Case No.

~~Lee~~

Application, Transcript,
Small Exhibits, Etc.

[illegible] . 21 Side Water
[illegible] . [illegible] Junction, McKinley Co.

TIDE WATER ASSOCIATED OIL COMPANY
79 New Montgomery Street
San Francisco, California.

December 1, 1948

LOG OF MARIANO DOME WELL

COMPANY: TIDE WATER ASSOCIATED OIL COMPANY

LOCATION: 1,252 feet north and 121 feet east of S/4 corner Section 8, T. 15 N., R. 13 W.

COUNTY: McKinley County, NEW MEXICO

WELL NO. MARIANO DOME NO. 1

ELEVATION: 7,570 feet. (Aneroid)

SPUDDED: September 21, 1948

ABANDONED: November 18, 1948

TOTAL DEPTH: 4,653 feet.

Casing record: 11-3/4 inch casing cemented 398 feet with 225 sacks.

Drilled

0-80	Conglomerate, Dakota formation.
80-222	Drilled top of Morrison, approximately 90 feet shale, streaks of sand.
402-600	Drilled bentonite and sand.
600-650	Sand, medium grained, reddish, sub-rounded quartz grains.
650-680	Sand, fine to medium light gray, sub-rounded quartz grains.
680-700	Sand, medium greenish-gray to pink.
700-730	Sand, gray, friable, rounded frosted quartz grains.

Drilled

730-740 Sand, gray, fine to medium, with streaks of red and green sandy shale.

740-750 As above.

750-790 Sand, fine greenish-grey, frosted sub-rounded grains.

790-800 Shale, chocolate brown, sandy in part.

800-810 Sand, fine, reddish.

810-840 Shale, chocolate brown.

840-860 Sand, fine red to green, frosted quarts grains.

860-880 Sand, greenish-grey with streaks of green sandy shale.

880-890 Sand, grey, fine, rounded quarts grains.

890-920 Sand, fine grey, interbedded with red and green shale.

920-960 Sand, fine grey, friable, rounded grains.

Schlumberger indicates Todilto in interval 965-980.

980-1210 Top Entrada 980.

Sand, pink, fine, friable, frosted quarts grains. Contain over 50% red and green shale cavings.

Top Carmel 1210 feet (Schlumberger)

1210-1220 Limestone, siliceous in part.

1220-1230 Shale, green and chocolate, and limestone.

1230-1260 Shale, green and chocolate with occasional streaks of sand.

Top of Chinle 1242 feet. (Schlumberger)

Drilled

1260-1270	Shale, light, limey.
1270-1320	Shale, green, with monor amounts of red shale.
1320-1340	Sand, salmon colored, plus minor amounts of red and green shale.
1340-1420	Shale, red and green sandy, variegated in part.
1420-1450	Sand, fine, light red.
1450-1460	Sand, brick red.
1460-1470	Shale, green and red sandy.
1470-1510	Sand, brick red, fine silty, streaks of sandy shale.
1510-1570	Shale, sandy, red and green mottled.
1570-1620	Shale, dark red.
1620-1670	Shale, brick red.
1670-1700	Shale, dark red, sandy towards base.
1700-1720	Sand, red, fine, greenish in part.
1720-1740	Shale, dark red.
1740-1750	Shale, purplish, silty.
1750-1770	Shale, red and green, sandy.
1770-1810	Shale, red and green, with streaks of sand.
1810-1903	Shale, brick red mottled with green spots.

Cored	Rec. Feet	
1903-1909	3	Red shale with occasional small spots of light green shale. No evidence of dips.
Drilled		
1909-1920		Shale, brick red with spots of light green.
Cored		
1920-1925	5	Shale, brick red, mottled with small light green spots, no dips.
Drilled		
1925-1930		Shale, brick red.
1930-1970		Shale, silty in part, red with few green spots.
1970-1975		Siltstone, brick red with light green spots.
Cored		
1975-1985	6	Total.
	4	Shale, red, mottled with green.
	2	Sand, fine silty red with few spots of green. Conglomeratic near base with angular fragments of siltstone.
1985-2000	10	Total.
	4	Sand, fine silty brick red.
	6	Shale, red with occasional spots of light green.
2000-2009	9	Shale, brick red clay soft crumbles easily.
2009-1012	2	As above. Looks bentonitic.
2012-2018	6	As above.
2018-2036	10	As above.
Drilled		
2036-2038		As above.

Cored	Rec. Feet	
2038-2058	20	Shale, brick red, soft, mottled with green in part.
2058-2078	20	Shale, brick red, soft, crumbly with occasional spots of green.
2078-2098	20	As above.
2098-2107	7	Total.
	3	Sand, brick red, fine, silty.
	4	Shale, brick red clay, soft mottled with green in part.
2107-2127	20	Total.
	14	Shale, brick red, soft.
	2	Sand, brick red, very fine, silty, containing angular fragments of shale.
	4	Shale, brick red mottled with green in part.
2127-2147	16	Shale, brick red soft clay.
2147-2167	18	Total.
	17	As above.
	1	Shale, sandy brick red.
2167-2187	20	Total.
	10	As above.
	10	Shale, brick red, soft clay.
2187-2207	20	As above, plus few spots of green.
2207-2227	20	Shale, brick red, clay crumbly, few small spots of green.
2227-2247	20	As above.
2247-2267	20	As above.

Log of Mariano Dome No. 1

Cored	Rec. Feet	
2267-2287	20	Total.
	1	As above.
	6	Shale, purple soft crumbly bentonitic.
	2	Conglomerate, made up of angular fragments of purple, red and green shale.
	11	Shale, brick red, bentonitic, soft crumbly.
2287-2307	20	As above, plus spots of pale green.
2307-2327	20	Total.
	13	As above.
	7	Shale, purple and green variegated.
2327-2347	20	Total.
	6	As above.
	14	Shale, sandy purple with spots of light green.
2347-2367	20	Total.
	4	As above.
	16	Shale, bentonitic brick red mottled with pale green. Soft.
2367-2387	5	Shale, purple mottled with pale green, soft crumbly bentonitic.
2387-2407	12	Shale, purplish red with small spots of green, firm silty.
2407-2427	20	Total.
	12	Shale, chocolate mottled with pale green. Crumbly, bentonitic.

Cored	Rec. Feet	
2407-2427	8	Shale, sandy, chocolate mottled with light green.
		Top Shinarump 2427 feet (cores), 2449 feet. (Schlumberger)
2427-2444	16	Total.
	3	Sandstone, medium to coarse grained, light green to chocolate with irregular thin streaks of chocolate sandy shale. No show. Looks wet.
	13	Sandstone, grey coarse grained crossbedded with thin streaks of chocolate sandstone and occasional fragments of green and chocolate shale.
2444-2452	6	Sandstone, greenish-gray, medium to coarse, crossbedded. No show. Looks wet.
2452-2459	7	Conglomerate and grit, grey green crossbedded. Contains fragments of green shale at base. Irregular laminations of coal at 2457 feet.
2459-2475	6	Total.
	1/2	Shale, pale green.
	5-1/2	Sandstone, greenish-grey coarse, porous, crossbedded. Contains scattered pebbles of chert. Looks wet.
2475-2484	6	As above. (4 inches of pale green shale at 2484')
2484-2490	6	Total.
	2	Siltstone, hard, light green.
	2	Shale, pale green.
	2	Sandstone, greenish-grey, hard, coarse grained, wet, sulphur water odor.
2490-2492	2	Total.
	1	Shale, purplish-red.
	1	Shale, green mottled with red.

