

KERN COUNTY LAND CO. NO. 7 STATE /-23  
NE/NE Sec 2-17N-R25E, Apache Co.

P-W

County APACHE  
 Area \_\_\_\_\_  
 Lease No. \_\_\_\_\_

Well Name KERN COUNTY LAND COMPANY NO. 7 STATE

Location NE/NE Sec 2 Twp 17N Range 25E Footage 660 FEL - 660 FNL  
 Elev na 5800 Gr \_\_\_\_\_ KB Date 6-6-64 Spud \_\_\_\_\_ Completed \_\_\_\_\_ Total \_\_\_\_\_  
 Abandon 6-18-64 Depth 1600'

Contractor \_\_\_\_\_

Casing Size \_\_\_\_\_ Depth \_\_\_\_\_ Cement \_\_\_\_\_  
 Drilled by Rotary \_\_\_\_\_  
 Cable Tool \_\_\_\_\_  
 Production Horizon \_\_\_\_\_  
 Initial Production \_\_\_\_\_

REMARKS \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Elec Logs Gamma Ray-Neutron -2  
 Applic. to Plug \_\_\_\_\_ Plugging Record \_\_\_\_\_ Completion Report \_\_\_\_\_  
 Sample Log \_\_\_\_\_  
 Sample Descript. \_\_\_\_\_  
 Sample Set \_\_\_\_\_  
 Core Analysis \_\_\_\_\_  
 DSTs \_\_\_\_\_

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 NO. 02-001-05023

Permit Number \_\_\_\_\_ Date Issued \_\_\_\_\_

H2057

KCLA ~~7~~ 7 (1-23)

use of 22.0 miles existing rd. at

\$80.00/mile = 1,760.00

Construction 0.8 mile new rd. = 256.00

Surf. damage to well site = 150.00

drill water = 100.00

Dural lith. description

1st sign sylvite = 1523.95

1527.85 - 1529.55 - some red  
rimmed. milky syl. x'tals; very  
coarse grained.

1545 - 1548 - carnallite reported -

1551.35' - last trace sylvite - K<sub>2</sub>O in gen.

Break in potash between 1535.05 - 1540.0

112059

(1-23)

Kern County Land Company #7  
ASSAY REPORT AND DISCUSSION

Depth From To	Interval (ft)	K <sub>2</sub> O %	Na <sub>2</sub> O %	Analysis		Ca %	Mg %	SO <sub>4</sub>	Insol		Minerals		
				SiO <sub>2</sub>	Fe <sub>2</sub> O <sub>3</sub>				H <sub>2</sub> O	SiO <sub>2</sub>	Fe <sub>2</sub> O <sub>3</sub>	H <sub>2</sub> O	S
1523.15	1523.95	0.05	37.18	1.30	57.36	3.12	0.20	0.08	21.51	0.08	2.06	5.22	2.34
1523.95	1525.05	1.67	26.03	0.95	42.18	2.28	19.79	2.65	36.66	7.95	5.26	5.65	5.65
1525.05	1526.20	5.03	14.12	0.46	28.06	1.10	14.45	7.97	68.39	7.97	2.63	8.13	8.13
1526.20	1527.85	5.03	26.90	0.23	46.83	2.06	12.89	25.84	60.50	25.84	1.60	4.95	4.95
1527.85	1529.55	16.33	23.80	0.14	49.61	1.32	7.10	18.33	55.63	18.33	2.51	4.29	4.29
1529.55	1532.15	11.57	25.92	0.22	49.47	0.79	9.24	7.07	44.99	7.07	4.00	12.58	12.58
1532.15	1533.30	4.46	17.70	0.35	32.18	2.76	31.36	2.08	37.27	2.08	1.26	3.50	3.50
1533.30	1535.05	1.32	34.33	0.11	54.38	0.62	5.92	0.46	35.33	0.46	0.23	3.20	3.20
1538.95	1539.80	0.28	37.50	0.02	58.15	2.01	0.10	0.38	27.89	0.38	0.11	2.76	2.76
1539.80	1540.50	0.25	38.51	0.01	59.55	0.43	0.31	0.11	27.89	0.38	0.11	2.76	2.76
1540.50	1541.90	16.42	27.73	0.02	55.19	1.73	0.15	0.23	70.19	25.99	0.11	5.46	5.46
1541.90	1542.75	2.60	35.50	0.01	56.72	2.52	0.10	0.11	30.24	4.10	0.11	9.34	9.34
1542.75	1543.10	8.43	30.37	-	53.19	3.96	0.10	0.10	77.20	13.35	-	55.62	55.62
1543.10	1543.80	2.09	16.12	-	26.43	8.15	0.10	0.10	40.98	3.30	-	3.51	3.51
1543.80	1544.60	4.27	31.93	0.74	55.70	1.70	0.10	0.10	81.17	6.75	8.46	2.76	2.76
1544.60	1545.30	14.86	23.04	1.30	52.11	1.22	0.27	0.27	63.57	23.53	14.86	4.00	4.00
1545.30	1546.25	4.04	30.83	0.95	51.73	0.98	0.40	0.40	74.97	6.39	10.86	3.45	3.45
1546.25	1547.60	0.52	30.97	1.09	52.90	0.58	4.56	4.56	78.73	0.80	12.46	2.05	2.05
1547.60	1548.65	10.91	28.04	0.56	53.94	0.84	2.95	2.95	71.28	17.26	6.40	5.44	5.44
1548.65	1549.15	0.24	32.03	0.51	51.82	1.37	6.94	6.94	81.42	0.38	5.83	2.53	2.53
1549.15	1550.60	2.60	36.37	0.05	58.24	1.37	0.94	0.94	92.45	4.12	0.57	2.53	2.53
1550.60	1551.35	0.62	37.64	0.01	58.73	1.51	0.73	0.73	95.68	1.32	0.11	2.67	2.67

