

P-M

Anthony Oil-Discoverer #1
Sec 27-Twp 18N-R 2W
Yavapai County No Permit 13-5

13-5
16

County Yavapai
Area Chino Valley

Lease No. _____

Well Name Chino Valley Oil Dev. & Anthony Oil & Refng 1
~~Discovery~~

Location _____ Sec 27 Twp 13N Range 2W Footage ~1000 fsl 490.fel
Elev 4487 Gr Spud _____ Complete _____ Total _____
KB Date _____ Abandon 1903 Depth 2003

Contractor: _____ Approx. Cost \$ _____

Drilled by Rotary _____
Cable Tool _____

Casing Size _____ Depth _____ Cement _____

Production Horizon _____

Initial Production D & A

*Chino Valley Oil Development & Anthony O&R #1
Discovery (Heslet) - State Pl Dept. reports as Heslet well
or Discovery
USGS OMI # 201 - operators as above, but
no those name reported. First well in Goanopai
& NW 1/4 (1903-1905) - old reports (newspapers)
carried it as Discovery (probably from optimistic
operators). L.A. Herald reported that it was also
known as the Heslet well (probably name of farm
owner)*

Water well - accepted by _____

Bond Co. & No. _____ Note: P.I. gives location SE. SE. SE.

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

Filing Receipt _____ dated _____ Well Book _____ Plat Book _____

Loc. Plat _____ Dedication _____

API # 02-025-05009

PERMIT NO. None Date Issued _____

13-5

HESLET WELL
 Drilled 1902 NO LOCATION

0	225	Gravel and boulders
225	270	Clay
270	285	Water Sand
285	360	Lime
360	425	Water Gravel
425	559	Sandstone
459	524	Lime
524	534	Yellow shala
534	542	Oil Shale
542	562	Penn Sandstone..... ?
562	577	Blue Shale
577	607	Goodrich sandstone
557 607	557 612	Red Clay
612	657	Dark Pebbly sandstone
657	667	Clay and shale
667	717	Goodrich sandstone
717	797	Brown shale w/ gas
797	875	Red sandstone
865	965	Lime
965	999	Brown shale
999	1164	Blue lime
1164	1259	Red sandstone
1259	1404	Blue shale
1404	1481	Brown sandstone
1481-1529		Brown shale
1529	1599	Red sandstone
1599	1714	Lime
1714	1784	Red sand
1784	1887	Lime cap
1887	1997	Oil sand
1997	2002	Blue shale
TD 2002		

No permit

HESLET WELL

LOG OF "DISCOVERY WELL"? DRILLED IN YEAR 1903

Section 27, Twp. 18 N., R. 2 W., G. & S.E.B. & N.
(BIG CHINO VALLEY)
At Abra Sidine, Yavapai County, Arizona.

Property of
ANTHONY OIL & REFINING CO., PAULLETT, ARIZONA.

DEPTH FEET	FEET	THICKNESS	FORMATION AND REMARKS
FROM	TO		
000	225	225	Gravel and boulders (surface)
225	270	45	Limestone (gray)
270	285	15 (W)	Clay (Fire clay)
285	295	10 (")	Gravel ("ater)
295	360	65	Limestone (gray)
360	424	64 (W)	Gravel ("ater)
424	460	36	Sandstone (Pennsylvania)
460	525	65	Limestone (gray)
525	535	10 (O)	SHALE (Yellow)
535	547	8 (O)	Dil Shale
547	563	20	Sandstone (Fine grained -red)
563	578	15	SHALE
578	608	30	Sandstone (red)
608	617	5	Clay (red)
617	658	45	SANDSTONE (Dark, pebbly)
658	668	10	Clay and Shale (red)
668	718	50	Sandstone (red)
718	748	30 (O)	SANDSTONE (BROWN? pebbly)
748	798	50 (O)	SHALE AND GAS (yellow)
798	873	78	Sandstone (red)
873	963	90	Limestone (blue)
963	1000	37	Shale (yellow)
1000	1165	165	Limestone (blue)
1165	1260	95	Sandstone (red)
1260	1405	145	Shale
1405	1482	77	SANDSTONE (BROWN, pebbly)
1482	1530	48	Limestone (yellow)
1530	1620	90	Sandstone (red)
1620	1715	115	Limestone (blue)
1715	1795	70	Sandstone (red)
1795	1998	103 (C)	Limestone (blue)
1998	1998	110 (O)	OIL SAND (set to rock)
1998	2003	5 (R)	Shale

NOTE

- W - Water
- O - Oil and Gas areas and bearing formations and discoloration.
- C - Capping
- R - Bottom

EXHIBIT "D"

#13-5

Anthony Oil

LOG OF "DISCOVERY WELL" DRILLED IN YEAR 1903

Section 27, Township 18 North, Range 2 West, Q. & S. E. B. & M.

BIG CHINO VALLEY

At Abra Biding, Yavapai County, Arizona

Property of
ANTHONY OIL & REFINING COMPANY, PAULDEN, ARIZONA

(See smpl. log)