Drilling	Rec. Feet	
2492-2500		Shale, sandy dark red with streaks of fine sand.
2500-2510		Sandstone, grey, fine grained.
2510-2520		Sandstone with chert pebbles and red and green shale.
2520-2530		Sandstone with chert pebbles.
		Base of Shinarump 2537 feet. (Schlumberger)
2530-2540		Shale, red and green, soft bentonitic.
2540-2550		Shale, purple to red with streaks of grey siltstone.
2550-2570		Shale, variegated purple and green.
2570-2590		As above, mostly purple plus some gypsum?
2590-2600		Shale, purplish red.
2600-2610		No sample.
2610-2620		Shale, purple with green streaks.
2620-2630		Shale, brick red.
2630-2710		Shale, variegated red and purple, some green, sandy in part.
2710-2720		Sandstone, grey to reddish, very micaceous, fine grained.
2720-2730		Shale, red and purple, sandy in part.
2730-2740		As above, plus streaks of micaceous sand.
2740-2750		Sand, greenish-grey fine grained, quartzitic.
2750-2770		As above, plus red and purple siltstone.

Drilling	Rec. Feet	
2770-2790		Shale, red and purple, sandy with streaks of hard, fine sandstone.
2790-2800		Sand, red, fine, silty.
2800-2830		Shale, purple-red.
2830-2840		Shale, purple.
2840-2870		Shale, purple and green. Streaks of fine sand towards base.
2870-2890		Sandstone, fine, gray to red. Streaks of sandy shale towards base.
2890-2900		Shale, purple to green, sandy in part.
2900-2910		Sandstone, fine, light grey with streaks of red sandy shale.
2910-2920		Marl, light grey to white.
2920-2950		Shale, red, sandy.
2950-2970		Shale, red and blue, bentonitic.
2970-2980		Shale, red, sandy in part.
2980-3010		Shale, blue, some purple, with thin streaks of fine red sand.
3010-3020		Shale, red, sandy, with streaks of grey sand and gypsum - probably in veins.
3020-3040		Sandstone, grey, medium grained, porous, friable.
3060-3070		Sandstone, pink, medium grained, porous, friable, with streaks of sandy shale.
3070-3095		Sandstone, pink, medium grained, friable, porous.

Cored	Rec. Feet	
3095-3099	1/2	Sandstone, pink, medium grained, porous. Looks wet. No show.
3099-3115	14	Sandstone, pink to buff, medium grained, sub-rounded grains, friable, permeable with occasional irregular laminations of light grey glauconitic sandstone. Looks wet. No show.
3115-3130	8	Sandstone, buff, medium grained with occasional large grains, sub-rounded, arkosic, friable, permeable, cross-bedded, scattered grains of glauconite throughout. Looks wet. No show.
3130-3150	20	Total.
	15	Sandstone, red, medium grained with a few coarse grains, sub-rounded, poorly sorted, arkosic, micaceous, cross-bedded, contains occasional irregular laminations of dark mineral grains.
	5	Sandstone, buff, medium to coarse grained, friable, sugary, permeable, cross-bedded, arkosic, glauconitic and hematitic (?) grains scattered throughout. Looks wet.
3150-3160	10	Sandstone, buff, medium to coarse grained, friable, permeable, cross-bedded, contains scattered grains of glauconite. Irregular laminations of dark red sandy shale towards base. Looks wet.
3160-3178	18	Sandstone, buff, medium grained with occasional coarse grains, permeable, friable, arkosic, with scattered grains of glauconite. (6 inches of chocolate and green shale at 3175 feet). Looks wet.
3180-3200	19	Total.
	1/2	Siltstone, chocolate, very hard.
	2-1/2	Sandstone, reddish buff, fine, hard, impermeable, arkosic with scattered grains of glauconite and irregular laminations of chocolate siltstone. Looks dry.

Cored	Rec. Feet	
3180-3200	15	Sandstone, dark buff, medium grained with few coarse grains, arkosic, friable. Looks wet.
	1	Siltstone, chocolate, hard, micaceous.
3200-3219	19	Total.
	3	Siltstone, chocolate, hard, with occasional laminations of light hard sandstone.
	2	Sandstone, greenish-grey, fine to medium grained arkosic, scattered grains of glauconite, hard, tight and dry, contains occasional laminations of chocolate shale.
	1	Siltstone, chocolate, hard, micaceous, contains occasional spots of green shale.
	3	Sandstone, buff to reddish buff, medium grains, friable, permeable, dry, arkosic with scattered grains of glauconite.
	3	Shale, chocolate, sandy, few spots of green shale.
	1	Sandstone, light buff to green with irregular laminations of green and chocolate shale. Hard, tight and dry.
	6	Sandstone, reddish buff to red, medium, friable, with occasional laminations of chocolate shale. Impermeable, dry.
3219-3239	20	Total.
	6	As above.
	2	Sandstone, buff, medium-grained, hard, tight, well cemented, and dry.
	3	Sandstone, chocolate, fine grained with scattered grains of glauconite throughout. Irregular laminations of chocolate shale towards base. Hard tight and dry.

Cored	Rec. Feet	
3219-3239	2	Shale, chocolate, micaceous, hard, firm and sandy.
	2	Sandstone, green-grey to buff, fine to medium grained, scattered grains of glauconite. Hard, tight and dry.
	3	Siltstone, chocolate, hard, firm, micaceous.
	2	Sandstone, chocolate-red, medium, friable, permeable, wet. Glauconite grains.
3239-3257	11	Total.
	3	Shale, chocolate, sandy, hard, micaceous.
	1	Sandstone, mottled pink and green, fine grained, hard, tight, dry.
	1	Shale, chocolate, hard, firm.
	2	Sandstone, chocolate, fine, hard, tight, dry. Glauconite grains.
	4	Sandstone, chocolate, fine, impermeable, dry, contains occasional irregular laminations of chocolate shale.
3259-3266	6	Shale, variegated, chocolate and green. Sandy in part.
3266-3286	20	Total.
	2	Sandstone, pinkish-grey, sugary, medium well cemented, impermeable.
	9	Siltstone, chocolate, with spots of pale green.
	7	Sandstone, buff, medium grained, friable. Looks wet.
	2	Sandstone, pale green mottled with chocolate, friable and wet.

Cored	Rec. Feet	
3286-3295	9	Total.
	5	Siltstone, chocolate mottled with pale green.
	4	Sandstone, grey to red, hard and tight.
Drilled.		
3295-3300		Sandstone, reddish to grey. Streaks of anhydrite.
3300-3305		Shale, red sandy-streaks of anhydrite.
3305-3310		Sandstone, brick red, fine grained, silty.
3310-3315		Siltstone, reddish with streaks of fine sand.
3315-3320		Sandstone, grey fine grained silty. No show.
		Possible top of Chupadera (San Andres) 3320 feet.
3320-3325		Siltstone, black, hard.
Cored		
3325-3329	4	Siltstone, black hard, dense, with veins of anhydrite (?) Fetid odor when struck with hammer. No cut. This looks very similar to the oil shale of the Green River formation.
3329-3332	2	As above.
3332-3352	20	Total.
	4	As above. Grades into fine sandstone at base.
	2	Sandstone, very fine, hard, tight, dark grey. No show.
	14	Sandstone, grey-greenish in part fine grained with occasional thin irregular streaks of siltstone. Wet where permeable.