No. 1 Bed 9.64

No. 2 Bed 1.39

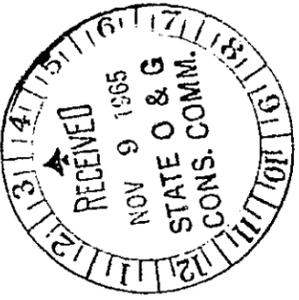
1526.20 1532.15 5.95 11.12 0.39 11.51

1540.50 1545.30 4.80 9.15 0.62 19.07

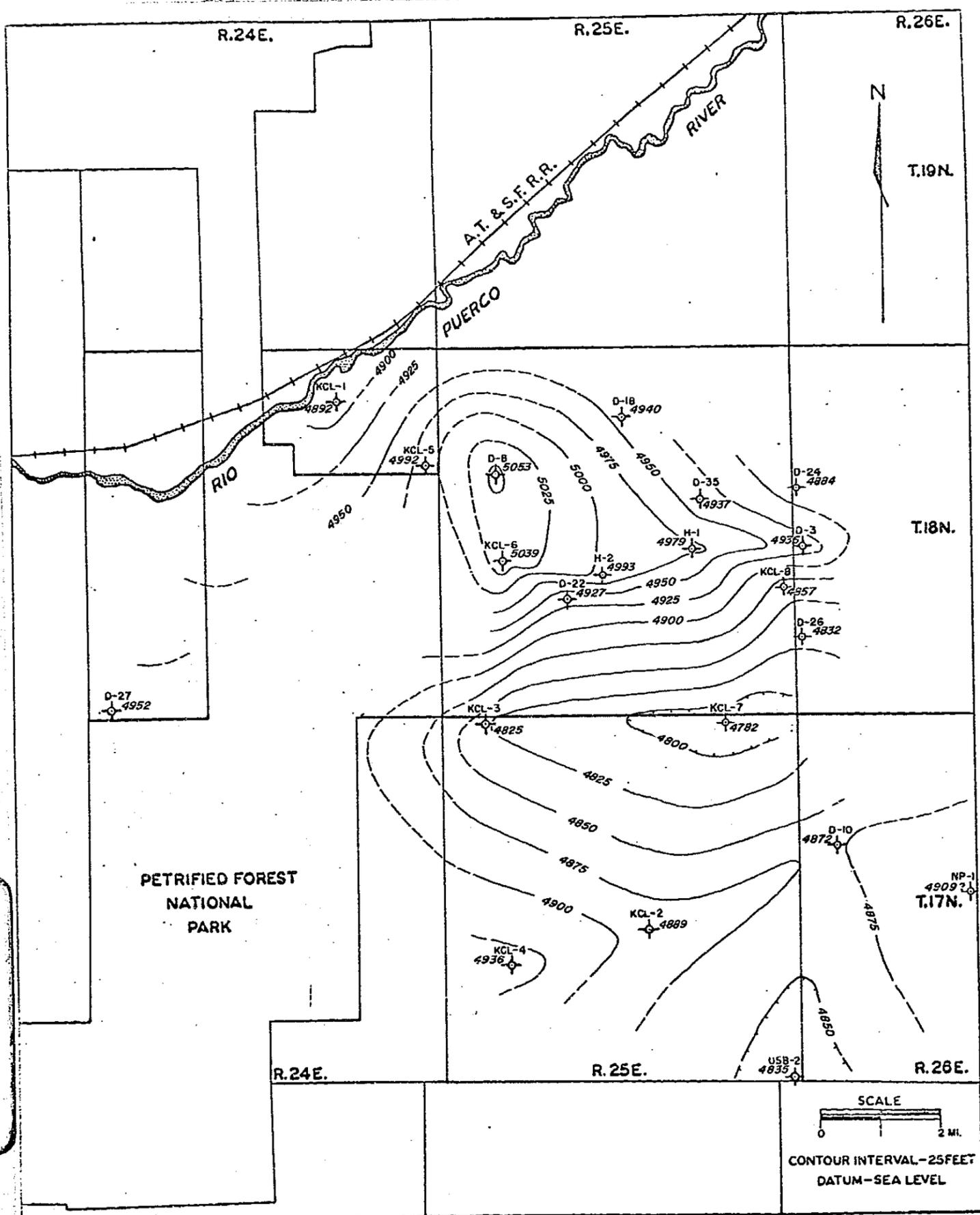
June 26, 1964

KERN COUNTY LAND COMPANY - POTASH TEST HOLES - APACHE COUNTY, ARIZONA

Drill Hole Number	DRILL		HOLE		LOCATION		Mineral Land Status	Ground Elevation	DEPTH TO TOP OF		Total Depth	Date Started	Date Completed		
	Township	Range	Section	Location	Location	Cocconino			Supai	Anhydrite "A" Bed				Anhydrite "B" Bed	Halite
KCL No. 1 <sup>100</sup> (O&GCC #1-35) ✓	18 N	24 E	C-S <sup>2</sup> , SW 2	660' FSL, 1320' FWL	660' FSL, 1320' FWL	P.P.#1596 State	5342'	450' ✓	830'	None	912'	969.5'	1134'	2-17-64	2-25-64
KCL No. 2 (U.S.B.-Navajo #2) (O&GCC #1-25) ✓	17 N	25 E	C - 22	2640' FSL, 2626' FEL	2640' FSL, 2626' FEL	P.P. - State	5710' ±	821'	1170'	1220'	1257'	1245'	1430'	3-1-64	3-8-64
KCL No. 3 <sup>100</sup> (O&GCC #1-24) ✓	17 N	25 E	C-N <sup>2</sup> , NE 6	660' FNL, 1320' FEL	660' FNL, 1320' FEL	P.P.#1128 Private	5600' ±	775'	1128'	1184'	1220'	1234.2'	1385'	5-14-64	3-22-64
KCL No. 4 (Phillips 1-F) (O&GCC #1-24) ✓	17 N	25 E	C-NW, NW 29	660' FWL, 660' FNL	660' FWL, 660' FNL	GREER State	5630' ±	694'	1046'	1100'	1133'	1136.4'	1305'	3-26-64	4-1-64
KCL No. 5 <sup>100</sup> (O&GCC #1-34) ✓	18 N	24 E	C-S <sup>2</sup> , SE 12	660' FSL, 1320' FEL	660' FSL, 1320' FEL	P.P.#1597 State	5367'	375' ✓	742'	None	821'	846.6'	1012'	4-5-64	4-11-64
KCL No. 6 (Duval Perm(c)) (O&GCC No. 1-43) ✓	18 N	25 E	W <sup>2</sup> , W <sup>2</sup> 20	2640' FNL, 141' FNL	2640' FNL, 141' FNL	P.P. - State	5418'	379'	720'	None	806'	835.8'	1021'	4-15-64	4-20-64
KCL No. 7 <sup>100</sup> (O&GCC #1-23) ✓	17 N	25 E	C-NE, NE 2	660' FNL, 660' FEL	660' FNL, 660' FEL	P.P.#1126 State	5800'	1018'	1350'	1399'	1433'	1445'	1600'	6-6-64	6-18-64
KCL No. 8 <sup>100</sup> (O&GCC #1-44) ✓	18 N	25 E	SE, SE 24	419' FSL, 882' FEL	419' FSL, 882' FEL	P.P.#1169 State	5710'	853' ✓	1190'	1248'	1283'	1302'	1421'	6-21-64	7-1-64



