert as above w/gry-grn sli calc claystone.
6350-6360 As above
6360-6370 Ls wh & gry w/chert some tn-pk andesite, yel fluor. No cut
6370-6380 Andesite as above w/ gry slty ls
6380-6390 Andesite as above w/drk gry calc sh & shly ls trace wh chert
6390-6400 Ls gry shly w/gry calc sh trace clear chert
6400-6410 Ls gry shly trace lav chert trace grn claystone
6410-6420 No spls
6420-6430 Ls & chert as above
6430-6440 Ls drk gry shly slty in part trace lav chert, trace grn silt
6440-6450 Ls as above
6450-6460 As above
6460-6470 Ls drk gry shly
6470-6480 Ls as above some blk sh
6480-6490 Ls & sh as above few peices wh-gry Andesite porphyry
6490-6500 Andesite porphyry
6500-6510 Andesite porphyry. Sill, wh-pale gry, matrix w/blk & gry pheno, some some stng & fl, calc part where stnd, wh-ls-slts v-drk-gry, v calc, foss frag
6510-6520 Sill as above, less calc than above; fl 2% sli cut, stng
6520-6530 Sill as above w/perhaps some potash-feldspar, tr fluor & stng
6530-6540 Sill as above, approx 2% fluor, stng w/some fair cut
6540-6550 Sill as above (1st spl after trip)
6550-6570 Sill as above, show as above
6570-6580 Sill as above; sh-slts; ls, blk-drk gry, (base of Sill #15 @ 6574')
6580-6590 Slts & sh, blk-med gry, v-calc; ls gry, sli arg; Sill as above
6590-6600 As above, w/inc in % ls, gry, arg.
6600-6610 As above
6610-6620 Poor spl; prob ls & slts & sh as above
6620-6630 Slts sh ls as above; sltst pale grn, calc
6630-6640 Slts ls, pale-med gry, less arg & carb than above; slts, pale grn, as above
6640-6650 Ls slts, ls gry to gry grn, foss frag, slts gry-grn, gry to pale grn calc tr wh chert
6650-6660 Ls slts as above
6660-6680 As above
6680-6690 Sh ls slts, pale to med gry-sli tn, foss frag ; chert wh-clear
6690-6700 Ls sh sltst, as above; chert gry
6700-6710 Ls, gry, arg; slts, gry-buff-gale grn, v-calc
6710-6720 Ls gry, gry-tn, dns; sh, med-drk gry, v-calc; slts med-drk gry, v-calc
6720-6730 As above
6730-6740 Sh, blk-drk gry & med gry, v-calc, slts as above, ls gry, dns arg
6740-6750 Sh, drk gry, fairly sft; ls, slts & sh as above

6750-6760 Sill, matrix, gry to pale grn, plagioclase & potash-feldspar, biotite & qtz pheno, calc
6760-6790 Sill as above, feldspar pheno 1-3 mm
6790-6800 Ls, med-gry, arg; sh, med-gry, v-calc; Sill as above
6800-6810 Ls, med gry, arg; slts med gry, arg, calc; tr ss med-gry, calc, arg
6810-6820 Sh, med-gry, v-calc ls, med-gry, v-arg; slts med gry, arg calc as above
6820-6830 As above w/tr ls, tn dns
6830-6840 As above w/chert wh-gry, tr
6840-6850 Ls, tn-gry, dns, calc filled frac, ls brn-gry, dns; chert wh-gry; ls f-xln; ls buff pelletal, dns
6850-6860 Ls, gry dns, frac as above, chert gry; ls tn dns
6860-6880 As above
6880-6890 As above w/Sill
6890-6900 Sill, tn-brn, gry matrix w/highly altered pheno, chlorite? & feldspar alters to drk brn, sft material; reacts in acid some slow, some fast
#17
6900-6910 Sill as above; ls, buff-tn dns chlky
6910-6920 Ls, buff, dns-chlky; slts, med-drk gry, calc (sil ls?); Sill as above
6920-6930 Slts, med-drk gry, v-calc, arg; ls buff, med-gry clastic, dns; ls, buff, dns-chlky
6930-6940 Ls, buff-tn, dns relict clasttex, laced w/small veins; slts as above;
6940-6950 Ls as above; ls tn-gry, dns-chlky stylolitic, ls sh, drk gry, foss frag
6950-6960 Ls gry, arg, silicons
6960-6970 Ls, mixed as above
6970-6980 Ls mixed, buff-tn-gry, dns to part recrystallized-f-xln; gry, sli calc foss--crinoids; forcams; brachs;? chert gry
6980-6990 As above
6990-7000 as above tr Ivanoviedalgue
7000-7050 As above
7050-7060 As above w/chert gry; tr blk sh
7060-7070 As above no sh
7070-7100 As above
7100-7110 Ls, blk to drk gry, foss, v-carbonaeous; ls, tn-gry, dns-partly recrystallized
7110-7120 Spl 35 min. after trip--not representative
7120-7130 Mixed spl, rec during mud lose
7130-7140 Mixed spl, ls buff-gry-tn, some arg; sh, med-gry, calc; much cavings
7140-7150 Ls, buff to gry-tn, partly recrystallized, sh med gry, v-calc
7150-7160 Ls, gry-tn partly recrystallized; some fine pelletal, mostly dns, arg foss frag & micro
7150-7160 Ls, gry to gry tn, fine pelletal in part, partly recrystallized, some arg
7160-7210 As above
7210-7310 Ls, lt gry-gry sublithe
7310-7420 Tr sh, drk gry, calc
7420-7450 As above
7450-7460 Ls wh f-med-xl, dense few peice w/strng mineral fluor. Ls gry finely xln, dense tr sh grnish-gry v-firm tr ss. Med-gr glau dense calcite cem.
7460-7470 As above w/inc in grnish gry sh plus sh red-brn silty dolometic
7470-7480 Ls as above dec 40% sh, rd-brn slty dolo plus sh grnish-gry (1 piece of ls sh v-f-xln has narrow vain of pyrite & chalcopyrite & galena, ore?)
7480-7490 Ls as above w/sh grn-gry & redish-brn. Sh less than 5%.

7490-7510	Ls wh-tn v-f-xln cherty in part, ls gry f-xln foss. Sh grn-gry v-sandy and calc
7510-7520	As above w/40% ign rock wh aphenetic ground mass w/hornblend & pyroxene pheno, latite porphry
7520-7530	100% latite porphry
7530-7540	As above w/inc in ls gry f-xln foss
7540-7550	Ls, wh v-dns & ls gry, dns cherty. Tr sh, rd-brn
7550-7570	As above w/inc in sh, rd-brn & sh, grn, sandy
7570-7580	(40%) Ls, gry, dns, silic & ls, wh v-dns (25%) sh, drk red-brn, sandy 25% sh, lit grn-grn, v-sandy w/calc cem
7580-7600	As above
7600-7610	(50%) Ls, gry, f-xln, silic; (30%) Sh, drk rd-brn & grn, sandy 20% Latite Porphry
7610-7620	As above. Latite porphry inc to 50% @ expense of shale
7620-7830	100% Latite Porphry. wh Aphanitic groundmass w/pheno of potash feldspar, Pyroxene. Playioclase & hornblend. Tr magnetite

#1 / 8-M.

10/8/69 **Carrizo #1 - ø 7978 in Sill #19.**

10/9/69 **Carrizo #1 - Tripping at 8045' in Sill 19.**

10/10/69 **Carrizo #1 - ø 8111'. Base Sill #19 8092'.**

10/11/69 Carrizo #1 - ø 8207. Base Sill #19 8143.

10/12/69 Carrizo #1 - ø 8295 in Miss. T/Miss 8217 + 697
211' hi to Pan am Navajo Moko. Lost 245 bbls mud
at 8294.

10/13/69 Carrizo #1 - TD 8304. COOH w/ DST #3. 8236 to 8304
Time: 15:30: 45:45. No Blow.

10/14/69 Carrizo #1 - ø 8370 in Miss. Limestone.
DST 8070-8140. Rec. 5' Mud. IFP 74 in 15 minutes,
ISIP 464 in 30 minutes, FFP 74 to 77 in 45 minutes,
FSIP 109 in 45 minutes. Bomb pressure @ 8300'.
Both Shut-In Pressure still building.

