

P-W

Amer80-Stanolind Black Mt. #1 NE/SE
Sec 3-T31N-R23E, Apache Co. 1-77

County Apache
Area Black Mt.
Lease No. I-149-IND-7481

Well Name Amerado Starolind Black Mt. #1
Location SW NW Sec 3 Twp 37N Range 23E Footage 2460 FNL; 300 FWL
LS Spud Complete Total
Elev 6163 Gr 6172 KB Date 8-15-50 Abandon 11-1-50 Depth 5765 PB 5550
Contractor: _____ Approx. Cost \$ _____

Drilled by Rotary X
Cable Tool _____
Casing Size Depth Cement
B 3/8 521 425 ex
20 78 28sx
Production Horizon _____
Initial Production D & A

REMARKS: 4 DST's and 11 cores: see file.

See 10-30-50 letter, L.A. Herald to Amerada re correlations by E.D. McKee

Elec. _____ Sample Log Am Strat
Logs GR-Induction: E log Sample Descript _____
Applic _____ Plugging _____ Completion _____ Sample Set 70, 1562
to Plub _____ Record _____ Report Cores _____

Water well - accepted by _____

Bond Co. _____
& No. _____

Bond Am't \$ _____ Cancelled _____ Date _____
Organization Report _____

Filing Receipt _____ dated _____ Well Book _____ Plat Book _____

Loc. Plat _____ Dedication _____

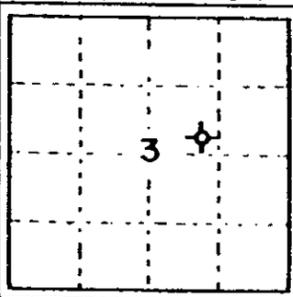
API 02-021-05148

PERMIT NO. None Date Issued _____

file 1-77

1-77

State. ARIZONA County. APACHE
 Well Name. AMERADA PET. CORP. STANOLIND OIL & GAS
 CO. NO. 1 NAVAJO-BLACK MOUNTAIN
 Spot SE SW NE*1. Sec. 3 T. 31 N R. 23 E
 (SEE FOOTNOTE NO. 1)



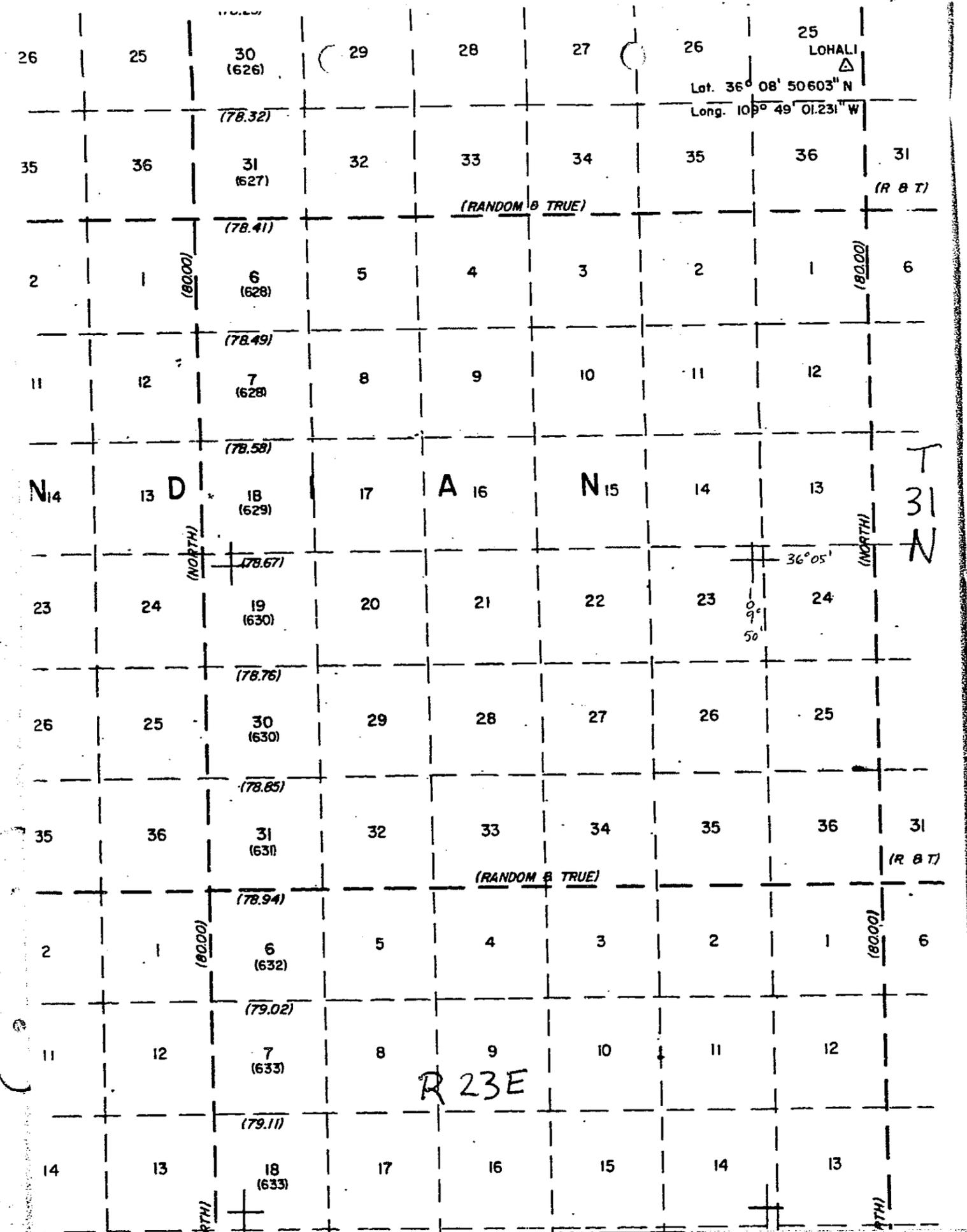
Area. Black Mountain (W)
 Commenced. Aug. 15, 1950
 Completed. Nov. 1, 1950
 Initial Production. D & A

Elevation:
 KB. Producing Fm.
 GR 6320
 Total Depth Producing Intervals
 5766
 Oldest Fm Casing 13 3/8" at 550'
 Precambrian

1. This well was originally drilled in an unsurveyed location. Initial surveys placed it in 26-32N-23E, approximately 8000' from NE and 4000' from WL in Tract 9, Lease 1-149, Indian 7481, approximately 23 miles from Chinle, Arizona and 125 miles northwest of Gallup, New Mexico.

The latest and probably most accurate grid system through this area is based on the BLM Arizona protraction diagram No. 44, Area 2. This grid places the well in SE SW NE, Sec 3, T 31N, R 23E. This location also agrees geologically with the U.S.G.S. photogeology of the Black Mountain Anticline, this location being on the axis of the anticline.

Location information courtesy of Tidewater Oil Company, Durango, Colorado.



AMERADO STANOLIND BLK MT. #1 Sec. 26, T. 32 N., R. 23E. Apache County

(see note about well location) SE 1/4 NE 2-311-23E
S. 1/4 44 22
October 30, 1950

Mr. J. C. Benzley
Mr. N. W. Charnley
Amarado Petroleum Corporation
417 East Hill Street
Los Angeles, California

Dear Sirs:

Professor E. D. McKee, University of Arizona, went over the cores this past weekend and on the basis of a very hurried inspection has tentatively placed the cores as indicated on the attached sheets.