Completed By: WAYNE R. WALLACE  
November 4, 1965

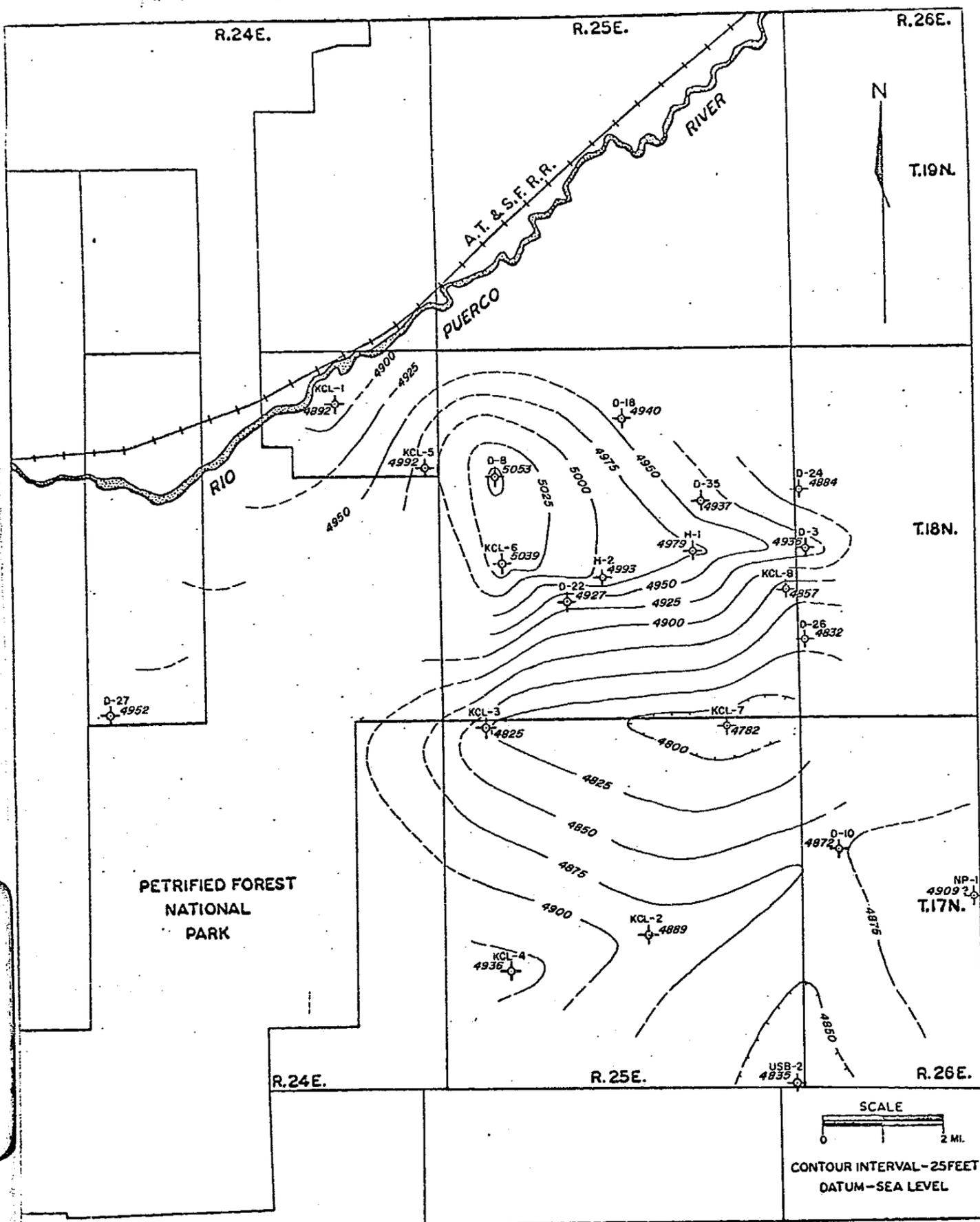


**STRUCTURAL CONTOUR MAP**  
**TOP OF COCONINO SANDSTONE**

AUGUST 1, 1964  
 BY WAYNE WALLACE

KERN COUNTY LAND COMPANY  
 APACHE POTASH PROJECT  
 APACHE COUNTY, ARIZONA

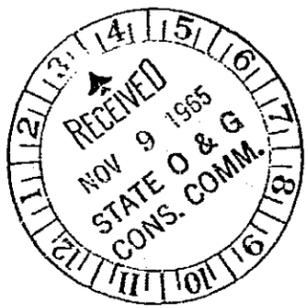


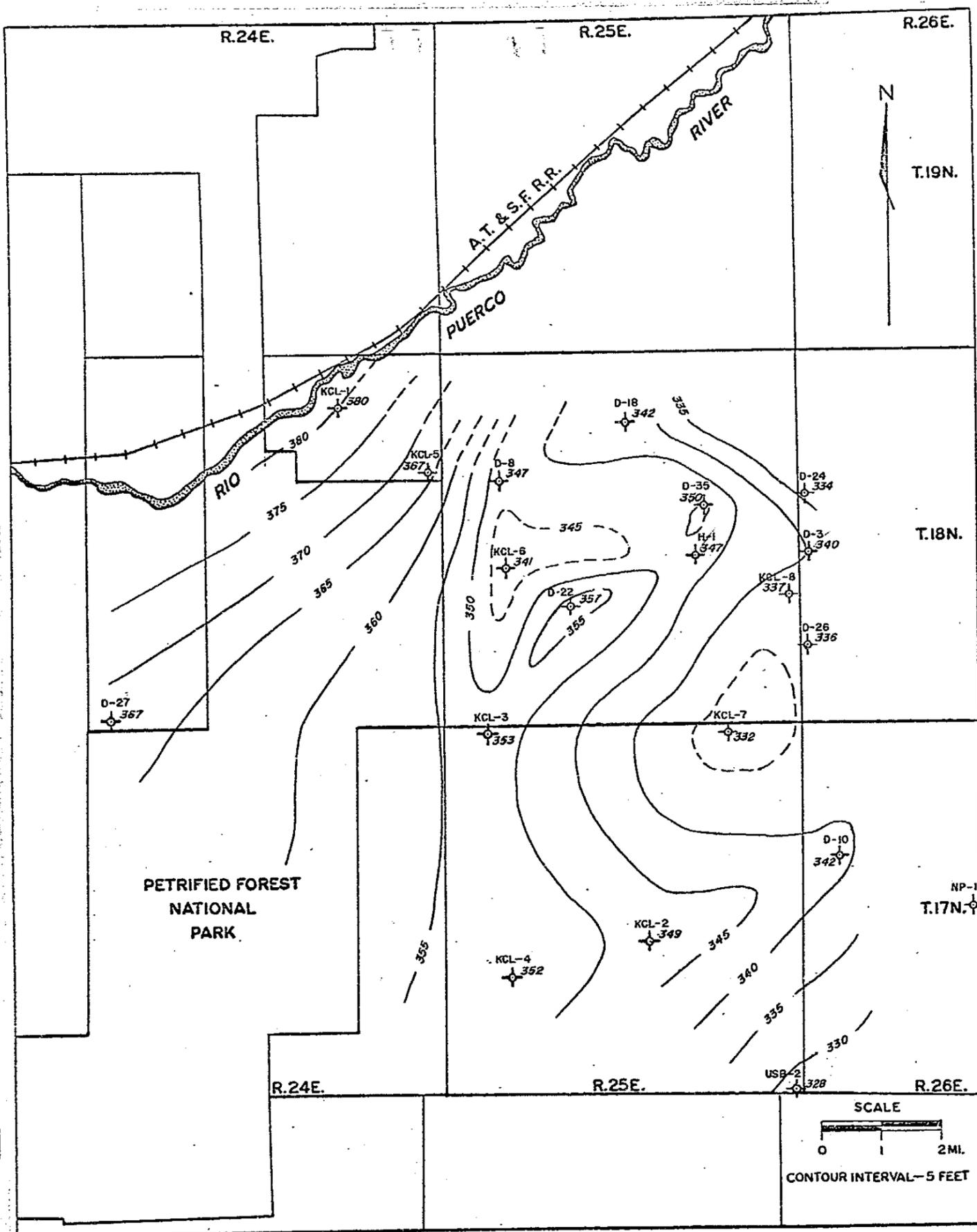


**STRUCTURAL CONTOUR MAP**  
**TOP OF COCONINO SANDSTONE**

AUGUST 1, 1964  
 BY WAYNE WALLACE

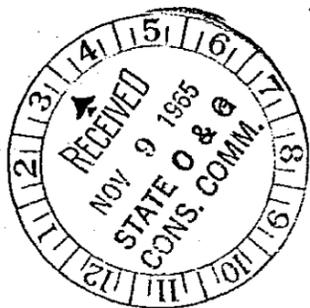
KERN COUNTY LAND COMPANY  
 APACHE POTASH PROJECT  
 APACHE COUNTY, ARIZONA

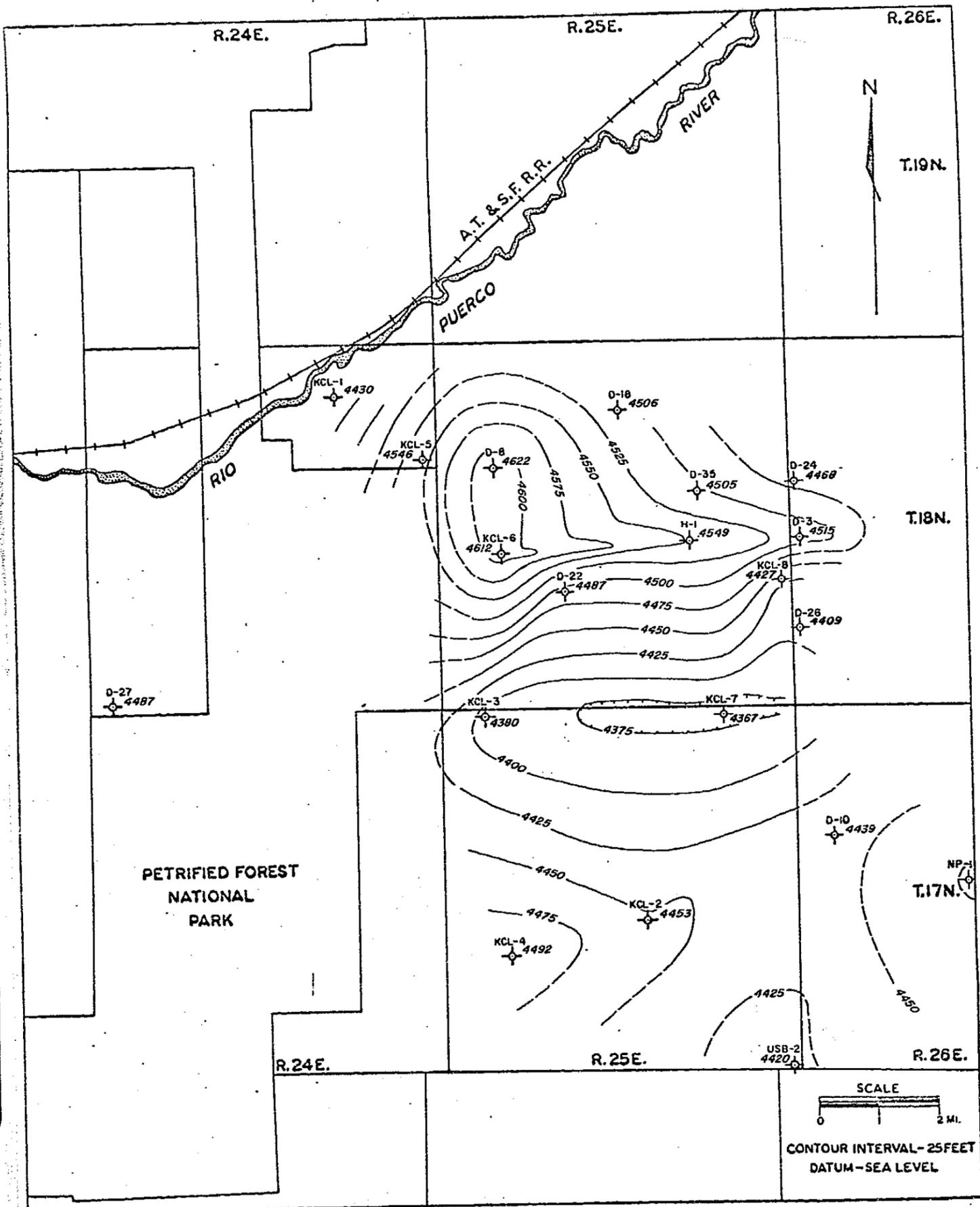




**ISOPACH MAP**  
 FROM TOP OF COCONINO SANDSTONE TO TOP OF SUPAI FORMATION  
 JULY 31, 1964  
