

UTAH DIVISION OF OIL AND GAS CONSERVATION

REMARKS: WELL LOG _____ ELECTRIC LOGS _____ FILE X WATER SANDS _____ LOCATION INSPECTED _____ SUB. REPORT /abd. _____

* OPERATOR NAME CHANGE 11-26-79

DATE FILED 9-30-76

LAND: FEE & PATENTED _____ STATE LEASE NO. ML-27414 PUBLIC LEASE NO. _____ INDIAN _____

DRILLING APPROVED: 9-27-76

SPUDDED IN: _____

COMPLETED: _____ PUT TO PRODUCING: _____

INITIAL PRODUCTION: _____

GRAVITY A.P.I. _____

GOR: _____

PRODUCING ZONES: _____

TOTAL DEPTH: _____

WELL ELEVATION: 8285' gr

DATE ABANDONED: 11-14-79 - Location Abandoned; Approval suspended until drilling commences

FIELD: Wildcat 3/86

UNIT: _____

COUNTY: Grand

WELL NO. State #1-414

API NO: 43-019-30314

LOCATION 600' FT. FROM ~~XX~~ (S) LINE. 1900' FT. FROM ~~XX~~ (W) LINE. SE SW 1/4 - 1/4 SEC. 32

TWP.	RGE.	SEC.	OPERATOR	TWP.	RGE.	SEC.	OPERATOR
				18S	21E	32	* TEXOMA PRODUCTION CO.

MADE IN U.S.A.

peafco



FILE NOTATIONS

Entered in NID File

Entered On S R Sheet _____

Location Map Pinned _____

Card Indexed

1 W R for State or Fee Land _____

Checked by Chief _____

Copy NID to Field Office _____

Approval Letter _____

Disapproval Letter _____

COMPLETION DATA:

Date Well Completed _____

OW _____ WW _____ TA _____

GW _____ OS _____ PA _____

Location Inspected _____

Bond released _____

State of Fee Land _____

LOGS FILED

Driller's Log _____

Electric Logs (Nos.) _____

E _____ EI _____ GR _____ GR-N _____ Micro _____

Lat _____ Mi-L _____ Sonic _____ Others _____

LWD
4-5-90

Utah State

14

~~UNHYDROCARBONS~~
~~DEPARTMENT OF THE INTERIOR~~
~~GEOLOGICAL SURVEY~~ Dept. of Nat. Res.

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK
 DRILL DEEPEN PLUG BACK

b. TYPE OF WELL
 OIL WELL or GAS WELL OTHER
 SINGLE ZONE MULTIPLE ZONE

2. NAME OF OPERATOR
 The Anschutz Corp.

3. ADDRESS OF OPERATOR
 1110 Denver Club Bldg, Denver, Colo. 80202

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*)
 At surface
 SE.SW.Sec.32,T.18 S.,R.21 E.,S.L.M.
 At proposed prod. zone 1900' from W-line & 600' from S-line

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*
 Approx. 25 miles NW. of Cisco, Utah

15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any) 600'

16. NO. OF ACRES IN LEASE 1280 ac.

17. NO. OF ACRES ASSIGNED TO THIS WELL 160 ac.

18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT. 2 1/2 miles

19. PROPOSED DEPTH 8000'

20. ROTARY OR CABLE TOOLS Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.)
 8285' grd.; 8297' K.B.

22. APPROX. DATE WORK WILL START*
 May 1, 1976

5. LEASE DESIGNATION AND SERIAL NO.
 ML-27414

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME
 East Willow Creek

8. FARM OR LEASE NAME
 STATE

9. WELL NO.
 #1 State 414

10. FIELD AND POOL, OR WILDCAT
 Wildcat

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA
 SE.SW.Sec.32-18S-21E S.L.M.

12. COUNTY OR PARISH 13. STATE
 Grand Utah

PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
12 1/2"	9 5/8"	36.00#	300'	125 sks.
8 3/4"				

It is planned to drill a well at the above location to test the oil and/or gas possibilities in the Mesaverde, Mancos, Dakota and Morrison sands, as well as in the Entrada formation. The well will be drilled with rotary tools, using mud for circulation. The surface casing, 9 5/8", will be set at about 300' and thoroughly cemented with returns to the surface. A blowout preventer will fill and kill lines will be installed on the casing head for well control. Green River sediments are at the surface and it is anticipated that the Mesaverde will be topped at about 800', the Mancos at about 3300', the Castlegate at 3470', the Dakota at 7140', the Morrison at 7220', and the Entrada at about 7770'. All hydrocarbon shows will be drill stem tested as they are encountered. In the event of production, 5 1/2" casing will be run and cemented thru the pay zones.

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 H. Now Gungley TITLE Consulting Geologist DATE Feb. 20, 1976

(This space for Federal or State office use)

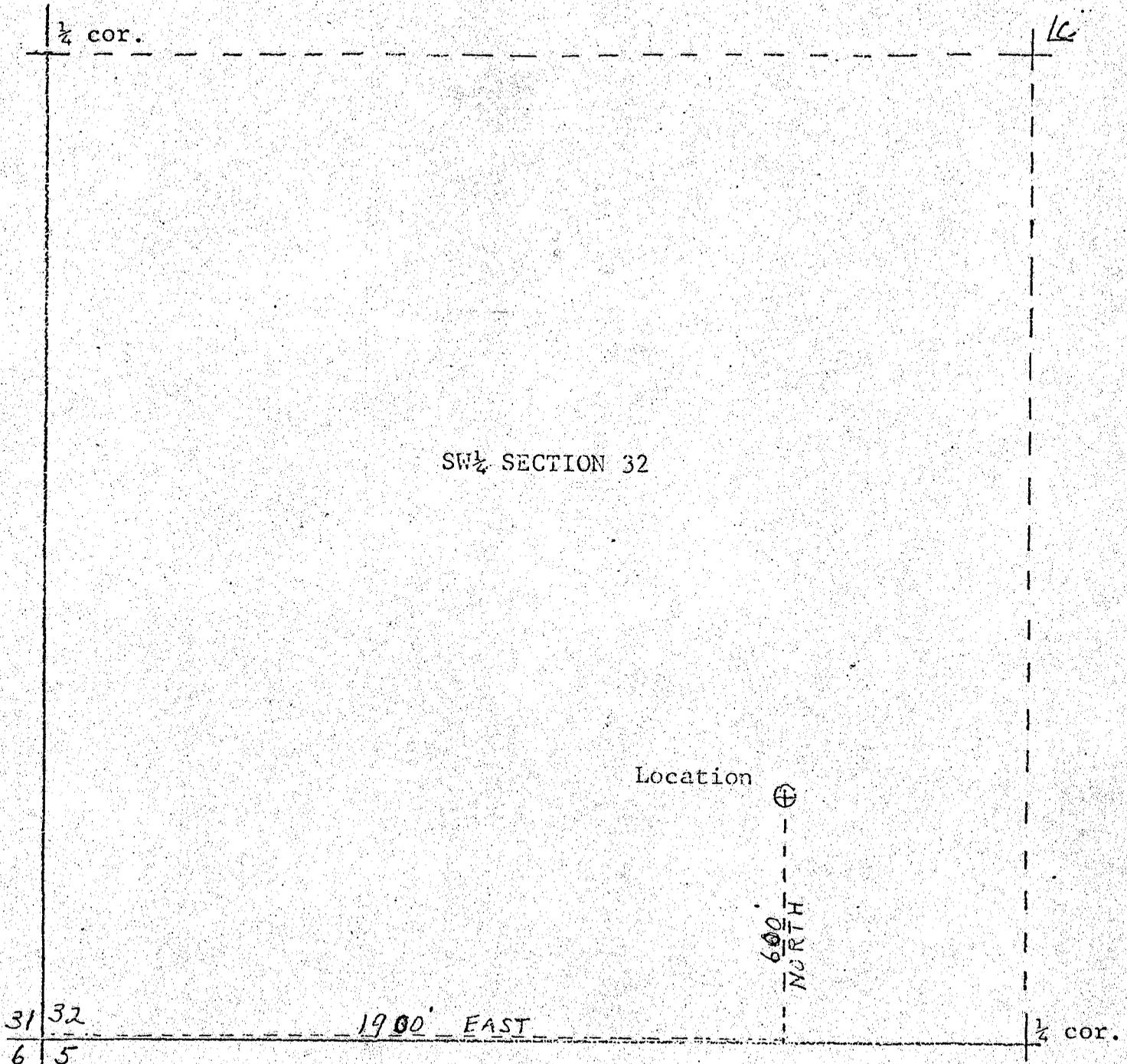
PERMIT NO. 43-019-30614 APPROVAL DATE _____

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

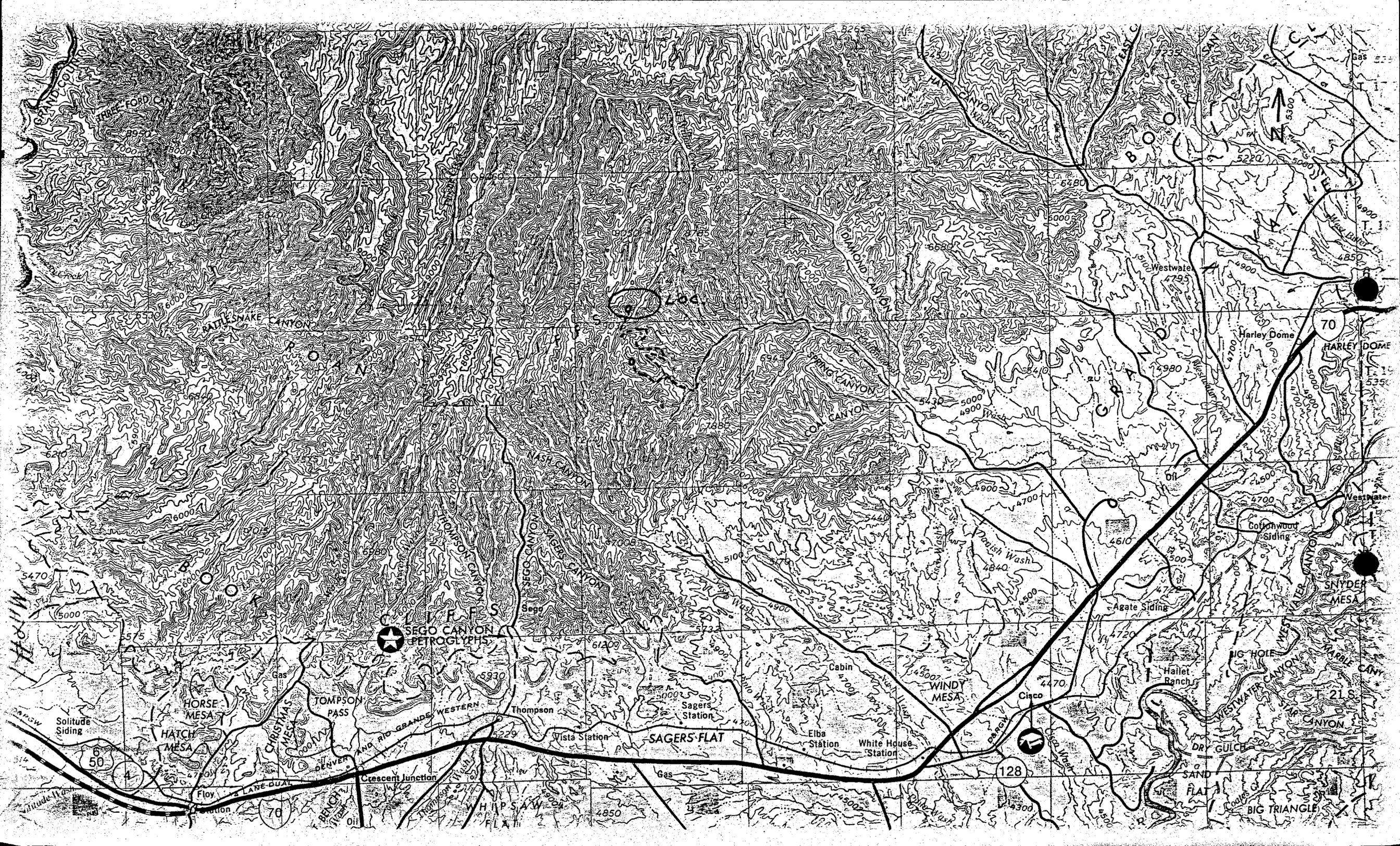
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LOCATION PLAT FOR
THE ANSCHUTZ CORPORATION
#1 STATE 414 WELL
SE.SW.SEC.32-18S-21E.
GRAND COUNTY, UTAH
Elev.: 8285' grd.



Scale: 1 in. = 400 ft.
Date: Feb. 20, 1976
Surveyed by: W. Don Cuigley

PLAT No. 1



WELL CONTROL EQUIPMENT OR
THE ANSCHUTZ CORPORATION
#1 STATE 414 WELL
SE.SW.SEC.32-18S-21E.
GRAND COUNTY, UTAH

The following control equipment is planned for the above designated well:

1. Surface Casing:

- A. Hole size for the surface casing is 11".
- B. Setting depth for surface casing is approx. 300'.
- C. Casing spes. are: $2 \frac{5}{8}$ " O.D.; J-55; 33.00#; 8-rd. thread; new or used.
- D. Anticipated pressure at setting depth is approx. 100 lbs.
- E. Casing will be run and cemented with 100 sks of cement and with returns to the surface.
- F. Top of casing will be at ground level.

2. Casing Head:

Flange size: 16"; A.P.I. pressure rating: 3000#; Series 900; Cameron, O.C.T., or equivalent; new or used; equipped with two 2" ports with nipples and 2", 3000# W.P. valves. Casing head and valves will be set above ground.

3. Intermediate Casing:

None

4. Blowout preventers:

- A. Double rams; hydraulic; one set of blind rams for 4" drill pipe; 10" flange; 3000# W.P.; Series 900; equipped with mechanical wheels and rod for back-up; set on top of casing head and bolted down securely; pressure tested for leaks up to 2000#; Cameron, Shaffer, or equivalent.
- B. The fill and kill line are to be connected to the the 2" valves in the casing head and are to be heavy duty line pipe or tubing. The kill line will be connected to the mud pump and the flow line will be directed into the reserve pit.

5. Auxilliary Equipment;

A float valve (3000# W.P.) is to be used in the bottom drill collar at all times. A Kelly valve (At least 3000# W.P.) will be installed in the stand pipe and a valve with proper sub will be available for stabbing in the drill pipe or drill collars.

6. Anticipated pressures:

The shut-in pressure of the Dakota formation at a depth of 7200' should be about 2600# or less and the hydrostatic pressure of 9.0#/gal. mud should be about 3300# which would be sufficient safety. The pressures in the Morrison and Entrada zones would not be more than 200# greater than the above pressure for the Dakota.

7. Drilling Fluids:

Normal drilling mud will be used for circulation and should have a weight of about 9#/gal. This should give sufficient hydrostatic pressure to keep the well under control at all times.

8. Production Casing:

A. Hole size for the production casing is 8 3/4". (This large hole size is planned just in case a string of 7" may be required at some point in the well).

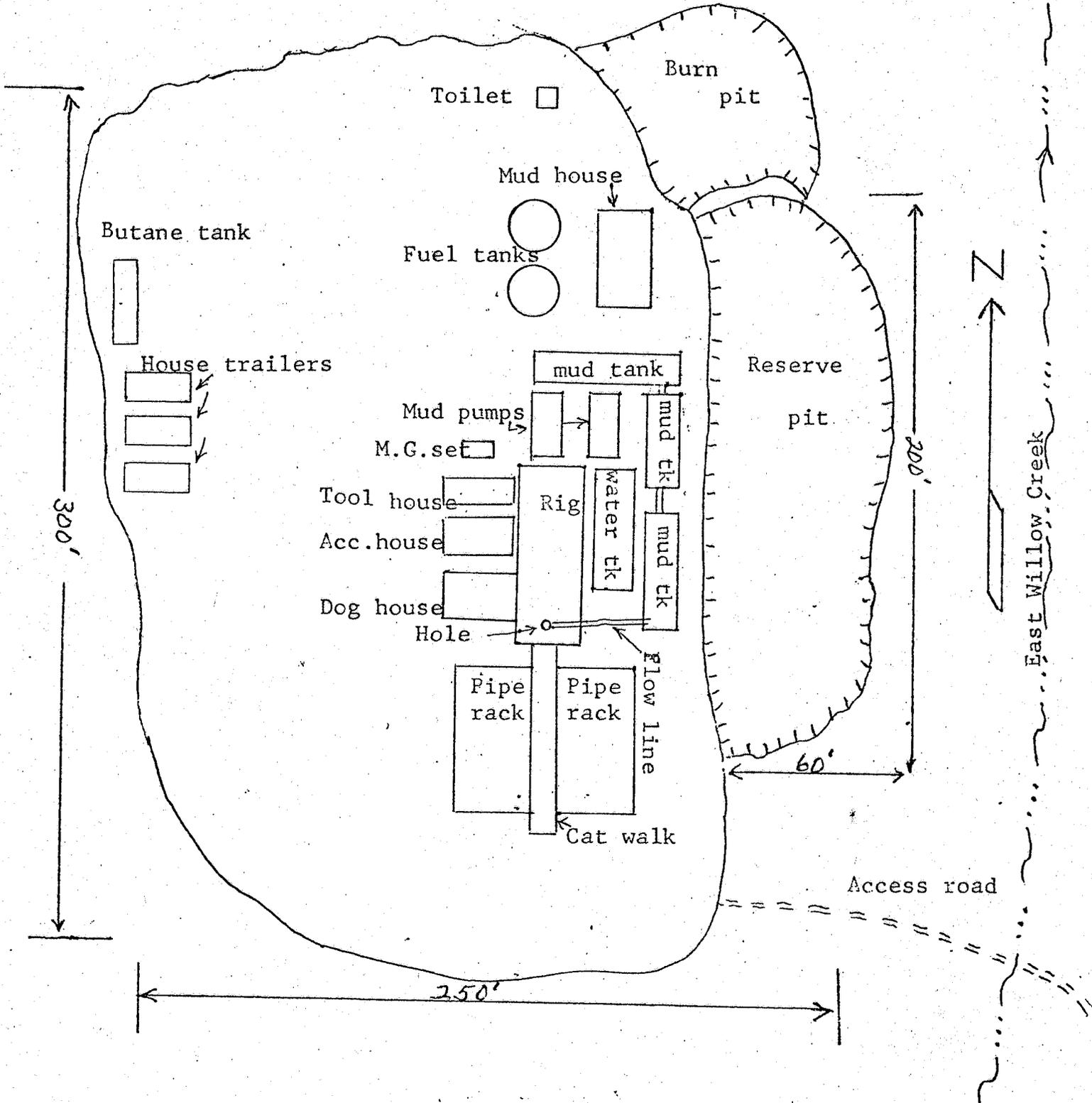
B. Approx. setting depth will be 7900'

C. Casing specs. are 5 1/2", 15.50#, J-55.

D. Casing will be run and cemented with approx. 300sks reg. cement with 2% CaCl.

PLAN FOR DRILLING EQUIPMENT

THE ANSCHUTZ CORPORATION
#1 STATE 414 WELL-
SE. SW. SEC. 32-18S-21E.
GRAND COUNTY, UTAH



Approx. scale: 1 in. = 50 ft.

PLAT NO. 3

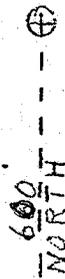
LOCATION PLAT FOR
THE ANSCHUTZ CORPORATION
#1 STATE 414 WELL
SE. SW. SEC. 32-18S-21E.
GRAND COUNTY, UTAH
Elev.: 8285' grd.

1/4 cor.

lc

SW 1/4 SECTION 32

Location



31 32
6 5

1900' EAST

1/4 cor.

Scale: 1 in. = 400 ft.
Date: Feb. 20, 1976
Surveyed by: W. Don Quigley

PLAT No. 1

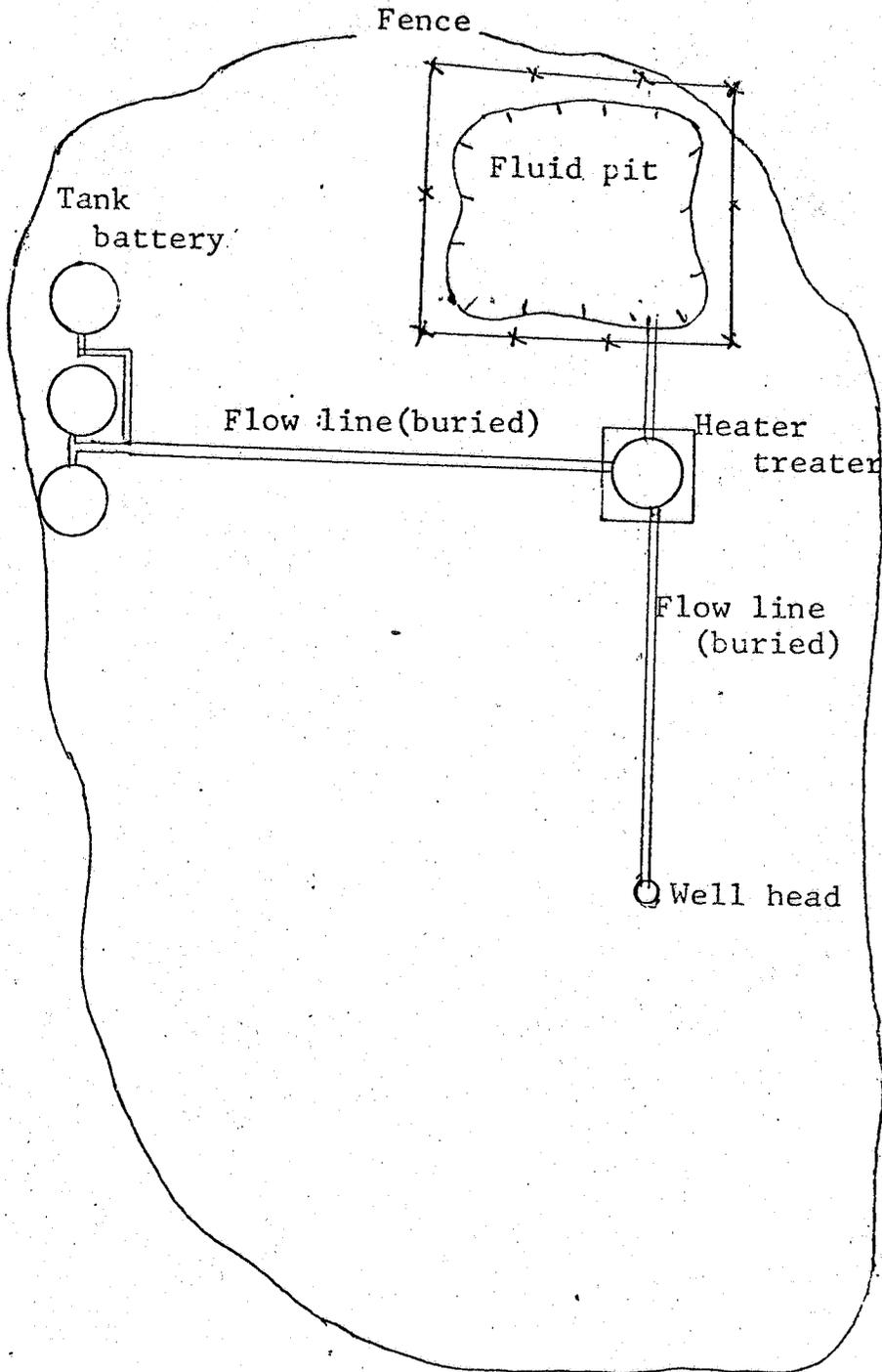
PLAN FOR PRODUCTION EQUIPMENT

THE ANSCHUTZ CORPORATION

#1 STATE 414 WELL

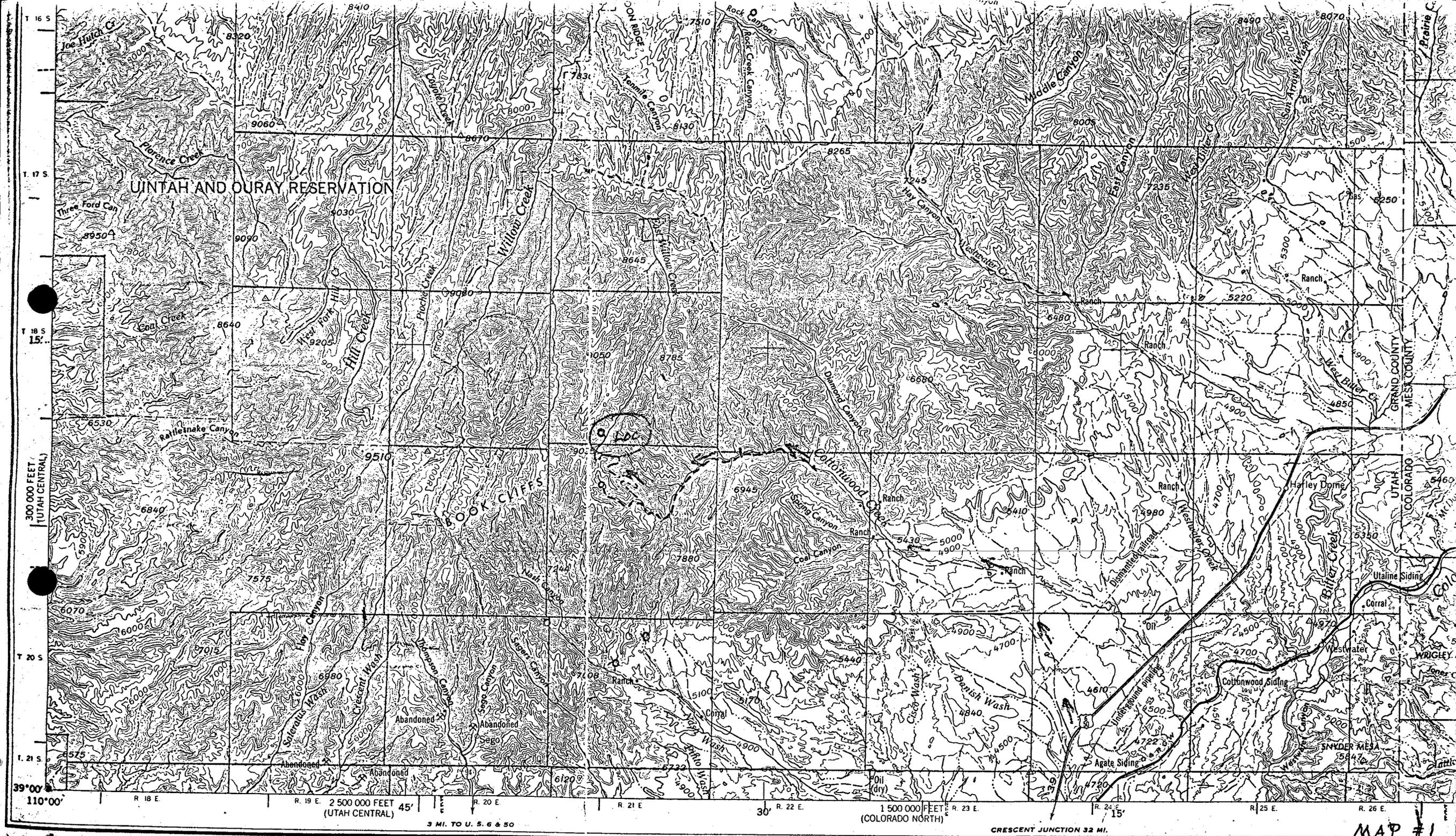
SE. SW. SEC. 32-18S-21E.

