CONFIDENTIAL

Release 6-16-65

[redacted]

M-d

BLACKBURN #35-1 NAVAJO
NW/4NW/4 S35-T37N-R29E
Apache County 298

sl

COUNTY Apache AREA Cove School LEASE NO. 14-20-0603-8435

WELL NAME W.T. Blackburn #35-1 Navajo

LOCATION NW NW SEC 35 TWP 37N RANGE 29E FOOTAGE 650 FNL 530 FWL

ELEV 6244 GR 6257 KB SPUD DATE 11-22-64 STATUS ~~12-16-64~~ COMP. DATE TOTAL DEPTH 3657'

CONTRACTOR

CASING SIZE	DEPTH	CEMENT	LINER SIZE & DEPTH
13 3/8	311'	340 SX	

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

FORMATION TOPS	DEPTHS	SOURCE L.L.	SOURCE E.L.	REMARKS
Chinle	Surface		x	
~~Shinarump~~	~~100'~~			
Moenkopi	300'			
Cutler DeChelly	425'			
~~Evaporites~~	~~1072'~~			
Hermosa	2280'			
Molas	3007'			
~~Ouray~~	~~3201'~~			
Elbert	3234			
McCracken	3414			
~~Aneth~~	~~3516~~			
~~Cambrian~~	~~3622~~			
Pre-Cambrian	3650			

ELECTRIC LOGS	PERFORATED INTERVALS	PROD. INTERVALS
IE, Sonic-Caliper, GRN	NA	NA

SAMPLE LOG Am Strat
SAMPLE DESCRP.
SAMPLE NO. 1278*
CORE ANALYSIS x
DSTs
Tuc. 2014

REMARKS 5 DST - 8 CORES - SEE FILE/too numerous to list.
GEOLOGICAL REPORT IN FILE.

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

WATER WELL ACCEPTED BY

BOND CO. Federal Insurance Company BOND NO. 8021-84-61

BOND AMT. $ 2500 CANCELLED 1-11-65 DATE ORGANIZATION REPORT 9-21-64

FILING RECEIPT 9397 LOC. PLAT x WELL BOOK x PLAT BOOK x

API NO. DATE ISSUED 11-2-64 DEDICATION NW/4 NW/4

PERMIT NUMBER 288

(over)

DRILL STEM TEST

NO.	FROM	TO	RESULTS
			SEE FILE

CORE RECORD

NO.	FROM	TO	RECOVERY	REMARKS
				SEE FILE

REMEDIAL HISTORY

DATE STARTED	COMPLETED	WORK PERFORMED	NEW PERFORATIONS

ADDITIONAL INFORMATION

298

ARIZONA
APACHE CO.
WILDCAT (W)

PETROLEUM INFORMATION
DENVER CASPER
ROCKY MOUNTAIN
OIL INFORMATION

Twp 37n-29e
Section 35
nw nw
650 s/n 530 e/w

OPR: W.T. Blackburn

WELL #: 1 Blackburn-Navajo

ELEV: 6257 KB

TOPS: Log-Sample

Chinle surf
Shinrump 100
Moenkopi 300
DeChelly 425
Hermosa 2280
Molas 3007
Ouray ls 3201
Elbert 3234
McCracken 3414
Aneth 3516
Cambrian 3622
preCambrian 3650

DSTS. & CORES:

SPUD: 11-22-64 COMPL: 12-16-64

TD: 3657 PB:

CSG: 13-3/8" @ 311 w/340

Crd 3443-83, rec 11 sd; 7 sh; 3 sd, dense, hard & tight; 4 sh; 3 sd, dense, tight; 10 sh. Crd 3483-3513, rec ½ sh; 2½ dolo; 6 silt; 12 sh; 5 sh & silt, interbdd; 2½ sd, arg. Crd 3523-63, rec 7 dolo, fine xln; 6 dolo, dense; 8 dolo, looks wet; 11 dolo, hard, dense; tight; 8 dolo, silty, dense, tight. Crd 3566-78, rec 12 dolo, hard, dense. Crd 3578-91, rec 2 dolo, dense; 1 dolo, good matrix oil stain; 5½ dolo, dense, tight; 4½ dolo, good fluor & cut. Crd 3592-3600, rec 2 dolo, hard, dense, spotty oil stain & fluor; 2 dolo, hard, dense, tight; 3 dolo, good fluor & odor; 1 dolo, hard, dense, tight. Crd 3600-04, rec 2 sd, dense, tight; 1 sd, good oil stain; 1 sd. (over).

INIT. PROD: D&A

Contr: not reported

ARIZ3-562101

W. T. BLACKBURN 1 BLA[illegible]URN-NAVAJO, nw nw 35-37n-29e, 650 s/n[illegible] e/w. (Contd).
ARIZONA - APACHE COUNTY - WILDC[illegible] (W) - PAGE 2

Crd 3604-47½, rec 3 sd, tight; 4 sd, dense; 2 sd, sli dolo, hard, dense; 5 sh, sdy; 1 sd, dense, hard, qtz; 1½ sh; 4½ sd, qtz, hard, dense; 3 sh; dense; 3 sh, sdy; 2 silt, arg; 4 silt; [illegible]; 4 granite, weathered; 2½ granite. DST 3415-83, SI 30 mins, open 1 hr, SI 30 mins, rec 475 salt wtr, 50 salt WCM, FP 27-230#, SIP 1290-1263#, HP 1545-1545#. DST 3512-63, SI 30 mins, open 1 hr, SI 30 mins, rec 90 salt WCM, 410 salt wtr, FP 14-203#, SIP 1330-1330#, HP 1612-1625#. DST 3578-3600, SI 30 mins, open 1 hr, SI 30 mins, rec 100 WCM, FP 14-58#, SIP 1310-1310#, HP 1651-1651#. DST 3010-3115, SI 30 mins, open 1 hr, SI 30 mins, rec 90 mud, FP 0-1#, SIP 1201-908#, HP 1468-1468#. DST 3190-3330, SI 30 mins, open 1 hr, SI 1 hr 5 mins, rec 10 mud, FP 0-0#, SIP 620-620#, HP 1470-1472#.

ARIZONA
APACHE CO.
WILDCAT (W)

298

PETROLEUM INFORMATION
DENVER CASPER
ROCKY MOUNTAIN
OIL INFORMATION

Twp 37n-29e
Section 35
nw nw
650 s/n 530 e/w

OPR: Vaughey, Vaughey & Blackburn WELL #: 1 Blackburn-Navajo

ELEV: 6244 Gr	DSTS. & CORES:	SPUD: COMPL:
TOPS: Log-Sample	4500 preCambrian test	TD: 4500 (approx) PB:
		CSG:
		PERF:
		PROD. ZONE:
		INIT. PROD: D&A (Tight hole).

(CARD WILL BE RE-ISSUED WHEN DATA IS AVAILABLE)

ARIZ2-561150

CONFIDENTIAL INFORMATION -- DO NOT RELEASE "TIGHT HOLE"

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 XX

DESCRIPTION OF WELL AND LEASE

Operator: W. T Blackburn	Address: 1650 Denver Club Building, Denver, Colorado 80202
Federal, State or Indian Lease Number or name of lessor if fee lease: Navajo Tribal	Well Number: 35-1 / Field & Reservoir: Wildcat
Location: 650' FNL, 530' FWL, NW¼NW¼ Section 35	County: Apache
Sec. TWP-Range or Block & Survey: Section 35, Township 37 North, Range 29 East, G&SRM	

Date spudded	Date total depth reached	Date completed, ready to produce	Elevation (DF, RKB, RT or Gr.) feet	Elevation of casing hd. flange feet
11/22/64	12/16/64	n/a	RKB 6257	n/a

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.
3657	n/a	n/a	

Producing interval (s) for this completion	Rotary tools used (interval)	Cable tools used (interval)
n/a	entire depth	NO

Was this well directionally drilled?	Was directional survey made?	Was copy of directional survey filed?	Date filed
NO	No	n/a	n/a

Type of electrical or other logs run (check logs filed with the commission) Schlumberger Gamma Ray Neutron; Induction Electric, Sonic w/caliper — Date filed: 1/8/65

CASING RECORD

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

Purpose	Size hole drilled	Size casing set	Weight (lb./ft.)	Depth set	Sacks cement	Amt. pulled
Surface	17-1/4"	13-3/8"	55#	311	340	n/a

TUBING RECORD			LINER RECORD				
Size	Depth set	Packer set at	Size	Top	Bottom	Sacks cement	Screen (ft.)
n/a in.	N/a ft.	n/a ft.	n/a in.	n/a ft.	n/a ft.	n/a	n/a

PERFORATION RECORD			ACID, SHOT, FRACTURE, CEMENT SQUEEZE RECORD	
Number per ft.	Size & type	Depth Interval	Am't. & kind of material used	Depth Interval
n/a	n/a	n/a	n/a	n/a

INITIAL PRODUCTION

Date of first production	Producing method (indicate if flowing, gas lift or pumping—if pumping, show size & type of pump:)
n/a	n/a

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

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

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

CERTIFICATE: I, the undersigned, under the penalty of perjury, state that I am the operator, W. T. Blackburn ~~of the~~ ~~(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 6, 1965
Date

Signature: W. T. Blackburn

CONFIDENTIAL

Permit No. 298

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

(Complete Reverse Side)

DETAIL OF FORMATIONS PENETRATED

Formation	Top	Bottom	Description*
Chinle	Surface	99	Surface
Shinarump	100	299	
Moenkope	300	424	
Cutler			
DeChelly	425		
Evaporites	1072		
Hermosa	2280	3006	
Molas	3007	3200	
Ouray	3201	3233	
Elbert	3234	3413	
McCracken	3414	3515	
Aneth	3516	3621	
Cambrian?	3622	3649	
Precambrian	3650	TD	
			FOR COMPLETE DRILL STEM TEST AND CORE DESCRIPTIONS SEE ATTACHED FIVE PAGES -- eight cores and five drill stem tests.