 BY WAYNE WALLACE

KERN COUNTY LAND COMPANY  
 APACHE POTASH PROJECT  
 APACHE COUNTY, ARIZONA



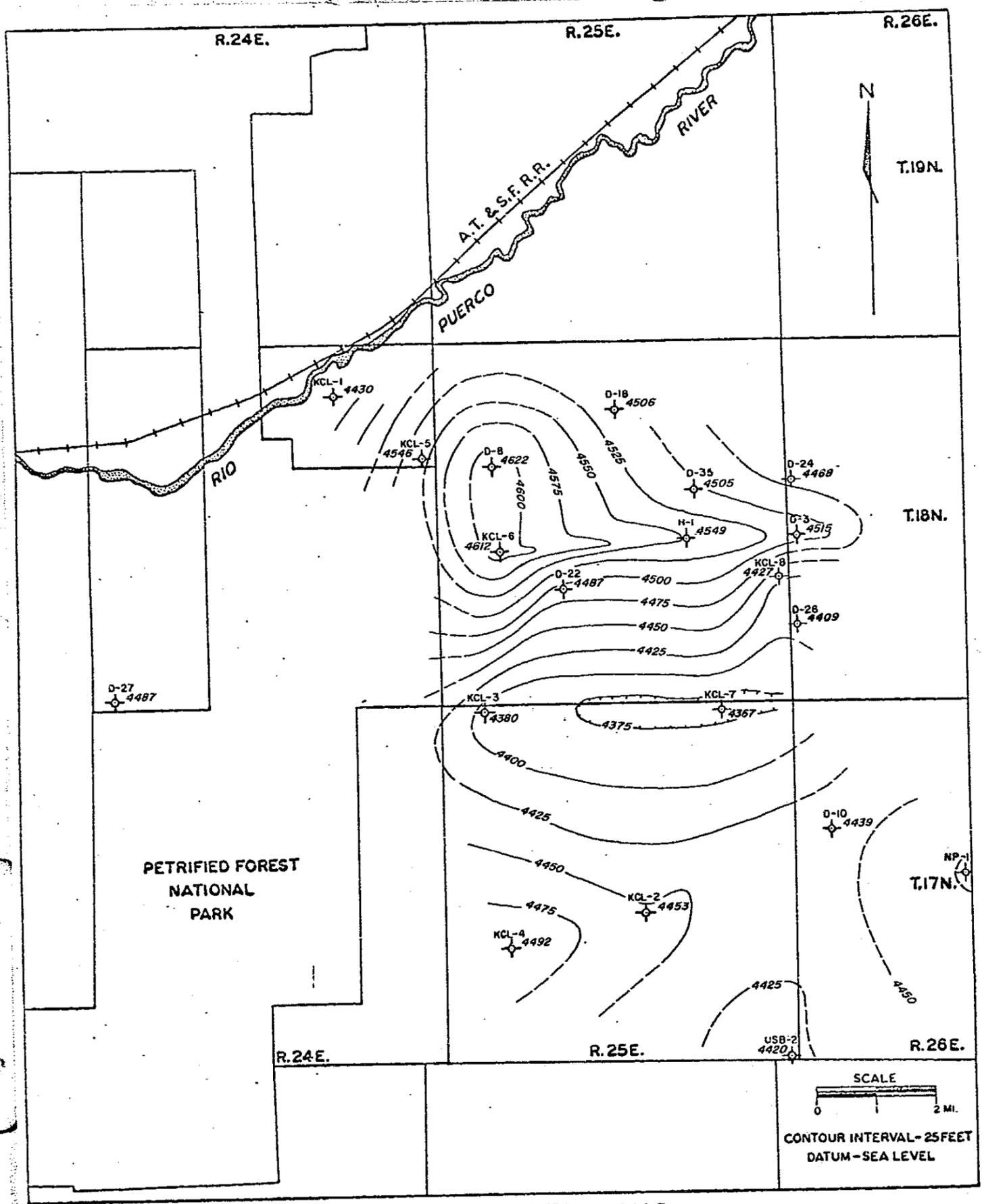


**STRUCTURAL CONTOUR MAP**  
 TOP OF ANHYDRITE "B" BED IN SUPAI FORMATION

AUGUST 5, 1964  
 BY: WAYNE WALLACE

KERN COUNTY LAND COMPANY  
 APACHE POTASH PROJECT  
 APACHE COUNTY, ARIZONA

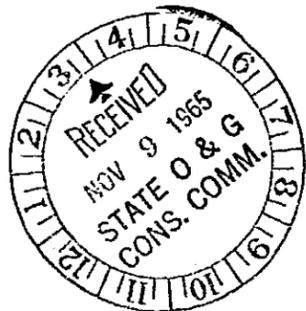


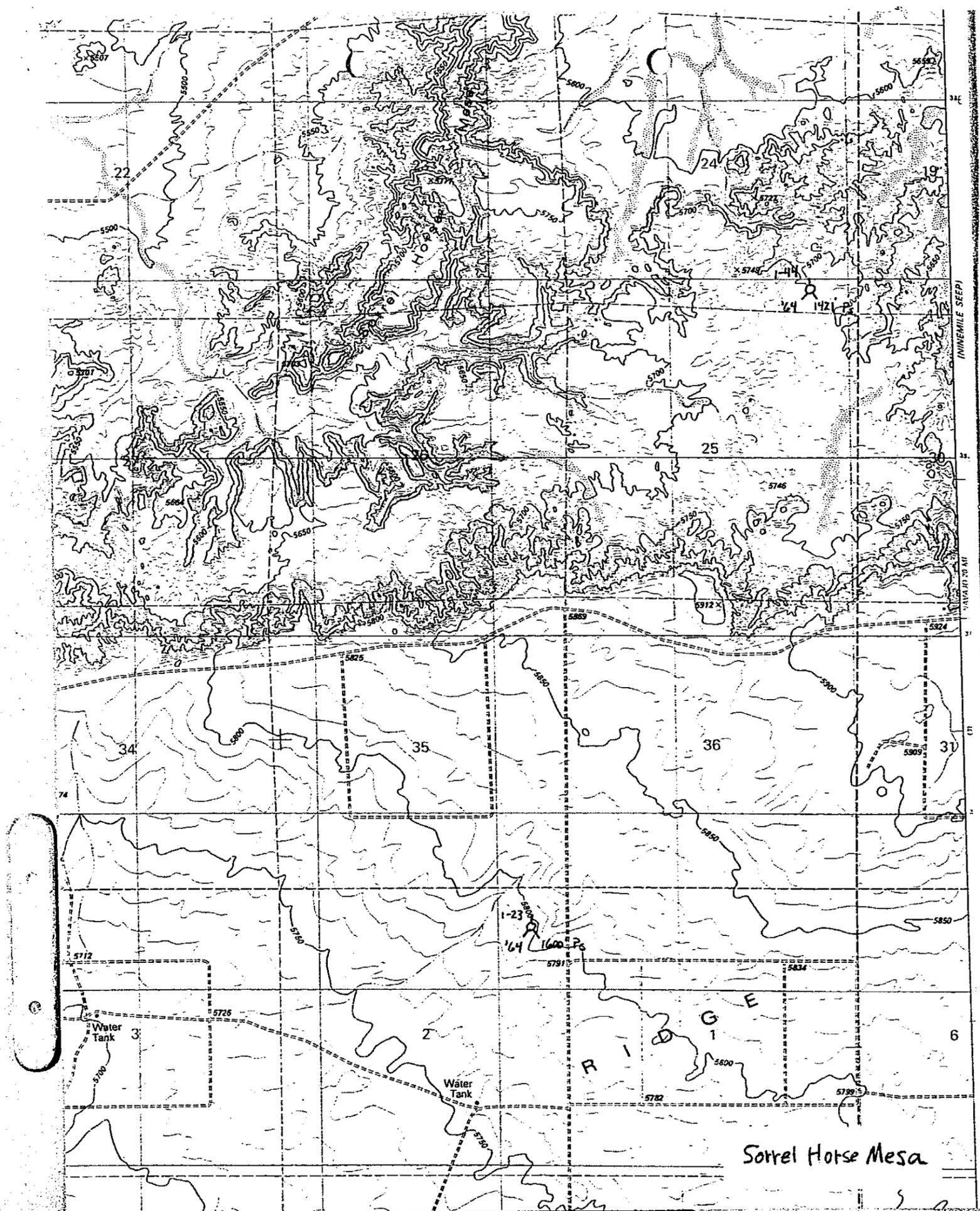


**STRUCTURAL CONTOUR MAP**  
**TOP OF ANHYDRITE "B" BED IN SUPAI FORMATION**

AUGUST 6, 1964  
 BY: WAYNE WALLACE

KERN COUNTY LAND COMPANY  
 APACHE POTASH PROJECT  
 APACHE COUNTY, ARIZONA



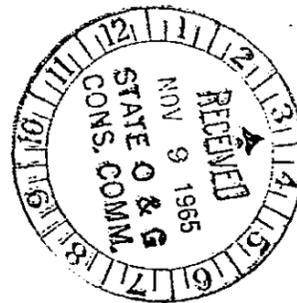


Sorrel Horse Mesa

KERN COUNTY LAND COMPANY  