Cores 1 through 4 are placed within the Pennsylvanian on the basis of the continued presence of mud and clays and the impure nature of limestones. Core No. 6 Professor McKee would not place as this sugary sandstone was new to him. Core No. 7 is placed in the Mississippian on apparent similarity between the dense white aphanitic limestone and one of the 4 members of the Red Wall. The green and red mudstones within Core 8 tentatively place it within the Devonian with possibly the top of the Cambrian indicated by the coarse-grained quartzite at the bottom of the cores below 5,695 feet. The Cambrian pick is made solely on lithologic similarity between this coarse quartzite and the Tapeats quartzite.

It should be emphasized that these picks are tentative. Further work will be done on both the cores and the cuttings when time permits. Your detailed log of the well would be of considerable assistance in this work.

The cuttings should be in the hands of the Four Corner Sample Cut in Farmington this week and the cores will be sent up at the beginning of next week.

Thank you again for your cooperation in this matter.

Very truly yours,

Leopold A. Heindl
Geologist

AMERADO STANOLIND BLK MT. #1 Apache County

Core No. 1, 5324-5333

- Tray 1 (5325 Red brown mudstone
(5325.5 Gray sandy limestone - contact mudstone and limestone
(5326 Purple muddy limestone
- Tray 2 (5328 Red brown mudstone
(5330 Purple-green muddy limestone - sandy
- Tray 3 (5333 Red brown mudstone (sandy in part)
(5334 Light greenish and purple limestone

AZ OIL & GAS
CONSERVATION COMMISSION

Core No. 2, 5370-5375

- Tray 1 (5370 Light gray aphanitic limestone (with colites?)
(5373 Purple aphanitic muddy limestone
(5375 Light gray aphanitic limestone like 5370

Core No. 3, 5441-5456

- Tray 1 (5441 Green and purple muddy limestone (mottled)
(5442 Same but less mud (mottled)
(5443 Dark gray muddy limestone (even)
- Tray 2 (5445 Greenish gray, gritty sandstone and shale
(5445.5 Dark gray calcareous mud
(5446 Green mudstone contact gray aphanitic limestone
- Tray 3 (5447 Gray aphanitic limestone
(5448 Greenish gray aphanitic limestone, mottled purple mudstone
(5449 Dark purple siltstone
(5449.5 Dark gray, fine grained limestone with geodes
- Tray 4 (5450 Same but no geodes
(5452 Very dark gray aphanitic muddy limestone
(5453 Black shale
- Tray 5 (5453.5 Same - fissile
(5454 Very dark gray aphanitic muddy limestone
(5455 Gray aphanitic limestone with partings of black shale
(5456 Muddy gray limestone

Core No. 4, 5470 - 5477

- Tray 1 (5470 Gray quartzite, black fragments (fetid smell on fracture)
(5471 Gray quartzite siltstone interlaminated black mudstone
(5471.5 Dark gray silty mudstone (calcareous ?)
(5473 Gray quartzite
- Tray 2 (5475 Quartzites and black mudstone alternating
(5475.5 Same
(5476 Fine grained gray limestone ?

↑
Pennsylvanian ?

1-77

AMERADO STANOLINE 1 MT. #1 Apache County

Core No. 5, No recovery

Core No. 6, 5519-5533
(1 1/2' cored, 4' recovered)
(lost bottom 10')

Tray 1 (5519 White sugary, uniform sandstone
(5522 Same but coarser

Tray 2 (5523 Same

?

Core No. 7, 5598-5604
(6' cored, 4 1/2' recovered)

Tray 1 (5598 Red brown siltstone
(5599 Green to lavender aphanitic limestone, red brown clay partings

Tray 2 (5602 White aphanitic limestone with green shale partings

Mississippian ?

Core No. 8, 5692-5697
(4 1/2' recovered)

Tray 1 (5692 Green shale
(5692.5 Poorly sorted coarse grained sandstone alternating with claystone
(5693 Same
(5694 Claystone, dark gray, green and red

Tray 2 (5695 Purple ferruginous and glauconitic sandstone
Devonian ? (5695 Green and purple claystone
Cambrian ? (5696 Quartzite, coarse grained
(5697 Quartzite, gray, poorly sorted

Pre-Cambrian

Core No. 9, 5756-5762
(6' cored, 4 1/2' recovered)

Tray 1 (5758 Arkose or decomposed granite
(White feldspar is angular, partly weathered

Tray 2 (5760 Same

Core No. 10 5762-5763.5

Tray 1 (5763 Fresh igneous, crystalline rock, mostly orthoclase

Core No. 11, 5763.5-5766

Tray 1 (5765 Same

AZ OIL & GAS
CONSERVATION COMMISSION

AMERADO STANOLINE BLK MT. #1 Sec. 26, T. 32 N., R. 23E. Apache County

*see note about well location SE SW 1/4 3-31N-23E
SEP 4-9-50*

Oct 30 October 30, 1950

Mr. J. C. Benzley
Mr. N. W. Charnley
Amarado Petroleum Corporation
417 East Hill Street
Los Angeles, California

AZ OIL & GAS
CONSERVATION COMMISSION

Dear Sirs:

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Cores 1 through 4 are placed within the Pennsylvanian on the basis of the continued presence of mud and clays and the impure nature of limestones. Core No. 6 Professor McKee would not place as this sugary sandstone was new to him. Core No. 7 is placed in the Mississippian on apparent similarity between the dense white aphanitic limestone and one of the 4 members of the Red Wall. The green and red mudstones within Core 8 tentatively place it within the Devonian with possibly the top of the Cambrian indicated by the coarse-grained quartzite at the bottom of the cores below 5,695 feet. The Cambrian pick is made solely on lithologic similarity between this coarse quartzite and the Tapeats quartzite.

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Very truly yours,

Leopold A. Heindl
Geologist

Over-

- 1 -

AMERADO STANOLINE BLK MTN #1
Sec. 26-T32N-R23E
APACHE COUNTY

AMERADO STANOLIND LK MT. #1 Apache County

Core No. 1, 5324-5335

Tray 1 (5325 Red brown mudstone
(5325.5 Gray sandy limestone - contact mudstone and limestone
(5326 Purple muddy limestone

Tray 2 (5328 Red brown mudstone
(5330 Purple-green muddy limestone - sandy

Tray 3 (5333 Red brown mudstone (sandy in part)
(5334 Light greenish and purple limestone

Core No. 2, 5370-5375

Tray 1 (5370 Light gray aphanitic limestone (with colites?)
(5373 Purple aphanitic muddy limestone
(5375 Light gray aphanitic limestone like 5370

Core No. 3, 5441-5456

Tray 1 (5441 Green and purple muddy limestone (mottled)
(5442 Same but less mud (mottled)
(5443 Dark gray muddy limestone (even)

Tray 2 (5445 Greenish gray, gritty sandstone and shale
(5445.5 Dark gray calcareous mud
(5446 Green mudstone contact gray aphanitic limestone

Tray 3 (5447 Gray aphanitic limestone
(5448 Greenish gray aphanitic limestone, mottled purple mudstone
(5449 Dark purple siltstone
(5449.5 Dark gray, fine grained limestone with geodes

Tray 4 (5450 Same but no geodes
(5452 Very dark gray aphanitic muddy limestone
(5453 Black shale

Tray 5 (5453.5 Same - fissile
(5454 Very dark gray aphanitic muddy limestone
(5455 Gray aphanitic limestone with partings of black shale
(5456 Muddy gray limestone

Core No. 4, 5470 - 5477

Tray 1 (5470 Gray quartzite, black fragments (fetid smell on fracture)
(5471 Gray quartzite siltstone interlaminated black mudstone
(5471.5 Dark gray silty mudstone (calcareous ?)
(5473 Gray quartzite

Tray 2 (5475 Quartzites and black mudstone alternating
(5475.5 Same
(5476 Fine grained gray limestone ?

Pennsylvanian ?