RECEIVED
JAN 11 1965
STATE O & G
CONS. COMM.

* 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

INFORMATION CONFIDENTIAL -- NOT TO BE RELEASED WITHOUT PERMISSION

PLUGGING RECORD

Operator: W. T. Blackburn	Address: 1650 Denver Club Building, Denver, Colo 80202
Federal, State, or Indian Lease Number, or lessor's name if fee lease: 14-20-0603-8435	Well No.: #35-1
Field & Reservoir: Wildcat	
Location of Well: 650'FNL, 530' FWL, NW¼NW¼ Sec. 35-37N-29E, G&SRM	Sec-Twp-Rge or Block & Survey
County: Apache	
Application to drill this well was filed in name of: W. T. Blackburn	Has this well ever produced oil or gas: no
Character of well at completion (initial production): Oil (bbls/day): --	Gas (MCF/day): n/a
Dry?: yes	
Date plugged: December 16, 1964	Total depth: 3657
Amount well producing when plugged: Oil (bbls/day): none	Gas (MCF/day): none
Water (bbls/day): none	

Name of each formation containing oil or gas. Indicate which formation open to wellbore 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
no zones capable of producing oil or gas			

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
13-3/8"	311		311	none	none

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

Indicate deepest formation containing fresh water. none

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

Name	Address	Direction from this well:
Monsanto Company	900 Patterson Building, Denver, Colo	-- west
Anadarko Production Company, Liberal, Kansas		west

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 W. T Blackburn, Operator of the above well ~~(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 13, 1965
Date

Signature: W. T. Blackburn

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CONFIDENTIAL

Permit No. 298

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

Form No. 10

WELL SITE CHECK

By [illegible]
Date 4-26-67

Contractor _____ Person(s) Contacted _____

Spud Date _____ _____

Type Rig _____ Rotary / Cable Tool Present Operations _____

Samples _____ _____

Pipe _____ Drilling with Air / Mud

Water Zones _____ Size Hole _____

Lost Circ. Zones _____ Size Drill Pipe _____

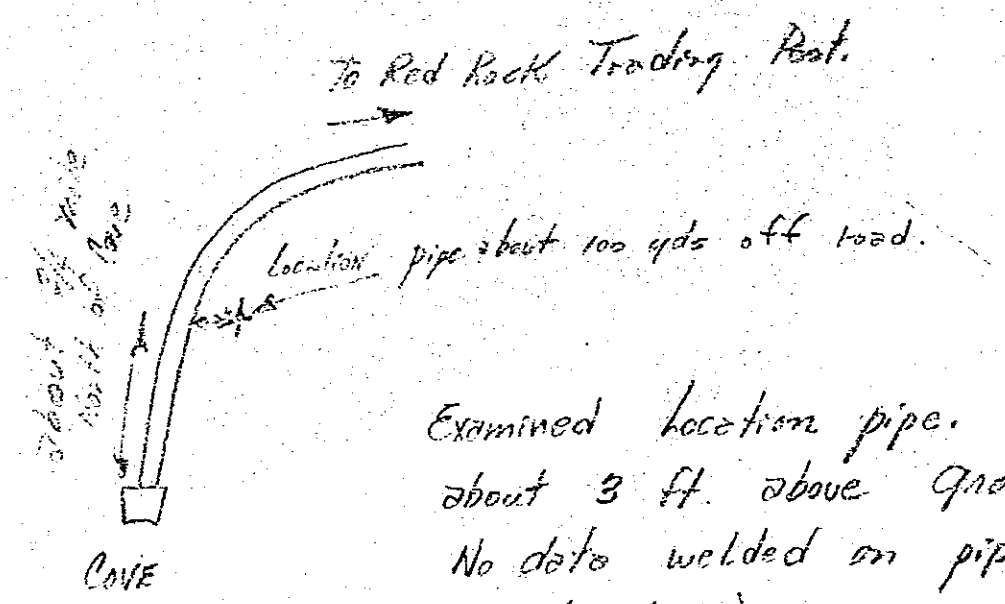
Formation Tops _____ Type Bit _____

Cores, Logs, DST _____ No. Bit ____ Drilling Rate _____

_____ Formation _____

Crews _____ Lithology _____

REMARKS, PHOTO, MAP NWNW35 - 37N - 29E
Marker 660' FNL 530' FWL



Examined location pipe. 4" pipe rising about 3 ft. above ground level. No data welded on pipe. (No sign on location.)
Have written to Blackburn asking him to weld data to pipe.

WELL NAME Blackburn #1-35 Navajo

Permit No. 298
Confidential: yes (No)

Largo Management Corporation

PETROLEUM ENGINEERS AND GEOLOGISTS

GEOLOGICAL REPORT

OF

VAUGHEY, VAUGHEY, AND BLACKBURN

NAVAJO NO. 35-1

Section 35, T-37-N, R-29-E

Apache County, Arizona

Prepared for

VAUGHEY, VAUGHEY, AND BLACKBURN

DENVER, COLORADO

Harrell Budd
Largo Management Corporation
Farmington, New Mexico
December 23, 1964

Largo Management Corporation

PETROLEUM ENGINEERS AND GEOLOGISTS

GEOLOGICAL REPORT

OF

VAUGHEY, VAUGHEY, AND BLACKBURN

NAVAJO NO. 35-1

Section 35, T-37-N, R-29-E
Apache County, Arizona

WELL DATA

Location	650' from north line 530' from west line Section 35, Township 37 North, Range 29 East Apache County, Arizona
Elevation	6244' Ground 6257' Kelly Bushings
Spud Date	November 22, 1964
Hole Size	17 1/4" hole from surface to 311' 12 1/2" hole from 311' to 321' 8 3/4" hole from 321' to 3442' 7 7/8" hole from 3442' to 3658'
Casing	Set 329' of 13 3/8" at 311' KB with 340 sacks of 2% CaC1 cement.
Cores	For core descriptions see attached sample description

Core No. 1 - 3442' to 3483', Recovered 34'
Core No. 2 - 3483' to 3513', Recovered 28 1/2'
Core No. 3 - 3523' to 3563', Recovered 40'
Core No. 4 - 3566' to 3578', Recovered 12'
Core No. 5 - 3578' to 3591', Recovered 13'
Core No. 6 - 3592' to 3600', Recovered 7 1/2'
Core No. 7 - 3600' to 3604', Recovered 4'
Core No. 8 - 3604' to 3647 1/2', Recovered 43 1/2'

Largo Management Corporation

PETROLEUM ENGINEERS AND GEOLOGISTS

Drill Stem Tests

DST No. 1 - 3415' to 3483' (McCracken)

Time	Initial Shut-in 30 minutes	
	Open one hour	
	Shut-in 30 minutes	
Recovery	Very weak blow of air throughout test. Recovered 475' salt water and 50' of salt water cut mud.	
Pressures	Initial Hydrostatic	1545 lbs.
	Initial Shut-in	1290 lbs.
	Initial Flow	27 lbs.
	Final Flow	230 lbs.
	Final Shut-in	1263 lbs.
	Final Hydrostatic	1545 lbs.

DST No. 2 - 3512' to 3563' (Aneth)

Time	Shut-in 30 minutes	
	Open one hour	
	Shut-in 30 minutes	
Recovery	Weak blow of air continuous throughout test. Recovered 90' of salt water cut drilling mud and 410' of salt water.	
Pressures	Initial Hydrostatic	1612 lbs.
	Initial Shut-in	1330 lbs.
	Initial Flow	14 lbs.
	Final Flow	203 lbs.
	Final Shut-in	1330 lbs.
	Final Hydrostatic	1625 lbs.
Bottom Hole Temperature		100°

DST No. 3 - 3578' to 3600' (Aneth)

Time	Shut-in 30 minutes
	Open one hour
	Shut-in 30 minutes
Recovery	Opened with very weak blow of air, died at end of test. Recovered 100' of water cut drilling mud.

