

**COCHRANE RESOURCES, INC.**

Engineering  
Wellsite Supervision  
Lease Operating

P.O. Box 1656  
Roosevelt, Utah 84066  
Phone (801) 722-5081

July 12, 1989

State of Utah  
Department of Natural Resources  
Division of Oil, Gas & Mining  
355 West North Temple  
3 Triad Center, Suite 350  
Salt Lake City, Utah 84180-1203

RECEIVED  
JUL 14 1989  
DIVISION OF  
OIL, GAS & MINING

Attn: Ron Firth

Re: Application to drill Cochrane Federal 13-9

Dear Ron:

Please find attached the application to drill the subject well.

A copy of the archaeological survey will be sent to you when it is completed, and the water to drill the well will come from Pleasant Valley under Shields water service temporary water permit.

Please advise if you have any questions.

Yours truly,

*Ken Allen*

Ken Allen

KBA/da  
encl.

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

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  
 Cochrane Resources, Inc.

3. ADDRESS OF OPERATOR  
 P.O. Box 1656 Roosevelt, Utah 84066

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)\*  
 At surface 660' FWL 1980' FSL *NWSW*  
 At proposed prod. zone

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE\*  
 22 Miles South West from Myton, Utah

15. DISTANCE FROM PROPOSED\* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any)  
 660'

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

21. ELEVATIONS (Show whether DF, RT, GR, etc.)  
 5767; G.R.

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
10 3/4"	8 5/8"	24#	200'	to surface
7 7/8"	5 1/2"	17#	5400'	as required

T.D. on this well will be 5400' in the Green River Formation.

See: 8 point compliance program  
 13 point surface use plan  
 B.O.P. Diagram  
 Plat of Location  
 Cut and fill sheets  
 Topographic map

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 *John R. Bay* TITLE President DATE July 12, 1989

(This space for Federal or State office use)

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

PERMIT NO. 43-013-31237

APPROVAL DATE

APPROVED BY

TITLE

DATE: 7-18-89  
BY: *John R. Bay*  
WELL SPACING: R615-32

CONDITIONS OF APPROVAL, IF ANY:

\*See Instructions On Reverse Side

5. LEASE DESIGNATION AND SERIAL NO.

U-43355

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME

Wilkins Ridge II Unit

9. WELL NO.

13-9

10. FIELD AND POOL, OR WILDCAT

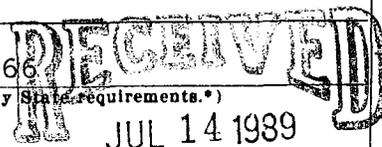
Undesignated

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

Sec 9, T10S, R17E SLB&M

12. COUNTY OR PARISH 13. STATE

Duchesne Utah



**COCHRANE RESOURCES, INC.**

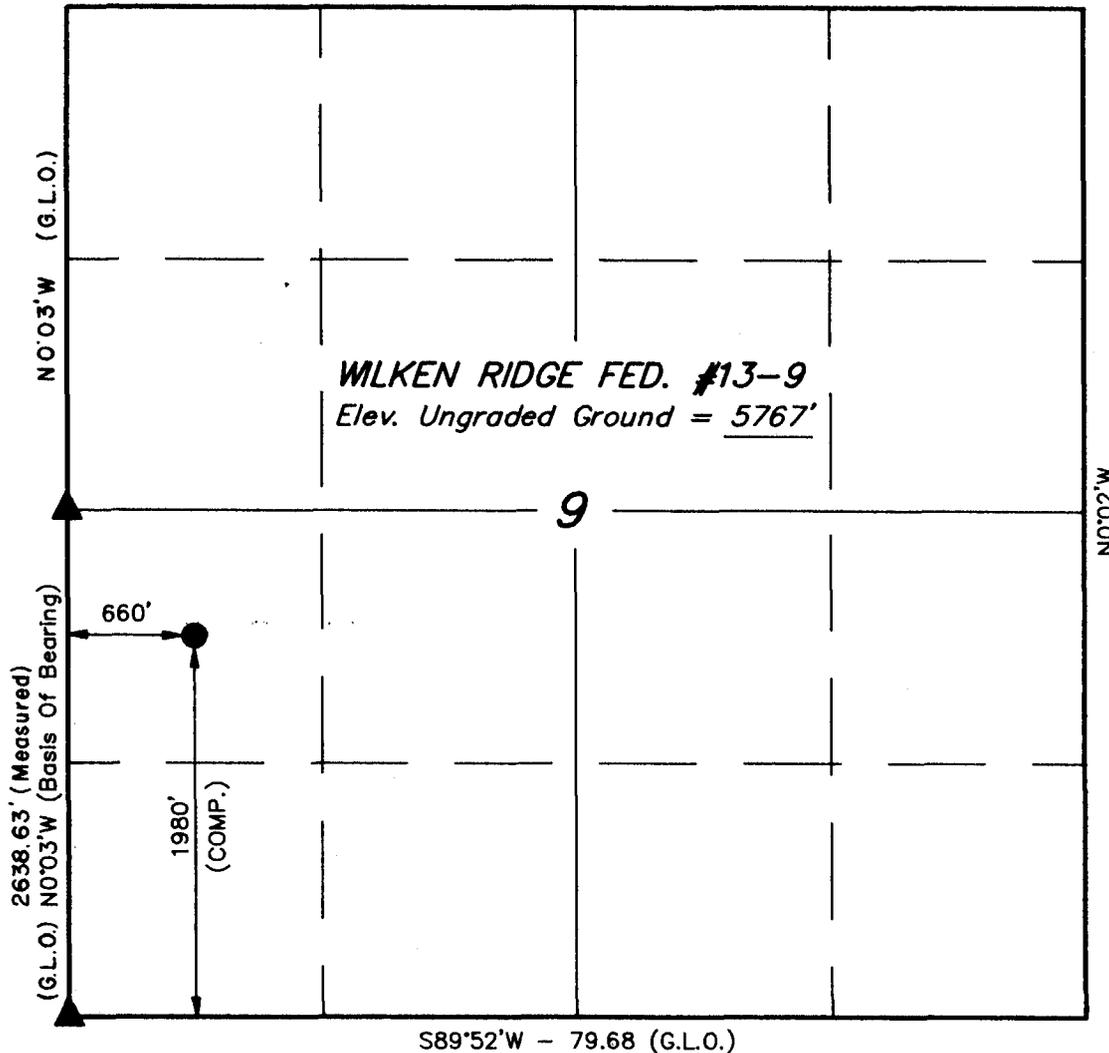
**T10S, R17E, S.L.B.&M.**

WELL LOCATION, WILKEN RIDGE FED. #13-9,  
LOCATED AS SHOWN IN THE NW1/4 SW1/4  
OF SECTION 9, T10S, R17E, S.L.B.&M.

S89°56'W - 79.70 (G.L.O.)

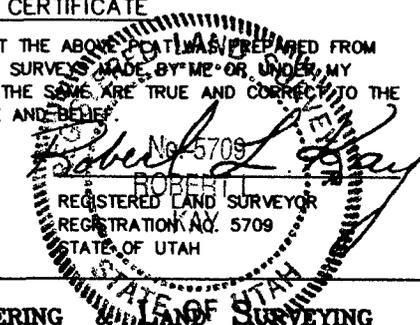
BASIS OF ELEVATION

SPOT ELEVATION AT A RIDGE TOP IN THE SW1/4  
NE1/4 OF SECTION 9, R9S, R17E, S.L.B.&M. TAKEN  
FROM THE WILKEN RIDGE QUADRANGLE, UTAH,  
DUCHESNE COUNTY, 7.5 MINUTE QUAD. (TOPOGRAPHIC  
MAP) PUBLISHED BY THE UNITED STATES DEPARTMENT  
OF THE INTERIOR, GEOLOGICAL SURVEY. SAID  
ELEVATION IS MARKED AS BEING 5749 FEET.



CERTIFICATE

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



**UNTAH ENGINEERING AND SURVEYING**  
P. O. BOX 1758 - 85 SOUTH - 200 EAST  
VERNAL, UTAH - 84078

SCALE 1" = 1000'	DATE 6-27-89
PARTY R.L.K. B.M. T.D.H.	REFERENCES G.L.O. PLAT
WEATHER HOT	FILE COCHRANE RESOURCES, INC.

