



**CHANDLER & ASSOCIATES, INC.**

1401 DENVER CLUB BUILDING • DENVER, COLORADO 80202 • 303 629-6756  
OIL AND GAS EXPLORATION AND PRODUCTION

February 21, 1984

Utah Division of Oil & Gas Mining  
4241 State Office Building  
Salt Lake City, Utah 84114

RE: Orangeville Unit Fed. 10-21  
NW SE Sec. 21-18S-8E  
Emery County, Utah

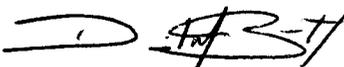
Gentlemen:

Enclosed please find three copies of the APD for the above captioned well.

Please contact us should you need more information.

Sincerely yours,

CHANDLER & ASSOCIATES, INC.

  
David Burnett

enclosures  
DB/tz

**RECEIVED**  
FEB 24 1984

**DIVISION OF  
OIL, GAS & MINING**

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK DRILL  DEEPEN  PLUG BACK

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

2. NAME OF OPERATOR  
Chandler & Associates, Inc.

3. ADDRESS OF OPERATOR  
1401 Denver Club Bldg. DENVER, CO. 80202

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.\*)  
At surface: 2044 FEL; 1977 FSL NW SE  
At proposed prod. zone

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE\*  
Approximately 1 mile north of Castle Dale, Utah

15. DISTANCE FROM PROPOSED\* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any) 593

13. DISTANCE FROM PROPOSED LOCATION\* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT. ---

21. ELEVATIONS (Show whether DF, RT, GR, etc.)  
5899' (ground)

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
12 1/4	8-5/8	24#	120	125 sx.
7-7/8	5 1/2	15.5#	1850	150 sx.

1. Drill to TD of 1850 (Dakota).
2. Run 5 1/2" casing if commercial production is indicated.
3. If dry hole, P&A as instructed by the BLM.
4. Well will be drilled with compressed air, tested open hole and mud-up to run 5 1/2" casing.
5. Well control equipment will include double hydraulic BOP system of 900 series. A fillup line will be installed, equipment pressure mechanically checked daily while drilling.

Well Name: Orangeville Unit Fed. 10-21

**RECEIVED**

APR 2 1984

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.

DIVISION OF  
OIL, GAS & MINING

24. SIGNED Richard Veghte TITLE Petroleum Engineer DATE 2/21/84

(This space for Federal or State office use)

PERMIT NO. \_\_\_\_\_ APPROVAL DATE \_\_\_\_\_

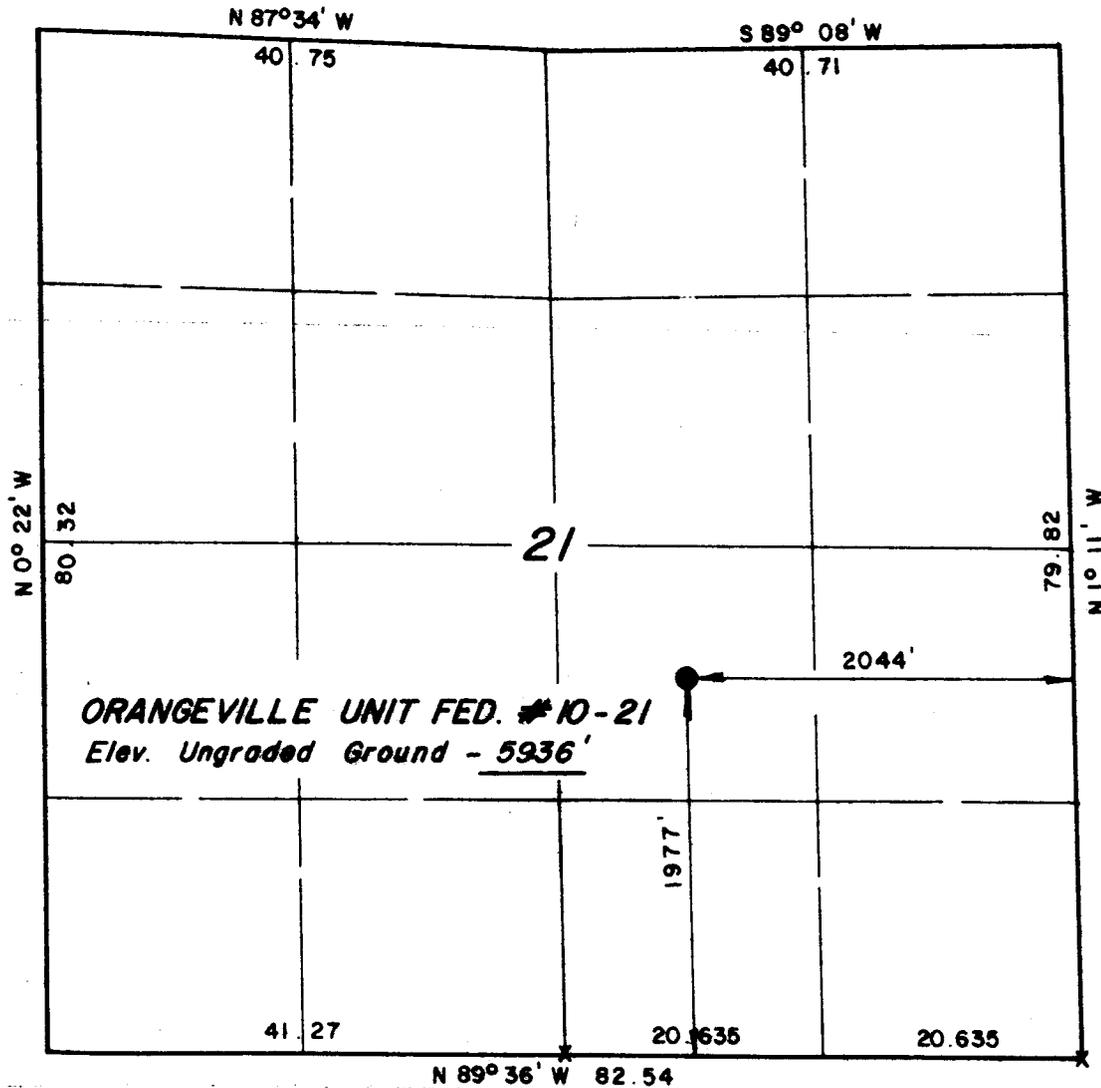
**APPROVED BY THE STATE  
OF UTAH DIVISION OF  
OIL, GAS, AND MINING**  
DATE: 2/21/84  
BY: [Signature]

APPROVED BY \_\_\_\_\_ TITLE \_\_\_\_\_  
CONDITIONS OF APPROVAL, IF ANY:

T18S, R8E, S.L.B.&M.

PROJECT  
CHANDLER & ASSOCIATES, INC.

Well location, O.U. FED. #10-21,  
located as shown in the NW1/4 SE1/4  
Section 21, T18S, R8E, S.L.B.&M.  
Emery County, Utah.



CERTIFICATE

THIS IS TO CERTIFY THAT THE ABOVE PLAT WAS PREPARED FROM  
FIELD NOTES OF ACTUAL SURVEYS MADE BY ME OR UNDER MY  
SUPERVISION AND THAT THE SAME ARE TRUE AND CORRECT TO THE  
BEST OF MY KNOWLEDGE AND BELIEF.

*Nelson J. ...*

REGISTERED LAND SURVEYOR  
REGISTRATION NO 2454  
STATE OF UTAH

UINTAH ENGINEERING & LAND SURVEYING  
P.O. BOX Q - 85 SOUTH - 200 EAST  
VERNAL, UTAH - 84078

SCALE 1" = 1000'	DATE 2 / 14 / 84
PARTY D.A. D.K. G.S.      BFW	REFERENCES GLO Plat
WEATHER Cold	FILE CHANDLER & ASSOC.

X = Sections Corners Located

Bureau of Land Management  
University Club Building  
136 E. South Temple  
Salt Lake City, Utah 84111

Re: Orangeville Unit Fed. 10-21  
NW SE Sec. 21-18S-8E  
Emery County, Utah

Gentlemen:

Enclosed is the additional information required for permitting the above well:

1. Surface Formation: Bluegate
2. Geological Markers:
  - Ferron 900
  - Dakota 1650
  - T.D. 1850
3. Producing Formation:
4. Casing Program:
  - Surface 8-5/8", 24#, grade K-55-NEW
  - Production 5½", 15.5#, grade K-55-NEW
5. Blowout Preventer:
  - (a) Shaffer 10" 900 double hydraulic with Payne closing unit. One set rams blind and one set for 4" drill pipe; tested upon installation and daily. (b) 10" 900 rotary head for use while air or mist drilling. Schematic diagram attached.
6. Circulating Medium:
  - Well will be drilled with compressed air and mist if required. Mud up will occur for running casing only.
7. Auxiliary Equipment:
  - (a) Drill String Floats will be used.
  - (b) Float will be used.
  - (c) No monitoring on mud system as air will be used for drilling.
  - (d) Stabbing valve will be used for drill pipe.
8. Evaluation Program:
  - No drill stem tests will be run due to air drilling. No cores are anticipated. An IES

8. Evaluation Program Cont.: Should this evaluation program indicate commercial quantities of hydrocarbons are in place, casing will be set and completion attempted utilizing hydraulic fracturing techniques. The size of treatment, pounds of propanant, volume and type of fluid will be determined after log and formation analysis is completed.
9. Potential Hazards: No abnormal high pressure, temperatures or hydrogen sulfide gas should be encountered. productive zone is normal in pressure and gas analysis indicate no H<sub>2</sub>S hazard.
10. Starting Date: The anticipated starting date is March 1,  
1984 with operations being conducted  
for 10 days.

Please notify us if any additional information is necessary for the permitting of this well.

Yours truly,

CHANDLER & ASSOCIATES, INC.

