

6-6-76 - ~~11/11~~ Finished drilling & well  
suspended

7/18/77 - Well Plugged & abandoned -



1110 DENVER CLUB BUILDING  
518 SEVENTEENTH STREET  
DENVER, COLORADO 80202  
TELEPHONE 303-573-5665

March 24, 1976

Mr. Cleon Feight  
Utah Oil & Gas Conservation Division  
1588 West Temple North  
Salt Lake City, Utah 84116

Re: Anschutz #1 State 635  
SW NE Sec. 32-19S-21E  
Grand County, Utah  
State lease 27635

Dear Mr. Feight:

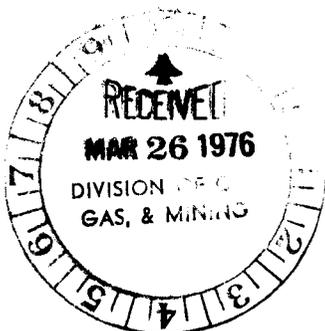
Transmitted herewith in triplicate is the APPLICATION FOR  
PERMIT TO DRILL for the captioned well.

Yours very truly,

THE ANSCHUTZ CORPORATION

Robert M. Wakefield  
Geologist

RMW/k1f



STATE OF UTAH  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL & GAS

5. Lease Designation and Serial No.

Utah State - 27635

6. If Indian, Allottee or Tribe Name

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. Type of Work

DRILL

DEEPEN

PLUG BACK

b. Type of Well

Oil Well

Gas Well

Other

Single Zone

Multiple Zone

2. Name of Operator

The Anschutz Corporation

3. Address of Operator

1110 Denver Club Bldg., Denver, Colorado 80202

4. Location of Well (Report location clearly and in accordance with any State requirements.\*)

At surface NE 1/4 SW 1/4 NE 1/4 Sec. 32 1390' SNL-1389' WEL

At proposed prod. zone

7. Unit Agreement Name

8. Farm or Lease Name

State 635

9. Well No.

1

10. Field and Pool, or Wildcat

Left Hand Canyon Area

11. Sec., T., R., M., or Blk. and Survey or Area

32-19S-21E

14. Distance in miles and direction from nearest town or post office\*

Approx. 23 miles northwest of Cisco, Utah

12. County or Parrish 13. State

Grand Utah

15. Distance from proposed\* location to nearest property or lease line, ft. (Also to nearest drlg. line, if any)

1390'

16. No. of acres in lease

640

17. No. of acres assigned to this well

18. Distance from proposed location\* to nearest well, drilling, completed, or applied for, on this lease, ft.

19. Proposed depth

4800

20. Rotary or cable tools

Rotary

21. Elevations (Show whether DF, RT, GR, etc.)

6162 GL 6173 KB

22. Approx. date work will start\*

5-1-76

23. PROPOSED CASING AND CEMENTING PROGRAM

Size of Hole	Size of Casing	Weight per Foot	Setting Depth	Quantity of Cement
12 1/4"	8 5/8"	24	250'	175 sx (circulated)
7 7/8"	5 1/2"	15-17	4800'	175 sx (or more)

Survey plats are attached. Blanket drilling bond covering state leases on file. We propose to drill this well to an approximate total depth of 4800' in the Entrada formation. Mud and BOP programs will be those generally used in this area. Electric logs will be run to total depth; no cores are planned. Drill stem tests will be run as warranted from sample and log evaluation. If production is encountered, casing will be set through the indicated pay zone and selectively perforated; fracing or acidizing may be necessary to stimulate production.

\* For topographic reasons, permission is requested to drill this well at a location closer than 500' to the nearest quarter-quarter section line. Operator owns all leases within 500' of the location.

Nearest production is approximately one-half mile northwest at the Anschutz #1 Fed. 773, NW SE Sec. 29. Production in Bull Canyon field is slightly less than two miles to the south.

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24. Signed Robert M. Wakefield Title Geologist Date 3-24-76

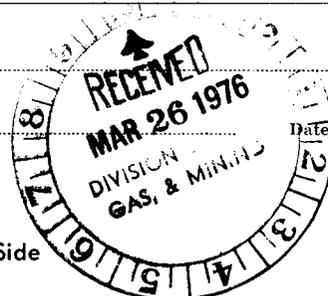
(This space for Federal or State office use)

Permit No. 43-019-30284 Approval Date

Approved by \_\_\_\_\_ Title \_\_\_\_\_ Date \_\_\_\_\_

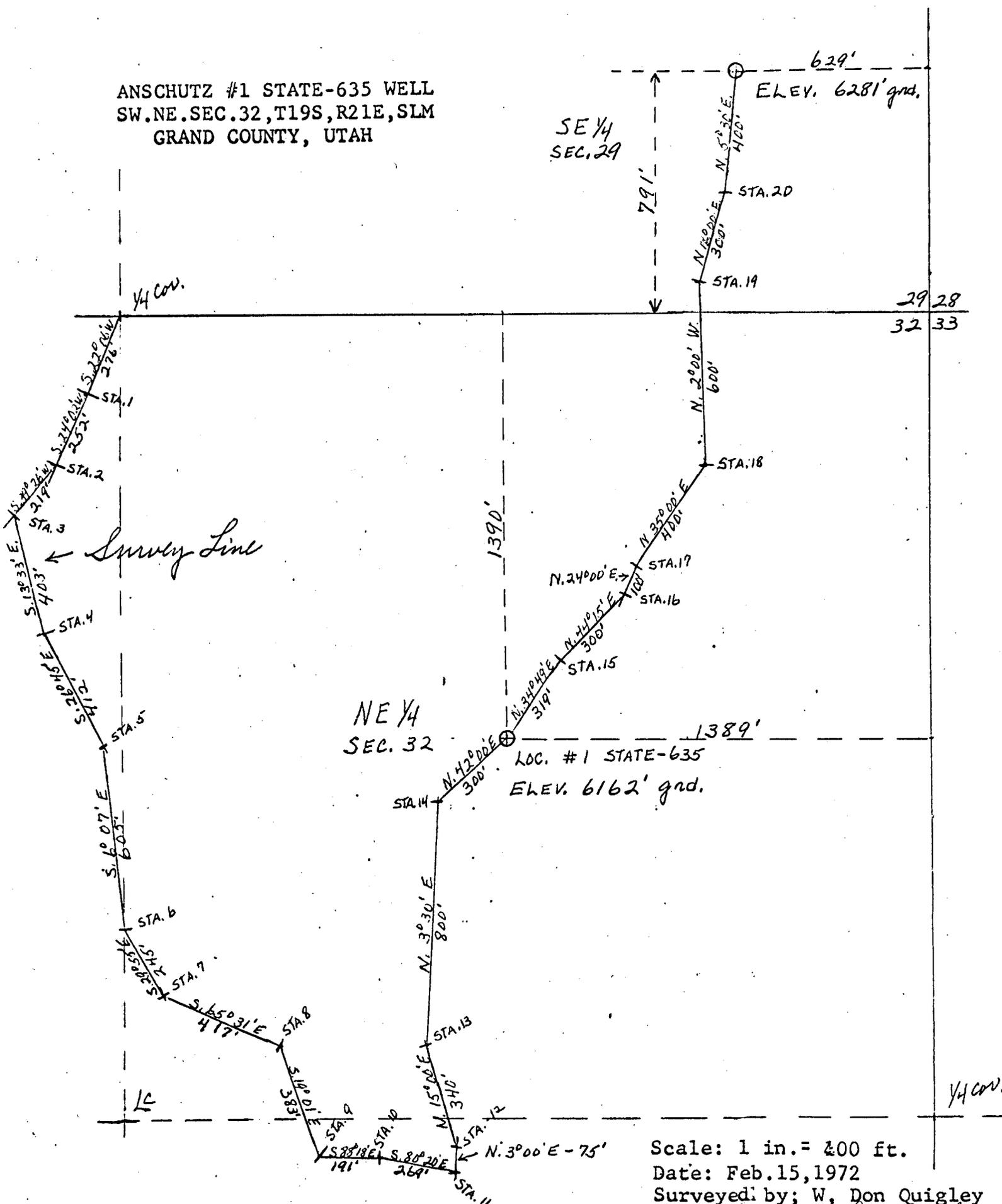
Conditions of approval, if any:

\*See Instructions On Reverse Side

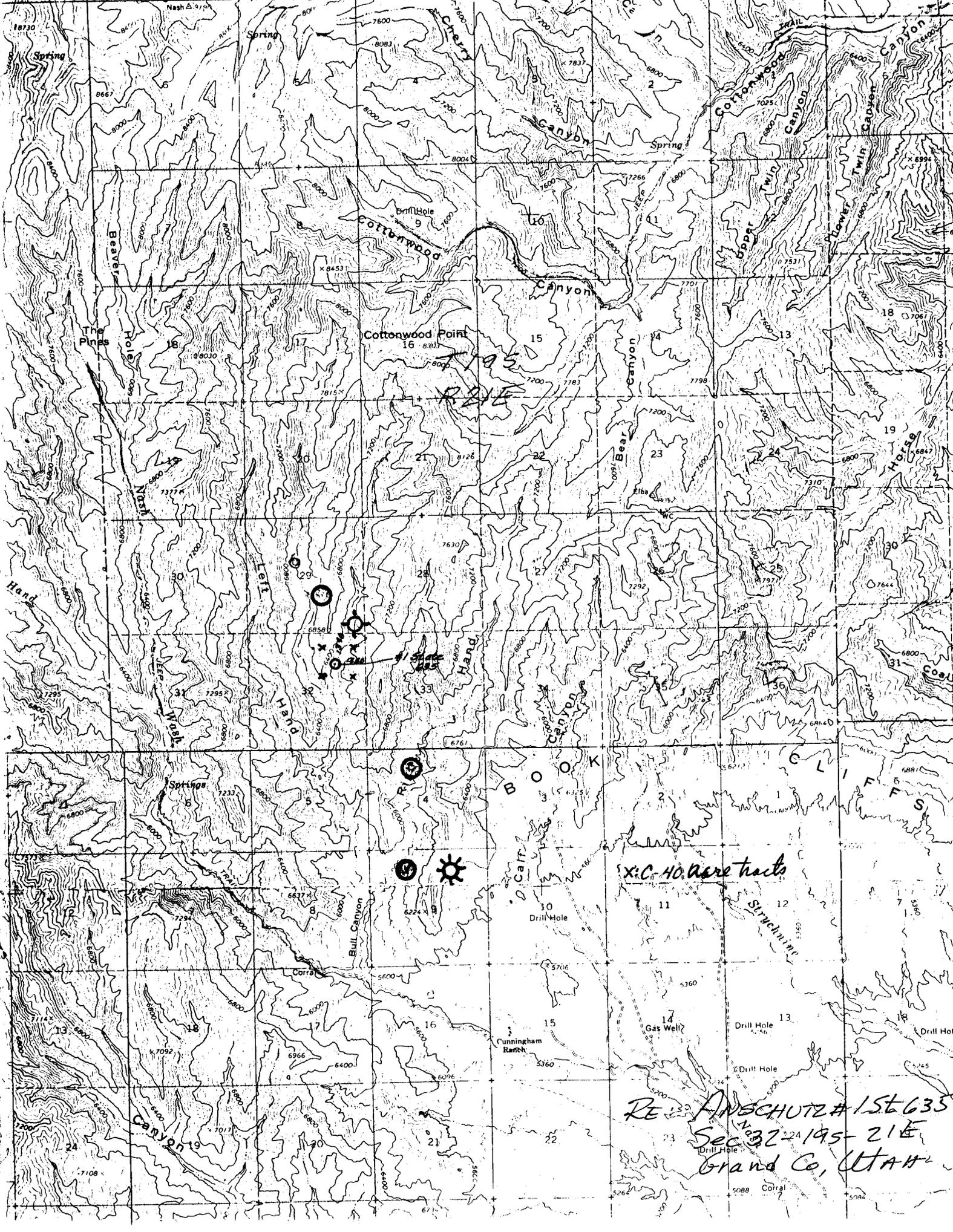


LOCATION PLAT

ANSCHUTZ #1 STATE-635 WELL  
 SW.NE.SEC.32, T19S, R21E, SLM  
 GRAND COUNTY, UTAH



Scale: 1 in. = 400 ft.  
 Date: Feb. 15, 1972  
 Surveyed by: W. Don Quigley  
*W. Don Quigley*



*RE*



*X-C-40 are tracks*

*RE ANSCHUTZ # 156635  
Sec 24 195-21E  
Grand Co, UTAH*

DIVISION OF OIL, GAS, AND MINING

\*FILE NOTATIONS\*

Date: March 29-  
 Operator: Amschutz Corp.  
 Well No: State 635-#1  
 Location: Sec. 32 T. 19S R. 21E County: Grand

File Prepared  Entered on N.I.D.   
 Card Indexed  Completion Sheet

Checked By:

Administrative Assistant: [Signature]

Remarks: Rule C-3(c)

Petroleum Engineer/Mined Land Coordinator: [Signature]

Remarks: Need topo map and more detailed field explanation as to why exception is necessary

Director: [Signature]  
 Remarks: Also, need survey plat prepared by Registered land Surveyor in Utah, Rule C-4

Include Within Approval Letter:

Bond Required  Survey Plat Required   
 Order No. \_\_\_\_\_  Blowout Prevention Equipment   
 Rule C-3(c) Topographical exception/company owns or controls acreage within a 660' radius of proposed site   
 O.K. Rule C-3  O.K. In \_\_\_\_\_ Unit   
 Other:

Disapproved  
 Letter written 5-1-91

April 2, 1976

The Anschutz Corporation  
1110 Denver Club Building  
Denver, Colorado 80202

Re: Well No. State 635-1  
Sec. 32, T. 19 S, R. 21 E,  
Grand County, Utah

Gentlemen:

This Division is in receipt of your "Application for Permit to Drill" for the above referred to well.

It should be noted that approval to drill will not be granted by this office until such time as the following conditions have been met:

- a) A topographic map of the area is submitted to this office accompanied by a detailed explanation as to why an exception to the spacing requirements of Rule C-3 is necessary.
- b) A statement indicating that your company owns or controls all acreage within 660 feet of the proposed well site. (Rule C-3(c))
- c) In accordance with Rule C-4, it is requested that a survey plat prepared by a "licensed surveyor or engineer" be submitted, indicating the exact footage location of the proposed site.

Should you have any questions relative to the above, please do not hesitate to call or write.

Very truly yours,

DIVISION OF OIL, GAS, AND MINING

CLEON B. FEIGHT  
DIRECTOR



1110 DENVER CLUB BUILDING  
518 SEVENTEENTH STREET  
DENVER, COLORADO 80202  
TELEPHONE 303-573-5665



April 29, 1976

*Handwritten initials: dl fe*

Mr. Cleon B. Feight  
Utah Oil & Gas Conservation  
1588 West North Temple  
Salt Lake City, Utah 84116

RE: Your letter 4-2-76  
Our Application for Permit to Drill  
Anschutz #1 State 635  
SW NE Sec. 32-19S-21E  
Grand County, Utah  
State lease 27635

Dear Mr. Feight:

We submit the following information to comply with the requirements listed in your captioned letter:

- A. Attached is a topographic map of the subject area contoured at intervals of 80'. The location as staked is located in a valley floor. To drill at any of the centers of 40-acre tracts in the NE $\frac{1}{4}$  of Sec. 32 would present an impossible access and dirtwork problem since they fall high on canyon walls. Accordingly, an exception to Rule C-3 is requested.
- B. The captioned oil and gas lease includes all lands in Sec. 32 and Anschutz is sole owner of the lease. Therefore, Anschutz controls all acreage within 600' of the wellsite.
- C. As discussed with you by telephone this morning, the survey plat prepared by Mr. Don Quigley is acceptable in this instance.

Yours very truly,

THE ANSCHUTZ CORPORATION

Robert M. Wakefield  
Geologist

RMW/dj

Encl.

May 4, 1976

The Anschutz Corporation  
1110 Denver Club Building  
Denver, Colorado 80202

Re: Well No. Anschutz State 635-#1  
Sec. 32, T. 19 S, R. 21 E,  
Grand County, Utah

Gentlemen:

Insofar as this office is concerned, approval to drill the above referred to well is hereby granted in accordance with Rule C-3(c), General Rules and Regulations and Rules of Practice and Procedure.

Should you determine that it will be necessary to plug and abandon this well, you are hereby requested to immediately notify the following:

PATRICK L. DRISCOLL - Chief Petroleum Engineer  
HOME: 582-7247  
OFFICE: 533-5771

Enclosed please find Form OGC-8-X, which is to be completed whether or not water sands (aquifers) are encountered during drilling.

The API number assigned to this well is 43-019-30284.

Very truly yours,

DIVISION OF OIL, GAS, AND MINING

CDEON B. FEIGHT  
DIRECTOR

STATE OF UTAH  
OIL & GAS CONSERVATION COMMISSION  
Salt Lake City 14, Utah

**REPORT OF OPERATIONS AND WELL STATUS REPORT**

Willow Creek Unit East

State Utah County Grand Field or Lease Anschutz State 635 No. 1

The following is a correct report of operations and production (including drilling and producing wells) for

Month of May, 19 76

Agent's address 517 Seventeenth Street Company THE ANSCHUTZ CORPORATION

Suite 1110, Denver, Colorado 80202 Signed *[Signature]*

Phone 303-573-5665 Agent's title Production Administrator

State Lease No. 635 Federal Lease No. \_\_\_\_\_ Indian Lease No. \_\_\_\_\_ Fee & Pat.

Sec. & 1/4 of 1/4	Twp.	Range	Well No.	*Status	Oil Bbls.	Water Bbls.	Gas MCF's	REMARKS (If drilling, Depth; if shut down, Cause; Date & Results of Water Shut-Off Test; Contents of Gas; and Gas-Oil Ratio Test)	
								No. of Days Produced	
32 SW NE	19S	21E	1	Spudding	31	May	1976		none

Note: There were no runs or sales of oil; no M cu. ft. of gas sold; no runs or sales of gasoline during the month.