GRAND COUNTY, UTAH



Approx scale: 1 in. = 50 ft.

PLAT NO. 2



LEGEND

MAP #1

CRESCENT JUNCTION 32 MI.

1 500 000 FEET (COLORADO NORTH)

2 500 000 FEET (UTAH CENTRAL)

3 MI. TO U. S. 6 & 50

39° 00'

300 000 FEET (UTAH CENTRAL)

T 16 S
T 17 S
T 18 S
T 19 S
T 20 S
T 21 S

R 18 E R 19 E R 20 E R 21 E R 22 E R 23 E R 24 E R 25 E R 26 E

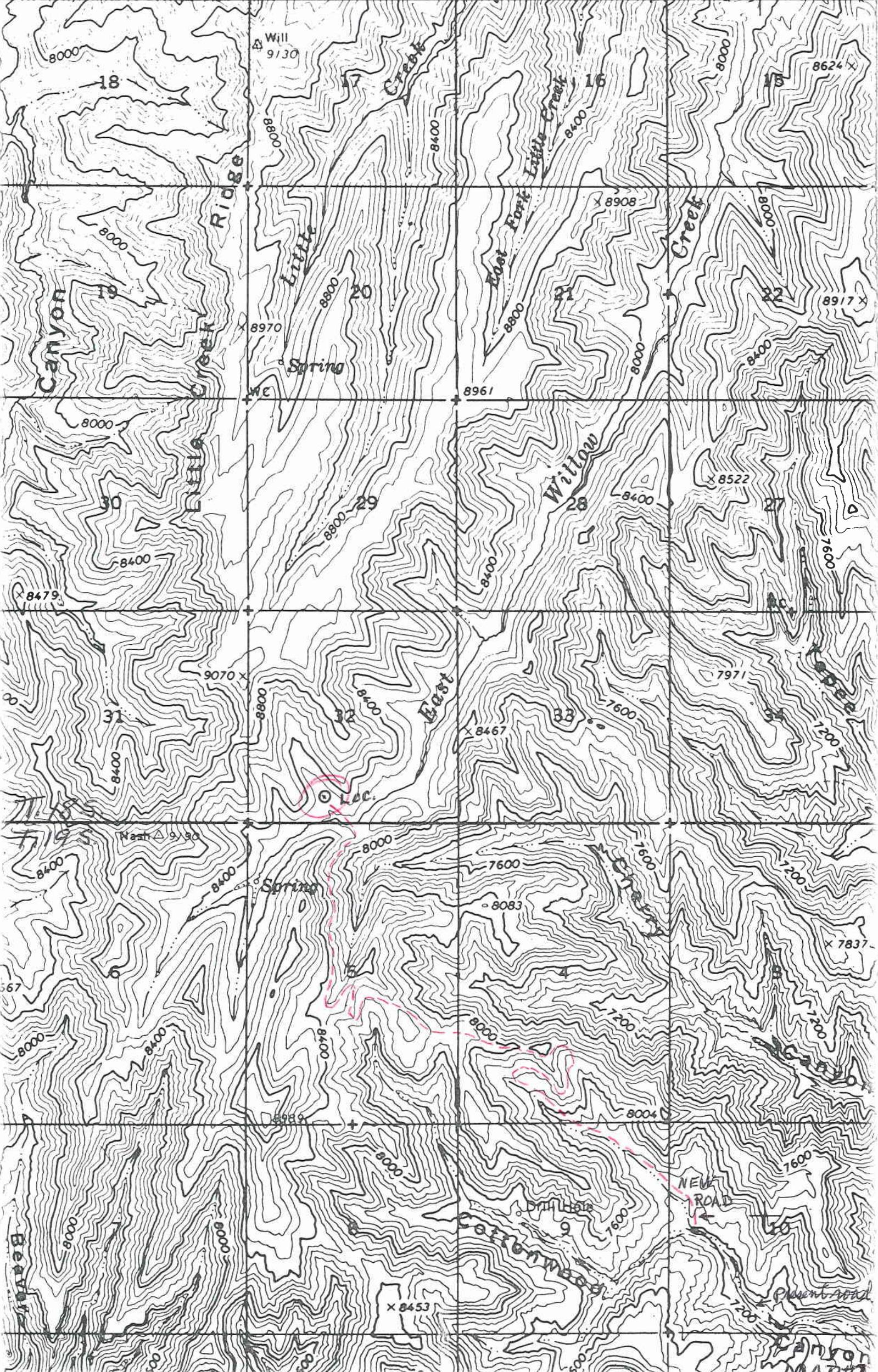
LOCATION PLANS FOR
THE ANSCHUTZ CORPORATION
#1 STATE 414 WELL
SE.SW.SEC.32-18S-21E.
GRAND COUNTY, UTAH

1. A survey plat (Plat No.1) for the location of the subject well is attached. Map No.1, attached, shows the access road up Cottonwood Canyon from I-70. Map No.2 shows the details of the planned road, approx.2½ miles long, from the Cottonwood Canyon road to the location. The present Cottonwood Canyon road ends at a previous well site in Section 9, 19S-21E.
2. The planned access road is shown on Map No.2 and will be constructed up the canyon from Cottonwood Canyon as shown to the head of the canyon and then over the ridge and down into East Willow Creek. This will be about 2½ to 3 miles in length and offers the least road construction of any other access route.
3. There are no other wells near the proposed location. The closest previous well is about 2½ miles away and is located in Section 9 of 19S-21E as shown on Map No.2.
4. See 1 and 2 above.
5. A plan for the location of the completion equipment in the event the well is successful is shown on Plat No.2.
6. The water required for the operation of the rig and for drilling will be obtained from the spring at the head of East Willow creek or from the creek, if running, and will either be hauled to the rig by truck or pumped from the creek to the rig.
7. A plat (Plat No. 3) showing the plan for the equipment layout to be used in the drilling operations of the proposed well is attached. This plat shows the reserve pit with dimensions and trash or burn pit. The excess drilling fluids, rig waste water, and cuttings will be deposited into the reserve pit, and all trash or burnable material will be put into the burn pit. At the completion of the well, these pits will be folded-in and levelled.
8. See location of house trailers on Plat No.3. No other camp facilities will be needed.
9. There are no airstrips in the vicinity of the proposed well site; and it is doubtful that any will be needed.
10. See Plat No.3 for the drilling equipment layout.

11. The topsoil on the location site will be shoved aside prior to levelling the site for the rig; and will be pushed back over the location when the well is finished. The site will be cleaned, levelled and the pits will be covered when the well is finished. The area is sloping gently toward the creek and will require only a small amount of dirt work to make it level for the rig. The site will be reseeded.
12. As can be seen from the topography on Map No.2 the site is at the mouth of a small side canyon on the west side of East Willlow Creek. The sides of the Canyons are fairly steep and thus limit the selection of a drill site in the area. Sage brush and grass are present on the surface of the site. The rocks in the surrounding cliff faces belong to the Parachute Creek member of the Green River formation. They consist of thin sands and shale beds and can include oil shale beds.

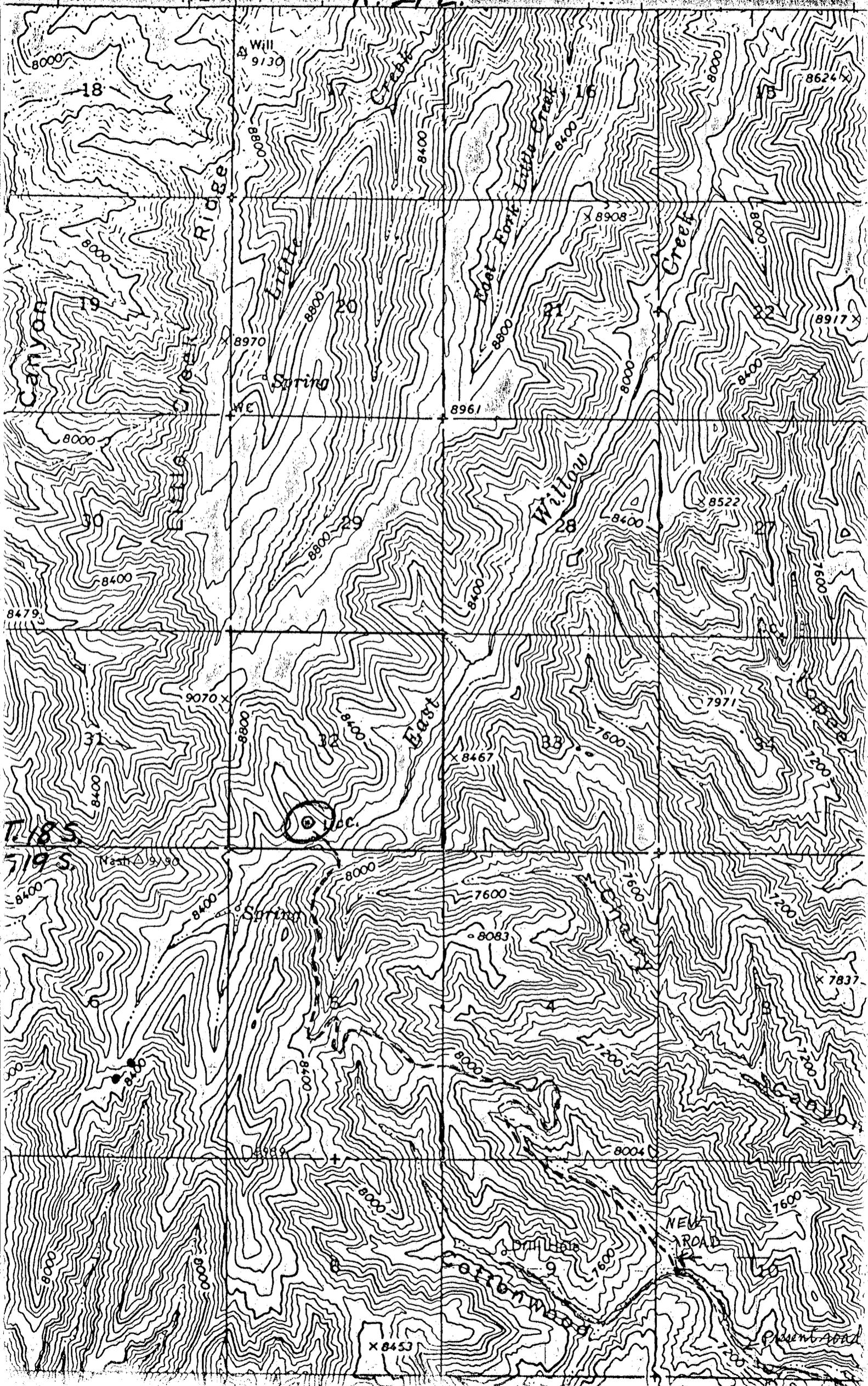
21 E.

R 21 E



Canyon MAP #1

R. 21 E.



Original

ENVIRONMENTAL ASSESSMENT
for
ANSCHUTZ #1 STATE 414
WILDCAT OIL AND/OR GAS WELL

on
STATE OF UTAH ML 27414
SE $\frac{1}{4}$ SW $\frac{1}{4}$ Section 32,
Township 18 South, Range 21 East
Grand County, Utah

July 23, 1976

Prepared by:

UTAH DIVISION OF OIL, GAS, AND MINING

Ronald W. Daniels, Coordinator of Mined Land Development
Patrick L. Driscoll, Chief Petroleum Engineer

I. DESCRIPTION OF THE PROPOSED ACTION

Anschutz Corporation plans to drill a well on the existing State oil and gas lease on Section 32, Township 18 South, Range 21 East, SLB&M, to determine the liquid hydrocarbon potential of several geologic formations. Tests will be performed in the Mesaverde, Mancos, Dakota, Morrison, and Eutrada formations. Maximum depth of drilling will be about 10,000 feet.

The plan for the layout of the drilling equipment is shown on ~~Plat~~ #3. Surface facilities will cover an area of about 250' x 300'. The location of the well on section 32 is shown on ~~Plat~~ #1.

Access to the proposed location is planned via an access road to be constructed by the operator from Cottonwood Canyon. From the point where road construction will commence to the location is 2 3/4 miles straight-line distance. The actual length of the proposed Class III road is 4.4 miles. Map #2 illustrates the route of the access road. The finished road grade width will be 12'.

II. DESCRIPTION OF THE ENVIRONMENT POTENTIALLY AFFECTED

The majority of the environment affected by this project will be along the road course. The road begins in the mountain brush type at 7,200' in elevation and proceeds upward through this type in the right hand fork of Cottonwood Creek over the divide at 8,240' into the Cherry Creek drainage and thereafter follows a natural ledge along the contour at about 8,320' and subsequently crosses into the East Willow Creek Drainage where the proposed well is located.

(A) Physical Environment

This localized area of the southern Book Cliffs region is characterized by moderately steep slopes, the result of canyons deeply incised into the surface Wasatch and Green River formations. Flood plain alluvial valleys have formed in the major canyon bottoms, especially in the lower reaches of Cottonwood Creek. The upper slopes and the heads of most drainages are characterized by massive sandstone outcrops with scattered interbedded lenticular shales.

Precipitation in this area totals approximately 20" annually, the majority of which falls during the winter. Summer precipitation falls in the form of short, violent thunderstorms. Temperature extremes are -20° to 90° F. Freezing temperatures and frost may occur during any month of the year with the right meteorological conditions.

Soils are a function of the active weathering process upon parent rocks in the area and therefore are highly variable in depth and composition. In the canyon bottoms soils forming in the colluvial and alluvial deposits range from 1' to 5' in depth. On the canyon sides soils have accumulated, but, the parent rock, mostly Wasatch sandstone, outcrops occasionally. The soils exhibiting the most structure^{ure} are found on the North and East facing slopes of East Willow Creek.

In the project area the slopes are relatively stable. No snow slides were observed during a field evaluation.

No roads exist within two miles of the proposed well location.

(B) Biologic Environment

Overstory vegetation along the proposed road route is typical of the mountain brush type and is comprised of:

<u>COMMON NAME</u>	<u>SCIENTIFIC NAME</u>
Gamble Oak	Quercus gambelii
Utah Serviceberry	Amelanchier utahensis
Mountain Mohogany	Cercocarpus ledifolius
Mountain Maple	Acer glabrum
Bigtooth Maple	Acer grandidentatum
Rocky Mountain Juniper	Juniperus scopulorum
Utah Juniper	Juniperus asteosperma
Pinyon	Pinus edulis

Scattered individuals and alter^Nys of small stands of the following occur along the proposed road route.

<u>COMMON NAME</u>	<u>SCIENTIFIC NAME</u>
Ponderosa pine	Pinus ponderosa
Douglas fir	Tseudotsuga menziesii
Onaking aspen	Populus tremuloides
Mountain cottonwood	Populus angustifolia

Understory vegetation is variable along the proposed road and includes:

COMMON NAME

SCIENTIFIC NAME

small l

Western Yarrow

Archillea Lanulosa

Big Sagebrush

Artemesia tridentata

Western Wheatgrass

Agropyron smithii

Woods Rose

Rosa woodsii

Basin Wildye

Elymus cinereus

Smooth Brome

Bromus inermus

Annual brome

Bromus tectorum

Mountain ^N snowberry

Symphoricarpos oreophilus

Lupines

Lupinus sp.

ok
→

Elderberry

Sambucus racemosa

Bitterbrush

Purshia tridentata

The vegetation reported here is not a complete inventory but represents a major listing of the species encountered.

On the well site itself, the vegetative composition is dominated by Snowberry and Big sagebrush with an understory of some of the grasses listed above.

Fauna

Fauna found in the general area of the proposed road and well include both managed wildlife species and domestic livestock.

Included in Biologic Envir.

Wildlife

Managed wildlife big game species include elk, mule deer, bear, and cougar. Small game species include cottontail

rabbit, snowshoe hare, and forest grouse. Non-game species are abundant and include coyote, gopher, eagles, hawks, chipmunk, various small rodents, and songbirds.

Though the upper reaches of Cherry Creek, Cottonwood Creek, and East Willow Creek are perennial, these streams do not comprise a sport fishery.

SP Winter range for the managed big-game wildlife is provided in the lower reaches of the right fork of Cottonwood Creek but, the area does not exhibit signs of high-level use by these species.

Cattle grazing is evident in the East Willow Creek drainage but currently livestock use in the right fork of Cottonwood Creek is minimal mostly due to poor access.

The proposed well is in an area which has been declared roadless by the lessor, the Utah State Lands Division.

III. PROBABLE IMPACT OF THE PROPOSED ACTION ON THE ENVIRONMENT

Physically, the proposal will change the land use of approximately 13 acres in surface area. This is based on a 20' right-of-way for a 4.4 mile road and the operations pad measuring 250' x 300'. It is not anticipated that the construction would cause undue erosion or sedimentation into the stream courses encountered.

In quantity, the amount of forage and habitat eliminated through road and pad construction will not be significant to animal utilization. With the initial road construction wildlife utilization of areas adjacent to the road and pad may be reduced. Following construction and with the limited use of the access road most wildlife will again utilize areas adjacent to the movement of vehicles. Elk and bear will be less prone to return to areas near the proposed project.

One impact on the environment will be the road itself, an action which is in conflict with the mineral lessor's administrative designation for the area. With the advent of a discovery of oil or gas in this well the potential remains for a field development here. This would lead to increased widespread human and mechanical activity in the area.

Air and water degradation to any significant degree as a result of the drilling itself are not anticipated.

On the positive side of the impacts, a road into this area would be of value in the implementation of multiple-use management in the Bookcliffs. Two uses in addition to the mineral development would be enhanced through construction of the road. Forest management of the scattered Ponderosa Pine, Douglas Fir, and Aspen resource would be improved by providing access for fire protection, insect and disease surveillance, and actual timber harvesting. Grazing by domestic livestock in the right fork of Cottonwood presently appears minimal. With

the introduction of a road from the head of East Willow Creek live-stock would graze this area more, and movement of livestock would be possible from the head of East Willow to winter feeding areas to the South.

Since plans call for the proposed road to be limited access for well personnel, fire control units, and the grazing permittee, the recreational impact will be low. Two wheeled vehicles however, could pass by most any roads ^rbaricade and the impact of trail vehicles could be potentially large if the area were "discovered!" ~~Should the area be managed for purely recreational objectives, the road would be an invaluable asset.~~

IV. MITIGATIVE MEASURES INCLUDED IN THE PROPOSED ACTION

Stabilizing of the proposed drill pad is planned by the operator following operations. The pad will be stabilized even with the advent of installing production facilities in the case that a producing well is discovered. A production facility plan is shown on plat #2. *

The seed mixture for planting is:

<u>SEED</u>	<u>POUND/ACRE</u>
Smooth Brome	4
Orchard Grass	3
Kentucky Bluegrass	1
Crested Wheatgrass	3
Meadow Foxtail	2
Ranger Alfalfa	2

Vegetative protection from grazing will be provided for two growing seasons through fencing. The road design calls for providing adequate drainage from the finished grade.

Access to the road will be limited to those having legitimate business on the project and to administrative responsibility in adjacent areas. Since a portion of the access road crosses Public Domain lands a tramway right-of-way permit will be applied for through the Grand Resources Office of the U.S. Bureau of Land Management.

All applicable safety, blowout prevention, fire prevention, and spillage prevention will be in use for the drilling process itself. In the location of the road and pad the disturbance merchantable timber will be avoided. In locating the road up the ~~Right~~ Fork of Cottonwood Creek, the oak brush side of the canyon will be followed, thus preventing the destruction of forage.

V. ALTERNATIVES TO THE PROPOSED ACTION

One alternative to the proposed action is no development of the existing lease. If it is determined by the State Land Board, in light of their recent decision to classify the area as roadless, that this is a viable alternative and the exploration for precious liquid hydrocarbons is less important, a settlement with the lessee on the potential value of the lease would be needed.

Helicopter only access to the drill site is another alternative. Economically, this shows no promise, especially if an oil or gas discovery is made and further development of an oil field is needed.

Whipstock drilling from an existing road-accessible location is a possible alternative which can be discounted for technical reasons. Road access to the location via the East Willow Creek drainage is an alternative which is technically feasible. The impacts of a haulage road in East Willow seem to have more potential for the disruption of animal habitat, stream flow, and drainage patterns.

The original proposal remains to be the most viable alternative of those presented here.

VI. SHORT TERM USES OF THE ENVIRONMENT VS. LONG TERM PRODUCTIVITY

The short term uses planned for this project will not necessarily affect long term productivity of the natural area involved. The option of maintaining this block of State-owned acreage as a roadless area would be negated however.

With a relatively small disturbance in the short term, a productive liquid hydrocarbon discovery could be made. If the discovery would be of sufficient size the area would be productive for many years, yielding valuable and increasingly rare raw materials for the production of energy

VIII. IRREVERSIBLE AND ^{Unrecoverable} ~~INRETRIEVABLE~~ COMMITMENTS OF RESOURCES INVOLVED IN THE PROPOSED ACTION.

The depletion of the oil reservoir, in the event a discovery is made would be an irreversible action, the resource would be beneficially utilized by man.