10/15/69 Carrizo #1 - TD 8461'. Circ. to log. Pre-Cambrian
8436 + 479

10/17/69 Carrizo #1 - Plugging.

Plug 1,	8372-8272	28 sacks
Plug 2,	8182-8082	28 sacks
Plug 3,	6010-5910	28 sacks
Plug 4,	3036-2936	61 sacks
Plug 5,	18 to 0	10 sacks

Should be completed by noon today.

RECEIVED OCT 14 STATE O & G CONS. COMM.
RECEIVED OCT 14 1969 STATE O & G
RECEIVED OCT 14 1969 STATE O & G CONS. COMM.
RECEIVED OCT 16 STATE O & G CONS. COMM.
RECEIVED OCT 17 1969 STATE O & G
RECEIVED OCT 20 1969 STATE O & G CONS. COMM.

10 503

9/20/69 Carrizo #1 - Drilling 6135 T/Hermosa 6037 plus 2978 ss.
9/21/69 Carrizo #1 - Drilling 6257.
9/22/69 Carrizo #1 - Drilling 6362 Sill 13 - 6272-6302.

9/23/69 Carrizo #1 - Drilling 6438

9/24/69 Carrizo #1 - Drilling 6553 in Sill 15. Sill 15 top 6485. Sill 14 6361-73.

9/25/69 - Carrizo #1 - ø 6704 in Hermosa. Sill #15 6486 - 6576

9/26/69 Carrizo #1 - ø 6814. Sill 16 6752 - 6787.

9/27/69 Carrizo #1 - ø 6932 in Sill 17. Top Sill 17 - 6887.
9/28/69 Carrizo #1 - ø 7027. Sill 17 6887 - 6902. Upper Ismay 6908 +2006 SS. 655' hi Pan Am Navajo Moko.
9/29/69 Carrizo #1 - Trip 7118. Top S-11 shale 7106 +1808 SS.

9/30/69 Carrizo #1 - Trip 7178. Top AKAH 7118 +1797. 671' hi to Pan Am Navajo Moko 15-40N-29E.

10/1 /69 Carrizo #1 - ø 7296 in Akah.

10/2/69 Carrizo #1 - ø 7406. Base Akah 7406 + 1509SS

10/3/69 Carrizo #1 - ø 7538
Drilled 30' to 40' Barker Creek - No shows - then Red Shale - Molas, and topped Sill No. 18 approximately 7523'.

10/4/69 Carrizo #1 - ø 7656. Barker Creek 7425 + 1589SS, 723' hi to Pan am Navajo Moko

10/5/69 Carrizo #1 - ø 7812 in limestone and igneous, Top of Sill #19, 7590

10/6/69 Carrizo #1 - TD 7837 in Sill #19. G.I.H. to drill ahead
Fished and recovered two cones 17½ hours.

10/7/69 Carrizo #1 - ø 7895 in Sill 19.

ø 7978

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RECEIVED 1 OCT 1969 STATE O & G CONS. COMM.
2 OCT 1969 STATE O & G CONS. COMM.
OCT 6 1969 STATE O & G
RECEIVED OCT 8 1969 STATE O & G

11

503

503

9/9/69 Carrizo #1 - ∅ 5428 in Sill #11.

RECEIVED SEP 11 1969 STATE O & G CONS. COMM.

9/10/69 Carrizo #1 - Drilling at 5485 in Sill 11.

RECEIVED SEP 11 1969 STATE O & G CONS. COMM.

9/11/69 Carrizo #1 - Tripping 5535.

RECEIVED SEP 12 1969 STATE O & G CONS. COMM.

9/12/69 Carrizo #1 - Drilling 5610 in organ rock.

RECEIVED SEP 15 1969 STATE O & G CONS. COMM.

9/13/69 Carrizo #1 - ∅ 5652 in Organ Rock.
9/14/69 Carrizo #1 - ∅ 5713 in Organ Rock.
9/15/69 Carrizo #1 - Tripping at 5788 in Organ Rock.

RECEIVED SEP 16 1969 STATE O & G CONS. COMM.

9/16/69 Carrizo #1 - ∅ 5854 in Organ Rock.

RECEIVED SEP 17 1969 STATE O & G CONS. COMM.

9/17/69 Carrizo #1 - ∅ 5915 in Organ Rock.

9/18/69 Carrizo #1 - Drilling 5977 in Sill 12.

RECEIVED SEP 19 1969 STATE O & G CONS. COMM.

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

9/19/69 Carrizo #1 - Drilling 6054 in Organ Rock, Sill 12 5924-84.

503

WELL SITE CHECK

By JRS
Date 9-5-69

Contractor Cactus
Person(s) Contacted

Spud date 7-11-69
Type Rig Rotary ✓ Cable
Present Operations fishing for Cones (bit # 40) in sill #11 @ 5228.
Samples
Pipe
Drilling with Air Mud ✓
Water Zones
Size Hole
Lost Circ. Zones
Size Drill Pipe
Formation Tops
Type Bit button
Cores, Logs, DST
No. Bit 40 Drilling Rate
Formation ORGAN ROCK
Crews
Lithology igneous SILL

REMARKS, PHOTO, MAP

DST 4345 - 4445.

	TOP GAUGE		Bottom GAUGE
IH	2049.4		2095.0
Open (15 min)	44 - 44 #	Initial Open	131.9 — 131.9
SI (30 min)	571.4		615.4
Open for 15 min	87.9 - 131.9		131.9 - 175.8
SI 2 hrs.	615.4		703.3
Final H	2006.4		2051.8

Open with weak blow, incr. to fair blow in 8 min. Rec 125' odorless GCM

Tops: ORGAN ROCK 3458
SILL #9 3844
ORGAN ROCK 3922
SILL #10 4136
ORGAN ROCK 4368
SILL #11 4492

WELL NAME MONSANTO #1 Navajo 717

Permit No. 503
Confidential: Yes (No)

9L	8/20/69	Carrizo #1 - ø 3470 in DeChelly
	8/21/69	Carrizo #1 - ø 3614. T/Organ Rock 3458 +5457. 293' low to prog.
9L	8/22/69	Carrizo #1 - ø 3805
9L	8/23/69	Carrizo #1 - ø 3871 in Sill. Sill #9 3844-3922.
	8/24/69	Carrizo #1 - TD 4035. Mixing mud lost circulation.
	8/25/69	Carrizo #1 - ø 4153 in Sill. T/Sill #10 4136.
9L	8/26/69	Carrizo #1 - ø 4295 in Sill.
9L	8/27/69	Carrizo #1 - ø 4421. Sill #10 4136 - 4370.
9L	8/28/69	Carrizo #1 GIH DST No. 2 -- 4345-~~4413~~ 4448 TO 1½ hr weak blow to fair throughout. Rec. 125' mud. IF 44 in 15 min. ISIP 571 in 35 min, still building. FP 88-132 in 1¼ hours. FSIP 615 in 1½ hours still building.
9L	8/29/69	Carrizo #1 Drilling @4514 Silt #11 4490.
9L	8/30/69	Carrizo #1 - Drilled @4623 in Sill
	8/31/69	Carrizo #1 - Drilled @4695 in Sill
	9/1/69	Carrizo #1 - Drilled @4814 in Sill 11
	9/2/69	Carrizo #1 - Tripping 4915 in Sill 11. Lost circulation 5 hours.
9L	9/4/69	Carrizo #1 - ø 5148 in Sill 11.
9L	9/5/69	Carrizo #1 - Tripping 5228 in Sill 11.
9L	9/6/69	Carrizo #1 - TD 5228. Fishing for cones.
	9/7/69	Carrizo #1 - ø 5262 in Sill #11.
	9/8/69	Carrizo #1 - ø 5368 in Sill #11.