Drilled	Rec. Feet	
3352-3355		Shale, grey, poor sample.
3355-3375		Sandstone, reddish-buff, fine grained, poor samples.
3375-3380		Sandstone, grey, fine grained.
3380-3385		Siltstone, grey.
3385-3390		Shale, grey with streaks of anhydrite.
3390-3413		Shale, sandy in part, reddish with streaks of anhydrite or gypsum.
3413-3416		Sandstone, grey medium grained.
3416-3450		Shale, brick red, sandy in part, bentonitic in part.
3450-3470		Sandstone, brick red, fine grained, silty. Few streaks of anhydrite.
3470-3485		Sandstone, brick red fine grained silty with streaks of sandy shale.
3485-3490		Shale, brick red sandy with streaks of fine silty brick red sand.
3490-3510		Sandstone, brick red, fine silty.
3510-3530		Sandstone, brick red fine silty with streaks of brick red sandy shale.
3530-3540		Shale, brick red and purple, sandy in part-streaks of red silty sandstone.
3540-3550		Shale, purple with streaks of brick red sandy shale.
3550-3560		As above, plus fine silty sand.
3560-3570		Shale, purple, brick red and light blue.

Drilled	Rec. Feet	
3570-3575		As above, plus streaks of brick red fine silty sand.
3575-3585		Shale, sandy brick red.
3585-3595		Shale, brick red and pale green. Some purple.
3595-3605		Sandstone, brick red very fine silty.
3605-3630		As above, plus streaks of brick red sandy shale.
3630-3640		Shale, brick red, sandy with streaks of very fine silty sandstone.
3640-3645		Sandstone, brick red very fine grained, silty.
3645-3670		Sandstone, orange-red, very fine grained silty with streaks red shale.
3670-3680		Shale, red, sandy in part, with streaks of orange-red silty sandstone.
3680-3690		Shale, chocolate and blue-grey.
3690-3710		Shale, blue and chocolate.
3710-3725		Shale, blue, streaks of orange-red sand 3715-20.
3725-3800		Shale, blue, grey and red with streaks of orange red fine silty angular grained sandstone.
3800-3830		Sandstone, orange-red, fine silty with streaks of red sandy shale. (streaks of blue-grey shale 3820-3830)
3830-3880		Shale, blue-grey, sandy in part, with streaks of red fine silty sand.
3880-3910		Sandstone, red, fine silty and red sandy shale. (Streaks of blue shale 3890-3900 feet)
3910-3920		Shale, red.
3920-3945		Sandstone, grey to red with few streaks of marl.
3945-3970		Shale, brick red, sandy in part.

Drilled	Rec. Feet	
3970-3985		Sandstone, red, fine, silty streaks of red shale.
3985-3990		Shale, red, sandy in part.
3990-4035		Shale, blue, purple and red.
4035-4040		Sandstone, rusty red, fine silty with streaks of purple, blue and grey shale.
4040-4045		Shale, blue and purple with streaks of orange red sandstone.
4045-4070		Shale, blue, purple and grey with streaks of orange red sandstone.
4070-4080		Shale, blue and purple.
4080-4090		Shale, blue and green.
4090-4110		Shale, dark blue and red.
4110-4130		Shale, blue-grey.
4130-4140		Sandstone, orange-red, fine, silty, micaceous, angular grains.
4140-4150		As above, plus purple shale.
4150-4160		As above, plus blue and purple shale and few pieces of white marl or lime.
4160-4170		As above, plus red sandy shale.
4170-4190		Shale, blue, purple and red.
4190-4210		As above, plus streaks of sand and possibly some anhydrite.
4210-4230		Sandstone, orange-red, very fine grained. Silty with streaks of red, purple and green sandy shale. Few pieces of lime.

Drilled	Rec. Feet	
4230-4260		Shale, chocolate, blue and brick red, sandy. Poor sample.
4260-4270		Shale, blue with streaks of chocolate, brick red and purple shale.
4270-4280		As above, plus streaks fine red sand. Poor sample.
4280-4290		Shale, red with some blue and chocolate sandy with streaks red sand.
4290-4310		Shale, chocolate colored.
4310-4330		Shale, chocolate red and pale blue.
4330-4370		Shale, chocolate-red with few streaks of blue shale.
4370-4390		Shale, dull red with streaks of blue, sandy in part.
4390-4410		Shale, chocolate, red, blue and green. Sandy in part.
4410-4420		Shale, chocolate, sandy in part.
4420-4440		Shale, chocolate with red blue clay shale streaks. Sandy in part.
4440-4460		Shale, red and chocolate, sandy, and purple bentonitic shale.
4460-4480		Shale, red and chocolate. Sandy.
4480-4500		As above. Plus streaks of blue and green bentonitic shale.
4500-4510		As above. Plus streaks of sand and blue-green shale.
4510-4520		Shale, red and chocolate sandy, with streaks of light colored lime.
4520-4530		Shale, chocolate colored sandy. Some purple and blue.
4530-4540		As above. Plus streaks of light green sand and few pieces of limestone.
4540-4560		Shale, chocolate colored.
4560-4608		Shale chocolate with streaks of purple and blue. Few pieces of lime.

Drilling	Rec. Feet	
		Top Pennsylvanian 4608 feet.
4608-4613		Limestone, grey, crystalline. Hard and tight. No show.
Cored		
4613-4621	8	Total.
	4	Limestone, grey crystalline with irregular laminations of chocolate shale. Hard and tight. No show.
	4	Shale, variegated chocolate and green with numerous fragments of grey lime.
4621-4630	5	Shale, chocolate with fragments of green marl and limestone.
4630-4633	6	Limestone, grey, crystalline. Hard tight. No show.
4633-4643		No recovery.
4643-4648		No recovery.
4648-4653		No recovery.
		Samples show above no recovery cores to be grey limestone.
4653-4657	4	Sandstone, very fine grained, dark grey, hard tight, with irregular laminations of dark grey shale. No show.
4657-4661	4	Total.
	1	As above.
	2	Shale, blue-grey to dark grey. Contains fragments of limestone.
	1	Sandstone, dark grey fine, hard and tight. No show.
4661-4664		No recovery. Logged as limestone, purple and red shale.
4664-4667		No recovery. Logged as shale, chocolate and grey limestone.

Cored	Rec. Feet	
4667-4671		No recovery.
4671-4676	2	Limestone, dark grey and crystalline.
4676-4685	8	Total.
	2	Limestone, grey with irregular laminations of chocolate and red shale.
	4	Shale, chocolate contains fragments of limestone.
4682	2	Limestone, grey dense with irregular laminations of green and red shale.
4684	1	Shale, clay variegated blue green and red.
	1	Granite, hard, firm, unweathered.

Top of Granite 4695 feet.

Electric log total depth 4696 feet.

NOTICE OF PUBLICATION
STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

The State of New Mexico by the Oil Conservation Commission hereby gives notice, pursuant to law, of the following public hearing to be held [illegible] December 7, 1948, beginning at 10:00 o'clock A.M. on that day in the City of Santa Fe, New Mexico, in Mabry Hall.