15

Pressures	Initial Hydrostatic	1651 lbs.
	Initial Shut-in	1310 lbs.
	Initial Flow	14 lbs.
	Final Flow	58 lbs.
	Final Shut-in	1310 lbs.
	Final Hydrostatic	1651 lbs.

DST No. 4 - 3010' to 3115' (Mississippian)

Time: Shut-in 30 minutes
Open one hour
Shut-in 30 minutes

Recovery: Opened with a very weak blow, died in 50 minutes. Recovered 90' of drilling mud.

Pressures	Initial Hydrostatic	1468 lbs.
	Initial Shut-in	1201 lbs.
	Initial Flow	0 lbs.
	Final Flow	11 lbs.
	Final Shut-in	908 lbs.
	Final Hydrostatic	1468 lbs.

DST No. 5 - 3190' to 3238' (Mississippian)

Time: Shut-in 30 minutes
Open one hour
Shut-in 65 minutes

Recovery: Opened tool with very weak blow, died in 10 minutes. Recovered 10' of drilling mud. No shows. No water.

Pressures	Initial Hydrostatic	1470 lbs.
	Initial Shut-in	620 lbs.
	Initial Flow	0 lbs.
	Final Flow	0 lbs.
	Shut-in (final)	620 lbs.
	Final Hydrostatic	1472 lbs.

Total Depth: 3647 1/2' Driller
3657' Schlumberger

Logs: Schlumberger Well Surveying Corporation
Gamma Ray-Neutron from 2000' to 3656'
Induction-Electrical Log from 310' to 3656'
Sonic Log with Caliper from 310' to 3656'

Largo Management Corporation

PETROLEUM ENGINEERS AND GEOLOGISTS

Cement Plugs (Set in compliance with instructions of U.S. Geological Survey)
75 sacks of neat cement from 3300' to 3500'
55 sacks of neat cement from 550' to 650'
10 sacks of neat cement at surface
Installed dry hole marker in surface casing.

Plug Date December 16, 1964.
Rig released 12:30 AM 12/17/64

Contractor Huron Drilling Company
Denver, Colorado

Stratigraphy

Formation	Depth
Chinle	Surface
Shinarump	100'
Moenkopi	300'
Cutler	
DeChelly	425'
Evaporites	1072'
Hermosa	2280'
Molas	3007'
Ouray	3201'
Elbert	3234'
McCracken	3414'
Aneth	3516'
Cambrian?	3622'
Pre-Cambrian Cored 3641-47½	~~3650'~~ 3641

Largo Management Corporation

PETROLEUM ENGINEERS AND GEOLOGISTS

DRILLING TIME LOG

VAUGHEY, VAUGHEY, AND BLACKBURN

NAVAJO NO. 35-1

Section 35, T-37-N, R-29-E
Apache County, Arizona

Drilling time recorded in minutes per five feet

100 - 150			12	14	17	15	15	14	17	14
150 - 200	12	10	8	8	2	2	2	2	3	3
200 - 250	3	3	3	3	5	5	5	5	5	5
250 - 300	5	5	2	2	2	2	4	3	3	2
300 - 350	3	3	3	3	3	3	3	3	3	2
350 - 400	2	2	2	2	2	2	2	2	2	2
400 - 450	2	3	3	4	5	7	6	4	5	5
450 - 500	5	5	5	5	4	4	3	3	3	3
500 - 550	3	5	3	3	4	4	4	4	4	4
550 - 600	4	4	3	3	4	3	3	3	3	3
600 - 650	3	3	3	3	3	3	3	3	3	3
650 - 700	3	3	3	3	3	3	3	3	3	3
700 - 750	3	3	2	3	2	2	2	3	3	2
750 - 800	3	2	3	3	3	3	3	3	3	5
800 - 850	3	3	3	3	3	3	3	3	4	4
850 - 900	5	5	5	6	6	6	5	5	5	5
900 - 950	6	7	6	3	3	3	3	3	5	6
950 - 1000	5	5	5	7	6	5	5	5	5	6
1000 - 1050	5	4	6	11	12	11	9	8	11	7
1050 - 1100	9	13	13	15	23	18	30	39	8	8
1100 - 1150	7	10	10	8	9	8	10	10	13	11
1150 - 1200	19	15	19	20	14	16	16	14	14	13
1200 - 1250	18	15	15	13	16	13	11	12	10	10
1250 - 1300	10	13	15	12	14	12	10	13	10	6
1300 - 1350	12	9	13	16	12	13	16	8	10	10
1350 - 1400	11	5	5	14	26	19	11	18	14	10
1400 - 1450	13	13	13	14	14	12	13	16	12	10
1450 - 1500	18	17	21	25	31	29	25	15	10	13
1500 - 1550	23	25	25	25	23	20	6	5	7	7

5

Largo Management Corporation

PETROLEUM ENGINEERS AND GEOLOGISTS

1550 - 1600	6	6	6	5	5	7	7	6	7	8
1600 - 1650	6	6	5	7	8	7	7	8	8	8
1650 - 1700	8	7	9	8	8	9	8	7	9	8
1700 - 1750	10	9	10	9	8	9	10	10	10	9
1750 - 1800	8	10	10	10	10	7	5	7	8	9
1800 - 1850	10	10	9	9	8	9	9	8	10	9
1850 - 1900	11	12	11	13	9	10	10	7	7	8
1900 - 1950	12	7	8	7	8	9	9	6	10	8
1950 - 2000	10	7	8	6	5	7	8	6	5	6
2000 - 2050	7	7	7	7	7	7	8	7	9	9
2050 - 2100	9	9	8	8	9	9	8	9	10	8
2100 - 2150	10	10	10	11	11	9	10	10	8	10
2150 - 2200	10	8	10	11	9	7	8	9	8	9
2200 - 2250	7	8	8	10	9	8	8	11	11	10
2250 - 2300	11	10	12	11	8	10	10	11	11	20
2300 - 2350	9	10	8	8	9	10	11	12	14	14
2350 - 2400	16	10	11	11	13	12	13	13	13	7
2400 - 2450	10	14	23	32	21	27	42	37	12	13
2450 - 2500	13	14	17	15	16	19	19	16	21	24
2500 - 2550	25	35	30	31	31	35	26	32	50	41
2550 - 2600	41	46	47	57	59	69	58	35	31	36
2600 - 2650	36	30	31	27	23	19	16	20	26	37
2650 - 2700	30	18	20	23	24	17	21	23	24	27
2700 - 2750	26	28	23	27	35	38	36	49	41	48
2750 - 2800	44	39	29	14	16	19	21	26	21	27
2800 - 2850	23	19	20	20	23	24	26	23	12	10
2850 - 2900	15	14	17	17	14	17	18	16	17	16
2900 - 2950	23	24	29	23	28	12	8	17	18	20
2950 - 3000	18	15	12	15	29	24	19	15	25	22
3000 - 3050	22	21	23	22	25	23	23	22	16	17
3050 - 3100	10	19	25	27	28	25	23	25	22	22
3100 - 3150	24	23	22	23	24	23	25	23	25	25
3150 - 3200	23	26	26	26	25	28	27	28	29	28
3200 - 3250	17	16	18	18	20	21	22	17	24	28
3250 - 3300	27	30	24	21	27	25	33	19	33	38
3300 - 3350	43	45	53	26	26	24	30	25	30	26
3350 - 3400	31	40	41	40	50	34	44	49	49	58
3400 - 3450	50	58	70	50	26	49	40	34	35	23
3450 - 3500	58	72	116	91	111	134	123	103	111	109
3500 - 3550	123	123	132	21	35	55	50	32	47	58
3550 - 3600	64	84	85	190	130	59	80	86	77	45
3600 - 3650	111	93	139	144	164	157	145	144	170	212

T. D. 3647 1/2' in Granite

Largo Management Corporation

PETROLEUM ENGINEERS AND GEOLOGISTS

SAMPLE DESCRIPTION

VAUGHEY, VAUGHEY, AND BLACKBURN

NAVAJO NO. 35-1

Section 35, T-37-N, R-29-E
Apache County, Arizona

0 - 100	60% Sandstone, white to pink to maroon, poorly sorted, fine to coarse grained, argillaceous with red, calcareous clay matrix. 20% Shale, variegated, maroon, gray, pink, green, sandy, calcareous. 20% Limestone, red to gray, argillaceous, sandy, lithographic, (nodular?) dense, tight. Traces of pyrite, traces of orange chert.
100 - 300	100% Sandstone, white to light gray, fine to coarse grained, poorly sorted, glauconitic, argillaceous, with white, calcareous clay matrix. Traces of nodular limestone with interbedded lamination of gray and green shale.
300 - 310	100% Shale, variegated, pastel gray, green, lavender, maroon, red, brown, soft, bentonitic, clayey. Traces of nodular limestone.
310 - 360	100% Shale, predominantly red brown to brick red, sandy, calcareous, hard; some gray to gray green, soft, bentonitic shale (cavings?).
360 - 420	100% Shale, variegated, pastel, gray, green, brown, yellow, red, soft, clayey, bentonitic with traces of nodular limestone.
420 - 490	100% Sandstone, white, fine grained, well sorted, fairly clean, fair porosity, slightly calcareous.
490 - 520	100% Sandstone, fine to medium grained, poorly sorted, glassy, subangular, friable, fairly clean, porous.