2624 North First Avenue  
Tucson, Arizona

November 4, 1965

Mr. John Bannister  
Executive Secretary  
Oil and Gas Conservation Commission  
State of Arizona  
Room 202  
1624 West Adams  
Phoenix, Arizona 85007



Dear Mr. Bannister:

Enclosed are the following data pertaining to our 1964 Potash Project in Apache County, Arizona:

<u>Item</u>	<u>Quantity</u>	<u>Description</u>
1	2	Gamma Ray - Neutron Log KCL No. 1
2	2	" " " " KCL No. 3
3	2	" " " " KCL No. 5
4	2	" " " " KCL No. 6
5	2	" " " " KCL No. 7
6	2	" " " " KCL No. 8
7	2	Structural Contour Map - Top of Coconino Sandstone
8	2	Isopach Map - Coconino Sandstone
9	2	Structural Contour Map - Top of Anhydrite "B" Bed in Supai Formation
10	2	Itemized List of Drill Holes with Locations, Elevations, Formational Tops and Completion Dates

We have not furnished Gamma Ray - Neutron Logs on our Hole Designation of KCL No. 2 and KCL No. 4. Kern County Land Company drilled KCL No. 2 for the account of U.S. Borax. The U.S. Borax Designation for this Hole is Navajo #2. All detailed geologic and Gamma Ray - Neutron Logs are in the possession of U.S. Borax. The Phillips Petroleum Company drilled KCL No. 4 for the account of Kern County Land Company. The Phillips Designation for KCL No. 4 is Hole No. 1-P.

To: Mr. John Bannister  
Oil and Conservation Commission  
State of Arizona

November 4, 1965

Page 2

The original Gamma Ray - Neutron Log for this Hole is in the custody of Phillips Petroleum Company. Kern County Land Company drilled KCL No. 6 for the account of the Duval Corporation on one of Duval's state prospecting permits.

You will note that I have designated an Anhydrite "A" and "B" bed. In my opinion the "B" bed can be correlated throughout most of the Supai Salt Basin. The Unit that I have designated the Anhydrite "A" bed is situated stratigraphically above the "B" bed; however, it occurs only locally and is not as consistent or widespread as the "B" bed. Formational tops designated with a question mark have been reported to me by third parties; however, I have not actually seen the core or logs and cannot guarantee their accuracy.