RECEIVED AUG 22 1969 STATE O & G
RECEIVED AUG 22 1969 STATE O & G
AUG 25 1969 STATE O & G
RECEIVED AUG 25 1969 STATE O & G CONS. COMM.
RECEIVED AUG 27 1969 STATE O & G
AUG 28 1969 STATE O & G
SEP 2 1969 STATE O & G CONS. COMM.
SEP 2 1969 STATE O & G
RECEIVED SEP 3 1969 STATE O & G CONS. COMM.
SEP 5 1969 STATE O & G
SEP 8 1969 STATE O & G CONS. COMM.
RECEIVED SEP 9 1969 STATE O & G

13 503

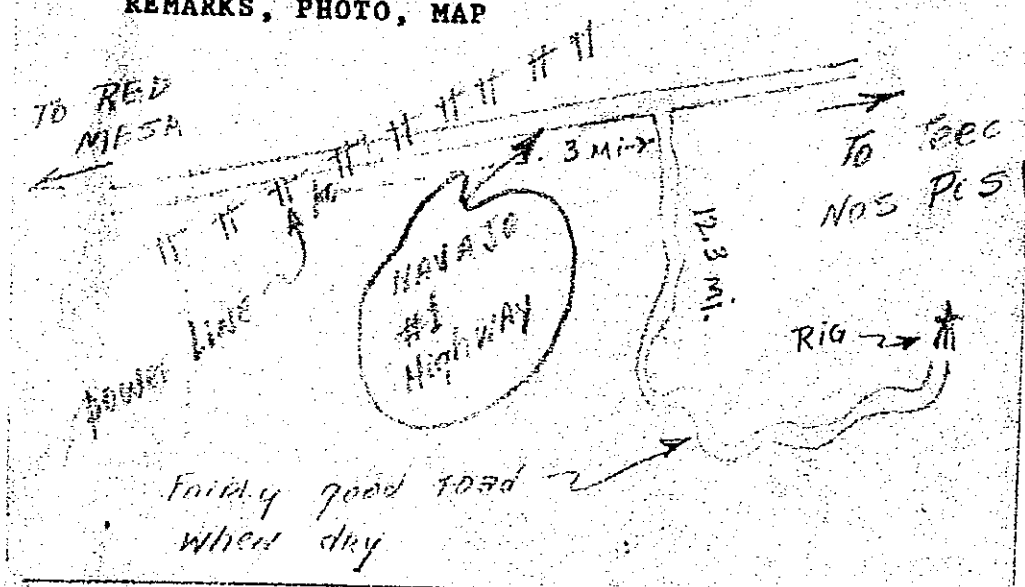
WELL SITE CHECK

By JRS
Date 8-4-69

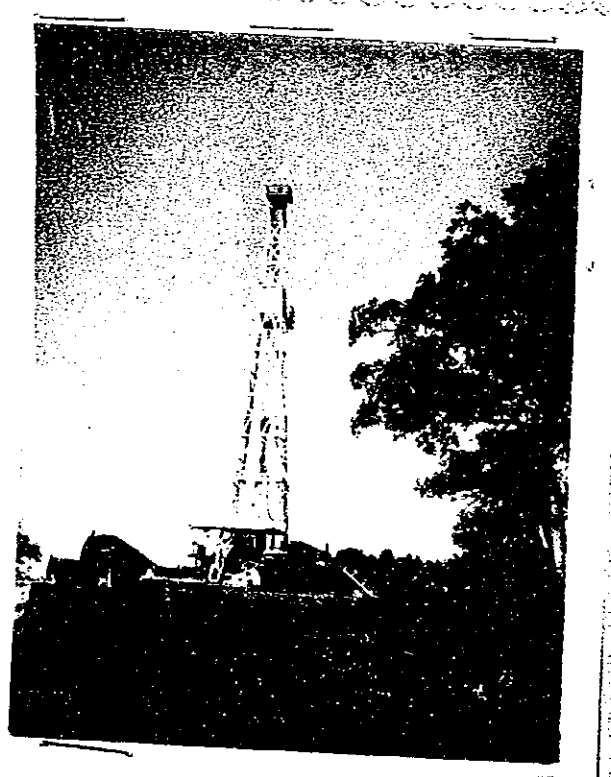
Contractor CACTUS DRIG.
Spud date
Type Rig Rotary X Cable
Samples TAKING 10' Smpls.
Pipe
Water Zones
Lost Circ. Zones
Formation Tops
Cores, Logs, DST
Crews from FARMINGTON

Person(s) Contacted EARL BABCOCK - pusher/CACTUS
Present Operations DRILLING 1544
Drilling with Air Mud ✓ { Mud wt 8.7 Vis 32
Size Hole
Size Drill Pipe
Type Bit
No. Bit 23 Drilling Rate
Formation
Lithology

REMARKS, PHOTO, MAP



Mud 8.7 wt. 32 Vis.



They have had lot of hard drilling - through Volcanic rock.

Spent (reportedly) $30,000 on Road.

WELL NAME MONSANTO #1 NAVAJO

Permit No. 503
Confidential: Yes No

7/31/69 - Carrizo #1 - Drilling at 816'

8/1/69 - Carrizo #1 - Drilling at 1002'

8/2/69 - Carrizo #1 - Drilling at 1120'.
8/3/69 - Carrizo #1 - Drilling at 1256'.
8/4/69 - Carrizo #1 - Drilling at 1452'.

8/5/69 - Carrizo #1 - Drilling at 1610'

8/6/69 - Carrizo #1 - Tripping at 1764'.

8/7/69 Carrizo #1 - Drilling at 18[illegible]

8-8 Carrizo #1 - TD 2007. Fishing for 6 slip segments. Chinle 1650 plus 7264. 214' hi to prog. Sill 1740.

8/9/69 - Carrizo #1 - ø 2185 in Chinle Base Sill 1970.
8/10/69 - Carrizo #1 - ø2406 in Chinle
8/11/69 - Carrizo #1 - ø2600 in Chinle

Carrizo #1 - ø 2716' Top Sill 2630.

8/13 Carrizo #1 - ø 2922 in lower Chinle. Sill #6 2626 - 2740.

8/14 Carrizo #1 - ø 3078 Dethelly. 3050 + 5865 SS. KB 8915.

8/15 Carrizo #1 - Preparing to drill ahead. DST #1 2974 - 3091. TO 1 hr 15 min. Weak blow decreasing to very weak blow in 55 min. Rec. 270' 8.8# mud, no gas or oil shows. IFP 80 - 107 # in 15. ISIP 160# in 30 min. FFP 107 - 188# in 60 min. FSIP 293# in 60 min. Sill #7 2949 - 3010.

8/16/69 Carrizo #1 - ø 3231.
8/17/69 Carrizo #1 - ø 3253. Lost 300 BBL mud at 3249 - 3250.
8/18/69 Carrizo #1 - ø 3291.

8/19/69 Carrizo #1 - Tripping 3319.

AUG 1 1969 STATE O & G CONS. COMM.
AUG 1 1969 STATE O & G CONS. COMM.
AUG 4 1969 STATE O & G
AUG 4 1969 STATE O & G
RECEIVED AUG 5 1969 STATE O & G
AUG 6 1969 STATE O & G CONS. COMM.
RECEIVED AUG 7 1969
AUG 8 1969 STATE O & G
RECEIVED AUG 11 1969
RECEIVED AUG 12 1969 STATE
AUG 13 1969
RECEIVED AUG 14 1969 STATE O & G
AUG 18 1969 STATE O & G CONS
RECEIVED AUG 18 1969 STATE O & G CONS. COMM.
RECEIVED AUG 19 1969 STATE
AUG 21 1969 STATE O & G

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503

7/14/69 - Carrizo #1 - TD 53' on 7/12. Set 16" at 58' with 60 sxs. regular 3% Chloride. P.D. 9:00 a.m. on 7/12/69. Spudded 6:30 a.m. on 7/11/69.
Drilling at 64' on 7/13 - 15" hole.
Drilling at 95' on 7/14 - 15" hole. 1/4 deg. at 85'.

RECEIVED JUL 16 1969 STATE O & G CONS. COMM.

7-15-69 Carrizo #1 - Drilling at 181' 86' in 22 hrs.

Carrizo # 1 - 245 ' 64' in 21½ hrs.

7/17/69 Carrizo #1 - Drilling at 334'. 1/2 deg. at 275'.

7-18-69 Carrizo #1 - Drilling at 426' in Basal Morrison. Base Sill 374'.

7/19/69 - Carrizo #1 - TD 466'. 1/4 deg. at 426'. Ream 9 7/8 to 15" 97 to 120'.
7/20/69 - Carrizo #1 - TD 466'. Reamed 120 to 185'.
7/21/69 - Carrizo #1 - TD 466'. Reamed 185 to 213'.

7-22-69 Carrizo #1 - TD 466'. Reaming 15½ at 238'.