520 - 530	100% Shale, light gray, sandy, calcareous.
530 - 540	50% Shale, as above. 50% Sandstone, white, fine to medium grained, glassy, subangular, friable, clean porous.
540 - 550	100% Sandstone, as above.
550 - 560	50% Sandstone, as above. 50% Shale, gray, sandy, calcareous.
560 - 590	100% Sandstone, white to pink very fine to fine grained, well sorted, subrounded, soft, porous, friable, slightly calcareous.
590 - 600	100% Sandstone, medium to coarse grained, subangular, glassy, fairly clean, porous, friable.
600 - 630	100% Sandstone, white, glassy, medium to coarse grained, subangular frosted, poorly sorted, calcareous, clean, porous, friable.
630 - 760	100% Sandstone, pink to orange, fine to medium grained, subrounded, well sorted, slightly argillaceous, calcareous.
760 - 880	100% Shale, gray, silty, calcareous, slightly bentonitic (cavings?)
880 - 980	100% Sandstone, pale red to orange, fine to medium grained, subrounded, slightly argillaceous, slightly friable, fair porosity. No shows.
980 - 1110	100% Siltstone, grading into very fine grained, silty sandstone, orange to vermillion, argillaceous, dense, tight, interbedded with dark red sandy shale. Big improvement in samples at 1110 after trip.
1110 - 1290	100% Sandstone, orange to vermillion, fine grained, micaceous, argillaceous, hard, dense, tight.

1290 - 1450	100% Shale, variegated, predominantly dark red to maroon, with some green, gray, brown and lavender. Traces of nodular limestone.
1450 - 1520	100% Shale, variegated, red, brown, purple, gray, green, silty, calcareous with traces of nodular limestone.
1520 - 1610	100% Shale, dark gray to black, hard, dense, brittle, calcareous.
1610 - 1630	100% Sandstone, brick red to orange, fine to very fine grained, silty, argillaceous, calcareous, shaly, hard, dense, tight.
1630 - 1680	100% Shale, variegated, predominantly dark gray to black, with some pastel shades of maroon, green, and light gray, calcareous with traces of nodular limestone.
1680 - 1710	100% Sandstone-siltstone, very fine grained, silty, argillaceous, dense, tight.
1710 - 1720	100% Shale, variegated, as above.
1720 - 1730	100% Sandstone-siltstone, orange to brick red, very fine grained, calcareous, dense, argillaceous.
1730 - 1920	100% Shale, variegated, with pastel shades of red, brown, lavender, gray, green, etc. Traces of nodular limestone.
1920 - 2070	100% Shale, predominantly red to maroon with traces of gray, green, lavender and yellow. Clayey to silty, slightly calcareous with traces of nodular limestone
2070 - 2200	25% Siltstone, pink, micaceous, argillaceous, calcareous, hard, dense, tight. 75% Shale, as above, with traces of nodular limestone.

2200 - 2340	5% Limestone, white, chalky, earthy, sandy. 95% Shale, red, maroon, red-brown, sandy, micaceous, calcareous.
2340 - 2420	100% Shale, brick red, sandy, micaceous, calcareous. Traces of nodular limestone.
2420 - 2460	5% Limestone, white, chalky, earthy, sandy, dense, tight. 95% Shale, as above.
2460 - 2480	25% Siltstone, brown, sandy, micaceous, calcareous, dense, tight. 5% Limestone, white, chalky, sandy, fragmental. 70% Shale, brick red, sandy, calcareous, micaceous. Traces of nodular limestone.
2480 - 2520	40% Siltstone, gray, micaceous, calcareous. 20% Limestone, gray to tan, sandy, micaceous, dense, tight, hard. 40% Shale, red brown, sandy, micaceous, calcareous.
2560 - 2580	25% Sandstone, white, fine grained, glassy, well sorted, calcareous, dense, tight. 50% Limestone, white, gray, chalky, sandy, dense, tight. Traces of milky chert. 25% Siltstone, gray to brown, sandy, argillaceous, calcareous.
2580 - 2600	30% Limestone, light gray, sandy, sublithographic, hard, dense, tight. 70% Shale, red-brown, sandy, calcareous, micaceous.
2600 - 2620	60% Shale, red to red-brown, to gray, sandy, calcareous. 40% Limestone, white, chalky, light gray, sandy to olive, microxln; hard, dense, tight.
2620 - 2640	90% Dolomite, light gray to olive, crypto to microcrystalline, very slightly sucrosic (silty?). Traces of porosity. No shows. 10% Limestone, white, chalky, soft, earthy.

6

2640 - 2650	80% Dolomite, as above. 20% Siltstone, gray, sandy, argillaceous, calcareous.
2650 - 2660	20% Dolomite, as above. 80% Shale, red-brown, silty, calcareous, soft, slightly bentonitic, clayey.
2660 - 2700	15% Dolomite, as above. 15% Limestone, white, chalky, soft, earthy. 70% Shale, red to brown, as above.
2700 - 2710	15% Dolomite, tan to olive, sublithographic to microcrystalline, slightly argillaceous, slightly silty, hard, dense, tight. 10% Limestone, white, light gray, chalky to microcrystalline, sandy, fragmental. 75% Shale, red to red-brown, silty, slightly calcareous.
2710 - 2720	25% Sandstone, white to gray, very fine grained, calcareous, dense, tight. 25% Dolomite, as above. 50% Shale, as above.
2720 - 2750	60% Sandstone, as above. 15% Dolomite, as above. 25% Shale, brick red, sandy, calcareous.
2750 - 2760	25% Sandstone, light gray, fine to very fine grained, calcareous. 10% Dolomite, white to gray, chalky, argillaceous, sandy. 65% Shale, brick red, silty, calcareous.
2760 - 2770	20% Sandstone, light gray, fine grained, calcareous. 20% Dolomite, white, chalky, tan, silty, sublithographic. 60% Shale, as above.

2770 - 2780	40% Sandstone, as above. 20% Dolomite, as above. 40% Shale, brick red, as above.
2780 - 2830	20% Shale, dark gray to black, carbonaceous, calcareous. 20% Sandstone, as above. 20% Dolomite, as above. 40% Shale, brick red, silty, calcareous.
2830 - 2840	10% Sandstone, white to light gray, fine to very fine grained, calcareous, dense, tight. 20% Dolomite, white to tan to gray, sandy, sub-lithographic, dense, argillaceous. 25% Shale, gray, soft, clayey, calcareous. 45% Shale, red, silty, slightly calcareous.
2840 - 2860	10% Sandstone, as above. 10% Dolomite, as above. 25% Shale, gray, clayey. 55% Shale, brick red, silty, calcareous.
2860 - 2920	10% Limestone, white, chalky, dolomitic, fragmental. 10% Dolomite, gray to tan, microxln, sandy. 30% Shale, gray, clayey, calcareous. 50% Shale, brick red, silty, calcareous. Samples are very poor, almost 100% cavings.
2920 - 2950	100% Shale, light to dark gray, soft, clayey, slightly calcareous.
2950 - 3040	10% Limestone, white, chalky, earthy, dolomitic, fragmental, dense, tight. 25% Shale, gray, soft, calcareous, as above. 65% Shale, red, sandy, calcareous.
3040 - 3070	100% Shale, brick red, purple, gray, green, ocher, soft, clayey, calcareous.
3070 - 3100	10% Limestone, white, soft, chalky, earthy. 90% Shale, as above.

