M-d

DUVAL CORPORATION #26 STATE NO PERMIT
NW SW Sec. 30-T18N-R26E APACHE COUNTY 1-54

1-54

County Apache

Area Holbrook Basin

Lease No.

Well Name Duval Corporation #26 State

Location NW SW Sec 30 Twp 18N Range 26E Footage 1650' FSL - 660' FWL

Elev 5740 Gr KB Spud Date 3-31-64 ~~Completed~~ Abandon 4-12-64 Total Depth 1496'?

Contractor

Drilled by Rotary
Cable Tool

Casing Size	Depth	Cement
4-1/2"	790'	
3-1/2"	1285'	

Production Horizon

Initial Production

REMARKS This hole drilled as a potash test.

See file for Core Lithology. (Footage 1285.3 - 1495.6')

Elec Logs Gamma Ray - Neutron;

Applic. to Plug Plugging Record x Completion Report x

Sample Log
Sample Descript.
Sample Set P-1316
Core Analysis
DSTs

Water well accepted by

Bond Co. & No. None

Bond Am't $ Cancelled Date Organization Report None

Filing Receipt None Dated Well Book x Plat Book x

API No. 02-001-05055 ~~None~~ Loc. Plat Dedication None (Strat)

Permit Number None Date Issued

1-54

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	Address
DUVAL CORPORATION	4715 E. FT. LOWELL RD. TUCSON, ARIZ.

Lease Name	Well Number	Field & Reservoir
	26	

Location: 3630' SOUTH & 660' EAST OF N.W. COR SEC. 30 T18N, R26E (Sec.—TWP-Range or Block & Survey)

County	Permit number	Date Issued	Previous permit number	Date Issued
APACHE				

Date spudded	Date total depth reached	Date completed, ready to produce	Elevation (DF, RKB, RT or Gr.) feet	Elevation of casing hd. flange feet
3-31-64	4-12-64	4/12/64		

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.
1493			

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)	Date filed
GAMMA RAY-NEUTRON	

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 in.	Depth set ft.	Packer set at ft.	Size in.	Top ft.	Bottom ft.	Sacks cement	Screen (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 bbls.	Gas prod. during test MCF	Water prod. during test bbls.	Oil gravity ° API (Corr)

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

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

PLUGGING RECORD

Operator: DUVAL CORPORATION		Address: 4715 E ET LOWELL RD. TUCSON, ARIZONA	
Name of Lease	Well No.: 26	Field & Reservoir	
Location of Well: 3630' SOUTH & 660' EAST OF N.W. COR SEC. 30 T 18N R 26E		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: 4-12-64	Total depth: 1493	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 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.

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 .....

STATE OF ARIZONA OIL & GAS CONSERVATION COMMISSION

Plugging Record — File two copies

Form No. P-15

Hole No.	Interval (feet)	Formation or Member
25	Ground elevation 6520'	
	0-110	(No samples)
	-652	Bidahochi'
	652-	Upper Petrified Forest
	1495-	Lower Petrified Forest
	1660 (gradational)	Top of greenish-grey
	1930-	Shinarump
	1965-2085	Lower Wupatki
	2085-2370	Coconino
	2370-	Supai
	2467	Top of 1st marker Anhydrite
26	Ground elevation 5740'	
	0-60	Upper Petrified Forest
	60-70	Sonsela
	70-	Lower Petrified Forest
	323-	Top of greenish-grey unit
	745-	Shinarump
	823-908	Lower Wupatki
	908-1245	Coconino
	1245-	Supai
	1331	Top of 1st marker Anhydrite
27	Ground elevation 5390'	
	0-63	Bidahochi
	63-	Chinle, below greenish-grey unit
	142-	Shinarump
	160-438	Lower Wupatki
	438-800	Coconino
	800-	Supai
	902	Top of 1st marker Anhydrite
28	Ground elevation 5880'	
	0-	Upper Petrified Forest
	269-	Lower Petrified Forest
	458-	Top of greenish-grey unit
	1023-	Shinarump
	1040-1176	Lower Wupatki
	1176-1493	Coconino
	1493-	Supai
	1576	Top of 1st marker Anhydrite

