FILE NO. [illegible]

Entered in N I D File	✓	Checked by Chief	
Entered On S R Sheet		Copy N I D to Field Office	✓
Location Map Pinned		Approval Letter	✓
Card Indexed	✓	Disapproval Letter	
I W R for State or Fee Land			

COMPLETION DATA: 12-1-60

Date Well Completed	~~12-1-60~~	Location Inspected	
OW	WW	TA	Bond released
GW	OS	PA X	State of Fee Land

LOGS FILED

Driller's Log 12-14-60

Electric Logs (No.) 2

E ✓ I E-I GR ✓ GR-N Micro

Lat Mi-L Sonic Others

TENNESSEE GAS TRANSMISSION COMPANY
Post Office Box 2410
Denver, Colorado

October 31, 1960

Oil and Gas Supervisor
United States Geological Survey
Post Office Box 400
Casper, Wyoming

Re: Stipulation

Dear Sir:

Tennessee Gas Transmission Company is the owner of United States Oil and Gas Lease U-0982~~3~~7 covering, among other lands, the following described property situate in Grand County, State of Utah, to-wit:

Township 17 South, Range 25 East, S. L. M.

Section 30: W½E½, W½

This company has designated Burton W. Hancock as the Operator of this Lease and the lands covered thereby. Mr. Hancock, as Operator, proposes to drill a well on the leased premises to test for oil and gas at a location in the SW¼ of said Section 30, Township and Range as aforesaid, 3285 feet West of the East line and 1,480 feet North of the South line of said Section 30.

Section 221.20, Federal Oil and Gas Regulations, requires that no well be drilled less than 200 feet from the boundary of any legal subdivision without the written consent of the Supervisor, United States Geological Survey. The proposed location is approximately 160 feet North from the South sideline of the NE¼SW¼ of said Section 30, but is considered to be necessary because of the topographic restrictions imposed by a narrow canyon at this point. The proposed well site represents the optimum drill site with respect to surface topography (including natural drainage) and geophysical data. Any other drill site would involve

undue hardship because of excessive costs involved in roadwork and the preparation of a drill site location.

Therefore, Tennessee Gas Transmission Company, lessee, requests the consent of the Supervisor to the drilling of the proposed well at the above described location. In consideration of such consent, Tennessee Gas Transmission Company, lessee, hereby expressly covenants and agrees that it will make no separate assignments of the NE¼SW¼ and SE¼SW¼ of said Section 30, Township 17 South, Range 25 East, S. L. M., Grand County, Utah, and that it will keep the two above described subdivisions under joint assignment until the above mentioned well has been plugged and abandoned with the approval of the Supervisor.

Very truly yours,

TENNESSEE GAS TRANSMISSION COMPANY

FORM APPROVED

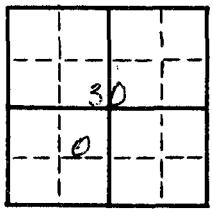
By _____

AGENT AND ATTORNEY-IN-FACT

Form OGCC-1

(SUBMIT IN DUPLICATE)

LAND:



STATE OF UTAH

OIL & GAS CONSERVATION COMMISSION

SALT LAKE CITY, UTAH

Fee and Patented ☐
State ☒
Lease No. 09617

Public Domain ☒
Lease No. 09617

Indian ☐
Lease No.

SUNDRY NOTICES AND REPORTS ON WELLS

Notice of Intention to Drill	X	Subsequent Report of Water Shut-off	
Notice of Intention to Change Plans		Subsequent Report of Altering Casing	
Notice of Intention to Redrill or Repair		Subsequent Report of Redrilling or Repair	
Notice of Intention to Pull or Alter Casing		Supplementary Well History	
Notice of Intention to Abandon Well			

(INDICATE ABOVE BY CHECK MARK NATURE OF REPORT, NOTICE, OR OTHER DATA)

November 1, 19 60

Well No. Gov't #6 is located 1480 ft. from {N/S} line and 3285 ft. from {E/W} line of Sec. 30

NE SW, Sec. 30 (¼ Sec. and Sec. No.) T. 17 S., R. 25 E., (Range) Salt Lake (Meridian)

Unnamed (Field) Grand (County or Subdivision) Utah (State or Territory)

The elevation of the derrick floor above sea level is Approx. 5290 feet.

A drilling and plugging bond has been filed with .....

DETAILS OF WORK

(State names of and expected depths to objective sands; show sizes, weights, and lengths of proposed casings; indicate mudding jobs, cementing points, and all other important work, surface formation, and date anticipate spudding-in.)