DEPTH - FEET		FEET THICKNESS	Formation and Remarks
From	To		
000	225	225	Gravel and boulders (surface)
225	270	45	Limestone (gray)
270	285	15 (W)	Clay (Fire clay)
285	295	10 (W)	Gravel (water)
295	360	65	Limestone (gray)
360	424	64 (W)	Gravel (water)
424	460	36	Sandstone (Pennsylvania)
460	525	65	Limestone (Gray)
525	535	10 (O)	SHALE (Yellow)
535	543	8 (O)	Oil Shale
543	563	20	Sandstone (Fine grained - red)
563	576	15	SHALE
576	608	30	Sandstone (red)
608	613	5	Clay (red)
613	658	45	SANDSTONE (Dark, pebbly)
658	668	10	Clay and Shale (red)
668	718	50	Sandstone (red)
718	748	30 (O)	SANDSTONE (Brown, pebbly)
748	798	50 (O)	SHALE AND GAS (yellow)
798	876	78	Sandstone (red)
876	966	90	Limestone (blue)
966	1,000	34	Shale (yellow)
1,000	1,165	165	Limestone (blue)
1,165	1,260	95	Sandstone (red)
1,260	1,405	145	Shale
1,405	1,482	77	SANDSTONE (BROWN, pebbly)
1,482	1,530	48	Limestone (yellow)
1,530	1,600	70	Sandstone (red)
1,600	1,715	115	Limestone (blue)
1,715	1,785	70	Sandstone (red)
1,785	1,888	103 (O)	Limestone (blue)
1,888	1,998	110 (O)	<u>OIL SAND</u> (set to rock)
1,998	2,003	5 (B)	Shale

NOTE:

- W - Water
- O - Oil and Gas areas and bearing formations and discoloration.
- C - Capping
- B - Bottom

EXHIBIT "D"

no permit

LOG OF "DISCOVERY WELL"? DRILLED IN YEAR 1903
 Anthony Oil Discovery #1 Same as Heslet Well

Section 27, T. 18-N, R. 2-W, G&SRB&M
 Big Chino Valley
 At Abra Siding, Yavapai County, Arizona

Property of Anthony Oil & Ref. Co., Paulden? Arizona

Depth From	Feet To	Feet Thickness		Formation and Remarks
0	225	225		Gravel and boulders (surface)
225	270	45		Limestone (gray)
270	285	15	(W)	Clay (Fire clay)
285	295	10	(W)	Gravel (Water)
295	360	65		Limestone (gray)
360	424	64	(W)	Gravel (Water)
424	460	36		Sandstone (Pennsylvania)
460	525	65		Limestone (gray)
525	535	10	(O)	Shale (Yellow)
535	543	8	(O)	Oil shale
543	563	20		Sandstone (Fine grained - Red)
563	578	15		Shale
578	608	30		Sandstone (red)
608	613	5		Clay (red)
613	658	45		Sandstone (Dark, pebbly)
658	668	10		Clay and shale (red)
668	718	50		Sandstone (red)
718	748	30	(O)	Sandstone (Brown? pebbly)
748	798	50	(O)	Shale and gas (yellow)
798	876	78		Sandstone (red)
876	966	90		Limestone (blue)
966	1000	34		Shale (yellow)
1000	1165	165		Limestone (blue)
1165	1260	95		Sandstone (red)
1260	1405	145		Shale
1405	1482	77		Sandstone (brown, pebbly)
1482	1530	48		Limestone (yellow)
1530	1600	70		Sandstone (red)
1600	1715	115		Limestone (blue)
1715	1785	70		Sandstone (red)
1785	1888	103	(C)	Limestone (blue)
1888	1998	110	(O)	Oil sand (set to rock)
1998	2003	5	(B)	Shale

Note

W Water
 O Oil and gas areas and bearing formations and discoloration.
 C Capping
 B Bottom

Exhibit "D"

BOND NO. _____
AMOUNT _____
CANCELLED _____
ORGANIZATION REPORT _____

No Permit

March 2, 1959

Key Petroleum
514 Newhouse Building
Salt Lake City 11, Utah

Attention: A. E. Russell, Chief Geologist

Dear Mr. Russell:

Thank you for your letter of February 25, 1959 in which you have requested the drillers log and the strip log for the Anthony Oil Discovery well, located in Section 27, Township 18 North, Range 2 West, Yavapai County, Arizona.

Transmitted herewith please find a copy of the drillers log for the above mentioned well. There are no charges for this service.

The strip log is in our file and may be seen in this office at any time you are in the Phoenix vicinity.

We are very sorry we were unable to send you a copy, inasmuch as we are not equipped to run duplicate copies of strip logs.

If we may be of additional service, please let us know.

Very truly yours,

STATE LAND COMMISSIONER

By: Frederick C. Ryan,
Supervisor,
Oil and Gas Conservation

FCR:mb
Encl.

No permit

KEY PETROLEUM

514 NEWHOUSE BLDG. SALT LAKE CITY, UTAH
PHONE EL 9-0139

February 25, 1959.

State Land Dept.
422 Arizona State Land Office Bldg.
Phoenix, Arizona

Gentlemen:

According to the information I have at hand,
you will be able to supply this office with copies
of both the Drillers Log and Strip Log of the hole
listed below.

Anthony Oil Discovery #1 (s/a Heslet Well)

27- 18N- 2W, Yavapai County, Arizona, Date
listed as 1903, TD 2003, Elev. 4487

If you will contact this office as to charges
we will be happy to mail you a check by return
mail.

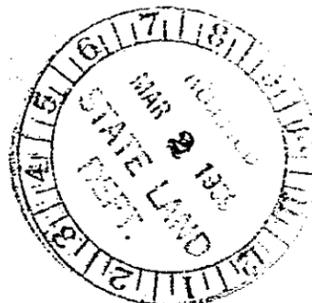
Yours Truly,
Key Petroleum

By

A. R. Russell
A. R. Russell
Chief Geologist

3169

ARR/cj



No permit

20mbstone

APH

THURSDAY, SEPTEMBER 3, 1931.

IN August Report of the Bear RY Springs Oil & Gas Company W

has at r of im- et- ich ug- on for. 7. st a ner. oss ver: cks the re- will ee- vall that im- s at oi is used City Jords. mmer stroy- heth- ething and stone's ming- e pool -main- esert; e and it. tone's ave a g-un- of old- f the Macia ted to thers. at for

SAN SIMON VALLEY—

San Simon Well, on SE $\frac{1}{4}$ N $\frac{1}{4}$ Sec. 27; T. 13S., R. 30E.; Torrence ranch 2 miles west of San Simon. Walter Tuttle, driller, has the deepest oil well, drilling, in Arizona, 4230 feet, now in hard black sand (Lime) Good oil showings; 170 degree water at 4056 ft.; 6 $\frac{1}{4}$ in. casing hanging at 4035 ft. Will underream to 4160 ft. to shut off water and dry hole.