Form 3
2M Sheets 5-54

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. 26

DEPTH (Feet) From		DEPTH (Feet) To		INTERVAL Feet		ESTIM. % Shale	ESTIM. % XA	DESCRIPTION
				Abbreviations:				H - Halite Gyp - Gypsum
								A - Anhydrite C-S - Clay-Silt
								P - Polyhalite med.g. - medium grained
								S - Sylvite occ - occasional
								C - Carnallite V - Very
								f.g. - fine grained incr - increasing
								c.g. - coarse grained decr - decreasing
								incl. - inclusions clr - clear
								irreg - irregular brn - brown
1285	3							Started Coring
1285	3	1286	8	1	5	100	-	C-S, tan-brn., V. hard.
1286	8	1287	1	0	3	50	50	C-S, tan-white, V. hard mixture with A.
1287	1	1288	1	1	0	100	-	C-S, brn., hard.
1288	1	1288	5	0	4	-	100	A, white.
1288	5	1290	0	1	5	100	-	C-S, brn., V. hard.
1290	0	1291	1	1	1	10	90	A, white-gray; some C-S gray, grading in down.
1291	1	1299	7	8	6	100	-	C-S, brn., occ. gray, V. hard; ½" white A band at 1295.4'.
1299	7	1302	8	3	1	2	98	A, dark-lt. gray; zone of 10% brn. C-S in bottom 0.5'.
1302	8	1318	6	15	8	99	1	C-S, brn, hard, A, lt. gray, indurated, as 1303.2' & 1315.0'.
1318	6	1318	9	0	3	10	90	A, white; some irreg. C-S, brn., stringers in lower half.
1318	9	1320	4	1	5	90	10	C-S, brn., hard; few irreg. white A blebs & stringers.
1320	4	1321	0	0	6	5	95	A, lt. gray; little C-S in middle third.
1321	0	1322	8	1	8	98	2	C-S, dk. brnn, little gray, med. hd.; ½" irreg. white A band at 1321.4'.
1322	8	1323	5	0	7	-	100	A, lt. gray.
1323	5	1325	3	1	8	98	2	C-S, brn., C. little gray, med. hd., few small tan A stringers, steeply dipping.
1325	3	1328	3	3	0	-	100	A, gray, med.-dk., little white at base.

Form 3-A
3M Sheets 5-54

DUVAL SULPHUR & POTASH COMPANY

WELL NO. 26 — CORE LITHOLOGY — PAGE NO. 2

DEPTH (Feet) From		To		INTERVAL Feet		ESTIM. % Shale	A	DESCRIPTION
1328	3	1333	1	4	8	94	6	C-S, dk. brn., little gray; upper 1.1' is 20% white
								irreg. A/G, f remainder is 2% G, as fracture fillings
								of A along slickensides, few blebs.
1333	1	1345	5	12	4	-	100	A, lt.-dk. gray, mostly G. in upper & lower foot,
								(0.2' C-S at 1342.0', probably out of sequence).
1345	5							Top of Salt.
1345	5	1347	6	2	1	55	-	C-S, dk. brn., top 0.2' gray, med. hd.-med. soft; V.
								irreg. H, med., incr. down from 5% at top to 90% at
								base.
1347	6	1351	4	3	8	30	-	H, med. many small-med. brn-gray C-S incls.
1351	4	1352	3	0	9	4	-	H, clr., med.; few small brn. C-S incls.
1352	3	1355	3	3	0	8	1	H, med.-c.g.; some med. brn. C-S incls., occ. thin
								band; V. few med. white A blebs.
1355	3	1358	5	3	2	40	-	H, med.; some med.-V. lg. irreg. brn. C-S incls &
								bands.
1358	5	1361	6	3	1	4	-	H, med.; few irreg. small-med. brn. C-S incls.
1361	6	1363	4	1	8	-	2	H, clr., c.g.-V. c.g.; few irreg. lt. gray A
								stringers; occ. small brn. C-S incl.
1363	4	1365	2	1	8	-	90	A, gray, occ. red; some small irreg. H incls.
1365	2	1366	8	1	6	-	2	H, clr., c.g.-med.; few small tan-red A stringers,
								grading in down.
1366	8	1369	9	3	1	4	-	H, c.g.; 3% brn. C-S incls. & 20% 0.3' zone at top
								10% 0.3' zone at base.
1369	9	1373	8	3	9	-	1	H, V. clr., med.-c.g.; V. few small gray A stringers.
1373	8	1375	2	1	4	60	5	C-S, brn., med. soft; some irreg. H, f.-~~med.~~ c.g.;
								½" gray A zones at top & base, & few small white
								blebs.
1375	2	1378	5	3	3	40	-	H, med.; many small-V. lg. brn. C-S incls.
1378	5	1380	4	1	9	12	-	H, med.; some small-lg. brn. C-S incls., ½" band
								at 1380.0'.
1380	4	1384	2	3	8	12	-	H, med.; some irreg. small-lg. brn. C-S incls.,
								0.2' 80% zone at top, 0.4' 40% zone at 1381.4'.