It is planned to drill a test well at the above location to a depth sufficient to test all formations down to and including the Salt Wash member of the Morrison formation. It is expected to obtain natural gas in the Dakota, Cedar Mountain, and/or Morrison formations. The well will be drilled to a total depth of about 4100 feet. The approximate expected depths to the potential producing formations are: Dakota-3940'; Cedar Mt. -3550'; and Morrison-3680'.

About 200 feet of 8-5/8" surface casing will be set and thoroughly cemented. A 6-3/4" hole will be drilled with a rotary rig using air as a circulating medium. If production is obtained 4½" casing will be run and cemented. All production zones will be perforated.

I understand that this plan of work must receive approval in writing by the Commission before operations may be commenced.

Company Burton W. Hancock

Address 18531 Decatur Road
Los Gatos, California

By H. Don Gingley

Title Consulting Geologist

INSTRUCTIONS: A plat or map must be attached to this form showing the location of all leases, property lines, drilling and producing wells, within an area of sufficient size so that the Commission may determine whether the location of the well conforms to applicable rules, regulations and orders.

C.S.V. Oil - SLC

~~Trident~~
Cuban American Oil
Dallas, Texas

Walter L. Morrisson S.L.C.

Texas Eastern Trans.

R.G. Thomas - Ferron, Utah

Hancock leases

Acreage To be acquired by Hancock on Farmout from Tennessee Gas & Oil

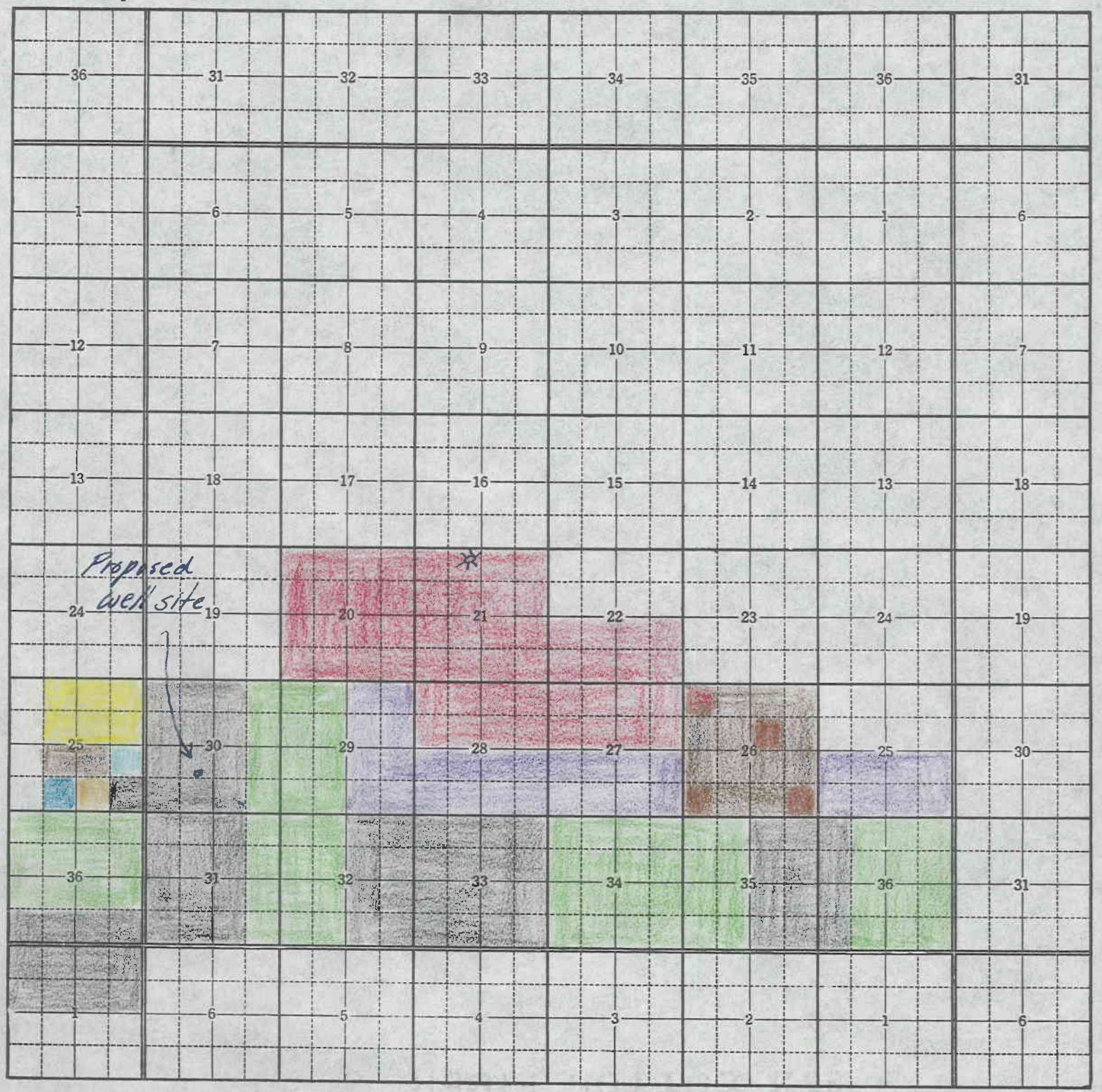
Lands retained by Tennessee

Woods Petroleum - Oklahoma City

Merle E Buttram - Okla Cty - Various %'s assigned to G Caulkins

Township 17S, Range 25E, County Grand, State Utah

Island Township Plat



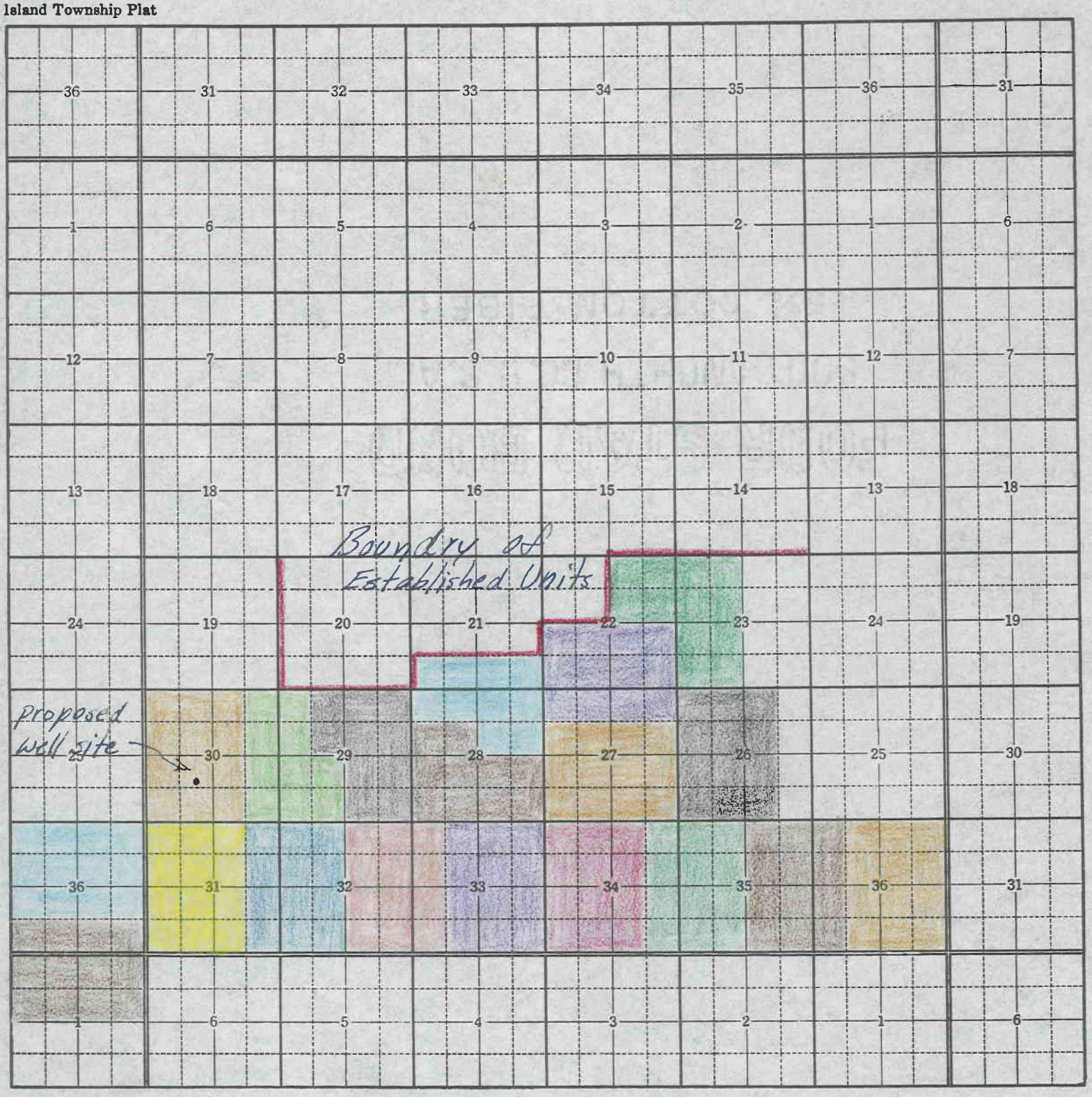
Lease ownership in area of consideration

Oil & Gas Conservation Commission

Subject: Potential arrangement of drilling units

Township 17S, Range 25E, County Grand, State Utah

Island Township Plat



Submitted by Burton W. Hancock

November 4, 1960

Mr. Burton W. Hancock
18531 Decatur Road
Los Gatos, California

Dear Mr. Hancock:

This is to acknowledge receipt of your notice of intention to drill Well No. Gov't. #6, which is to be located 1480 feet from the south line and 3285 feet from the east line of Section 30, Township 17 South, Range 25 East, SLM, Grand County, Utah.