Pinal Oil Co. Well No. 1 on Allen permit, SE $\frac{1}{4}$ SE $\frac{1}{4}$ Sec. 25; T. 10S., R. 23E., 17 miles north of Bowie. Sam Twentier, Field Supt. with crew of three has had a hard job to get two camps in shape to start active work. These two wells have been practically shut down for the past three years.

Whitlock Oil Co. Well No. 1, on NE $\frac{1}{4}$ NE $\frac{1}{4}$ Sec. 36, T. 10S., R. 23E. State Land 17 miles north of Bowie. Pinal Oil Co. in return for loan of National No. 2 drilling machine and 80 h. p. Buffalo Gasoline engine, owned by Whitlock Oil Co., have repaired and put in good working order to pull 6.5-8 in. casing and plug Whitlock No. 1 Well back to 1500 ft. before moving the above equipment to Pinal No. 1 Well.

Whitlock No. 2 Well, on NE $\frac{1}{4}$ NE $\frac{1}{4}$ Sec. 20, T. 10S., R. 23E., on Penford permit, still shut down at 521 ft.

Pinal No. 1 Well, 9 miles north of Bowie on SW $\frac{1}{4}$ NE $\frac{1}{4}$ Sec. 28, T. 11S., R. 28E. Reed permit, still negotiating with eastern capital to drill his permit.

Ryan et al Well on SE $\frac{1}{4}$ NW $\frac{1}{4}$ Sec. 24, T. 14S., R. 30E., State Land 9 miles south of San Simon at 920 ft. Tentative option has been given a group of oil men, on the fifteen state land sections, held by E. J. Ryan and associates of Montebello, Calif. A "K" type Okell drilling machine is on location and the option calls for completion of the well.

SULPHUR SPRINGS VALLEY—

Benedum-Trees, Arzberger No. 1 Well on NW $\frac{1}{4}$ SE $\frac{1}{4}$ Sec. 19; T. 15S., R. 26E., 14 miles SE of Willcox, 4000 ft. 3 $\frac{1}{4}$ in. casing unloaded by S. P. Ry, and delivered to wells 10 in. set at 2243 ft. Depth 3140 ft in hard

brown shale with shells. Little water in hole. Two towers with crew of five. R. W. Hickman in charge, making very good progress, considering the many delays. John Pugh of the Two John Drilling Co., contractors, made a flying trip from Shreveport, La., Denver, Willcox, and back to headquarters.

Geronimo Oil Co., No. 1, No. 2, and No. 3 Wells, in town of Willcox have shut down for the time being. Mr. I. R. Borck is in charge and expects a large heavy standard rig within 60 days. The splendid oil showings in their wells should warrant further explorations.

S. V. Windle, Riggs No. 1 Well, N E $\frac{1}{4}$ Sec. 10, T. 17S., R. 23E., still waiting for equipment necessary to spud in.

Western Water Works of Alamo-gordo, N. M., was awarded the contract for drilling the state well for artesian water to irrigate 10,000 acres in the Stewart District. An appropriation of \$10,000.00 was allowed to do this drilling.

GILA VALLEY—

Gila Oil Syndicate Well No. 1, SW $\frac{1}{4}$ NE $\frac{1}{4}$ Sec. 30, T. 5S., R. 24E., 7 miles NW of Pima, shut down at 2630 ft.

Underwriters Syndicate Well No. 1 (Vaughn Oil Co.) 2 miles NW of Pima, on Mary Mack farm, NW $\frac{1}{4}$ N E $\frac{1}{4}$ Sec. 13, T. 6S., R. 24E., standing shut down at 3755 ft. Several deals pending to finish this well to completion.

SAN PEDRO VALLEY—

Century Petroleum Co. Well No. 1 on Colrazier permit, NW $\frac{1}{4}$ NE $\frac{1}{4}$ Sec. 17; T. 17S., R. 19E., 9 miles west of Benson, expecting to contract the deepening of this well, now shut down at 1550 ft.

Understand interested people are looking over this prospect with view of starting drilling.

San Pedro Oil Corp., No. 1 Well on Smith Bros. ranch 1 $\frac{1}{4}$ miles SE of Mammoth, shut down at 1400 ft.

CHINO VALLEY—

Pinal Oil Co. Lantz No. 1 Well NE $\frac{1}{4}$ NE $\frac{1}{4}$ Sec. 3, T. 16N., R. 2W., 19 miles north of Prescott spudded

in August 16th. Now about 200 feet All casing on rack, all supplies purchased, work is progressing in fine shape, with a steam Star rig, under supervision of Fred Womack, Supt. A water well was drilled to 305 ft. and 350 bbls. a day artesian flow of good water was encountered there, making drilling water for that district a certainty.

Yavapai Oil Development Co. Kissah No. 1 Well, Sec. 27; T. 18N., R. 2W., 29 miles north of Prescott, in charge of A. L. Kissah, who, I am told, has a number of Japanese clients interested in this development. Their No. 1 Well will be spudded in on the 30th, I hear.

There is a possibility of a third well being drilled on the Pantenney Ranch. I hear that all arrangements have been made and the rig is being shipped in from Los Angeles.

"Petroleum" a bulletin issued by the University of Arizona and prepared by Dr. G. M. Butler and J. E. Tenney, is now ready for state distribution. The bulletin treats of the origin of petroleum, methods of concentration, favorable structures, hints to prospectors and tests for petroleum.