3100 - 3150	100% Shale, predominantly brick red, silty, sandy, micaceous, very slightly calcareous. Minor amounts of lavender, purple, gray, green, ocher. Traces of white chalky limestone.
3150 - 3200	90% Shale, as above. 10% Limestone, white, chalky, sandy, earthy.
3200 - 3270	5% Limestone, white, soft, chalky, earthy. 95% Shale, variegated, predominantly brick red with some minor amounts of lavender, brown, gray, green and ocher.
3270 - 3390	100% Shale, as above. (Very poor samples - cavings?). Mudded up at 3390'.
3390 - 3400	100% Dolomite, tan to cream, sublithographic, sandy with large floating rounded sand grains.
3400 - 3410	100% Dolomite, buff to cream, sublithographic, hard, dense, tight.
3410 - 3420	10% Sandstone, white, fine grained, glauconitic, dolomitic, hard, dense, tight. 90% Dolomite, as above.
3420 - 3430	100% Sandstone, white, fine to medium grained, glauconitic, dolomitic, hard, tight. Dull yellow mineral fluorescence. No cut. No gas kick.
3430 - 3443	75% Sandstone, as above. 25% Sandstone, pink to orange to red, fine grained, argillaceous, micaceous, slightly arkosic
Core No. 1	3443 to 3483, Recovered 34' 11' Sandstone, white with pale shades of light pink, fine grained, subrounded, glassy, dolomitic with few red and green grains. 7' Shale, dark red to maroon, sandy, micaceous, dolomitic.

3' Sandstone, white with some pale green, abundant glauconite, fine to very fine grained, dense, hard, tight, dolomitic with incipient vertical fractures.
4' Shale, maroon, dark red, sandy, micaceous, dolomitic with few thin stringers of pale red, argillaceous sandstone.
3' Sandstone, white to pink, fine grained, glauconitic with few pink and green grains, dense, tight, dolomitic.
10' Shale, maroon, dark red, sandy, micaceous, dolomitic with few small green spots.

Core No. 2 — 3483' to 3513', Recovered 28 1/2'.
1/2' Shale, red, mottled green, sandy, micaceous, interbedded with green, fine grained, glauconitic sandstone.
2 1/2' Dolomite, light green to pink, sandy, glauconitic, with thin to hairline laminations of red shale.
6' Siltstone, pale red to pale green, argillaceous, sandy, dolomitic, glauconitic.
12' Shale, red, clayey, dolomitic with irregular laminations and inclusions of pale red siltstone.
5' Shale and siltstone, interbedded, red, dolomitic, hard, dense.
2 1/2' Sandstone, light green, fine to medium grained, silicious, argillaceous, glauconitic with few fresh grains of pink feldspar. Few thin red shale laminations.

3513 - 3523 — 100% Dolomite, tan, very fine crystalline, slightly sucrosic with traces of intercrystalline porosity.

Core No. 3 — 3523' to 3563', Recovered 40'.
7' Dolomite, light gray, very fine crystalline, sucrosic with traces of pinpoint and microvuggular porosity. Dull yellow mineral fluorescence, salty taste.
6' Dolomite, light gray, lithographic, dense, tight.

5

8' Dolomite, light gray to white, medium to fine crystalline with fair intercrystalline and microvuggular porosity. Dull yellow mineral fluorescence, salty taste. Looks wet.
11' Dolomite, light gray, lithographic, very hard, dense, tight.
8' Dolomite, gray to gray green, argillaceous, silty, dense, tight.

Core No. 4 — 3566' to 3578', Recovered 12'.
12' Dolomite, dark gray to brown, sucrosic, argillaceous to sublithographic, very hard, dense, tight with asphaltic residue along shale partings. Open vertical fractures.

Core No. 5 — 3578' to 3591', Recovered 13'.
2' Dolomite, dark gray to brown, argillaceous, sublithographic, hard, dense, tight. Open vertical fractures.
1' Dolomite, dark gray to dark brown, sucrosic, argillaceous, dense, with numerous small drusy vugs coated with live oil. Good matrix oil stain.
5 1/2' Dolomite, dark gray to brown, slightly sucrosic, argillaceous, dense, tight. No shows.
4 1/2' Dolomite, dark brown, microxln, dense with abundant small drusy vugs coated with live oil. Good matrix oil saturation, good fluorescence and cut. 4" of brown chert at base of core.

Core No. 6 — 3592' to 3600', Recovered 8'.
2' Dolomite, dark brown, very fine crystalline to sublithographic, very hard, dense, tight. faint, spotty, oil stain and fluorescence. Few thin to hairline laminations of black carbonaceous shale.
2' Dolomite, light gray, very fine crystalline to sublithographic, very hard, dense, tight. No shows. Few thin laminations of black, carbonaceous shale.
3' Dolomite, tan to brown, fine crystalline, sucrosic, argillaceous, laminated with very thin laminae of argillaceous dolomite. Good matrix oil stain. Good fluorescence, good odor.

1' Dolomite, light gray, very fine crystalline, slightly sucrosic, very hard, dense, tight. No shows.

Core No. 7 — 3600' to 3604', Recovered 4'.
2' Sandstone, white, fine to medium grained, glassy, dolomitic with white clay matrix. Traces of glauconite. Few small spots of dead oil. Dense, tight, no shows.
1' Sandstone, tan to dark brown, fine grained, dolomitic with good oil stain.
1' Sandstone, white, fine grained, glauconitic, with white dolomitic clay matrix. No shows.

Core No. 8 — 3604' to 3647 1/2', Recovered 43 1/2'.
3' Sandstone, light gray, fine to medium grained, subrounded to rounded, dolomitic, hard, dense, tight. No shows, slightly arkosic, with few thin green shale laminations.
4' Sandstone, gray mottled pink and green, fine to coarse grained, poorly sorted, dense, dolomitic, slightly argillaceous with few thin laminations of green shale.
2' Sandstone, dark red, fine grained, argillaceous, slightly dolomitic, very hard, dense, tight.
5' Shale, green, sandy, waxy.
1' Sandstone, dark red, fine grained, dense, hard, quartizitic.
1 1/2' Shale, green, clayey, waxy.
4 1/2' Sandstone, dark red, fine grained, argillaceous, quartzitic, very hard, dense, tight.
3' Shale, green, sandy, hard, dense, almost green, argillaceous siltstone.
3' Shale, dark red to maroon, sandy, micaceous, very hard, dense.
2' Siltstone, green, sandy, micaceous, argillaceous with few large floating feldspar crystals.
4' Siltstone, green to maroon, argillaceous, sandy with large inclusions of pink granite.
4' Granite, pink to green, weathered, reworked.
2 1/2' Granite, pink, crystalline, fresh.

T D — 3647 1/2' in pre Cambrian Granite.

Pen No. 298

CA-20

CORE LABORATORIES, INC.
Petroleum Reservoir Engineering
DALLAS, TEXAS

Page No.

CORE ANALYSIS RESULTS

Company ~~VAUGHEY, VAUGHEY & BLACKBURN~~ W. T. Blackburn
Formation
File R?-3-1940
Well 35-1 NAVAJO
Core Type DIA. CONV.
Date Report 12-13-64
Field WILDCAT
Drilling Fluid WATER BASE
Analyst HUFF
County APACHE State ARIZONA Elev. Location NW NW Sec 35 T37N R29E

Lithological Abbreviations

SAND-SD	DOLOMITE-DOL	ANHYDRITE-ANHY	SANDY-SDY	FINE-FN	CRYSTALLINE-XLN	BROWN-BRN	FRACTURED-FRAC	SLIGHTLY-SL/
SHALE-SH	CHERT-CH	CONGLOMERATE-CONG	SHALY-SHY	MEDIUM-MED	GRAIN-GRN	GRAY-GY	LAMINATION-LAM	VERY-V/
LIME-LM	GYPSUM-GYP	FOSSILIFEROUS-FOSS	LIMY-LMY	COARSE-CSE	GRANULAR-GRNL	VUGGY-VGY	STYLOLITIC-STY	WITH-W/

