

P-W

DUVAL CORPORATION #2 STATE NO PERMIT
NE SE Sec. 12-T19N-R26E APACHE CO. 1-64

1-64

County Apache
Area Holbrook Basin
Lease No. State

Well Name Duval Corporation #2 State

Location NE SE Sec 12 Twp 19N Range 26E Footage 1869' FSL - 308' FEL
GL Spud Completed Total
Elev 5735' ~~GL~~ 5740' KB Date 10-3-63 Abandon 12-7-63 Depth 1594'
5786GL + 5791 KB from HSGS 7 1/2' Quad
Contractor per spec

Casing Size 4" Depth 1467' Cement _____
Drilled by Rotary _____
Cable Tool _____
Production Horizon _____
Initial Production P & A

REMARKS Drilled as a potash test.
See file for Core Lithology. (Cored interval 1470-1593.5)

Elec _____
Logs Gamma Ray-Neutron: (2 others) Sample Log _____
Applic. Plugging Completion Sample Descript. _____
to Plug Record x Report x Sample Set X P-1339
Core Analysis _____
DSTs _____

Water well accepted by _____

Bond Co. & No. None

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

Filing Receipt _____ Dated _____ Well Book x Plat Book x

API No. 02-001-00078 Loc. Plat _____ Dedication None (Strat)

Permit Number None Date Issued _____

1-64

WELL COMPLETION OR RECOMPLETION REPORT AND WELL LOG

DESIGNATE TYPE OF COMPLETION:

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

DESCRIPTION OF WELL AND LEASE

Operator DUAL CORPORATION Address 715 E. FT LOWELL RD. TUCSON, ARIZONA

Lease Name _____ Well Number 2 Field & Reservoir _____

Location _____ Sec.—TWP—Range or Block & Survey T. 19. N. R. 26 E

County APACHE Permit number _____ Date Issued _____ Previous permit number _____ Date Issued _____

Date spudded _____ Date total depth reached 12-7-63 Date completed, ready to produce _____ Elevation (DF, RKB, RT or Gr.) _____ Elevation of casing hd. flange _____

Total depth 1594 P.B.T.D. _____ Single, dual or triple completion? _____ If this is a dual or triple completion, furnish separate report for each completion.

Producing interval (s) for this completion _____ Rotary tools used (interval) _____ Cable tools used (interval) _____

Was this well directionally drilled? _____ Was directional survey made? _____ Was copy of directional survey filed? _____ Date filed _____

Type of electrical or other logs run (check logs filed with the commission) GAMMA RAY - NEUTRON Date filed _____

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

TUBING RECORD

LINER RECORD

Size	Depth set	Packer set at	Size	Top	Bottom	Sacks cement	Screen (ft.)
in.	ft.	ft.	in.	ft.	ft.		

PERFORATION RECORD

ACID, SHOT, FRACTURE, CEMENT SQUEEZE RECORD

Number per ft.	Size & type	Depth interval	Am't. & kind of material used	Depth Interval

INITIAL PRODUCTION

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

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

Tubing pressure	Casing pressure	Cal'ed rate of Pro-duction per 24 hrs.	Oil	Gas	Water	Gas—oil ratio
			bbls.	MCF	bbls.	

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

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

Date _____

Signature _____

STATE OF ARIZONA OIL & GAS CONSERVATION COMMISSION
 Well Completion or Recompletion Report and Well Log
 Form No. P-7 File two copies
 Authorized by Order No. 4-8-59
 Effective April 6, 19 59

PLUGGING RECORD

Operator DUVAL CORPORATION		Address 4715 E. FT. LOWELL RD., TUCSON, ARIZONA	
Name of Lease		Well No. 2	Field & Reservoir
Location of Well 1869' NORTH & 308' WEST OF SE COR SEC. 12 T. 19 N. R. 16 E		Sec-Twp-Rge or Block & Survey	County APACHE
Application to drill this well was filed in name of	Has this well ever produced oil or gas	Character of well at completion (initial production): Oil (bbls/day) Gas (MCF/day) Dry?	
Date plugged: 12-7-63	Total depth 1594	Amount well producing when plugged: Oil (bbls/day) Gas (MCF/day) Water (bbls./day)	
Name of each formation containing oil or gas. Indicate which formation open to well-bore at time of plugging	Fluid content of each formation	Depth interval of each formation	Size, kind & depth of plugs used. Indicate zones squeeze cemented, giving amount cement.