Form 3-A
3M Sheets 5-54

DUVAL SULPHUR & POTASH COMPANY

WELL NO. 26 — CORE LITHOLOGY — PAGE NO. 3

DEPTH (Feet) From		DEPTH (Feet) To		INTERVAL Feet		ESTIM. % Shale	ESTIM. % BdA	DESCRIPTION
1384	2	1384	5	0	3	60	-	C-S, brn., & some irreg. H, med.
1384	5	1386	7	2	2	6	-	H, clr., med.-c.g.; few med. brn. C-S incl.s.
1386	7	1390	2	3	5	8	-	H,,med.; some small-med. brn., occ. gray, C-S incls.
								(core badly broken)
1390	2	1391	5	1	3	1	-	H, clr., med.; few small brn. C-S incls.; occ. white
								A bleb in lower 0.1'.
1391	5	1397	6	6	1	-	90	A, med. gray; few irreg. med. H intergrowths in
								lower half.
1397	6	1399	0	1	4	-	7	H, V. clr., c.g.; A, gray to tan, as lg. blebs &
								stringers in lower half; few gray C-S stringers in
								bottom 0.2'.
1399	0	1400	5	1	5	15	-	H, med., some irreg. small-lg. brn. C-S incls. &
								stringers.
1400	5	1402	4	1	9	50	-	C-S, brn., med. soft; many irreg. H, med. blebs &
								H, pink, f.g., as vertical frasture-fillings; occ.
								med. tan A bleb.
1402	4	1407	0	4	6	13	-	H, med., some med.-lg. brn. C-S incls. decr. down
								from 20% at top to 6% at base; occ. small gray A
								bleb in lower part. (Core badly broken.)
1407	0	1408	1	1	1	2	-	H, clr., med.; few small brn. C-S incls.
1408	1	1413	2	5	1	8	-	H, med.-c.g.; some irreg. brn. C-S incls.
								(cOre badly broken)
1413	2	1415	0	1	8	-	2	H, V. clr.-pink, med.-c.g.; occ. irreg. V. small
								brn. C-S incls.; few small pink-white A blebs &
								stringers.
1415	0	1417	3	2	3	60	-	C-S, brn. & H, med., as ireeg. blebs.
1417	3	1418	2	1	9	13	-	H, med.,some small-lg. brn. C-S incls., incr. down
								from 6% at top to 20% at base; occ. small pink A
								bleb in upper part.
1419	2	1420	1	0	9	15	-	H, med.-c.g.; few small-lg. brn. C-S incls.
1420	1	1420	70	0	6	55	-	C-S, brn., hd., & H, med.-c.g., irreg.