NEW COMPANIES INCORPD.—

Blue Ribbon Refinery Co., capital 100,000 shares, no normal par value. Incorporators, A. C. Hill, Robert U. Moore and R. H. Orin.

National Carbonic Ice Co., capital 1,000,000 shares, no par value. Incorporators, R. M. Malone, H. A. Kehler and C. A. Winder, all of San Francisco.

Appointment of eight agents in Arizona was made yesterday by the Texas company, a foreign corporation, empowered to operate in Arizona. The agents are: Folsom Moore, Bisbee, Cochise Co.; Ed Matteson, Wenden, Yuma Co.; H. R. Sisk, Nogales, Santa Cruz Co.; J. Verne Pace, Safford, Graham Co.; L. F. Sweeting, Clifton, Greenlee Co.; A. W. Sydnor, Globe, Gila Co.; Kirk Moore, Tucson, Pima Co.; Ned Creighton, Phoenix, Maricopa Co.

BOB THOMAS.

Business Agent Bear Springs Oil & Gas Co., Bowie, Arizona.

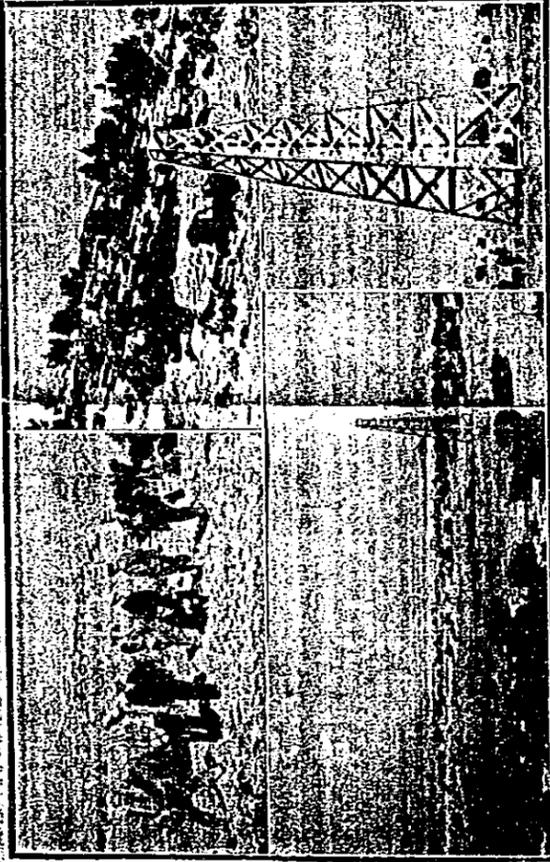
13-5

Arizona-Oklahoma Gas & Oil Company, Inc.

Organized Under the Laws of Arizona

OFFICES:
Union Building,
Prescott, Ariz.
Box 338

OFFICERS:
 President, W. M. Poulson; vice-president, L. D. Nuneley; secretary and treasurer, S. P. Shull; general manager, Col. Fred Bowler.
DIRECTORS:
 Dr. A. B. Carmichael, Col. Fred Bowler, W. M. Poulson, L. D. Nuneley and S. P. Shull.



Showing Drilling Operations in Chino Valley.

Properties

The Arizona-Oklahoma Gas & Oil Company owns and controls 3,200 acres of land in the Chino valley, Yavapai county, Arizona, and 4,000 acres of land in the proven oil fields of Kansas, Oklahoma and Texas.

At the present time the eye of the oil and gas men of the country are centered on the Chino valley oil fields in Arizona, where active exploration operations on a large scale are being prosecuted. This comparatively newest oil field that has sprung into the lime light is a few miles northwest of Jerome Junction, a station on the Prescott and Santa Fe railroad, southwest of Ash Fork and northwest of Prescott, Arizona, where the newest oil boom is under all way.

The opening of this oil field in Arizona will mean the beginning of an oil boom duplicated only by the activities prevailing in Wyoming, which are being new millionaires almost daily. It is predicted that in the near future there will be hundreds of other companies operating in this field.

Various oil geologists and experts, including a noted official of the Standard Oil company, have examined and reported most favorably on this field. A noted oil geologist recently said: "I wish to say that in my experience, covering nearly every oil field on this continent, I have never seen any untested locality that presented so many favorable features for oil as the Chino valley, Arizona. Geological conditions are correct, grading ground is of large area. The existence of oil in Chino valley field and the saturated rocks are conclusive evidence that there is oil there."
Geological Elements Necessary for and Oil Field Do Exist in Chino Valley.
 Oil has actually been struck in drill holes in Chino valley. The geological conditions all point to immense oil pools to be opened by drilling.

shales are covered with an impervious rock that prevents the escape of the oil and gas to the surface.

There is a suitable structure in the form of an arch, generally called the "anticline" or "dome," as a reservoir to hold the oil in a pool or pocket. There is a large area of gathering ground or discharge area. The more the arch or anticline should be flanked on either side by a wide expanse of water area.

The above statements are verified by reports of different geologists and the log of the discovery well drilled ten years ago, which proved the existence of the oil.

Log of Discovery Well

At 230 feet water was first encountered, but was not cased off. At 400 feet sandstone was encountered and was drilled through to a depth of 75 feet after which shale was struck to a depth of 1,283 feet, where the cap rock was encountered.

Passing through the cap rock 110 feet of oil sand, containing a high percentage of base oil, was encountered.

By reason of the great column of water, through which we were drilling, it was impossible to determine the quantity of oil that this well was capable of producing, says J. L. Wiley, who was in charge of the drilling, "but in view of the fact that the oil was forced to the surface of this column of water by the gas pressure below, would indicate that a tremendous oil production should have been the result of our efforts, had water been properly cased off in the beginning, after we struck it at 230 feet.