  
Richard Veghte  
Petroleum Engineer

RV/fs

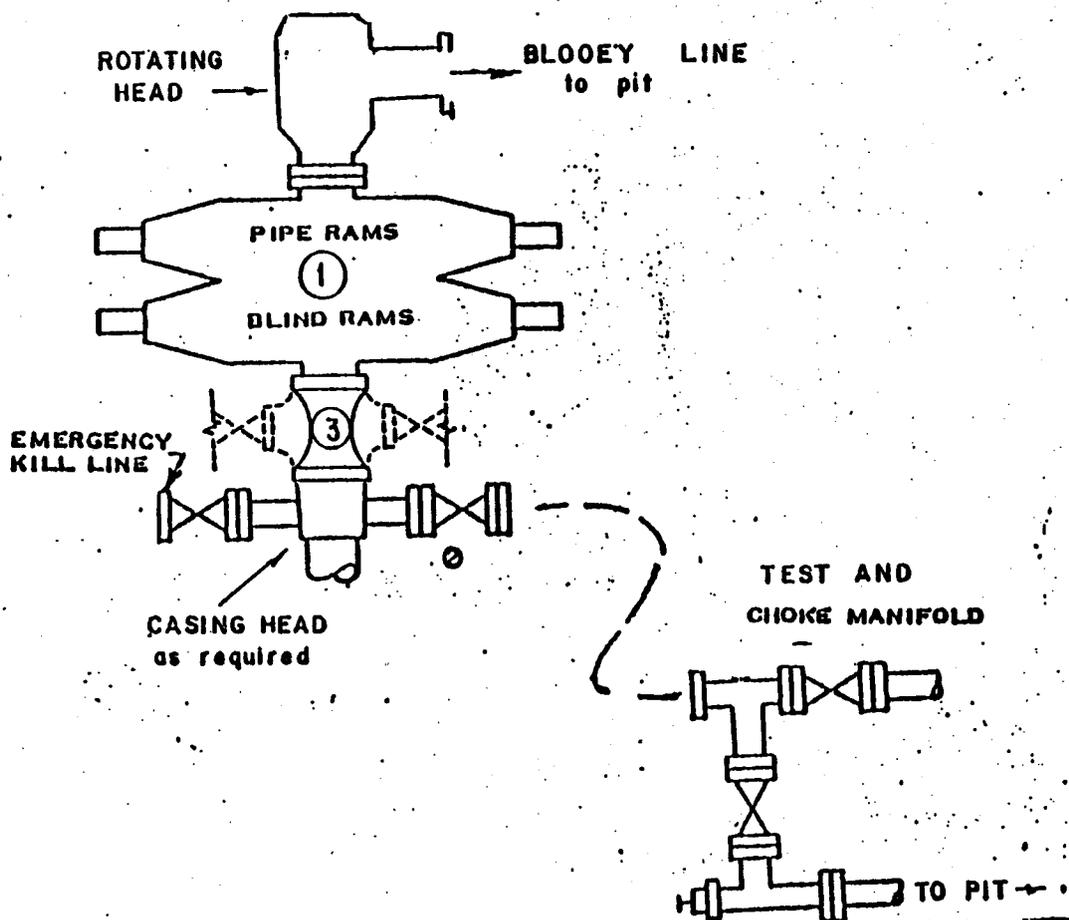
Attachment

# DOUBLE PREVENTER

FOR

## AIR DRILLING

- ① SERIES 900 RAM-TYPE BOP
- ② 2" SERIES 900 VALVE
- ③ SERIES 900 DRILLING SPOOL



..... OPTIONAL EQUIPMENT

CHANDLER AND ASSOCIATES, INC.

3000 PSI WORKING PRESSURE  
BLOWOUT PREVENTER HOOK-UP  
(SERIES 900 FLANGES OR BETTER)

Rev. 12/77

FIGURE NO. 4

## DESIGNATION OF OPERATOR

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

DISTRICT LAND OFFICE: Salt Lake City, Utah  
SERIAL No.: U-51018

and hereby designates

NAME: Chandler & Associates, Inc.  
ADDRESS: 1401 Denver Club Building  
Denver, Colorado 80202

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

Township 18 South, Range 8 East

Section 21: E/2, N/2NW/4, SE/4NW/4, NE/4SW/4

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

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

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

CITIES SERVICE OIL AND GAS CORPORATION



(Signature of lessee)

R. P. Pasque, Attorney In Fact

900 Colorado State Bank Building  
1600 Broadway, Denver, Colorado 80202

(Address)

JAN 13 1984

(Date)

CHANDLER & ASSOCIATES, INC.

13 Point Surface Use Plan

For

Well Location

Orangeville Unit Fed. #10-21

Located In

Section 31, T18S, R8E, S.L.B. & M.

Emery County, Utah

1. EXISTING ROADS:

a. Location of proposed well in relation to town or other reference point: approximately 2 mile North of Castle Dale, Utah.

b. Proposed route to location: Proceed North out of Castle Dale, Utah on Highway #10 to the intersection of U-29; proceed Westerly on U-29 0.6 miles to the junction of a county road known as the New Danish Bench Road; proceed Northerly on the Danish Bench road approximately 1 mile to the beginning of the proposed access road.

c. Location and Description of roads in the area: See Topographic Map "B" U-29 and the New Danish Bench road are bituminous surfaced (Black Topped) roads to the proposed access road.

d. Plans for improvement and/or maintenance of existing roads: A new road will be constructed from the county road to the location (Approximately 150'). One 18" culvert will be installed in borrow ditch of county road.

e. Other: An Egress permit must be obtained from the county road department.

2. PLANNED ACCESS ROADS:

a. Width: 24' maximum disturbed area.

b. Maximum grades: N/A

c. Turnouts: N/A

d. Location (centerline): Flagged

e. Drainage: Water bars where needed.

f. Surface materials (source): None

g. Other: All travel will be confined to the existing roads and the proposed access right of way.

3. LOCATIONS OF EXISTING WELLS: None

4. LOCATION OF TANK BATTERIES AND PRODUCTION FACILITIES:

All permanent (onsite for six months or longer) structures constructed or installed (including oil well pump jacks will be painted a flat, non-reflective, earthtone color to match the standard environmental colors, as determined by the Rocky Mountain 5 State Interagency Committee. All facilities will be painted within 6 months of installation. Facilities required to comply with O.S.H.A. (Occupational Safety and Health Act) will be excluded.

If a tank battery is constructed on this lease, it will be surrounded by a dike of sufficient capacity to contain 1 1/2 times the storage capacity of the battery.

Tank batteries will be placed on the: Northwest end of the pad.

All loading lines will be placed inside the berm surrounding the tank battery.

All site security guidelines identified in 43 CFR 3162.7 regulations will be adhered to.

All off-lease storage, off-lease measurement, or commingling on-lease or off-lease will have prior written approval from the AO.

All product lines entering and leaving hydrocarbon storage tanks will be effectively sealed.

Gas meter runs for each well will be located within 500 feet of the wellhead. The gas flowline will be buried from the wellhead to the meter and 500 feet downstream of the meter run or any production facilities. Meter runs will be housed and/or fenced.

The oil and gas measurement facilities will be installed on the well location. The oil and gas meters will be calibrated in place prior to any deliveries. Tests for meter accuracy will be conducted monthly for the first three months on new meter installations and at least quarterly thereafter. The AO will be provided with a date and time for the initial meter calibration and all future meter proving schedules. A copy of the meter calibration reports will be submitted to the Moab District office. All meter measurement facilities will conform with the API standards for liquid hydrocarbons and the AGA standard for natural gas measurement.

5. LOCATION AND TYPE OF WATER SUPPLY:

All water needed for drilling purposes will be obtained from:  
The Mammoth Canal - Cottonwood Creek Irrigation Company.

6. SOURCE OF CONSTRUCTION MATERIAL:

Road surfacing and pad construction material will be obtained from:  
Materials on location.

The use of materials under B.L.M. jurisdiction will conform to 43 CFR 3610 . 2-3.

Construction materials will be located on lease.

7. METHODS OF HANDLING WASTE DISPOSAL:

The reserve pit will not be lined.

Burning will not be allowed. All trash must be contained and disposed of by: Hauling to a sanitary landfill.

Produced waste water will be confined to a unlined pit for a period not to exceed 90 days after initial production. During the 90 day period an application for approval of a permanent disposal method and location, along with required water analysis, will be submitted for the AO's approval. Failure to file an application within the time allowed will be considered an incident of noncompliance, and will be grounds for issuing a shut-in order.

8. ANCILLARY FACILITIES:

Camp facilities will not be required.

9. WELL SITE LAYOUT:

The reserve pit will be located: on the Northeast side of the location.

The stockpiled topsoil will be stored: on the Southeast end of the location pad.

Access to the well pad will be from: The Northwest from county road.

The trash pit will be located: All trash will be kept in a wire cage and hauled to a sanitary landfill.

Reserve pits will be fenced with a net wire fence and topped with at least one strand of barbed wire.

10. PLANS FOR RESTORATION OF SURFACE:

Immediately upon completion of drilling, the location and surrounding area will be cleared of all debris, materials trash and junk not required for production.

Before any dirt work to restore the location takes place, the reserve pit must be completely dry and all cans, barrels, pipe etc. Will be removed as approved by the land owner.

All disturbed areas will be recontoured to the approximate natural contours.

The stockpiled topsoil will be evenly distributed over the disturbed areas.

Prior to reseeding, all disturbed areas, including the access roads, will be scarified and left with a rough surface.

Seed will be broadcast or drilled at a time specified by the BLM. If broadcast, a harrow or some other implement will be dragged over the seeded area to assure seed coverage.

The following seed mixture will be used: (Shade Scale 1 pound per acre) - (Crested Wheat 2 pounds per acre) - (Indian Rice - 2 pounds per acre) - (Sweet Yellow Clover 2 pounds per acre)

The reserve pit and that portion of the location and access road not needed for production or production facilities will be reclaimed.