NOTE: Report on this form as provided for in Rule C-22. (See back of form.)

FILE IN DUPLICATE

\*STATUS: F-Flowing P-Pumping GL-Gas Lift  
SI-Shut In D-Dead  
GI-Gas Injection TA-Temp. Aban.  
WI-Water Injection

CIRCULATE TO:  
DIRECTOR  
PETROLEUM ENGINEER  
MINE COORDINATOR  
ADMINISTRATIVE ASSISTANT  
ALL

RETURN TO Kathy K  
FOR FILING

June 11, 1976

MEMO FOR FILING

Re: Anschutz Corporation  
State 635 #1  
Sec. 32, T. 19 S., R. 21 E.  
Grand County, Utah

On June 10, 1976, verbal permission was given to Mr. Don Quigley to plug the bottom portion of this well. Completion will be made in a sand section in the Mancos Formation at approximately 1500'. The bottom of the hole will be plugged with 50 sacks of cement, across the top of the Entrada and at the base of the Morrison. A 40 sack plug will be set across the top of the Morrison and at the base of the Dakota. A 35 sack cement plug will be placed immediately below the proposed casing seat.

PATRICK L. DRISCOLL  
CHIEF PETROLEUM ENGINEER

PLD:tb

cc: U. S. Geological Survey

DRILLING HISTORY  
AND  
GEOLOGIC REPORT  
ON  
ANSCHUTZ #1 STATE 635 WELL  
GRAND COUNTY, UTAH

By

W. Don Quigley  
Consulting Geologist  
Salt Lake City, Utah

July 9, 1976

DRILLING HISTORY  
OF  
PEASE OIL & GAS - ANSCHUTZ  
#1 STATE 635 WELL

Operator: The Anschutz Corp., Inc.  
1110 Denver Club Bldg., Denver, Colorado 80202

Contractor: Willard Pease Drlg. Co.  
P.O. Box 548, Grand Junction, Colorado 81501

Location: SW. NE. Sec. 32, T 19S., R 21E., SLM, Grand County,  
Utah (1390' from S-line and 1389' from E-line)

Elevations: 6162' grd.; 6173' K.B.

Spudded-in: May 31, 1976

Finished Drilling: June 5, 1976

Total Depth: 4493'

Surface Casing: 8 5/8", 24#, K-55, STC. set at 346' K.B. and  
cemented with 150 sks. of cement with returns to  
the surface.

Production Casing: 4 1/2", 10.50#, K-55, STC. set at 1656' K.B.  
and cemented with 250 sks cement (10% gel, 10% salt  
and 2% calcium chloride).

Production Formation: Mancos

Production Interval: 750' to 1180' and 1570' to 1640'

Initial Production: Well is to be completed at a later date.

Drilling History

May 29-30: Moving in and rigging up.

- May 31: Finished rigging up. Drilled rat hole. Spudded surface hole (12 $\frac{1}{4}$ "") and drilled to 65' with air. Had lots of gravel and boulders and couldn't keep hole open. Had to rig up to drill with mud. Mixed mud to drill ahead.
- June 1: Drilled 65' to 280' (215'). Drilling slow. Had to raise viscosity to keep hole open. Lost circulation and had to mix more mud and loss-circulation material. Had to change out motor on #2 pump. Repaired rotary table.
- June 2: Drilled 280' to 390' (110'). Drilled about 150' below Castlegate sand to insure complete water shut-off. Ran 8 5/8", 24#, K-55, STC. casing to 346' (K.B.) and cemented with 150 sks reg.-type G cement with 2% calcium chloride and circulated returns to the surface. Waited on cement to cure.
- June 3: Drilled 390' to 1584' (1194'). Nippled-up to drill ahead with air and 7 7/8" bit. Bit #1 (12 $\frac{1}{4}$ "-Reed-RR) drilled 390' in 21 hrs. Drilled mouse hole. Blew casing dry and drilled out cement (20'). Tested blow-out preventers to 300#. Survey at 690' was 2 $\frac{1}{2}$ °. Survey at 990' was 1°. Had a 15' to 20' gas flare for 10 secs. on connection at 990' (This was the first time a flare was placed at the end of the blowie line.) Had a similar flare on every connection thereafter.
- June 4: Drilled 1584' to 3512' (1928'). Survey at 2514' was 1 $\frac{1}{2}$ °. Drilling ahead at rate of 80 ft. per hr. Had two gas flares (15' to 20') on each connection about 5 seconds apart.
- June 5: Drilled 3512' to 4146' (634'). Shut down for 5 hours during night because of dust. Mixed a pit of mud during this period. Gas flare on each connection for  $\frac{1}{2}$  min. Drilling rate decreased at 3680'. This is probable top of the Dakota formation. Had some thin tight sands with no shows and no apparent increase in

gas. Encountered green shale at 3750', which is probable top of the Cedar Mountain formation. Had a very silty sand at 3770' to 3790' which was the probable Buckhorn equivalent. Had a reverse drilling break and red siltstone at 3820' which is probable top of Morrison formation. Encountered a very hard quartzitic sand at 4045' which is probable top of the Salt Wash section. The Brushy Basin sand at 3880'-3895' was hard, tight, and dry. This sand contained water in the #2-773 well to the north. The Salt Wash had one thin sand at 4115' to 4130' which was hard, quartzitic and tight and gave no increase in the gas flow.

June 6: Drilled 4145' to 4493' (347'). Lower Salt Wash sands were very thin, tight, and dry without shows. Encountered red shales and siltstones of Summerville at about 4330'. Topped the Entrada at 4435' and lost most of the dust due to water in hole. Sand and water had residual brown to black oil specks. Had to begin mist-drilling at 4450' and drilled slowly with several periods of circulation and unloading of hole down to 4493'. Amount of water was increasing rapidly. Came out of hole to run logs. Ran temperature log to 3606' and hit bridge. Ran Gamma-Induction log to 3606' and couldn't go deeper. Logged from 3606' to bottom of surface casing. Went in hole with bit and drill pipe to condition hole with mud and drill out bridges.

June 7: Ran 30 stds (1800') and tried to break circulation without success. Went in hole to bridge at 3606' and tried to drill and circulate thru the bridge but found bit plugged so had to come out of hole with wet string. Went back in hole open ended and circulated down to 4370' and got stuck. Pulled free and circulated for 2 hrs. Broke off kelly and decided to run gamma-neutron log inside drill pipe. Ran log to 4380' and logged from this depth to 3430'. Finished logging at midnight.

June 8: Placed a 90 sk-cement plug at 4380' to 4100'. Laid

down drill pipe to 1850'. Placed 35 sk-cement plug at 1850' to 1750'. Waited 12 hrs. and went in hole to tag plug at 1750'. Found plug down at 1900'; so placed another 40 sk-cement plug at 1870' to 1750'. Laid down rest of drill pipe.

June 9: Ran 4½", 10.50#, K-55, STC. casing to 1656' and cemented with 250 sks of cement with 10% gel, 10% salt, and 2% calcium chloride. Plug down at 4 P.M. Began rigging down.

GEOLOGIC REPORT  
ON  
ANSCHUTZ #1 STATE 635 WELL  
GRAND COUNTY, UTAH

General Geologic Conditions

The Anschutz #1 State 635 well was located on a very poorly outlined seismic high which was very local in extent. In general, the well is located on the northwest plunging nose of the Cisco Dome anticline. The magnetic data suggested that the location was on the flank of an anticlinal nose prior to the present day fold. This position was verified by the increased thickness of the Summerville formation in the subject well over the Anschutz #2 Fed. 773 well located about ½ mile to the northeast. Likewise, a thicker section in the Morrison, Cedar Mtn., and Dakota formations confirms a lower structural position at the time of deposition. At present, however, the subject well was about 40' to 75' higher structurally than the #2 Fed. 773 well, tending to confirm the seismic data. From the large amount of bentonite found in the cuttings from the well, it is strongly suspected that the subject well was located on or very close to a fault. Neither of the geophysical methods detected this fault. The fault probably is nearly parallel and coincident with the canyon in which the well is located.

The surface structure, evident from exposed beds of the Mesaverde and Mancos formation, is a northwest plunging anticline whose axis is located a short distance to the east of the subject well location. The subsurface is much older than the surface structure and was probably distorted somewhat by the later folding. All parts of the older structure may actually be lower structurally at the present time than the younger structure as seen from the attitude of the surface rocks; but this is not critical, since the oil and gas were probably accumulated prior to the more recent folding and have been retained in the old structure. Considerable adjustment and variation of structure and movement have undoubtedly been absorbed by the thick sequence of Mancos shale in the area plus the unconformity at the top of the Morrison formation and in the middle Cretaceous section. There is considerable lensing and overlap in the upper Mancos and lower Mesaverde beds which tend to erase underlying structure.