"I would add further that there was no casing used below the 1,400-foot level, this accounting for the many points at which gas-in-a-tank places. That

CAPITAL

One Million Dollars
 (\$1,000,000)

Divided Into
1,000,000 Shares,
Par Value \$1.00
Fully Paid and Non-Assessable

The Arizona-Oklahoma Gas & Oil Company Will Drill—No Fake

The character and personnel of the officers and directors are of the highest character and they will personally drill for oil in the best selected site in the Chino oil field. Their employees are experienced oil men, taken from active service in large oil fields. There will be no experimenting with small rigs. The company is equipping itself with a standard rig heavy enough to reach a depth of 5,000 feet if necessary, as its board of directors are experienced oil men. General Manager Fred Bowler, a graduate mining engineer of long practical experience, is a successful driller himself in other fields.

Arizona-Oklahoma Gas & Oil Company is now offering what is left of the original block of 150,000 shares of stock, which permits to sell was granted by the corporation following the formation of the company. Most of the proceeds to be received will go to the stockholders. Most of the stock had been purchased in Arizona by people familiar with the Chino oil field.

Buy Now and Reap Later

The remainder of the stock for sale is going rapidly. Soon the books will be closed. Buy now before it is too late. A few dollars invested now may be worth thousands in less than a year. Such things have happened recently in California, Wyoming, Oklahoma, Texas and Kansas oil fields. Be an "I did" and make quick money, not a "wish I had" and be broke.

UNIVERSITY OF ARIZONA
TUCSON
ARIZONA STATE BUREAU OF MINES

Jan. 2, 1918

file 13-5

Chino Valley Oil Co.

Phoenix, Ariz

Gentlemen:

Our Mr. Allen is about to make a reconnaissance of the oil situation in the Chino Valley, starting on Monday the 7th. We would be glad if you would give us the names of your officers or those with whom he will communicate in Phoenix.

Yours very truly,

Charles F. Tullis
Director.

CFW.H

Reconnaissance of the Chino & Verde Valleys
of Arizona

Introductory

By M.A. Allen *1918* [1918]

The tremendous publicity which certain fields of Arizona are receiving with regard to the possible occurrence of oil in commercial quantities, and the interest the public has taken in Arizona's oil possibilities, has prompted the Arizona State Bureau of Mines to make a rough reconnaissance of the possible fields. This reconnaissance was short, unfortunately, and was not in the nature of a geological investigation which would have taken considerable time and funds, which are not available. The weather conditions were very adverse, snow considerably hampering a part of the investigation. In fact the visit to the Holbrook district had to be abandoned because of the depth of the snow, but it is expected that a visit to that field will be made in the spring. The fields which are considered in the report are the Chino, and the Verde Valley fields. The writer wishes to take this opportunity of thanking the officers of the Arizona Oil & Refining Co., Mr. C.L. Dunbar, and Messers Coleman, and King for the assistance rendered and the facilities extended during his visit to the fields.

Chino Valley Field

The Chino Valley field is situated in the northern part of Yavapai County, and embraces the whole of the Black Forest Mesa, comprising an area of about ten townships as follows:

T 17N R1W

T 17N R2W

T 18N R1W

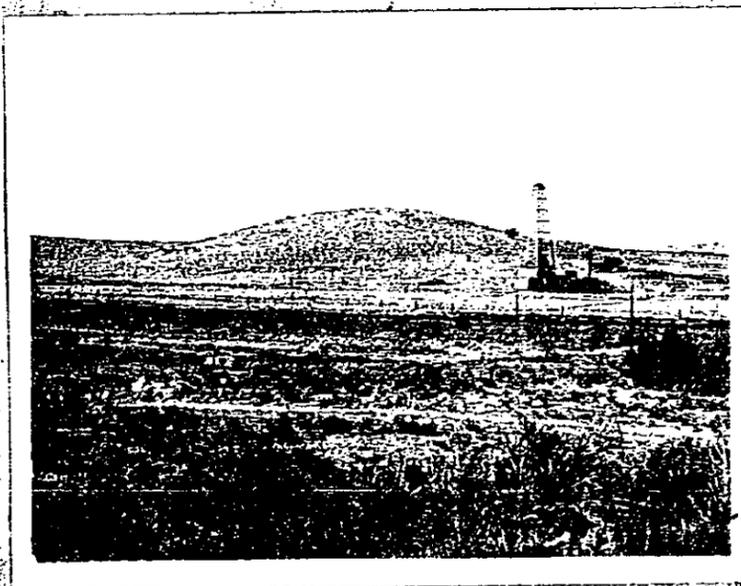
T 18N R2W	T 18N R3W	T 19N R2W
T 19N R3W	T 19N R4W	T 20N R3W
	T 20N R4W	

Valley Station, which is in the Southeastern part of the field, is about twenty five miles north of Prescott on the Ashfork & Phoenix branch of the Santa Fe Railroad.

History

Oil indications have been known in Chino Valley for a number of years. In 1905 O.A.Jones, after a careful survey of the Valley, reported that favorable indications of oil existed.

Some years ago, J.C.Heslit formed a company known as the Chino Valley Oil & Mining Co., which raised sufficient money to put down a test well, a photograph of which is given herewith.



This well was drilled about a half mile north of Valley Station. It appears that considerable difficulty was encountered in drilling and casing the well; in any event, the water met with at the 280 feet

level does not seem to have been cased off. No absolute log of this well seems to have been kept, but given herewith are some extracts from an affidavit made by one of the drillers of the well.