▲ = SECTION CORNERS LOCATED. (Bross Caps)

8 POINT COMPLIANCE PROGRAM

WELL NAME: Cochran Resources Wilkins Ridge 13-9

LOCATION: N.E. of S.W. Sec. 9, T10 S, R17E. S.L.M.

LEASE NO.: U-43355 Wilkins Ridge II Unit

ONSITE INSPECTION DATE: 6/30/89

A. DRILLING PROGRAM

1. Surface Formation and Estimated Formation Tops:

Well will spud in the Uintah Formation.  
Green River at 800'.  
Wasatch at 5400'.

2. Estimated Depth at Which Oil, Gas, Water and Other Mineral Bearing Zones are Expected to be Encountered:

	<u>FORMATION</u>	<u>ZONE</u>
Expected oil zones:	<u>Green River</u>	<u>3500' - 5400'</u>
Expected gas zones:	<u>Green River</u>	<u>3500' - 5400'</u>
Expected water zones:	<u>Upper Green River</u>	<u>0' - 3500'</u>
Expected mineral zones:	<u>None</u>	

All fresh water and prospectively valuable minerals (as described by BLM at onsite) encountered during drilline, will be recorded by depth and adequately protected. All oil and gas shows will be tested to determine commercial potential.

3. Pressure Control Equipment:

The rig will be equipped with 10", 3000 PSI, double ram B.O.P.'s with a 10", 3000 PSI annular type B.O.P. Pipe rams and blind rams will be tested to 2000 PSI, and the annular B.O.P. will be tested to 1500 PSI before drilling out from surface casing. Pipe rams will be operationally checked each day, and blind rams every trip out of the hole. Accessories to B.O.P.'s include Kelly Cock, Floor safety valve, and choke manifold of equivalent pressure rating. B.O.P. systems will be consistent with API RP53. Pressure tests will be conducted before drilling out from under casing strings which have been set and cemented in place. Blowout preventer controls will 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 will be recorded on a daily drilling report. Preventer will be

## 8 POINT COMPLIANCE PROGRAM

WELL NAME: Cochrane Resources Wilkins Ridge 13-9

3. Continued:

pressure tested before drilling casing cement plugs.

The District Office should be notified with sufficient lead time, in order to have a BLM representative on location during pressure testing.

4. Casing Program and Auxiliary Equipment:

200' of 8 5/8", 24#/ft. casing will be set and cemented to surface. If the well is productive 5 1/2", 15.5#/ft. casing will be set from surface to T.D. Cement program will be determined at that time .

Anticipated cement tops will be reported as to depth; not the expected number of sacks of cement to be used. The District Office should be notified, with sufficient lead time, in order to have a BLM representative on location while running all casing strings and cementing.

5. Mud Program and Circulating Medium:

0'-4500' Drill with fresh water.

4500'-T.D. Drill with 2% KCL water.

No chromate additives will be used in the mud system on Federal and Indian Lands without prior approval to ensure adequate protection of fresh water aquifers.

6. Coring, Logging and Testing Program:

No cores or dill stem tests will be taken. Open hole logs will be DLL with Gamma Ray and Micro SFL from T.D. to 3000'. FDC and CNL from T.D. to 4000'. Mud log from 3000' to T.D.

Whether the well is completed as a dry hole or as a producer, "Well Completion and Recompletion Report and Log" (Form 3160-4) will be submitted not later than 30 days after completion of the well or after completion of operations being performed, in accordance with 43 CFR 3164. Two copies of all logs, core descriptions, core analyses, well-test data, geologic summaries, sample description, and all other surveys or data obtained and compiled during the drilling, workover, and/or completion, will be filed with form 3160-4. Samples (cuttings, fluids, and/or gases) will be submitted when requested by authorized officer. (AO).