Regionally, the prospect area is located on the northwest plunging flank of the Uncompahgre nose extending northwestward from the Uncompahgre plateau into the Uinta Basin. On the flanks of this nose and southern edge of the Basin, a number of natural gas fields have been found and developed during the last twenty years. These natural gas accumulations have been primarily found in the Dakota, Cedar Mountain, Morrison and Entrada formations. The reservoirs in the first three formations have been lenticular sands of varying thickness and areal extent. To date, the fields developed in these formations have been confined to good structural positions; but this may or may not be essential to the gas accumulation. Production may eventually be established in structurally unfavorable positions and the lenticularity of the sands could be found to provide their own trapping mechanism. The gas accumulations found in the Entrada formation to date have all been structurally controlled and have a water drive. The Entrada is a fairly consistent, blanket sand in the region and, usually has a high porosity (15 to 25%), thus structural entrapment is necessary to contain the hydrocarbon accumulation. Generally the Entrada, where tested in the area, has contained water (usually saline) or natural gas having

a low B.T.U. content (480 to 720 B.T.U.). Thus the natural gas produced from the formation has had to be treated and/or mixed with better quality gas to permit marketing.

The rocks exposed in the area around the subject well site belong to the lower Mesaverde and upper Mancos formations. The strata in the Mesaverde consist of a series of lenticular sandstone beds with interfingering layers of shale and siltstone. The upper Mancos strata are interbedded gray marine shales, siltstones and sandstones.

Considerable faulting and adjustment have taken place throughout the area due to the various rejuvenations of the Uncompahgre Uplift. In general, this faulting and movement are not apparent in the Mesaverde strata other than by stratigraphic irregularities. Through experience, it has been found that the faulting has not been essential to hydrocarbon accumulations, but has definitely effected the reservoir rocks adjacent to the fault plane. The natural porosity and permeability of the reservoir rock have been destroyed by the influx of clay minerals and gouge material, thus inhibiting production near the fault plane (nearer than 500 to 600 feet). This is particularly pertinent to the Dakota, Cedar Mountain, and Morrison reservoirs. It may not be so critical to the Entrada reservoirs, due to the greater porosity and permeability inherent with the sands of that formation. It is also possible that the faulting may have aided entrapment of hydrocarbons in the Entrada by the forming of fault traps. This has not been established to date.

#### Drilling History

A complete daily history of the drilling of the Anschutz #1 State 635 well is given above. The well was drilled with air for circulation and was drilled in record time. The section was completely dry from the bottom of the surface casing to the top of the Entrada formation at 4435', and no difficulty was encountered in this portion of the hole. The Entrada, however, contained slightly saline water in large amounts and immediately caused swelling of the bentonite beds and severe sloughing

of the shales. This created sticking problems and the hole could not be cleaned with air. The hole bridged in several places and the logging tools would not go to bottom. It was necessary to convert to mud to clean out the hole; and, even with mud, the hole would not stay open long enough to log the well all the way to bottom. It was therefore necessary to log the bottom portion of the well thru drill pipe; and even with drill pipe, it was not possible to go below 4330' without getting stuck. The logging tool did go to 4380'; but the total depth of the well was 4493'. The only log on the bottom 100 ft. of the well is the attached sample log.

Based on the above experience, it would be wise to log all air drilled holes prior to penetrating the Entrada formation; and, if the well is productive, run casing before drilling the Entrada.

The only production found in the subject well was in the upper Mancos formation. Two zones between 750' and 1180' and at 1570' to 1640' continued to make gas thru-out the drilling operation of the well. Accordingly, the well was plugged back to 1750' and casing was set to 1656' in preparation for later completion of these zones.

### Stratigraphy

A detailed sample descriptive log from 3000' to 4493' (T.D.) is attached hereto. The stratigraphic section in the well was similar to the #2 Fed. 773 well, except that there was a slight thickening of most of the formations; and there was a copious amount of bentonite in the samples from the top of the Dakota to total depth. This definitely suggests proximity to a fault. The sands in the Dakota were thin, bentonitic, fine grained, and interbedded with light-grey, bentonitic, silty shale. There were no shows in these sands.

Likewise, the Cedar Mountain formation had very thin, tight, very fine grained, bentonitic sands, with intermingled silty shales and bentonite beds. There were no shows in these sands.

The Brushy Basin section of the Morrison was topped at 3820' at the base of a thick bentonite bed. There were several thin,

tight, quartzitic and very fine grained sandstone beds in the Brushy Basin; but none had any hydrocarbon shows or significant porosity. The sandstone bed that was water wet in the #2 Fed. 773 well was tight and bentonitic in the subject well.

The Salt Wash section of the Morrison was encountered at approximately 4045' from the electric logs. The samples thru this section were all bentonite and completely unreliable. The logs suggest some sands adjacent to the well bore; but the hole must have been following a gouge-zone at this point and nothing but bentonite was blown to the surface. The electric log and samples show several sandstone beds in the Salt Wash section, but all were bentonitic or quartzitic and had no hydrocarbon shows. This section also had several silty bentonite beds which were thicker and more numerous than normal.

The Summerville formation was 105' thick in the subject well which was about 8' thicker than in the #2 Fed. 773 well. This isn't a great amount, but does tend to suggest that the position of the well is at a point which was lower and receiving more sediments at the time of deposition.

The Entrada was reached at 4435' and immediately the hole got wet and the dust quit. Water came in at a rapid rate; but it was possible to drill the well an additional 58' with air to fully test the potential of the top of the Entrada.

The formations with their tops, thicknesses, and datum points which were encountered in the #1 State 635 well are as follows:  
(Tops are based on the electric logs plus samples)

<u>Formation</u>	<u>Depth to Top</u>	<u>Thickness</u>	<u>Datum</u>
Mesaverde	Surface	170'	6173' K.B.
Castlegate	170'	20'	6003'
Mancos	190'	3490'	5983'
Dakota	3680'	72'	2493'
Cedar Mountain	3752'	68'	2421'
Morrison (Brushy Basin)	3820'	225'	2353'
Morrison (Salt Wash)	4045'	285'	2128'

<u>Formation</u>	<u>Depth to Top</u>	<u>Thickness</u>	<u>Datum</u>
Summerville	4330'	105'	1843'
Entrada	4435'	—	1738'
Total Depth	4493'		

Comparison of the above datum points with those of the #2 Fed. 773 well reveals that the subject well is 75' to 45' higher structurally. This difference could be due to the wells being on opposite sides of a fault.

#### Hydrocarbon Shows

The only hydrocarbon shows observed in the subject well were in the Mancos formation. Since the well was drilled with air, the gas and oil shows were readily observed. A flare was placed at the end of the blowie line at about 1000' and gas was already coming out of the well at that point. Additional gas was encountered at a depth of about 1150'. This gas from two different zones continued to flow thru-out the rest of the drilling operations on the well. Every connection would have two 20-ft. flares, about 5 seconds apart, for about 10 seconds each. The temperature log of the well shows gas zones at 750' to 820', 870' to 900', and 925' to 980'. The log does not show the zone at 1135' to 1180' for some reason. This could be an oil zone and the oil was being volatilized by the large volume of air. The gamma-induction log clearly shows this latter zone.

The gamma-induction log also shows a highly favorable and potential oil zone at 1580' to 1640'. Unfortunately samples were not being caught in this portion of the well, so information on the shows in the samples is lacking.

The samples had good oil shows at various intervals from 3120' to 3500' and they were continuous from 3300' to 3500'. It is felt that these shows may have come from oil lubrication of the rotating head and rubber seal. However, the electric logs show that this section could have some potential. It is also possible that some zones up the hole were bleeding oil into the

air stream at the time and saturating the cuttings.

No further hydrocarbon shows were observed below the 3500 ft. level discussed above. There was so much bentonite in the section and all the sand beds were tight, fine-grained and generally quite thin providing very poor reservoir characteristics for hydrocarbon accumulations. There can be little doubt that the lower portion of the hole was in or near a fault zone.

### Conclusions

The Anschutz #1 State 635 well was located on a possible seismic high on the northwest plunging axis of the Cisco Dome structure. The well was somewhat higher than the #2 Fed. 773 well located about  $\frac{1}{2}$  mile to the northeast in the SE. SE. of Sec. 29; but this difference (45 to 75 ft.) could have been due to a fault running between the wells.

The subject well was quite definitely located on a fault zone due to the unusual amount of bentonite in the samples. This fault was not detected by either the magnetic or seismic data obtained on the area, probably because the profile lines were nearly coincident with the fault trace. The fault is obviously pre-Mancos in age and was absorbed or covered by the Mancos sediments. Because of the proximity of the well to the fault, all the sands penetrated in the Dakota, Cedar Mountain and Morrison formations were filled with bentonite or were quartzitic in nature, thus destroying their favorable reservoir characteristics for hydrocarbon accumulations.

The well, however, did have excellent hydrocarbon shows in the Mancos sediments above the fault zone. Natural gas and possible oil are present at 750' to 820', at 870' to 900', at 925' to 980', at 1135' to 1180', and at 1580' to 1640'. There is some chance that other oil zones are present at 3120' to 3500', but the oil saturation observed in the samples did not appear to be authentic; so the potential of this zone is questionable. It was felt that there was not sufficient reason to justify running casing thru this zone. Accordingly, the well was plugged back

to 1750' and casing was run to a depth of 1656'.