Sworn Affidavit of the Discovery of Oil in Arizona:

State of Arizona:

ss

County of Maricopa:

I, J. J. Wiley, being first duly sworn, deposes and says:

I know there is oil in the Chino Valley, Yavapai County, Arizona:

I assisted in the discovery of oil in the well drilled by the Chino Valley Oil & Mining Company on Section 27, Township 18 North, Range 2 West, Gila and Salt River Meridian, Yavapai County, Arizona. The records of the log of this well showed the following:

At the 280 foot level water was first encountered, but was not cased off;

At the 400 foot level sandstone was encountered and was drilled through to a depth of 75 feet, after which shale was struck to a depth of 1383 feet, where the cap rock was encountered;

Passing through the cap rock 110 feet of oil sand, containing a high paraffine base oil was found.

By reason of the great column of water, through which we were drilling, it was impossible to determine the quantity of oil that this well was capable of producing, but in view of the fact that oil was forced to the surface of this column of water by the gas pressure below, it would indicate that a tremendous production should have been the result of our first efforts, had water been properly cased off in the beginning.

I would add further, that there was no casing used below the 1400 foot level, thus accounting for the many points at which cave-ins took place. That was the cause of the loss of this well.

J.L.Wiley

Before me J.R.Price a notary public in and for the County of Maricopa, State of Arizona, on this day personally appeared Mr.

J.L.Wiley, known to me to be the person whose name is subscribed to the foregoing instrument and acknowledged to me that he executed the same.

Given under my hand and seal of office this 9th day of November, 1917.

J.R.Price
Notary Public

My commission expires

June 5, 1918

A considerable number of companies have been formed and have taken locations in the Chino Valley field, besides numerous private individuals. At the present time the Arizona Oil & Refining Co., and the United Chino Oil Co., and the Arizona Del-Rio Oil Co. are the only companies which have been granted permission to sell stock by the Arizona Corporation Commission.

The Arizona Oil & Refining Company has now its derrick erected at a place one half mile southeast of the discovery well of the Chino Valley Oil & Mining Company. The complete drilling rig is on the field, necessary bunk houses erected, and drilling operations will

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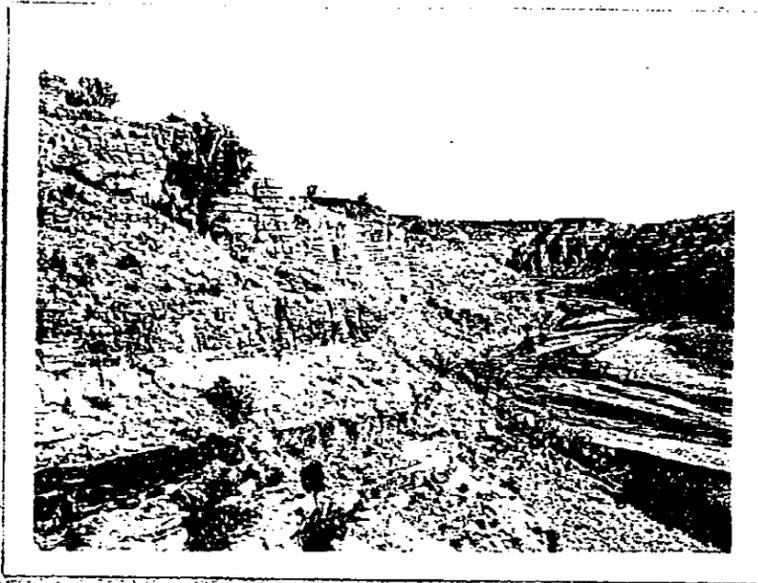
probably commence the middle of January. The Arizona Del-Rio and United Chino Oil Companies will probably be sinking their test wells within a few months.

Geological

Reports on this field have been made by J. Roland Sager, Etienne A. Ritter, and others.

The geological conditions under which oil is found are discussed fully in Bulletin 69, by the same author. It is reported that there are many surface indications of oil in the Chino field, two of which were examined by the author. One was an exposure of limestone in the walls of the canyon of the Verde River at a point a little north of the Junction of Chino and Granite Creeks. A photo of this point, together with a view down the canyon is given herewith.





The exposure referred to is marked by a cross on the photo. Eight miles northwest of this part, another indication of oil was found. There is also the sworn affidavit of the driller of the well of the Chino Valley Oil & Mining Co., given in the previous part of this report.

Structural Conditions

The field is transversed by a distinct anticlinal structure, the axis of which approximates a NW and SE direction, and which is distinctly marked by the Black Forest Mesa. The southwest flank of the anticline dips at an angle of approximately 11 degrees, and gradually flattens out into the syncline which is occupied by Page Flat, through which Chino Creek runs. The dip of the strata can be seen in the small hill behind the derrick in the first photo in this report. The old well and the new test well of the Arizona Oil & Refining Co. are located on the southwest flank of the anticline. The northwest flank of the anticline does not appear to dip at a great angle and in places appears flat; the dip of this flank can only be determined by

careful survey. In fact, to accurately determine if favorable structural conditions exist to the north, east, south, a careful stratigraphical survey should be conducted. Whether this has been done or not, the writer was unable to ascertain.

From the geological work which has been done by H.H. Porter, H.B. Gregory, and F.L. Parsons, all of the U.S.G.S. Survey, on northern Arizona and the immediate vicinity of the Chino Valley, together with the geological field data gathered in Chino Valley by the writer, the formation of the Black Forest Mesa may be considered to be of the ^{Redwell} ~~Keibab~~ formation of the ^{of the Mississippian which is Carboniferous} ~~Pennsylvania~~ series which is of carboniferous age. From the known thickness of the strata exposed at the Grand Canyon and Jerome, and considering the limestones of ^{the Redwell} ~~Keibab~~ exposed on the Black Forest Mesa, the sedimentary strata in the Chino Oil field is very thick, considerably deeper than 1850 feet, the water depth of the discovery well.

The nearest field in which oil occurs in the same geological series as that of the Chino Valley (Pennsylvanian) is the San Juan field of Utah, just north of the Utah Arizona State line.