AMERADO STANOLINE MT. #1 Apache County

1-77

Core No. 5, No recovery

Core No. 6, 5519-5533
(14' cored, 4' recovered)
(lost bottom 10')

Tray 1 (5519 White sugary, uniform sandstone
(5522 Same but coarser

Tray 2 (5523 Same

?

AZ OIL & GAS
CONSERVATION COMMISSION

Core No. 7, 5598-5604
(6' cored, 4 1/2' recovered)

Tray 1 (5598 Red brown siltstone
(5599 Green to lavender aphanitic limestone, red brown clay partings

Tray 2 (5602 White aphanitic limestone with green shale partings

Mississippian ?

Core No. 8, 5692-5697
(4 1/2' recovered)

Tray 1 (5692 Green shale
(5692.5 Poorly sorted coarse grained sandstone alternating with claystone
(5693 Same
(5694 Claystone, dark gray, green and red

Tray 2 (5695 Purple ferruginous and glauconitic sandstone
Devonian ? (5695 Green and purple claystone
Cambrian ? (5696 Quartzite, coarse grained
(5697 Quartzite, gray, poorly sorted

Pre-Cambrian

Core No. 9, 5756-5762
(6' cored, 4 1/2' recovered)

Tray 1 (5758 Arkose or decomposed granite
White feldspar is angular, partly weathered

Tray 2 (5760 Same

Core No. 10 5762-5763.5

Tray 1 (5763 Fresh igneous, crystalline rock, mostly orthoclase

Core No. 11, 5763.5-5766

Tray 1 (5765 Same

4

AMERADO STANOLIND BLK MT. #1. Sec. 36, T. 32 N., R. 23 E.
Apache County, Arizona

26
See 1950 well location
SEC 36 T. 32 N. R. 23 E. 4-9-50

October 30, 1950

Mr. J. C. Benzley
Mr. N. W. Charnley
Amerado Petroleum Corporation
417 East Hill Street
Los Angeles, California

AZ OIL & GAS
CONSERVATION COMMISSION

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Leopold A. Heindl
Geologist

Nature Cut

AZ OIL & GAS
CONSERVATION COMMISSION

Core No. 1. 5324-5335

Tray 1	(5325) (5325.5) (5326)	Red brown mudstone Gray sandy limestone - contact mudstone and limestone Purple muddy limestone
Tray 2	(5328) (5330)	Red brown mudstone Purple-green muddy limestone - sandy
Tray 3	(5333) (5334)	Red brown mudstone (sandy in part) Light greenish and purple limestone

Core No. 2 5370-5375

Tray 1	(5370) (5373) (5375)	Light gray aphanitic limestone (with oolites?) Purple aphanitic muddy limestone Light gray aphanitic limestone like 5370
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Core No. 3, 5441-5456

Tray 1	(5441) (5442) (5443)	Green and purple muddy limestone (mottled) Same but less mud (mottled) Dark gray muddy limestone (even)
Tray 2	(5445) (5445.5) (5446)	Greenish gray, gritty sandstone and shale Dark gray calcareous mud Green mudstone contact gray aphanitic limestone
Tray 3	(5447) (5448) (5449) (5449.5)	Gray aphanitic limestone Greenish gray aphanitic limestone, mottled purple mudstone Dark purple siltstone Dark gray, fine grained limestone with geodes
Tray 4	(5450) (5452) (5453)	Same but no geodes Very dark gray aphanitic muddy limestone Black shale
Tray 5	(5453.5) (5454) (5455) (5456)	Same - fissile Very dark gray aphanitic muddy limestone Gray aphanitic limestone with partings of black shale Muddy gray limestone

Core No. 4, 5470-5477

Tray 1	(5470) (5471) (5471.5) (5473)	Gray quartzite, black fragments (fossil shell on fracture) Gray quartz siltstone interbedded black mudstone Dark gray silty mudstone (calcareous ?) Gray quartzite
Tray 2	(5475) (5475.5) (5476)	Quartzites and black mudstone alternating Same Fine grained gray limestone ?

Core No. 5. No recovery

Core No. 6, 5519-5533
(14' cored, 4' recovered)
(lost bottom 10')

Tray 1 (5519) White, sugary, uniform sandstone
(5522) Same but coarser
Tray 2 (5523) Same

AZ OIL & GAS
CONSERVATION COMMISSION

Core No. 7, 5598-5604
(6' cored, 4 1/2' recovered)

Tray 1 (5598) Red brown siltstone
(5599) Green to lavender aphanitic limestone, red brown clay partings
Tray 2 (5602) White aphanitic limestone with green shale partings

↑
Mississippian 1

Core No. 8, 5692-5697
(4 1/2' recovered)

Tray 1 (5692) Green shale
(5692.5) Poorly sorted coarse grained sandstone alternating with claystone
(5693) Same
(5694) Claystone, dark gray, green and red
Tray 2 (5695) Purple ferruginous and glauconitic sandstone
(5695) Green and purple claystone
(5696) Quartzite, coarse grained
(5697) Quartzite, gray, poorly sorted

↑
Devonian ?
Cambrian ?

↓
Pre-Cambrian

Core No. 9, 5756-5762
(6' cored, 4 1/2' recovered)

Tray 1 (5758) Arkose or decomposed granite
(5759) White feldspar is angular, partly weathered
Tray 2 (5760) Same

Core No. 10, 5762-5763.5

Tray 1 (5763) Fresh igneous, crystalline rock, mostly orthoclase

Core No. 11, 5763.5-5766

Tray 1 (5765) Same

5747
|
5747
|

Core #1 - 5324-35	Tray 1	5325 - Red brown mudstone
		5325.5 - Green sandy ls - contact mudstone entls.
		5326 - Purple muddy ls.
		AZ OIL & GAS CONSERVATION COMMISSION
	Tray 2	5328 - Red brown mudstone
		5330 - Purple-green muddy ls. - sandy
	Tray 3	5333 - Red brown mudstone (sandy in part)
		5334 - Light greenish & purpl. ls.
Core #2 5370-75	Tray 1	5370 - Light gray aph. ls. (with oolites?)
		5373 - Purple, aph. muddy ls.
		5375 - Light gray aph. ls. like 5370
Core #3 5441-5456	Tray 1	5441 - Green & purple muddy ls. (mottled)
		5442 - Same but less mud (mottled)
		5443 - Dark gray muddy ls. (even)
	Tray 2	5445 - Greenish gray, gritty s.s. & sh.
		5445.5 - Dark gray calc. mud
		5446 - Green mudst. contact gray aph. ls.
	Tray 3	5447 - Gray aph. ls.
		5448 - Greenish gray aph. ls. mottled purp. mudstone
		5449 - Dark purple siltstone
		5449.5 - Dark gray, fine gr. ls. with geodes
	Tray 4	5450 - Same but no geodes
		5452 - Very dark gray aph. muddy ls.
		5453 - Black shale
	Tray 5	5453.5 - Same fossils
		5454 - Very dark gray aph. muddy ls.
		5455 - Gray aph. ls. with partings of black sh.
		5456 - Muddy, gray ls.

Core # 4

5470-5477

Tray 1

- 5470 Gray quartzite, black fragments (sh. shell small on fracture)
- 5471 gray stz. siltstone interlamin black mudstone
- 5471.5 Dark gray silty mudstone (Calc.?)
- 5473 Gray quartzite

Tray 2
submedian

- 5475 quartzites & black mudst. altern.
- 5475.5 ~~quartzites~~ Same
- 5476 fine gr. gray ls.?

↑ Penns.?