It is planned to complete the subject well as a small gas and/or oil producer from the favorable Mancos zones outlined above during the period when a second well in the area is being drilled. It is quite probable that these zones will require a small fracture-treatment, because of probable mud and cement damage to the formation.

*W. Don Quigley*

W. Don Quigley  
Consulting Geologist  
A A P G Cert. No. 1296

W. L. Linn  
min 110 ft

# Andhra - Pease & Co. 71 State 635 Well.

3000-4000

3000'  
3100'  
3200'  
3300'  
3400'  
3500'  
3600'  
3700'  
3800'  
3900'  
4000'



BRK SW NE 32-195-21E  
 DK. gray calc sh. **Elect: 6173' K.B.**  
 DK. gray calc, silty bent. sh.  
 \*DK. gray calc. silty sh & silt. w/ good con.  
 DK. gray to tan calc. bent. sh. w/ some fr. bent w/cu stain  
 Gray calc. bent. sh.  
 \*DK. gray calc. on soaked silty sh. - good st. fluid cut,  
 DK. gray to blk calc sh.  
 \*DK. gray to tan silty calc sh. & silt - on soaked w/ good fluid cut.  
 \*DK. gray calc. silty sh. w/ oil st. (suspect oil comes from rotating head).  
 (dusting good).  
 DK. gray silty calc. sh.  
 DK. gray silty calc sand silt.  
 Lt. gray to wh. bent. vfg. ss. (non-calc) & lt. gray bent. silty sh.  
 Lt. gray vfg. qtz. non calc ss. (ang. grains. & qtz)  
 wh. to lt. gray bent. + lt. gray bent. sh.  
 Lt. gray to wh. silty bent. sh. & bent. - v. calc.  
 Lt. gray to wh. vfg. qtz. bent. ss. - ang. grains.  
 wh. bent. calc. silty bent.  
 Lt. gray buff. fine & th. gray calc. bent. sh.  
 wh. bent. calc. bent. sh.  
 blk. head. silty sh. & silt.  
 blk. silty sh. silt. + vfg. ang. bent. ss.  
 Lt. gray ss. qtz.  
 Lt. gray to wh. vfg. ang. qtz. ss. + bent.  
 Lt. gray vfg. bent. ss. & blk. sh.  
 wh. bent. silty bent.  
 Lt. bent. gray. ang. vfg. ss. + silt.  
 Lt. gray & tan silty sh. & silt.  
 wh. bent. silty bent.  
 Lt. gray. ang. + blk. silty sh. & silt.  
 Lt. gray bent. sh. & bent. + some vfg. ang. ss.  
 Lt. gray vfg. bent. calc. ss.  
 gray. silty sh. & silt.

CS 93

W.A.L. Jones  
Main 10 ft.

# #1 State 635 Well Cont

4000' - 4493'

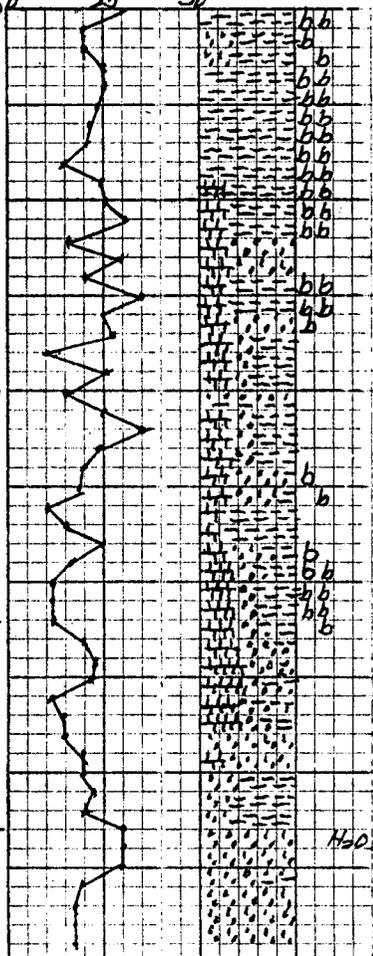
4000' 25 50

4300  
Js

4400  
Je

4500

4600



Wh. soft, fluffy bent  
Vanic. bent. sh & sist

Wh. soft, fluffy bent.

SAMPLES are UNRELIABLE.

PK. SOFT calc. fluffy bent

Lt. gray. to wh. hd. quartz. calc. ss.  
wh. fluffy calc. bent.

Wh. to ch. hd. bent. calc. vfg. ss.  
Vanic. calc. silty sh. & sist.

Gray. hd. quartz. ss. & blk. fiss. sh  
Rd. gan. blk. & gray. silic. calc. sh & sist.

Wh. to milky vfg. quartz, calc. & bent. ss.

Vanic. fiss. sh. & some wh. vfg. quartz. ss  
Gray. blk. & hd. fiss. sh.  
Gray. calc. sist. & vfg. ss. - Vanic. sh. & bent.  
PK. & wh. & gray bent. gray. calc. sist. & vfg. ss.; Vanic. sh.

Rd. calc. sist. & sd. sh. & sist.  
Rd. sh. & sist. wh. vfg. hd. calc. ss. & blk. sd. ms.  
Gray & blk. sd. ms. wh. quartz. ss.  
Rd. blk. sh.; sd. gray ms.; wh. quartz. ss & blk. fiss. sh.

Wh. to ch. vfg. quartz. ss.  
DK. gray vfg. sil. calc. ss.  
Rd. sist. & sh.

H2O Wh. to ch. rd. mg. loosely cons. quartz. ss. w/ H2O  
Some rd. sist.  
Wh. to ch. c.g. loosely cons. rd. quartz. ss.

T.D. = 4493'

W.A.L. JONES  
KEMP, TEXAS

STATE OF UTAH  
OIL & GAS CONSERVATION COMMISSION

Salt Lake City 14, Utah

REPORT OF OPERATIONS AND WELL STATUS REPORT

State Utah County Grand Field or Lease Willow Creek Unit East Anshutz #1 State 635

The following is a correct report of operations and production (including drilling and producing wells) for June, 1976

Agent's address 803 Phillips Petro. Bldg. Company The Anschutz Corporation

Salt Lake City, Utah

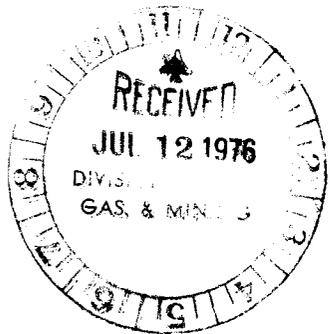
Signed H. Don Jingley

Phone 801-359-3575

Agent's title Cons. Geol.

State Lease No. ML-27635 Federal Lease No. \_\_\_\_\_ Indian Lease No. \_\_\_\_\_ Fee & Pat.

Sec. & 1/4 of 1/4	Twp.	Range	Well No.	*Status	Oil Bbls.	Water Bbls.	Gas MCF's	REMARKS (If drilling, Depth; if shut down, Cause; Date & Results of Water Shut-Off Test; Contents of Gas; and Gas-Oil Ratio Test)
32 SWNE	19S	21E	#1St.635	Suspended				Well was drilled to a depth of 4493' which was 50' into the Entrada which was wet; and plugged back to 1750'. Casing (4 1/2") was set at 1656' and cemented with 250 sks. The well is currently suspended wait-for completion unit to complete two gas zones in the Mancos formation.



NOTE: Report on this form as provided for in Rule C-22. (See back of form.)

FILE IN DUPLICATE

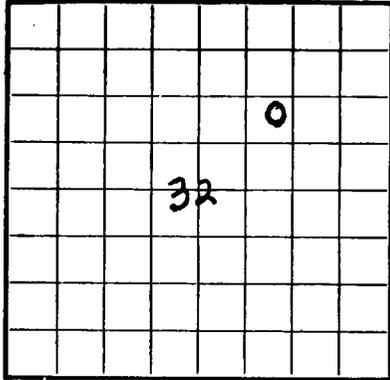
\*STATUS: F-Flowing P-Pumping GL-Gas Lift  
SI-Shut In D-Dead  
GI-Gas Injection TA-Temp. Aban.  
WI-Water Injection



STATE OF UTAH

**OIL & GAS CONSERVATION COMMISSION**

Salt Lake City, Utah



LOCATE WELL CORRECTLY

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

**LOG OF OIL OR GAS WELL**

Operating Company Anschutz Corporation Address 1110 Denver Club Bldg., Denver, Colo.  
 Lease or Tract ML-27635 Field Left Hand State Utah  
 Well No. #1 St. 635 c. 32 T. 19S R. 21E Meridian SLM County Grand 6173' K.B.  
 Location 1390 ft. N of N Line and 1389 ft. E of E Line of 32 Elevation 6162' grd.  
(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 H. Roy Gingley Title Cons. Geol.