Please be advised that insofar as this office is concerned approval to drill said well on said unorthodox location is hereby granted in accordance with Rule C-3 (c), General Rules and Regulations and Rules of Practice and Procedure, Utah State Oil and Gas Conservation Commission. However, this approval does not grant you permission to commingle gas from the zones you anticipate as productive, since the Commission can only grant such permission after notice and hearing, (Rule C-16, General Rules and Regulations and Rules of Practice and Procedure, Utah State Oil and Gas Conservation Commission). Any dual completion must also be approved by the Commission.

This approval terminates within 90 days if the above mentioned well has not been spudded in within said period.

Very truly yours,

OIL & GAS CONSERVATION COMMISSION

CLEON B. FEIGHT,
EXECUTIVE SECRETARY

CBF:awg
cc: Don F. Russell, Dist. Eng.
U. S. Geological Survey

W. Don Quigley, Consulting Geologist

H. L. Coonts - OGCC, Moab

U-28
C-689

Form 9-1123

(Submit in Triplicate)

SUPERVISOR, OIL AND GAS OPERATIONS:

DESIGNATION OF OPERATOR

The undersigned is, on the records of the Bureau of Land Management, holder of oil and gas lease

DISTRICT LAND OFFICE: Salt Lake City, Utah
SERIAL NO.: UTAH-09817

and hereby designates

NAME: Burton W. Hancock
ADDRESS: 18531 Decatur Road, Los Gatos, California

as his operator and agent, with full authority to act in his behalf in complying with the terms of the lease and regulations applicable thereto and on whom the supervisor or his representative may serve written or oral instructions in securing compliance with the Oil and Gas Operating Regulations with respect to (describe acreage to which this designation is applicable):

TOWNSHIP 17 SOUTH, RANGE 24 EAST, SLM
Section 25: SE¼ SE¼

TOWNSHIP 17 SOUTH, RANGE 25 EAST, SLM
Section 30: Lots 1,2,3,4, E½ E½, E½ W½
All in Grand County, Utah

It is understood that this designation of operator does not relieve the lessee of responsibility for compliance with the terms of the lease and the Oil and Gas Operating Regulations. It is also understood that this designation of operator does not constitute an assignment of any interest in the lease.

In case of default on the part of the designated operator, the lessee will make full and prompt compliance with all regulations, lease terms, or orders of the Secretary of the Interior or his representative.

The lessee agrees promptly to notify the oil and gas supervisor of any change in the designated operator.

TENNESSEE GAS TRANSMISSION COMPANY

BY: [signature] (Signature of lessee)

Agent and Attorney-in-Fact

FORM APPROVED

November 17, 1960
(Date)

P. O. Box 2410, Denver, Colorado
(Address)

U. S. GOVERNMENT PRINTING OFFICE 16—53598-2

BIELE, JONES & GARNER
1157 FIRST SECURITY BUILDING
SALT LAKE CITY, UTAH
DAvis 8-8629

November 22, 1960

Utah Oil & Gas Conservation Commission
Newhouse Building
Exchange Place
Salt Lake City, Utah

Attention: Mr. Feight

Re: Federal Oil & Gas Lease U-09817
Grand County, Utah
Burton W. Hancock, Operator

Gentlemen:

As attorney for Burton W. Hancock I caused to be filed with Mr. Don Russell of the United States Geological Survey, Salt Lake City, Utah, on November 22, 1960, the following documents:

(a) Notice of Intention to Drill a well on the above captioned Lease at a location in the SW corner of Section 30, Township 17 South, Range 25 East, S. L. M. Such notice was signed by W. Don Quigley, Agent for Mr. Hancock;

(b) Designation of Operator executed by Tennessee Gas Transmission Company, lessee of record under the above captioned Lease, designating Burton W. Hancock as that company's operator and agent with respect to drilling operations upon such well;

(c) A letter to the Oil and Gas Supervisor, United States Geological Survey, dated October 31, 1960, signed by Tennessee Gas Transmission Company, constituting a Stipulation with respect to the proposed location of the above mentioned well which is approximately 160 north from the South sideline of the NE¼SW¼ of said Section 30. A carbon copy of such Stipulation of October 31, 1960, signed by

Tennessee Gas Transmission Company, is enclosed herewith.