7-23-69 Carrizo #1 - TD 466'. Reaming at 294'.

7-24-69 Carrizo #1 - TD 466'. Reaming at 339'.

7-25-69 Carrizo #1 - TD 466'. Tripping at 417'.

7/26/69 - Carrizo #1 - Circ. at 449' to run casing.
7/27/69 - Carrizo #1 - WOC. Set 11 3/4" 42# H-40 at 449' w/300 regular ~~3% CaCl~~$_2$ P.D. 1:30 p.m. on 7/26. Digging mouse hole.
7/28/69 - TD 449' WOC.

7/29/69 Carrizo #1 - Drilling at 500'.

7/30/69 Carrizo #1 - Drilling at 600'.

16
503

July 11, 1969

Memo to File #503

From J. A. Lambert

Mrs. Towers of Monsanto telephoned this office at 8:15 A this date to report that they will be spudding the captioned well this date.

18

Monsanto

FROM (NAME & LOCATION) Denver, Colorado

DATE : July 11, 1969

CC:

SUBJECT : Daily Drilling Report

REFERENCE :

TO :

Carrizo #1 - Location: SE SE Sec. 1, T39N, R29E, Apache County, Arizona. Contractor: Cactus Drilling Corporation. KB 8907 Est. & 8895 GR.

6/23/69 - Carrizo #1 - Building Road.
6/24/69 - Carrizo #1 - "
6/25/69 - Carrizo #1 - "
6/26/69 - Carrizo #1 - Building Road. Blasting at 7000' elevation.
6/27/69 - Carrizo #1 - Building road.
6/30/69 - Carrizo #1 - Building road at 7600' level.
7/ 1/69 - Carrizo #1 - Building road.
7/ 2/69 - Carrizo #1 - Building road and location.
7/ 3/69 - Carrizo #1 - Building road and location.
7/ 7/69 - Carrizo #1 - MIRT.
7/ 8/69 - Carrizo #1 - RURT.
7/ 9/69 - Carrizo #1 - RURT. Should spud Thursday morning.
7/10/69 - Carrizo #1 - RURT. Should spud Friday.
4K 7/11/69 - Carrizo #1 - Will spud this a.m.

RECEIVED
JUL 14 1969
STATE O & G
CONS. COMM.

J. Murphy, Jr.

17

503

IN-10 REV. 11-65

APPLICATION FOR PERMIT TO DRILL OR RE-ENTER

APPLICATION TO DRILL ☒ RE-ENTER OLD WELL ☐

Monsanto Company
NAME OF COMPANY OR OPERATOR

Suite 1102 Lincoln Tower Bldg., 1860 Lincoln Street, Denver, Colorado
Address City State

Not yet awarded
Drilling Contractor

Address

DESCRIPTION OF WELL AND LEASE

Federal, State or Indian Lease Number, or if fee lease, name of lessor: 14-20-0603-717	Well number: Carrizo #1	Elevation (ground): 8895 Ungraded
Nearest distance from proposed location to property or lease line: 554 feet	Distance from proposed location to nearest drilling, completed or applied—for well on the same lease: None 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): 554 FEL 866 FSL	Section—township—range or block and survey: Sec 1 T39N R29E	Dedication (Comply with Rule 105): 80 Acres
Field and reservoir (if wildcat, so state): Wildcat	County: Apache	
Distance, in miles, and direction from nearest town or post office: 12 Miles South of Teec Nos Pos		
Proposed depth: 6100' - 7600'	Rotary or cable tools: Rotary	Approx. date work will start: July 1, 1969
Bond Status In effect / Amount $ 25,000	Organization Report: On file X Or attached	Filing Fee of $25.00: Attached

Remarks: TD of 6100' assumes there will be no intrusive igneous materials, considering any such intrusion, TD could be extended to 7600'
(1) Need of intermediate casing is not anticipated, water sands will be protected by mud behind production casing if run. Intermediate will be run only if required to control the flow.

CERTIFICATE: I, the undersigned, under the penalty of perjury, state that I am the Dist. Prod. Supt. of the Monsanto (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.

J. Murphy
Signature J. Murphy, Jr.

June 9, 1969
Date

Permit Number: 503
Approval Date: 6-20-69
Approved By: John Bannister

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

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

Form No. 2

RECEIVED JUN 19 1969 STATE OF ARIZ. CONS. COMM.

(Complete Reverse Side)

19

1. Operator shall outline the dedicated acreage for *both* oil and gas wells on the plat.

2. A registered professional engineer or land surveyor registered in the State of Arizona or approved by the Commission shall show on the plat the location of the well and certify this information in the space provided.

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

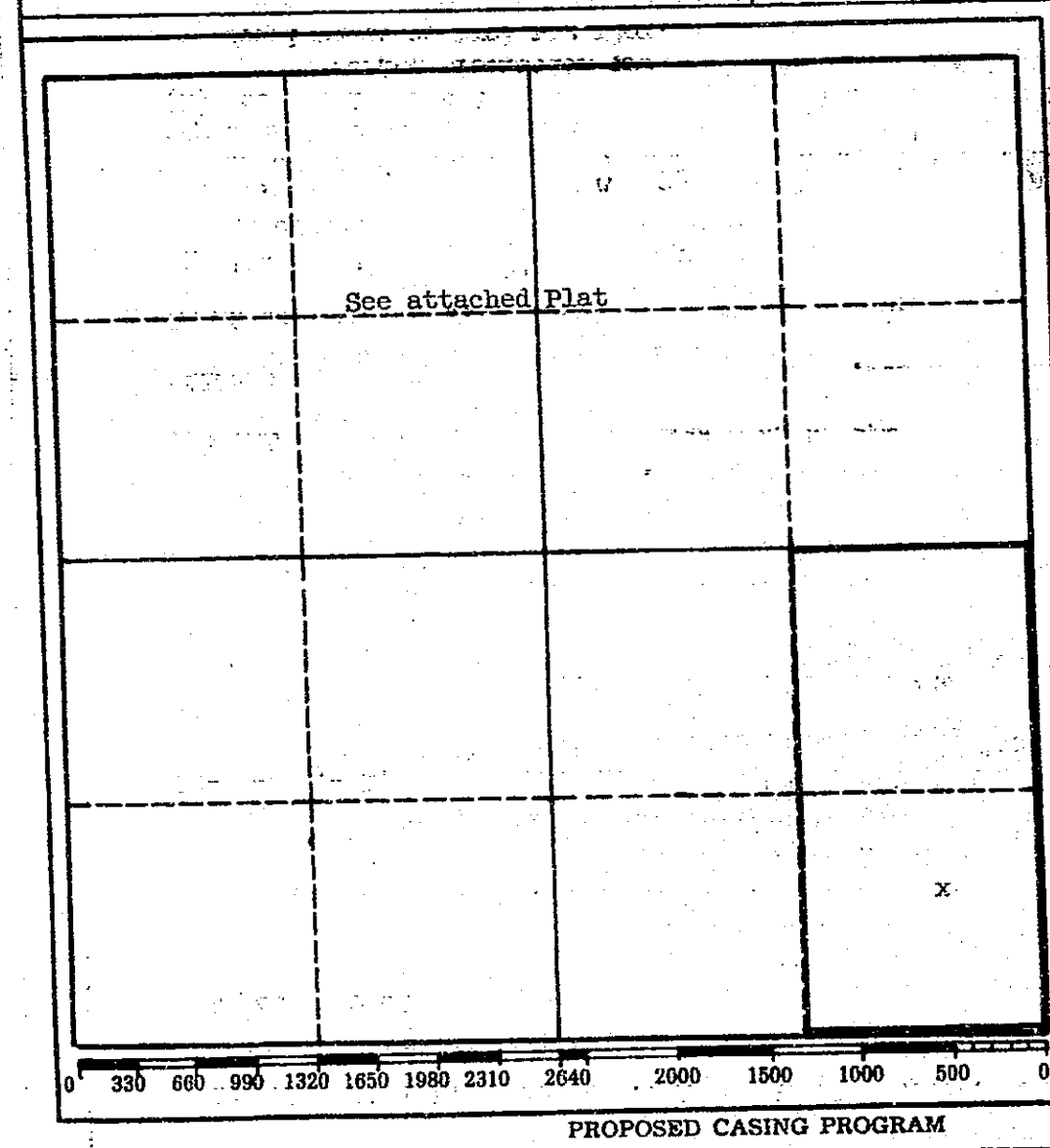
4. Is the Operator the only owner in the dedicated acreage outlined on the plat below? YES X NO_____

   100% Ownership entire Section 1.