Date July 7, 1976

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

Commenced drilling May 31, 1976 Finished drilling June 6, 1976

**OIL OR GAS SANDS OR ZONES**

(Denote gas by G)

No. 1, from 750' to 1180' No. 4, from \_\_\_\_\_ to \_\_\_\_\_  
 No. 2, from 1570' to 1640' No. 5, from \_\_\_\_\_ to \_\_\_\_\_  
 No. 3, from \_\_\_\_\_ to \_\_\_\_\_ No. 6, from \_\_\_\_\_ to \_\_\_\_\_

**IMPORTANT WATER SANDS**

No. 1, from 170' to 190' No. 3, from \_\_\_\_\_ to \_\_\_\_\_  
 No. 2, from \_\_\_\_\_ to \_\_\_\_\_ No. 4, from \_\_\_\_\_ to \_\_\_\_\_

**CASING RECORD**

Size casing	Weight per foot	Threads per inch	Make	Amount	Kind of shoe	Cut and pulled from	Perforated		Purpose
							From-	To-	
8 5/8"	24	8 rd.	K-55	346'	Guide	none	-----	-----	Surface
4 1/2"	10.50	8 rd.	K-55	1656'	Float	none	not yet		Production

**MUDDING AND CEMENTING RECORD**

Size casing	Where set	Number sacks of cement	Method used	Mud gravity	Amount of mud used
8 5/8"	346'	150 sks	pumped	8.5#	?
4 1/2"	1656'	250 sks	pumped	8.6#	?

**PLUGS AND ADAPTERS**

OLD MARK

42 1050 250 SKS pumped 0.07

**PLUGS AND ADAPTERS**

Heaving plug—Material ..... Length ..... Depth set .....

Adapters—Material ..... Size .....

**SHOOTING RECORD**

Size	Shell used	Explosive used	Quantity	Date	Depth shot	Depth cleaned out
Not perforated yet						

**TOOLS USED**

Rotary tools were used from 0' feet to 4493' feet, and from ..... feet to ..... feet

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

**DATES**

Date P & A ....., 19..... 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**

Kurt Antles ..... Driller

Richard Davis ..... Driller

Don Gracie ..... Driller

**FORMATION RECORD**

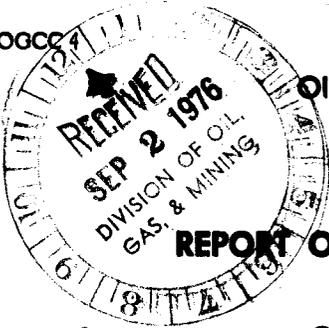
FROM—	TO—	TOTAL FEET	FORMATION
Mesaverde Surface	190'	190'	At the end of complete Driller's Log add Geologic Tops. State whether from Electric Logs or samples.
190'	440'	250'	
440'	3680'	3240'	
3680'	3752'	72'	
3752'	3820'	68'	
3820'	4045'	225'	
4045'	4330'	285'	
4330'	4435'	105'	
4435'	4493' T.D.	58'	

(SEE ATTACHED DRILLING HISTORY AND GEOLOGIC REPORT)

[OVER]

W. Stz

Form OGCC



STATE OF UTAH OIL & GAS CONSERVATION COMMISSION

Salt Lake City 14, Utah

REPORT OF OPERATIONS AND WELL STATUS REPORT

State Utah County Grand Field or Lease Willow Creek East Unit Left Hand Canyon

The following is a correct report of operations and production (including drilling and producing wells) for July, 1976.

Agent's address 803 Phillips Petro. Bldg. Company The Anschutz Corp.

Salt Lake City, Utah 84101

Signed H. Don Jingley Agent's title Cons. Geol.

Phone 801-359-3575

State Lease No. ML 27635 Federal Lease No. Indian Lease No. Fee & Pat. [ ]

Table with 8 columns: Sec. & 1/4 of 1/4, Twp., Range, Well No., \*Status, Oil Bbls., Water Bbls., Gas MCF's, and REMARKS. Row 1: 32 SWNE, 19S, 21E, #1-635, Suspended, none, none, one, Well has not been completed yet. Waiting on completion rig.

NOTE: Report on this form as provided for in Rule C-22. (See back of form.)

FILE IN DUPLICATE

\*STATUS: F-Flowing P-Pumping GL-Gas Lift SI-Shut In D-Dead GI-Gas Injection TA-Temp. Aban. WI-Water Injection

STATE OF UTAH  
OIL & GAS CONSERVATION COMMISSION

Salt Lake City 14, Utah



REPORT OF OPERATIONS AND WELL STATUS REPORT

State Utah County Grand Field or Lease Willow Creek East Unit  
Left Hand Canyon

The following is a correct report of operations and production (including drilling and producing wells) for

August, 1976

Agent's address 803 Phillips Petro. Bldg. Company The Anschutz Corp.

Salt Lake City, Utah 84101

Signed *W. Don Jungley*

Phone 801-359-3575

Agent's title Cons. Geol.

State Lease No. ML-27635 Federal Lease No. \_\_\_\_\_ Indian Lease No. \_\_\_\_\_ Fee & Pat.

Sec. & 1/4 of 1/4	Twp.	Range	Well No.	*Status	Oil Bbls.	Water Bbls.	Gas MCF's	REMARKS (If drilling, Depth; if shut down, Cause; Date & Results of Water Shut-Off Test; Contents of Gas; and Gas-Oil Ratio Test)
32 SWNE	20S	21E	#1-635	Suspended	none	none	none	Well has not been completed yet. Waiting on completion rig.

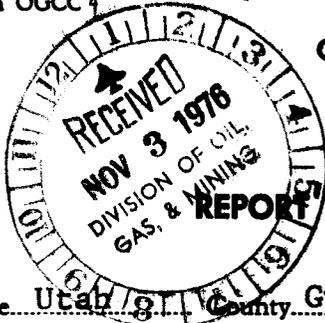
NOTE: Report on this form as provided for in Rule C-22. (See back of form.)

FILE IN DUPLICATE

\*STATUS: F-Flowing P-Pumping GL-Gas Lift  
SI-Shut In D-Dead  
GI-Gas Injection TA-Temp. Aban.  
WI-Water Injection

STATE OF UTAH  
OIL & GAS CONSERVATION COMMISSION

Salt Lake City 14, Utah



REPORT OF OPERATIONS AND WELL STATUS REPORT

Willow Creek East Unit

Left Hand Canyon

State Utah County Grand Field or Lease

The following is a correct report of operations and production (including drilling and producing wells) for  
September, 1976

Agent's address 803 Phillips Petro. Bldg. Company The Anschutz Corp.

Salt Lake City, Utah 84101

Signed H. Now Grigley  
Agent's title Cons. Geol.

Phone 801-359-3575

State Lease No. ML 27635 Federal Lease No. Indian Lease No. Fee & Pat.

Sec. & 1/4 of 1/4	Twp.	Range	Well No.	*Status	Oil Bbls.	Water Bbls.	Gas MCF's	REMARKS (If drilling, Depth; if shut down, Cause; Date & Results of Water Shut-Off Test; Contents of Gas; and Gas-Oil Ratio Test)
32 SWNE	19S	21E	#1-635	Suspended	none	none	none	Well has not been completed yet. Waiting on workover rig.

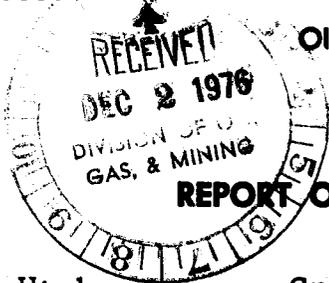
NOTE: Report on this form as provided for in Rule C-22. (See back of form.)

FILE IN DUPLICATE

\*STATUS: F-Flowing P-Pumping GL-Gas Lift  
SI-Shut In D-Dead  
GI-Gas Injection TA-Temp. Aban.  
WI-Water Injection

STATE OF UTAH  
OIL & GAS CONSERVATION COMMISSION

Salt Lake City 14, Utah



REPORT OF OPERATIONS AND WELL STATUS REPORT

State Utah County Grand Field or Lease Willow Creek East Unit  
Left Hand Canyon

The following is a correct report of operations and production (including drilling and producing wells) for  
October, 19 76

Agent's address 803 Phillips petro.Bldg. Company The Anschutz Corp., Inc.

Salt Lake City, Utah 84101 Signed H. Don Quigley

Phone 001-359-3575 Agent's title Cons. Geol.

State Lease No. ML-27635 Federal Lease No. \_\_\_\_\_ Indian Lease No. \_\_\_\_\_ Fee & Pat.

Sec. & 1/4 of 1/4	Twp.	Range	Well No.	*Status	Oil Bbls.	Water Bbls.	Gas MCF's	REMARKS (If drilling, Depth; if shut down, Cause; Date & Results of Water Shut-Off Test; Contents of Gas; and Gas-Oil Ratio Test)
32 SWNE	19S	21E	#1-635	Suspended none	none	none	none	Well has not been completed yet. Waiting on workover rig and pipeline in the area.

NOTE: Report on this form as provided for in Rule C-22. (See back of form.)