STATE OF NEW MEXICO TO:

All named parties in the following cases, and notice to the public.

CASE 144

In the matter of the application of Tide Water Associated Oil Company for an order granting permission for an unorthodox location designated as well Mariano Lone #3, described as 1650FSL 113 feet east of the centerline and 1240 feet north of the south line of Section 3, Township 15 North, Range 13 West N.M.P.M. McKinley County, New Mexico.

Given under the seal of the Oil Conservation Commission of New Mexico at Santa Fe, New Mexico on November 17, 1948.

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

BY R. R. Spurrier
R. R. SPURRIER, SECRETARY

STATE OF NEW MEXICO
OFFICE OF STATE GEOLOGIST
SANTA FE, NEW MEXICO

18 November 1948

The Gallup Independent
Gallup, New Mexico

RE: Case No. 166 - Notice of Publication.

Gentlemen:

Please publish the enclosed notice once, immediately. Please proof-read the notice carefully and send a copy of the paper carrying such notice.

UPON COMPLETION OF THE PUBLICATION, PLEASE SEND PUBLISHER'S AFFIDAVIT IN DUPLICATE.

For payment please submit statement in duplicate, accompanied by voucher executed in duplicate. The necessary blanks are enclosed.

Very truly yours,

_____

RRS:bsp

C

O

P

Y

FORM 337

TIDE WATER ASSOCIATED OIL COMPANY

ASSOCIATED

DIVISION

79 NEW MONTGOMERY STREET

SAN FRANCISCO 20, CALIFORNIA

F. A. MENKEN

MANAGER, GEOLOGICAL DEPARTMENT

December 3, 1948.

Mr. FRANK C. BARNES,
Office of State Geologist,
Santa Fe,
New Mexico.

Dear Mr. Barnes:

Thank you for submitting a carbon copy of your letter of November 29, 1948, addressed to Mr. Enders at Durango, in which you have called attention to certain matters which have not been handled to your complete satisfaction.

Tide Water Associated Oil Company has long been an operator in the State of New Mexico, and I am sure you will find that we have, to the best of our ability, cooperated with the Office of the State Geologist of New Mexico to the fullest extent.

I regret very much that some misunderstanding has arisen with respect to information and samples from our recently abandoned well on Mariano Dome in McKinley County. Upon receipt of your letter an immediate explanation was requested from Mr. Enders who informs us that all of the information requested by Mr. Greer was given, and that in the matter of samples, Mr. Enders made certain inquiry as to how the cuts should be made and where they should be sent in order to meet your requirements in the most satisfactory manner.

Mr. Enders further states that on November 18th Mr. Greer, accompanied by a scout from the Standard Oil Company of Texas, called at the well and asked certain questions, all of which he states were completely answered, and if there is any information which Mr. Greer had wanted, such would have gladly been furnished him, and we are unaware of any data or information which was not given to Mr. Greer to his complete satisfaction.

I am sure you will find during our continued activities in the State of New Mexico that the fullest cooperation will always be extended to your office by this company.

Very truly yours,

F. A. Merriam.

FAM:MH

Tide-Water Associated Oil Co., Western Division, failed to acquaint itself with the requirements of the law in the State of New Mexico, and caused to be drilled a well at the aforementioned, unorthodox location, since found to be non-productive, and now abandoned.

All forms required to date are on file with the Commission Secretary, excepting No. 105, to be presented when the bottom hole log is complete. A complete set of drilling samples will be forwarded to the State Bureau of Mines at Socorro. Two copies of Schlumberger electric logs will be filed at Commission offices when available.

Tide-Water Oil regrets this oversight and will furnish full information to the Commission on all wells drilled by its Western Division, regardless of land ownership. The petitioner suggests an order from the Commission approving the application of October 19th, 1948.

Exhibit A, Case No. 166

STATE OF NEW MEXICO
OFFICE OF STATE GEOLOGIST
SANTA FE, NEW MEXICO

Nov. 29, 1948

Mr. D. W. Enders, Geologist
Tidewater Associated Oil Co.
757 8th. Street
Durango, Colorado

Dear Sir:

It has come to my attention through our Aztec representative, Mr. Al Greer, that you are reluctant to cooperate with the Oil Conservation Commission in the matter of information and samples from your Mariano Dome well in McKinley County, New Mexico.

I want to remind you that this well was drilled with complete disregard to the New Mexico State spacing regulation which states that, " no well shall be drilled closer to any unit boundry line than 330 feet." The unit consisting of a legal 40 acres. We have been extremely tolerant in our attitude towards this well and have allowed drilling to proceed without interruption, even though we were not notified of this illegal location until long after drilling had commenced. We try to cooperate and assist the operator whenever possible, but we expect the same cooperation in return.

According to the New Mexico State Oil Conservation Act of 1935, " any person who violates any provision of this act or any rule, regulation or order of the Commission, shall be subject to a penalty not to exceed One Thousand ($1,000.00) Dollars a day for each and every day of such violation and for each and every act of violation."

If your company is too poor to provide sample sacks and if you are too busy to send those samples to the State Bureau of Mines, Socorro, New Mexico, perhaps you could better afford a five to ten thousand dollar fine for your oversight in locating this well.

Please remember that ignorance of the law is no excuse here, even as in California.

STATE OF NEW MEXICO
OFFICE OF STATE GEOLOGIST
SANTA FE, NEW MEXICO

I am sending you another copy of our bulletin No. 6-A which outlines the general rules and regulations of the Commission and I recommend you read this carefully. I hope we can expect your full cooperation in the future. Any further violations on your part will require very firm action by the Commission.

Very truly yours

Frank C. Barnes,
Geologist

FCB/sv

cc: Al Greer, Aztec, New Mexico

cc: Chief Geologist
Tidewater Associated Oil Co.
79 New Montgomery St.
San Francisco, California

NEW MEXICO
OIL CONSERVATION COMMISSION

GOVERNOR THOMAS J. MABRY
CHAIRMAN

LAND COMMISSIONER JOHN E. MILES
MEMBER

STATE GEOLOGIST R. R. SPURRIER
SECRETARY AND DIRECTOR

Santa Fe, New Mexico

November 20, 1948

Mr. R. R. Spurrier
Director, Oil Conservation Commission
Box 871
Santa Fe, New Mexico

Dick:

When I visited the Tidewater Associated location last week I found a Mr. D. W. Enders, a geologist, in charge of Tidewater operations here in New Mexico and very politely but firmly refused to put out any information other than that the hole was drilled "tight" and no samples or information would be available until he had had time to study the electric log and samples which he thought he would probably be able to do within the next sixty days; that in the meantime if the New Mexico Bureau of Mines would send him some sample sacks he would see that they would get a sample cut.

You, of course, know that practically all of the Operators here in the Basin belong to the sample cut at Farmington; the Tidewater had been invited to join but refused. Now it seems that the company itself had no objections. They left it, according to Mr. Enders, entirely up to him and he did not think it a good idea. Well, of course that is entirely up to them. They are paying for the hole and also paying Mr. Enders, whose judgment is, no doubt, satisfactory to them as a geologist, but I fail to see how a man can be smart enough to be in charge of this type of operation and still be as dumb as he pretends to be about the Rules and Regulations governing the drilling of wells for oil and gas in the states they operate in.