With or without a discovery, the road entry into a previously unroaded area would commit the area to road activity. The presence of a road would change both livestock and wildlife use patterns. It seems

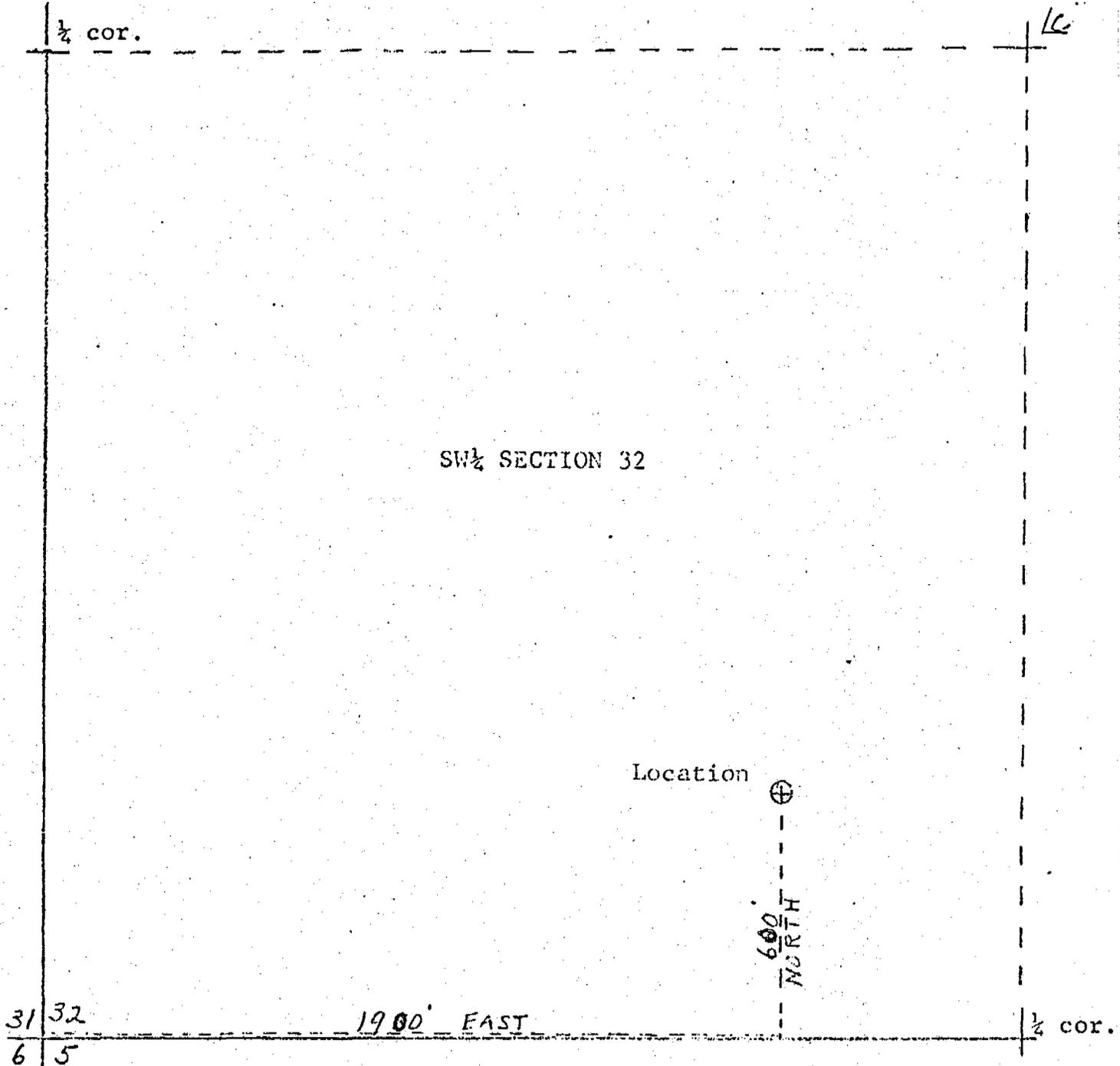
doubtful that wildlife would completely abandon the area due to roaded entry and associated activities.

SUMMARY AND RECOMMENDATIONS

Conflicting demands for land uses ^{ARE} ~~is~~ the crux of the problem presented in the previous assessment. The existence of two management objectives, a roadless area and a valid mineral lease, exhibit a desire to manage on a multiple use basis this block of State-owned acreage.

To achieve multiple use on the project area, the lease and accompanying road should be developed since the actual environmental impacts are not significant. If the principle objective is the maintenance of a roadless area and this overrides the mineral development, the value of the mineral leases should be determined and the lessee compensated.

LOCATION PLAT FOR
THE ANSCHUTZ CORPORATION
#1 STATE 414 WELL
SE. SW. SEC. 32-18S-21E.
GRAND COUNTY, UTAH
Elev.: 8285' grd.



Scale: 1 in. = 400 ft.
Date: Feb. 20, 1976
Surveyed by: W. Don Quigley

PLAT No. 1

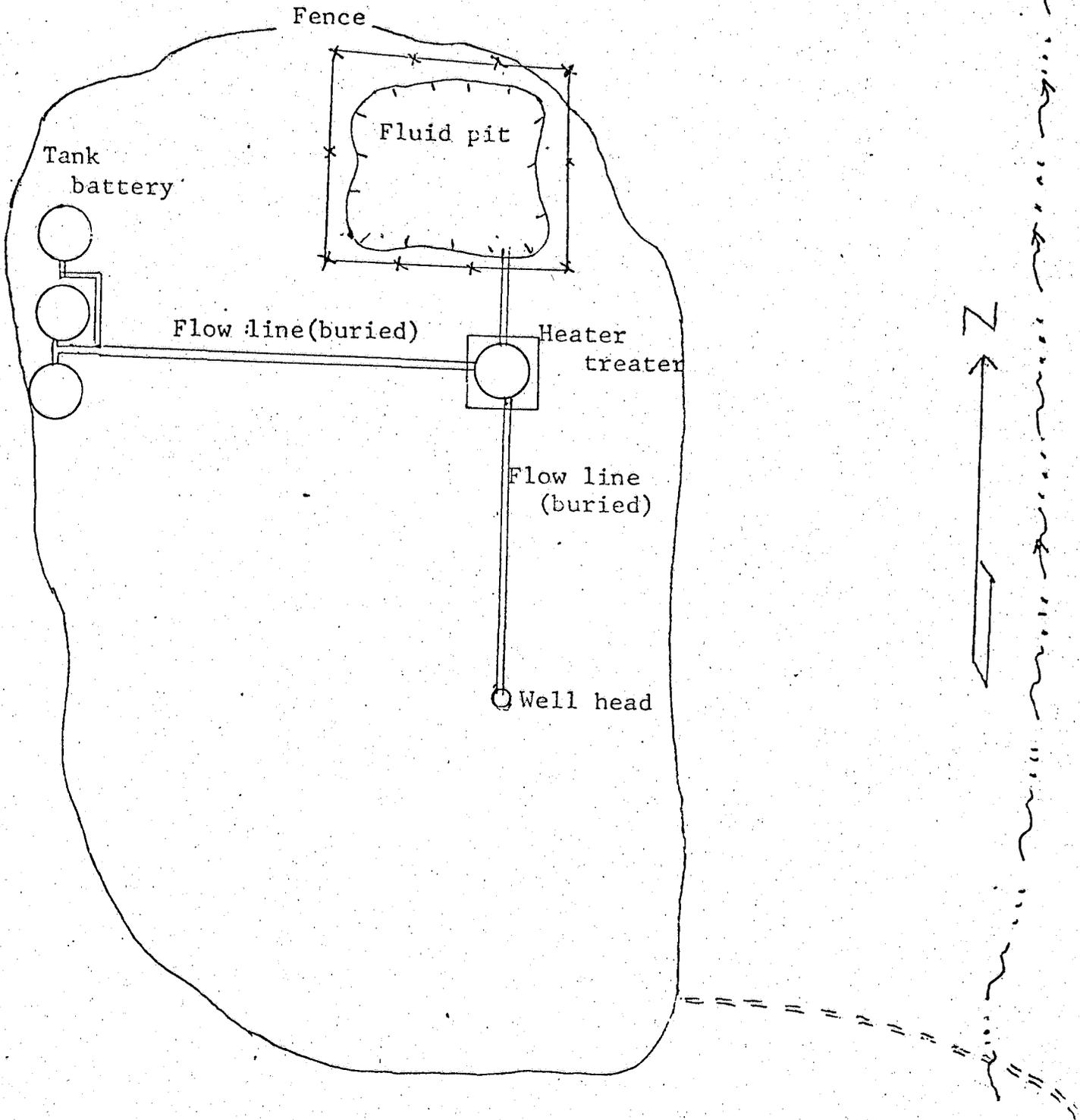
PLAN FOR PRODUCTION EQUIPMENT

THE ANSCHUTZ CORPORATION

#1 STATE 414 WELL

SE.SW.SEC.32-18S-21E.

GRAND COUNTY, UTAH

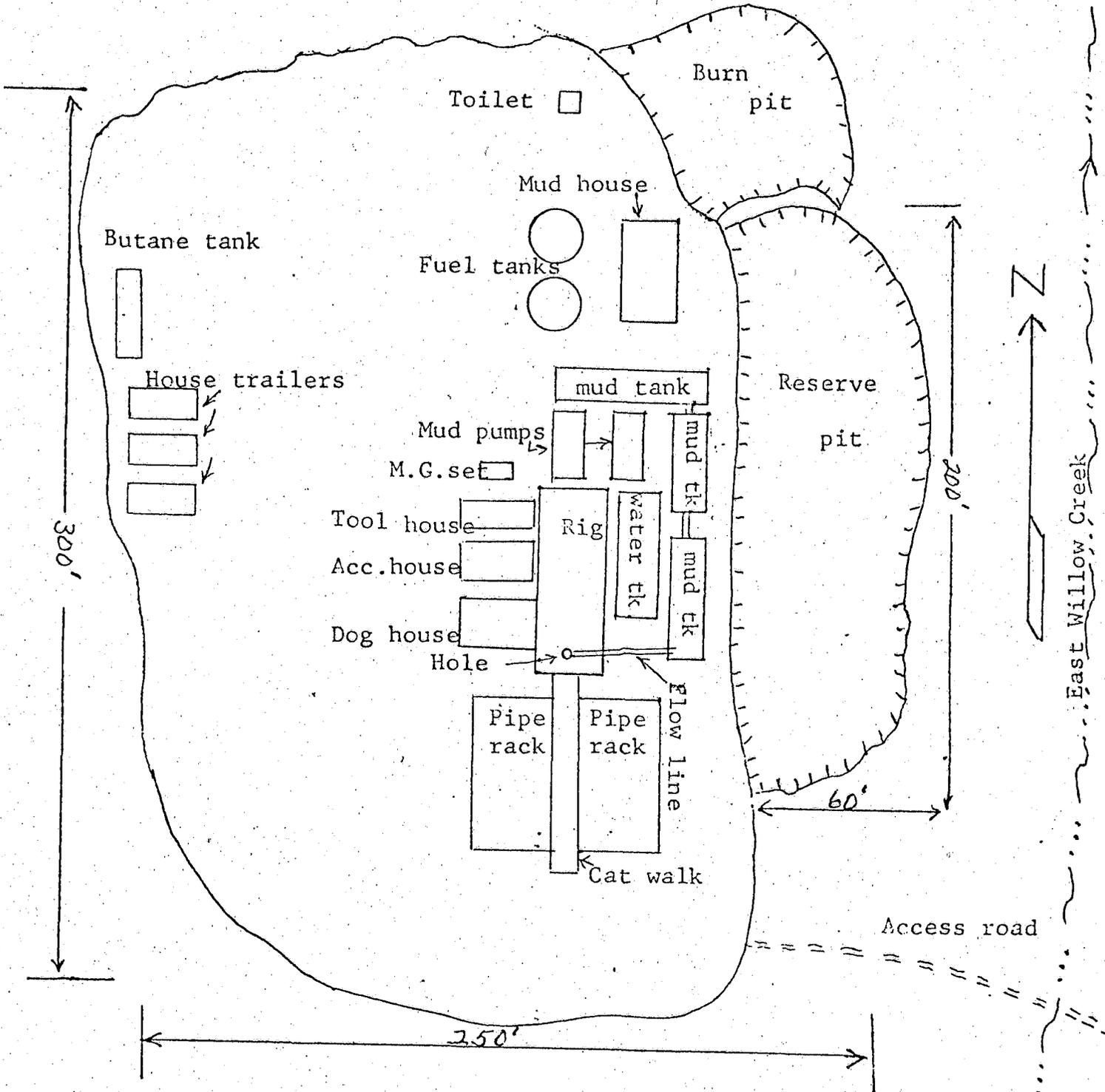


Approx scale: 1 in. = 50 ft

PLAT NO. 2

PLAN FOR DRILLING EQUIPMENT

THE ARSCHUTZ CORPORATION
#1 STATE 414 WELL-
SE. SW. SEC. 32-18S-21E.
GRAND COUNTY, UTAH



Approx. scale: 1 in. = 50 ft.

Environmental Impact Statement

Re: Anschutz Corporation

1 State - 414

C SE SW

Section 32, T185 R21E

Grand County, Utah

P.H. Driscoll - Chief Pet. Eng.

R.W. Daniels - Mineral Lease Clerk

Twelve Point Surface Use Plan
For assessment purposes.

1) Existing Road; To reach this location, proceed East ~~to~~ on Interstate 70 from a point where State 128 ~~has~~ exits. Approximately 10 miles East of this point, turn North through the Cisco Springs Field and continue North to the Book Cliff Field. From this point, continue generally Northwest on ~~Cottonwood~~ ^(Cottonwood Canyon) dry-hole location road, for seven miles. At this point, a canyon with a perennial flowing stream will extend from the right along a generally trending NW. location

2) Access Road.

From the point above, it will be necessary to construct between 3.75 and ^{4.4} ~~4.4~~ miles of new road. This road is planned to be 12-14 feet in width and will generally follow a the brushy ^{or Southwestern} side of the stream through the ~~valley~~ ^{right fork of Cottonwood Canyon}. It will be necessary to ~~grade~~ ^{grade} this road upward with an average grade of ^{9.5%} ~~about 8%~~ from commencement in order to go over a ridge and descend to

the head of the East Willow Creek ~~drainage~~ drainage area. Maximum road grade will be 13%. The outline and general contours of the road are shown on the attached ~~interior~~ topographical map. It is proposed that this access road will have a multiplicity of purposes. They are:

1) Access to exploitation of potential, vitally needed, mineral resources.

2) An urgently needed five-access road to an area encompassing a broad State average holding

3) A cattle grazing, drive route, down Cottonwood Canyon ~~for winter feeding purposes.~~ At present, ~~the forage in the right fork of Cottonwood Canyon is not being utilized to any great extent and the phenominal growth of natural vegetation is not being used.~~ This, plus the fact that there is a year-around source of water, makes this road access site a valuable addition to a cattle raising enterprise.

4) A potential limited access road that opens huge new areas of mineral exploration with a minimum disturbance of land values

There will be an extraordinary amount of one way traffic on this

Proposed road. It can be easily isolated to provide access to 1) lease operating personnel, 2) haulers of hydrocarbon products, provided that access to existing transfer lanes are non-existent. 3) limited commercial grazing and cattle growth areas. 4) Accessibility to Natural Resource Crews concerned with fire ~~management~~ management.

5) Location of Proposed Tank Batteries and necessary flow-lines.

This area will be surveyed at a later date, Maximum conditions will address potential fires and subsequent damage



3) Location of Existing wells.

The only well drilled within a 5-mile radius would be the Belco Petroleum Corp. well in section 9, T19S R21E

4) Lateral Roads to well Location:

As this test represents a wildcat drilling location, the number and physical amount of access roads are not to be considered. The ultimate disposition of this location as a dry hole is well documented in dry-hole / exploratory drillings.

5) Location of Production Facilities:

As with all wildcat discovery wells, the production facilities will be initially within the nearby area. Very little surface disturbance will occur if the well is noted as productive.

6) Location and type of water supply

The consistent flow of the East Willow Creek drainage area will be utilized for drilling fluid purposes. The temporary interruption will constitute a very minute usage of the total water flow.

7) An attached plat indicates the layout of equipment of the drilling contractor currently under consideration. If another contractor is used, the basic configuration will comply. If the well indicates non-commercial production, the location can be cleaned, graded, reseeded to no more than a ~~small~~ noticeable

8) Location of Camps
No Camp Facilities are prepared

9) Location of Airstrips

None are planned and ~~there~~ there are none in the immediate area.

10) Location layout

See Attached Plat

11) Plans for Restoration of Surface

Topsoil will be segregated from the pit material excavation material for later use in regrading the location. Following abandonment of the well, the location will be regraded and the topsoil spread over the regraded fill and seeded for stabilization with the following seed mixture

... 1.1 (Cont) seed lb. pure

Smooth Bromegrass	4	
Orchard Grass	3	
Kentucky Blue Grass	1	
Orchard Topgrass	3	
(12) <u>Woods</u>		
Meadow Foxtail	2	
Ranger Alfalfa	2	from grazing

Fencing should provide vegetative protection for two ~~year~~ growing seasons.

(12) Topography

the southern

This localized area of Book Cliffs region is characterized by moderately steep slopes, the result of ~~erosion~~ ^{weathering} canyons deeply incised into the surface. ~~Green River~~ ^{Green River} formations flood plain alluvial valleys have formed in the major canyon bottoms, especially in the lower reaches of Cottonwood Creek. The ~~steeper~~ slopes and the heads of most drainages are characterized by massive sandstone outcrops with scattered interbedded lenticular shales.

Description of Proposed Action.

There appears to be a potentially productive oil and gas horizon in the Mancos, Entrada, Dakota and Morrison Formations at this proposed site.

In order to evaluate the geological information leading to this conclusion, it is proposed to drill a test well at this site.

The maximum anticipated depth will be 10,000 feet below the ground level of the well.

A 12 $\frac{1}{4}$ " hole will be initially drilled to a point lower than the known fresh water zones. This drilled area will be cased with 9 $\frac{5}{8}$ " casing and it will be cemented to surface.

Below this point, it is anticipated that an 8 $\frac{3}{4}$ " hole will be drilled to T.D., and any intermediate casing will be set if needed.

~~XXXXXXXXXXXX~~

(Other instructions on
reverse side)

~~DEPARTMENT OF NATURAL RESOURCES~~

~~XXXXXXXXXXXX~~ Dept. of Nat. Res.

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK
 DRILL DEEPEN PLUG BACK

b. TYPE OF WELL
 OIL WELL or GAS WELL OTHER
 SINGLE ZONE MULTIPLE ZONE

2. NAME OF OPERATOR
The Anschutz Corp.

3. ADDRESS OF OPERATOR
1110 Denver Club Bldg, Denver, Colo. 80202

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)*
 At surface **SE.SW.Sec.32,T.18 S.,R.21 E.,S.L.M.**
 At proposed prod. zone **1980' from W-line & 600' from S-line**

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*
Approx. 25 miles NW. of Ciseo, Utah

15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any)
600'

16. NO. OF ACRES IN LEASE
1280 ac.

17. NO. OF ACRES ASSIGNED TO THIS WELL
160 ac.

18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.
2 1/2 miles

19. PROPOSED DEPTH
8000'

20. ROTARY OR CABLE TOOLS
Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.)
8285' grd.; 8297' K.B.

22. APPROX. DATE WORK WILL START*
May 1, 1976

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
12 1/4"	9 5/8"	36.00#	300'	125 sks.
8 3/4"				

It is planned to drill a well at the above location to test the oil and/or gas possibilities in the Mesaverde, Mancos, Dakota and Morrison sands, as well as in the Entrada formation. The well will be drilled with rotary tools, using mud for circulation. The surface casing, 9 5/8", will be set at about 300' and thoroughly cemented with returns to the surface. A blowout preventer will fill and kill lines will be installed on the casing head for well control. Green River sediments are at the surface and it is anticipated that the Mesaverde will be topped at about 800', the Mancos at about 3300', the Castlegate at 3470', the Dakota at 7140', the Morrison at 7220', and the Entrada at about 7770'. All hydrocarbon shows will be drill stem tested as they are encountered. In the event of production, 5 1/2" casing will be run and cemented thru the pay zones.

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 H. How Gingley TITLE Consulting Geologist DATE Feb. 20, 1976

(This space for Federal or State office use)

PERMIT NO. _____ APPROVAL DATE _____

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

LOCATION PLAT FOR
THE ANSCHÜTZ CORPORATION
#1 STATE 414 WELL
SE.SW.SEC.32-18S-21E.
GRAND COUNTY, UTAH
Elev.: 8285' grd.

File

1/4 cor.

1/4

SW 1/4 SECTION 32

Location



600
NORTH

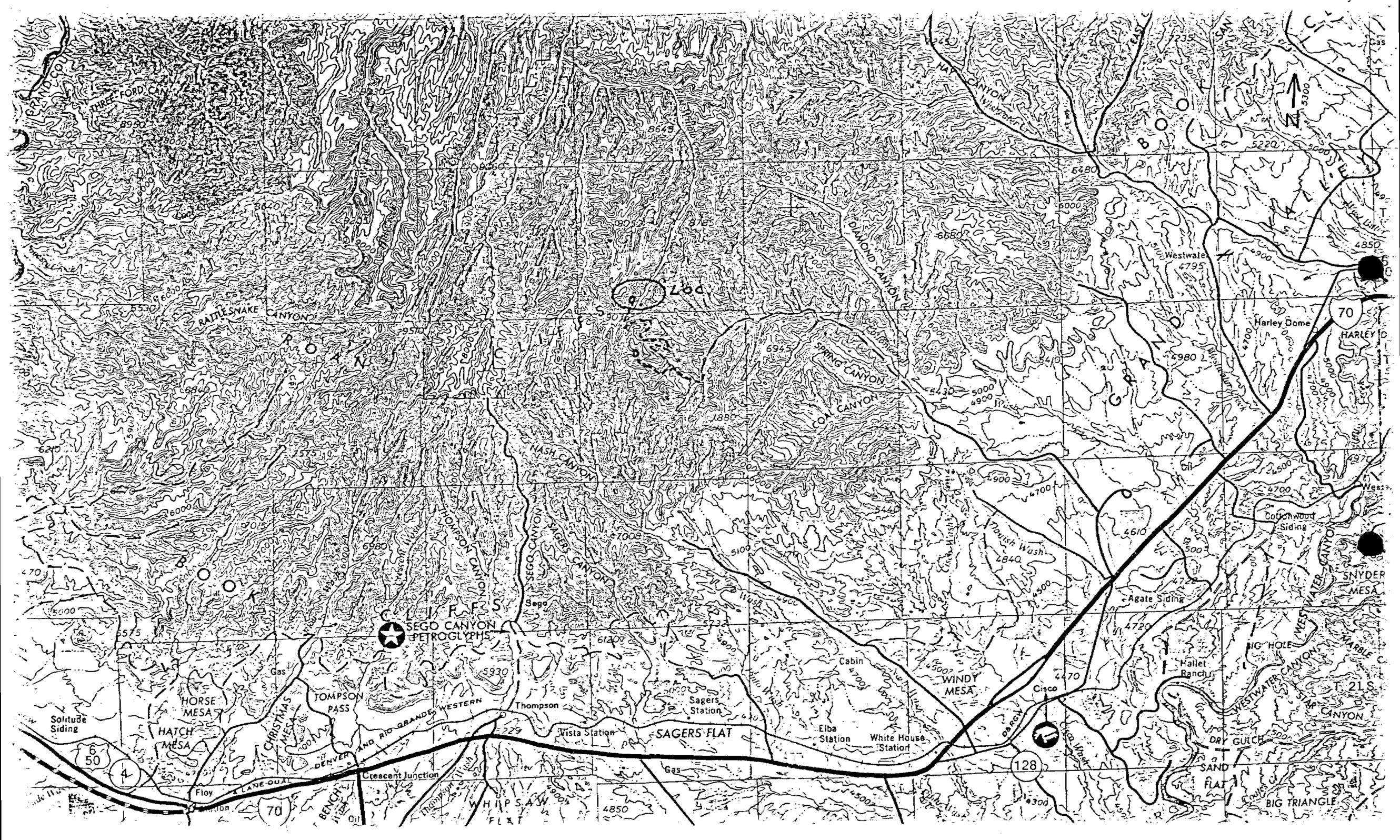
31 32
6 5

1900' EAST

1/4 cor.