11. SURFACE AND MINERAL OWNERSHIP

Federal

12. OTHER INFORMATION

There will be no deviation from the proposed drilling and/or workover program without prior approval from the AO. Safe drilling and operating practices must be observed. All wells, whether drilling, producing, suspended, or abandoned will be identified in accordance with 43 CFR 3162.2.

"Sundry Notice and Report and Wells" (Form 3160-5) will be filed for approval for all changes of plans and other operations in accordance with 43 CFR 3164.

The dirt contractor will be provided with an approved copy of the surface use plan.

A cultural resource clearance will be required before any construction begins. If any cultural resources are found during construction, all work will stop and the AO will be notified.

This permit will be valid for a period of one year from the date of approval. After permit termination a new application will be filed for approval for any future operations.

13. LESSEE'S OR OPERATORS REPRESENTATIVE AND CERTIFICATION

Representative

Name: Richard Veghte

Address: 1401 Denver Club Building

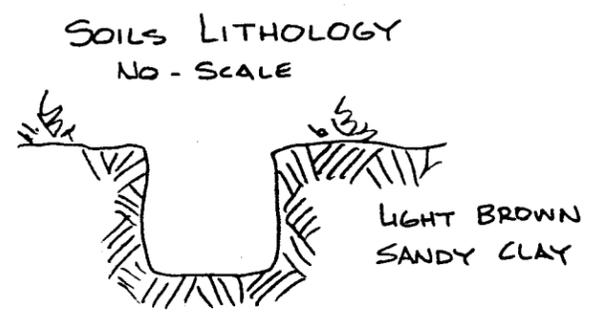
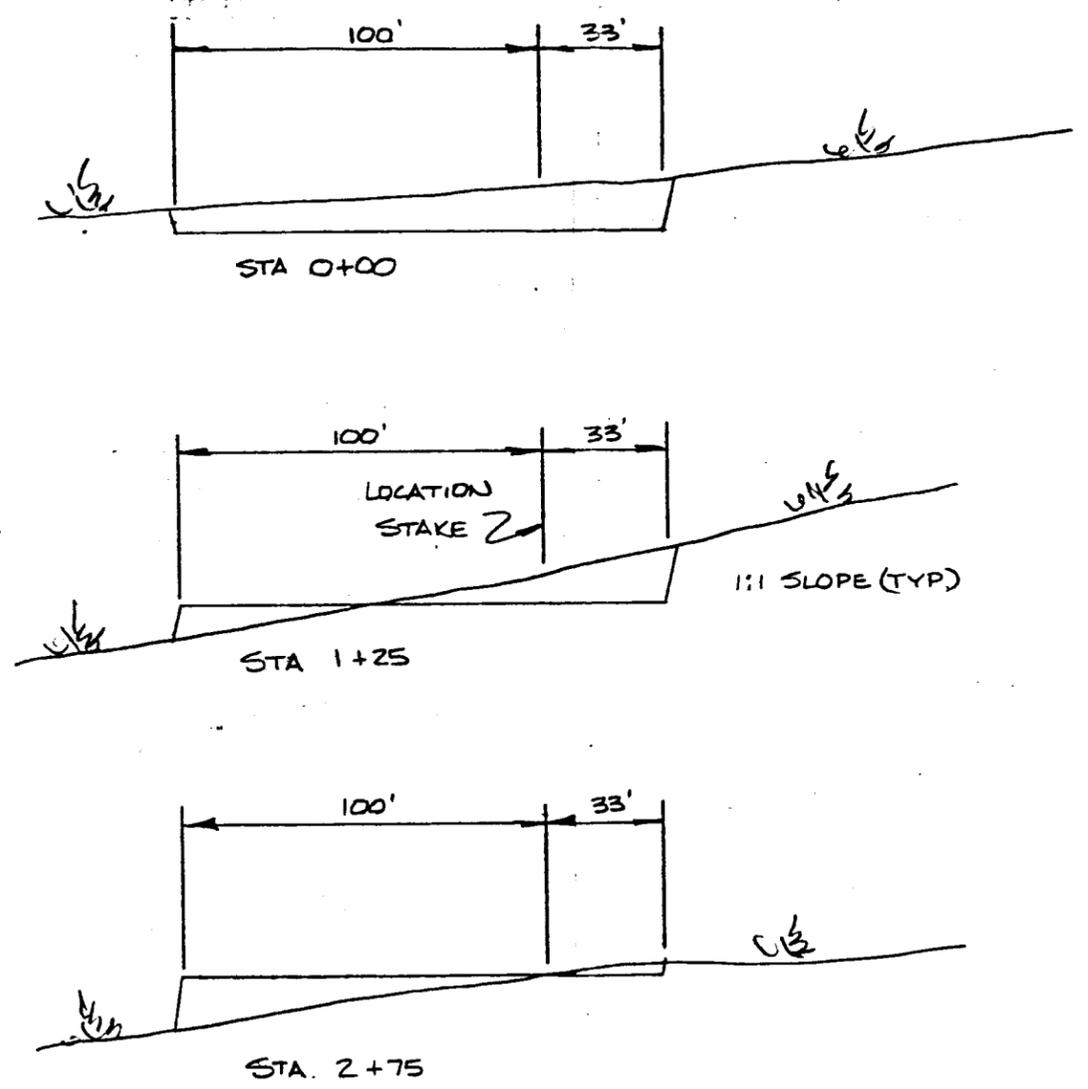
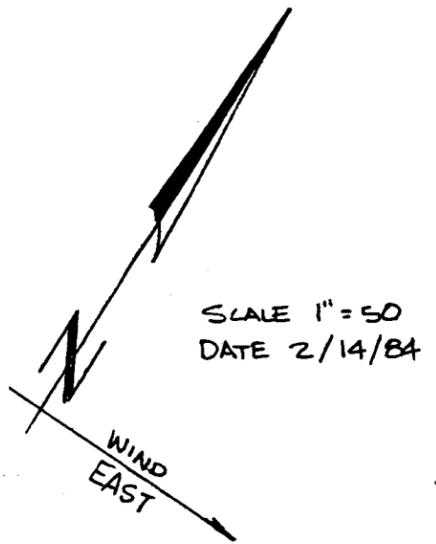
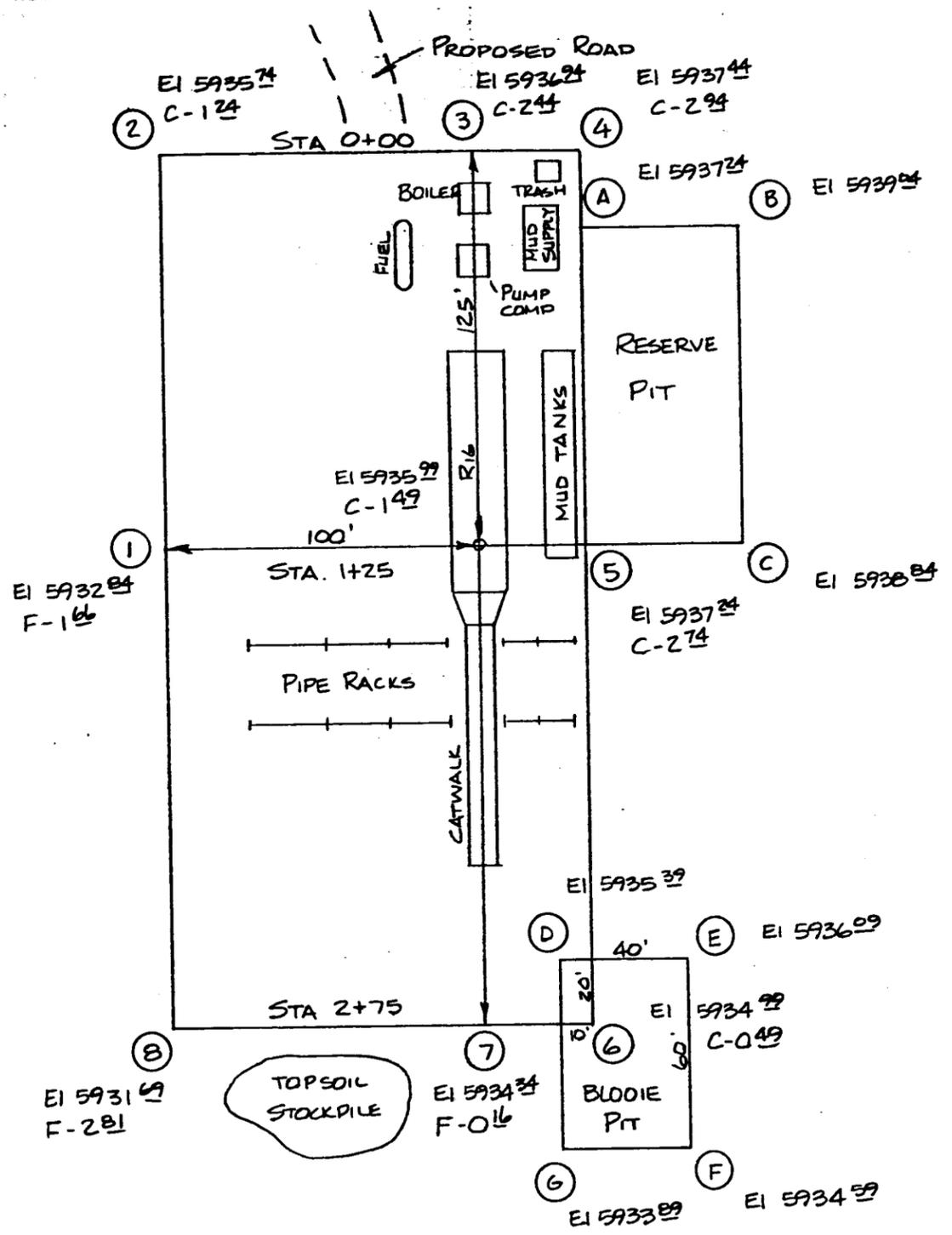
Phone No. (303) 629-6756

Certification:

I hereby certify that I, or persons under my direct supervision, have inspected the proposed drillsite and access route; that I am familiar with the conditions which currently exist; that the statements made in this plan are, to the best of my knowledge, true and correct; and, that the work associated with the operations proposed herein will be performed by: Chandler & Associates, Inc. and its contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved. This statement is subject to the provisions or 18 U.S.C. 1001 for the filing of a false statement.