AZ OIL & GAS
CONSERVATION COMMISSION

Core # 5

no recovery

Core # 6

5519-5533

(14' core, 4' recovered)
lost bottom 10'

Tray 1

Tray 2

- 5519 White, sugary, uniform S.S.
- 5522 Same but coarser
- 5523 Same

Core # 7

5598-5604

(6' core, 4 1/2' recovered)

Tray 1

Tray 2

- 5598 Red brown siltstone
- 5599 Green to lavender aph. ls. red br. clay partings
- 5602 White aph. ls. with green shale partings

↑ Miss?
Mississippian

Core # 8

5692-5697

(4 1/2' recovered)

Tray 1

Tray 2

- 5692 Green sh.
- 5692.5 Poorly sorted coarse gr. S.S.
- 5693 same altern. with claystone
- 5694 Claystone, dark gray, green and blue glauconitic
- 5695 Purple ferrug. S.S. glauconitic
- 5695 Green & purple claystone
- 5696 Quartzite, coarse gr.
- 5697 " gray poorly sorted

↑ Devonian
Cambrian?

↓ Devonian?
↓ Cambrian?

↓ Pre-Cambrian

Core #9

5756-5762

6 sec 4 1/2

Tray 1 { 5758 Carbonaceous or decomp. granite
White feldspar is angular, partly weathered

Tray 2 { 5760 Same

AZ OIL & GAS
CONSERVATION COMMISSION

Core #10

5762-63.5

Tray 1

{ 5763 Fresh igneous, crystalline rock
mostly orthoclase

Core #11

5763.5-5766

Tray 1

{ 5765 Same

*cut
Francis*

AZ OIL & GAS
CONSERVATION COMMISSION

Operator AMERADA PETROLEUM CORPORATION Well Black Mountain #1
Field Black Mountain Area, Arizona Elevation 6333' K.B. which is 13'
above ground
Location 7942' South and 4038' East from the Northwest Corner of Tract 9,
2880 Acres of Stanolind Oil and Gas Company, Contract I-149-Ind-7481,
Black Mountain Area, Navajo Tribal Lands, Apache County, Arizona.
Commenced Drilling August 14, 1950 Completed Drilling October 14, 1950
Total Depth 5766' Drilling Tools Rotary

.....
INITIAL PRODUCTION

No Commercial Production

WELL ABANDONED OCTOBER 23, 1950

.....
CASING RECORD

Size Casing	Weight Per Foot	Threads Per Inch	Make	Amount	Kind of Shoe
20"	78	Welded joints	Welded	73'	
13-3/8"	54	8rd.	J-55	521'	Guide

.....
CEMENTING RECORD

Size Casing	Where Set	Number Sacks of Cement	Method Used
20"	73'	28	Outside
13-3/8"	521'	425	Plug displacement

.....

Black Mountain #1, Arizona

HISTORY

AZ OIL & GAS
CONSERVATION COMMISSION

Location: 7942' South and 4038' East from the Northwest Corner of Tract 9,
2880 Acres of Stanolond Oil and Gas Co., Contract I-149-Ind-7481,
Black Mountain Area, Navajo Tribal Lands, Apache County, Arizona.

Elevation: 6333' K.B.

SE SW NE 3-31N-23E see note on well location

LR-4490

- 8-14-50 Spudded in at 10 A.M. Drilled 12 $\frac{1}{4}$ " hole to 72'.
Reamed 12 $\frac{1}{4}$ " hole to 24" from surface to 72' and drilled
24" hole to 73'.
- 8-15-50 Cemented 20" 78# steel conductor casing at 73' with 28
sacks of construction cement.
- 8-16-50 Started drilling 12 $\frac{1}{4}$ " hole ahead at 4 A.M.
- 8-17-50 Drilled 12 $\frac{1}{4}$ " hole from 73' to 525'.
- 8-19-50 Reamed 12 $\frac{1}{4}$ " hole to 17 $\frac{1}{2}$ " from 73' to 521'.
13-3/8" CASING CEMENTED AT 521'
Ran in 17 $\frac{1}{2}$ " hole: 522' of 13-3/8" 54# grade J-55, new
8rd. thread seamless casing including guide shoe welded
on bottom. Cemented at 521' with 425 sacks of construc-
tion cement using one top plug. Cement in place 10:30
A.M., final pressure 700#. An estimated 200 sacks of
cement returned to surface on outside.
- 8-20-50 Installed Blow Out Prevention equipment: 13-3/8" Shaffer
double gate with C.S.O. and 4 $\frac{1}{2}$ " drill pipe rams and No.4
Type R Hydril B.O.P. with air and liquid controls.
Tested all Blow Out Prevention equipment with 1000# for
15 minutes.
Began drilling 9" hole ahead at 10:30 P.M.
- 9-5-50 Drilled 9" hole to 4208'.
Lost cone and part of shank from 9" bit in hole at 4208'.
- 9-6-50 Ran basket and could feel nothing on bottom. Cone proba-
bly sidetracked.
- 9-7-50 Drilled 9" hole to 4245'.
Lost cone from 9" bit at 4245'.
Ran basket and recovered cone.
- 9-24-50 Drilled 9" hole to 5324'.
Cored 7 $\frac{1}{2}$ " hole from 5324' to 5335'.
Reamed 7 $\frac{1}{2}$ " hole to 9" from 5324' to 5335'.
- 9-25-50 Drilled 9" hole to 5370'.
Cored 7" hole from 5370' to 5375'.

Black Mountain #1, Arizona
AZ OIL & GAS
CONSERVATION COMMISSION

HISTORY

9-26-50	Reamed 7" hole to 9" from 5370' to 5375'. Drilled 9" hole to 5386'. Lost cone, pin and part of bearing from bit, ran basket and recovered same.
9-28-50	Drilled 9" hole to 5441'.
9-29-50	Cored 8-3/4" hole from 5441' to 5456'. Reamed 8-3/4" hole to 9" from 5441' to 5456'.
9-30-50	Drilled 9" hole to 5471'. Cored 8-3/4" hole from 5471' to 5476'. Reamed 8-3/4" hole to 9" from 5471' to 5476'.
10-1-50	Drilled 9" hole to 5493'.
10-2-50	Cored 8-3/4" hole from 5493' to 5509'.
10-3-50	Reamed 8-3/4" hole to 9" from 5493' to 5509'.
10-4-50	Drilled 9" hole to 5519'. Cored 8-3/4" hole from 5519' to 5533'. Reamed 8-3/4" hole to 9" from 5519'-5533'.
10-7-50	Drilled 9" hole to 5598'. Cored 7 1/2" hole from 5598' to 5604'. Reamed 7 1/2" hole to 9" from 5598' to 5604'.
10-8-50	Drilled 9" hole to 5637'. Stuck drill pipe at 5545' while coming out of hole.
10-9-50	Worked and circulated pipe loose. Reamed 9" hole from 5515' to 5637'.
10-10-50	Drilled 9" hole to 5692'. Cored 7 1/2" hole from 5692' to 5697'.
10-11-50	Reamed 7 1/2" hole to 9" from 5692' to 5697'.
10-12-50	Drilled 9" hole to 5756'. Twisted off pin in tool joint and left bit and 2 bottom drill collars in hole, top of fish at 5698'. Recovered fish with socket.
10-13-50	Cored 7 1/2" hole from 5756' to 5762'. Cored 7 1/2" hole from 5762' to 5763 1/2'.