Scale: 1 in. = 400 ft.
Date: Feb. 20, 1976
Surveyed by: W. Don Quigley

PLAT No. 1



Loc

SEGO CANYON
PETROGLYPHS

70

HARLEY C

SNYDER
MESA

T 21 S

128

70

650

4

HATCH
MESA

HORSE
MESA

TOMPSON
PASS

Thompson

SAGERS FLAT

Sagers Station

Elba Station

White House Station

WINDY
MESA

Cabin

Agate Siding

Cottonwood Siding

HOLE

WESTWATER CANYON

WATER

CANYON

SNYDER

MESA

WINDY

MESA

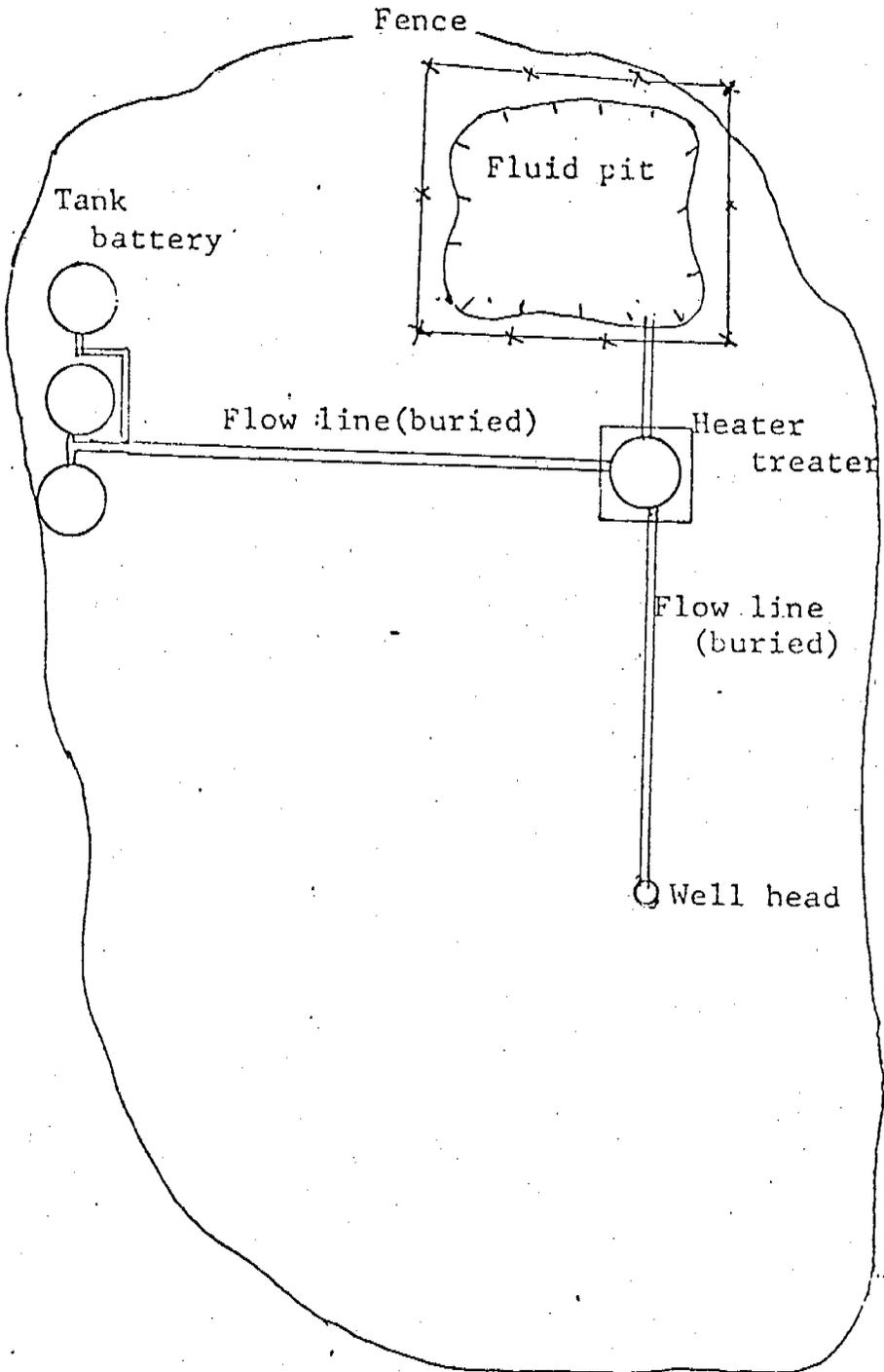
PLAN FOR PRODUCTION EQUIPMENT

THE ANSCHUTZ CORPORATION

#1 STATE 414 WELL

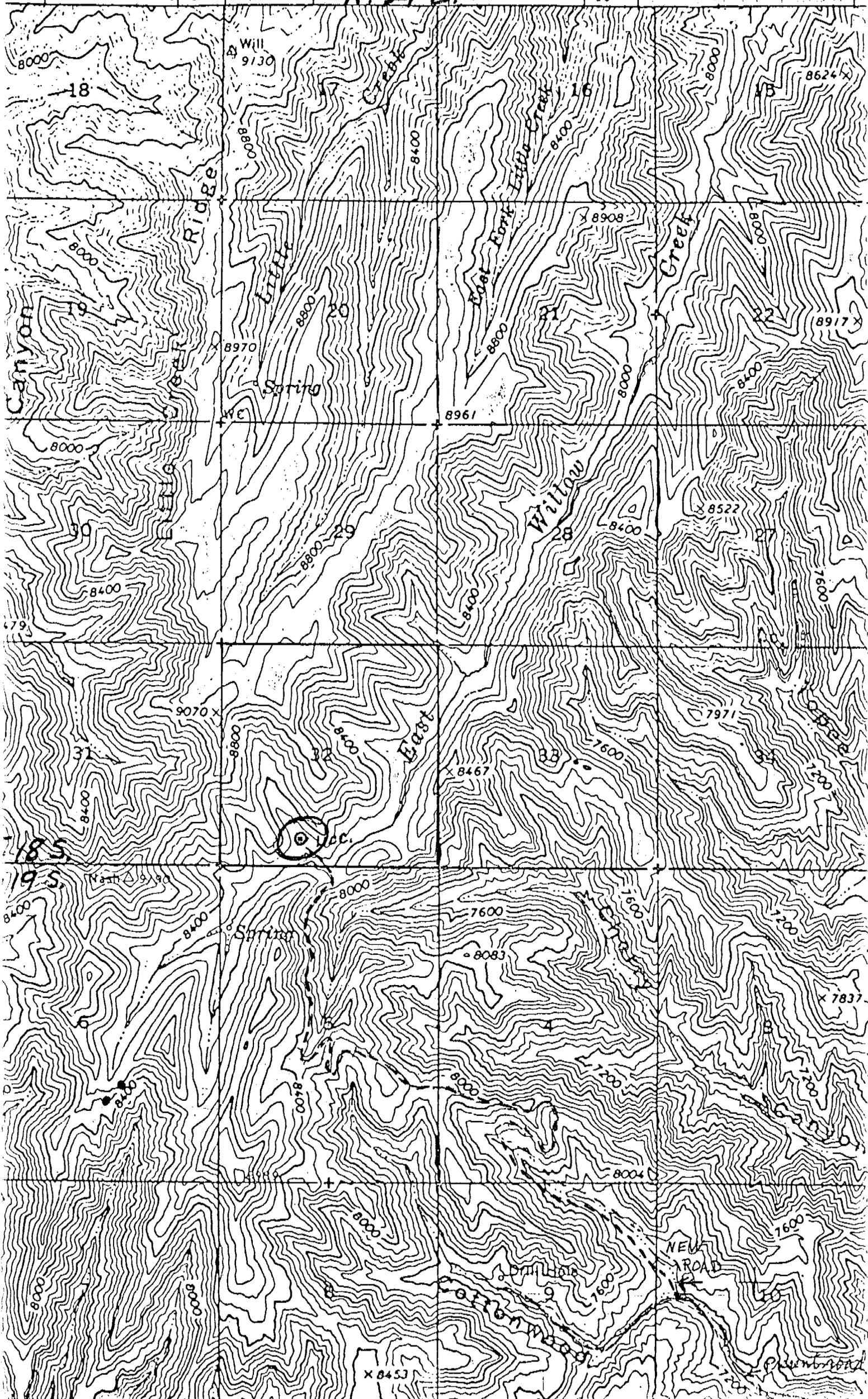
SE.SW.SEC.32-18S-21E.

GRAND COUNTY, UTAH



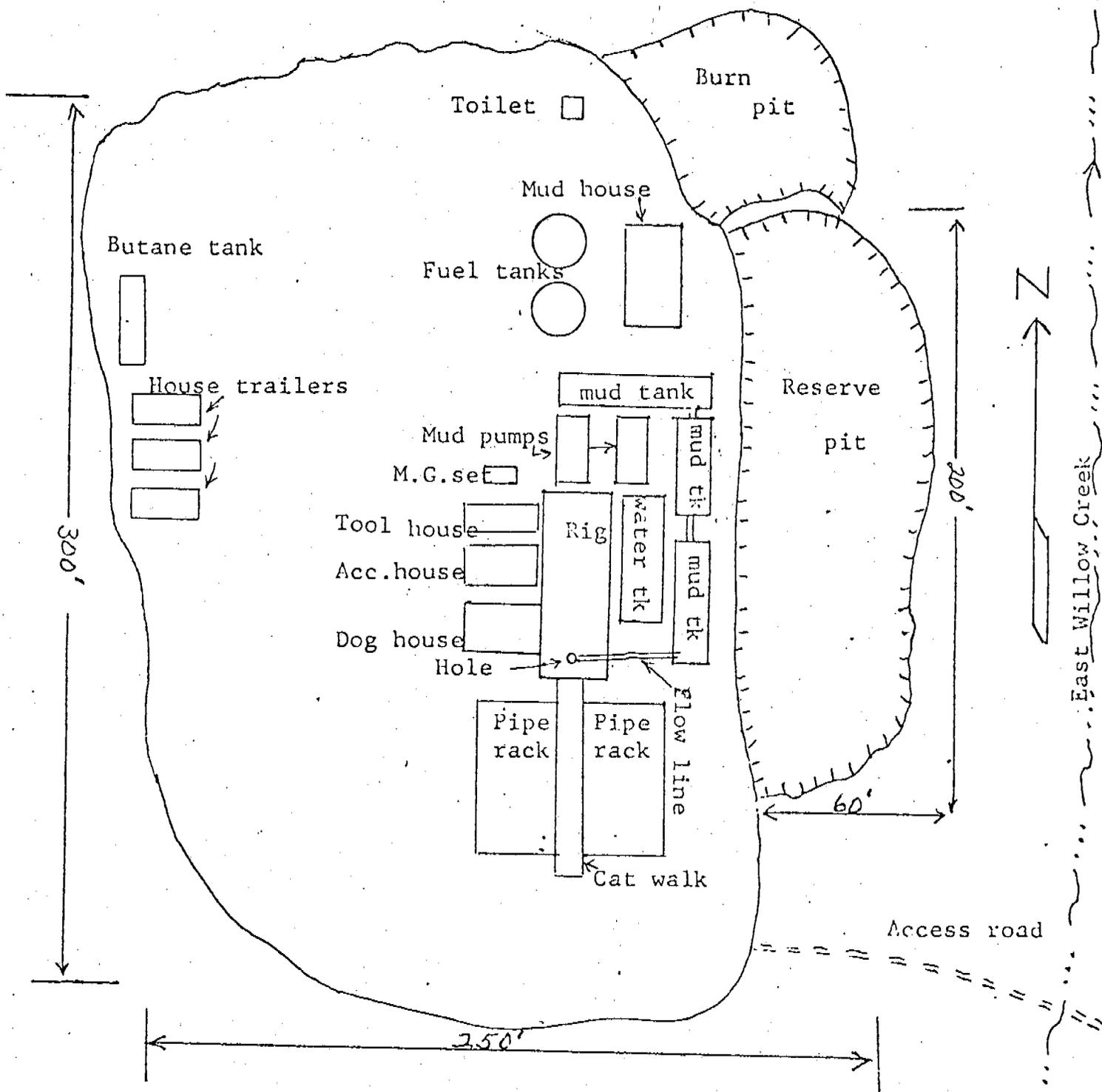
Approx scale: 1 in. = 50 ft

R. 21 E.



PLAN FOR DRILL EQUIPMENT

THE ANSCHUTZ CORPORATION
#1 STATE 414 WELL-
SE. SW. SEC. 32-18S-21E.
GRAND COUNTY, UTAH

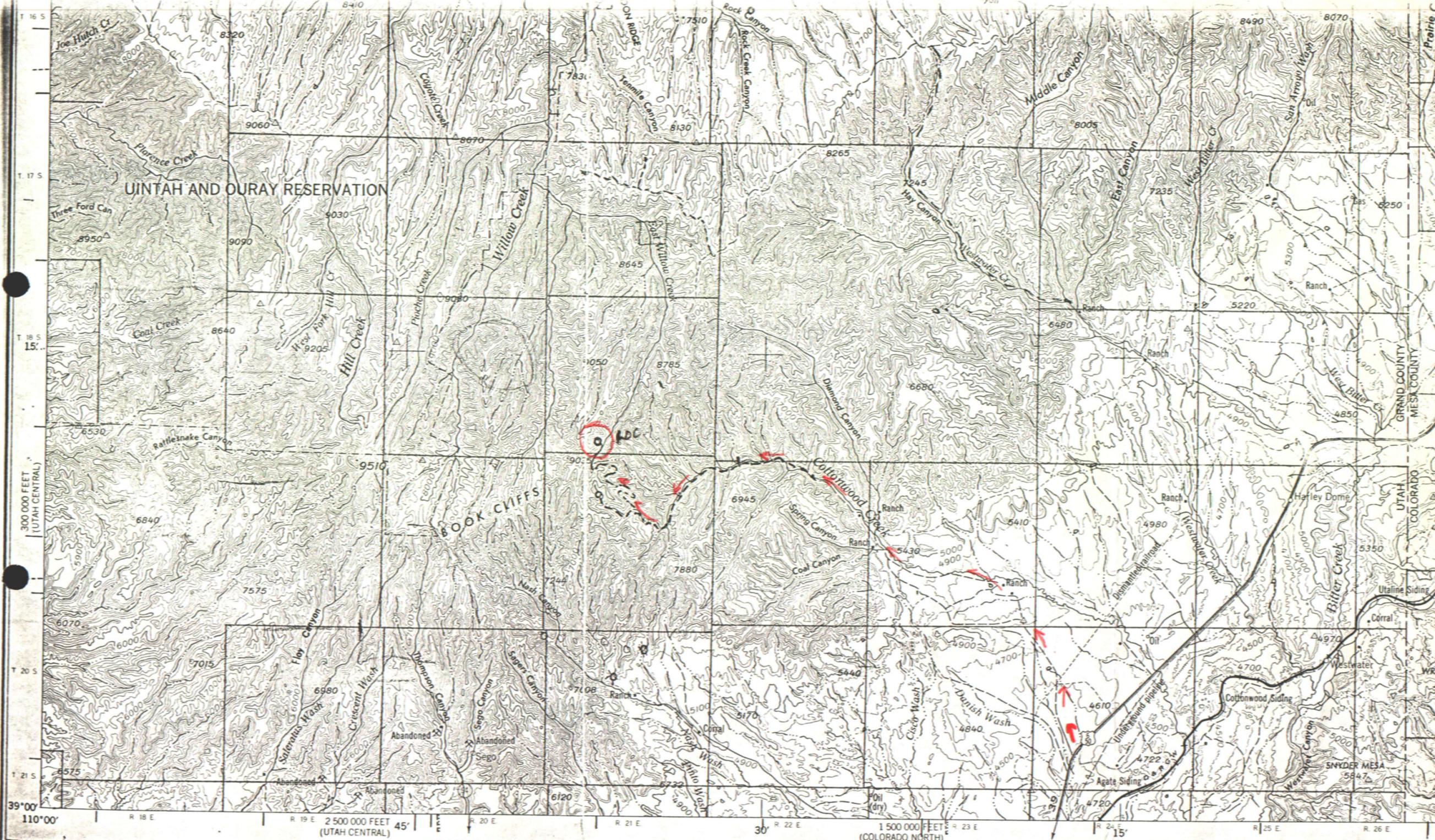


LOCATION PLANS FOR
THE ANSCHUTZ CORPORATION
#1 STATE 414 WELL
SE.SW.SEC.32-18S-21E.
GRAND COUNTY,UTAH

1. A survey plat (Plat No.1) for the location of the subject well is attached. Map No.1, attached, shows the access road up Cottonwood Canyon from I-70. Map No.2 shows the details of the planned road, approx.2½ miles long, from the Cottonwood Canyon road to the location. The present Cottonwood Canyon road ends at a previous well site in Section 9, 19S-21E.
2. The planned access road is shown on Map No.2 and will be constructed up the canyon from Cottonwood Canyon as shown to the head of the canyon and then over the ridge and down into East Willow Creek. This will be about 2½ to 3 miles in length and offers the least road construction of any other access route.
3. There are no other wells near the proposed location. The closest previous well is about 2½ miles away and is located in Section 9 of 19S-21E as shown on Map No.2.
4. See 1 and 2 above.
5. A plan for the location of the completion equipment in the event the well is successful is shown on Plat No.2.
6. The water required for the operation of the rig and for drilling will be obtained from the spring at the head of East Willow creek or from the creek, if running, and will either be hauled to the rig by truck or pumped from the creek to the rig.
7. A plat (Plat No. 3) showing the plan for the equipment layout to be used in the drilling operations of the proposed well is attached. This plat shows the reserve pit with dimensions and trash or burn pit. The excess drilling fluids, rig waste water, and cuttings will be deposited into the reserve pit, and all trash or burnable material will be put into the burn pit. At the completion of the well, these pits will be folded-in and levelled.
8. See location of house trailers on Plat No.3. No other camp facilities will be needed.
9. There are no airstrips in the vicinity of the proposed well site; and it is doubtful that any will be needed.
10. See Plat No.3 for the drilling equipment layout.

11. The topsoil on the location site will be shoved aside prior to levelling the site for the rig; and will be pushed back over the location when the well is finished. The site will be cleaned, levelled and the pits will be covered when the well is finished. The area is sloping gently toward the creek and will require only a small amount of dirt work to make it level for the rig. The site will be reseeded.

12. As can be seen from the topography on Map No.2 the site is at the mouth of a small side canyon on the west side of East Williw Creek. The sides of the Canyons are fairly steep and thus limit the selection of a drill site in the area. Sage brush and grass are present on the surface of the site. The rocks in the surrounding cliff faces belong to the Parachute Creek member of the Green River formation. They consist of thin sands and shale beds and can include oil shale beds.



39°00' 110°00' R 18 E 2 500 000 FEET (UTAH CENTRAL) 45' R 19 E R 20 E R 21 E R 22 E 30' 1 500 000 FEET (COLORADO NORTH) R 23 E R 24 E R 25 E R 26 E

3 MI. TO U. S. 6 & 50

CRESCENT JUNCTION 32 MI.

MAP #1

LEGEND

LOCATION, PLAT FOR
THE ANSCHUTZ CORPORATION
#1 STATE 414 WELL
SE.SW.SEC.32-18S-21E.
GRAND COUNTY, UTAH
Elev.:8285'grd.

1/2 cor.

LC

SW 1/4 SECTION 32

Location



600'
NORTH

31 32
6 5

1900' EAST

1/2 cor.

Scale: 1 in. = 400 ft.
Date: Feb. 20, 1976
Surveyed by: W. Don Quigley

PLAT No.1

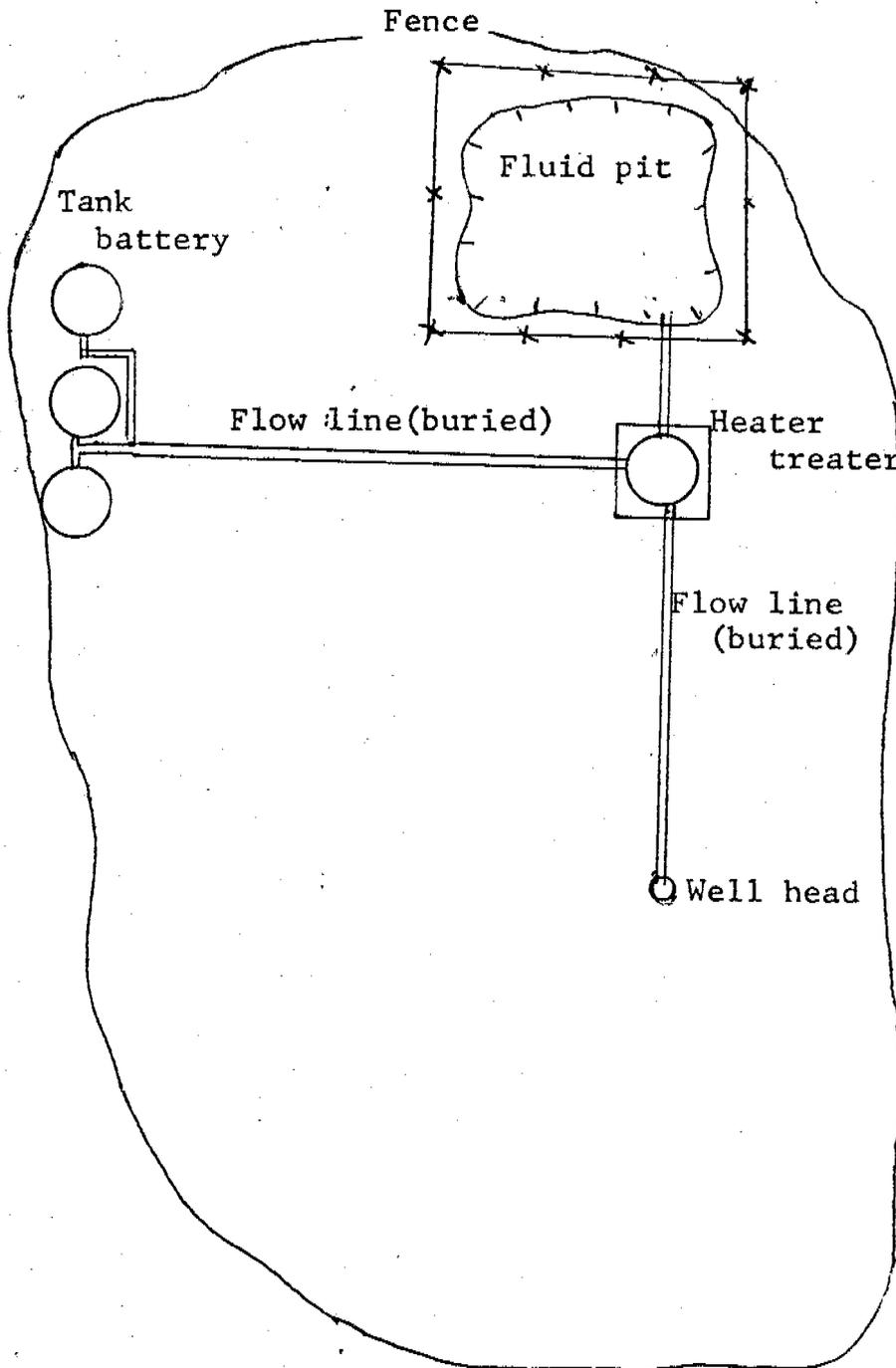
PLAN FOR PRODUCTION EQUIPMENT

THE ANSCHUTZ CORPORATION

#1 STATE 414 WELL

SE.SW.SEC.32-18S-21E.