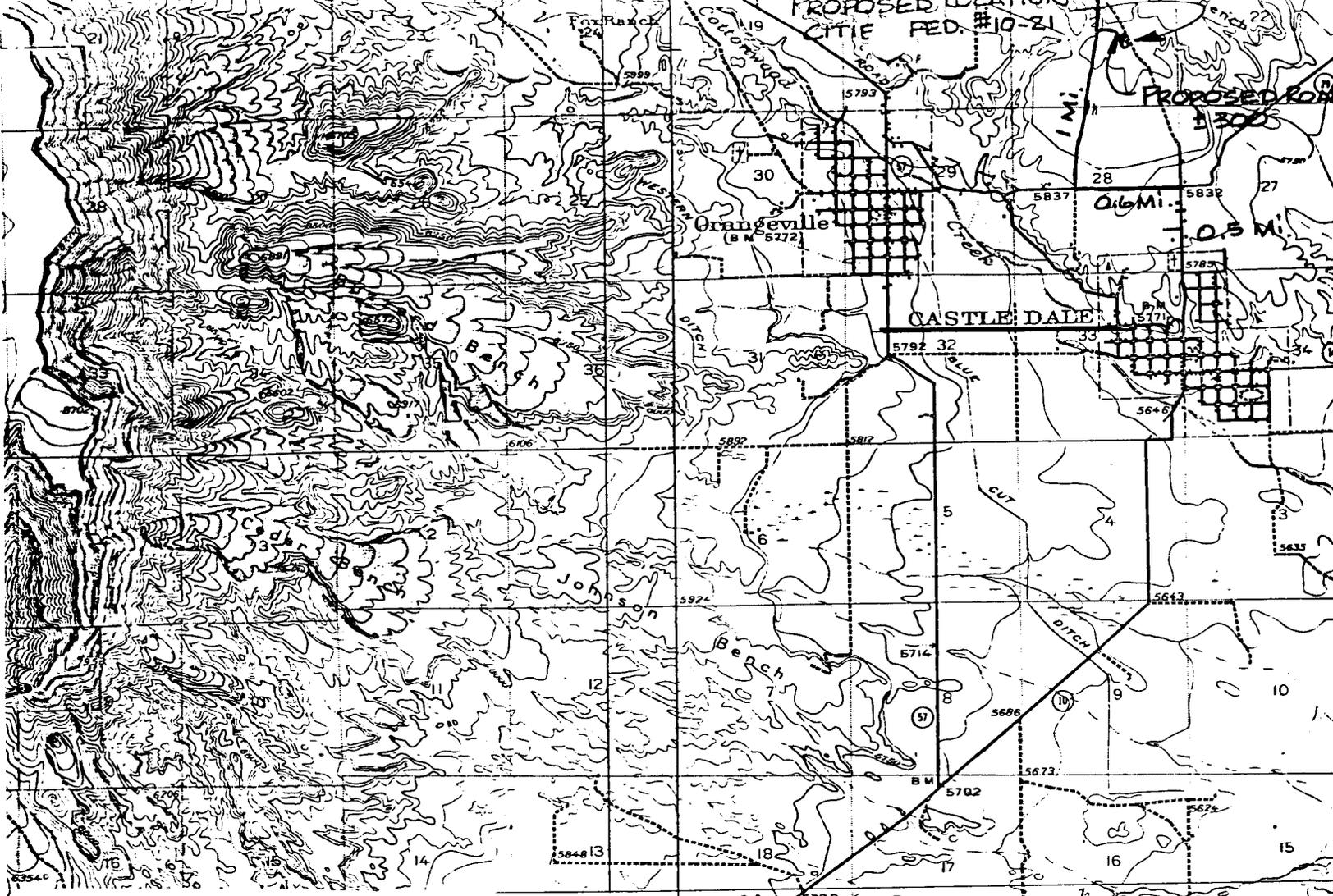
\_\_\_\_\_  
Date

\_\_\_\_\_  
Vice President & Engineer

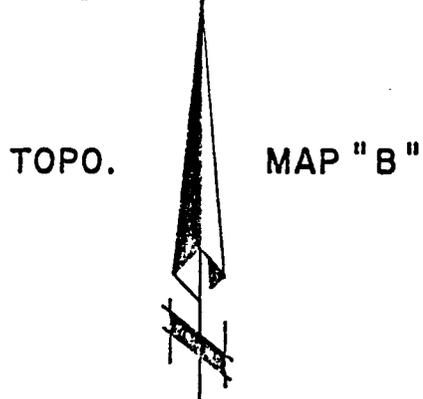


APPROX. YARDAGES

Cu. Yds. CUT 1,350  
Cu. Yds. FILL 730



**CHANDLER & ASSOCIATES INC.**  
**ORANGEVILLE Unit FED. #10-21**  
**PROPOSED LOCATION**



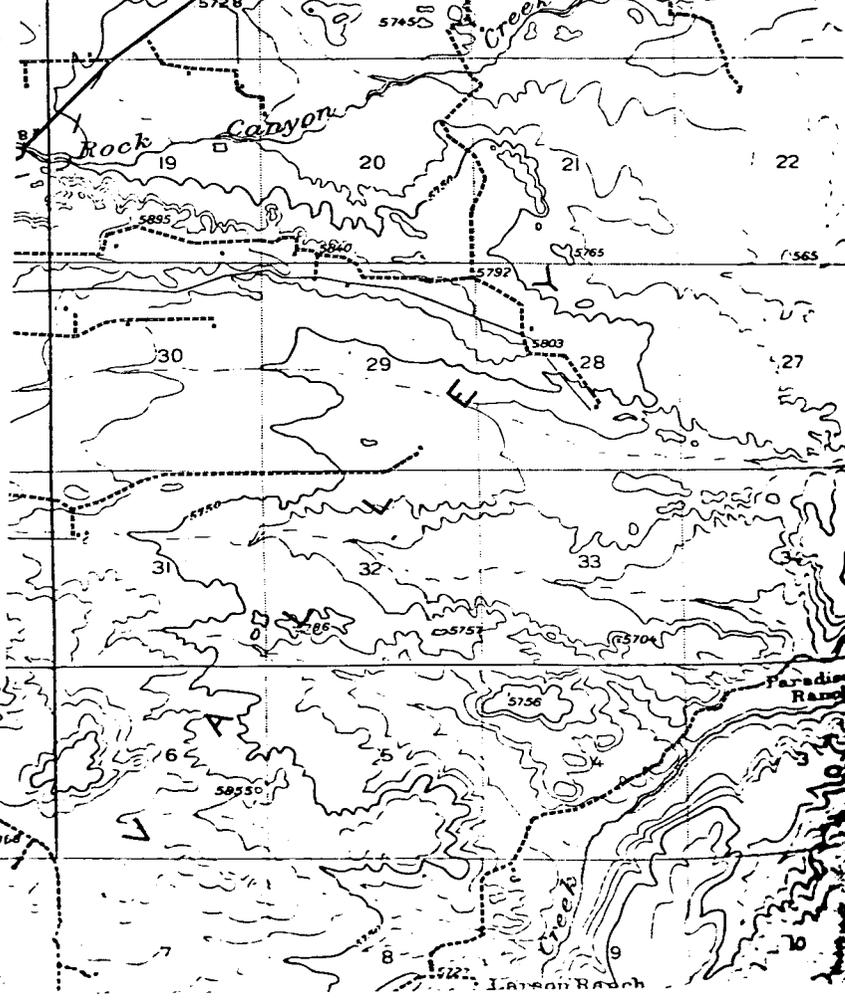
SCALE 1" = 2000'

**ROAD CLASSIFICATION**

Light duty road, all weather, improved surface —————      Unimproved road fair or dry weather =====



QUADRANGLE LOCATION





OPERATOR Chandler & Associates DATE 2-24-84  
WELL NAME Orangeville Unit Fed 10-21  
SEC NWSE 21 T 18S R 8E COUNTY Emery

43-015-30188  
API NUMBER

Fed.  
TYPE OF LEASE

POSTING CHECK OFF:

INDEX                       MAP                       HL  
 NID                                                             PI

PROCESSING COMMENTS:

Water of - Cottonwood Irrigation Co.  
Unit Approved 4/2/84 - BLM

CHIEF PETROLEUM ENGINEER REVIEW:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

APPROVAL LETTER:

SPACING:  A-3 Orangeville Unit  c-3-a \_\_\_\_\_ CAUSE NO. & DATE  
 c-3-b                       c-3-c

SPECIAL LANGUAGE:

Water  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

RECONCILE WELL NAME AND LOCATION ON APD AGAINST SAME DATA ON PLAT MAP.

AUTHENTICATE LEASE AND OPERATOR INFORMATION

VERIFY ADEQUATE AND PROPER BONDING

AUTHENTICATE IF SITE IS IN A NAMED FIELD, ETC.

APPLY SPACING CONSIDERATION

ORDER \_\_\_\_\_

UNIT Cranville Unit

c-3-b

c-3-c

CHECK DISTANCE TO NEAREST WELL.

CHECK OUTSTANDING OR OVERDUE REPORTS FOR OPERATOR'S OTHER WELLS.

IF POTASH DESIGNATED AREA, SPECIAL LANGUAGE ON APPROVAL LETTER

IF IN OIL SHALE DESIGNATED AREA, SPECIAL APPROVAL LANGUAGE.