What I would like for you to do would be for you to write him or his Company a letter and tell him that he will receive the sacks he requested and at the same time inform him as to what he will be expected to do so far as the state is concerned when he is drilling a well on other than state or deeded lands. His address is:

D. W. Enders
Geologist for Tidewater Associated Oil Co.
757 8th Street
Durango, Colorado

Very truly yours,

Al Greer

Al Greer

FORM 1272

TIDE WATER ASSOCIATED OIL COMPANY

ASSOCIATED

DIVISION

Box 811
Ventura California
December 5 1948

Mr. R. R. Spurrier
State Geelegist & Secretary of
Oil Conservation Committee
Santa Fe New Mexico

Dear Sir:

Attached hereto please find the following forms covering the drilling by our Company of Mariano Deme Well #1, in Section 8, T15N, R13W, McKinley County, New Mexico:

(a) Form C-101 Intention to drill.

(b) Form C-102 Miscellaneous notice - intention to plug well

(c) Form C-103 Miscellaneous report - report of result of plugging well.

Yours truly,

M. Mears

M. Mears
Drilling Superintendent

OK RS
Dec. 6.

MM/e
encls (3)

BEFORE THE
OIL CONSERVATION COMMISSION
STATE OF NEW MEXICO

The following proceedings came on to be heard before the Oil Conservation Commission of the State of New Mexico at Santa Fe at 10:00 A. M. on December 7, 1948.

NOTICE OF PUBLICATION
STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

The State of New Mexico by its Oil Conservation Commission hereby gives notice, pursuant to law, of the following public hearing to be held December 7, 1948, beginning at 10:00 A. M. o'clock on that day in the City of Santa Fe, New Mexico, in Senate Chambers.

STATE OF NEW MEXICO TO:

All named parties in the following cases, and notice to the public:

CASE 166

In the matter of the application of Tide Water Associated Oil Company for an order granting permission for an unorthodox location designated as well Mariano Dome #1, described as NWSWSE 118 feet east of the centerline and 1249 feet north of the south line of Section 8, Township 15 North, Range 13 West N.M.P.M. McKinley County, New Mexico.

CASE 167

In the matter of the application of Amerada Petroleum Corporation for an order granting permission to dually complete their "State LMT Well #1", Langlie-Mattix pool SWNW Section 36, Township 23 South, Range 36 East, N.M. P.M., Lea County, New Mexico.

CASE 168

In the matter of the application of Clary and Ruther for an order granting permission for an unorthodox location designated as Clary and Ruther State No. 1, described as NWNWNW, 106.3 feet from the north and 43.9 from the west lines of Section 36, Township 23 South, Range 2 East, N.M.P.M., Dona Ana County, New Mexico.

Given under the seal of the Oil Conservation Commission of New Mexico at Santa Fe, New Mexico on November 17, 1948.

(SEAL)

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

By /s/ R. R. Spurrier
R. R. SPURRIER, Secretary

BEFORE: Hon. R. R. Spurrier, Secretary

REGISTER:

Frank C. Barnes, Santa Fe, New Mexico; Roy O. Yarbrough, Hobbs, New Mexico; George Graham, Santa Fe, New Mexico.

For the Oil Conservation Commission.

J. C. Blackwood, Midland, Texas; J.O. Seth, Santa Fe, New Mexico.

For Amerada Petroleum Corporation.

Guy Shepard, Santa Fe, New Mexico.

For the Land Commissioner.

Frank R. Lovering, Hobbs, New Mexico.

For Shell Oil Company.

Paul C. Evans, Hobbs, New Mexico.

For Gulf Oil Corporation.

Ralph W. Casey, 1412 Magnolia Building, Dallas, Texas; H. A. King, Oklahoma City, Okla.

For D. D. Drilling Company.

G. H. Gray, Midland, Texas.

For Repollo Oil Company.

Glenn Staley, Hobbs, New Mexico.

For Lea County Operators

M. Mears, P. O. Box 811, Ventura, Calif.

For Tide Water Associated Oil Company.

W. M. McKim, El Rancho Hotel, Gallup, New Mexico

For himself.

R. E. Canfield, Roswell, N. M.

For United States Geological Survey

E. C. Anderson, Socorro, New Mexico.

For the State Bureau of Mines.

COMMISSIONER SPURRIER: Gentlemen, let's open the meeting. As some of you may know, Governor Mabry is in California and former Governor Miles is sick in the hospital. So I have been instructed, as the minutes of the Commission will show, to again take the record of the cases to be heard today. There will be no decisions made. All cases will be taken under advisement. And the other members of the Commission will pass on the record before the orders are signed.

Mr. Graham, will you read the advertisement for the first case, please?

(Reads the notice of publication in Case No. 166)

MR. MEARS: I am drilling superintendent for the western division of the Tide Water Associated Oil Company. I would like to appear as representative and witness.

COMMISSIONER SPURRIER: You have a witness?

MR. MEARS: I do not.

COMMISSIONER SPURRIER: You are the witness?

MR. MEARS: Yes.

COMMISSIONER SPURRIER: We will swear you as the witness.

(Mr. Mears sworn)

COMMISSIONER SPURRIER: The Tide Water has presented a statement here. I will be glad to read it. Since Mr. Mears is appearing as their only representative and witness, you may ask or cross-examine him as you care to. I would like to read this statement that they have entered as an exhibit. (Reads the statement) Now, Mr. Mears, if you would like to add anything to this, you may do so.

MR. MEARS: Well, Mr. Spurrier, as far as I know the stick for the location of the well was placed there on the best geological information available. And, of course, in my position with the company I cannot furnish any other reason why it was put in that particular place. But I do believe, as stated in the statement that you read, that the party that placed the stick wasn't familiar with the laws and did not place it there other than for geological purposes.

COMMISSIONER SPURRIER: Does anyone care to question the witness? Well, I should like to make a little summary here. The well has been located, drilled, and found non-productive and plugged. So it may seem rather useless to have a hearing before this Commission to approve an unorthodox location. The well was located on Federal land, I believe?

MR. MEARS: That's right.

COMMISSIONER SPURRIER: Indian land. Now, as a matter of practice, we don't concern ourselves too much with exact locations on Federal land because we know that Mr. Canfield's crew on Federal land are usually on the job and they are allowed some discretion. We also realize that there is no producing field. There is no offset problem. But I think the point I would like to make here is that it should go without saying any company operating in the state should acquaint themselves with the rules and regulations. If they should like to take exception, there is a way it can be very simply done. But to go ahead and do something like this, and then find out what the regulations are is just inconvenient for them and us too. Now, we are not placing-- this is not a personal chastisement because Mr. Mears wasn't personally responsible for this at all. And there has been

no harm done. But if the Commission doesn't enforce its rules and regulations, then it might as well not have rules and regulations. We feel that Tide Water has handled the case very well since it came to our attention. And I could personally say that I think an order will be issued approving this. However, we will have to wait for the Commission to pass on it.

I think if no one has anything further, and if you have nothing further, Mr. Mears, that we will call the case ended.

MR. MEARS: O. K., Mr. Spurrier. I might add that since talking with Mr. Barnes yesterday with regard to these samples I now find that they were delivered to Socorro yesterday. They are already there.

COMMISSIONER SPURRIER: Fine. Thank you very much.

Read the advertisement for the next case, please.