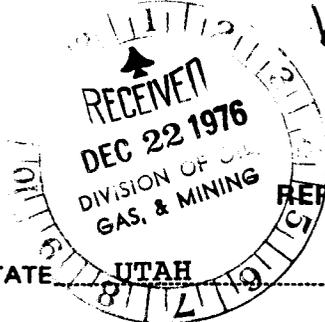
FILE IN DUPLICATE

\*STATUS: F-Flowing P-Pumping GL-Gas Lift  
SI-Shut In D-Dead  
GI-Gas Injection TA-Temp. Aban.  
WI-Water Injection

DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL & GAS CONSERVATION

Federal Lease No. \_\_\_\_\_  
Indian Lease No. \_\_\_\_\_  
Fee & Pat. \_\_\_\_\_

1588 WEST NORTH TEMPLE  
SALT LAKE CITY, UTAH 84116  
533-5771



REPORT OF OPERATIONS AND WELL STATUS REPORT

WILLOW CREEK UNIT EAST  
ANSCHUTZ #1 STATE 635

STATE UTAH COUNTY GRAND FIELD/LEASE \_\_\_\_\_

The following is a correct report of operations and production (including drilling and producing wells) for the month of:  
NOVEMBER 1976

Agent's Address 570 KENNECOTT BLDG. Company WILLARD PEASE OIL & GAS COMPANY  
SALT LAKE CITY, UTAH 84133 Signed [Signature]  
Title CLERK  
Phone No. 801/364-6217

Sec. and % of %	Twp.	Range	Well No.	Days Produced	Barrels of Oil	Gravity	Cu. Ft. of Gas (in thousands)	Gallons of Gasoline Recovered	Barrels of Water (if none, so state)	REMARKS (If drilling, depth; if shut down, cause; date and result of test for gasoline content of gas)
32 SWNE	19S	21E	#1	-	-	-	-	-	-	SHUT IN

GAS: (MCF)

Sold \_\_\_\_\_  
Flared/Vented \_\_\_\_\_  
Used On/Off Lease \_\_\_\_\_

OIL or CONDENSATE: (To be reported in Barrels)

On hand at beginning of month \_\_\_\_\_  
Produced during month \_\_\_\_\_  
Sold during month \_\_\_\_\_  
Unavoidably lost \_\_\_\_\_  
Reason: \_\_\_\_\_  
On hand at end of month \_\_\_\_\_

DRILLING/PRODUCING WELLS: This report must be filed on or before the sixteenth day of the succeeding month following production for each well. Where a well is temporarily shut-in, a negative report must be filed. THIS REPORT MUST BE FILED

Utah  
State

STATE OF UTAH  
OIL & GAS CONSERVATION COMMISSION

Salt Lake City 14, Utah

REPORT OF OPERATIONS AND WELL STATUS REPORT

Willow Creek East Unit  
Left Hand Canyon

State Utah County Grand Field or Lease

The following is a correct report of operations and production (including drilling and producing wells) for  
November, 19 76

Agent's address 803 Phillips Petro. Bldg. Company The Anschutz Corp., Inc.

Salt Lake City, Utah 84101

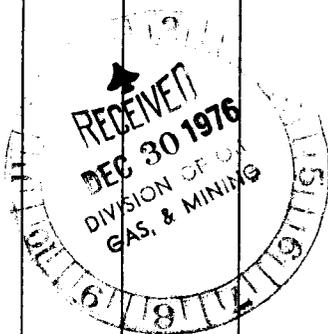
Signed H. Don Gungley

Phone 801-359-3575

Agent's title Cons. Geol.

State Lease No. ML-27635 Federal Lease No. Indian Lease No. Fee & Pat.

Sec. & 1/4 of 1/4	Twp.	Range	Well No.	*Status	Oil Bbls.	Water Bbls.	Gas MCF's	REMARKS (If drilling, Depth; if shut down, Cause; Date & Results of Water Shut-Off Test; Contents of Gas; and Gas-Oil Ratio Test)
32 SWNE	19S <del>19S</del>	21E	#1-635	Suspended none	none	none	none	Well is waiting on a completion rig. A rig has been promised for the first week in Jan.'77.

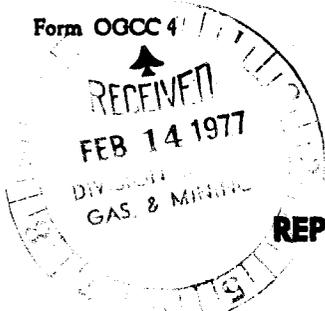


NOTE: Report on this form as provided for in Rule C-22. (See back of form.)

FILE IN DUPLICATE

\*STATUS: F-Flowing P-Pumping GL-Gas Lift  
SI-Shut In D-Dead  
GI-Gas Injection TA-Temp. Aban.  
WI-Water Injection

Utah State



STATE OF UTAH OIL & GAS CONSERVATION COMMISSION

Salt Lake City 14, Utah

REPORT OF OPERATIONS AND WELL STATUS REPORT

State Utah County Grand Field or Lease Willow Creek East Unit Left Hand Canyon

The following is a correct report of operations and production (including drilling and producing wells) for December, 1976

Agent's address 803 Phillips Petro. Bldg. Company The Anschutz Corp., Inc.

Salt Lake City, Utah 84101 Signed W. Ron Grigley

Phone 801-359-3575 Agent's title Cons. Geol.

State Lease No. ML-27635 Federal Lease No. Indian Lease No. Fee & Pat. [ ]

Table with 8 columns: Sec. & 1/4 of 1/4, Twp., Range, Well No., \*Status, Oil Bbls., Water Bbls., Gas MCF's, and REMARKS. Row 1: 32 SWNE, X19S, 21E, #1-635, Suspended, none, none, none, Well is waiting on completion rig...

NOTE: Report on this form as provided for in Rule C-22. (See back of form.)

FILE IN DUPLICATE

\*STATUS: F-Flowing P-Pumping GL-Gas Lift SI-Shut In D-Dead GI-Gas Injection TA-Temp. Aban. WI-Water Injection

STATE OF UTAH  
OIL & GAS CONSERVATION COMMISSION

Salt Lake City 14, Utah

REPORT OF OPERATIONS AND WELL STATUS REPORT

Willow Creek East Unit  
Left Hand Canyon

State Utah County Grand Field or Lease

The following is a correct report of operations and production (including drilling and producing wells) for  
January, 1977

Agent's address 803 Phillips Petro. Bldg. Company The Anschutz Corp.

Salt Lake City, Utah 84101

Signed H. Now Grigley

Phone 801-359-3575

Agent's title Cons. Geol.

State Lease No. ML-27635 Federal Lease No. Indian Lease No. Fee & Pat.

Sec. & 1/4 of 1/4	Twp.	Range	Well No.	*Status	Oil Bbls.	Water Bbls.	Gas MCF's	REMARKS (If drilling, Depth; if shut down, Cause; Date & Results of Water Shut-Off Test; Contents of Gas; and Gas-Oil Ratio Test)
32 SWNE	19S	21E	#1-635	Shut-in	none	none	none	Well was perforated and fractured with oil-water-sand and tested from three zones in the Mancos formation. A rough est. of the production potential, based on the tests, is 10-15 bbl of oil per day. The well is waiting on a pump jack and tank to be installed.

NOTE: Report on this form as provided for in Rule C-22. (See back of form.)

FILE IN DUPLICATE

\*STATUS: F-Flowing P-Pumping GL-Gas Lift  
SI-Shut In D-Dead  
GI-Gas Injection TA-Temp. Aban.  
WI-Water Injection

*Utah State*

*H*

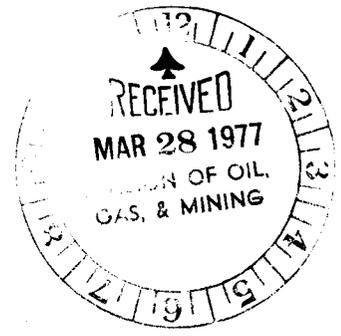
*9*

FINAL COMPLETION REPORT  
ON  
ANSCHUTZ #1 STATE 635 WELL  
WILLOW CREEK EAST UNIT  
SW. NE. SEC. 32 - 19S - 21 E  
GRAND COUNTY, UTAH

By

W. Don Quigley  
Consulting Geologist  
Salt Lake City, Utah

March 18, 1977



FINAL COMPLETION REPORT  
ON  
ANSCHUTZ #1 STATE 635 WELL  
SEC. 32 - 19S - 21E  
GRAND COUNTY, UTAH

Jan. 18:

0900-1200: Ran gamma-neutron log. Welded surface pipe to 4½" casing at ground level.

1200-1330: Ran 2 3/8" tubing in hole to 1500' and unloaded water with compressors.

1330-1415: Went in hole with tubing gun and shot interval 1592' to 1602' with 1 shot/ft.

1415-1500: Blew hole to check for entry of gas or oil. Had faint spray of light brown oil. Went in hole with 4 more jts of tubing (bottom at 1625'); and blew all the water out. Waited 20 minutes and blew again. Didn't get any gas or oil.

1500-1600: Pulled 25 jts of tubing (bottom now at 847').

1600-1700: Went in hole with perforating gun and shot zone 974' to 984' with 1 shot/ft. (10 shots). Shot zone 870' to 890' with 1 shot/ft. (20 shots).

Jan. 19-21: Assembled tanks, oil, and water for fracture treatment.