Need VERIFY LEGAL AND SUFFICIENT DRILLING WATER

April 5, 1984

Chandler & Associates, Inc  
1401 Denver Club Bldg.  
Denver, Colorado 80202

RE: Well No. Orangeville Unit Fed. 10-21  
NWSE Sec. 21, T. 18S, R. 8E  
1977' FSL, 2044' FEL  
Emery County, Utah

Gentlemen:

Approval to drill the above referenced gas well is hereby granted in accordance with Section 40-6-11, Utah Code Annotated 1953; and predicted on Rule A-3, General Rules and Regulations and Rules of Practice and Procedure.

In addition, the following actions are necessary to fully comply with this approval:

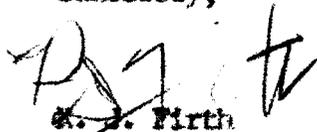
1. Spudding notification to the Division within 24 hours after drilling operations commence.
2. Submittal to the Division of completed Form OGC-8-X, Report of Water Encountered During Drilling.
3. Prompt notification to the Division should you determine that it is necessary to plug and abandon this well. Notify R. J. Firth, Chief Petroleum Engineer, Telephone (801) 533-5771 (Office), 571-5068 (Home).
4. Compliance with the requirements and regulations of Rule C-27, Associated Gas Flaring, General Rules and Regulations, Oil and Gas Conservation.

Chandler & Associates, Inc.  
Well No. Orangeville Unit Fed. 10-21  
April 5, 1984  
Page 2

5. This approval shall expire one (1) year after date of issuance unless substantial and continuous operation is underway or an application for an extension is made prior to the approval expiration date.

The API number assigned to this well is 43-015-30188.

Sincerely,



G. J. Firth  
Associate Director, Oil & Gas

RJF/as

cc: Branch of Fluid Minerals  
Enclosures

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

**RECEIVED**

1a. TYPE OF WORK  
DRILL  PLUG BACK

b. TYPE OF WELL  
OIL WELL  GAS WELL  OTHER

2. NAME OF OPERATOR  
Chandler & Associates, Inc. APR 9 1984

3. ADDRESS OF OPERATOR  
1401 Denver Club Bldg. DIVISION OF OIL, GAS & MINING

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At proposed prod. zone

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Approximately 1 mile north of Castle Dale, Utah

15. DISTANCE FROM PROPOSED\* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any) 593

16. NO. OF ACRES IN LEASE 880

17. NO. OF ACRES ASSIGNED TO THIS WELL 40

18. DISTANCE FROM PROPOSED LOCATION\* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT. ---

19. PROPOSED DEPTH 1850'

20. ROTARY OR CABLE TOOLS Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.) 5899' (ground)

22. APPROX. DATE WORK WILL START\* March 1, 1984

5. LEASE DESIGNATION AND SERIAL NO.  
U-51018

6. IF INDIAN, ALLOTTEE OR TRIBE NAME  
---

7. UNIT NAME  
EXPANDED Orangeville Unit

8. FARM OR LEASE NAME  
Orangeville Unit Fed.

9. WELL NO.  
10-21

10. FIELD AND POOL, OR WILDCAT  
Wildcat

11. SEC., T., R., M., OR BLK. AND SURVEY-OR AREA  
Sec. 21-18S-8E

12. COUNTY OR PARISH  
Emery

13. STATE  
Utah

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
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Well Name: Orangeville Unit Fed. 10-21

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SIGNED: Richard Veghte TITLE: Petroleum Engineer DATE: 2/21/84

PERMIT NO. \_\_\_\_\_ APPROVAL DATE \_\_\_\_\_

APPROVED BY: s/Kenneth V. Rhea TITLE: Associate District Manager DATE: 4/5/84

CONDITIONS OF APPROVAL, IF ANY:

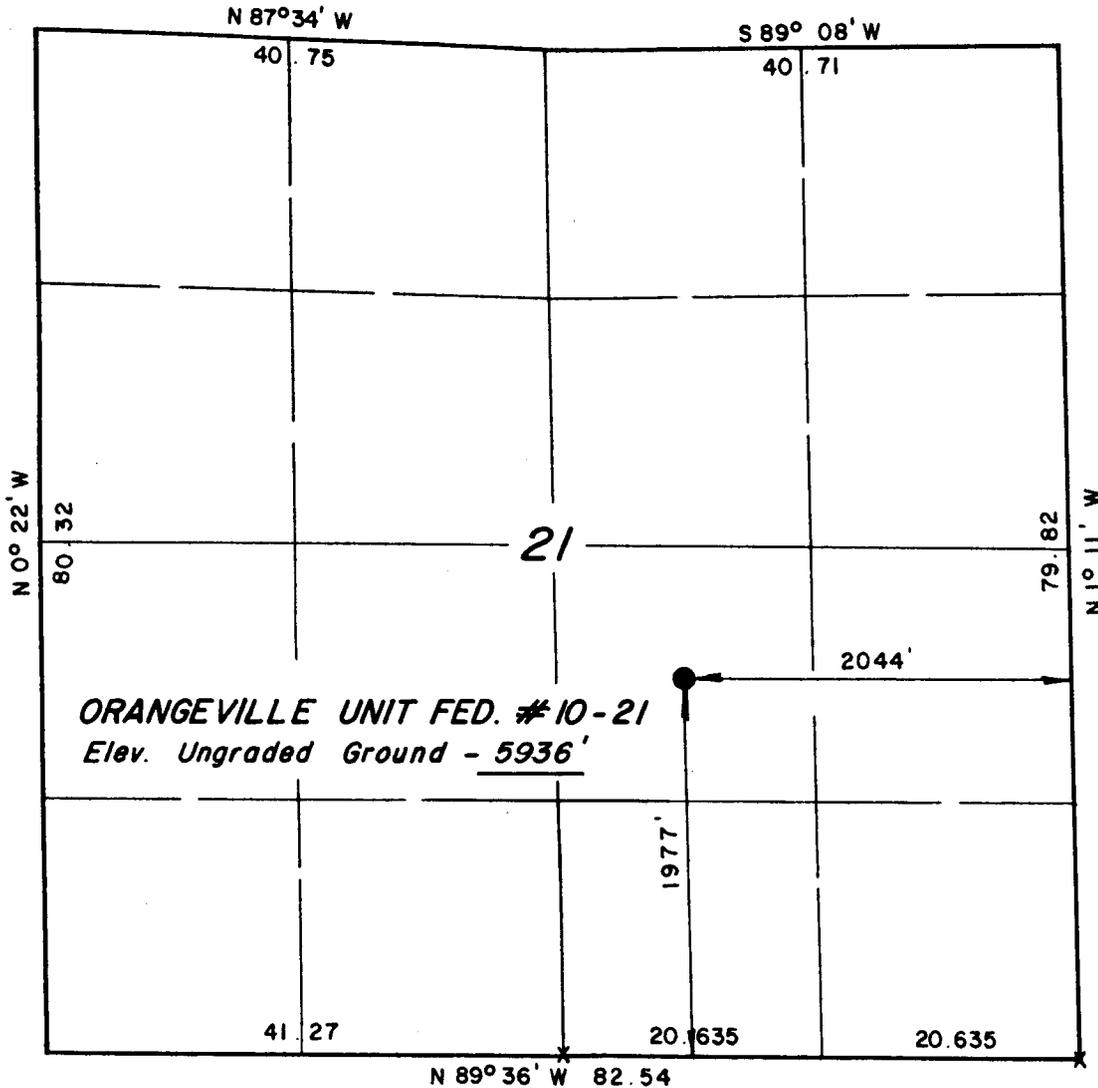
FLARING OR VENTING OF GAS IS SUBJECT TO NTL 4-A DATED 1/1/80

CONDITIONS OF APPROVAL ATTACHED

State of Utah - DDCM

T18S, R8E, S.L.B. & M.

PROJECT  
**CHANDLER & ASSOCIATES, INC.**  
 Well location, O.U. FED. #10-21,  
 located as shown in the NW1/4 SE1/4  
 Section 21, T18S, R8E, S.L.B. & M.  
 Emery County, Utah.



X = Sections Corners Located



CERTIFICATE

THIS IS TO CERTIFY THAT THE ABOVE PLAT WAS PREPARED FROM  
 FIELD NOTES OF ACTUAL SURVEYS MADE BY ME OR UNDER MY  
 SUPERVISION AND THAT THE SAME ARE TRUE AND CORRECT TO THE  
 BEST OF MY KNOWLEDGE AND BELIEF.

*Nelson J. ...*

REGISTERED LAND SURVEYOR  
 REGISTRATION NO 2454  
 STATE OF UTAH

UINTAH ENGINEERING & LAND SURVEYING  
 P. O. BOX Q - 85 SOUTH - 200 EAST  
 VERNAL, UTAH - 84078

SCALE 1" = 1000'	DATE 2 / 14 / 84
PARTY D.A. D.K. G.S.      BFW	REFERENCES GLO Plat
WEATHER Cold	FILE CHANDLER & ASSOC.

CONDITIONS OF APPROVAL FOR NOTICE TO DRILL

Company Chandler & Associates, Inc. Well No. 10-21  
Location Sec. 21, T. 18 S., R. 8 E. Lease No. U-51018

**A COPY OF THESE CONDITIONS SHOULD BE FURNISHED YOUR  
FIELD REPRESENTATIVE TO INSURE COMPLIANCE**

All lease and/or unit operations are to be conducted in such a manner that full compliance is made with the applicable laws, regulations (30 CFR 221), and the approved plan of operations. The operator is considered fully responsible for the actions of his subcontractors. The following items are emphasized:

1. There shall be no deviation from the proposed drilling and/or workover program as approved. Safe drilling and operating practices must be observed. All wells, whether drilling producing, suspended, or abandoned shall be identified in accordance with 30 CFR 221.22. Any changes in operations must have prior approval of this office. Pressure tests are required before drilling out from under all casing strings set and cemented in place. Blowout preventer controls must be installed prior to drilling the surface casing plug and will remain in use until the well is completed or abandoned. Preventers will be inspected and operated at least daily to insure good mechanical working order, and this inspection recorded on the daily drilling report. Preventers will be pressure tested before drilling casing cement plugs. All BOP pressure tests must be recorded on the daily drilling report.
2. All shows of fresh water and minerals will be reported and protected. A sample will be taken of any water flows and furnished this office for analysis. All oil and gas shows will be adequately tested for commercial possibilities, reported and protected.
3. No location will be constructed or moved, no well will be plugged, and no drilling or workover equipment will be removed from a well to be placed in a suspended status without prior approval of this office. If operations are to be suspended, prior approval of this office must be obtained and notification given before resumption of operations.