Black Mountain #1, Arizona

AZ OIL & GAS
CONSERVATION COMMISSION

HISTORY

- 10-14-50 Cored 7" hole from 5763½' to 5766'.
5766' Total Depth
Ran Schlumberger Electric Survey
Electric Log 520' to 5765'
Micro Log 2240' to 5762'
Induction Log 547' to 5762'
Gamma Ray Log 450' to 5762'
- 10-15-50 ^{Test} Formation Test No. 1 5632' - 5766'
Ran formation tester of 4½" F.H. drill pipe with 1 - 8" straight wall packer, 5/8" bean, 2 pressure recorders and 570' of water cushion. 134' of tail piece below packer including perforations 5633'-5643' and 5761'-5766'. Set packer at 5632', tail extended to bottom at 5766'. Opened valve at 4:35 P.M., valve open 70 minutes, closed valve at 5:45 P.M. Blow: Weak initial blow decreasing until 4:40 P.M., increasing to 4:45 P.M., decreasing to dead at 5:40 P.M. Closed valve at 5:45 P.M. Recovered: 2430' net fluid rise. Top 450' was 70# watery mud, balance 1980' was salt water testing 2580 G/G NaCl. Charts: Showed buildup from 1200# to 1700# while valve open.
- 10-16-50 Cement Plug No. 1 5545' - 5766'
Hung open end 4½" drill pipe at 5766' and pumped in and equalized 100 sacks of construction cement. Cement in place at 12:25 A.M.
Drilled out firm cement 5505' to 5550'
^{Test} Formation Test No. 2 5437' - 5550'
Ran formation tester on 4½" F.H. drill pipe, jars, safety joint, 1 - 8" straight wall packer, 5/8" bean, no water cushion, 113' of tail including perforations at 5438' - 5442', 5471'-5476', 5503'-5513', 5543'-5550' and 2 pressure bombs. Set packer at 5437', tail extended to top of plug at 5550'. Opened valve at 10:55 P.M., valve open 90 minutes, closed valve at 12:25 P.M. Blow: Light steadily decreasing blow for 80 minutes, dead final 10 minutes. Recovered: 3640' net rise salt water testing 1300 G/G NaCl. Charts: Showed drop to 1000# when valve opened, increased in normal curve to 1800# after 80 minutes and held at 1800# for final 10 minutes.
- 10-17-50 Cement Plug No. 2 5367' - 5550'
Hung open end 4½" drill pipe at 5550' and pumped in and equalized 75 sacks of oilwell cement treated with 2% calcium chloride. Cement in place at 12:20 P.M. Located top of cement plug at 5367' at 10 P.M. and cleaned out to 5370'.

Black Mountain #1, Arizona

AZ OIL & GAS
CONSERVATION COMMISSION

HISTORY

- 10-18-50 35' Formation Test No. 3 5115' - 5370'
Packer failed.
Drilled out cement plug from 5370' to 5381'.
Formation Test No. 3A 5098' - 5381'
Packer failed.
- 10-19-50 Drilled out cement plug from 5381' to 5390'.
Formation Test No. 3B 5107' - 5390'
Packer failed.
Drilled out cement plug from 5390' to 5400'.
- 10-20-50 Formation Test No. 3C 5117' - 5400'
Packer failed.
Cement Plug No. 3 5320' - 5400'
Hung open end 4½" drill pipe at 5400' and pumped in and equalized 350 sacks of Hi-Temp cement treated with 2% calcium chloride. Cement in place at 10:40 A.M.
- 10-21-50 Located top of cement plug at 5342' at 3 A.M. Cleaned out to 5347'.
Formation Test No. 3D 5064' - 5347'
Packer failed.
Cement Plug No. 4 2420' - 2620'
Hung open end 4½" drill pipe at 2620' and pumped in and equalized 80 sacks of Hi-Temp cement treated with 2% calcium chloride. Cement in place at 9:37 P.M.
- 10-22-50 Located top of cement plug at 2446' at 11 A.M. Cleaned out to 2455'.
- 10-22-50 Formation Test No. 4 2348' - 2455'
Ran formation tester on 4½" F.H. drill pipe, jars, safety joint, 2 - 8" straight wall packers, 5/8" bean, no water cushion, 107' of tail piece including perforations 2350'-2359', 2387'-2392' and 2420'-2427'. Set packer at 2348' with tail to top of plug at 2455'. Opened valve at 9:22 P.M., valve open 1 hour, closed valve at 10:22 P.M.
Blow: There was a weak decreasing blow to dead in 50 minutes. Recovered: 1110' of fluid, top 360' watery mud, balance water testing 35 G/G NaCl. Charts: Showed bottom hole pressure 600#.
- 10-23-50 Welded steel cap on 13-3/8" casing and erected marker.

WELL ABANDONED OCTOBER 23, 1950

Black Mountain #1, Arizona
AZ OIL & GAS
CONSERVATION COMMISSION

FORMATION RECORD

Top	Bottom	Thickness	Description
0'	73'	73'	Surface sand and boulders.
73'	164'	91'	Shale and hard sand.
164'	307'	143'	Shale and shells.
307'	1151'	844'	Shale, red.
1151'	1395'	244'	Shale, varicolored.
1395'	2510'	1115'	Shale, red.
2510'	2595'	85'	Shale, sand and shells.
2595'	2690'	95'	Shale.
2690'	2797'	107'	Red shale and sand.
2797'	3090'	293'	Red shale with thin shells.
3090'	3148'	58'	Red shale, sand and thin shells.
3148'	3224'	76'	Red shale, sandy.
3224'	3275'	51'	Red shale with thin shells.
3275'	3727'	452'	Red shale.
3727'	3757'	30'	Red sandstone and lime.
3757'	4208'	451'	Red shale with streaks of lime.
4208'	4224'	16'	Red sandstone and lime.
4224'	4273'	49'	Red shale.
4273'	4956'	683'	Red shale with streaks of lime.
4956'	4970'	14'	Lime.
4970'	5021'	51'	Red shale with streaks of lime.
5021'	5035'	14'	Lime.
5035'	5077'	42'	Red shale with streaks of lime.
5077'	5091'	14'	Lime.
5091'	5114'	23'	Red shale with streaks of lime.
5114'	5147'	33'	Lime and streaks of shale.
5147'	5195'	48'	Lime.
5195'	5238'	88'	Lime with red shale.
5238'	5324'	41'	Lime with streaks of shale.
5324'	5328½'	4½'	<u>Core #1 (5324'-5335' 11' Recovered 11')</u> Dolomite, light gray to pale green, sometimes mottled, dense, with fine sugary texture under microscope, massive - showing no bedding planes but with occasional color bands and few streaks of dark gray and dark green shale and with red shale toward bottom. One thin green sandy streak at 5327'
5328½'	5335'	6½'	Dolomite and Shale, irregularly, to evenly interbedded dolomite as above and hard dark red shale with thin sandy streaks near bottom and occasional bright green inclusions or streaks. Dip indicated 10-30°
5335'	5370'	35'	Dolomite

Black Mountain #1, Arizona
 AZ OIL & GAS
 CONSERVATION COMMISSION

FORMATION RECORD

Top	Bottom	Thickness	Description
5370'	5375'	5'	<u>Core #2 (5370'-5375' 5' Recovered 5')</u> Dolomite, mostly light gray, varying to reddish and green and medium gray, finely crystalline, with occasional thin green bentonitic shale laminae at 10-35° and some black possibly bituminous patches in local areas.
5375'	5441'	66'	Dolomite.
5441'	5441½'	½'	<u>Core #3 (5441'-5456' 15' Recovered 15')</u> Dolomite, dark brown, finely crystalline, irregular fractures with seams of purple and green bentonitic clay.
5441½'	5447'	5½'	Dolomite, finely crystalline, pale brown grading to green and purple mottled, grading to purple, grading to gray. Interval somewhat fractured but not as much as top ½'. Irregular bands of purple and green and dark gray clay and clay seams in fractures.
5447'	5447½'	½'	Dolomitic conglomerate, pale green, rounded grains of chert in a sandy dolomitic matrix, numerous red chert grains present, matrix grains appear coated with bentonitic clay.
5447½'	5449'	1½'	Dolomite cryptocrystalline, dull green and pale brown bands possibly siliceous, small thin bands of coarser crystalline dolomite grades to finely crystalline pale brown dolomite.
5449'	5450'	1'	Dolomite, mottled pale brown and green with patches of coarsely crystalline dolomite and anhydrite, grades to bluish gray shaley dolomite with common dark gray chert grains, grading to purplish shaley dolomite.
5450'	5451'	1'	Porous dolomite, pale brown crystalline with common vugs partially filled with coarse dolomitic and anhydrite crystals. Vugs may be replaced fossils.
5451'	5454'	3'	Shale, greenish gray with common nests of medium-coarse quartz grains, occasional layers of dark brown dolomite present.
5451'	5456'	2'	Dolomite, dark brown with irregular layers of dark gray shale and well cemented grits. 1" band of sandy dolomite with quartz grits in streaks.