SAMPLE NUMBER	DEPTH FEET	PERMEABILITY MILLIDARCYS MAX	90°	POROSITY PER CENT	RESIDUAL SATURATION PER CENT PORE OIL	TOTAL WATER	SAMPLE DESCRIPTION AND REMARKS
							WHOLE CORE ANALYSIS
31	3580-81	0.3	0.2	2.3	10.7	35.5	Dolo, dns xln, vuggy, hairline fracs
32	3586-87	0.3**		3.2	4.7	69.0	Dolo, argill, carb ptgs
33	3587-88	1.3	0.4	3.5	1.4	62.0	Dolo, xln, argill, hairline fracs, vuggy
34	3588-89	2.0	1.1	4.1	10.2	53.5	Dolo, xln, vuggy, hairline fracs
35	3589-90	1.6	1.4	3.0	1.3	52.5	Dolo, xln, vuggy, hairline fracs
36	3590-91	1.8	1.8	2.9	1.4	64.9	Dolo, xln, vuggy, chty, hairline fracs
							CONVENTIONAL CORE ANALYSIS
37	3592-93	<0.01		1.2	16.7	58.2	Dolo, xln, argill, carb ptgs
38	3593-94	<0.01		1.3	15.3	69.2	Dolo, xln, argill, carb ptgs
39	3594-95	<0.01		1.0	0.0	90.0	Dolo, xln, argill, carb ptgs
40	3595-96	<0.01		1.0	0.0	70.0	Dolo, xln, thin carb ptgs
41	3596-97	0.01		1.7	11.8	53.0	Dolo, xln, pp vugs in stks wi stn
42	3597-98	1.3		7.0	7.1	21.4	Dolo, xln, suc stks wi pp vugs, gd stn
43	3598-99	0.20		6.8	7.4	25.0	Dolo, xln, suc stks wi pp vugs, gd stn
44	3599-3600	<0.01		1.4	0.0	78.6	Dolo, xln, ltl stn on frac
45	3600-01	1.5		8.2	0.0	34.2	Ss, wh f g, qtztic, vert fr
46	3601-02	0.86		7.7	0.0	55.9	Ss, wh f g, qtztic, vert fr
47	3602-[illegible]	5.5		7.2	19.5	22.2	Ss, wh f g, vert frac, ltl [illegible] cem
48	3603-04	2.5		8.2	0.0	51.2	Ss, wh f g, sh[illegible] cem, vert frac
49	3604-05	0.01		4.9	0.0	51.0	Ss, med g, sl srx, qtztic
50	3[illegible]-07	0.02		4.2	0.0	59.5	Ss, med g, sl srx, qtztic
51	3608-09	0.11		4.1	0.0	41.5	Ss, med g, srx, qtztic
52	3610-11	0.06		2.9	0.0	58.5	Ss, cgl, qtztic, scat grn sh
53	3612-13	0.01		2.7	0.0	51.8	Ss, med g, qtztic, ltl grn sh
54	3619-20	0.01		2.5	0.0	52.0	Qtzite ss, cgl, fel g wthd

SERVICE NO. 8 & 8-A

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

W.T. Blackburn ~~Vaughey & Vaughey et al~~ #35-1 Navajo
Core #1 Analysis

Sample	Depth	Permeability	Porosity	Oil	Water
1	3442-43'	18	9.8	0.0	67.4
2	43-44	12	9.2	0.0	84.8
3	44-45	21	10.1	0.0	77.0
4	45-46	22	9.6	0.0	79.2
5	46-47	3.0	7.8	0.0	56.0
6	47-48	10	10.4	0.0	68.3
7	48-49	18	8.3	0.0	65.1
8	49-50	24	11.0	0.0	70.8
9	50-51	1.5	6.5	0.0	55.4
10	51-52	11	8.1	0.0	61.8
11	52-53	1.9	7.8	0.0	60.3
12	56-57	0.01	5.2	0.0	86.5
13	57-58	0.01	5.7	0.0	86.0
14	58-59	0.01	5.0	0.0	57.0
15	59-60	0.02	3.3	0.0	57.5
16	65-66	0.01	1.0	0.0	60.0

FILE

12-7-64
W. T. Blackburn
~~Vaughey & Vaughey et al~~ #35-1 Navajo

Core #1 3442-83' - cored 41', rec. 34'

11' ss, finely grained, dolo., looks wet
3' red sh
4' ss, finely grained, green, glon.
3' red sh with thin sand stringers
3' ss, finely grained, shly with inclusions of green sh
10' red sh
Lost 7', probably red sh. Core barrel jammed @ 3483'.

Prep to DST 3415-83. Single packer test, no shows, no mud logger kick.

"TIGHT HOLE"

APPLICATION FOR PERMIT TO DRILL, DEEPEN, PLUG BACK, OR RE-ENTER

APPLICATION TO DRILL ☒ DEEPEN ☐ PLUG BACK ☐ RE-ENTER OLD WELL ☐

NAME OF COMPANY OR OPERATOR: W. T. Blackburn

DATE: October 30, 1964

Address: 1650 Denver Club Building, Denver, Colorado 80202

DESCRIPTION OF WELL AND LEASE

Federal, State or Indian Lease Number or name of lessor, if fee lease: Navajo Contract 14-20-0603-8435

Well number: ~~#1~~ 35-1

Elevation (ground): 6244 feet

Well location and acreage dedicated to the well (give footage from section lines): 650' from N line; 530' from W line, NW¼NW¼ Section 35-37N-29E, G&SRM; dedicate W/2 NW/4 JBB

Section—township—range or block & survey

Field & reservoir (if wildcat, so state): Wildcat

County: Apache County, Arizona

Distance, in miles, and direction from nearest town or post office: approximately 1-½ miles north of Cove School

Nearest distance from proposed location to property or lease line: 530 feet

Distance from proposed location to nearest drilling, completed or applied—for well on the same lease: no previous drilling on same lease feet

Proposed depth: 4100 feet to 4500 feet

Rotary or cable tools: Rotary

Approx. date work will start: November 15, 1964

Number of acres in lease: 2,560.00

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: not applicable - no previous drilling

Status and amount of bond: $2,500.00 individual

Organization Report: On file / Or attached on file

Filing Fee of $25.00 Attached $25.00

Remarks: (If this is an application to deepen or plug back, briefly describe work to be done, giving present producing zone and expected new producing zone)

THIS WELL IS BEING DRILLED AS A "TIGHT HOLE" - DO NOT RELEASE ANY INFORMATION WITHOUT PERMISSION OF OPERATOR.

*Fill in Proposed Casing Program on reverse side

CERTIFICATE: I, the undersigned, under the penalty of perjury, state that I am the said W. T. Blackburn ~~agent~~ ~~of~~ ~~the~~ ~~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.

W T Blackburn

Signature W. T. Blackburn

October 30, 1964

Date

CONFIDENTIAL

Permit Number: 298

Approval Date: Nov 4, 1964

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.

See Instruction on Reverse Side of Form

STATE OF ARIZONA
OIL & GAS CONSERVATION COMMISSION

Application to Drill, Deepen or Plug Back and Plat

File Two Copies

Form No. 3

(Complete Reverse Side)

1. Operator shall outline the dedicated acreage for *both* oil and gas wells on the plat. W½NW¼

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

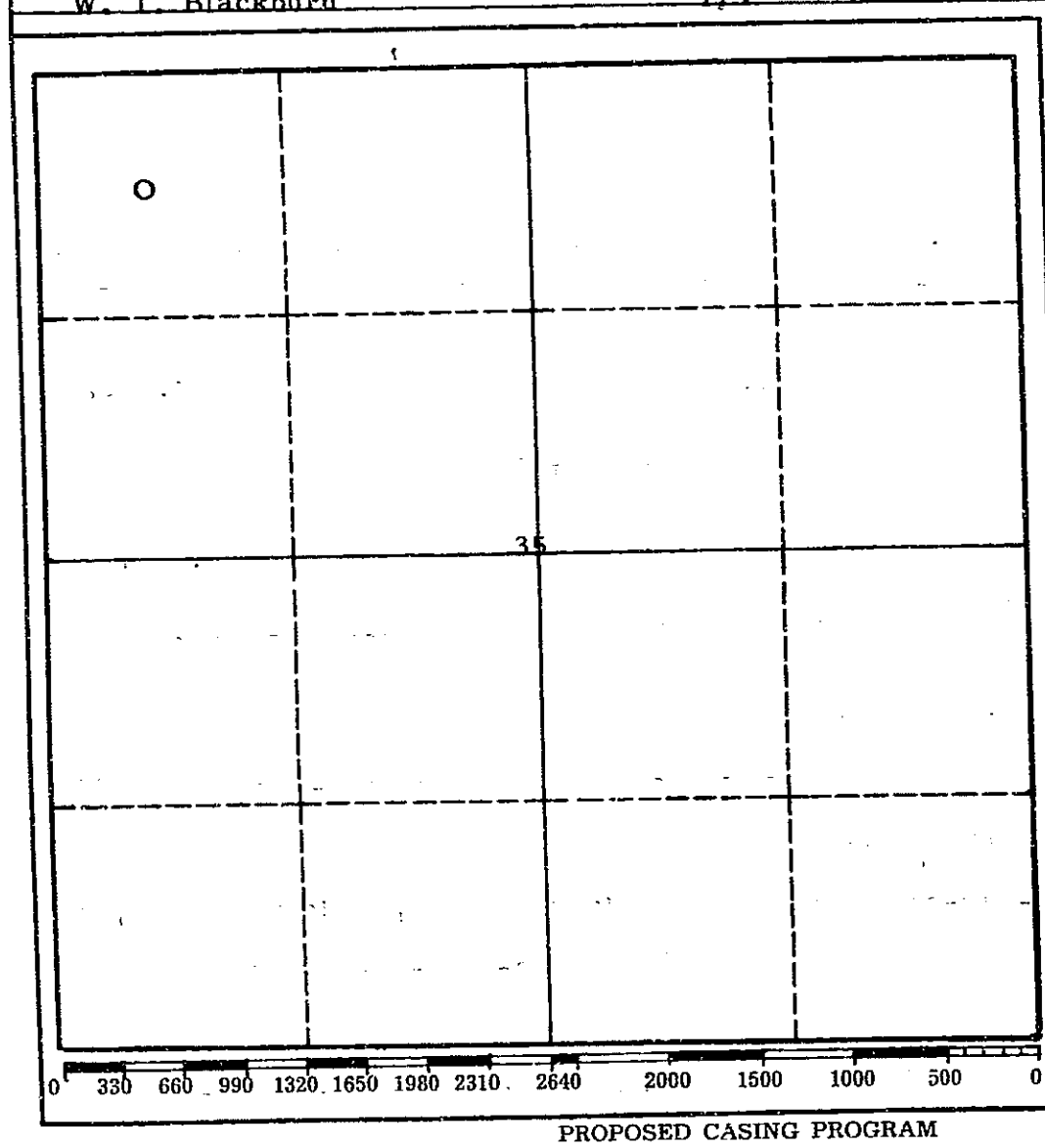
3. All distances shown on the plat must be from the outer boundaries of the Section.