5. If the answer to question four is "no," have the interests of all the owners been consolidated by communitization agreement or otherwise? YES_____ NO_____. If answer is "yes," Type of Consolidation_____

6. If the answer to question four is "no," list all the owners and their respective interests below:

Owner	Land Description



CERTIFICATION

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

Name J. Murphy, Jr.

Position District Production Supt.

Company Monsanto Company

Date June 18, 1969

I hereby certify that the well location shown on the plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief.

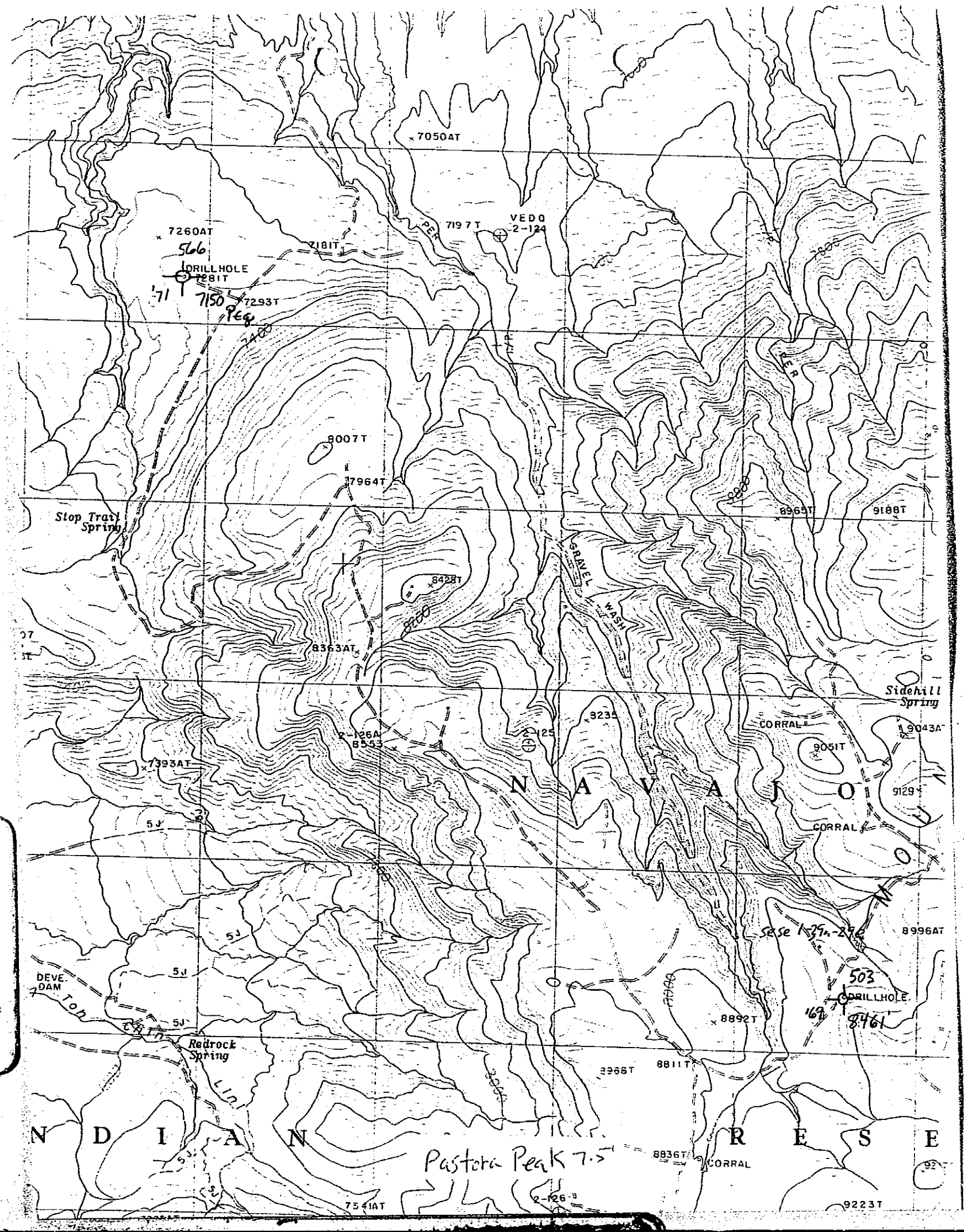
Date Surveyed

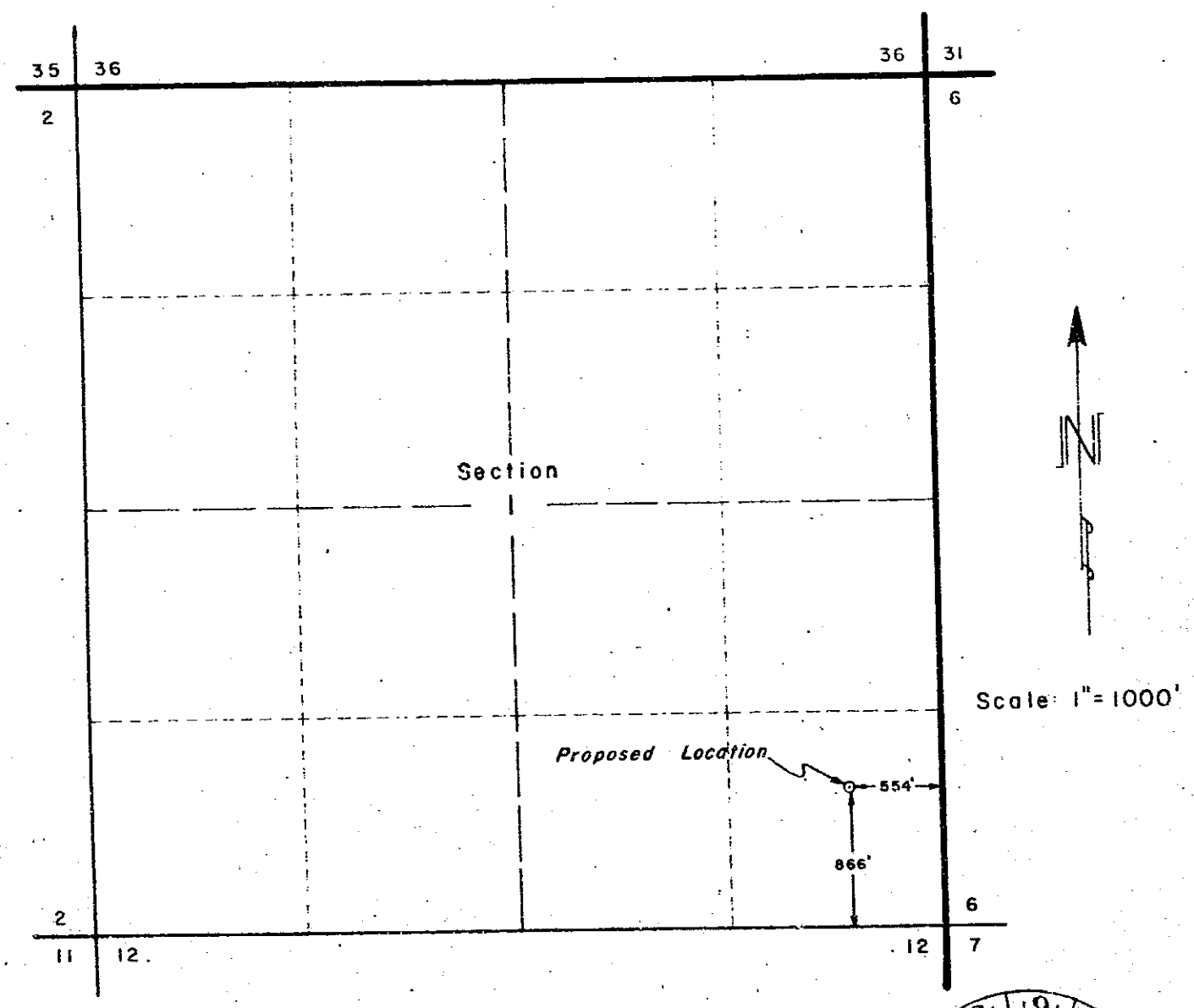
Registered Professional Engineer and/or Land Surveyor

Certificate No.