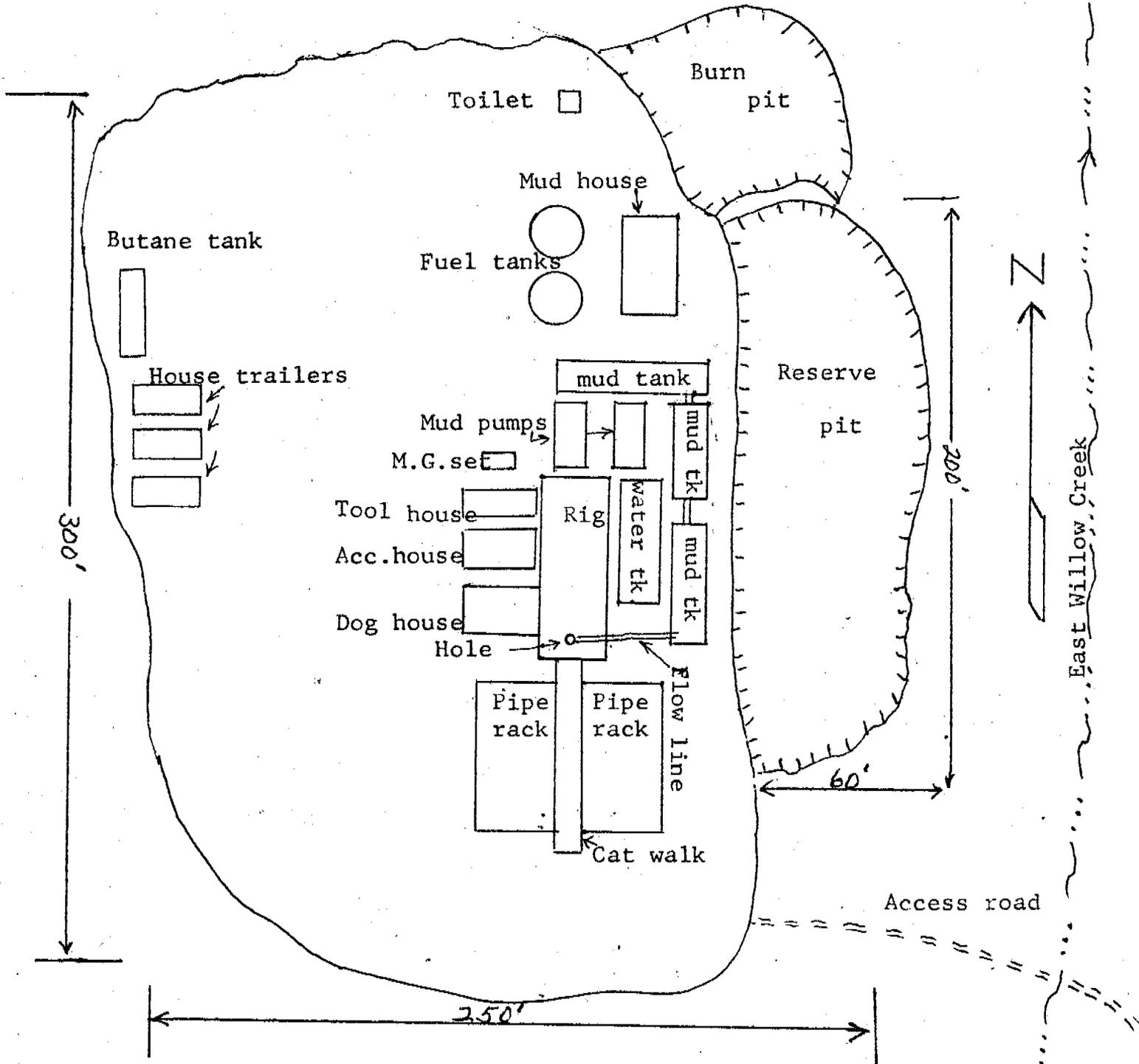
GRAND COUNTY, UTAH



Approx scale: 1 in. = 50 ft.

PLAN FOR DRILLING EQUIPMENT

THE ANSCHUTZ CORPORATION
#1 STATE 414 WELL
SE. SW. SEC. 32-18S-21E.
GRAND COUNTY, UTAH



Approx. scale: 1 in. = 50 ft.

PLAT NO. 3

WELL CONTROL EQUIPMENT FOR
THE ANSCHUTZ CORPORATION
#1 STATE 414 WELL
SE. SW. SEC. 32-18S-21E.
GRAND COUNTY, UTAH

The following control equipment is planned for the above designated well:

1. Surface Casing:
 - A. Hole size for the surface casing is 11".
 - B. Setting depth for surface casing is approx. 300'.
 - C. Casing spes. are: $\frac{5}{8}$ " O.D.; J-55; 36.00#; 8-rd. thread; new or used.
 - D. Anticipated pressure at setting depth is approx. 100 lbs.
 - E. Casing will be run and cemented with 100 sks of cement and with returns to the surface.
 - F. Top of casing will be at ground level.
2. Casing Head:

Flange size: 16"; A.P.I. pressure rating: 3000#; Series 900; Cameron, O.C.T., or equivalent; new or used; equipped with two 2" ports with nipples and 2", 3000# W.P. valves. Casing head and valves will be set above ground.
3. Intermediate Casing:

None
4. Blowout preventers:
 - A. Double rams; hydraulic; one set of blind rams for 4" drill pipe; 10" flange; 3000# W.P.; Series 900; equipped with mechanical wheels and rod for back-up; set on top of casing head and bolted down securely; pressure tested for leaks up to 2000#; Cameron, Shaffer, or equivalent.
 - B. The fill and kill line are to be connected to the the 2" valves in the casing head and are to be heavy duty line pipe or tubing. The kill line will be connected to the mud pump and the flow line will be directed into the reserve pit.
5. Auxilliary Equipment;

A float valve (3000# W.P.) is to be used in the bottom drill collar at all times. A Kelly valve (At least 3000# W.P.) will be installed in the stand pipe and a valve with proper sub will be available for stabbing in the drill pipe or drill collars.
6. Anticipated pressures:

The shut-in pressure of the Dakota formation at a depth of 7200' should be about 2600# or less and the hydrostatic pressure of 9.0#/gal. mud should be about 3300# which would be sufficient safety. The pressures in the Morrison and Entrada zones would not be more than 200# greater than the above pressure for the Dakota.

7. Drilling Fluids:

Normal drilling mud will be used for circulation and should have a weight of about 9#/gal. This should give sufficient hydrostatic pressure to keep the well under control at all times.

8. Production Casing:

A. Hole size for the production casing is 8 3/4". (This large hole size is planned just in case a string of 7" may be required at some point in the well).

B. Approx. setting depth will be 7900'

C. Casing specs. are 5 1/2", 15.50#, J-55.

D. Casing will be run and cemented with approx. 300sks reg. cement with 2% CaCl.

*Field
File*

ENVIRONMENTAL ASSESSMENT
for
ANSCHUTZ #1 STATE 414
WILDCAT OIL AND/OR GAS WELL

on
STATE OF UTAH ML 27414
SE $\frac{1}{4}$ SW $\frac{1}{4}$ Section 32,
Township 18 South, Range 21 East
Grand County, Utah

July 23, 1976

Prepared by:
UTAH DIVISION OF OIL, GAS, AND MINING
Ronald W. Daniels, Coordinator of Mined Land Development
Patrick L. Driscoll, Chief Petroleum Engineer

with the limited use of the access road most wildlife will again utilize areas adjacent to the movement of vehicles. Elk and bear will be less prone to return to areas near the proposed project.

One impact on the environment will be the road itself, an action which is in conflict with the mineral lessor's administrative designation for the area. With the advent of a discovery of oil or gas in this well the potential remains for a field development here. This would lead to increased widespread human and mechanical activity in the area.

Air and water degradation to any significant degree as a result of the drilling itself are not anticipated.

On the positive side of the impacts, a road into this area would be of value in the implementation of multiple-use management in the Bookcliffs. Two uses in addition to the mineral development would be enhanced through construction of the road. Forest management of the scattered Ponderosa Pine, Douglas Fir, and Aspen resource would be improved by providing access for fire protection, insect and disease surveillance, and actual timber harvesting. Grazing by domestic livestock in the right fork of Cottonwood presently appears minimal. With the introduction of a road from the head of East Willow Creek livestock would graze this area more, and movement of livestock would be possible from the head of East Willow to winter feeding areas to the South.

Since plans call for the proposed road to be limited access for well personnel, fire control units, and the grazing permittee, the recreational impact will be low. Two wheeled vehicles however, could pass by most any road barricade and the impact of trail vehicles could be potentially large if the area were "discovered".

IV. MITIGATIVE MEASURES INCLUDED IN THE PROPOSED ACTION

Stabilizing of the proposed drill pad is planned by the operator follow-

ing operations. The pad will be stabilized even with the advent of installing production facilities in the case that a producing well is discovered. A production facility plan is shown on plat #2. The seed mixture for planting is:

<u>SEED</u>	<u>POUND/ACRE</u>
Smooth Brome	4
Orchard Grass	3
Kentucky Bluegrass	1
Crested Wheatgrass	3
Meadow Foxtail	2
Ranger Alfalfa	2

Vegetative protection from grazing will be provided for two growing seasons through fencing. The road design calls for providing adequate drainage from the finished grade.

Access to the road will be limited to those having legitimate business on the project and to administrative responsibility in adjacent areas. Since a portion of the access road crosses Public Domain lands a tramway right-of-way permit will be applied for through the Grand Resources Office of the U.S. Bureau of Land Management.

All applicable safety, blowout prevention, fire prevention, and spillage prevention will be in use for the drilling process itself. In the location of the road and pad the disturbance merchantable timber will be avoided. In locating the road up the right fork of Cottonwood Creek, the oak brush side of the canyon will be followed, thus preventing the destruction of forage.

V. ALTERNATIVES TO THE PROPOSED ACTION

One alternative to the proposed action is no development of the existing lease. If it is determined by the State Land Board, in light of their recent decision to classify the area as roadless, that this is a viable alternative and the exploration for precious liquid hydrocarbons

is less important, a settlement with the lessee on the potential value of the lease would be needed.

Helicopter only access to the drill site is another alternative. Economically, this shows no promise, especially if an oil or gas discovery is made and further development of an oil field is needed.

Whipstock drilling from an existing road-accessible location is a possible alternative which can be discounted for technical reasons. Road access to the location via the East Willow Creek drainage is an alternative which is technically feasible. The impacts of a haulage road in East Willow seem to have more potential for the disruption of animal habitat, stream flow, and drainage patterns.

The original proposal remains to be the most viable alternative of those presented here.

VI. SHORT TERM USES OF THE ENVIRONMENT VS. LONG TERM PRODUCTIVITY

The short term uses planned for this project will not necessarily affect long term productivity of the natural area involved. The option of maintaining this block of State-owned acreage as a roadless area would be negated however.

With a relatively small disturbance in the short term, a productive liquid hydrocarbon discovery could be made. If the discovery would be of sufficient size the area would be productive for many years, yielding valuable and increasingly rare raw materials for the production of energy.

VII. IRREVERSIBLE AND UNRETRIEVABLE COMMITMENTS OF RESOURCES INVOLVED IN THE PROPOSED ACTION

The depletion of the oil reservoir, in the event a discovery is made would be an irreversible action, the resource would be beneficially utilized by man.

With or without a discovery, the road entry into a previously unroaded area would commit the area to road activity. The presence of a road would change both livestock and wildlife use patterns. It seems doubtful that wildlife would completely abandon the area due to roaded entry and associated activities.

SUMMARY AND RECOMMENDATIONS

Conflicting demands for land uses are the crux of the problem presented in the previous assessment. The existence of two management objectives, a roadless area and a valid mineral lease, exhibit a desire to manage on a multiple use basis this block of State-owned acreage.

To achieve multiple use on the project area, the lease and accompanying road should be developed since the actual environmental impacts are not significant. If the principle objective is the maintenance of a roadless area and this overrides the mineral development, the value of the mineral leases should be determined and the lessee compensated.

I. DESCRIPTION OF THE PROPOSED ACTION

Anschutz Corporation plans to drill a well on the existing State oil and gas lease on Section 32, Township 18 South, Range 21 East, SLBM, to determine the liquid hydrocarbon potential of several geologic formations. Tests will be performed in the Mesaverde, Mancos, Dakota, Morrison, and Entrada formations. Maximum depth of drilling will be about 10,000 feet.

The plan for the layout of the drilling equipment is shown on Plat #3. Surface facilities will cover an area of about 250' x 300'. The location of the well on section 32 is shown on Plat #1.

Access to the proposed location is planned via an access road to be constructed by the operator from Cottonwood Canyon. From the point where road construction will commence to the location is 2 3/4 miles straight-line distance. The actual length of the proposed Class III road is 4.4 miles. Map #2 illustrates the route of the access road. The finished road grade width will be 12 feet.

II. DESCRIPTION OF THE ENVIRONMENT POTENTIALLY AFFECTED

The majority of the environment affected by this project will be along the road course. The road begins in the mountain brush type at 7,200' in elevation and proceeds upward through this type in the right hand fork of Cottonwood Creek over the divide at 8,240' into the Cherry Creek drainage and thereafter follows a natural ledge along the contour at about 8,320' and subsequently crosses into the East Willow Creek Drainage where the proposed well is located.

(A) Physical Environment

This localized area of the southern Book Cliffs region is characterized by moderately steep slopes, the result of canyons deeply incised into the surface Wasatch and Green River formations. Flood plain alluvial valleys have formed in the major

canyon bottoms, especially in the lower reaches of Cottonwood Creek. The upper slopes and the heads of most drainages are characterized by massive sandstone outcrops with scattered interbedded lenticular shales.

Precipitation in this area totals approximately 20" annually, the majority of which falls during the winter. Summer precipitation falls in the form of short, violent thunderstorms. Temperature extremes are -20° to +90° F. Freezing temperatures and frost may occur during any month of the year with the right meteorological condition.

Soils are a function of the active weathering process upon parent rocks in the area and therefore are highly variable in depth and composition. In the canyon bottoms soils forming in the colluvial and alluvial deposits range from 1' to 5' in depth. On the canyon sides soils have accumulated, but the parent rock, mostly Wasatch sandstone, outcrops occasionally. The soils exhibiting the most structure are found on the North and East facing slopes of East Willow Creek.

In the project area the slopes are relatively stable. No signs of landslides, slumps, or snowslides were observed during a field evaluation.

No roads exist within two miles of the proposed well location.

(B) Biologic Environment

Overstory vegetation along the proposed road route is typical of the mountain brush type and is comprised of:

<u>COMMON NAME</u>	<u>SCIENTIFIC NAME</u>
Gamble Oak	<i>Quercus gambelii</i>
Utah Serviceberry	<i>Amelanchier utahensis</i>
Mountain Mahogany	<i>Cercocarpus ledifolius</i>
Mountain Maple	<i>Acer glabrum</i>
Bigtooth Maple	<i>Acer grandidentatum</i>

<u>COMMON NAME</u>	<u>SCIENTIFIC NAME</u>
Rocky Mountain Juniper	Juniperus scopulorum
Utah Juniper	Juniperus osteosperma
Pinyon	Pinus edulis

Scattered individuals and alterns of small stands of the following occur along the proposed road route.

<u>COMMON NAME</u>	<u>SCIENTIFIC NAME</u>
Ponderosa pine	Pinus ponderosa
Douglas fir	Tseudotsuga menziesii
Quaking aspen	Populus tremuloides
Mountain cottonwood	Populus angustifolia

Understory vegetation is variable along the proposed road and includes:

<u>COMMON NAME</u>	<u>SCIENTIFIC NAME</u>
Western Yarrow	Archillea lanulosa
Big Sagebrush	Artemesia tridentata
Western Wheatgrass	Agropyron smithii
Woods Rose	Rosa woodsii
Basin Wildrye	Elymus cinereus
Smooth Brome	Bromus inermus
Annual brome	Bromus tectorum
Mountain snowberry	Symphoricarpos oreophilus
Lupines	Lupinus sp.
Elderberry	Sambucus racemosa
Bitterbrush	Purshia tridentata

The vegetation reported here is not a complete inventory but represents a major listing of the species encountered.

On the well site itself, the vegetative composition is dominated by Snowberry and Big sagebrush with an understory of some of the grasses listed above.

Fauna found in the general area of the proposed road and well include both managed wildlife species and domestic livestock.

Managed wildlife big game species include elk, mule deer, bear, and cougar. Small game species include cottontail rabbit, snowshoe hare, and forest grouse. Non-game species are abundant and include coyote, gopher, eagles, hawks, chipmunk, various small rodents, and songbirds.

Though the upper reaches of Cherry Creek, Cottonwood Creek, and East Willow Creek are perennial, these streams do not comprise a sport fishery.

Winter range for the managed big game wildlife is provided in the lower reaches of the right fork of Cottonwood Creek but, the area does not exhibit signs of high-level use by these species.

Cattle grazing is evident in the East Willow Creek drainage but currently livestock use in the right fork of Cottonwood Creek is minimal mostly due to poor access.

The proposed well is in an area which has been declared roadless by the lessor, the Utah State Lands Division.

III. PROBABLE IMPACT OF THE PROPOSED ACTION ON THE ENVIRONMENT

Physically, the proposal will change the land use of approximately 13 acres in surface area. This is based on a 20' right-of-way for a 4.4 mile road and the operations pad measuring 250' x 300'. It is not anticipated that the construction would cause undue erosion or sedimentation into the stream courses encountered.

In quantity, the amount of forage and habitat eliminated through road and pad construction will not be significant to animal utilization. With the initial road construction wildlife utilization of areas adjacent to the road and pad may be reduced. Following construction and



★ SEGE CANYON PETROGLYPHS

70

128

65

70

MAP # 1

LOCATION PLAT FOR
THE ANSCHUTZ CORPORATION
#1 STATE 414 WELL
SE.SW.SEC.32-18S-21E.
GRAND COUNTY,UTAH
Elev.:8285'grd.

1/2 cor.

LC

SW 1/4 SECTION 32

Location



600
NORTH

31 32
6 5

1900' EAST

1/2 cor.

Scale: 1 in. = 400 ft.

Date: Feb. 20, 1976

Surveyed by: W. Don Quigley

PLAT No.1

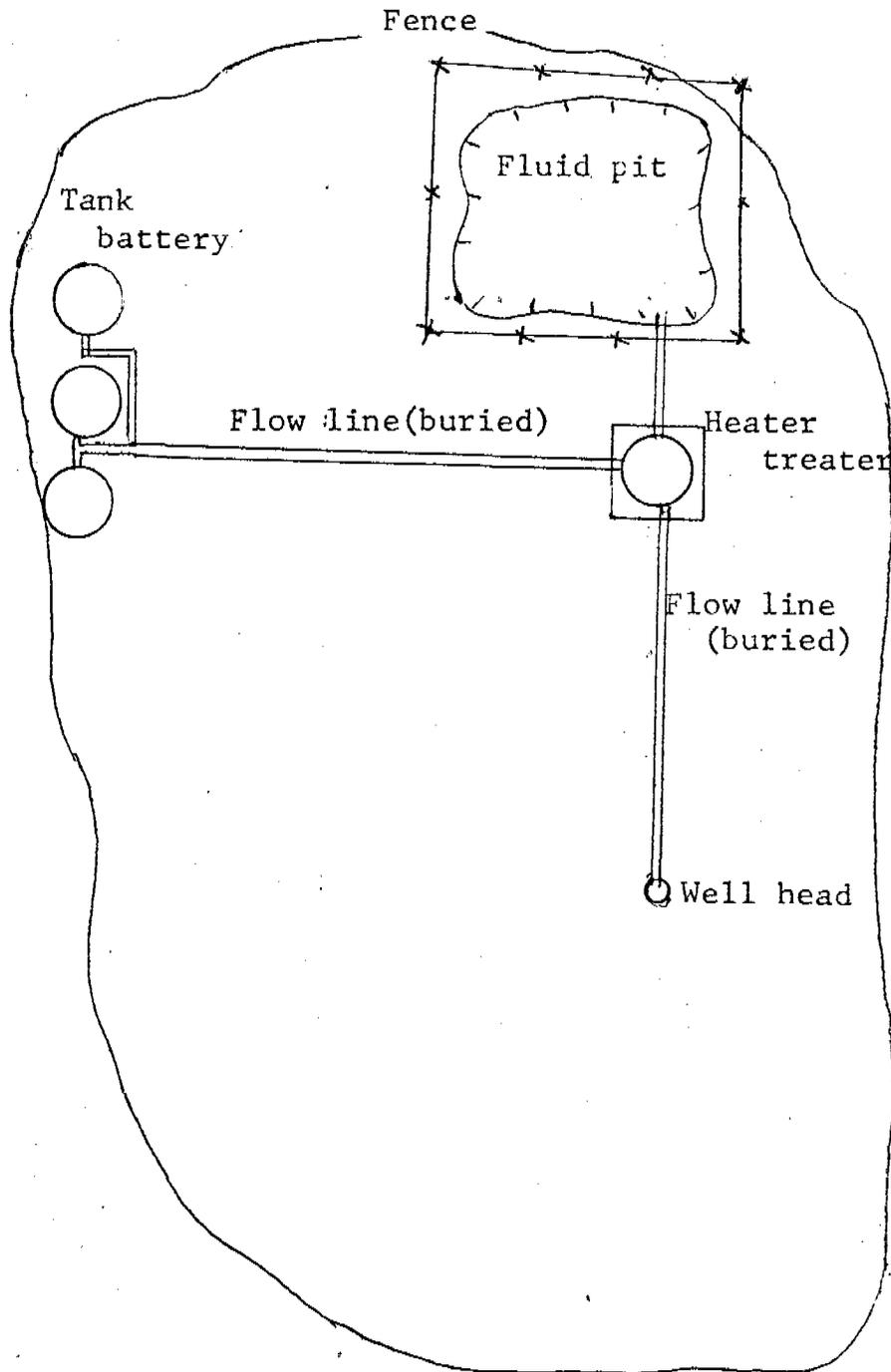
PLAN FOR PRODUCTION EQUIPMENT

THE ANSCHUTZ CORPORATION

#1 STATE 414 WELL

SE. SW. SEC. 32-18S-21E.

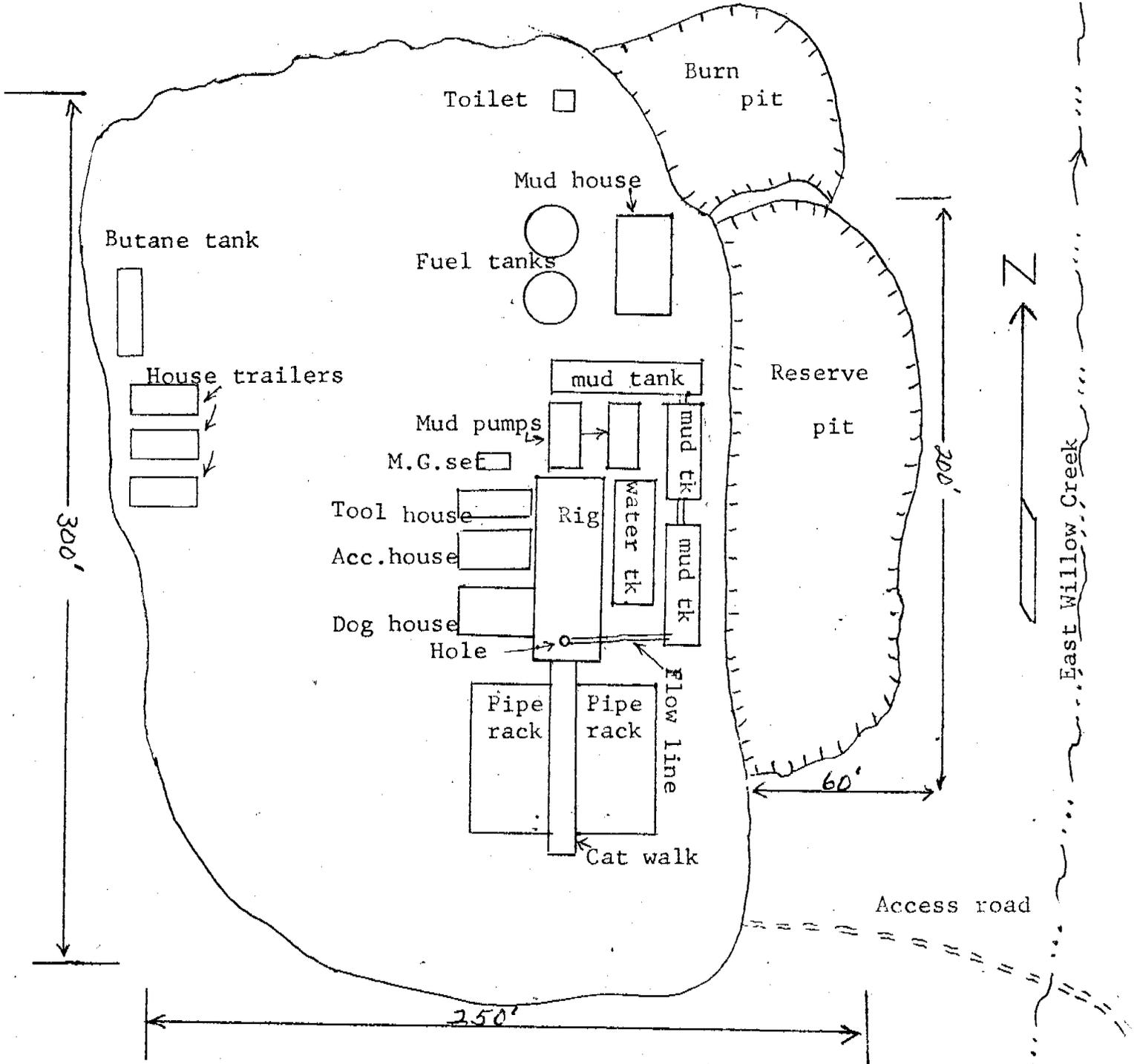
GRAND COUNTY, UTAH



Approx scale: 1 in. = 50 ft.