Jan. 22: Fracture treated well with K-2 frac-treatment (50% oil and 50% gelled water). Set packer at 1005'. Filled annulus with fluid. Broke down zone 1592'-1602' with 20 bbl. fluid at rate of 17 bbl/min. at 2400#. Put in 420# of 100 mesh sand at ½#/gal. and 420# of 100 mesh sand at 1 lb/gal. and then 420# of 10-20 sand at ½ lb/gal. Flushed with 20 bbl. fluid. Pumped in at 11 bbl./min. rate at 3000# pressure. Instant shut-in pressure was 1200#, and 950# in 15 min. Opened valves to bleed back. Bled off in 10 minutes. Released packer and came out of hole. Picked up bridge plug and put one stand back in hole and shut well in for the night - 1730 hrs.

Jan. 23: Set bridge plug at 1012' and packer at 941'. Filled annulus. Broke zone 974' to 984' down with 10 bbl. fluid at 1800# at 11 bbl/min. rate. Pumped in 420# of

100 mesh sand at  $\frac{1}{2}$ #/gal.; then 1260# of 100 mesh sand at 1#/gal (30 bbl. fluid); then 315# of 10-20 sand at  $\frac{1}{2}$ #/gal (15 bbl fluid); then 630# of 10-20 sand at 1#/gal (15 bbl fluid); and then flushed with 15 bbl of fluid. Shut-in pressure was 600# in 5 minutes and remained steady. Frac-treatment pumped in at 2000# pressure at 11 bbl/min. rate.

Shut well in for 30 minutes, and then released. Flowed back for 15 minutes.

Moved bridge plug to 949' and packer to 821' to frac. zone 870' to 890'. Put 2000# pressure on annulus. Pressured zone up to 4200# - wouldn't break down. Pressured up to 5200# and formation finally broke down, but would only take fluid at 3 bbl/min rate at that pressure. Decided that it wouldn't frac; so shut down at 1430 hrs to wait for acid. Will try to break down with acid in the morning.

Jan. 24: Spotted 250 gal. of 15% acid across perms. and waited 30 minutes. Acid spotted at 900# at 1 bbl/min. rate.

1100: Started frac-treatment. Put 1400# pressure on annulus. Pumped in 105 bbl. of fluid as follows:

10 bbl pad first; then 20 bbl of fluid with  $\frac{1}{2}$ #/gal of 100 mesh sand (420#) at 9 bbl/min. rate at 2000#; then 30 bbl fluid with 1#/gal. of 100 mesh sand (1260#); then 15 bbl fluid with  $\frac{1}{2}$ #/gal. of 10-20 sand (315#); then 15 bbl fluid with 1#/gal. of 10-20 sand (630#); and then flushed with 15 bbl fluid. Instant shut-in pressure was 750#. Left well shut-in for 30 minutes; released packer, picked up bridge plug, and came out of hole.

Installed mud anchor, and seating nipple, perforated joint and went back in hole. Landed seating nipple at 1590'. Put on tubing flange and shut well in for the night.

Jan. 25-30: Used compressors to unload fluid and to recover the frac-oil and water. Recovered most all of the 500 bbl of frac-fluid (225 bbl water and 225 bbl oil); and then well

began making new green oil. Well produced a  $\frac{1}{2}$ " stream of green oil with the compressors. Estimate that this would make about 10 to 20 bbl oil per day on pump. Shut well in to wait for pump jack, motor, and tank.

*H. Don Gungley*

STATE OF UTAH  
OIL & GAS CONSERVATION COMMISSION

Salt Lake City 14, Utah

REPORT OF OPERATIONS AND WELL STATUS REPORT

State Utah County Grand Field or Lease Willow Creek East Unit  
Left Hand Canyon

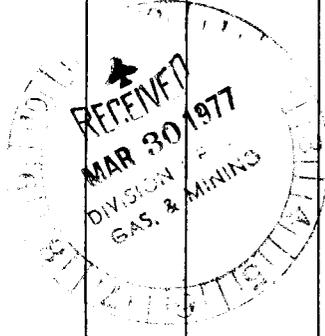
The following is a correct report of operations and production (including drilling and producing wells) for February, 1977.

Agent's address 803 Phillips Petro Bldg. Company The Anschutz Corp.  
Salt Lake City, Utah Signed H. Non Grigley

Phone 801-359-3575 Agent's title Cons. Geol.

State Lease No. ML-27635 Federal Lease No. \_\_\_\_\_ Indian Lease No. \_\_\_\_\_ Fee & Pat.

Sec. & 1/4 of 1/4	Twp.	Range	Well No.	*Status	Oil Bbls.	Water Bbls.	Gas MCF's	REMARKS (If drilling, Depth; if shut down, Cause; Date & Results of Water Shut-Off Test; Contents of Gas; and Gas-Oil Ratio Test)
32 SWNE	19S	21E	#1-635	Shut-in	none	none	none	Well is shut-in pending making arrangements for pump jack and tanks.



NOTE: Report on this form as provided for in Rule C-22. (See back of form.)

FILE IN DUPLICATE

\*STATUS: F-Flowing P-Pumping GL-Gas Lift  
SI-Shut In D-Dead  
GI-Gas Injection TA-Temp. Aban.  
WI-Water Injection

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

SUBMIT IN TRIPLICATE  
(Other instructions on re-  
verse side)

Form approved.  
Budget Bureau No. 42-R1424.

5. LEASE DESIGNATION AND SERIAL NO.

ML-27635

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

Willow Creek East.

8. FARM OR LEASE NAME

9. WELL NO.

1 State 635

10. FIELD AND POOL, OR WILDCAT

Wildcat

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA

Sec. 35, T19S, R21E

SLB+M

12. COUNTY OR PARISH

Grand

13. STATE

Utah

1.

OIL WELL  GAS WELL  OTHER

2. NAME OF OPERATOR

Willard Pease Oil & Gas Company

3. ADDRESS OF OPERATOR

570 Kennecott Building, Salt Lake City, Utah 84133

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.\*

See also space 17 below.)  
At surface

SW 1/4 NE 1/4 Sec. 32, T19S, R21E, Grand County, Utah

14. PERMIT NO.

15. ELEVATIONS (Show whether DF, RT, GR, etc.)

6172' G.L.

16.

Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:

SUBSEQUENT REPORT OF:

TEST WATER SHUT-OFF

PULL OR ALTER CASING

WATER SHUT-OFF

REPAIRING WELL

FRACTURE TREAT

MULTIPLE COMPLETE

FRACTURE TREATMENT

ALTERING CASING

SHOOT OR ACIDIZE

ABANDON\*

SHOOTING OR ACIDIZING

ABANDONMENT\*

REPAIR WELL

CHANGE PLANS

(Other)

(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)\*

Well was drilled to a total depth of 4493' in June, 1976. Casing was set at 1637' and perforated at 870'-890', 974'-984', and 1592'-1602'. The well was Sand-Oil Hydrafraced in January of 1977 and a small amount of oil production found. On April 14, 1977, a service unit was moved in and the well swabbed. After swabbing 12 hours, a total of 4 barrels of oil were recovered. The well was shut-in overnight and swabbed again. No fluid entry was found. Verbal approval was obtained and the well plugged and abandoned.

Plugs set at: 1300'-1637': 25 Sx  
700'-1050': 25 Sx  
Surface : 10 Sx

APPROVED BY THE DIVISION OF  
OIL, GAS, AND MINING

DATE: April 28, 1977

BY: P. K. Driscoll

Surface casing orange peeled to 4 1/2" production casing and regulation marker installed.

Verbal approval received to P+A from Pat Driscoll on 4-16-77.

Operations complete 4-18-77.

Restoration and reseeding should be done by 9-30-77.

18. I hereby certify that the foregoing is true and correct

SIGNED

[Signature]

TITLE Consulting Engineer

DATE 4-25-77

(This space for Federal or State office use)

APPROVED BY

TITLE

DATE

CONDITIONS OF APPROVAL, IF ANY:



CALVIN L. RAMPTON  
Governor

OIL, GAS, AND MINING BOARD

GORDON E. HARMSTON  
Executive Director,  
NATURAL RESOURCES

STATE OF UTAH

GUY N. CARDON  
Chairman

DEPARTMENT OF NATURAL RESOURCES

CHARLES R. HENDERSON  
ROBERT R. NORMAN  
JAMES P. COWLEY  
HYRUM L. LEE

CLEON B. FEIGHT  
Director

DIVISION OF OIL, GAS, AND MINING

1588 West North Temple  
Salt Lake City, Utah 84116

June 23, 1977

**The Anschutz Corp.**  
803 Phillips Petroleum Bldg.  
Salt Lake City, Utah 84101

Re: Well No. STATE 635-#1  
Sec. 32, T. 19S, R. 21E  
Grand County, Utah

Gentlemen:

This letter is to advise you that the Well Completion or Recompletion Report and Log for the above referred to well is due and has not been filed with this office as required by our rules and regulations.

Please complete the enclosed Form OGC-3 in duplicate, and forward them to this office as soon as possible.

Thank you for your cooperation relative to the above.

Very truly yours,

DIVISION OF OIL, GAS, AND MINING

KATHY OSTLER  
RECORDS CLERK

*Kathy, Don & Carter  
filed checked  
The log is  
in towards  
the back*

*R*