PROPOSED CASING PROGRAM

Size of Casing	Weight	Grade & Type	Top	Bottom	Cementing Depths	Sacks Cement
16"	65#	H-40	0	50	50	Circulated
11 3/4"	38#	H-40		500	500	Circulated
(1) 8 5/8"	24#	J-55		As required		
5 1/2"	15.5#	[illegible]		TD		Sufficient to segregate all oil and gas strata if completed as producer


7050AT
7260AT
566
DRILLHOLE
7281T
7181T
7197T
VEDO
2-124
7150
7293T
8007T
7964T
Stop Trail Spring
8428T
8363AT
GRAVEL WASH
8965T
9188T
Sidehill Spring
CORRAL
9043AT
9051T
9129
2-126A
8553
7393AT
N A V A J O
CORRAL
8996AT
503
DRILLHOLE
8461
8892T
DEVE DAM
Redrock Spring
8811T
8836T
CORRAL
N D I A N
R E S E
Pastora Peak 7.5'
7541AT
2-126
9223T



WELL LOCATION: Monsanto Company No. 1 Carrizo

Located 866 feet North of the South line and 554 feet West of the East line of Section 1
Township 39 North, Range 29 East G. & S. R. Meridian
Apache Co., Arizona
Existing ground elevation determined at 8895 feet based on U.S.G.S. datum

RECEIVED JUN 19 1969 STATE O & G CONS. COMM.

I hereby certify the above plat represents a survey made under my supervision and that it is accurate to the best of my knowledge and belief.

Frederick H. Reed

503

FREDERICK H. REED
Registered Land Surveyor
State of Arizona #5313

REGISTERED LAND SURVEYOR CERTIFICATE 5313 FREDERICK H. REED Date Signed 5/13/69 ARIZONA, U.S.A.

MONSANTO COMPANY
Denver, Colorado

WELL LOCATION PLAT
SEC. 1, T.39 N., R.29 E.
Apache Co., Arizona

CLARK-REED & ASSOC.
Durango, Colorado

DATE: May 23, 1969
FILE NO. 69031

PERMIT TO DRILL

This constitutes the permission and authority from the

OIL AND GAS CONSERVATION COMMISSION,
STATE OF ARIZONA,

To: Monsanto Company
(OPERATOR)

to drill a well to be known as

Monsanto #1 Navajo [redacted]
(WELL NAME)

located 554' FEL - 866' FSL

Section 1 Township 39N Range 29E, Apache County, Arizona.

The E/2 SE/4 of said Section, Township and Range is dedicated to this well.

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

Issued this 20th day of June, 19 69.

OIL AND GAS CONSERVATION COMMISSION

By John V. Tannister
EXECUTIVE SECRETARY

PERMIT Nº 503

RECEIPT NO. 9585
API NO. 02-001-20103

State of Arizona
Oil & Gas Conservation Commission
Permit to Drill

FORM NO. 27

SAMPLES ARE REQUIRED

Formation Testing Service Report

503

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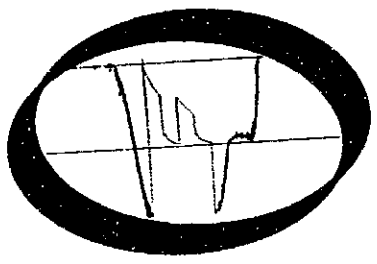
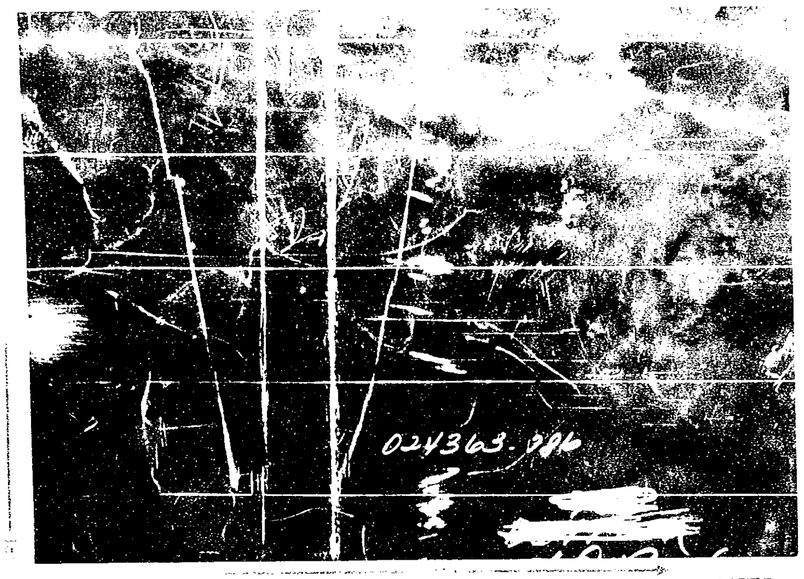
OCT 22 1969
STATE O & G
CONS. COMM.

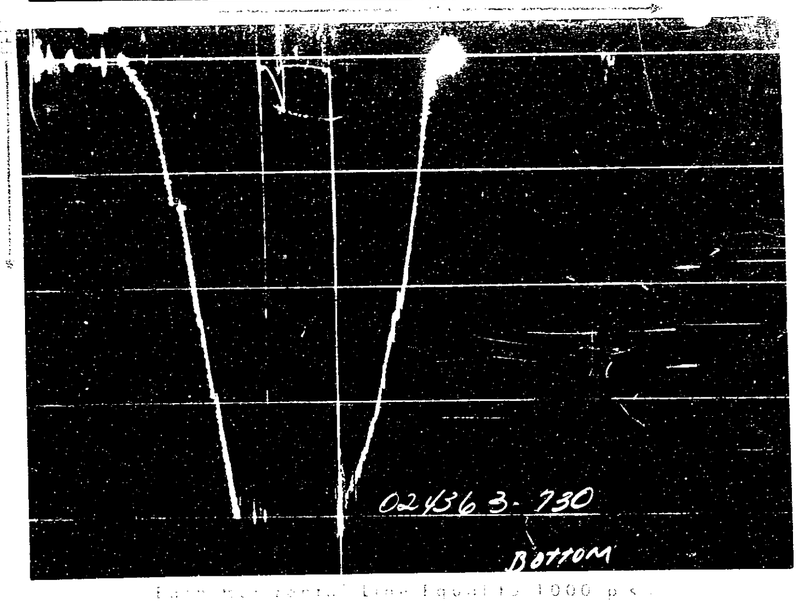


1510

CARRIZO	Lease Name
1	Well No.
3	Test No.
8236-8304'	Tested Interval
MONSANTO CHEMICAL COMPANY	Lease Owner/Company Name

HALLIBURTON SERVICES
DUNCAN, OKLAHOMA

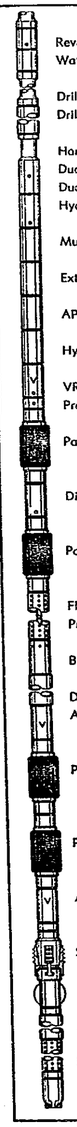




Each Major Division Line Equals 1000 p.s.i.