(Reads the notice of publication in Case No. 167)

MR. SETH: I appear for Amerada. I would like to have Mr. Blackwood sworn.

J. C. BLACKWOOD, having been first duly sworn, testified as follows:

DIRECT EXAMINATION BY MR. SETH:

Q. Please state your name.

A. J. C. Blackwood.

Q. By whom are you employed?

A. Amerada Petroleum Corporation.

Q. In What capacity?

A. District engineer, west Texas and New Mexico district.

Q. Will you please state briefly your educational qualifications and experience in the oil business?

A. Well, I was educated at Texas A. & M. College in petro-

leum engineering in 1936. Since that time I have been employed by the Amerada Petroleum Corporation except for a four-year period with the Army.

Q. Are you familiar with the well described in the notice, I believe in the SWNW of Section 36, Township 23 South, Range 36 East?

A. Yes, I am.

Q. When, approximately, was this well completed?

A. It was completed in March 1946.

Q. At what approximate depth?

A. It was completed at 3,607 feet.

Q. And is it now producing?

A. Yes, it is producing oil, about fifteen barrels a day.

Q. From what sand?

A. That is the Stuart sand. Queens formation.

Q. Would you give the casing of the well?

A. The casing record is 13-3/8 set at 504 feet, 8-5/8 set at 3,450 feet.

Q. Now, you desire to dually--to make the well produce from an additional sand?

A. Yes, that's right. We wish to produce from the Yates and Seven Rivers sands which generally is gas productive in the area and ranges in depth from 2900 to 3,400.

Q. This Yates sand, what does that produce, gas only?

A. That's right.

Q. Just state briefly the manner in which you propose to handle this if the permission is granted by the Commission.

A. Well, the first step we propose is to shoot with explosives the present producing formation to increase its productivity. The second step is we will set a Baker Model D

Retainer Production Packer at 3,435 in the 8-5/8 casing. This packer has a smooth bore through the center of it about 3½ inches in diameter. And once the packer is set in place it cannot be moved either up or down. The tools--the tubing will then be released from this packer and withdrawn from the well. Then we will make up tools in the following order: 125 feet of 2 inch tubing as tail pipe, which will extend through the packer from the bottom of the packer down to about 3,560 feet or 47 feet off bottom. Immediately above the 2 inch tail pipe is a standing valve sub and Type F Otis standing valve. The purpose of this is to prevent the passage of any fluid down through the valve--the packer--to the lower producing formation. Above the standing valve sub are two Baker Multi-V tubing seals which will be positioned in the smooth bore of the packer and seal off between the casing and the packer. Above that is a Baker No Left Turn Latching Sub, which is a device which will latch in the top of the packer body and prevent the moving of the tubing seals either up or down. Above that is a tubing seal receptacle, which is a tube with a smooth bore of 3½ inch in diameter. And a setting tool above that which will be attached to the tubing seal receptable by means of shear pins. The tools then are run in on the casing and when the latching sub sets and latches on top of the packer, the weight of the tubing will shear the pins of the setting tools and leave the tools positioned in place. The object of all this packer and standing valve arrangement is to prevent mud fluid from getting down on the lower producing formation. The Yates is a high-pressure gas sand. It has a bottomhole pressure of from 1,300 pounds in the area,

and to perforate it sufficiently it will be necessary to float the hole with mud, and we don't want to get mud on the lower formation. That is the reason for this packer and standing valve arrangement. After the tools are positioned in the packer, we will circulate mud into the well and withdrawn the tubing and gun perforate the Yates and Seven Rivers sands. We give the depth of the perforation point as 2,900 to 3,400. Actually, before we select the actual perforation point, we will run a radio activity log to determine the effective point. After the gas sand is perforated, we will run in a tubing guide shoe, tubing seal nipples, retrieving tool, and Otis Type L Side Door Choke nipple. The tubing guide shoe and tubing seal nipples pass down into the tubing seal receptacle to affect the seal. Actually, what happens is we rejoin the tubing back to the packer. We will then circulate the mud out with oil through the ports in the Otis Side Door Choke nipple and bring in the gas sand. After it is produced enough to clean it up, we run on a wire line under pressure the Otis Side Door Choke which will seal off the ports in the Side Door Choke nipple. That makes the operation complete between these two points.

Q. Do you believe this arrangement you have testified about will effectively separate the two pays?

A. Yes, it will.

Q. Prevent the high pressure gas from getting into the low pressure oil at the bottom of the well?

A. Yes.

Q. The well is not producing at all at this time from the upper gas pay is it?

A. No, it is not.

Q. Do you believe the gas upper pay, the Yates sand, and the Stuart are separate strata, entirely separate?

A. Yes. There is an impervious strata between them and the pressure difference indicates there is separation between them.

Q. What is the pressure in the oil producing strata at the bottom of the well?

A. The bottom hole pressure after a twenty-four hour shut in period is 570 pounds in the Stuart sand.

Q. Have you a market for the gas when you produce it?

A. Yes, there is a market. El Paso Natural Gas Company has a line laid to the lease.

Q. And they will take the gas?

A. Yes.

Q. Is there any other way to get the gas from the Yates sand without drilling an additional well?

A. No.

Q. Is gas being produced from the Yates sand all around you?

A. Yes, there is. Our State LMT lease is the N½ of Section 36. In the S½ of Section 36 there are two wells dually completed. They are producing gas from the Yates. And in the S½ of Section 25 to the north there are two wells producing gas from the Yates.

Q. There are two dually completed wells immediately offsetting there already?

A. Yes.

Q. And do you believe this process you have outlined will result in that recovery of the gas that otherwise would not be recovered?

A. Yes, that is correct.

Q. Would it be feasible or economically feasible to drill a well for that gas?

A. Well, not very economically feasible because of the shortage of casing. We don't like to drill wells that are doubtful from an economic standpoint.

Q. The well will continue to produce oil through the tubing, whatever its allowable may turn out to be, after it is shot?

A. Yes, that is correct.

MR. SETH: I would like to offer in evidence this drawing showing the method of dually completing, and this statement covering to a large extent what Mr. Blackwood has already testified to.

Q. Do you believe the allowance of this application for the dual completion contemplated will result in the ultimate recovery of more oil and gas from the field?

A. Yes, it will.

MR. SETH: That is all we have.

MR. GRAHAM: Are you familiar with the discussions surrounding the Gulf application for dual completions?

A. No, sir.

MR. SETH: What field was that?

MR. GRAHAM: Hobbs.

A. No, sir.

MR. GRAHAM: The discussion in that case, as I remember, was as to the corrosiveness of the oil. Is it sulphur? And the gas, is that sweet gas?

A. That is sweet gas.

MR. GRAHAM: And its corrosive properties would be ....?

A. As a gas it wouldn't be corrosive. The oil might be slightly corrosive.

MR. GRAHAM: At that time, the Commission felt that there was some question about the effectiveness of the mechanical packer. What is your opinion on this arrangement you have? Will it

prevent the mixture?

A. Yes, it will prevent mixture. Of course, in the case of severe corrosion it might have to be replaced.

MR. SETH: But in your view, it would prevent the intermingling of the oil and gas?

A. Yes.

MR. GRAHAM: Could you identify those two wells to the south of you?

A. Ralph Lowe Shell State C No. 2. And the other one is Skelly Oil Company New Mexico D.

MR. GRAHAM: Are they offset wells?