In the event abandonment of the hole is desired, an oral request may be granted by this office, but must be timely followed within 15 days with a "Notice of Intention to Abandon" (Form 9-331). Unless the plugging is to take place immediately upon receipt of oral approval, the District Manager must be notified at least 48 hours in advance of the plugging of the well in order that a representative may witness plugging operation. If a well is suspended or abandoned, all pits must be fenced immediately until they are backfilled. The "Subsequent Report of Abandonment" (Form 9-331) must be submitted within 15 days after the actual plugging of the well bore, reporting where the plugs were placed, and the current status of the surface restoration. If surface restoration has not been completed at that time, a follow-up report on form 9-331 should be filed when all surface restoration has been completed and the location is considered ready for final inspection.

4. The spud date will be reported orally to the respective District Manager's office within 48 hours after spudding. If the spudding occurs on a weekend or holiday, wait until the following regular workday to make this report.

Periodic drilling progress reports must be filed directly with the District Manager's office on a frequency and form or method as may be acceptable to the District Manager.

In accordance with NTL-1, this well must be reported on Form 9-329 "Monthly Report of Operations", starting with the month in which operations commence and continue each month until the well is physically plugged and abandoned. This report should be filed, in duplicate, directly with Royalty Management Accounting Center, Minerals Management Service, P. O. Box 2859, Casper, Wyoming 82602.

Any change in the program must be approved by the District Manager. "Sundry Notices and Reports on Wells" (form 9-331) must be filed for all changes of plans and other operations in accordance with 30 CFR 221.58. Emergency approval may be obtained orally, but such approval does not waive the written report requirement. Any additional construction, reconstruction, or alteration of facilities, including roads, gathering lines, batteries, etc., which will result in the disturbance of new ground will require the filing of a suitable plan pursuant to NTL-6, and prior approval by the District Manager.

5. Whether the well is completed as a dry hole or as a producer, "Well Completion and Recompletion Report and Log" (form 9-330) will be submitted not later than 15 days after completion of the well or after completion of operations being performed, in accordance with 30 CFR 221.59. Two copies of all logs run, core descriptions, core analyses, well-test data, geologic summaries, sample descriptions, and all other surveys or data obtained and compiled during the drilling, workover, and/or completion operations, will be filed with form 9-330. Samples (cuttings, fluid, and/or gas) will be submitted only when requested by this office.
6. Significant surface values (are) (are not) involved at this location. Accordingly, you (must) (need not) notify at least (24) (48) hours prior to commencing field operations to allow this office to have personnel present for consultation during the construction of roads and locations.

Your contact with the District Office is: Robert (Bob) Graff

Office Phone: 801-259-6111 Ext 216 Home Phone: \_\_\_\_\_

City: Moab State: Utah

Resource Area Manager's Address and contacts are:

Address: 900 N. 700 E., P.O. Box AB, Price, Utah 84501

Your contact is: Mervin Miles

Office Phone: 801-637-4584 Home Phone: 801-748-2249

## 7. SURFACE OPERATING STANDARDS

Unless otherwise specified herein, construction and maintenance of surface facilities approved under this plan shall be in accordance with the guidelines set forth in the BLM/FS/GS Oil and Gas Brochure entitled, "Surface Operating Standards for Oil and Gas Exploration and Development". This includes but is not limited to such items as road construction and maintenance, handling of top soil and rehabilitation.

8. If a replacement rig is contemplated for completion operations, a "Sundry Notice" to that effect must be filed, for prior approval of the District Manager, and all conditions of this approved plan are applicable during all operations conducted with the replacement rig.
9. Pursuant to NTL-2B requirements regarding disposal facilities for new wells, this is authorization for unlined pit disposal of the water produced from this well for a period of 90 days from the date of initial production for sales purposes. During this period, an application for approval of the permanent disposal method, along with the required water analysis and other information must be submitted for the District Manager's approval. Failure to timely file an application within the time allowed will be considered an incident of noncompliance, and will be grounds for issuing a shut-in order until the application is submitted.
10. This permit is valid for a period of one year from the date of approval. If construction does not commence within 90 days from approval, the operator must contact this office 15 days prior to beginning construction. Construction under adverse conditions may require additional stipulations. If the permit terminates, any surface disturbance created under the application must be rehabilitated in accordance with the approved plan. After termination, it is required that a new application be filed for approval for any future operations.
11. If a tank battery is constructed on this lease, it must be surrounded by a fire wall of sufficient capacity to adequately contain the storage capacity of the battery.
12. This Application for Permit to Drill is approved subject to the requirement that, should the well be successfully completed for production, this office must be notified when it is placed in a producing status. Such notification will be by telegram or other written communication, and must be received in this office by not later than the first business day next following the date on which the well is placed on production. The notification shall provide, as a minimum, the following informational items:
  - a. Operator name, address and telephone number.
  - b. Well name and number.
  - c. Well location (1/4, 1/4, Section, Township, Range and Prime Meridian).
  - d. Date was placed in a producing status.
  - e. The nature of the well's production, i.e. crude oil, or crude oil and casinghead gas, or natural gas and entrained liquid hydrocarbons.

- f. The OCS, Federal or Indian lease prefix and number on which the well is located. Otherwise, the non-Federal or non-Indian land category, i.e. State or private.
- g. If appropriate, the unit agreement name, number and participating area name.
- h. If appropriate, the communitization agreement number.

13.

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SUPPLEMENTAL STIPULATIONS OF APPROVAL ATTACHED

## ADDITIONAL STIPULATIONS FOR PRODUCTION FACILITIES

Your Application for Permit to Drill also included a submittal for production facilities. These production facilities are approved for the lessee and his designated operator under Section 1 of the Oil and Gas Lease with the following conditions:

(1) The oil and gas measurement facilities must be installed on the well location. The oil and gas meters will be calibrated in place prior to any deliveries. Tests for meter accuracy are to be conducted monthly for the first three months on new meter installations and at least quarterly thereafter. Please provide this office with a date and time for the initial meter calibration and all future meter proving schedules. A copy of the meter calibration reports are to be submitted to the Salt Lake City District Oil and Gas Supervisor. Royalty payments will be made on all production volume as determined by the meter measurements or the tank measurements. All measurement facilities must conform with the API standards for liquid hydrocarbons and the AGA standard for natural gas measurement.

(2) Gas meter runs for each well will be located within 500 feet of the wellhead. The gas flowline will be buried from the wellhead to the meter and 500 feet downstream of the meter run or any production facilities. Meter runs must be housed and/or fenced.

(3) All disturbed areas not required for operations will be rehabilitated.

(4) All produced liquids must be contained including the dehydrator vent/condensate line effluent. All production pits must be fenced.

(5) The well activity, the well status and the date the well is placed on production must be reported on Lessee's Monthly Report of Operations, Form 9-329.

(6) All off-lease storage, off-lease measurement, or commingling on lease or off-lease must have written approval.

(7) All product lines entering and leaving hydrocarbon storage tanks must be locked/sealed.

(8) You are reminded of the requirements for handling, storing, or disposing of water produced from oil and gas wells under NTL-2B.

(9) All materials, trash, junk, debris, etc. not required for production must be removed from the well site and production facility site at the completion of these operations.

(10) A copy of the Gas Sales Contract will be provided to this office and the Royalty Accounting Department as directed.

(11) Construction and maintenance for surface use approved under this plan should be in accordance with the surface use standards as set forth in the BLM/GS Oil and Gas Brochure entitled, "Surface Operating Standards for Oil and Gas Exploration and Development." This includes, but is not limited to, such items as road construction and maintenance, handling of top soil and rehabilitation.

(12) "Sundry Notice and Reports on Wells" (form 9-331) will be filed for all changes of plans and other operations in accordance with 30 CFR 221.58. Emergency approval may be obtained verbally, but such approval does not waive the written report requirement. Any additional construction, reconstruction, or alternations of facilities, including roads, gathering lines, batteries, measurement facilities, etc., will require the filing of a suitable plan and prior approval by the survey.

Water  
of  
ab

DIVISION OF OIL, GAS AND MINING

SPUDDING INFORMATION

NAME OF COMPANY: CHANDLER & ASSOCIATES

WELL NAME: ORANGEVILLE FED. 10-21

SECTION NWSE 21 TOWNSHIP 18S RANGE 8E COUNTY Emery

DRILLING CONTRACTOR DESERT

RIG # 1

SPUDDED: DATE 4-13-84

TIME 2:00 PM

How Rotary

DRILLING WILL COMMENCE \_\_\_\_\_

REPORTED BY Rita

TELEPHONE # 303-863-9100

DATE 4-16-84 SIGNED AS

RECEIVED

APR 30 1984

Form 9-331  
Dec. 1973

Form Approved.  
Budget Bureau No. 42-R1424

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

DIVISION OF OIL  
GAS & MINING

**SUNDRY NOTICES AND REPORTS ON WELLS**

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use Form 9-331-C for such proposals.)