Black Mountain #1, Arizona
AZ OIL & GAS
CONSERVATION COMMISSION

FORMATION RECORD

Top	Bottom	Thickness	Description
5456'	5471'	15'	Dolomite. <u>Core #4 (5471'-5476' 5' Recovered 5')</u>
5471'	5471½'	½'	Quartzitic dolomitic, medium gray with greenish cast, finely to cryptocrystalline siliceous shoen to surface of samples, contain small patches and fragments occasional bands of dark brownish gray shale. Interval is very hard but appears to have slight porosity.
5471½'	5476'	4½'	Dolomite, generally medium gray, occasional bands of light gray crystalline dolomite and greenish gray cryptocrystalline dolomite on bottom, occasional bands are siliceous and sandy. Irregular bands of dark gray and medium gray shale (bentonitic) are common. A vug is present at 5474' with calcite crystals partially filling cavity, possibly a replaced fossil.
5476'	5493'	17'	Dolomite. <u>Core #5 (5493'-5509' 16' Recovered 0')</u>
5493'	5509'	16'	No recovery.
5509'	5519'	10'	Lime and dolomite. <u>Core #6 (5519'-5533' 14' recovered 4')</u> Lost bottom 10'
5519'	5523'	4'	Quartzitic sand stone, grayish white, sugary texture, entirely of quartz grains except for scattered chert grains, grains angular-subangular, very fine to fine grained, massive, hard, difficultly friable (grains rub off with fingers), fair porosity. NO SHOWS.
5523'	5533'	10'	No recovered.
5533'	5546'	13'	Sandstone and lime.
5546'	5556'	10'	Dolomite and lime.
5556'	5567'	11'	Dolomite and sand.
5567'	5581'	14'	Dolomite and lime.
5581'	5598'	17'	Dolomite. <u>Core #7 (5598'-5604' 6' Recovered 4½')</u>
5598'	5599½'	1½'	Not recovered.
5599½'	5604'	4½'	Silty dolomite, pale reddish purple, finely crystalline, scattered subrounded quartz grains, scattered dendritic fracture fillings of reddish brown limonite (?). Occasional bands of red bentonitic polished clay. Core becomes less silty and coarser crystalline in bottom ½'.

Black Mountain #1, Arizona

AZ OIL & GAS
CONSERVATION COMMISSION

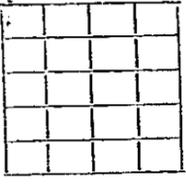
FORMATION RECORD

Top	Bottom	Thickness	Description
			<u>Core #7, Continued.</u>
			Dolomite, pale grayish green, very finely crystalline to cryptocrystalline with dendritic stainings of limonite(?) of light reddish brown. Several bands of green bentonitic clay to 1" thick in top 1½', Bottom 1' consists of light gray cryptocrystalline dolomite with occasional thin gray bentonitic clay bands. The clay bands are irregular and at different angles though generally flat contact lines are sometimes wavy.
5604'	5678'	74'	Dolomite.
5678'	5692'	14'	Sandstone and dolomite.
			<u>Core #8 (5692'-5697' 5' Recovered 4½')</u>
5692'	5693½'	1½'	Shale and sandstone, alternating bands to 3" in thickness of gray green, reddish purple and greenish gray calcareous shale with streaks of silt and sand. The shale alternates with 3" bands of light gray quartzitic, medium to coarse grained sandstone with numerous grayish green and light brownish red subangular to sub rounded chert fragments. Cement in calcite but not abundant. In lower ½' shale is highly calcareous and the sandstone less cherty.
5693½'	5694½'	1'	Shale, bands of reddish purple, grayish green, and bluish gray occasional bands of dolomitic limestone. A 3" band of silty to sandy bluish and reddish gray shale is present 3" from bottom of interval.
5694½'	5696½'	2'	Bottom 3" green and reddish shale. Sandstone, light gray speckled with stringers and inclusions of pale green and reddish gray clay. Sandstone varies from quartzitic and cherty to a sandy dolomitic limestone. Top 3" of interval has a stringer of purplish to brownish finely crystalline shaly dolomitic limestone with common clear and dark subrounded chert grains. Contacts and partings in shale and between shale and sandstone have flat dips.
5696½'	5697'	½'	Not recovered.
5697'	5738'	41'	Dolomite with streaks of shale.
5738'	5756'	18'	Dolomite and chert.

Black Mountain #1, Arizona
 AZ OIL & GAS
 CONSERVATION COMMISSION

FORMATION RECORD

<u>Top</u>	<u>Bottom</u>	<u>Thickness</u>	<u>Description</u>
5756'	5757 $\frac{1}{2}$ '	1 $\frac{1}{2}$ '	<u>Core #9 (5756'-5762' 6' Recovered 4$\frac{1}{2}$') Not recovered. Biotitic granite, weathered, high angle fractures with dolomitic coatings. Granite consists mainly of feldspar flesh colored and sericitized giving white powdery appearance occasional biotitic flakes generally chloritized, quartz clear and flesh red. Rare pyrites weathering decrease downward to fairly fresh granite at bottom 3/4". Top of core has a strongly salty taste decreasing in intensity downward due to formation salt water seeping downward into weathered granite. </u>
5757 $\frac{1}{2}$ '	5762'	4 $\frac{1}{2}$ '	
5762'	5763 $\frac{1}{2}$ '	1 $\frac{1}{2}$ '	<u>Core #10 (5762'-5763$\frac{1}{2}$' 1$\frac{1}{2}$' Recovered 1$\frac{1}{2}$') Biotitic granite, fresh with occasional high angle fractas with dolomite and calcite biotite looks more common. </u>
5763 $\frac{1}{2}$ '	5764'	1 $\frac{1}{2}$ '	<u>Core #11 (5763$\frac{1}{2}$'-5766' 2$\frac{1}{2}$' Recovered 2') Not recovered. Biotitic granite, several high angle fractas at top of core. Low angle fractas in bottom 1$\frac{1}{2}$' giving biscuit like frags. </u>
5764'	5766'	2'	



Locate well correctly

ARIZONA STATE LAND DEPARTMENT

Lease or Navajo
Permit No. Tribal Lands

Log of Oil or Gas Well

AZ OIL & GAS
CONSERVATION COMMISSION

Company Amerada Petroleum Corporation Address 417 South Hill Street, Los Angeles 13, Calif.
 Lessor or Tract Tract 9, Stanolind Oil & Gas Co. Field Black Mountain Area
 Well No. Black Mountain 1 Section Tract 9, 2880 Acres of Stanolind Oil and Gas Co., Contract No. I-149-Ind-7481. Township _____ Range _____
 Meridian _____ County Apache
 Location 7942 feet (S) of North Line and 4038 feet (E) of West Line of Tract 9
 Elevation 6333' (Derrick floor relative to sea level).

The information given herewith is a complete and correct record of the well and all work done thereon so far as can be determined from all available records.