Form 3-A
3M Sheets 5-54

DUVAL SULPHUR & POTASH COMPANY

WELL NO. 26 — CORE LITHOLOGY — PAGE NO. 4

DEPTH (Feet) From		DEPTH (Feet) To		INTERVAL Feet		ESTIM. % Shale	ESTIM. % B&A	DESCRIPTION
1420	70	1421	15	0	45	10	-	H, med.; some med. brn. C-S incls.; occ. small pink milky S bleb. Est. K_2O/S = 1%
1421	15	1422	30	1	15	40	-	H, med., & C-S, brn. Decr. down from 60% at top to 20% at base.
1422	30	1422	80	0	50	12	-	H, clr., med.; some lg. brn. C-S incls. in upper & lower thirds; few med. red S blebs in bottom 0.1'. Est. K_2O/S = 3%
1422	80	1424	00	1	20	25	-	H, med.; some irreg. med. c.g. red-milky S; some irreg. med.-lg. brn.-little gray C-S; occ. small A bleb. Est. K_2O/S = 15%
1424	00	1425	80	1	80	20	-	H, med.; some irreg. med.-lg. brn. C-S incls.; few small med. red-milky S blebs. (Core broken) Est. K_2O/S = 3%
1425	80	1426	65	0	85	4	1	H, med.-c.g.; some small brn. C-S incls.; V. few small pink A/P & red S blebs. Est. K_2O/S = 1%
1426	65	1427	45	0	80	1	-	H, clr., f.g.-med.; few V. small red S blebs; occ. small gray C-S incl. Est. K_2O/S = 1%
1427	45	1428	35	0	90	-	-	H, clr., c.g.-V.c.g.; 0.2' zone of S, milky, c.g., at top, few red S blebs below. Est. K_2O/S = 16%
1428	35	1429	90	1	55	-	2	H, V. clr., med.-c.g.; some irreg. S, c.g., milky-pink, V. few small white A stringers. Est. K_2O/S = 14%
1429	90	1430	55	0	65	-	10	H, clr., med.; few irreg. A zones; occ. small pink S blebs. Est. K_2O/S = 1%
1430	55	1431	05	0	50	-	40	H, f.g., & A, lt. gray; V. few small pink S blebs. Est. K_2O/S = 2%
1431	05	1431	75	0	70	-	1	H, v. clr., c.g.; occ. white A bleb at top; occ. irreg. pink S bleb. Est. K_2O/S = 1%
1431	75	1432	60	0	85	-	1	H, clr., c.g.; some S, red-milky, in lower 0.3'; V. few irreg. gray A stringers. Est. K_2O/S = 12%

Form 3-A
3M Sheets 5-54

DUVAL SULPHUR & POTASH COMPANY

WELL NO. 26 — CORE LITHOLOGY — PAGE NO. 5

DEPTH (Feet) From		DEPTH (Feet) To		INTERVAL Feet		ESTIM. % Shale	ESTIM. % XP A	DESCRIPTION
1432	60	1434	60	2	00	3	-	H, med.; few small-med. brn. C-S incr. down from 1% at top to 6% at base; V. few small-med. red S blebs; occ. gray A bleb. Est. K_2O/S = 1%
1434	60	1436	05	1	45	4	2	H, f.g.-med.; some med.-V. lg. milky S blebs; few small-med. brn.-gray C-S incls.; occ. small pink A/P bleb. Est. K_2O/S = 22%
1436	05	1436	65	0	60	10	2	H, med.;some brn. C-S incls., grading out in top half; few med. white A blebs; occ. small pink S bleb. Est. K_2O/S = 1%
1436	65	1437	20	0	55	-	4	H, clr. , med.; few small-lg. pink-milky S blebs; few small pink-gray A/P blebs. Est. K_2O/S = 10%
1437	20	1437	95	0	75	1	5	H, clr., med.; few small pink-tan A/P blebs; occ. brn. C-S bleb in top third. Est. K_2O/S = 0%
1437	95	1438	9	0	95	-	1	H, V. clr., c.g.; V. few small white A blebs.
1438	9	1439	2	0	3	-	15	H, clr., med.; few med-lg. lt.gray A blebs; occ. small gray C-S incl. near base.
1439	2	1440	2	1	0	20	2	H, med. f.g.; many med.-lg. brn. C-S incl., grading in down; few small white A blebs.
1440	2	1445	0	4	8	50	-	C-S, brn., & H, irreg., f.g.-c.g.; ½" red C stringer at 1440.4', occ. small red C stringer in lower foot. Est. C = 1%
1445	0	1448	2	3	2	4	-	H, med.-c.g.; few med-lg. irreg. C-S incls., grading out down; occ. med. white A bleb.
1448	2	1449	4	1	2	-	1	H, clr., med., ¼" A parting at base; occ. V. small brn. C-S incl.
1449	4	1451	4	2	0	-	-	H, V. clr., c.g.; occ. A stringer & small brn. C-S incl.
1451	4	1452	2	0	8	2	2	H, fairly clr., med.; few small tan A blebs & brn. C-S incls.
1452	2	1455	4	3	2	-	1	H, V. clr., V.c.g.; 0.1' 20% white zone at 1454.2'.