PLAN FOR DRILLING EQUIPMENT

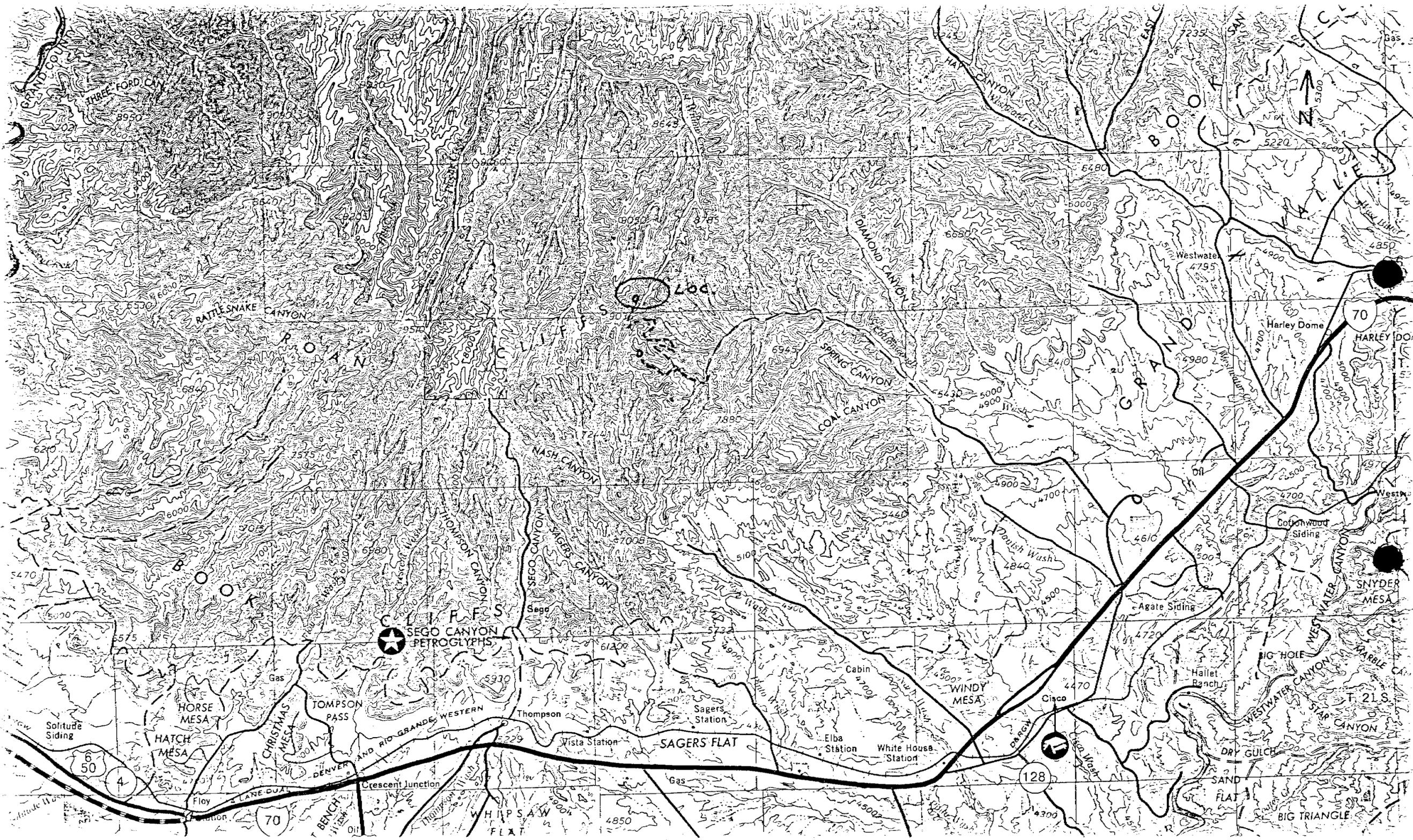
THE ANSCHUTZ CORPORATION
#1 STATE 414 WELL
SE. SW. SEC. 32-18S-21E.
GRAND COUNTY, UTAH



Approx. scale: 1 in. = 50 ft.

PLAT NO. 3

DUPLICATE COPIES OF WELL HISTORY INFORMATION



★ SEJO CANYON PETROGLYPHS

SAGERS FLAT

70 HARLEY DOME

128

THREE FORD CANYON

RATTLESNAKE CANYON

NASH CANYON

SPRING CANYON

COAL CANYON

GRAND

HATCH MESA

TOMPSON PASS

THOMPSON

SAGERS STATION

ELBA STATION

WHITE HOUSE STATION

CISCO

Hallett Ranch

SNYDER MESA

DRY GULCH

SAND FLAT

BIG TRIANGLE

Solitude Siding

FLOY

LANE DUA

WHIPSAW FLAT

WINDY MESA

WINDY MESA

WINDY MESA

WINDY MESA

6500

6000

5500

5000

4500

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3000

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WELL CONTROL EQUIPMENT FOR
THE ANSCHUTZ CORPORATION
#1 STATE 414 WELL
SE.SW.SEC.32-18S-21E.
GRAND COUNTY, UTAH

The following control equipment is planned for the above designated well:

1. Surface Casing:
 - A. Hole size for the surface casing is 11".
 - B. Setting depth for surface casing is approx. 300'.
 - C. Casing spes. are: $\frac{5}{8}$ " O.D.; J-55; 31.00#; 8-rd. thread; new or used.
 - D. Anticipated pressure at setting depth is approx. 100 lbs.
 - E. Casing will be run and cemented with 100 sks of cement and with returns to the surface.
 - F. Top of casing will be at ground level.
2. Casing Head:

Flange size: 16"; A.P.I. pressure rating: 3000#; Series 900; Cameron, O.C.T., or equivalent; new or used; equipped with two 2" ports with nipples and 2", 3000# W.P. valves. Casing head and valves will be set above ground.
3. Intermediate Casing:

None
4. Blowout preventers:
 - A. Double rams; hydraulic; one set of blind rams for 4" drill pipe; 10" flange; 3000# W.P.; Series 900; equipped with mechanical wheels and rod for back-up; set on top of casing head and bolted down securely; pressure tested for leaks up to 2000#; Cameron, Shaffer, or equivalent.
 - B. The fill and kill line are to be connected to the the 2" valves in the casing head and are to be heavy duty line pipe or tubing. The kill line will be connected to the mud pump and the flow line will be directed into the reserve pit.
5. Auxilliary Equipment;

A float valve (3000# W.P.) is to be used in the bottom drill collar at all times. A Kelly valve (At least 3000# W.P.) will be installed in the stand pipe and a valve with proper sub will be available for stabbing in the drill pipe or drill collars.
6. Anticipated pressures:

The shut-in pressure of the Dakota formation at a depth of 7200' should be about 2600# or less and the hydrostatic pressure of 9.0#/gal. mud should be about 3300# which would be sufficient safety. The pressures in the Morrison and Entrada zones would not be more than 200# greater than the above pressure for the Dakota.

7. Drilling Fluids:

Normal drilling mud will be used for circulation and should have a weight of about 9#/gal. This should give sufficient hydrostatic pressure to keep the well under control at all times.

8. Production Casing:

A. Hole size for the production casing is 8 3/4". (This large hole size is planned just in case a string of 7" may be required at some point in the well).

B. Approx. setting depth will be 7900'

C. Casing specs. are 5 1/2", 15.50#, J-55.

D. Casing will be run and cemented with approx. 300sks reg. cement with 2% CaCl.

ENVIRONMENTAL ASSESSMENT
for
ANSCHUTZ #1 STATE 414
WILDCAT OIL AND/OR GAS WELL

on
STATE OF UTAH ML 27414
SE $\frac{1}{4}$ SW $\frac{1}{4}$ Section 32,
Township 18 South, Range 21 East
Grand County, Utah

July 23, 1976

Prepared by:
UTAH DIVISION OF OIL, GAS, AND MINING
Ronald W. Daniels, Coordinator of Mined Land Development
Patrick L. Driscoll, Chief Petroleum Engineer

I. DESCRIPTION OF THE PROPOSED ACTION

Anschutz Corporation plans to drill a well on the existing State oil and gas lease on Section 32, Township 18 South, Range 21 East, SLBM, to determine the liquid hydrocarbon potential of several geologic formations. Tests will be performed in the Mesaverde, Mancos, Dakota, Morrison, and Entrada formations. Maximum depth of drilling will be about 10,000 feet.

The plan for the layout of the drilling equipment is shown on Plat #3. Surface facilities will cover an area of about 250' x 300'. The location of the well on section 32 is shown on Plat #1.

Access to the proposed location is planned via an access road to be constructed by the operator from Cottonwood Canyon. From the point where road construction will commence to the location is 2 3/4 miles straight-line distance. The actual length of the proposed Class III road is 4.4 miles. Map #2 illustrates the route of the access road. The finished road grade width will be 12 feet.

II. DESCRIPTION OF THE ENVIRONMENT POTENTIALLY AFFECTED

The majority of the environment affected by this project will be along the road course. The road begins in the mountain brush type at 7,200' in elevation and proceeds upward through this type in the right hand fork of Cottonwood Creek over the divide at 8,240' into the Cherry Creek drainage and thereafter follows a natural ledge along the contour at about 8,320' and subsequently crosses into the East Willow Creek Drainage where the proposed well is located.

(A) Physical Environment

This localized area of the southern Book Cliffs region is characterized by moderately steep slopes, the result of canyons deeply incised into the surface Wasatch and Green River formations. Flood plain alluvial valleys have formed in the major

canyon bottoms, especially in the lower reaches of Cottonwood Creek. The upper slopes and the heads of most drainages are characterized by massive sandstone outcrops with scattered interbedded lenticular shales.

Precipitation in this area totals approximately 20" annually, the majority of which falls during the winter. Summer precipitation falls in the form of short, violent thunderstorms. Temperature extremes are -20° to +90° F. Freezing temperatures and frost may occur during any month of the year with the right meteorological condition.

Soils are a function of the active weathering process upon parent rocks in the area and therefore are highly variable in depth and composition. In the canyon bottoms soils forming in the colluvial and alluvial deposits range from 1' to 5' in depth. On the canyon sides soils have accumulated, but the parent rock, mostly Wasatch sandstone, outcrops occasionally. The soils exhibiting the most structure are found on the North and East facing slopes of East Willow Creek.

In the project area the slopes are relatively stable. No signs of landslides, slumps, or snowslides were observed during a field evaluation.

No roads exist within two miles of the proposed well location.

(B) Biologic Environment

Overstory vegetation along the proposed road route is typical of the mountain brush type and is comprised of:

<u>COMMON NAME</u>	<u>SCIENTIFIC NAME</u>
Gamble Oak	<i>Quercus gambelii</i>
Utah Serviceberry	<i>Amelanchier utahensis</i>
Mountain Mahogany	<i>Cercocarpus ledifolius</i>
Mountain Maple	<i>Acer glabrum</i>
Bigtooth Maple	<i>Acer grandidentatum</i>

<u>COMMON NAME</u>	<u>SCIENTIFIC NAME</u>
Rocky Mountain Juniper	Juniperus scopulorum
Utah Juniper	Juniperus osteosperma
Pinyon	Pinus edulis

Scattered individuals and alterns of small stands of the following occur along the proposed road route.

<u>COMMON NAME</u>	<u>SCIENTIFIC NAME</u>
Ponderosa pine	Pinus ponderosa
Douglas fir	Tseudotsuga menziesii
Quaking aspen	Populus tremuloides
Mountain cottonwood	Populus angustifolia

Understory vegetation is variable along the proposed road and includes:

<u>COMMON NAME</u>	<u>SCIENTIFIC NAME</u>
Western Yarrow	Archillea lanulosa
Big Sagebrush	Artemesia tridentata
Western Wheatgrass	Agropyron smithii
Woods Rose	Rosa woodsii
Basin Wildrye	Elymus cinereus
Smooth Brome	Bromus inermus
Annual brome	Bromus tectorum
Mountain snowberry	Symphoricarpos oreophilus
Lupines	Lupinus sp.
Elderberry	Sambucus racemosa
Bitterbrush	Purshia tridentata

The vegetation reported here is not a complete inventory but represents a major listing of the species encountered.

On the well site itself, the vegetative composition is dominated by Snowberry and Big sagebrush with an understory of some of the grasses listed above.

Fauna found in the general area of the proposed road and well include both managed wildlife species and domestic livestock.

Managed wildlife big game species include elk, mule deer, bear, and cougar. Small game species include cottontail rabbit, snowshoe hare, and forest grouse. Non-game species are abundant and include coyote, gopher, eagles, hawks, chipmunk, various small rodents, and songbirds.

Though the upper reaches of Cherry Creek, Cottonwood Creek, and East Willow Creek are perennial, these streams do not comprise a sport fishery.

Winter range for the managed big game wildlife is provided in the lower reaches of the right fork of Cottonwood Creek but, the area does not exhibit signs of high-level use by these species.

Cattle grazing is evident in the East Willow Creek drainage but currently livestock use in the right fork of Cottonwood Creek is minimal mostly due to poor access.

The proposed well is in an area which has been declared roadless by the lessor, the Utah State Lands Division.

III. PROBABLE IMPACT OF THE PROPOSED ACTION ON THE ENVIRONMENT

Physically, the proposal will change the land use of approximately 13 acres in surface area. This is based on a 20' right-of-way for a 4.4 mile road and the operations pad measuring 250' x 300'. It is not anticipated that the construction would cause undue erosion or sedimentation into the stream courses encountered.

In quantity, the amount of forage and habitat eliminated through road and pad construction will not be significant to animal utilization. With the initial road construction wildlife utilization of areas adjacent to the road and pad may be reduced. Following construction and

with the limited use of the access road most wildlife will again utilize areas adjacent to the movement of vehicles. Elk and bear will be less prone to return to areas near the proposed project.

One impact on the environment will be the road itself, an action which is in conflict with the mineral lessor's administrative designation for the area. With the advent of a discovery of oil or gas in this well the potential remains for a field development here. This would lead to increased widespread human and mechanical activity in the area.

Air and water degradation to any significant degree as a result of the drilling itself are not anticipated.

On the positive side of the impacts, a road into this area would be of value in the implementation of multiple-use management in the Bookcliffs. Two uses in addition to the mineral development would be enhanced through construction of the road. Forest management of the scattered Ponderosa Pine, Douglas Fir, and Aspen resource would be improved by providing access for fire protection, insect and disease surveillance, and actual timber harvesting. Grazing by domestic livestock in the right fork of Cottonwood presently appears minimal. With the introduction of a road from the head of East Willow Creek livestock would graze this area more, and movement of livestock would be possible from the head of East Willow to winter feeding areas to the South.

Since plans call for the proposed road to be limited access for well personnel, fire control units, and the grazing permittee, the recreational impact will be low. Two wheeled vehicles however, could pass by most any road barricade and the impact of trail vehicles could be potentially large if the area were "discovered".

IV. MITIGATIVE MEASURES INCLUDED IN THE PROPOSED ACTION

Stabilizing of the proposed drill pad is planned by the operator follow-

ing operations. The pad will be stabilized even with the advent of installing production facilities in the case that a producing well is discovered. A production facility plan is shown on plat #2. The seed mixture for planting is:

<u>SEED</u>	<u>POUND/ACRE</u>
Smooth Brome	4
Orchard Grass	3
Kentucky Bluegrass	1
Crested Wheatgrass	3
Meadow Foxtail	2
Ranger Alfalfa	2

Vegetative protection from grazing will be provided for two growing seasons through fencing. The road design calls for providing adequate drainage from the finished grade.

Access to the road will be limited to those having legitimate business on the project and to administrative responsibility in adjacent areas. Since a portion of the access road crosses Public Domain lands a tramway right-of-way permit will be applied for through the Grand Resources Office of the U.S. Bureau of Land Management.

All applicable safety, blowout prevention, fire prevention, and spillage prevention will be in use for the drilling process itself. In the location of the road and pad the disturbance merchantable timber will be avoided. In locating the road up the right fork of Cottonwood Creek, the oak brush side of the canyon will be followed, thus preventing the destruction of forage.

V. ALTERNATIVES TO THE PROPOSED ACTION

One alternative to the proposed action is no development of the existing lease. If it is determined by the State Land Board, in light of their recent decision to classify the area as roadless, that this is a viable alternative and the exploration for precious liquid hydrocarbons

is less important, a settlement with the lessee on the potential value of the lease would be needed.

Helicopter only access to the drill site is another alternative. Economically, this shows no promise, especially if an oil or gas discovery is made and further development of an oil field is needed.

Whipstock drilling from an existing road-accessible location is a possible alternative which can be discounted for technical reasons. Road access to the location via the East Willow Creek drainage is an alternative which is technically feasible. The impacts of a haulage road in East Willow seem to have more potential for the disruption of animal habitat, stream flow, and drainage patterns.

The original proposal remains to be the most viable alternative of those presented here.

VI. SHORT TERM USES OF THE ENVIRONMENT VS. LONG TERM PRODUCTIVITY

The short term uses planned for this project will not necessarily affect long term productivity of the natural area involved. The option of maintaining this block of State-owned acreage as a roadless area would be negated however.

With a relatively small disturbance in the short term, a productive liquid hydrocarbon discovery could be made. If the discovery would be of sufficient size the area would be productive for many years, yielding valuable and increasingly rare raw materials for the production of energy.

VII. IRREVERSIBLE AND UNRETRIEVABLE COMMITMENTS OF RESOURCES INVOLVED IN THE PROPOSED ACTION

The depletion of the oil reservoir, in the event a discovery is made would be an irreversible action, the resource would be beneficially utilized by man.

With or without a discovery, the road entry into a previously unroaded area would commit the area to road activity. The presence of a road would change both livestock and wildlife use patterns. It seems doubtful that wildlife would completely abandon the area due to roaded entry and associated activities.

SUMMARY AND RECOMMENDATIONS

Conflicting demands for land uses are the crux of the problem presented in the previous assessment. The existence of two management objectives, a roadless area and a valid mineral lease, exhibit a desire to manage on a multiple use basis this block of State-owned acreage.

To achieve multiple use on the project area, the lease and accompanying road should be developed since the actual environmental impacts are not significant. If the principle objective is the maintenance of a roadless area and this overrides the mineral development, the value of the mineral leases should be determined and the lessee compensated.

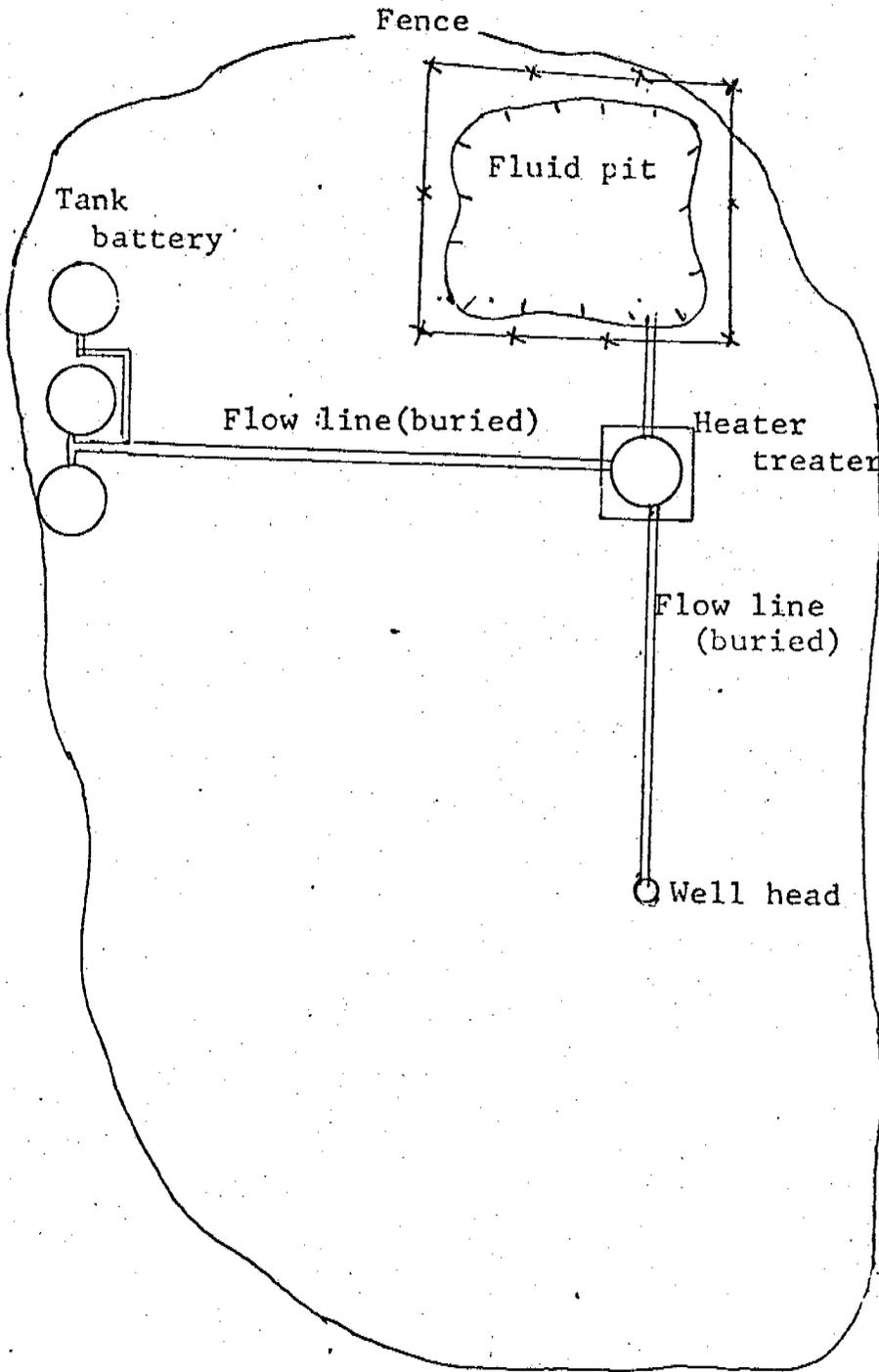
PLAN FOR PRODUCTION EQUIPMENT

THE ANSCHUTZ CORPORATION

#1 STATE 414 WELL

SE. SW. SEC. 32-18S-21E.

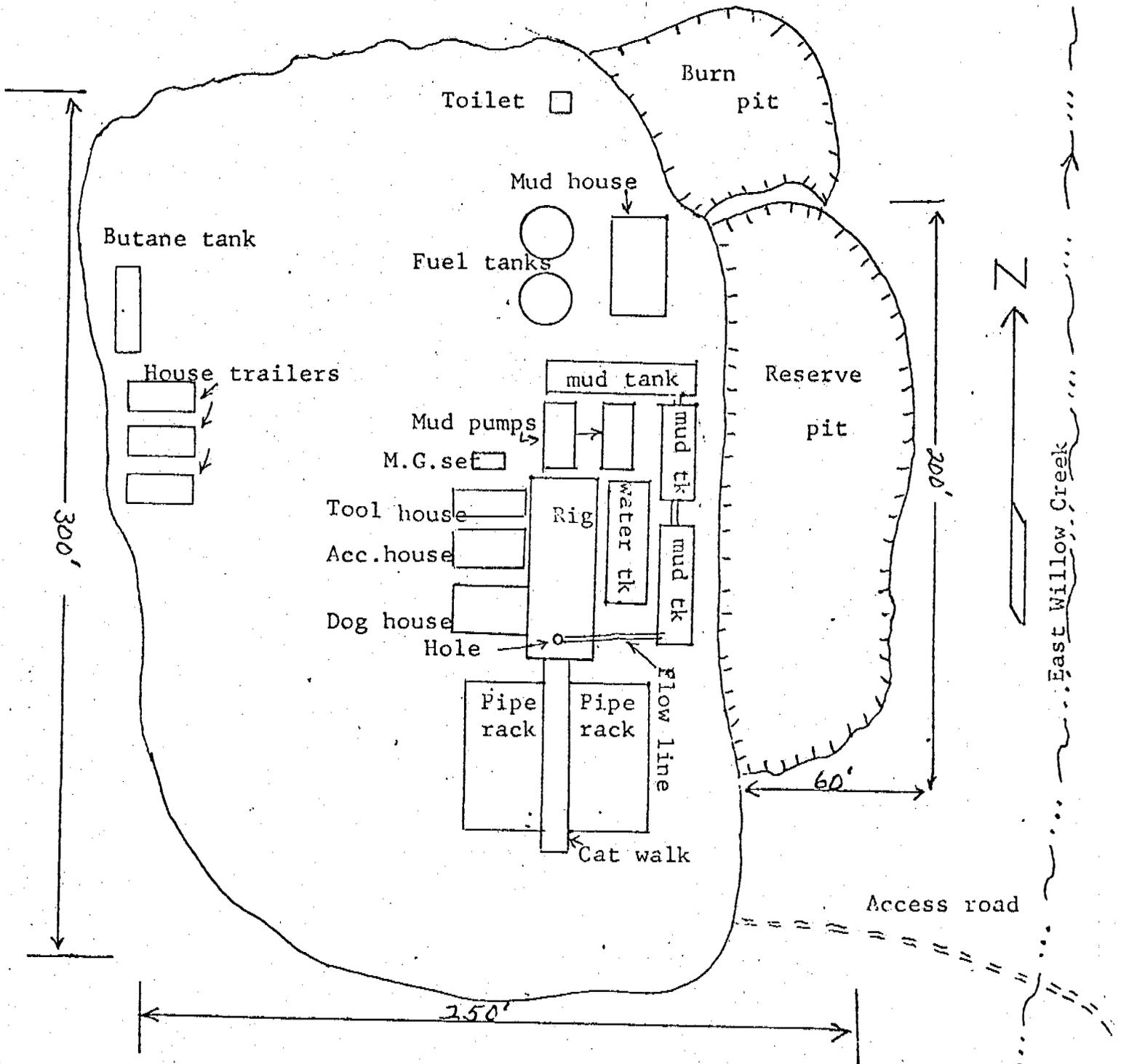
GRAND COUNTY, UTAH



Approx scale: 1 in. = 50 ft

PLAN FOR DRILLING EQUIPMENT

THE ANSCHUTZ CORPORATION
#1 STATE 414 WELL-
SE. SW. SEC. 32-18S-21E.
GRAND COUNTY, UTAH



Approx. scale: 1 in. = 50 ft.