FORMATION TEST DATA

024363



	O. D.	I. D.	LENGTH	DEPTH
Reversing Sub	5 3/4"	2½"	1'	
Water Cushion Valve				
Drill Pipe	4"	3.340"	7610'	
Drill Collars	6"	2¼"	694'	
Handling Sub & Choke Assembly				
Dual CIP Valve				
Dual CIP Sampler				
Hydro-Spring Tester	5.00"	.75"	60.21"	8202'
Multiple CIP Sampler				
Extension Joint	5"	1"	39"	
AP Running Case	5.00"	4.18"	48.37"	8207'
Hydraulic Jar	5"	1¼"	5'	
VR Safety Joint	5"	1"	3'	
Pressure Equalizing Crossover				
Packer Assembly	7"	1.35"	48.89"	8231'
Distributor				
Packer Assembly	7¼"	1.35"	48.89"	8236
Flush Joint Anchor	5 3/4"	2¼"	12'	
Pressure Equalizing Tube				
Blanked-Off B.T. Running Case				
Drill Collars	6¼"	2¼"	30'	
Anchor Pipe Safety Joint				
Packer Assembly				
Packer Assembly				
Anchor Pipe Safety Joint				
Side Wall Anchor				
Drill Collars				
Flush Joint Anchor	5 3/4"	2½"	19'	
Blanked-Off B.T. Running Case	5 3/4"	4.75"	18"	8300'

...leum, Inc. (Monsanto
SE Sec. 1-39N-29E, Apache

NOMENCLATURE

b	= Approximate Radius of Investigation	Feet
b_1	= Approximate Radius of Investigation (Net Pay Zone h_1)	Feet
D.R.	= Damage Ratio	—
El	= Elevation	Feet
GD	= B.T. Gauge Depth (From Surface Reference)	Feet
h	= Interval Tested	Feet
h_1	= Net Pay Thickness	Feet
K	= Permeability	md
K_1	= Permeability (From Net Pay Zone h_1)	md
m	= Slope Extrapolated Pressure Plot (Psi^2/cycle Gas)	psi/cycle
OF_1	= Maximum Indicated Flow Rate	MCF/D
OF_2	= Minimum Indicated Flow Rate	MCF/D
OF_3	= Theoretical Open Flow Potential with/Damage Removed Max.	MCF/D
OF_4	= Theoretical Open Flow Potential with/Damage Removed Min.	MCF/D
P_s	= Extrapolated Static Pressure	Psig.
P_F	= Final Flow Pressure	Psig.
P_{ot}	= Potentiometric Surface (Fresh Water*)	Feet
Q	= Average Adjusted Production Rate During Test	bbls/day
Q_1	= Theoretical Production w/Damage Removed	bbls/day
Q_g	= Measured Gas Production Rate	MCF/D
R	= Corrected Recovery	bbls
r_w	= Radius of Well Bore	Feet
t	= Flow Time	Minutes
t_o	= Total Flow Time	Minutes
T	= Temperature Rankine	°R
Z	= Compressibility Factor	—
μ	= Viscosity Gas or Liquid	CP
Log	= Common Log	

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

...leum, Inc. (Monsanto
SE Sec. 1-39N-29E, Apache

OFFICE OF
Oil and Gas Conservation Commission
STATE OF ARIZONA
1645 WEST JEFFERSON, SUITE 420
PHOENIX, ARIZONA 85007
PHONE: (602) 255-5161

July 16, 1986

Mr. Barney E. Sullivan
Manager, Bonds & Insurance
BHP Petroleum (Americas) Inc.
217 North Water Street
Wichita, KS 67201

Re: BHP Petroleum Company Inc.
Blanket Bond No. 811-66-21
Dry Mesa Field
Apache County

Dear Mr. Sullivan:

This letter is to inform you that the above-captioned bond has been received and approved by the Commission, and that effective July 15, 1986, the old Monsanto Oil Company bond No. 328-6165 is eligible for release.

Enclosed is a copy of the approved bond.

If I can be of further assistance, please let me know.

Sincerely,

R. A. Ybarra

R. A. Ybarra
Enforcement Director

lr
Encl.

RECEIVED
JUL 7 1986
O & G CONS. COMM.

217 North Water Street
Post Office Box 1201
Wichita, Kansas 67201
Telephone (316) 265-7721
Fax (316) 264-6929
Telex II (910) 741-6940

CERTIFIED MAIL

BHP Petroleum (Americas) Inc

July 3, 1986

State of Arizona
Oil & Gas Conservation Commission
Attn: Ms. Katie Barnes
1645 West Jefferson, Suite 420
Phoenix, Arizona 85007

Re: Statewide Drilling Bond
BHP Petroleum Company Inc.
Bond #8111-66-21

Dear Ms. Barnes:

Enclosed please find two copies of the captioned bond for our new subsidiary, BHP Petroleum Company Inc., formerly Monsanto Oil Company. Along with this bond is a rider accepting the liability for the old Monsanto Oil Company bond #328-6165/10720. We would appreciate you forwarding to us at the address set out above, the original copy of the old bond or a letter of release so we may cancel same.

Thank you for your assistance and should you have any questions or need additional information, please advise.

Very truly yours,

BHP PETROLEUM (AMERICAS) INC.

Barney E. Sullivan

Barney E. Sullivan
Manager, Bonds & Insurance

:dj

Enclosures

Operator BHP Petroleum Company, Inc. (Monsanto Oil Co.)

Bond Company Federal Insurance Company Amount $25,000

Bond No. 8111-66-21 Date Approved 7-15-86

Permits covered by this bond:

503

106

77

115

852 (organization report)
(+ Bond)

March 23, 1971

Dr. H. Wesley Peirce
Arizona Bureau of Mines
University of Arizona
Tucson, Arizona 85721

d

Re: Monsanto #1 Carrizon
Sec. 1-T39N-R29E
Apache County, Arizona

Dear Wes:

I am enclosing copies of some notes made by one of the Monsanto geologists in connection with slide studies of sills encountered in the subject well. I've forgotten his name, but can get it if needed.

He expressed the hope that you can read his writing. If you or your co-workers reach any conclusions, he would like to know what they are.

Sincerely yours,

Jack N. Conley
Staff Geologist

JNC:jd
Encs.

A1-1-C Slide Section three
4510-2 .03mm

Groundmass

1 { 15-20% Qtz
85-80% Feldspar - badly weathered to Calcite, Sericite
heavily Fe stained

2 { 15% Qtz
5% Augite
80% Feldspar
Tr Magnetite

1490 - 5506

no phenocrysts
no way to tell Feldspar type short of staining

Qtz grains? surrounded by Plagioclase Feldspar

For H W P Jensen

503

M-C 4590 - 4600

Andesine phenocrysts (An_{46}) to 2 mm
sericitized & zoned (normal)
Hornblende phenocrysts to 1.5 mm
altered to Mag, chlorite, sericite
& calcite
.03 mm groundmass w/ < 10%
Qtz, & Feldspars > 90%

Phenocrysts are 40% by
volume

503

Monsanto #1 Carrizo

4620 - 30

orthoclase phenocryst .39 mm x 2 mm
badly sericitized

in v.f. gr mass .03 mm
qtz & feld. equigranular

503

9C 0-30 M-1-C

Highly Fine QTZ pebble 1 mm in diam

Plagioclase Phenocryst tabular 3x2 mm long

K-spar phenocrysts - altered to calcite & sericite - one includes xtal of plagioclase

Groundmass:		
K-spar	40%	stubby laths of plagioclase, granules and xtls of K-spar
Plag	40%	and QTZ grains
QTZ	19%	.03 - .05 mm
Argile	1%	
	100	

503

JA-C 4320-30

Quartz Phenocryst 0.9mm (rd edges)
Feldspar Phenocryst (Andesine)
Sericitized .6mm Tabular Shape
Groundmass, badly sericitized
feldspar & Quartz

503

(1960-70 M-1-C)

Feldspar phenocrysts 0.6 mm rectangular shape

Tr <1% Augite phenocrysts?

Badly sericitized feldspar & Quartz ground mass

503

Mojonendo #1 CAR-220
5020-30

qtz ing .12 mm diam in groundmass
of Feld + qtz to .02 mm

Feld phenocryst .53 mm by 0.22 mm
badly sericitized

Groundmass appears to be
15% - 30% qtz
60 - 50% K-Na feldspar
20% - 10% Ca (Andesine) feldspar
w/ up to 2% OK minerals

503

1-1-C

5050-60

.3 mm x .08 mm Phenocryst
Hypersthene

.04 mm block of Augite

.6 mm x .1 mm Hornblende

1.2 mm x .5 mm feldspar badly
sericitized An 42

.18 mm x .08 mm Hornblende

25% Phenocrysts (20% Hne 15% Fdsp 5% Aug

75% G.M. v. b. weathered

503

M-1C 5090 - 5100

Sample all groundmass w/ plagioclase - K-spar laths to .05 mm x .02 mm in G.M. & pl. K-spar & Otz & Augite

88% 10% 2%

one feldspar phenocryst w/ many lath shaped augite & Apatite inclusions

G-M badly weathered to Calcite, Sericite, & chlorite.

503

M 1-C

5150-60

Feldspar phenocrysts to 1.6 mm
irregular shaped, in groundmass
(.03 mm) of Qtz <10% Feldspar (some
Iolite), & Augite.