Form 3-A
Sheets 5-54

DUVAL SULPHUR & POTASH COMPANY

WELL NO. 26 — CORE LITHOLOGY — PAGE NO. 6

DEPTH (Feet) From		To		INTERVAL Feet		ESTIM. % Shale	%A	DESCRIPTION
1455	4	1456	2	0	8	3	1	H, clr., med.-c.g.; 0.1' 25% C-S zone at top; few small gray A stringers in bottom ½.
1456	2	1458	4	2	2	85	-	H-S, brn.; some irreg. H, med.-c.gl, grading in down; occ. small white A bleb.
1458	4	1461	5	3	1	10	-	H, med.; some small med. brn. C-S incls., grading out down.
1461	5	1469	4	7	9	1	1	H, clr., med.-c.g.; V. few small-med. gray A blebs in lower half; occ. small brn. C-S incl.
1469	4	1473	1	3	7	-	1	H, V, clr., med. c.g.; some med. lt. gray A blebs in lower foot.
1473	1	1474	4	1	3	88	-	C-S, brn., little gray; 20% H, f.g. zone in top 0.3', few small stringers below.
1474	4	1477	4	3	0	4	1	H, clr., med.; few irreg. small-med., brn. C-S incls.; V. few small white A blebs.
1477	4	1482	1	4	7	30	1	H, clr., med.-c.g.; several V. lg. irreg. brn. C-S incls. & stringers, V. few small white A stringers.
1482	1	1483	3	1	2	5	-	H, clr, med.-c.g.; few small-med., irreg. brn. C-S incls.; occ. med. gray A bleb.
1483	3	1486	9	3	6	-	4	H, V. clr., c.g.; med. few med. white A blebs & stringers, half in. bad at 1486.2'.
1486	9	1488	0	1	1	1	90	A, med. gray; some H med. intergrowths in top ~~0.7~~ 0.7'; V. few thin gray-brn. C-S stringers in lower 0.4
1488	0	1488	5	0	5	90	-	C-S, brn., med. soft; 0.1' zone 50% H, f.g. at base.
1488	5	1489	6	1	1	1	2	H, clr., med.; few small white A blebs; V. few small brn. C-S. incls. grading out down.
1489	6	1495	5	5	9	-	2	H, clr., c-f.g.; few med white A blebs & stringers; 1.1' zone 2% small brn. C-S incls. at 1493.3'.
		1495	5					Total Depth