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

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

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

Name	Address	Direction from this well:

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
File this form in duplicate with the State of Arizona Oil & Gas Conservation Commission

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

.....
Date Signature

SUMMARY OF FORMATIONS
 RECOGNIZABLE IN DRILL HOLE CUTTINGS FOR CORRELATION IN THE
 HOLBROOK BASIN PROJECT

<u>Hole No.</u>	<u>Interval (feet)</u>	<u>Formation or Member</u>
1	Ground elevation 5982' 0-1360 1360- 1767	Not determined Top of Coconino Supai, top of 1st marker Anhydrite
2	Ground elevation 5735' 0-50 50-455 455-483 483- 605- 907- 947-1072 1072-1385 1365- 1462-	Dune Sand Upper Petrified Frst. Sonsela Lvr. Petrofied Frst. Top of Greenish-grey Shinarump Lower Wupatki Coconino Supai Top of 1st marker Anhydrite
3	Ground elevation 5604' 0-100 100-145 145- 498 535- 560-694 694-1035 1035- 1115	Upper Pet. Forest Sonsela Lower Pet. Forest Top of greenish-grey Sinarump Lower Wupatki Coconino Supai Top of 1st marker Anhydrite
4	Ground elevation 5753' 0-5 5- 172- 502- 804- 855-940 940-1280 1280- 1355	Bidahochi Upper Pet. Forest Lower Pet. Forest Top greenish-grey Shinarump Lower Wupatki Coconino Supai Top of 1st marker Anhydrite

1-64

DUVAL CORPORATION
INTER-OFFICE MEMORANDUM

FROM NAYAJO
TO TUCSON

DATE 1/28/64
ATTENTION B.G. MESSER

SUBJECT: DUVAL #2

DATE STARTED	<u>12/7/63</u>
DATE COMPLETED	<u>5735</u>
G.L. ELEV.	<u>5740</u>
K.B. ELEV	<u>1594</u>
T.D.	<u>1467</u>
CASING	<u>4663</u>
ELEV. COCO	<u>4252</u>
ELEV. TOP HALITE	<u> </u>
ELEV. TOP SYLVITE	<u> </u>

} 5' ADDED FOR K.B. DATUM.

5735
4252
1483

5740
4252
1488

DUVAL SULPHUR & POTASH COMPANY

POTASH DIVISION
CARLSBAD, NEW MEXICO

WHILE WE BELIEVE THIS INFORMATION TO BE
CORRECT. WE MAKE NO REPRESENTATION WITH
RESPECT TO, NOR DO WE ASSUME ANY RESPONSIBILITY
FOR, THE CORRECTNESS THEREOF.
DUVAL CORPORATION