The location of such well site is dictated by topographic restrictions imposed by a narrow canyon, as well as considerations of the optimum well site with respect to surface topography including natural drainage and known geophysical data. Based upon such factors Mr. Hancock respectfully requests the approval of your commission of such unorthodox well location. It is my understanding that informal approval of such well site has been heretofore given as a result of oral representations made to your Commission by Mr. Quigley, geologist in the employ of Mr. Hancock, who has made on-the-ground examinations of said lands, as well as surveys of the proposed well site.

Very truly yours,

Hugh C. Garner

HCG bam
Enclosures
cc: Mr. Burton W. Hancock

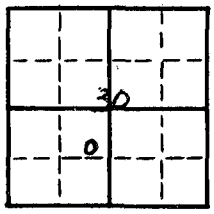
Form OGCC-1

State

(SUBMIT IN DUPLICATE)

Copy to USC

LAND:



STATE OF UTAH

OIL & GAS CONSERVATION COMMISSION

SALT LAKE CITY, UTAH

Fee and Patented ☐
State ☐
Lease No.

Public Domain ☒
Lease No. 09817

Indian ☐
Lease No.

SUNDRY NOTICES AND REPORTS ON WELLS

Notice of Intention to Drill		Subsequent Report of Water Shut-off	
Notice of Intention to Change Plans		Subsequent Report of Altering Casing	
Notice of Intention to Redrill or Repair		Subsequent Report of Redrilling or Repair	
Notice of Intention to Pull or Alter Casing		Supplementary Well History	
Notice of Intention to Abandon Well	X		

(INDICATE ABOVE BY CHECK MARK NATURE OF REPORT, NOTICE, OR OTHER DATA)

November 30, 19 60

Well No. Gov't #6 is located 1480 ft. from {N/S} line and 3285 ft. from {E/W} line of Sec. 30

NE SW Sec. 30 (¼ Sec. and Sec. No.) | T. 17 S. (Twp.) | R. 25 E. (Range) | Salt Lake (Meridian)

Wildcat (Field) | Grand (County or Subdivision) | Utah (State or Territory)

The elevation of the derrick floor above sea level is 5301 feet.

A drilling and plugging bond has been filed with .....

DETAILS OF WORK

(State names of and expected depths to objective sands; show sizes, weights, and lengths of proposed casings; indicate mudding jobs, cementing points, and all other important work, surface formation, and date anticipate spudding-in.)

The above well has been drilled to a total depth of 4287 feet, which is about 15 feet into the Entrada formation, without encountering commercial quantities of gas. Fresh water was obtained in the Cedar Mountain formation and Salt water in the Entrada. It is planned to abandon the well as follows: Install a cement plug in the bottom of about 75 sacks filling up from T. D. to about 4050 feet; a second plug of 80 sacks from 3700 to 3444 covering the Cedar Mountain and Dakota formations; and a third plug of about 20 sacks from 180 to 120 feet at bottom of surface casing. A 4' marker set in cement will be placed in the top of the surface casing.

I understand that this plan of work must receive approval in writing by the Commission before operations may be commenced.

Company B. W. Hancock

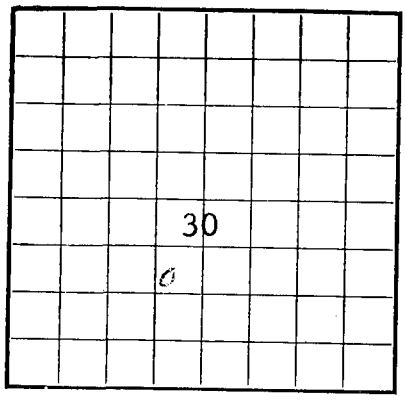
Address 18531 Decatur Road
Los Gatos, California

By W. Don Quigley

Title Consulting Geologist

INSTRUCTIONS: A plat or map must be attached to this form showing the location of all leases, property lines, drilling and producing wells, within an area of sufficient size so that the Commission may determine whether the location of the well conforms to applicable rules, regulations and orders.

Form OGCC-3



LOCATE WELL CORRECTLY

STATE OF UTAH

OIL & GAS CONSERVATION COMMISSION

Salt Lake City, Utah

To be kept Confidential until xxxxxxx
(Not to exceed 4 months after filing date)

LOG OF OIL OR GAS WELL

Operating Company B. W. Hancock Address 18531 Decatur Rd., Los Gatos, Calif.