LOGGED BY B. F. McGuire
B. F. Mc Guire

1-54

FORM 159

DUVAL CORPORATION

INTER-OFFICE MEMORANDUM

FROM Navajo, Arizona

DATE April 14, 1964

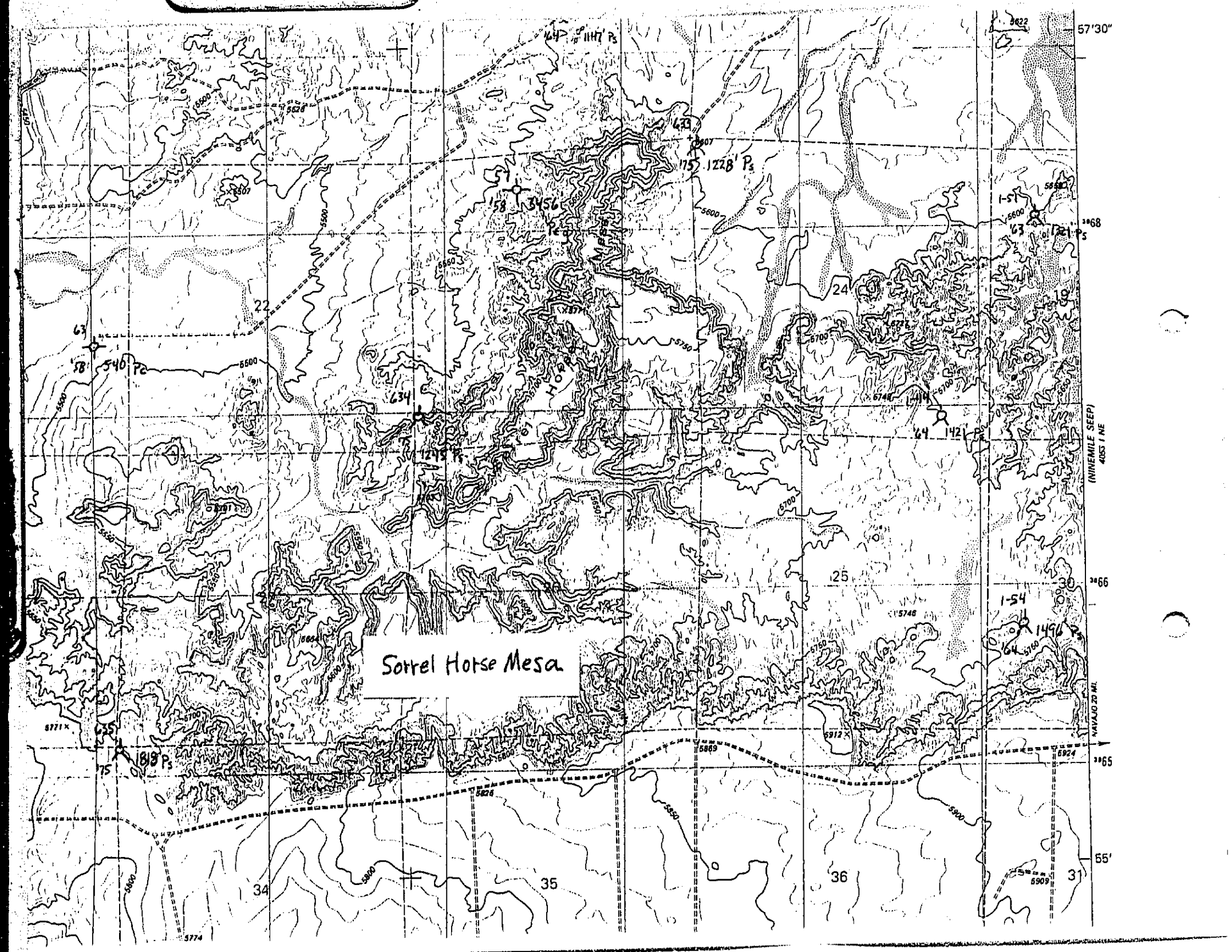
TO Esperanza

ATTENTION H.G. [illegible]

SUBJECT: Duval # 36 State

Location: 3630 FNL, 660 FWL, sec.30, T.18N., R.26E.
Date Started: 3/31/64
Date Completed: 4/12/64
Elevation, G.L.: 5740
Casing Point: 788
Depth, Top Coconino: 908 (4832)
Depth, Top Halite: 1344 (4396)
Depth, Top Sylvite: 1421 (4319)
T.D.: 1493

5740
908
+4832



Sorrel Horse Mesa
57'30"
55'
(NINEMILE SEEP)
4053 I NE
NAVAJO 20 MI.
22
24
19
25
30
34
35
36
31
1228' Ps
540 Pc
1245 Ps
1421 Ps
1496 Ps
1818 Ps
1-54