A. They are not exactly offsets. The leases adjoin and they are in the S½. They are within the same section. They are not exactly offsets.

COMMISSIONER SPURRIER: Does anyone care to cross-examine the witness?

BY MR. LOVERING:

Q. I would like to make a statement for the record and ask one or two questions. As to the corrosiveness of the fluids in the well, I think you will find that that oil is somewhat corrosive, but also the fact remains that there will be considerable water produced from that horizon.

A. There hasn't been any indication of it so far.

Q. Well, I believe that there will be water. I don't know in what quantities. Waters in the vicinity are generally corrosive. But that is neither here or there. What I wanted to state was with regard to the completion of the well. Do you have a record of how much cement was used in the oil string? Any idea where the cement column is behind the casing at the present time?

A. I don't believe I have that with me. But there was a cement test made and the top of the cement was well above the Yates. If I remember correctly, it was about 1,500 feet.

Q. Then in handling the fluids at the surface, how do you propose to handle the fluids or gases after they reach the surface?

A. The oil from the lower formation will be produced into a low pressure separator and the present tank battery as it is now being produced. The Yates gases we propose to produce through a high pressure separator that is connected only into the El Paso Natural Gas line.

Q. The gases from the Yates then will be metered separately before they enter the same line with the other gases from the tank battery?

A. Yes, that's right. As a matter of fact, we propose to put the Yates in the El Paso main which carries a pressure of 750 pounds in the area. The lower formation won't go into that line.

Q. Then they go into two separate lines?

A. That's right.

MR. LOVERING: That is all.

COMMISSIONER SPURRIER: Anyone else care to examine the witness?

MR. GRAHAM: Do you have any figures on costs of digging a well down to the shallow sands as compared to this arrangement?

A. No, I don't have any figures with me on that.

MR. SETH: There would be a wide discrepancy?

A. There would be, yes.

COMMISSIONER SPURRIER: Do you have anything further, Judge?

MR. SETH: No, that is all.

COMMISSIONER SPURRIER: If no one has anything further, the witness is excused. Read the next case, please.

(Reads the notice of publication in Case No. 168)

COMMISSIONER SPURRIER: This case we will ask the Commission to continue to a definite date for the reason that the principals in the case were unable to be here this morning. We were notified by telephone and confirmed by telegram late yesterday that they would be unable to attend.

If no one has anything further, the meeting is adjourned.

STATE OF NEW MEXICO)
: ss
COUNTY OF SANTA FE)

I, E. E. Greeson, notary public, hereby certify that the foregoing transcript of proceedings before the Oil Conservation Commission of the State of New Mexico in Santa Fe on December 7, 1948, is a true record of the same to the best of my knowledge, skill, and ability.

DATED at santa Fe, New Mexico, this 13th day of December, 1948.

E. E. Greeson
Notary Public

My Commission Expires 8-4-52.

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

IN THE MATTER OF HEARING CALLED BY THE OIL CONSERVATION COMMISSION OF THE STATE OF NEW MEXICO FOR THE PURPOSE OF CONSIDERING:

CASE NO. 166
ORDER NO. 803

THE APPLICATION OF TIDEWATER ASSOCIATED OIL COMPANY FOR AN ORDER GRANTING PERMISSION FOR AN UNORTHODOX WELL LOCATION DESIGNATED AS MARIANO DOME NO. 1, DESCRIBED AS NW¼SW¼SE¼, BEING 118 FEET EAST OF THE CENTER LINE AND 1,249 FEET NORTH OF THE SOUTH LINE OF SECTION 8, TOWNSHIP 15 NORTH, RANGE 13 WEST, N.M.P.M. McKINLEY COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This matter came on regularly for hearing at 10:00 o'clock a.m. on the 7th day of December, 1948, at Santa Fe, New Mexico, before the Oil Conservation Commission of New Mexico hereinafter referred to as the "Commission."

NOW, on this 16th day of December, 1948, the Commission having before it for consideration the testimony adduced at the hearing of said cause and being fully advised in the premises;

FINDS:

1. That due public notice having been given as provided by law, the Commission has jurisdiction of the case;

2. That said location was heretofore staked as a wildcat location for geological reasons 118 feet east of the center line and 1249 feet north of the south line of Section 8, Township 15 North, Range 13 West, N.M.P.M. in the NW¼SW¼SE¼ thereof;

3. That all direct and diagonal off-set acreage to said location is under the control of this applicant.

IT IS THEREFORE ORDERED that the application of Tidewater Associated Oil Company for an order authorizing an unorthodox location 118 feet east of the center line and 1,249 feet north of the south line of Section 8, Township 15 North, Range 13 West, N.M.P.M. in the NW¼SW¼SE¼ thereof in McKinley County, New Mexico, be, and the same is hereby granted and approved.

IT IS FURTHER ORDERED that location notices, whether Federal or otherwise, and all other papers shall be filed with the Commission.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

Thomas J. Mabry, Chairman

John E. Miles, Member

R. R. Spurrier, Secretary

FORM 1373

TIDE WATER ASSOCIATED OIL COMPANY

ASSOCIATED

DIVISION

Case # _____ October 19, 1948 106

New Mexico Oil Conservation Commission,

Santa Fe, New Mexico.

In the matter of:

Application for approval of an unorthodox location for well Mariano, Dome #1, in the south east ¼, section 8, T. 15 N., R. 13 W., N. M. P. M. Wild Cat area, McKinley county, New Mexico. Lease unit #1007.

Comes now the petitioner, Tide Water Associated Oil Co., and move the commission for approval of an unorthodox location for Tide Water Associated Oil Co. Well, Maraino Dome #1. Under Lease unit #1007, located in the S. E. ¼, section 8, T. 15 N., T. 13 W., N. M. P. M. Wild Cat area McKinley county, New Mexico, and for ground of this application says.

Through lack of knowledge of the laws of the State of New Mexico and the rules and regulations of the New Mexico, Oil and Gas Conservation Commission, adopted pursuant there to : The Petitioner has caused said unorthodox location to be made. Heavy rotary drilling equipment installed. Well spudded, 398 feet, 11¾ casing cemented with 225 sacks. Tested 500 pounds presure. Drilling and coring 9 inch hole to approximately 2700 feet at heavy expence. It is further represented by the Petitioner, that it has under lease offset acreage on all sides of the said unorthodox location,

FORM 1373

TIDE WATER ASSOCIATED OIL COMPANY

ASSOCIATED

DIVISION

all of section 8 Navajo allotted Lease, so that no one is affected by the said unorthodox location either adversly or otherwise.

Wherefore, your Petitioner Prays that the New Mexico Oil Conservation Commission, set this Petition down for hearing giving notice there of in the usual maner as required by the rules and regulations of the commission, and upon said hearing, that the said unorthodox location be allowed and approved.

Your Petitioner:

Tide Water Associated Oil Co.

P. O. Box 811

Ventura, California.

Local Agent:

Drilling Foreman, W. M. McKim

attest to the best of my knowledge.