I wish to take this opportunity to thank personnel of the Arizona State Land Department and the Oil and Gas Conservation Commission for the splendid service and cooperation extended to The Kern County Land Company during our recent potash exploration program.

Very truly yours,

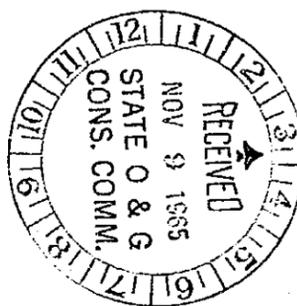
KERN COUNTY LAND COMPANY

*Wayne K. Wallace*

Wayne K. Wallace  
Chief Mining Engineer

cc: Mr. W. T. Griswold

Encl. - 20



November 12, 1965

Mr. Wayne K. Wallace  
Chief Mining Engineer  
Kern County Land Company  
2624 North First Avenue  
Tucson, Arizona

Dear Mr. Wallace:

We want to say how much we appreciate the data on the pot-  
ash tests which we received from you recently.

Of course this kind of information is considered most  
valuable by the operators here.

Yours very truly,

J.R. Scurlock  
Petroleum Geologist  
JR

KERN COUNTY LAND COMPANY

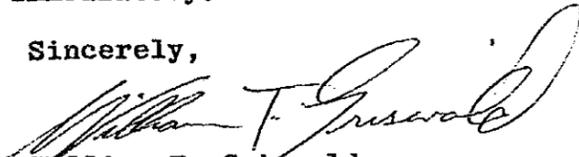
600 CALIFORNIA STREET  
SAN FRANCISCO 8  
TELEPHONE EXBROOK 7-4100  
October 25, 1965

Mr. John Bannister  
Executive Secretary  
Oil and Gas Conservation Commission  
State of Arizona  
Room 202  
1624 West Adams  
Phoenix, Arizona 85007

Dear Mr. Bannister:

I regret that the absence of our geologist from the Tucson office has delayed his reply to your letter requesting information on our drilling for potash in Apache and Navajo Counties, Arizona. Mr. Wallace, in our Tucson office, supervised this project and he should be returning to Tucson from Mexico within another week. I have written requesting that he furnish you the information immediately.

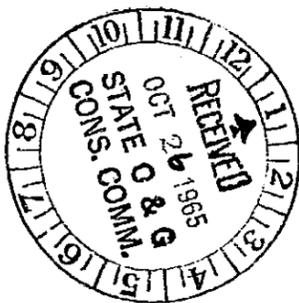
Sincerely,

  
William T. Griswold  
Manager, Minerals Department

WTG:ljb

cc: Mr. Wayne K. Wallace

*Make note of names & addresses*



October 22, 1965

Kern County Land Co.  
600 California Street  
San Francisco, California

Attention: Mr. R.E. Brodek

Gentlemen:

Attached are copies of information recently furnished to us by Davsi Corporation, National Potash, U.S. Borax, and Phillips Petroleum, covering their drilling in search of potash in Apache and Navajo Counties, Arizona.

As you recall, during the summer of 1964 your company was engaged in potash exploration in this area. Inasmuch as these holes penetrated the Shinarump and Coconino formations, both formations of potential helium value, I spoke to your personnel engaged in this activity, asking that certain information be filed with this Commission. They felt this could be done.

On September 8, 1965 and on October 11, 1965 we wrote your Tucson office, enclosing copies of the attached information, and requested that you file information along the lines of the information filed by Duval Corporation and National Potash.

Since these requests have not been acknowledged and therefore we do not know if any action is being taken, we are writing to your office. We request your cooperation in furnishing this office with information concerning your drilling.

Very truly yours,

John Bannister  
Executive Secretary  
mr  
enc

October 11, 1965

Kern County Land Co.  
2624 North First Avenue  
Tucson, Arizona 85719

Gentlemen:

On September 8, 1965 we wrote requesting that you file with this Commission data concerning your potash exploration holes. We requested this information inasmuch as these holes penetrated the Shinarump and Coconino formations.

We enclosed a copy of the data submitted by Duval Corporation concerning the forty-four strat holes drilled by that corporation. We are enclosing with this letter copies of the data furnished this office by National Potash Company on the two holes they drilled.

We have heard nothing from you in response to our letter of September 8, 1965. We again request your cooperation.

Yours very truly,

John Bannister  
Executive Secretary  
mj  
enc

September 8, 1965

Kern County Land Co.  
2624 North First Avenue  
Tucson, Arizona 85719

Gentlemen:

Attached please find information recently furnished to us by Duval Corp., covering its drilling of some forty-four holes in search of potash in Apache County.

As you recall, during the summer of 1964 your company was engaged in potash exploration in this area. Inasmuch as these holes penetrated the Shinarump and Coconino formations, both formations being of potential helium value, I spoke to your personnel engaged in this activity, asking that certain information be filed with this Commission. They felt that this could be done.

This letter is to request you to file information along the line of the information furnished by Duval. Duval has further promised that in the near future they will file copies of logs down to the salt so that the information most valuable to this Commission may be made available to the public.

Your cooperation with this endeavor will be greatly appreciated.

Yours very truly,

John Bannister  
Executive Secretary  
nr  
enc

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