Conclusion

The existence of oil in commercial quantities in the Chino Valley and Verde Valley fields can only be determined by sinking test wells. There is no doubt that the indications exist which warrant an investigation. In order that these test wells should prove the fields beyond a doubt, and that possible productive fields should not be condemned, sufficient geological and stratigraphical investigations should be done, to prove that an anticlinal structure favorable to oil accumulation exists, and test wells should be sunk in places determined by the results of the survey. Drilling rigs used should be capable of reaching a considerable depth, say from 3500 to 4000 feet, in order to prove the question of depth beyond a doubt.

CHINO VALLEY OIL CO.

Pioneer Company Plans to Bring In First Well

There is by no means anything new in the possibility of petroleum in Arizona. It is true, of course, that the possibility is taking more and more the shape of certainty due to the fact that several companies have been organized and are actively preparing to drill. About fifteen years ago the possibility of oil in the Chino Valley was as evident as it is today. In fact, more evident because a company actually drilled and actually, according to those interested, discovered oil.

In 1905 O. A. Jones, an oil geologist, after a careful survey of the valley, reported that favorable indications existed for a great producing field. Upon his recommendation a well was sunk. At a depth of about 400 feet water was encountered which, according to J. C. Heslet, one of the pioneer company, was not cased off.

The failure to shut off the water and the inexperience of the drillers resulted in bringing about obstacles which later could not be overcome. As a result, the well was abandoned and the company dissolved.

J. C. Heslet has retained control of the company and is now financing it for the drilling of a new well.

As the Chino Valley Company has a rig on the ground and can secure casing, Heslet expects to have the first producing well of the new field.

Efforts to clean out the test well have not been successful and an entirely new well must be drilled. The rig will be moved only a few feet away and the original well will be used only for water.

CHINO VALLEY OIL FIELD.

A standard rig and drill is enroute for the Arizona Oil & Refining Co.'s property located in the Chino valley, Arizona, where a boom is under full sway. The drill is expected to arrive on the company's property and to be in full operation by the 16th of this month. E. A. Edwards, a geologist who has been prominently identified with the vast development of the California oil fields, will supervise the work of drilling on the Arizona Oil Co.'s property. The seat of the initial drilling operations has been carefully selected and he is banking his reputation that the first hole will strike oil.

The company states that the rig will be set up and the well drilled on Sec. 35, which is most favorable location considered with reference to the discovery well of the Chino Valley Oil Co., in which oil sands were penetrated for 110 feet in the first discovery well. The drilling operations to be carried on by the Arizona Oil & Refining Co. will be watched with particular interest as there are numerous companies in the field who are about to start work.

The opening of this oil field in Arizona will mean the beginning of an oil boom duplicated only by the activities that have prevailed in Wyoming.

With the interests back of the Arizona Oil & Refining Co. and the treasury in strong condition, this company is in a position to carry on extensive operations and it is predicted that, not only will they strike oil, but they will pave the way for hundreds of other companies in the field. Various experts—including a noted official of the Standard Oil Co.—have approved this field, and the great interest being taken by the public means the opening of the new section which will add greatly to the prosperity of Arizona.

Etienne A. Ritter, whose first report on the Chino Valley section attracted attention, predicted that the field would receive recognition from the greatest experts in the country. On top of his statement, E. Ronald Sager, an oil geologist of note, in reporting on the field, made this statement: "I wish to say that in my experience covering nearly every oil field on this continent, I have never seen any untested location that presented so many favorable features as the Chino Valley field. Geological conditions are correct, grading ground

CHINO VALLEY OIL CO. SECURES DRILLER

Drilling will be commenced by the Chino Valley Oil and Mining company the first week in March, according to a communication received by the local representatives of the company from President J. C. Heslet.

Heslet writes that at last he has made arrangements to secure the experienced rig builders and drillers that are required to make the venture a success. He has several men at work now, making preliminary preparations to move the drill rig.

The Chino Valley company delayed some time in the hope that J. O. Dartt would be able to take charge of its drilling operations. Dartt spent some time at the old discovery well about a year ago and became a firm believer in the Chino valley. Later he went to Casper, Wyoming, and entered into a contract with an oil company. When Heslet asked him to return he asked to be released from his Wyoming contract but his employers insisted that he remain right on the job in the Casper field.

Heslet has not made public the name of the man who is to drill the new well for the Chino Valley company but he is understood to be from one of the California fields.

The new well is to be drilled about 200 yards from the old one, which was lost after it had penetrated 110 feet of oil sand.

NOTICE

Notice is hereby given that on the 3rd day of February, 1919, a special meeting of the stockholders of the Chino Valley Oil & Mining Co., will be held in the offices of the said company in the town of Jerome, Arizona, at the hour of 10 a. m., for the transaction of any and all business that may properly come before the meeting and in particular as follows:

Changing the name of the company to Chino Valley Oil and Refining Co.

Changing the capitalization of the Company to three million dollars divided into three million shares of a par value of one dollar per share.

Changing the principal office of company to Prescott, Arizona.

J. C. HESLET,
President.

CHINO VALLEY CO.

CHANGES NAME

FEB 7 1919
(From Monday's Daily)

At the special meeting of the Chino Valley Oil and Mining company, held this morning in the Bartlett hotel, the name of the corporation was changed to Chino Valley Oil and Refining company and new directors were elected.

The change in name had been under consideration for some time and this morning an amendment to the articles of incorporation embodying the chosen new cognomen was adopted without opposition. This amendment also provided for five directors instead of three.

It was decided to move the head office of the corporation from Jerome to Prescott. Because he could not consider moving to Prescott, Secretary-Treasurer Charles M. Connor withdrew from the directorate.