DIVISION OF OIL, GAS, AND MINING

FILE NOTATIONS

Date: July 19, 1976
 Operator: The Anschutz *Leysma* Corporation
 Well No: State # 1-414
 Location: Sec. 32 T. 18S R. 21E County: Grand

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

Checked By:

Administrative Assistant: [Signature]

Remarks: See approval letter for condition of approval - A.W.

Petroleum Engineer/Mined Land Coordinator: [Signature]

Remarks:

Director: [Signature]

Remarks:

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:
Attorney General Opinion Letter Written
9-10-76

(Holding For E.I.S.)















































DONALD T. McMILLAN
Director

UTAH GEOLOGICAL AND MINERAL SURVEY

606 BLACK HAWK WAY
SALT LAKE CITY, UTAH 84108
(801) 581-6831

August 5, 1976

CALVIN L. RAMPTON
Governor

GORDON E. HARMSTON
Executive Director
Department of Natural Resources

MEMORANDUM

TO: Bruce N. Kaliser

FROM: Howard R. Ritzma

SUBJECT: Proposed test well by Anschutz Corporation, section 32, T. 18 S.,
R. 21 E., Grand County, Utah.

This well is proposed on State of Utah Mineral Lease 27414 in SE $\frac{1}{4}$ SW $\frac{1}{4}$, section 32, T. 18 S., R. 21 E., Grand County by Anschutz Corporation. The well is located in a large block of State of Utah lands in what has been designated as a "roadless" area.

The following will answer specific questions posed by the Environmental Coordinating Committee.

GEOLOGIC SETTING OF WELL SITE

Formations present in the area are:

TERTIARY

Green River Formation (Eocene)

transitional contact

Wasatch Formation (Eocene-Paleocene?)

transitional contact

TERTIARY-CRETACEOUS

Tuscher Formation (Paleocene-Cretaceous)

CRETACEOUS

Mesaverde Formation*

Mancos Shale

Castlegate Sandstone* in upper part

Ferron Sandstone* near base

Dakota Formation**

Cedar Mountain Formation*

JURASSIC

Morrison Formation**

Entrada Sandstone**

TRIASSIC

Chinle Formation (redbeds)

PRECAMBRIAN

Granite and metamorphic rocks

OBJECTIVES

* minor

** major

The well site is in the transition between the Green River and Wasatch formations. These formations dip a few degrees to the northwest. This dip reflects in only a general sort of way the structure of the underlying Cretaceous formations. These older rocks are almost certain to be more strongly folded and broken by faults, particularly those below the 4500 foot-thick Mancos Shale which acts as a "cushion" for structural movements. Major objectives of exploratory drilling are below the Mancos Shale. Without geophysical information and exploratory drilling, there is no way of predicting the structural configuration of the beds below the Mancos Shale in this area.

The well site is on the northwesterly trending projection of Cottonwood Anticline. Topography and drainage patterns suggest that this fold is expressed prominently through this area in the Cretaceous formations but that the folding does not extend upward into the overlying Tertiary formations.

MOVING THE WELL SITE

Siting the well on this anticlinal trend affords the Anschutz Corporation what may be assumed to be the best possible location based on geologic structure. Moving the site to the south would put it into the syncline between Cottonwood Anticline and Cisco Dome to the south. It should be noted that a dry hole was drilled 2.2 miles south-southeast of the site. It tested the Morrison Formation at a total depth of 6801 feet.

Since there are few wells in the area, there is almost no stratigraphic control to guide location of wells. Sandstones in the Dakota, Cedar Mountain and upper Morrison formations are known to be channel sandstones of highly erratic areal extent and variable thickness. Without control from numerous wells it is impossible to estimate the presence or absence of these sands at a particular site. Initial exploratory drilling in these sandstones must of necessity be based on favorable structural position.

The potential reservoirs of the lower Morrison Formation and the Entrada Sandstone are blanket-type sandstones and produce gas and oil primarily at favorable structural locations. The Anschutz Corporation's well site is presumably such a location.

The well site chosen by Anschutz Corporation is presumably the best location based on what is known of the geologic structure of the area. There are no easy alternatives to the site.

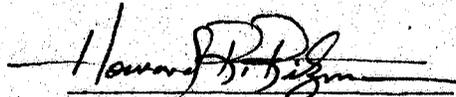
CHANCES FOR SUCCESS

The proposed well ranks as a wildcat and the odds for making a commercial discovery here are probably one in 25 to 30. The well is more likely to discover gas than oil in the Mesaverde through Morrison interval and might encounter either oil or gas in the Entrada. The presence of minor accumulations of oil in the Entrada at the Left Hand Canyon and Bull Canyon fields to the south (on the faulted flank of Cisco Dome) may indicate the possibility of larger oil accumulations in the Entrada at lower structural levels deeper into the Uinta Basin (at this well site).

ECONOMIC CONSIDERATIONS

The cost of drilling a 10,000 foot well at this location will probably exceed \$350,000, not counting costs of completing and equipping a well in event a discovery is made. Anschutz Corporation has already committed a sizable but unknown amount of money in lease acquisition and maintenance, geology and geophysics.

Discovery of oil and gas at this location could bring welcome royalty payments to the State of Utah (12.5% of gross). A gas discovery at this location could open important new supplies of this needed and precious commodity. Gas in this part of the Uinta Basin would undoubtedly be sold in the Wasatch Front region through existing pipelines only 6 to 13 miles distant from the well site.


HOWARD R. RITZMA

HRR:af



DONALD T. McMILLAN
Director

UTAH GEOLOGICAL AND MINERAL SURVEY

606 BLACK HAWK WAY
SALT LAKE CITY, UTAH 84108
(801) 581-6831

August 5, 1976

Rm
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TERTIARY-CRETACEOUS

Tuscher Formation (Paleocene-Cretaceous)

CRETACEOUS

Mesaverde Formation*
Mancos Shale
Castlegate Sandstone* in upper part
Ferron Sandstone* near base
Dakota Formation**
Cedar Mountain Formation*

JURASSIC

Morrison Formation**
Entrada Sandstone**

TRIASSIC

Chinle Formation (redbeds)

PRECAMBRIAN

Granite and metamorphic rocks

OBJECTIVES

* minor
** major

The well site is in the transition between the Green River and Wasatch formations. These formations dip a few degrees to the northwest. This dip reflects in only a general sort of way the structure of the underlying Cretaceous formations. These older rocks are almost certain to be more strongly folded and broken by faults, particularly those below the 4500 foot-thick Mancos Shale which acts as a "cushion" for structural movements. Major objectives of exploratory drilling are below the Mancos Shale. Without geophysical information and exploratory drilling, there is no way of predicting the structural configuration of the beds below the Mancos Shale in this area.

The well site is on the northwesterly trending projection of Cottonwood Anticline. Topography and drainage patterns suggest that this fold is expressed prominently through this area in the Cretaceous formations but that the folding does not extend upward into the overlying Tertiary formations.

MOVING THE WELL SITE

Siting the well on this anticlinal trend affords the Anschutz Corporation what may be assumed to be the best possible location based on geologic structure. Moving the site to the south would put it into the syncline between Cottonwood Anticline and Cisco Dome to the south. It should be noted that a dry hole was drilled 2.2 miles south-southeast of the site. It tested the Morrison Formation at a total depth of 6801 feet.

Since there are few wells in the area, there is almost no stratigraphic control to guide location of wells. Sandstones in the Dakota, Cedar Mountain and upper Morrison formations are known to be channel sandstones of highly erratic areal extent and variable thickness. Without control from numerous wells it is impossible to estimate the presence or absence of these sands at a particular site. Initial exploratory drilling in these sandstones must of necessity be based on favorable structural position.

The potential reservoirs of the lower Morrison Formation and the Entrada Sandstone are blanket-type sandstones and produce gas and oil primarily at favorable structural locations. The Anschutz Corporation's well site is presumably such a location.

The well site chosen by Anschutz Corporation is presumably the best location based on what is known of the geologic structure of the area. There are no easy alternatives to the site.

CHANCES FOR SUCCESS

The proposed well ranks as a wildcat and the odds for making a commercial discovery here are probably one in 25 to 30. The well is more likely to discover gas than oil in the Mesaverde through Morrison interval and might encounter either oil or gas in the Entrada. The presence of minor accumulations of oil in the Entrada at the Left Hand Canyon and Bull Canyon fields to the south (on the faulted flank of Cisco Dome) may indicate the possibility of larger oil accumulations in the Entrada at lower structural levels deeper into the Uinta Basin (at this well site).

ECONOMIC CONSIDERATIONS

The cost of drilling a 10,000 foot well at this location will probably exceed \$350,000, not counting costs of completing and equipping a well in event a discovery is made. Anschutz Corporation has already committed a sizable but unknown amount of money in lease acquisition and maintenance, geology and geophysics.

Discovery of oil and gas at this location could bring welcome royalty payments to the State of Utah (12.5% of gross). A gas discovery at this location could open important new supplies of this needed and precious commodity. Gas in this part of the Uinta Basin would undoubtedly be sold in the Wasatch Front region through existing pipelines only 6 to 13 miles distant from the well site.


HOWARD R. RITZMA

HRR:af

August 10, 1976

Mr. Paul E. Riemann
Assistant Attorney General
1586 South 2200 East
Salt Lake City, Utah

Dear Paul,

Anschutz Corporation has filed an "Application for Pursuit to Drill" for a well to be located in Section 32, T. 18 S., R. 21 E., ~~SE 1/4~~ S.L.B.M., Grand County, Utah. Said Corporation is the holder of State oil and gas lease ML 27414, which was issued on March 24, 1971, and covers the aforementioned section.

On August 21, 1975, the State Land Board set aside approximately 45,000 contiguous acres in Grand County as a roadless area, Section 32 was included in this acreage. As a result, for all practical purposes, Anschutz is unable to drill the above mentioned well. Operations would require building a road into the location (see Paragraph V of the attached Environmental Assessment.)

It would appear that the majority of agencies concerned with the area, such as the State Land Board, Division of Wildlife Resources, etc., would like to have the "roadless" category maintained.

Therefore, it is requested that an opinion be given as to the following:

1. *After an oil and gas lease has been granted on specific acreage, can the Land Board legally set aside said acreage, together with other State lands, as a roadless area to the extent that egress and ingress by oil well drilling equipment can only be made via air?*

Mr. Paul Reimann
August 10, 1976
Page Two

2. If the first question is answered in the negative, can the State Land Board terminate ML 27414 if all monies paid by Anschutz Corporation are returned, as well as additional compensation for loss of anticipated gas and/or oil production?
3. After having fully complied with the general Rules and Regulations of this Division, can Anschutz's application for "Permit to Drill" said well legally be denied by this office?

Very truly yours,

DIVISION OF OIL, GAS, AND MINING

CLEON B. FEIGHT
DIRECTOR

CBF:tb

cc: Division of State Lands

Gordon Harmston, Executive Director
Department of Natural Resources

*Copy to Environmental
Committee*



Schelle
Pa

CALVIN L. RAMPTON
Governor

OIL, GAS, AND MINING BOARD

GORDON E. HARMSTON
Executive Director,
NATURAL RESOURCES

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES

GUY N. CARDON
Chairman

CLEON B. FEIGHT
Director

DIVISION OF OIL, GAS, AND MINING
1588 West North Temple
Salt Lake City, Utah 84116
(801) 533-5771

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

August 11, 1976

Governor's Environmental
Coordinating Committee
Planning Coordinator's Office
Room 118
State Capitol Bldg.
Salt Lake City, Utah

ATTENTION: Chauncey Powis

Re: Anschutz Corporation
Lease: ML27414 (#1 State 414)
Sec. 32, T. 18 S., R. 21 E.
Grand County, Utah

Gentlemen:

For your information, attached is a copy of a request for an opinion from the Attorney General for Anschutz Corporation's application to drill the above mentioned well.

It is our understanding that said Corporation intends to appeal to the District Court if their application is not approved. Since the Attorney General will be required to represent the State, it is felt that he should be brought into the picture without delay. As soon as this Division receives an answer to this request, a copy will be furnished to the Committee.

Governor's Environmental
Coordinating Committee
August 11, 1976
Page Two

In the meantime, you are hereby put on notice, that should the first and second questions be answered in the negative, the application to drill will receive immediate approval. Thus, any future action to prevent or delay the drilling of said well will be up to the State Land Board.

Very truly yours,

DIVISION OF OIL, GAS, AND MINING

CLEON B. FEIGHT
DIRECTOR

CBF:tb

cc: Gordon Hamston , Dept. Natural Resources

State Land Board

Mr. Paul Reimann

ECC

August 17, 1976

Page Two

Discussion on the Anschutz Proposal

Bruce made an on-site inspection of this proposed wildcat well location. He stated that he had to walk 4-6 miles through very rugged terrain to get sight on the area of concern. It was his opinion that chances of erosion were slim as the area is consistant of hard sandstone. Bruce estimated a cost of around \$100,000. to construct a road four and one-half (4½) miles in length from the ending of the present road, to the well site.

Scheree Wilcox of the Division of Oil, Gas, and Mining, informed the members that there has been submitted to the Attorney General a request for an opinion to determine the Division's legal position for approving or denying approval of Anschutz's application.

Jeff Brinton with the Division of State Lands showed great concern with this project. He motioned that a Environmental Statement be composed to investigate costs of alternatives, and specific environmental disturbances. Transportation by helicopter was suggested a good possible alternative, but at approximately \$3,000. per hour quite a costly one. The alternative of substituting acreage will be given more consideration as well. It seems that Anschutz is the lease holder of a number of leases in this area. Jeff stated that a letter has been written to the Bureau of Land Management inquiring their standing relative to the right-of-way involved. It was the hopes of committee members that this project be settled in the least amount of time, yet investigation of all possible alternatives be sought.

Your secretary motioned that since the committee could not conclude the situation, we wait to hear back from (1) The Attorney General, and (2) from the BLM (in the meantime Ronald and Pat could meet with the committee to maybe stress facts more clearly on Anschutz' and the Divisions possition, although this is a decision the Land Division has to settle).

It was finally decided that the Land Division would construct a letter or statement to the EPD (parent group) pointing out reasons why the assessment compiled by this Division will not surfice. This procedure is outlined in the Executive Order. The committee members agreed they are only an advisory committee, but the total input from attending members concluded a Statement, in not too time consuming, certainly would not be uncalled for.

I am sure this will be discussed again in the next meeting to be held in three weeks.



INTERNATIONAL ASSOCIATION OF DRILLING CONTRACTORS



7400 HARWIN DR., SUITE 305 HOUSTON, TEXAS 77036 PHONE: 713 784-4090

Mr. Patrick Driscoll, Chief Petroleum Engineer State of Utah Dept. of Natural Resources Division of Oil, Gas & Mining 1588 West North Temple Salt Lake City, Utah 84116

(Re: Anschutz)

Dear Mr. Driscoll,

This will confirm our telephone conversation of today.

There is not to my knowledge in the Lower 48 States of the U.S. a drilling rig fitted for helicopter transport and useful for normal oil exploration. The need for such equipment in U.S. domestic work simply doesn't exist.

Even if such a rig were assembled and available to work here in the Rocky Mountains, it would be prohibitively expensive. It would be necessary to mount a support operation of great magnitude not only at the work site but also at a special base. Obviously, a large number of expensive helicopters would be required.

The only occasions that justify a helicopter operation are those on extremely large blocks (thousands of square miles) having a production potential measured in the hundreds-of-thousands of barrels per day. And, should production indeed be discovered of such extent and magnitude, the inflexible rule is for the helicopter transport to be abandoned immediately after initial discovery and deliniation in favor of surface transport.

Please call on me if IADC can provide further information.

Sincerely,

Ed McGhee (handwritten signature)

CIRCULATE TO:

- DIRECTOR
PETROLEUM ENGINEER
MINE COORDINATOR
ADMINISTRATIVE ASSISTANT
ALL

Ed McGhee

EMcG/rb

RETURN TO: FOR FILING

PRESIDENT: FRANK L. THOMPSON
FIRST VICE PRESIDENT: SPENCER TAYLOR

EXECUTIVE VICE PRESIDENT: ED MCGHEE

SECRETARY-TREASURER: CHESTER B. BERGE, JR.
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NORTHEAST TEXAS-NORTH LOUISIANA-
SOUTH ARKANSAS: J. F. Justice, Jr.

THE ATTORNEY GENERAL



STATE OF UTAH
STATE CAPITOL • SALT LAKE CITY
328-5261

- VERNON B. ROMNEY
ATTORNEY GENERAL
- ROBERT B. HANSEN
DEPUTY ATTORNEY GENERAL

September 10, 1976

Cleon B. Feight, Esq.
Director
Division of Oil, Gas and Mining
Department of Natural Resources
1588 West North Temple Street
Salt Lake City, Utah 84116

Dear Mr. Feight:

Under date of August 10, 1976, you submitted to the undersigned a request for an opinion with respect to an application of The Anschutz Corporation, Incorporated, as lessee under State Oil, Gas and Hydrocarbon lease No. ML-27414 for permit to drill a well within the SE $\frac{1}{4}$ SW $\frac{1}{4}$ of Section 32, Township 18 South, Range 21 East, Salt Lake Meridian, in Grand County, State of Utah. The lessee-applicant seeks to build a road into said Section 32 to prosecute drilling and development operations.

Your office furnished a copy of an "Environmental Assessment for Anschutz #1 State 414 Wildcat Oil and/or Gas Well, in Grand County, Utah", prepared by Ronald W. Daniels, Coordinator of Mined Land Development, and by Patrick L. Driscoll, Chief Petroleum Engineer, of the Utah Division of Oil, Gas and Mining, dated July 23, 1976. Your request for an opinion mentions that on August 21, 1975, the Board of State Lands set aside approximately 45,000 contiguous acres of land in Grand County, Utah, as a "roadless area", which area so designated included said Section 32 embraced in the aforesaid oil, gas and hydrocarbon mineral lease issued to Anschutz under date of March 24, 1971, over 4 years prior to the board order of August 21, 1975, creating the "roadless area".

Your request for an opinion in substance poses two basic questions:

First: Inasmuch as Oil, Gas and Hydrocarbon Mineral Lease No. ML-27414 was issued to The Anschutz Corporation, Incorporated, under date of March 24, 1971, and the order of the Board of State Lands dated August 21, 1975, establishing a "roadless area" covering said Section 32 as well as other lands, was adopted more than 4 years after date of issuance of State mineral lease No. 27414, does such subsequent order of the Board of State Lands for a roadless area legally restrict access by the lessee to ingress to and egress from said mineral leasehold and operations for drilling and development, by air?

Second: If the lessee under ML-27414 is willing to comply with all applicable general Rules and Regulations of the Division of Oil, Gas and Mining with respect to its application for a permit to drill a well at the designated point on its leasehold, and also is willing to comply with all applicable

Rules and Regulations of the Division of State Lands, does the Division of Oil, Gas and Mining have legal discretion to deny issuance of the requested permit to drill a well?

As part of the investigation for preparation of this opinion, I obtained from the Division of State Lands a copy of State Oil, Gas and Hydrocarbon Lease No. ML-27414. I also examined the ownership plats pertaining to the leasehold area and other documents in the Division of State Lands. Inasmuch as the proposed road would be constructed over State land in Section 5, Township 19 South, Range 21 East, Salt Lake Meridian, I also examined the record on State Oil, Gas and Hydrocarbon Lease No. 27492 covering portions of Sections 2, 4, 5 and 6, in Township 19 South, Range 21 East, which was issued to The Anschutz Corporation under date of April 13, 1971, covering 2,521.27 acres. I also held conferences with the Director of the Division of Oil, Gas and Mining, and also with the Director of the Division of State Lands, in order to obtain essential facts and also to enable me to make appropriate recommendations for further proceedings and processing of such application for a permit to drill a well at the designated location.

1. Oil, Gas and Hydrocarbon Lease No. ML-27414 dated March 21, 1971, appears to be a valid mineral lease between the State of Utah as Lessor, and The Anschutz Corporation, Incorporated, as Lessee. All information which I have obtained to date shows that this lease is not in default. It has not been amended and it appears to be a valid lease, covering all of Sections 32 and 36 (noncontiguous sections of State school lands) in Grand County, State of Utah, which granted the right to prospect for, mine, and produce the leased substances within said lands, specifying that

"the Lessee to have the rights to construct and maintain on said lands all works, buildings, plants, waterways, roads, communication lines, pipelines, reservoirs, tanks, pumping stations or other structures necessary to the full enjoyment thereof, subject, however, to the conditions hereinafter set forth."

2. In Section 5 of said lease, "RIGHTS RESERVED TO LESSOR -- The Lessor expressly reserves:

"(a) Easements and Rights of Way - The right to permit for joint or several use in a manner which will not unreasonably interfere with Lessee's operations hereunder, such easements or rights of way upon, through or in the land hereby leased as may be necessary or appropriate to the working of other lands belonging to the Lessor containing mineral deposits, or to the working of the land hereby leased for other than the hereby leased substances, and for other public purposes.

"(b) Surface Disposition - Leasing for Other Deposits - The right to use, lease, sell, or otherwise dispose of the surface of said land hereby leased, or any part thereof, under existing State laws, subject to the rights herein granted and insofar as in the judgment of the

Lessor, said surface is not necessary for the use of the Lessee in the exercise of the rights granted Lessee hereunder, and also the right to lease mineral deposits, other than the hereby leased substances, which may be contained in said hereby leased lands.

"(c) Unitization - The right, with the consent of the Lessee, to commit the hereby leased lands to a unit or co-operative plan of development and to establish, alter or change the drilling, producing, and royalty requirements and term of this lease to conform thereto."

3. The State of Utah has been committed to a policy of multiple use, insofar as such policy will not be detrimental to a particular area or tract of State lands and mineral resources. The mineral lease ML-27414 clearly states such policy.

4. In view of the energy crisis, the Department of Natural Resources has attempted to encourage development of potential oil and gas resources as well as other sources of energy producible from State lands within the guidelines of the statutes, and sound conservation practices.

5. Said mineral lease ML-27414 expressly authorizes construction of roads by the Lessee, but as pointed out in quoting from Section 5 of the State lease, the State reserves certain rights with respect to the surface, to conserve the resources including the surface estate.

6. In reviewing the order of August 21, 1975, for establishment of a roadless area, it appears to me that the Board of State Lands manifested no intention to rescind nor to cancel any valid mineral lease nor other contracts not in default. Nor do I construe that order as designed to prevent reasonable access to leasehold areas by lessees of the State of Utah holding valid mineral leases or valid contracts with Lessees holding State leases. That order does not abrogate any rights of State's lessees.

7. The proposed road into Section 32 would come in from the south, through Section 5, Township 19 South, Range 21 East, Salt Lake Meridian. The Anschutz Corporation has a valid State Oil, Gas, and Hydrocarbon Lease ML-27492 dated April 13, 1971, covering Lots 1, 2, 5 to 12 inclusive, S $\frac{1}{2}$ NW $\frac{1}{4}$ and NW $\frac{1}{4}$ SWP of said Section 5, with other lands in Sections 2, 4 and 6. The lease terms of ML-27492 are identical with those of ML-27414.