Signed [Signature]
 Title Assistant General Superintendent

Date _____

The summary on this page is for the condition of the well at above date.
 Commenced drilling August 14, 1950 Finished drilling October 14, 1950

OIL OR GAS SANDS OR ZONES (Denote Gas By G)

No. 1, from None to _____ No. 4, from _____ to _____
 No. 2, from _____ to _____ No. 5, from _____ to _____
 No. 3, from _____ to _____ No. 6, from _____ to _____

IMPORTANT WATER SANDS

No. 1, from 2348' to 2455' No. 3, from _____ to _____
 No. 2, from _____ to _____ No. 4, from _____ to _____

CASING RECORD

Size Casing	Weight per Foot	Threads per Inch	Make	Amount	Kind of Shoe	Cut and Pulled From	Perforated		Purpose
							From	To	
20"	78#	Welded		73'					
13-3/8"	54#	8rd.	J-55	521'	Guide				

MUDDING AND CEMENTING RECORD

Size Casing	Where Set	Number of Sacks of Cement	Method Used	Mud Gravity	Amount of Mud Used
20"	73'	28	Outside		
13-3/8"	521'	425	Plug displacement		

PLUGS AND ADAPTERS

Heaving plug—Material _____ Length _____ Depth set _____
 Adapters—Material _____ Size _____

**ARIZONA
STATE LAND DEPARTMENT**

Lease or Navajo Tribal
Permit No. Lands

Lessee's Monthly Report of Operations

AZ OIL & GAS
CONSERVATION COMMISSION

The following is a correct report of operations and production (including drilling and producing wells) for the month of October 19 50.

Agent's Address 417 South Hill Street Company AMERADA PETROLEUM CORPORATION
Los Angeles 13, California Signed [Signature]
Telephone Michigan 9544 Agent's Title Assistant General Superintendent

Section and 1/4 of 3/4	Township	Range	Days Produced	Barrels of Oil	Gravity	Cubic Feet of Gas (in Thousands)	Gallons of Gasoline	Barrels of Water (if None so State)	Remarks (if drilling, depth; if shutdown, cause; date and result of test for gasoline content of gas)
BLACK MOUNTAIN NO. 1									
Unsurveyed Land									
10-13-50									Drilled and cored 9" hole from 5471' to 5766' through dolomite, shale, sandstone, limestone and granite.
10-14-50									Ran Schlumberger Electrical, Micro, Induction and Gamma Ray Logs.
10-15-50									Formation test of interval 5632'-5766' recovered salt water.
10-16-50									Plugged hole 5550'-5766' with cement.
10-17-50									Formation test of interval 5437'-5550' recovered salt water.
10-18-50									Plugged hole 5370'-5550' with cement.
10-20-50									Attempts to test interval 5064'-5400' failed.
10-21-50									Plugged hole 2455'-2620' with cement.
10-22-50									Formation test of interval 2348'-2455' recovered water testing 35 G/G NaCl.
10-23-50									Abandoned hole in accordance with request of Office of Indian Affairs and with approval of United States Geological Survey.

NOTE:—There were No runs or sales of oil; No runs or sales of gas; No runs or sales of gasoline during the month. (Write "no" where applicable.)

NOTE:—Report on this form is required for each calendar month, regardless of the status of operations, and must be filed in triplicate with the Commissioner by the 6th of the succeeding month, unless otherwise directed by the Commissioner.

Approved:

AMERADA PETROLEUM CORPORATION

Company

By Assistant General Superintendent

Title

417 South Hill Street
Los Angeles 13, California

Date

ARIZONA
STATE LAND DEPARTMENT
 Lessee's Monthly Report of Operations

Lease or Navajo Tribal
 Permit No. Lands

Oil & Gas
AZ OIL & GAS
CONSERVATION COMMISSION

The following is a correct report of operations and production (including drilling and producing wells) for the month of August 19 50.

Agent's Address 417 South Hill Street Company AMERADA PETROLEUM CORPORATION
Los Angeles 13, California Signed [Signature]
 Telephone Michigan 9544 Agent's Title Asst. General Superintendent

Section and 1/4 of 1/4	Township	Range	Days Produced	Barrels of Oil	Gravity	Cubic Feet of Gas (in Thousands)	Gallons of Gasoline	Barrels of Water (if None so State)	Remarks (if drilling, depth; if shutdown, cause; date and result of test for gasoline content of gas)
Unsurveyed Land				BLACK MOUNTAIN NO. 1					
8-14-50									Drilled 12 1/2" hole and reamed to 24" from surface to 73'. Cemented 20" 78# conductor at 73'.
8-17-50									Drilled 12 1/2" hole from 73' to 525' through shale.
8-18-50									Reamed 12 1/2" hole to 17 1/4" from 73' to 521'.
8-19-50									Cemented 13-3/8" casing at 521' with 425 sacks of construction cement.
8-20-50									Landed casing and installed blow out preventers. Tested casing and blow out preventers with 1000#.
8-31-50									Drilled 9" hole from 525' to 3775' through shale, sandstone and limestone.

NOTE:—There were no runs or sales of oil; no runs or sales of gas; no runs or sales of gasoline during the month. (Write "no" where applicable.)

NOTE:—Report on this form is required for each calendar month, regardless of the status of operations, and must be filed in triplicate with the Commissioner by the 6th of the succeeding month, unless otherwise directed by the Commissioner.

Approved:

[Signature]
 Date

AMERADA PETROLEUM CORPORATION
 Company

By Asst. General Superintendent
 Title

417 South Hill Street
Los Angeles 13, California

ARIZONA STATE LAND DEPARTMENT
Sundry Notices and Reports on Wells

Lease or Navajo Tribal
Permit No. Lands

- Notice of intention to drill..... X
- Notice of intention to change plans.....
- Notice of date for test of water shut-off.....
- Report on result of test of water shut-off.....
- Notice of intention to re-drill or repair well.....
- Notice of intention to shoot.....
- Subsequent record of shooting.....
- Record of perforating casing.....
- Notice of intention to pull or otherwise alter casing.....
- Notice of intention to abandon well.....
- Subsequent report of abandonment.....
- Supplementary well history.....

AZ OIL & GAS
CONSERVATION COMMISSION

(Indicate above by check mark nature of report, notice or other data)

July 17 19 50

Following is a (Notice of intention to do work) on land under (permit) described as follows:
(Report of work done) (lease)

Well No. "Black Mountain" 1, Tract 9, 2880 Acres of Stanolind Oil and Gas Co., Contract
No. I-149-Ind-7481, Black Mountain Area, Navajo Tribal Lands, Apache County, Arizona

The well is located 79 1/2 feet (S) of North line and 4038 feet
(E) of West line of
Section above described property.

The elevation of the ~~well~~ floor above sea level is 6320 feet
ground

DETAILS OF PLAN OF WORK

(State names of an expected depth to objective sands; show sizes, weights, and lengths of proposed casings; indicate mudding jobs, cementing points, and all other proposed work.)

- Well will be drilled with rotary equipment.
- Casing (1) 20" 5 1/2# conductor pipe to be cemented to surface at 20'±
- (2) 13-3/8" 5 1/2# surface casing to be cemented to surface at 500'±
- (3) 7" 26# casing to be cemented at 8500'± and gun perforated for production.

Possible productive depth: Unknown. Probable total depth: 8500'

Approved..... Date..... Company AMERADA PETROLEUM CORPORATION
By *J. B. Finnell* Assistant General Superintendent
Title
Address 117 South Hill Street
Los Angeles 13, California

Arizona State Land Department

Address.....

NOTE:—Reports on this form to be submitted in triplicate to the Commissioner for approval.