1. oil well  gas well  other

2. NAME OF OPERATOR  
Chandler & Associates, Inc.

3. ADDRESS OF OPERATOR  
1400 Lincoln Tower Building, Denver, CO 80203

4. LOCATION OF WELL (REPORT LOCATION CLEARLY. See space 17 below.)  
AT SURFACE: 2044 FEL; 1977' FSL (NW SE)  
AT TOP PROD. INTERVAL:  
AT TOTAL DEPTH: Same

5. LEASE NO. 1151118

6. IF INDIAN, ALLOTTEE OR TRIBE NAME  
-----

7. UNIT AGREEMENT NAME  
Orangeville Unit

8. FARM OR LEASE NAME  
Orangeville Unit Fed

9. WELL NO.  
10-21

10. FIELD OR WILDCAT NAME  
Wildcat

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA  
Sec 21-18S-8E

12. COUNTY OR PARISH  
Emery

13. STATE  
Utah

14. API NO.  
43-015-30188

15. ELEVATIONS (SHOW DF, KDB, AND WD)  
5899' GR

16. CHECK APPROPRIATE BOX TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

REQUEST FOR APPROVAL TO:	SUBSEQUENT REPORT OF:
TEST WATER SHUT-OFF <input type="checkbox"/>	<input type="checkbox"/>
FRACTURE TREAT <input type="checkbox"/>	<input type="checkbox"/>
SHOOT OR ACIDIZE <input type="checkbox"/>	<input type="checkbox"/>
REPAIR WELL <input type="checkbox"/>	<input type="checkbox"/>
PULL OR ALTER CASING <input type="checkbox"/>	<input type="checkbox"/>
MULTIPLE COMPLETE <input type="checkbox"/>	<input type="checkbox"/>
CHANGE ZONES <input type="checkbox"/>	<input type="checkbox"/>
ABANDON* <input checked="" type="checkbox"/>	<input type="checkbox"/>
(other)	

(NOTE: Report results of multiple completion or zone change on Form 9-330.)

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

4-13-84 SPUD 2:00 PM.

4-14-84 Depth 175'. Set 4 jts 8 5/8" 24# surf csg at 163.41' KB w/130 sx Class "G", 3% CaCl, 1/4#/sk flocele. Circ, good returns. Plug down 4:45 PM 4-14-84.

4-18-84 Depth 2,137' - total depth. Ran open hole test in Tununck Shale. On test, slight blow thru 1/8" orifice. No pressure measureable. Ran Formation Density Log-Sidewall Neutron-GR, DILL-GR, & Cyberlook logs.

4-19-84 Depth 2,137'. After evaluation of logs and samples, it was determined to plug the well as follows: 20 sx at 2050-2100 RIG RELEASED 12 Noon.  
20 sx at 1760-1810  
20 sx at 144-194  
10 sx at surface

Mud laden fluid will be used between plugs.

Subsurface Safety Valve: Manu. and Type \_\_\_\_\_ Set @ \_\_\_\_\_ Ft.

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

SIGNED Hugo Cartaya TITLE Petroleum Engineer DATE 4-24-84

APPROVED BY \_\_\_\_\_ TITLE \_\_\_\_\_  
CONDITIONS OF APPROVAL, IF ANY:

APPROVED BY THE STATE  
OF UTAH DIVISION OF  
OIL, GAS, AND MINING

DATE: \_\_\_\_\_  
BY: \_\_\_\_\_

\*See Instructions on Reverse Side

RECEIVED

APR 30 1984

Form 9-331  
Dec. 1973

Form Approved.  
Budget Bureau No. 42-R1424

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

DIVISION OF OIL  
GAS & MINING

5. LEASE	0-51018
6. IF INDIAN, ALLOTTEE OR TRIBE NAME	
7. UNIT AGREEMENT NAME	Orangeville Unit
8. FARM OR LEASE NAME	Orangeville Unit Fed
9. WELL NO.	10-21
10. FIELD OR WILDCAT NAME	Wildcat
11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA	Sec 21-18S-8E
12. COUNTY OR PARISH	Emery
13. STATE	Utah
14. API NO.	43-015-30188
15. ELEVATIONS (SHOW DF, KDB, AND WD)	5899' GR

**SUNDRY NOTICES AND REPORTS ON WELLS**  
(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use Form 9-331-C for such proposals.)

1. oil well  gas well  other

2. NAME OF OPERATOR  
Chandler & Associates, Inc.

3. ADDRESS OF OPERATOR  
1400 Lincoln Tower Building, Denver, CO 80203

4. LOCATION OF WELL (REPORT LOCATION CLEARLY. See space 17 below.)  
AT SURFACE: 2044' FEL; 1977' FSL (NW SE)  
AT TOP PROD. INTERVAL:  
AT TOTAL DEPTH: Same

16. CHECK APPROPRIATE BOX TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

REQUEST FOR APPROVAL TO:	SUBSEQUENT REPORT OF:
TEST WATER SHUT-OFF <input type="checkbox"/>	<input type="checkbox"/>
FRACTURE TREAT <input type="checkbox"/>	<input type="checkbox"/>
SHOOT OR ACIDIZE <input type="checkbox"/>	<input type="checkbox"/>
REPAIR WELL <input type="checkbox"/>	<input type="checkbox"/>
PULL OR ALTER CASING <input type="checkbox"/>	<input type="checkbox"/>
MULTIPLE COMPLETE <input type="checkbox"/>	<input type="checkbox"/>
CHANGE ZONES <input type="checkbox"/>	<input type="checkbox"/>
ABANDON* <input type="checkbox"/>	<input checked="" type="checkbox"/>
(other) _____	

(NOTE: Report results of multiple completion or zone change on Form 9-330.)

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

Approval was received from the Utah Division of Oil, Gas & Mining and from the Federal Branch of Fluid Minerals on 4-19-84 to plug the well as follows:

20 sx at 2050-2100  
20 sx at 1760-1810  
20 sx at 144-194  
10 sx at surface

RIG RELEASED 12 Noon 4-19-84. Mud laden fluid between plugs. Location will be restored as per approved plan.

APPROVED BY THE STATE  
OF UTAH DIVISION OF  
OIL, GAS, AND MINING

DATE: \_\_\_\_\_  
BY: \_\_\_\_\_

Subsurface Safety Valve: Manu. and Type \_\_\_\_\_

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

SIGNED Hugo Cartaya TITLE Petroleum Engineer DATE 4-24-84

(This space for Federal or State office use)

APPROVED BY \_\_\_\_\_ TITLE \_\_\_\_\_ DATE \_\_\_\_\_  
CONDITIONS OF APPROVAL, IF ANY:

APR 30 1984

10

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

SUBMIT IN DUPLICATE  
DIVISION OF OIL  
GAS & MINERAL RESOURCES

Form approved.  
Budget Bureau No. 42-R355.5.

WELL COMPLETION OR RECOMPLETION REPORT AND LOG \*

1a. TYPE OF WELL: OIL WELL  GAS WELL  DRY  Other \_\_\_\_\_

b. TYPE OF COMPLETION: NEW WELL  WORK OVER  DEEP-EN  PLUG BACK  DIFF. RESVR.  Other \_\_\_\_\_

2. NAME OF OPERATOR  
CHANDLER & ASSOCIATES, INC.

3. ADDRESS OF OPERATOR  
1860 Lincoln St., Suite 1400, Denver, CO 80203

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements)\*  
At surface 2044' FEL, 1977' FSL (NW SE)  
At top prod. interval reported below same  
At total depth same

14. PERMIT NO. DATE ISSUED  
API 43-015-30188 4-5-84

5. LEASE DESIGNATION AND SERIAL NO.  
U-51018

6. IF INDIAN, ALLOTTEE OR TRIBE NAME  
-----

7. UNIT AGREEMENT NAME  
Orangeville Unit

8. FARM OR LEASE NAME  
Orangeville Unit Fed.

9. WELL NO.  
10-21

10. FIELD AND POOL, OR WILDCAT  
Wildcat

11. SEC., T., R., M., OR BLOCK AND SURVEY OR AREA  
Sec. 21-18S-8E

12. COUNTY OR PARISH Emery 13. STATE Utah

15. DATE SPUNDED 4-13-84 16. DATE T.D. REACHED 4-17-84 17. DATE COMPL. (Ready to prod.) P&A 18. ELEVATIONS (DF, REB, RT, GR, ETC.)\* 5899' GR 19. ELEV. CASINGHEAD --

20. TOTAL DEPTH, MD & TVD 2137' 21. PLUG, BACK T.D., MD & TVD -- 22. IF MULTIPLE COMPL., HOW MANY\* -- 23. INTERVALS DRILLED BY -- 24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)\* n/a 25. WAS DIRECTIONAL SURVEY MADE no

26. TYPE ELECTRIC AND OTHER LOGS RUN  
ENL-GR-Sidewall, DILL-GR, Cyberlook 27. WAS WELL CORED no

28. CASING RECORD (Report all strings set in well)

CASING SIZE	WEIGHT, LB./FT.	DEPTH SET (MD)	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
8-5/8"	24#	163.41'	12 1/4"	130 sks	--

29. LINER RECORD 30. TUBING RECORD

SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT*	SCREEN (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)
n/a					n/a		

31. PERFORATION RECORD (Interval, size and number) 32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.

DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED
n/a	

33.\* PRODUCTION

DATE FIRST PRODUCTION	PRODUCTION METHOD (Flowing, gas lift, pumping—size and type of pump)	WELL STATUS (Producing or shut-in)					
--	--	P&A					
DATE OF TEST	HOURS TESTED	CHOKE SIZE	PROD'N. FOR TEST PERIOD	OIL—BBL.	GAS—MCF.	WATER—BBL.	GAS-OIL RATIO
--	--	--	→	--	--	--	--
FLOW. TUBING PRESS.	CASING PRESSURE	CALCULATED 24-HOUR RATE	OIL—BBL.	GA—MCF.	WATER—BBL.	OIL GRAVITY-API (CORR.)	
--	--	→	--	--	--	--	

34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.) TEST WITNESSED BY --

35. LIST OF ATTACHMENTS  
Logs to be sent by subcontractor.

36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records

SIGNED Algo Cartaya TITLE Petroleum Engineer DATE 4-26-84

\*(See Instructions and Spaces for Additional Data on Reverse Side)

# INSTRUCTIONS

**General:** This form is designed for submitting a complete and correct well completion report and log on all types of lands and leases to either a Federal agency or a State agency, or both, pursuant to applicable Federal and/or State laws and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local, area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from, the local Federal and/or State office. See instructions on items 22 and 24, and 38, below regarding separate reports for separate completions.