The new directorate is made up as follows: J. C. Heslet, Chino Valley, president; N. D. Ross, Jerome, vice

the prospectus for developing commercial wells warrants the expenditure necessary to demonstrate same. I find the geology, what is known to practical oil men as "Oil Showings" all on one side, and the lack of legitimate drilling tests prove the showings of the other.

*E. Ronald Sawyer
- 1917*

I have recently concluded a personal examination of the District known as the Ohio Valley which is the exception to which I have heretofore referred. I learned that this district has been under favorable consideration ~~xx x xxx~~ for the prospects of oil for a period of about ten years past, and that reports from oil geologists and reputed practical oil men have been more or less favorable to this district; notable among the geologists who have recently and favorably reported upon the Ohio Valley oil stratification is Dr. Etienne A. Ritter, Mining Engineer, Doctor of Sciences, Member of the American Institute of Mining Engineers, of the Institute of Mining and Metallurgy.

→ In T- 18 Range 2 East, there has been a well drilled, reaching a depth of approximately 1900 feet. I learned from local history that this well was started a number of years ago by local people and as the result of lack of knowledge of the formation which they would be likely to encounter, they were compelled to give up drilling at about 1900 feet. It appears that if there was any log of the well kept, it has been lost, and the only information procurable was from people who lived in the vicinity at the time of the operations and some who claimed to have been engaged in the drilling. I am satisfied from the statements and data available that the well was drilled through about about 100 feet of Oil Sand and that the showing for paraffine Oil of high gravity was remarkably good. I learned that recently a new company was organized to take over this well, and it is now prosecuting work for the recovery of same under the direction of Mr. John Dartt, a man whom I know personally and who bears the reputation of a thorough and competent oil driller.

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Mr. Dartt personally informed me that from the bailings and by the limited amount of progress which he has been able to make since taking charge of the well, he has entire confidence that the well is an Oil well, whether or not they will be able to recover it owing to the present conditions, it must certainly prove the discovery and location of a large oil basin which should produce many wells of commercial importance.

This well which I consider the Discovery Well, is equipped with Standard Derrick and with an outfit adequate to substantially prosecute the work, and it is expected that it will be only a short time until the Oil sands will be shot to give the well a satisfactory testing. My conclusions as to this well are very encouraging as to the prospect or probability that oil has been encountered which will shortly prove to be of commercial quantity and of unusually high quality, being paraffine base, high gravity.

While this well was located by a man of some reputation as an Oil locator, it is evident from the Geological formation (See Map of District) that the well was located a considerable distance from the crest of the Anticline, and any oil showings made in this well should prove absolutely that wells drilled higher on the anticline would result in much more oil.

I will now take up briefly the geological elements that must exist to make possible oil fields;

First:-- That the district is so situated that the cretaceous sea, left sufficient deposits of its various elements, fossils, etc., necessary to make the Oil.

End:-- That there is sufficient quantities of lime salts, etc., to create the necessary chemical action to make the oil.

3rd:-- That above the cretaceous lime there is a sufficient body of porous sandstone and shale to receive and carry the oil.

4 th:-- That the porous sandstone and shale be covered with an impervious rock to prevent the escape of gas to the surface.

5 th:-- That there must be a suitable rock structure in the form of an arch, generally called the Anticline or dome, as a reservoir to hold the oil in a bed or pool.

6 th:-- That there must be a large area of gathering ground or drainage aer. This means the arch or anticline should be flanked on either side by a wide syncline or water aer.

7 th:-- The presence of sufficient water in the sands of the syncline to force the oil toward the crest of the ~~xxx~~ crest of the Area and hold it there.

There is an abundance of evidence in this field of the cretaceous limes with their various contents to insure the base from which Oil and Gas are created. There are many indications of the porous sandstone and shale to collect the oil, and convey same, also the necessary strata of rock to form an impervious or oil tight cover for oil bearing sandstone shale, that the arch or anticline is a most excellent structure for the storing and holding of oil is known to be plainly evident.

This Oil structure is located on an extensive anticline of Carboniferous limestone called the Black Forest Mesa. Nearly all of the Geological formations found there are exposed in the Grand Canyon of the Colorado to the Northwest, and again in the Jerome Mining District to the South east.

In making an approximate estimate of the thickness of the various formations, one can only try to strike a general average of the exposures at the Grand Canyon and Jerome. I would estimate that it would be more than 2500 feet to the bottom of the sedimentaries of possible oil formations included in this anticline,

Probably a considerable less depth.

The fact that no proven oil well has as yet been discovered in Arizona is no indication that there should not be oil in this state as I have heretofore stated, the various attempts made to drill have no bearing from a standpoint of a thorough test.

The nearest oil producing fields to this State are in Southern California. However, the indications in Chino Valley district can be likened to the field of the Colorado-Wyoming and Mid-Continent fields, as the California Oil Fields produce an asphaltic base oil, the indications here are of a Paraffine base. This is a very favorable point for the field as there is a wide margin between the price of Asphaltic and Paraffine base oils. High grade paraffine crude is today quoted at around \$3 per barrel, while Asphalt is about \$1, and it is a certainty that paraffine base oils will go higher as the production of the eastern fields is rapidly becoming exhausted, also the demand for the by-products of paraffine base are being more and more used in the manufacture of aniline dyes and other chemicals. Hence, paraffine base oils will always command prices far in excess of the asphalt base crude.

In conclusion, I wish to say that in my experience covering nearly every oil field on this continent, I have never seen any other untested location that presented so many favorable features as this one. The geological conditions are correct, Gathering ground is of large area, the existence of oil in the Chino Valley well and the oil saturated rocks are conclusive evidence that there is oil. The formations are of the approximate age and character of the great mid-continent field, and finally, water is easily obtained and transportation close at hand.

Respectfully Submitted,

(Signed) E. RONALD SAGER,
Oil Geologist.

Citeca 1917