8. Even in the absence of an express grant of a right to a mineral lessee to construct a road, there would be a legally implied right to gain reasonable access to the mineral estate covered by the mineral lease. Otherwise the lessee would not be physically able to produce the mineral covered by the lease. That does not mean that the lessee can build a road anywhere without permission of the State as Lessor. Nor does it mean that the Lessee can build a road across other lands owned by the State, even if the Lessee has a mineral lease covering such other land, as appears to be the case with respect to Section 5 adjoining on the south of Section 32. Nor can the Lessee build a road which will be open to the general public without the consent of the Lessor, nor one which is hazardous or which would be an unnecessary burden

Cleon B. Feight, Director
Division of Oil, Gas and Mining
September 10, 1976
Page 4

on the surface estate.

9. The Environmental Assessment report, of which I was furnished a copy, discloses certain information, and it might be supplemented by some additional information. The first plat shows that the proposed well-site is about 3 miles due north of Interstate 70. The second plat shows the general course of the proposed access road taking off from an existing road in Section 10, Township 19 South, Range 21 East, Salt Lake Meridian, in Cottonwood Canyon, then proceeding northwesterly about 400 feet into the Northeast quarter of Section 9 on a bearing of approximately North 45° West through the northeasterly corner of the Northwest quarter, thence winding through the southerly portion of Section 4, mostly within the Southwest quarter, thence westerly into Section 5 and generally northerly through said Section 5 to the north line thereof into Section 32, Township 18 South, Range 21 East, Salt Lake Meridian. There likely would not be over 700 or 800 feet of road in Section 32 over to the proposed well-site. The Environmental Assessment report, page 4, states that "The actual length of the proposed Class III road is 4.4 miles. Map #2 illustrates the route of the access road. The finished road grade width will be 12 feet." The term "Class III road" is not defined in the report.

10. An examination of the ownership plats in the State Land Office disclosed that the only State land to be traversed by such access road would be about 700 to 800 feet in said Section 32, T. 18 S., R. 21 E., and some lands in Section 5, T. 19 S., R. 21 E., on which The Anschutz Corporation has an Oil, Gas and Hydrocarbon Lease No. ML-27492. Most of the road would be built on Federally owned land in Sections 5, 4, 9 and 10, T. 19 S., R. 21 E. A permit would have to be obtained from the Bureau of Land Management for a road across Federally-owned land. It appears that less than 1 mile of the proposed road would cross State-owned land. The State has not given an unrestricted permit under Section 5 of the Oil, Gas and Hydrocarbon Lease to construct any kind of road, and the State has to be concerned that such road so constructed does not unreasonably alter the surface nor create hazards to other lessees under the multiple use policy established by statute in Utah.

RECOMMENDATIONS:

11. Although the access road over State land would likely constitute only one-fourth of the total length of the access road, and the area has been declared a "roadless area" as far as State lands are concerned, there ought to be a special use lease or a right-of-way grant for such access road which will authorize construction on State-owned land, not only for the road on a portion of said Section 32 where the well is proposed to be drilled, but also across the State-owned lands in Section 5 on the south of said Section 32. There should be additional information supplied by the lessee as to the specifications for such a road so that the Division of State Lands can approve the proposed road. The specifications for the proposed road insofar as it crosses over State land should include culverts which may be of sufficient size to divert water and to prevent the washing out of the road.

12. In my opinion the State has a right to determine that such an

Cleon B. Feight, Director
Division of Oil, Gas and Mining
September 10, 1976
Page 5

access road shall be open to the general public or in its discretion that such an access road shall not be open to the public, and also that such road shall be used only by the Lessee, its employees and agents and contractors, and also by the State of Utah and its officials, agents and employees, and that it shall be a locked-gate road where it enters upon State-owned land, with keys to be used only by those entitled to enter upon such road. Provision should be made for the maintenance of such road in a safe condition while the Lessee and its contractors are using the same. There should be some provision in the right-of-way grant that such use may continue as long as the lease remains in force and effect, and for termination of such right-of-way when Lessee no longer needs such road. It appears to me that the information contained in the Environmental Assessment should be amplified or supplemented with respect to specifications for the proposed access road so that the appropriate instruments for rights-of-way and limitations on use can be prepared as expeditiously as possible.

13. The first question posed is answered, "NO". The second question must be answered "NO" as far as legal discretion to deny the drilling permit is concerned; but appropriate measures should be taken to establish a road into the area with adequate safeguards, in accordance with Rules and Regulations of the Division of State Lands and in accordance with the provisions of the lease ML-27414. Consequently, if we can be of further assistance in working out necessary and appropriate arrangements, please advise us, to enable us to confer on any matter which will permit establishment of an appropriate road as provided by law.

Very truly yours,



Paul E. Reimann
ASSISTANT ATTORNEY GENERAL

PER;mfr
cc: Division of State Lands

Felo Anschutz

THE ATTORNEY GENERAL



STATE OF UTAH
STATE CAPITOL • SALT LAKE CITY
328-5261

- VERNON B. ROMNEY
ATTORNEY GENERAL
- ROBERT B. HANSEN
DEPUTY ATTORNEY GENERAL

September 10, 1976

Cleon B. Feight, Esq.
Director
Division of Oil, Gas and Mining
Department of Natural Resources
1588 West North Temple Street
Salt Lake City, Utah 84116

CIRCULATE TO:

DIRECTOR	-----	<input checked="" type="checkbox"/>
PETROLEUM ENGINEER	-----	<input checked="" type="checkbox"/>
MINE COORDINATOR	-----	<input checked="" type="checkbox"/>
ADMINISTRATIVE ASSISTANT	-----	<input checked="" type="checkbox"/>
ALL	-----	<input type="checkbox"/>

RETURN TO *Cherice*
FOR FILING

Dear Mr. Feight:

Under date of August 10, 1976, you submitted to the undersigned a request for an opinion with respect to an application of The Anschutz Corporation, Incorporated, as lessee under State Oil, Gas and Hydrocarbon lease No. ML-27414 for permit to drill a well within the SE1/4SW1/4 of Section 32, Township 18 South, Range 21 East, Salt Lake Meridian, in Grand County, State of Utah. The lessee-applicant seeks to build a road into said Section 32 to prosecute drilling and development operations.

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Second: If the lessee under ML-27414 is willing to comply with all applicable general Rules and Regulations of the Division of Oil, Gas and Mining with respect to its application for a permit to drill a well at the designated point on its leasehold, and also is willing to comply with all applicable

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"the Lessee to have the rights to construct and maintain on said lands all works, buildings, plants, waterways, roads, communication lines, pipelines, reservoirs, tanks, pumping stations or other structures necessary to the full enjoyment thereof, subject, however, to the conditions hereinafter set forth."

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"(a) Easements and Rights of Way - The right to permit for joint or several use in a manner which will not unreasonably interfere with Lessee's operations hereunder, such easements or rights of way upon, through or in the land hereby leased as may be necessary or appropriate to the working of other lands belonging to the Lessor containing mineral deposits, or to the working of the land hereby leased for other than the hereby leased substances, and for other public purposes.

"(b) Surface Disposition - Leasing for Other Deposits - The right to use, lease, sell, or otherwise dispose of the surface of said land hereby leased, or any part thereof, under existing State laws, subject to the rights herein granted and insofar as in the judgment of the

Lessor, said surface is not necessary for the use of the Lessee in the exercise of the rights granted Lessee hereunder, and also the right to lease mineral deposits, other than the hereby leased substances, which may be contained in said hereby leased lands.

"(c) Unitization - The right, with the consent of the Lessee, to commit the hereby leased lands to a unit or co-operative plan of development and to establish, alter or change the drilling, producing, and royalty requirements and term of this lease to conform thereto."

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6. In reviewing the order of August 21, 1975, for establishment of a roadless area, it appears to me that the Board of State Lands manifested no intention to rescind nor to cancel any valid mineral lease nor other contracts not in default. Nor do I construe that order as designed to prevent reasonable access to leasehold areas by lessees of the State of Utah holding valid mineral leases or valid contracts with Lessees holding State leases. That order does not abrogate any rights of State's lessees.

7. The proposed road into Section 32 would come in from the south, through Section 5, Township 19 South, Range 21 East, Salt Lake Meridian. The Anschutz Corporation has a valid State Oil, Gas, and Hydrocarbon Lease ML-27492 dated April 13, 1971, covering Lots 1, 2, 5 to 12 inclusive, S $\frac{1}{2}$ NW $\frac{1}{4}$ and NW $\frac{1}{4}$ SWP of said Section 5, with other lands in Sections 2, 4 and 6. The lease terms of ML-27492 are identical with those of ML-27414.

8. Even in the absence of an express grant of a right to a mineral lessee to construct a road, there would be a legally implied right to gain reasonable access to the mineral estate covered by the mineral lease. Otherwise the lessee would not be physically able to produce the mineral covered by the lease. That does not mean that the lessee can build a road anywhere without permission of the State as Lessor. Nor does it mean that the Lessee can build a road across other lands owned by the State, even if the Lessee has a mineral lease covering such other land, as appears to be the case with respect to Section 5 adjoining on the south of Section 32. Nor can the Lessee build a road which will be open to the general public without the consent of the Lessor, nor one which is hazardous or which would be an unnecessary burden

Cleon B. Feight, Director
Division of Oil, Gas and Mining
September 10, 1976
Page 4

on the surface estate.

9. The Environmental Assessment report, of which I was furnished a copy, discloses certain information, and it might be supplemented by some additional information. The first plat shows that the proposed well-site is about 3 miles due north of Interstate 70. The second plat shows the general course of the proposed access road taking off from an existing road in Section 10, Township 19 South, Range 21 East, Salt Lake Meridian, in Cottonwood Canyon, then proceeding northwesterly about 400 feet into the Northeast quarter of Section 9 on a bearing of approximately North 45° West through the northeasterly corner of the Northwest quarter, thence winding through the southerly portion of Section 4, mostly within the Southwest quarter, thence westerly into Section 5 and generally northerly through said Section 5 to the north line thereof into Section 32, Township 18 South, Range 21 East, Salt Lake Meridian. There likely would not be over 700 or 800 feet of road in Section 32 over to the proposed well-site. The Environmental Assessment report, page 4, states that "The actual length of the proposed Class III road is 4.4 miles. Map #2 illustrates the route of the access road. The finished road grade width will be 12 feet." The term "Class III road" is not defined in the report.

10. An examination of the ownership plats in the State Land Office disclosed that the only State land to be traversed by such access road would be about 700 to 800 feet in said Section 32, T. 18 S., R. 21 E., and some lands in Section 5, T. 19 S., R. 21 E., on which The Anschutz Corporation has an Oil, Gas and Hydrocarbon Lease No. ML-27492. Most of the road would be built on Federally owned land in Sections 5, 4, 9 and 10, T. 19 S., R. 21 E. A permit would have to be obtained from the Bureau of Land Management for a road across Federally-owned land. It appears that less than 1 mile of the proposed road would cross State-owned land. The State has not given an unrestricted permit under Section 5 of the Oil, Gas and Hydrocarbon Lease to construct any kind of road, and the State has to be concerned that such road so constructed does not unreasonably alter the surface nor create hazards to other lessees under the multiple use policy established by statute in Utah.

RECOMMENDATIONS:

11. Although the access road over State land would likely constitute only one-fourth of the total length of the access road, and the area has been declared a "roadless area" as far as State lands are concerned, there ought to be a special use lease or a right-of-way grant for such access road which will authorize construction on State-owned land, not only for the road on a portion of said Section 32 where the well is proposed to be drilled, but also across the State-owned lands in Section 5 on the south of said Section 32. There should be additional information supplied by the lessee as to the specifications for such a road so that the Division of State Lands can approve the proposed road. The specifications for the proposed road insofar as it crosses over State land should include culverts which may be of sufficient size to divert water and to prevent the washing out of the road.

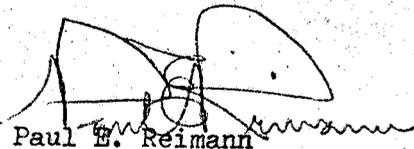
12. In my opinion the State has a right to determine that such an

Cleon B. Feight, Director
Division of Oil, Gas and Mining
September 10, 1976
Page 5

access road shall be open to the general public or in its discretion that such an access road shall not be open to the public, and also that such road shall be used only by the Lessee, its employees and agents and contractors, and also by the State of Utah and its officials, agents and employees, and that it shall be a locked-gate road where it enters upon State-owned land, with keys to be used only by those entitled to enter upon such road. Provision should be made for the maintenance of such road in a safe condition while the Lessee and its contractors are using the same. There should be some provision in the right-of-way grant that such use may continue as long as the lease remains in force and effect, and for termination of such right-of-way when Lessee no longer needs such road. It appears to me that the information contained in the Environmental Assessment should be amplified or supplemented with respect to specifications for the proposed access road so that the appropriate instruments for rights-of-way and limitations on use can be prepared as expeditiously as possible.

13. The first question posed is answered, "NO". The second question must be answered "NO" as far as legal discretion to deny the drilling permit is concerned; but appropriate measures should be taken to establish a road into the area with adequate safeguards, in accordance with Rules and Regulations of the Division of State Lands and in accordance with the provisions of the lease ML-27414. Consequently, if we can be of further assistance in working out necessary and appropriate arrangements, please advise us, to enable us to confer on any matter which will permit establishment of an appropriate road as provided by law.

Very truly yours,



Paul E. Reimann
ASSISTANT ATTORNEY GENERAL

PER;mfr
cc: Division of State Lands

September 27, 1976

The Anschutz Corporation
1110 Denver Club Building
Denver, Colorado 80202

Re: Well No. Anschutz #1 - State 414
Sec. 32, T. 18 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, General Rules and Regulations and Rules of Practice and Procedure.

Said approval is, however, contingent upon adhering to the following recommendation set forth by Assistant Attorney General Paul E. Reimann, in his opinion of September 10, 1976 (copy enclosed) which states in part:

Paragraph 11, Page 4:

".... there ought to be a special use lease or a right-of-way grant for such access road which will authorize construction on State-owned land, not only for the road on a portion of said Section 32 where the well is proposed to be drilled, but also across the State-owned lands in Section 5 on the south of said Section 32. There should be additional information supplied by the lessee as to the specifications for such a road so that the Division of State Lands can approve the proposed road. ..."

In addition, this office will require that:

Anschutz Corporation also obtain a "tramway permit" from the Bureau of Land Management, for that portion of the road to be constructed across the public domain.

The Anschutz Corporation
September 27, 1976
Page Two

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 43-019-30313.

Very truly yours,

DIVISION OF OIL, GAS, AND MINING

ORIGINAL SIGNED BY G. B. FEIGHT

CLEON B. FEIGHT
DIRECTOR

/sw

cc: Division of State Lands
Robert G. Pruitt, Esq.
Utah Environmental Coordinating Committee
Board of Oil, Gas, and Mining (5)

The Anschutz Corporation
September 27, 1976
Page Two

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 43-019-30313.

Very truly yours,

DIVISION OF OIL, GAS, AND MINING

ORIGINAL SIGNED BY C. B. FEIGHT

CLEON B. FEIGHT
DIRECTOR

/sw

cc: Division of State Lands
Robert G. Pruitt, Esq.
Utah Environmental Coordinating Committee
Board of Oil, Gas, and Mining (5)



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

DIVISION OF OIL, GAS, AND MINING

CHARLES R. HENDERSON
ROBERT R. NORMAN
I. DANIEL STEWART
HYRUM L. LEE

CLEON B. FEIGHT
Director

1588 West North Temple
Salt Lake City, Utah 84116
(801) 533-5771

September 28, 1976

CIRCULATE TO:

- DIRECTOR _____
- PETROLEUM ENGINEER _____
- MINE COORDINATOR _____
- ADMINISTRATIVE ASSISTANT _____
- ALL _____

RETURN TO *[Signature]*
FOR FILING *[Signature]*

Governor's Environmental Coordinating
Committee
State Planning Coordinator's Office
Room 118 - State Capitol Building
Salt Lake City, Utah 84114

ATTENTION: Mr. Chauncey Powis, Chairman

Re: Anschutz Corporation
Lease: ML27414 (#1 State 414)
Sec. 32, T. 18 S, R. 21 E,
Grand County, Utah

Dear Chauncey:

As a result of our letter of August 11, 1976, please find enclosed herewith a copy of the Attorney General's Opinion relative to the approval of the above referred to well.

You are hereby advised that the drilling of said well has been approved by this Division as indicated in our letter of September 27, 1976, a copy of which is enclosed for your information.

In his opinion, Mr. Reimann recommended that the "Environmental Assessment" prepared by this office be "amplified or supplemented with respect to specifications for the proposed access road...". However, rather than prepare a supplemental attachment to the Assessment, it was felt that this particular information could be made a part of the "special use lease" or the "right-of-way grant" to be issued by the Division of State Lands.

Finally, Mr. Reimann noted that the term "Class III road", as used in our assessment, was not defined. For your information, this is a Forest Service nomenclature, and is dictated by the following specifications:

- Minimum right-of-way 20 ft.
- Minimum width, ditch
to ditch 12 ft.
- Minimum width, wheeling
surface 8 ft.

Mr. Chauncey Powis, Chairman
Governor's Environmental Coordinating Committee
Page Two

Minimum radius of curvature 40 ft.
Maximum grades 15 %
Maximum sustained grade 10 %
Horizontal sight distance 100 ft.

Should you or other members of the Committee have any questions relative to the above matter, please do not hesitate to call.

Very truly yours,

DIVISION OF OIL, GAS, AND MINING

CLEON B. FEIGHT
Director

/sw



1110 DENVER CLUB BUILDING
518 SEVENTEENTH STREET
DENVER, COLORADO 80202
TELEPHONE 303-573-5665
TWX 910 931 2620

July 18, 1978

State of Utah
Dept. of Natural Resources
Division of Oil, Gas, and Mining
1588 West North Temple
Salt Lake City, Utah 84116

Attention: Kathy Ostler, Records Clerk

Dear Ms. Ostler:

As requested in your letter of June 8, 1978 the following is submitted.

To update your records the following wells have not yet been drilled and our plans have not changed.

Well No. Federal 258-#4, Sec. 5, T. 18S, R. 24E,
Grand County, Utah

Well No. Federal 335-#2, Sec. 20, T. 19S, R. 23E,
Grand County, Utah

Well No. Federal 335-#4, Sec. 19, T. 19S, R. 23E,
Grand County, Utah

Well No. Federal 350-#1, Sec. 4, T. 18S, R. 24E,
Grand County, Utah

Well No. State 400-#1, Sec. 17, T. 16S, R. 23E,
Grand County, Utah

Well No. State 402-#1, Sec. 36, T. 17S, R. 20E,
Grand County, Utah

Well No. State 404-#1, Sec. 23, T. 17S, R. 21E,
Grand County, Utah

Well No. State 411-#2, Sec. 23, T. 18S, R. 20E,
Grand County, Utah

Well No. State 414-#1, Sec. 32, T. 18S, R. 21E,
Grand County, Utah





2400 ANACONDA TOWER
555 SEVENTEENTH STREET
DENVER, COLORADO 80202
TELEPHONE 303-825-6100
TWX 910-931-2620



May 15, 1979

Mr. Cleon B. Feight, Director
Division of Oil, Gas & Mining
State of Utah
1588 West, North Temple
Salt Lake City, Utah 84116

Dear Mr. Feight:

The following wells have not commenced drilling and have been removed from our active files. Hence we no longer plan upon drilling them.

Federal 335 No. 2
Federal 335 No. 4
Federal 4275 No. 1
Federal 7674 No. 1

The following wells have not yet commenced drilling pending further geological evaluation:

Federal 258 No. 4
Federal 258 No. 7
Federal 258 No. 8
Federal 350 No. 1
Federal 350 No. 2
Federal 350 No. 3
State 400 No. 1
State 404 No. 1
State 414 No. 1
Federal 675 No. 3
State 7265 No. 2
State 7265 No. 3
Federal 4076 No. 14-23
State 920 No. 1

We are sorry if our lack of correspondence has created an inconvenience for you.

Very truly yours,


Peter B. Doty
Operations Coordinator

PBD:jp

P.S. Enclosed are the forms you requested on the Federal 675 No. 2.



2400 ANSCHUTZ TOWER • 555 SEVENTEENTH STREET • DENVER, COLORADO 80202 • 303-825-6100 • TWX 910-931-2620

July 3, 1979

Mr. Cleon B. Feight, Director
Division of Oil, Gas & Mining
State of Utah
1588 West, North Temple
Salt Lake City, Utah 84116

Dear Mr. Feight:

The following wells have not commenced drilling and have been removed from our active files. Hence we no longer plan upon drilling them.

Federal 335 No. 2
Federal 335 No. 4
Federal 4275 No. 1
Federal 7674 No. 1

The following wells have not yet commenced drilling pending further geological evaluation:

Federal 258 No. 4
~~Federal 258 No. 7~~
Federal 258 No. 8
Federal 350 No. 1
Federal 350 No. 2
Federal 350 No. 3
State 400 No. 1
State 404 No. 1
State 414 No. 1
Federal 675 No. 3
State 7265 No. 2
State 7265 No. 3
Federal 4076 No. 14-23
State 920 No. 1

We are sorry if our lack of correspondence has created an inconvenience for you.

Very truly yours,


Peter B. Doty
Operations Coordinator

PBD:jp



SCOTT M. MATHESON
Governor

OIL, GAS, AND MINING BOARD

GORDON E. HARMSTON
Executive Director,
NATURAL RESOURCES

STATE OF UTAH

DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL, GAS, AND MINING

1588 West North Temple

Salt Lake City, Utah 84116

(801) 533-5771

November 14, 1979

CHARLES R. HENDERSON
Chairman

CLEON B. FEIGHT
Director

JOHN L. BELL
C. RAY JUVELIN
THADIS W. BOX
CONSTANCE K. LUNDBERG
EDWARD T. BECK
E. STEELE McINTYRE

~~Anschutz Corp.~~ *Seyona Production*
2400 Anaconda Tower 555 17th Street
Denver Colo,
80202

RE: See Attached Sheet For
Well Information.

Gentlemen:

In reference to above mentioned well(s), considerable time has gone by since approval was obtained from this office.

This office has not recieved any notification of spudding. As of the above date we are suspending approval of these applications pending notification as to what you are doing ao each well. Since approval has already been obtained a new application will not be necessary if you decide to drill, but we will require a letter stating the date you intend to spudd-in.

Your prompt attention will be greatly appreciated.

Very truly yours,
DIVISION OF OIL, GAS, AND MINING

Debbie Beauregard
DEBBIE BEAUREGARD
CLERK-TYPIST

CC: U.S. Geological Survey

ATTACHMENT, WELLS.

- 1) Fereral 258 No. 7
- 2) Fereral 258 No. 8
- 3) Federal 350 No. 1
- 4) Federal 350 No. 2
- 5) Federal 350 No. 3
- 6) State 400 No. 1
- 7) State 402 No. 1
- 8) State 404 No. 1
- 9) State 414 No. 1
- 10) State 7265 No. 2
- 11) State 7265 No. 3
- 12) State 920 No. 1
- 13) Federal 675 No. 3
- 14) Federal 4076 No. 14-23
- 15) State 915 No. 1
- 16) Federal 258 No. 4



2400 ANACONDA TOWER · 555 SEVENTEENTH STREET · DENVER, COLORADO 80202 · 303-825-6100 · TWX 910-931-2620

November 26, 1979

State of Utah
Department of Natural Resources
Division of Oil, Gas, and Mining
1588 West North Temple
Salt Lake City, Utah 84116

Re: Your letter dated 11-14-79
Well Information.

Attention: Debbie Beauregard

Debbie:

In reference to your letter of November 14, 1979, pertaining to the notification of spudding for 16 wells that you had on an attached list. We are no longer operator for these wells, and therefore have not sent you the notification, as these belong to ~~Texoma Production Company~~. The information that you request will have to come from Texoma Production Company.

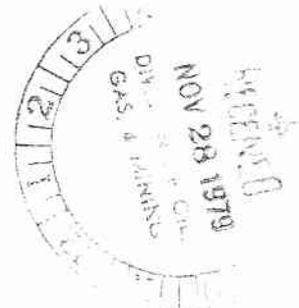
We will forward a copy of your letter to Texoma Production Co., and a copy of our letter, to you, so that they can comply with your request. Thank you.

Very truly yours,

Wayne C. Pierce
Production Manager

WCP:amc

CC: Texoma Production Company
U. S. Geological Survey



ATTACHMENT, WELLS.

1)	Federal	258	No.	7
2)	Federal	258	No.	8
3)	Federal	350	No.	1
4)	Federal	350	No.	2
5)	Federal	350	No.	3
6)	State	400	No.	1
7)	State	402	No.	1
8)	State	404	No.	1
9)	State	414	No.	1
10)	State	7265	No.	2
11)	State	7265	No.	3
12)	State	920	No.	1
13)	Federal	675	No.	3
14)	Federal	4076	No.	14-23
15)	State	915	No.	1
16)	Federal	258	No.	4