If not filed prior to the time this summary record is submitted, copies of all currently available logs (drillers, geologists, sample and core analysis, all types electric, etc.), formation and pressure tests, and directional surveys, should be attached hereto, to the extent required by applicable Federal and/or State laws and regulations. All attachments should be listed on this form, see item 35.

**Item 4:** If there are no applicable State requirements, locations on Federal or Indian land should be described in accordance with Federal requirements. Consult local State or Federal office for specific instructions.

**Item 18:** Indicate which elevation is used as reference. (where not otherwise shown) for depth measurements given in other spaces on this form and in any attachments. **Items 22 and 24:** If this well is completed for separate production from more than one interval zone (multiple completion), so state in item 22, and in item 24 show the producing interval, or intervals, top(s), bottom(s) and name(s) (if any) for only the interval reported in item 33. Submit a separate report (page) on this form, adequately identified, for each additional interval to be separately produced, showing the additional data pertinent to such interval.

**Item 29:** "Sacks Cement": Attached supplemental records for this well should show the details of any multiple stage cementing and the location of the cementing tool.

**Item 33:** Submit a separate completion report on this form for each interval to be separately produced. (See instruction for items 22 and 24 above.)

**37. SUMMARY OF POROUS ZONES:**  
SHOW ALL IMPORTANT ZONES OF POROSITY AND CONTENTS THEREOF; CORED INTERVALS; AND ALL DRILL-STEM TESTS, INCLUDING DEPTH INTERVAL TESTED, CUSHION USED, TIME TOOL OPEN, FLOWING AND SHUT-IN PRESSURES, AND RECOVERIES

FORMATION	TOP	BOTTOM	DESCRIPTION, CONTENTS, ETC.
Ferron	1785		
Tununk Sh	2075		
T.D.	2137		

**38. GEOLOGIC MARKERS**

NAME	MEAS. DEPTH	TRUE VERT. DEPTH

RECEIVED

APR 30 1984

DIVISION OF OIL  
GAS & MINING

GEOLOGICAL WELL REPORT

CHANDLER & ASSOCIATES, INC.  
ORANGEVILLE UNIT FEDERAL #10-21  
NW SE SEC. 21-T18S-R8E  
EMERY COUNTY, UTAH

PLEAS STRINGER  
PETROLEUM GEOLOGIST  
607 Colorado Building  
1615 California Street  
Denver, Colorado 80202

April 25, 1984

**C. PLEAS STRINGER, JR.**

**PETROLEUM GEOLOGIST  
807 COLORADO BUILDING  
1618 CALIFORNIA STREET  
DENVER, COLORADO 80202**

**PHONE 303-~~243333~~ 629-0817**

**CHANDLER & ASSOCIATES, INC.  
ORANGEVILLE UNIT FEDERAL #10-21  
NW SE SEC. 21-T18S-R8E  
EMERY COUNTY, UTAH**

ELEVATIONS: KB 5946', GL 5936'

SURVEY: 1977' FSL, 2044' FEL

SPUD DATE: April 13, 1984

SURFACE CASING: Set 8-5/8" at 164' with 130 sacks of class G cement, 3% CaCl<sub>2</sub> and 1/2 lb of Flo Cele per sack.

DRILLING FLUID: Air.

CORES: Attempted sidewall cores. No recovery.

TESTS: Open hole test at TD 2137'.

LOG SURVEY: Schlumberger Dual Induction log and Formation Density - Sidewall Neutron log; also, a computed Cyberlook log.

LOG TOPS:

<u>Formation</u>	<u>Depth</u>
Blue Gate sh	Surface
Ferron ss	1785 (+ 4161)
Tununk sh	2078

TOTAL DEPTH: 2137' by Driller and Logger.

STATUS: Plugged and abandoned April 19, 1984.

CONTRACTOR: Calvert Western Exploration Co. (Desert Drilling). rig 5; toolpusher Terry Leach.

DRILLING FOREMEN: Carl Winters, Bob Lafferty and Cotton Fladeland.

GEOLOGIST: Pleas Stringer.

SAMPLES: Disposed at the wellsite.

SAMPLE LITHOLOGIC DESCRIPTION

Samples are adjusted to the electric logs.

BLUE GATE SH

170-320 Shale: dark gray, firm, fissile.  
320-350 Siltstone: dark gray, firm.  
350-825 Shale: as above.  
825-840 Shale: dark gray, firm, fissile, slightly silty.  
840-880 Shale: dark gray, firm - hard, fissile - blocky;  
Siltstone: dark gray, firm - hard.  
880-960 Shale: dark gray, firm, fissile;  
Siltstone: dark gray, firm.  
960-1070 Shale: as above.  
1070-1320 Shale & Siltstone: as above.  
1320-1770 Very poor samples.  
1770-1780 Shale: dark gray, fissile.  
1780-1785 Siltstone: buff, even light staining?, no fluorescence  
or cut;  
Bentonite: white, soft.

FERRON SS

1785-1812 Sandstone: buff, silt - very fine grained, fairly  
well sorted, angular, firm, poor porosity and perm-  
eability, shows as above.  
1812-1820 Sandstone: white, very fine grained - silt, well  
sorted, angular, clay filled, firm, poor porosity  
and permeability, no shows.  
1820-1845 Shale: as above.  
1845-1863 Sandstone: light gray, silt - very fine grained,  
fairly well sorted, angular, friable, good porosity  
and permeability, no shows.

Chandler & Associates, Inc.  
Orangeville Unit Federal #10-21

- 1863-1875 Siltstone: brown, even staining, odor, no fluorescence or cut.
- 1875-1890 Shale: as above.
- 1890-1922 Sandstone: brown, silt - very fine grained, fairly well sorted, angular, firm, poor porosity and permeability, even staining, odor, no fluorescence or cut.
- 1922-1930 Sandstone: light gray, very fine grained - silt, fairly well sorted, angular, friable, fair porosity and permeability, no shows.
- 1930-1940 Siltstone: as above, shows as above.
- 1940-1950 Siltstone: gray, firm, no shows.
- 1950-1972 Sandstone: light gray, fine grained - silt, poorly sorted, angular, friable, good porosity and permeability, no shows.
- 1972-1995 Sandstone: light gray, very fine grained - silt, fairly well sorted, angular, friable, good porosity and permeability, no shows.
- 1995-2007 Sandstone: light gray, very fine grained, well sorted, angular, silty, firm, tight, no shows.
- 2007-2021 Siltstone: as above;  
Shale: as above.
- 2021-2031 Sandstone: light gray, very fine grained, well sorted, angular, silty, firm, tight, no shows.
- 2031-2048 Siltstone: as above.
- 2048-2066 Siltstone: dark gray, hard.
- 2066-2072 Shale: as above.
- 2072-2078 Siltstone: as above.

TUNUNK SH

- 2078-2137 Shale: dark gray, firm - hard.

Chandler & Associates, Inc.  
 Orangeville Unit Federal #10-21

SUMMARY OF FLARES AND TEST DATA

<u>Depths</u>	<u>Test Data</u>	<u>Flare &amp; Duration</u>
1430	Open hole test for 45 minutes. No gas.	
1992	Shut down 10 hours to trip and run logs. Kicked in compressor.	10' flare for 2 seconds.
2137	Open 8-1/2 hours, air flow TSTM. Shut in 3 hours, pressure was zero. Ran a swab, no fluid. Attempted sidewall cores in sands at 1845', 1922' and 1950'. No recovery.	

DRILLING PROGRESS SUMMARY

4-13-84		Spudded 2:30 P.M.
14	Ø 111'.	Set surface casing.
15	WOC at 175'.	
16	Ø 1285'.	Open hole test at 1430'.
17	Trip out at 1991' for logs.	Ran logs. Log TD 1992'.
18	TD 2137'. Running an open hole test.	Ran logs. Attempted sidewall cores.
19	Plugging.	Plugged and abandoned. Rig released at noon.

BIT RECORD

<u>Bit No.</u>	<u>Size</u>	<u>Make</u>	<u>Type</u>	<u>Depth Out</u>	<u>Feet</u>	<u>Hours</u>
1	7-7/8"	Reed	FP53J	2137	1962	41

Chandler & Associates, Inc.  
Orangeville Unit Federal #10-21

PLUGGING RECORD

Plugging instructions given by Bob Graff, BLM in Moab, Utah.

20 sacks	2050-2100
20 sacks	1760-1810
20 sacks	across the surface casing shoe.
10 sacks	at the surface.

Respectfully submitted,

*Pleas Stringer*

Pleas Stringer

PS:cjg

RECEIVED

STATE OF UTAH  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING  
1588 West North Temple  
Salt Lake City, Utah 84116

MAY 14 1984

DIVISION OF OIL  
GAS & MINING

\*REPORT OF WATER ENCOUNTERED DURING DRILLING\*

Well Name & Number Orangeville Unit Fed 10-21  
Operator Chandler & Associates, Inc. Address 1400 Lincoln Tower Building  
Denver, Colorado 80203  
Contractor Desert Drilling 1 Address P.O. Box 757  
Moab, Utah 84532  
Location NW 1/4 SE 1/4 Sec. 21 T: 18S R: 8E County Emery

Water Sands

	<u>Depth</u>		<u>Volume</u>	<u>Quality</u>
	From	To	Flow Rate or Head	Fresh or Salty
1.	<u>NO WATER ENCOUNTERED.</u>			
2.	<u></u>			
3.	<u></u>			
4.	<u></u>			
5.	<u></u>			

(Continue of reverse side if necessary)

Formation Tops

Ferron 1785'  
Tununk Sh 2075'

Remarks

- NOTE: (a) Report on this form as provided for in Rule C-20, General Rules and Regulations and Rules of Practice and Procedure.
- (b) If a water analysis has been made of the above reported zone, please forward a copy along with this form.