CORE LITHOLOGY

WELL NO. 2

DEPTH (Feet)		INTERVAL		ESTIM. %		DESCRIPTION	
From	To	Feet	Shale	P			
						Abbreviations: H - Halite K - Kieserite A - Anhydrite Le- Leonite P - Polyhalite K - Kainite S - Sylvite L - Langbeinite C - Carnallite V - Very fg - Fine grained med. g. - medium grained cg - course grained clr - clear incl. - inclusions occ - occasional irreg. - irregular	
1470	0					Started to core.	
1470	0	1477	2	7	2	- 100	A, gray-lt. gray near bottom;
1477	2	1484	3	7	1	90	10 Clay-silt, med. hard to soft, brown; some small to large gray A incls., 0.1 ft. gray A band at 1879.1'.
1484	3	1485	3	1	0	5	95 A, gray; thin brown clay partings at top & base.
1485	3	1488	1	2	8	90	10 Clay-silt, brown to gray, med. soft to hard; some small to med. gray A incls. decreasing down.
1488	1						Top of Salt
1488	1	1491	8	3	7	10	2 H, f. to med. g.; small to large brown clay-silt incls in top & bottom thirds; 0.1 ft. band gray A at top.
1491	8	1495	2	3	4	4	- H, med. g., clear; few small incls. & stringers of red-brown clay-silt.
1495	2	1495	5	0	3	-	100 A, gray, f.g.
1495	5	1495	9	0	4	-	2 H, f. to med. g., clear; few very small irreg. gray A stringers.
1495	9	1498	5	2	6	1	85 A, gray; several small to med. g. clear H intergrowths, some soft red-brown clay in top 0.2 ft.; very few irreg. red clay stringers in lower half.
1498	5	1502	3	3	8	-	- H, v. clear, small to large g., some pitting; very few small red-brown clay-silt incls.; occ. gray A stringer in bottom 0.4 ft.

DUVAL SULPHUR & POTASH COMPANY

WELL NO. 2

CORE LITHOLOGY

PAGE NO. 2

DEPTH (Feet)		INTERVAL		ESTIM. %		DESCRIPTION
From	To	Feet	Shale	P		
1502 3	1504 1	1 8	4	-		H, clear, med. to c.g.; occ. small to med. brown clay-silt incls.; thin gray A parting at base. 12-18-63:
1504 1	1509 3	5 2	16	-		H, f. to med. g.; small to large incls. of brn. clay silt, soft, decreasing down, 30% at top to 4% at base.
1509 3	1510 9	1 6	3	-		H, clr, med. g.; occ. small to med. red-brn clay-silt incls. & stringers; 0.1' band clay at 1510.6'.
1510 9	1516 3	5 4	7	1		H, med. to c.g.; occ. small to large brn. clay-silt incl. in top & bottom 1/3, decreasing to middle, 10% in top & base, 3% in middle; occ. V. small gray A. bleb.
1516 3	1518 2	1 9	2	2		H, clr., med. to c.g.; occ. small to med. gray A blebs & stringers; few small red-brn clay-silt stringers.
1518 2	1518 7	0 5	15	80		A, gray to white; mixture of red-brown silt, hard, with A, increasing down; 1/2" band gray A at top; V. few small blebs H, s.g., as intergrowths in A.
1518 7	1519 5	0 8	75	15		Silt, hard, brn.; A, white, as blebs & incls. decreasing down; few small H, f.g., blebs.
1519 5	1520 6	1 1	85	1		Clay-silt, red-brn., soft to med. hard; some blebs & stringers of H, f.g.; V. few small white A. blebs.
1520 6	1522 1	1 5	35	-		H, f. to med. g.; several small to large brn. clay-silt incls., soft.
1522 1	1524 6	2 5	6	-		H, med., several med. clay incls., brn., soft.
1524 6	1527 0	2 4	10	-		H, med. to c.g.; some med. to large brown clay-silt incls.
1527 0	1528 0	1 0	60	-		Clay-silt, brn., soft; some H, med. incls.
1528 0	1529 1	1 1	6	-		H, med., some small to med. incls. & stringers, soft brown clay-silt.
1529 1	1531 0	1 9	3	-		H, med. to c.g.; few small brown clay-silt incls.