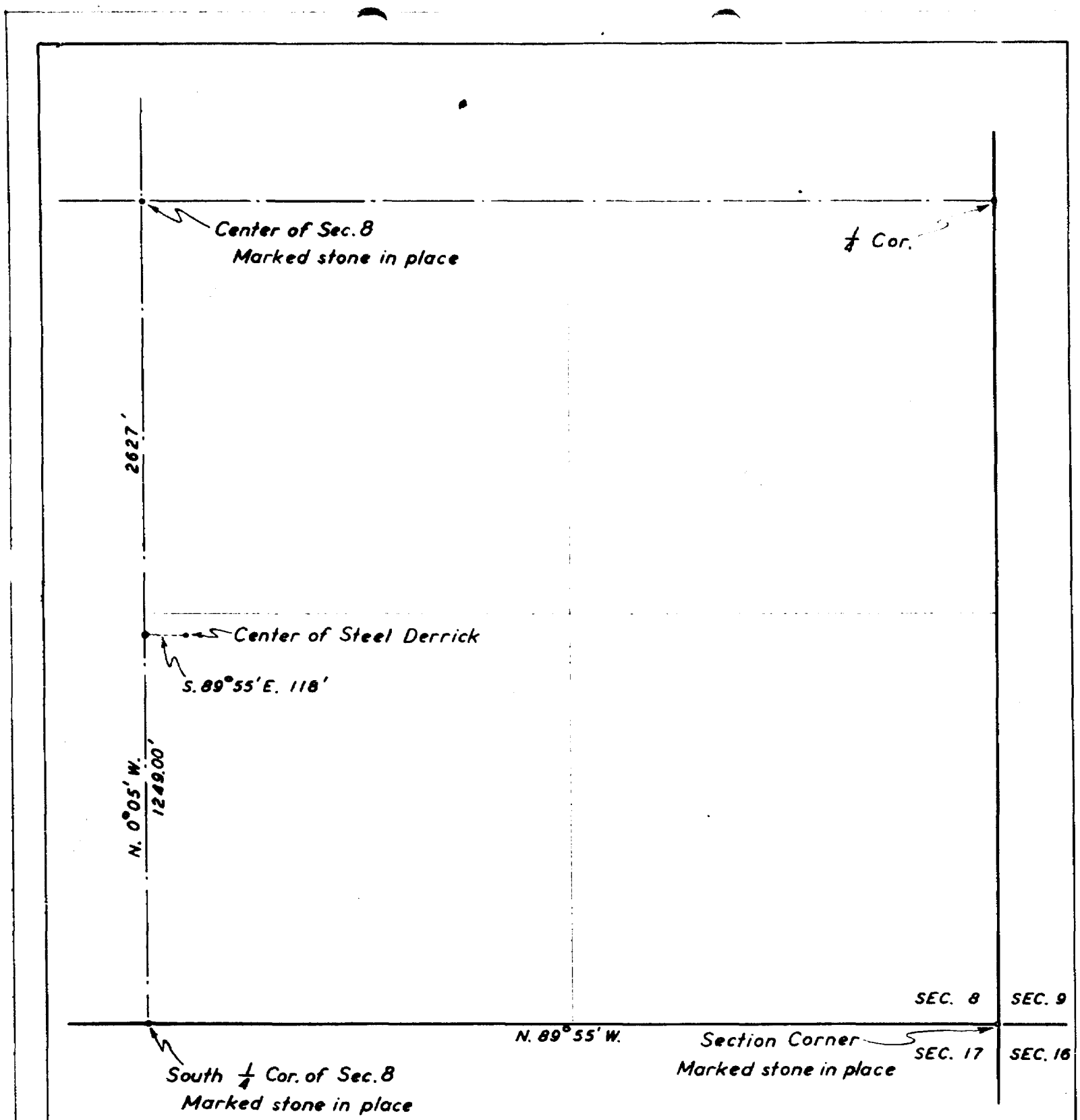
W. M. McKim

State of New Mexico }
County of McKinley }

Sworn and subscribed to before me
this 19 day of October 48.
by W. M. McKim

Notary Public

My comm. exp. 7/22/51



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Scale - 1" = 400'

MAP SHOWING

LOCATION OF STEEL DERRICK

OF

TIDEWATER ASSOCIATED OIL COMPANY

IN SECTION 8, T. 15 N., R. 13 W., N.M.P.M.

McKINLEY COUNTY ~ NEW MEXICO

ROSS-BEYER ENGINEERING OFFICE CBB-RH

ALBUQUERQUE, NEW MEXICO

SEPTEMBER 17, 1948

Tide Water Associated Oil Co.

October 19, 1948

New Mexico Oil Conservation Commission,

Santa Fe, New Mexico.

In the matter of:

Application for approval of an unorthodox location for well Mariano, Dome #1, in the south east ¼, section 8, T. 15 N., R. 13 W., N. M. P. M. Wild Cat area, McKinley county, New Mexico. Lease unit #1007.

Comes now the petitioner, Tide Water Associated Oil Co., and move the commission for approval of an unorthodox location for Tide Water Associated Oil Co. Well, Mariano Dome #1. Under Lease unit #1007, located in the S. E. ¼, 1190' E. of County line and 1249' N. of the S. line Sec. 8, section 8, T. 15 N., T. 13 W., N. M. P. M. Wild Cat area McKinley county, New Mexico, and for ground of this application says.

Through lack of knowledge of the laws of the State of New Mexico and the rules and regulations of the New Mexico, Oil and Gas Conservation Commission, adopted pursuant there to : The Petitioner has caused said unorthodox location to be made. Heavy rotary drilling equipment installed. Well spudded, 398 feet, 11¾ casing cemented with 225 sacks. Tested 500 pounds presure. Drilling and coring 9 inch hole to approximately 2700 feet at heavy expence. It is further represented by the Petitioner, that it has under lease offset acreage on all sides of the said unorthodox location,

all of section 8 Navajo allotted Lease, so that no one is affected by the said unorthodox location either adversely or otherwise.

Wherefore, your Petitioner Prays that the New Mexico Oil Conservation Commission, set this Petition down for hearing giving notice there of in the usual manor as required by the rules and regulations of the commission, and upon said hearing, that the said unorthodox location be allowed and approved.

Your Petitioner:

Tide Water Associated Oil Co.

P. O. Box 911

Ventura, California.

Local Agent:

Drilling Foreman, W. M. McKim

Attest to the best of my knowledge.

W. M. McKim

County of [illegible]

Subscribed and sworn to before me this 19 day of October 1948

W. M. McKim

Woodrow Bagley
Notary Public

My comm. exp. 7/22/51

STATE OF NEW MEXICO
OFFICE OF STATE GEOLOGIST
SANTA FE, NEW MEXICO

9 November 1948

Mr. W. M. McKim
P. O. Box 811
Ventura, California

C

Dear Mr. McKim:

O

Your application of October 19 for approval of an unorthodox location for Mariano Dome #1 has been received and will be set for hearing as soon as possible. You have submitted one copy only and we require three copies. Will you please forward two more copies.

P

Very truly yours,

Y

RKS:bsp

Well file Mariano # 1

Water Well, location 1739 ft. from N. line and 2752 ft. from W. line of sec. 17
Sec. No. 17, Twp-15 N., Range 13 W., Meridian- N. M. PM., Field-Mariano Area,
County- McKinley, State- New Mexico.

Well 494 ft. Total depth, 8 inch hole
Bridge plug shale, and five sacks cement. Approximately 15 ft. Plug
depth, 280 ft., 279 ft., 11 joints, new six inch invasion pipe. Well
pumps approximately. 125 barrels in 24 hours.

Graham

Dig. 2401