4. Is the Operator the only owner in the dedicated acreage outlined on the plat below? YES____ NO X.

5. If the answer to question one 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 Undivided ownership

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

Owner	Land Description	Undivided Interests
Pan American Petroleum Corporation		1/3
Sinclair Oil & Gas Company		1/6
Pure Oil Company		1/4
W. T. Blackburn		1/4



CERTIFICATION

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

Name W. T. Blackburn

Position an individual

Company

Date October 30, 1964

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 See Attached Statement

Registered Professional Engineer and/or Land Surveyor

Certificate No.

PROPOSED CASING PROGRAM

Size of Casing	Weight	Grade & Type	Top	Bottom	Cementing Depths	Sacks Cement
13-3/8"	32#	Used 498 48# H-40 STUC				
9-5/8"	32#	J-55 ST&C				Regular Cement

COMPANY W. T. Blackburn

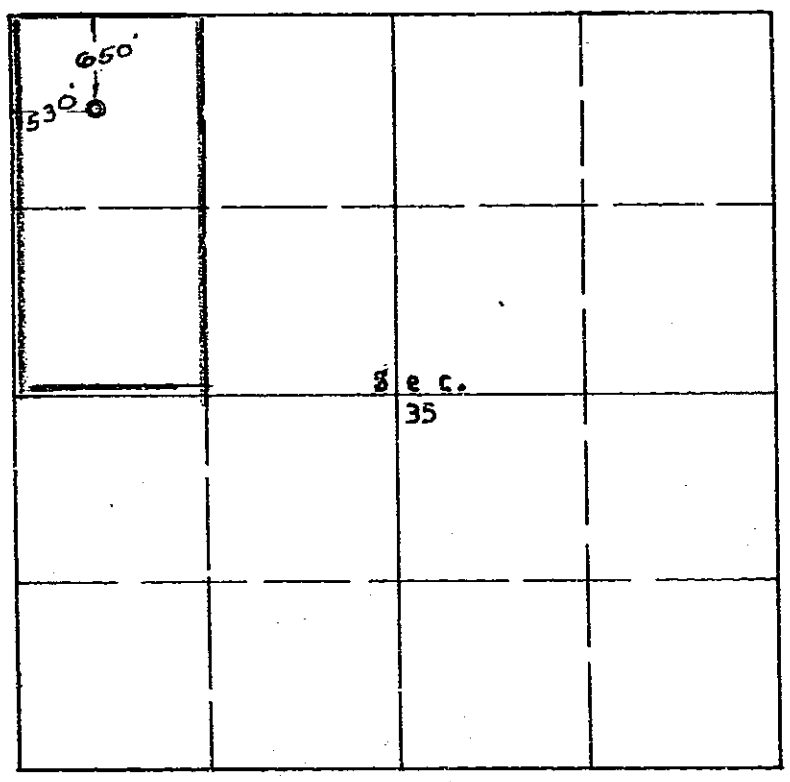
Well Name & No. #1 Navajo-8435 Cont. No. 14-20-0603-8435 Lease No.

Location 650 feet from the North line and 530 feet from the West line.

Being in NW¼NW¼

Sec. 35, T37 N., R 29 ~~W., N.M.P.M.,~~ East Apache County, Arizona.

Ground Elevation 6244



Scale, 4 inches = 1 mile

Surveyed September 19, 1964

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.

Ernest V. Echohawk
Registered Land Surveyor
~~N. M. Reg. #1545~~
Arizona Reg. No. 2311

REGISTERED LAND SURVEYOR
CERTIFICATE EXPIRES DEC. 31, 19
Seal:
ERNEST V. ECHOHAWK
Farmington, New Mexico
ARIZONA, U.S.A.

298

CONFIDENTIAL

BOND

KNOW ALL MEN BY THESE PRESENTS

NAVAJO CONTRACT NO.
BOND SERIAL NO. 14-20-0603-8435

That we: W. T. BLACKBURN
1615 Denver Club Building
of the County of: Denver in the State of: Colorado

as principal, and FEDERAL INSURANCE COMPANY

of 90 John Street, New York 38, New York
AUTHORIZED TO DO BUSINESS WITHIN the State of Arizona.

as surety, are held and firmly bound unto the State of Arizona in the penal sum as indicated, 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 is 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:

NW¼ NW¼ SEC. 35, TOWNSHIP 37 NORTH, RANGE 29 EAST G&SRM
(May be used as blanket bond or for single well)

APACHE COUNTY, ARIZONA

CANCELLED
DATE Nov 11, 1965

NOW, THEREFORE, if the above bounden principal shall comply with all of the provisions of the laws of this State and the rules, regulations and orders of the Oil and Gas Conservation 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 & Gas Conservation Commission all notices and records required by said Commission, 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, then this obligation is void; otherwise, the same shall be and remain in full force and effect.

Penal sum of TWENTY FIVE HUNDRED AND NO/100 ($2,500.00)

Witness our hands and seals, this 19th day of October, 1964.

Countersigned by:

E. J. O'Malley
Resident Agent

W. T. Blackburn
Principal

Witness our hands and seals, this 19th day of October, 1964

FEDERAL INSURANCE COMPANY

BY: Carl Cross
Surety Carl Cross, Attorney-in-Fact

Bond No. 8021-84-61

(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 Nov 4, 1964
STATE OF ARIZONA
OIL & GAS CONSERVATION COMMISSION
By: John Bannister

Permit No. 298

STATE OF ARIZONA
OIL & GAS CONSERVATION COMMISSION
Bond
File Two Copies
Form No. 2

RECEIVED
2 1964
STATE O & G
CONS. COMM.

[redacted]

'fied Copy of

POWER OF ATTORNEY

Know all Men by these Presents, That the FEDERAL INSURANCE COMPANY, 90 John Street, New York, New York, a New Jersey Corporation, has constituted and appointed, and does hereby constitute and appoint

C. Gale Neiswanger
L. A. Loiseau
Carl Cross
Robert J. Marker
Walter J. Kulp, Jr.
of
Denver, Colorado

each its true and lawful Attorney-in-Fact to execute under such designation in its name and to affix its corporate seal to and deliver for and on its behalf as surety thereon or otherwise, bonds of either of the following classes, to-wit:

1. Bonds on behalf of contractors in connection with bids, proposals or contracts to or with the United States of America, any State or political subdivision thereof or any person, firm or corporation.
2. Surety Bonds to the United States of America or any agency thereof, including those required or permitted under the laws or regulations relating to Customs or Internal Revenue; License and Permit bonds or other indemnity bonds under the laws, ordinances or regulations of any State, City, Town, Village, Board or other body or organization, public or private; bonds to Transportation Companies, Lost Instrument bonds, Lease bonds, Workmen's Compensation bonds, Miscellaneous Surety bonds and bonds on behalf of Notaries Public, Sheriffs, Deputy Sheriffs and similar public officials.
3. Bonds and Undertakings (other than Fiduciary Bonds) filed in any suit, matter or proceeding in any Court, or filed with any Sheriff or Magistrate, for the doing or not doing of anything specified in such Bond or Undertaking, in which the penalty of the bond or undertaking does not exceed the sum of Fifty Thousand Dollars ($50,000.00).

In Witness Whereof, the said FEDERAL INSURANCE COMPANY has, pursuant to its By-Laws, caused these presents to be signed by its Vice President and Assistant Secretary and its corporate seal to be hereto affixed this 1st day of February 19 64.