Lease or Tract U-09817 Field Wildcat State Utah

Well No. Gov't 6 Sec. 30 T. 17S R. 25E Meridian Salt Lake County Grand

Location 1480 ft. {N. / XX} of S. Line and 3285 ft. {XXX / W.} of E. Line of Sec. 30 Elevation 5301'
(Derrick floor relative to sea level)

The information given herewith is a complete and correct record of the well and all work done thereon so far as can be determined from all available records.

Signed W. Don Quigley

Date December 9, 1960 Title Consulting Geologist

The summary on this page is for the condition of the well at above date.

Commenced drilling November 22, 1960 Finished drilling December 1, 1960

OIL OR GAS SANDS OR ZONES

(*Denote gas by G*)

No gas zones

No. 1, from ____ to ____ No. 4, from ____ to ____

No. 2, from ____ to ____ No. 5, from ____ to ____

No. 3, from ____ to ____ No. 6, from ____ to ____

IMPORTANT WATER SANDS

No. 1, from 3605 to 3635-Fresh Water in Cedar Mt. No. 3, from ____ to ____

No. 2, from 4270 to T.D.-Salt Water No. 4, from ____ to ____ in Entrada

CASING RECORD

Size casing	Weight per foot	Threads per inch	Make	Amount	Kind of shoe	Cut and pulled from	Perforated From—	Perforated To—	Purpose
8 5/8	24#		J-55	158	Guide	- Surface Casing			

MUDDING AND CEMENTING RECORD

Size casing	Where set	Number sacks of cement	Method used	Mud gravity	Amount of mud used

PLUGS AND ADAPTERS

FOLD | MARK

Length _____ Depth set _____

Adapters—Material _____ Size _____

SHOOTING RECORD

Size	Shell used	Explosive used	Quantity	Date	Depth shot	Depth cleaned out

TOOLS USED

Rotary tools were used from _____ feet to _____ feet, and from _____ feet to _____ feet

Cable tools were used from _____ feet to _____ feet, and from _____ feet to _____ feet

DATES

Date P & A December 1, 19 60 Put to producing _____, 19____

The production for the first 24 hours was _____ barrels of fluid of which _____% was oil; _____% emulsion; _____% water; and _____% sediment. Gravity, °Bé. _____

If gas well, cu. ft. per 24 hours _____ Gallons gasoline per 1,000 cu. ft. of gas _____

Rock pressure, lbs. per sq. in. _____

EMPLOYEES

Bob De Long _____, Driller _____, Driller

J. W. Jennings _____, Driller _____, Driller

FORMATION RECORD

FROM—	TO—	TOTAL FEET	FORMATION
			At the end of complete Driller's Log add Geologic Tops. State whether from Electric Logs or samples.
			Electric Log Tops
Surface	3465'	3465'	Mancos formation
3465'	3550'	85'	Dakota formation
3550'	3670'	120'	Cedar Mountain formation
3670'	3946'	276'	Brushy Basin member of Morrison formation
3946'	4210'	264'	Salt Wash member of Morrison formation
4210'	4235'	25'	Summerville formation
4235'	4270'	35'	Curtis formation
4270'	4287'	Total Depth	Entrada formation

[OVER]

HISTORY OF OIL OR GAS WELL

It is of the greatest importance to have a complete history of the well. Please state in detail the dates of redrilling, together with the reasons for the work and its results. If there were any changes made in the casing, state fully, and if any casing was "sidetracked" or left in the well, give its size and location. If the well has been dynamited, give date, size, position, and number of shots. If plugs or bridges were put in to test for water, state kind of material used, position, and results of pumping or bailing.

State whether electric logs were run.

For well history & lithologic record see report attached to OGCC - 1.

Form OGCC-1

(SUBMIT IN DUPLICATE)

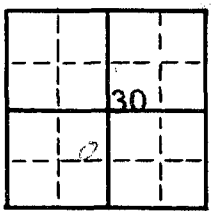
Copy to HC RCS

LAND:

STATE OF UTAH

OIL & GAS CONSERVATION COMMISSION

SALT LAKE CITY, UTAH



Fee and Patented ☐
State ☐
Lease No.

Public Domain ☒
Lease No. 09817

Indian ☐
Lease No.

SUNDRY NOTICES AND REPORTS ON WELLS

Notice of Intention to Drill		Subsequent Report of Water Shut-off	
Notice of Intention to Change Plans		Subsequent Report of Altering Casing	
Notice of Intention to Redrill or Repair		Subsequent Report of Redrilling or Repair	
Notice of Intention to Pull or Alter Casing		Supplementary Well History	X
Notice of Intention to Abandon Well			

(INDICATE ABOVE BY CHECK MARK NATURE OF REPORT, NOTICE, OR OTHER DATA)

December 9, 19 60

Well No. Gov't #6 is located 1480 ft. from {N/S} line and 3285 ft. from {E/W} line of Sec. 30

NE SW SEC. 30 (¼ Sec. and Sec. No.) T. 17 S. (Twp.) R. 25 E. (Range) Salt Lake (Meridian)

Wildcat (Field) Grand (County or Subdivision) Utah (State or Territory)

The elevation of the derrick floor above sea level is 5301 feet.