BOND NO. no

AMOUNT _____

CANCELLED _____

ORGANIZATION REPORT no



Oil and Gas Conservation Commission

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

file No. 177

April 9, 1990

Mr. Richard Koch
Navajo Nation Minerals Department
P. O. Box 146
Window Rock, AZ 86515

Dear Mr. Koch:

I have enclosed a copy of our information on the Amerada Black Mountain No. 1 well. In our discussion of the Amerada well this morning, I was quoting data (which I have highlighted) from these reports. The material includes a 10 page drilling report, the final monthly report (summary) of operations, and the note concerning the well's location. I checked our log file and we do have a copy of the electric log you mentioned, however, I want to thank you for offering to provide us a copy.

If we can be of further assistance please do not hesitate to contact us.

Sincerely,

Steven L. Rauzi

Steven L. Rauzi
Oil & Gas Specialist

Enclosures

GENERAL OFFICES
120 BROADWAY, NEW YORK

AMERADA PETROLEUM CORPORATION

417 SOUTH HILL STREET
LOS ANGELES 13, CALIFORNIA

D. B. PINNELL
PRODUCTION DEPARTMENT

November 14, 1950

Mr. L.A. Heindl
State Land Department
State of Arizona
Phoenix, Arizona

Dear Sir:

Enclosed please find copies of the following records on our well "Black Mountain" 1, Apache County, Arizona:

1. Complete Log and History
2. Schlumberger Electric Log
Regular scale 547'-5765'
Balloon scale and Micro Log 2300'-3800', 4900'-5765'
3. Schlumberger Gamma Ray and Induction Log 547'-5765'

Yours very truly,

AMERADA PETROLEUM CORPORATION


D.B. Pinnell

DBP:gj
Encl.

Nov. 9, 1950

Mr. Downs McElloskey
Amirado Petroleum Corporation
417 South Hill Street
Los Angeles 13, California

Dear Mr. McElloskey:

In compliance with a telegram from Mr. N. W. Charney from Gallup, New Mexico, I am enclosing the Railway Express receipt showing charges of \$51.30 on shipping the Amirado-Standlind Black Mountain #1 well cores to Mr. J. R. Clair, c/o Denver Sample Log Company, Dehnan Building, Denver, Colorado. The cores were shipped this morning and are expected to arrive in Denver Saturday.

I would appreciate it if the check covering these charges was made out to me personally.

Very truly yours,

Leopold A. Heindl
Geologist

Nov. 9, 1950

Mr. J. R. Clair
c/o Denver Sample Log Company
Decham Building
Denver, Colorado

Dear Mr. Clair:

In compliance with the request from the Amarado Petroleum Corporation, the cores from their Black Mountain #1 well were shipped to you by Railway Express this morning. They are expected to arrive in Denver Saturday.

Very truly yours,

Leopold A. Heindl
Geologist

CLASS OF SERVICE
This is a full-rate Telegram or Cablegram unless its deferred character is indicated by a suitable symbol above or preceding the address.

WESTERN UNION

1201

SYMBOLS
DL - Day Letter
NL - Night Letter
LC - Deferred Cable
NLT - Cable Night Letter

JOSEPH L. EGAN
PRESIDENT

NOV 8

The filing time shown in the date line on telegrams and day letters is STANDARD TIME at point of origin. Time of receipt is STANDARD TIME at point of destination.

LA309

L.GAA057 PD=EH GALLUP NMEX 8 219P=

LEO HEINDLE=

BASEMENT RM 4 POST OFFICE BLDG TUCSON ARIZ=

TALKED TO D MCCLOSKEY. WILL PAY FREIGHT ON SORES. SEND BILL TO DOWNS MCCLOSKEY AMERADA PET CORP 417 SO HILL ST LOS ANGELES 15 CALIFORNIA=

NATHANIEL W CHARNLEY=

417 SO 13=.

GENERAL OFFICES
120 BROADWAY, NEW YORK

AMERADA PETROLEUM CORPORATION

417 SOUTH HILL STREET
LOS ANGELES 13, CALIFORNIA

November 6, 1950.

RECEIVED
NOV 10 1950

Mr. L. A. Heindl,
State Land Department,
Phoenix, Arizona.

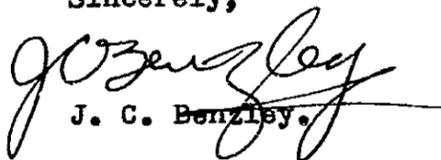
STATE LAND DEPT.
OF ARIZONA

Dear Mr. Heindl:

I am returning your
reference list of publications per-
tinent to Arizona geology.

I very much appre-
ciate the assistance you gave us
during our stay in Arizona, and
hope you have obtained the samples
and other information you wanted
on our well.

Sincerely,


J. C. Benzley.

JCB:SJ
Encl.

GENERAL OFFICES
120 BROADWAY, NEW YORK

AMERADA PETROLEUM CORPORATION

417 SOUTH HILL STREET
LOS ANGELES 18, CALIFORNIA

D. B. PINNELL
PRODUCTION DEPARTMENT

November 1, 1950

RECEIVED
NOV 1 1950
STATE LAND DEPT.
OF ARIZONA

State Land Department
State of Arizona
Phoenix, Arizona

Attention: Mr. L.A. Heindl

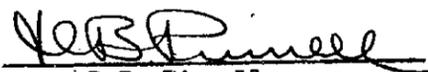
Gentlemen:

Enclosed please find copies of our final (October, 1950)
lessee's monthly report of operations on our well "Black Mountain"
No. 1, Apache County.

We will send you copies of the Log and History and electrical
logs of this well as soon as they have been prepared.

Yours very truly,

AMERADA PETROLEUM CORPORATION


D.B. Pinnell

DBP:gj
Encl.

September 19, 1950

Mr. J. C. Benzley
Amerada Petroleum Corporation
Chinle, Arizona

Dear Mr. Benzley:

I am enclosing what little information was available
in the Phoenix office, and will check into the
references after my arrival in Tucson.

I would appreciate being kept informed of your
activities.

Very truly yours,

L. A. Heindl
Geologist

LAM:kb
encls.

September 19, 1950

Mr. D. B. Pinnell
Amerada Petroleum Corporation
417 South Hill Street
Los Angeles 13, California

Dear Mr. Pinnell:

Enclosed please find your copies of the oil and gas
forms #1 and #3 referring to your Black Mountain No. 1
well on the Navajo tribal lands.

Very truly yours,

L. A. Heindl
Geologist

LAH:kb
encls.

GENERAL OFFICES
120 BROADWAY, NEW YORK

AMERADA PETROLEUM CORPORATION

417 SOUTH HILL STREET
LOS ANGELES 13, CALIFORNIA

D. B. PINNELL
PRODUCTION DEPARTMENT

June 23, 1950

Mr. L. R. Hogle
Coordinating Officer
Ground Water Division
State Land Department
Phoenix, Arizona

Dear Mr. Hogle:

Will you please forward to us at your earliest convenience 25 copies each of your State forms Oil and Gas 1, Oil and Gas 2, and Oil and Gas 3? Will you also furnish us 3 additional copies of the Oil and Gas Statutes, together with rules and regulations covering oil and gas drilling permits?

Thank you for your consideration in giving this matter your earliest attention.

Yours very truly,

D. B. Pinnell

TIK:mb

*Mailed
7/1/50*

RECEIVED
JUN 30 1950

STATE LAND DEPT.
OF ARIZONA

June 27, 1950

Ground Water Division

Mr. D. B. Pinnell
Amerada Petroleum Corporation
117 S. Hill St.
Los Angeles, California

Dear Mr. Pinnell:

Complying with your telephone request of June 26th we herewith enclose a copy of this Department's oil and gas statutes and forms used in connection therewith.

In the event we can be of further service to you in this respect, please advise.

Very truly yours,

John R. Hogle
Coordinating Officer-GW

JRHskb
encls.