DUVAL SULPHUR & POTASH COMPANY

WELL NO. 2

CORE LITHOLOGY

PAGE NO. 3

DEPTH (Feet)		INTERVAL		ESTIM. %		DESCRIPTION
From	To	Feet		Shale	P	
1531 0	1535 0	4 0		-	1	H, V. clear, c.g., some pitting; few blebs & stringers of P ? in upper half, very few clay-silt incls. in top 0.2 ft.
1535 0	1535 6	0 6		-	40	H, V. clear, c.g.; 0.2 ft. band A/P gray to pink at 1535.3 ft., other irreg. incls. of A/P.
1535 6	1536 3	0 7		3	65	A, gray, some A/P pink incls. in top third; H clear, f.g., intergrowths, 1/2" band of brown clay-silt at base.
1536 3	1538 4	2 1		5	-	H, clear, med. to c.g.; few med. brown clay-silt incls. decreasing down from 8% to 1%, 1/2" brown clay band at base.
1538 4	1539 5	1 1		6	-	H, med. to c.g.; several med. to large brown clay-silt incls.
1539 5	1542 9	3 4		1	2	H, clear, f. to c.g.; few small gray A stringers in lower third; very few small to med. brown clay-silt incls. in top third, some pitting.
1542 9	1543 0	0 1		-	-	A, gray, f.g.
1543 0	1547 9	4 9		75	-	Clay-silt, brown to gray, soft; several med. to large H, incls., f.g. to med.
1547 9	1550 9	3 0		5	-	H, med. to c.g.; several med. to large brown clay silt incls. & stringers in top & bottom thirds; very few small gray A blebs in bottom quarter.
1550 9	1553 5	2 6		-	4	H, clear to tan, c.g.; several small to med. gray A blebs & stringers; occ. V. Small pink P bleb.
1553 5	1554 4	0 9		3	2	H, clear, c.g.; several stringers, red-brown clay-silt; few gray A stringers in top half.
1554 4	1558 3	3 9		-	-	H, V. clear, med. to c.g.; V. few small brown clay incls.; occ. V. small gray A bleb in bottom ft.
1558 3	1559 0	0 7		10	20	H, tan, med. g.; 1/2" gray A band at top, 0.2 ft. zone white A and brown clay-silt at base, several stringers gray A thru out interval.

Form 3-A
of Sheets 5-54

DUVAL SULPHUR & POTASH COMPANY

WELL NO. 2 CORE LITHOLOGY PAGE NO. 4

DEPTH (Feet)		INTERVAL		ESTIM. %		DESCRIPTION		
From	To	Feet		Shale	P			
1559	0	1560	2	1	2	25	1	H, f. to med. g.; very large brown clay-silt incls. decreasing down from 40% to 10%; occ. V. small white A bleb.
1560	2	1561	5	1	3	65	-	Clay-silt, red-brown, soft; incls. of H, med. g. irreg. zone of gray silt at 1560.7.
1561	5	1565	5	4	0	8	-	H, f.g. to med.; several small irreg. brown clay-silt incls.; 0.2 ft. band at 1562.5.
1565	5	1568	0	2	5	2	-	H, V. clear, c.g.; occ. V. small irreg. blebs and stringers red-brown clay-silt.
1568	0	1571	9	3	9	3	-	H, clear, med. to c.g.; several irreg. brown clay-silt incls.; V. occ. gray A bleb.
1571	9	1573	2	1	3	1	2	H, clear, med. to c.g.; V. few small red-brown clay incls.; zone tan A/P stringers 0.2 ft. above base.
1573	2	1575	4	2	2	90	2	Clay-silt, brown to gray, soft; occ. irreg. blebs & stringers of H & white A.
1575	4	1579	6	4	2	4	1	H, med. to c.g., clear; several small to med., brown clay silt incls.; occ. small gray A bleb in upper part.
1579	6	1586	0	6	4	1	3	H, clear to tan, med. to c.g.; several med. to larger irreg. gray A incls. in middle third; occ. small brown clay-silt incls.
1586	0	1587	1	1	1	-	95	A, gray; some irreg. H intergrowths.
1587	1	1588	1	1	0	80	12	Clay-silt, brown to gray soft; some irreg. white A incls.; V. occ. H, stringers.
1588	1	1593	5	5	4	7	3	H, f.g. to med., several irreg. brown clay-silt incls. decreasing down from 12% at top to 2% at base; occ. stringers & blebs A/P, gray to pink.
		1593.5						TOTAL DEPTH
								Logged by <u>Karl E. Elers</u> K. E. Elers

NAVAJO SOUTH QUADRANGLE
ARIZONA-APACHE CO.
7.5 MINUTE SERIES (TOPOGRAPHIC)