FEDERAL INSURANCE COMPANY
By

Frederick C. Gardner
Vice President

Davis Quinn
Assistant Secretary

STATE OF NEW YORK
County of New York } ss.:

On this 1st day of February 19 64, before me personally came Davis Quinn, to me known and by me known to be Assistant Secretary of the FEDERAL INSURANCE COMPANY, the corporation described in and which executed the foregoing Power of Attorney and the said Davis Quinn being by me duly sworn, did depose and say that he resides in the City of New York, in the State of New York; that he is Assistant Secretary of the FEDERAL INSURANCE COMPANY and knows the corporate seal thereof; that the seal affixed to the foregoing Power of Attorney is such corporate seal and was thereto affixed by authority of the By-Laws of said Company and that he signed said Power of Attorney as Assistant Secretary of said Company by like authority; that he is acquainted with Frederick C. Gardner and knows him to be Vice President of said Company, and that the signature of said Frederick C. Gardner subscribed to said Power of Attorney is in the genuine handwriting of said Frederick C. Gardner and was thereto subscribed by authority of said By-Laws and in deponent's presence.

Acknowledged and Sworn to before me on the date above written.

Notary Public

MARION J. McGRATH
NOTARY PUBLIC, State of New York
No. 24-7837850
Qualified in Kings County
Certificate filed in New York County
Commission Expires March 30, 1964

Form 12387F (Ed. 3-64)

H4369 (5M)

CITY AND COUNTY OF NEW YORK: ss

I, the undersigned, Assistant Secretary of the FEDERAL INSURANCE COMPANY, do hereby certify that the following is a true excerpt from the By-Laws of the said Company as adopted by its Board of Directors on March 11, 1953 and amended January 2, 1964 and that this By-Law is in full force and effect.

"ARTICLE XIX.

Section 2. All bonds, undertakings, contracts, powers of attorney, and other instruments other than as above, for and on behalf of the Company which it is authorized by law or its charter to execute, may and shall be executed in the name and on behalf of the Company either by the Chairman or the Vice-Chairman or the President or a Vice-President, jointly with the Secretary or an Assistant Secretary, under their respective designations, except that any one or more officers or attorneys-in-fact designated in any resolution of the Board of Directors or the Executive Committee, or in any power of attorney executed as provided for in this section, may execute any such bond, undertaking or other obligation as provided in such resolution or power of attorney."

And I further certify that I have compared the foregoing copy of the POWER OF ATTORNEY with the original thereof and the same is a correct and true copy of the whole of said original Power of Attorney and that said Power of Attorney has not been revoked.

And I further certify that said FEDERAL INSURANCE COMPANY is duly licensed to transact fidelity and surety business in each of the States of the United States of America, Puerto Rico, and each of the Provinces of the Dominion of Canada with the exception of Prince Edward Island; and is also duly licensed to become sole surety on bonds, undertakings, etc., permitted or required by the laws of the United States.

Given under my hand and seal of said Company at New York, N. Y., this 19th day of October, 19 64

Walter La Forge
Assistant Secretary

RECEIVED

January 15, 1965

Vaughey and Vaughey
1650 Denver Club Building
Denver, Colorado 80202

Attention: Mr. W.T. Blackburn

Gentlemen:

Enclosed is an approved copy of the Plugging Record on the Navajo #35-1 well.

In response to a previous request from you, we had mailed the necessary forms for completion of a well. If these have not been received by you, please let us know so we may send you an additional suppply.

In reply to the request in your letter of January 13, 1965 we are enclosing additional copies of the Plugging Record form.

Yours very truly,

John Bannister
Executive Secretary

mr
enc

VAUGHEY AND VAUGHEY
OIL PRODUCERS

1650 DENVER CLUB BUILDING
DENVER, COLORADO 80202

January 13, 1965

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

Attention: Mr. John Bannister

Re: NAVAJO #35-1 WELL, NW¼NW¼
Section 35-37N-29E, G&SRM,
Apache County, Arizona
File 298

Gentlemen:

Thank you for your recent letter of January 11, 1965, and the Plugging Record Form No. 10 enclosed. We have completed this form and return it herewith.

May we please have a supply of this form -- approximately 25 -- to file on our other well. We have had requests for "approved" Plugging Records from our various participants. Since only one copy is filed, we have taken the liberty of enclosing an additional copy with request that you stamp approval on it and return in the enclosed envelope.

We very much appreciate your cooperation in this matter and thank you for your efforts in helping us properly fulfill requirements of the State of Arizona.

RECEIVED
JAN 14 1965
STATE O & G
CONS. COMM.

Very truly yours,

VAUGHEY AND VAUGHEY

By W. T. Blackburn

WTB:p
Enclosures

VAUGHEY AND VAUGHEY
OIL PRODUCERS

1650 DENVER CLUB BUILDING
DENVER 2, COLORADO

January 6, 1965

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

Attention: Mr. John Bannister

Re: NAVAJO #35-1 WELL, NW¼NW¼
Section 35, Township 37 North,
Range 29 East, G&SRM, Apache
County, Arizona

Gentlemen:

We are enclosing herewith the following items:

1) Well Completion or Recompletion Report and Well Log covering the above captioned well.

2) Copy of Gamma Ray Neutron, Induction Electric, Sonic with Caliper logs run on the above well.

If this is satisfactory, may we have authorization to release our Bond No. 802-184-61 which we submitted on the above well.

If there is anything else you would like, please advise.

Very truly yours,

W. T. Blackburn

WTB:p
Enclosures

RECEIVED
JAN 11 1965
STATE O & G
CONS. COMM.

CONFIDENTIAL

January 11, 1965

Mr. W.T. Blackburn
Vaughey and Vaughey
1650 Denver Club Building
Denver 2, Colorado

Re: Blackburn Navajo 35-1 well
NW/4NW/4, S35-T37N-R29E, Apache County, Arizona
File 298

Federal Insurance Company Bond 8021-84-61

Dear Mr. Blackburn:

This will acknowledge receipt of the Well Completion Report and the Gamma Ray Neutron, Induction Electric, Sonic logs run on this well.

This letter will also constitute the authority from this Commission that the captioned bond covering this well may be cancelled.

In order to complete our files, however, we will need a copy of your Plugging Record.

We very much appreciate your cooperation.

Yours very truly,

John Bannister
Executive Secretary
mr

cc: Federal Insurance Company
90 John Street
New York 38, New York

November 9, 1964

Mr. W.T. Blackburn
1615 Denver Club Building
Denver, Colorado 802020

Dear Mr. Blackburn:

We were unable to reach you by telephone Friday, November 6, to discuss your applications to drill two wells in Apache County, Arizona.

In order to avoid confusion, we have designated the well in Section 6 as the Navajo #6-1; and the well in Section 35 is designated as the Navajo #35-1.

Approved copies of these applications and receipt for the filing fees, and approved copies of bonds are enclosed.

Yours very truly,

J.R. Scurlock
Geologist

mr
enc

File 298 & 300

80202

October 30, 1964

O'Malley Insurance Company, Inc.
First National Bank Building
Phoenix, Arizona

Attention: Mr. E. S. O'Malley

Gentlemen:

We enclose herewith State of Arizona Bond Form No. 2, Bond No. 8021-84-61, Navajo Contract No. 14-20-0603-8435, in the amount of $2,500.00, covering the NW$\frac{1}{4}$NW$\frac{1}{4}$ Section 35-37N-29E, G&SRM, Apache County, Arizona. You will note this has been executed by Mr. Carl Cross, Attorney-in-Fact for Federal Insurance Company, and must be countersigned by you for the State of Arizona.

As soon as you have completed this, we would very much appreciate your taking both copies to Mr. John Bannister, Executive Secretary of the Oil and Gas Conservation Commission, State of Arizona, Phoenix, Arizona.

We would very much appreciate yourhandling this as soon as possible as we are attempting to receive approval of our application as soon as possible.

Very truly yours,

VAUGHEY AND VAUGHEY

By_____
W. T. Blackburn

WTB:p
Enclosure
cc: Mr. John Bannister

Loiseau, Neiswanger & Co.
1410 Security Life Buiding
Denver, Colorado 80202
Attention: Mr. Carl Cross

CONFIDENTIAL

298

VAUGHEY AND VAUGHEY
OIL PRODUCERS

1650 DENVER CLUB BUILDING
DENVER 2, COLORADO 80202

October 30, 1964

Oil and Gas Conservation Commission
State of Arizona
Phoenix, Arizona

Attention: Mr. John Bannister
Executive Secretary

Gentlemen:

Enclosed herewith is an original and one cop y of your Form No. 3, together with survey plat from Ernest Echohawk, Arizona Registration Number 2311. May we please have your approval for this application.

We also enclose a copy of our transmittal letter to Mr. E. S. O'Malley of O'Malley Insurance Company regarding the Bond. You may expect Mr. O'Malley to deliver the Bond to you in the very near future.

Thank you for your prompt attention to this.

Very truly yours,

VAUGHEY AND VAUGHEY

W. T. Blackburn

WTB:p
Enclosures

CONFIDENTIAL