Feldspar xtals altered badly to
Sericite & calcite & Alunite?

503

5050-60 M-1-L

Andesine phenocrysts to 1.3 mm long sericitized and altered to calcite

T. Biotite & Augite

Badly sericitized feldspar and unaltered Qtz groundmass

503

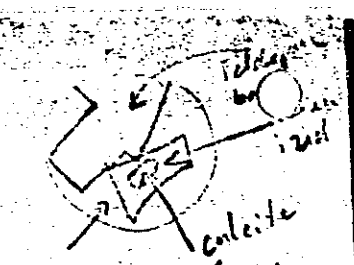
Hole #1 Cobalto
5228'

Granite Laville Porphyry
(Granodiorite Porphyry)

[227HD] (Johannsen)

503

5228
Mmi 1 Carrizo



Orientation of OH2
1 Feldspar 90-80

503

M-1-C

5340-50

Augite phenocryst altered to calc-
serpentine & magnetite .3x.5 mm

Plagioclase xtal .3x.5 mm altered
to serpentine & calcite w/ lava augite
inclusions

(16°) ext Aug

v granular texture .03mm

K Feldspar? phenocryst .3x.5 mm
partially serpentinized w/
Augite inclusions

503

544C-50 MIC

Feldspar laths v. r. flow aligned (.06mm) & Qtz grns (.03mm) w/ Feldspar (Plagioclase?) and Augite Phenocrysts to .5mm.

Phenocrysts < 5%

Qtz 25%

Feldspar 75%

v. r. flow aligned (.05mm) w/ Qtz and Aug. to .5mm.

503

3310-20 M-1-6

.5mm QTz & Augite

Phenocrysts in groundmass

of feldspar 70% 10% Augite,

20% QTz approx equigranular

coarse .02mm diam grains

Feldspar [illegible] Albite, do

Sanidine & Calcic

Sill 8

20' thick

Porphyritic w/ granular

groundmass

227H Granodiorite (Quartz Monzonite)

503

X-Chrono

January 28, 1970

Mr. J. Murphy, Jr.
Monsanto Company
Suite 1102 Lincoln Tower
1860 Lincoln Street
Denver, Colorado 80203

Re: Monsanto #1 Navajo 717
SE/4 SE/4 Sec. 1-39N-29E
Apache County
Permit #503

Dear Mr. Murphy:

In reviewing our file on the captioned well we find that all of our requirements have been complied with with the exception of your furnishing the necessary Well Completion Report, our Form #4. In order that our records may be complete will you please complete the enclosed form and return it at your earliest convenience. We appreciate your cooperation.

Sincerely,

John Bannister
Executive Secretary

JB:jd
Enc.

573

X Chron
X Lambert

September 29, 1969

Mr. J. Murphy, Jr.
Monsanto Company
Suite 1102 Lincoln Tower
1860 Lincoln Street
Denver, Colorado 80203

Re: Monsanto #1 Navajo 717
T39N, R29E, G & SRM
Sec. 1: SE/4 SE/4
Apache County
Permit #503

Dear Mr. Murphy:

Please furnish us with drilling information on the captioned well from the period September 19, 1969 to September 25, 1969. Apparently your reports for this period went astray as we have received each of the other daily reports that you have made.

Yours truly,

James A. Lambert
Administrative Assistant

/vb

503

X-Chrono
X-Lambert

July 8, 1969

Mr. J. Murphy Jr.
Monsanto Company
Suite 1102 Lincoln Tower
1860 Lincoln Street
Denver, Colorado 80203

Re: Monsanto #1 Navajo 717
T39N, R29E, G & SRM
Sec. 1: SE/4 SE/4
Apache County
Permit #503

Dear Mr. Murphy:

We note by your Application to Drill that you expected to start work on the subject well on July 1, 1969. Please advise us the spud date and any pertinent information pertaining to this well. It is incumbent upon you to keep this Commission advised of the progress of your work. A copy of the daily drilling log will suffice for our needs.

We call attention to the fact that we are willing to keep information you furnish us confidential; but, the Commission should be so informed in writing.

Yours truly,

James A. Lambert
Administrative Assistant

JAL:jf

503

503

X-Lambert
X-Chrono

June 24, 1969

Miss Betsy L. Smith
Monsanto Company
Suite 1102 Lincoln Tower
1860 Lincoln Street
Denver, Colorado 80203

Re: Texas Pacific 138-1 Navajo
T40N, R28E, G & SRM
Sec. 11: NE/4 NE/4
Apache County
Permit #77 X

Texas Pacific 138-2 Navajo
T40N, R28E, G & SRM
Sec. 12: SW/4 NW/4
Apache County
Permit #106 X

Texas Pacific 138-3 Navajo
T40N, R28E, G & SRM
Sec. 2: SW/4 SE/4
Apache County
Permit #115 X

Monsanto #1 Navajo 717
T39N, R29E, G & SRM
Sec. 1: SE/4 SE/4
Apache County
Permit #503

Dear Miss Smith:

Enclosed is an approved copy of your state-wide Performance Bond No. 3,286,165. This bond now covers the captioned wells and will cover any future wells you may drill. Thank you for your cooperation.

Yours truly,

James A. Lambert
Administrative Assistant

jf
Enc.

503

503

X-Chlorio
X-Lambert

June 20, 1969

Mr. J. Murphy, Jr.
Monsanto Company
Suite 1102 Lincoln Tower Building
1860 Lincoln Street
Denver, Colorado 80203

Re: Monsanto #1 Navajo 717
T39N, R29E, G & SRM
Sec. 1: SE/4 SE/4
Apache County
Permit #503

Dear Mr. Murphy:

Enclosed is the Application for Permit to Drill which has been approved, a copy of the plat, our Receipt No. 9585, and our Permit To Drill No. 503.

Miscellaneous instruction sheets pertaining to the well samples and reports required by this office are also enclosed.

Yours truly,

James A. Lambert
Administrative Assistant

jf

Enc.

503

503

X-Chlond
X-Lambert

June 19, 1969

Memo to Mr. Bannister

From J. Lambert 9:00 a.m.

American Insurance Company of St. Louis, Missouri, called this date notifying us that they were issuing an Arizona State-wide bond for Monsanto. Condy Meenan will be the Arizona Surety Agenty and the $25,000 bond carries serial No. 3286165. I requested telegraphic confirmation of this fact.

CLASS OF SERVICE
This is a fast message unless its deferred character is indicated by the proper symbol.

WESTERN UNION
TELEGRAM

SYMBOLS
DL=Day Letter
NL=Night Letter
LT=International Letter Telegram

The filing time shown in the date line on domestic telegrams is LOCAL TIME at point of origin. Time of receipt is LOCAL TIME at point of destination

1112A

252P PDT JUN 19 69 LB252
L PFA197 (SLLJ321 BP) AB PDB 13 EXTRA TLX ST LOUIS MO 19 1212P
CDT
JAMES A LAMBERT, STATE OF ARIZONA
OIL AND GAS DIVN PHOENIX ARIZ
RE TELEPHONE CALL THIS DATE CONFIRMING BOND 3,286,165 MONSANTO
CO FOR 25M BEING EXECUTED BY THE AMERICAN INSURANCE CO 14
S 4TH ST ST LOUIS 2 MISSOURI
3,286,165 25M 14 4 2
(244).

271-5961

X 306P adv

RECEIVED JUN 20 1969 STATE O & G CONS. COMM.

503

503

SF1001 (R9-65)

ENDORSEMENT OF THIS CHECK ACKNOWLEDGES FULL PAYMENT OF ITEMS AS LISTED BELOW

DATE	PAYEE OF DRAFT	LEASE NUMBER OR OTHER DESCRIPTION	DRAFT AMOUNT	EXCHANGE	TOTAL
6/18/69	Arizona Oil & Gas Conservation Commission Suite 202 1624 West Adams Phoenix, Arizona 85034	Filing Fee			$25.00

Monsanto Company No. 1 Carrizo, Section 1, T.39n, R.29e,
Apache County, Arizona.

TOTAL AMOUNT PAID $ 25.00

Monsanto COMPANY HYDROCARBONS DIVISION

503

Monsanto Company - new address 2/27/76
1300 Midland Natl Bank Tower
500 West Texas, Midland Texas 79701

Bond filed with P/N 115