A drilling and plugging bond has been filed with .....

DETAILS OF WORK

(State names of and expected depths to objective sands; show sizes, weights, and lengths of proposed casings; indicate mudding jobs, cementing points, and all other important work, surface formation, and date anticipate spudding-in.)

For well history and plugging record, see attached report.

I understand that this plan of work must receive approval in writing by the Commission before operations may be commenced.

Company B. W. Hancock

Address 18531 Decatur Road
Los Gatos, California

By W. Don Quigley

Title Consulting Geologist

INSTRUCTIONS: A plat or map must be attached to this form showing the location of all leases, property lines, drilling and producing wells, within an area of sufficient size so that the Commission may determine whether the location of the well conforms to applicable rules, regulations and orders.

WELL HISTORY REPORT
HANCOCK GOV'T #6
GRAND COUNTY, UTAH
DECEMBER 9, 1960

1. The R. W. Hancock Gov't #6 well is located at the mouth of San Arroyo Canyon in the Book Cliffs region of Grand County, Utah. The well is in the NE¼ SW¼ of Sec. 30, T. 17 S., R. 25 E., Salt Lake Meridian.

2. The well was commenced on 21, November 1960. The contractor was Willard Pease Drilling Company and the well was drilled with rotary tools using air as a circulating medium. Approximately 158 feet of surface casing was set and cemented with returns to the surface. After allowing the cement to set (24 hours), drilling below the surface casing was begun using a 7-7/8" bit.

3. Drilling continued at a rapid rate, approximately 1200 feet per day, until the top of the Dakota formation was reached at about 3434 feet. Here the drilling rate decreased somewhat. A slight amount of gas, which would burn at time of connections for about 1 minute, was encountered at 2540 to 2550' in the Mancos formation. Some small additional amount of gas was encountered in the Dakota formation at 3463' to 3495 feet. The amount was still too small to measure and would burn only at times of connections.

4. At 3695 feet fresh water was encountered in the Cedar Mountain formation in sufficient quantities to cause cessation of drilling with straight air as a circulating medium. It was necessary to begin soap and water injection to continue drilling. The soap and water injection worked very well, by drilling ten feet of hole and then starting the injection of the soap and water into the air stream. By the time 15 feet of hole had been cut the pressure would have built up to 200 lbs. which would unload the hole. This procedure was used to the bottom of the hole at 4287 feet. A small amount of additional gas may have been obtained in the Salt Wash member of the Morrison formation at 3946 feet, but this increase was still too small to make an aggregate flow sufficient in volume to measure.

5. Drilling was completed to total depth, 4287 feet, which was 17 feet into the Entrada formation, on November 30, 1960. A large volume of salt water was encountered in the Entrada preventing any further drilling with the method being used at that time. Salt water came into the hole and rose to a level which was 2070 feet below the surface.

6. An ES electrical log plus a Gamma log were run on the hole. The formation tops as picked from the electrical logs are as follows:

Surface	to 3465'	- Mancos formation
3465'	to 3550'	Dakota formation
3550'	to 3670'	Cedar Mountain formation
3670'	to 3946'	Brushy Basin member of Morrison formation
3946'	to 4210'	Salt Wash " " " "
4210'	to 4235'	Summerville formation
4235'	to 4270'	Curtis formation
4270'	to 4287' (T.D)	Entrada formation

A complete lithological log is attached hereto.

7. The well was plugged and abandoned on December 1, 1960 in the following manner:

(A) A cement plug was installed in the bottom of the hole from 4257' to 4000' with 80 sacks of cement. This sealed off the Entrada formation.

(B) A second cement plug was installed between 3700 and 3444 feet with 80 sacks of cement. This plug sealed off the Dakota and Cedar Mt. formations as well as isolating the Salt Wash sands.

(C) A third cement plug was installed between 180 and 120 feet with 20 sacks of cement. This plug sealed off the bottom of the surface casing. The intervening space between the plugs was filled with water and mud.

(D) A 4-foot marker was cemented into the top of the surface casing.

8. The subject well, although a dry hole, did show that the region does have some future prospects for gas production. The Dakota sand was well developed from the stand-point of thickness, being about 50 feet in total thickness, but was extremely fine-grained and silty. This was about the thickness expected at the well site from previous isopac studies. The quality of the sands suggests that the locality may have been near a river channel or flood plain and that coarser sediments might be found nearby. The proper direction to move to find these coarser sediments is really conjectural.

W. Don Quigley
W. Don Quigley
Consulting Geologist

LITHOLOGICAL LOG
ON
HANCOCK GOV'T #6 WELL
GRAND COUNTY, UTAH
DECEMBER 1, 1960

Loc: NE SW Sec. 30, T. 17 S., R. 25 E.
Elev: 5303 feet - K.B.

	2000 - 2250'	Lt. gry., v. calc., bent. sh., w. bent. beds
	2250 - 2280'	Dk gry., calc. sh.
	2280 - 2360'	Lt gry., calc., bent. sh.
	2360 - 2390'	Dk gry., calc. sh.
	2390 - 2420'	Lt. gry., v. calc., bent. sh.
	2420 - 2540'	Dk gry., calc. sh., gry slt, calc. sh., and brn lms.
	*2540 - 2550'	Lt. gry. to brn., calc., slty.,v.f.g.ss., some gass
	2550 - 2570'	Gry. calc. slty sh., brn., arg. lms. and v.f.g., slty., calc. ss.
	2570 - 2620'	Blk. calc. sh & blk. lms.
	2620 - 2660'	Lt. gry., calc., slty, sh.
	2660 - 2690'	Dk gry., calc. sh., w. bent.
	2690 - 2740'	Lt. gry., slty., calc. sh.
	2740 - 2755'	Dk. gry., calc. sh.
	2755 - 2780'	Lt. brn., slty., v.f.g. calc. ss & gry. calc. sh.
	2780 - 2830'	Lt. gry., calc. bent. sh.
	2830 - 2840'	Dk. gry., calc. sh.
	2840 - 2890'	Lt. gry., calc. bent sh.
	2890 - 2910'	Dk. gry., calc. sh.
	2910 - 3130'	Lt. gry. calc. bent. sh.
	3130 - 3290'	Dk. gry. calc. sh.
Kmc	3290 - 3340'	Lt. gry., slty., calc. sh.
	3340 - 3350'	Dk. gry., slty., calc. sh.
	3350 - 3395'	Lt. gry., slty, calc. ss., & gry slty sh.
	3395 - 3425'	Lt. gry., slty., calc., v.f.g. ss./w. bent.
	3425 - 3454'	Lt. gry., slty, calc. sh., & v.f.g. slty ss.
Kd	3454 - 3460'	Lt. gry., sl. calc., v. f. g. ss, & dk gry. sh.
	*3460 - 3495'	Wh., v.f.g., non-calc., qtz ss., w. bent., some small gas
	3495 - 3510'	Dk. gry to blk., carb. sh.
	3510 - 3545'	Wh., sl. mica, slty., tgt, v.f.g., qtz. ss.
	3545 - 3555'	Blk carb. sh. & coal
Kcm	3555 - 3580'	Wh to lt. gry., slty, sh. & bent.
	3580 - 3630'	Wh., v.f.g., bent., calc. ss. w. ang. qtz, grns, & wh, f. g. qtz ss., & grn & brn dol. sh. interbeds.
	3630 - 3650'	Varic., dol sh., f. g., & wh. calc. qtz ss.
	3650 - 3670'	Wh. to frosted qtz grns in f. g. shaly ss. & varic., dol., sh. w. pyrite.
	3670 - 3700'	No samples
Jm	-3670'	Top of Morrison Formation

	3700 - 3900'	Varic. dol. shale, some thin beds of hd. cherty ss. & brn. lms.
	3900 - 3920'	Some shaly, red, v.f.g. arg. calc. ss. & varic. shale
	3920 - 3940'	Blk calc. sh., grn, rd, & gry dol. sh.
Jm sw	3940 - 3970'	Wh., v.f.g., hd, xln. calc. ss.
	3970 - 4005'	Varic. calc. sh., w. some qtz. ss. stringers
	4005 - 4050'	Some m.g., wh. calc. ss beds with pyrite, & varic. dol sh.
	4050 - 4070'	Some brn lms. & wh. to lt. brn., calc., f.g. ss beds, & varic. sh.
	4070 - 4090'	No returns
	4090 - 4110'	Varicolored dol. shale
	4110 - 4210'	Buff colored, m.g., calc. ss., & varic. dol. sh., W. pyrite
Js	4210 - 4235'	Rd & gry grn. dol. sh, & brn lms. w some frosted qtz. grns.
	4235 - 4270'	Brn lms., wh to gry, v.f.g. calc. ss., gry & rd. sh.
	4270 - 4287'	Wh to Lt. brn m.g. to c. g. qtz. ss., w rd'd grns., & red silty sh.
	4287 -	Total Depth.