8 POINT COMPLIANCE PROGRAM

WELL NAME: Cochran Resources Wilkins Ridge 13-9

7. Abnormal Conditions, Bottom Hole Pressures and Potential Hazards:

No abnormal conditions or potential hazards are anticipated. Expected bottom hole pressure is 1900 PSI.

8. Anticipated Starting Dates and Notification of Operations:

Location Construction : July 26, 1989

Spud Date: July 29, 1989

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 the AO. If operations are to be suspended, prior approval of the AO will be obtained and notification given before resumption of operations.

The spud date will be reported to the AO within 48 hours after spudding. If the spudding occurs on a weekend or holiday, the report will be submitted on the following regular work day. The oral report will be followed up with a Sundry Notice.

In accordance with Onshore Oil and Gas Order No. 1, this will be reported on Form 3160-6 "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 will be filed with the Vernal BLM District Office, 170 South 500 East, Vernal, Utah 84078.

Immediate Report: Spills, blowouts, fires, leaks, accidents, or any other unusual occurrences shall be promptly reported in accordance with the requirements of NTL-3A or its revision.

If a replacement rig is contemplated for completion operations, a "Sundry Notice" (Form 3160-5) to that effect will be filed, for prior approval of the AO, and all conditions of this approved plan are applicable during all operations conducted with the replacement rig.

Should the well be successfully completed for production the AO will be notified when the well is placed in a producing status. Such notification will be sent by telegram or other written communication, not later than 5 days following the date on which the well is placed on production.

## 8 POINT COMPLIANCE PROGRAM

WELL NAME: Cochrane Resources Wilkins Ridge 13-9

### 8. Contined:

Pursuant to NTL-2B, with the approval of the District Engineer, produced water may be temporarily disposed of into lined pits for a period of up to 90 days. During the period so authorized, an application for approval of the disposal method, along with the required water analysis and other information, must be submitted to the District Engineer.

Pursuant to NTL-4A, leasees or operators are authorized to vent/flare gas during initial well evaluation tests, not exceeding a period of 30 days or the production of 50 MCF of gas, whichever occurs first. An application must be filed with the District Engineer and approval received, for any venting/flaring of gas beyond the initial 30 days or authorized test period.

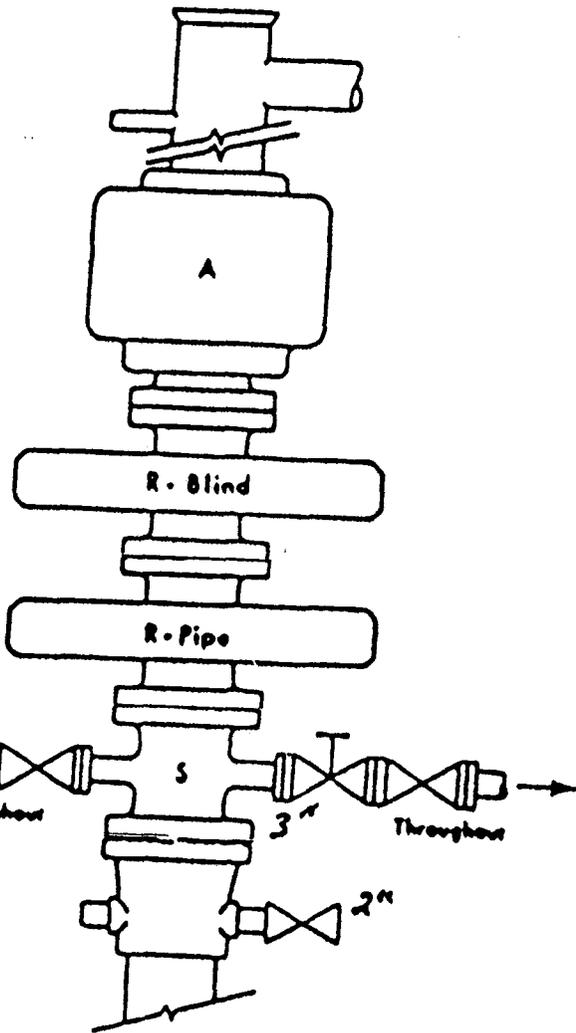
A schematic facilities diagram as required by 43 CFR 3162.7-2, 3162.7-3, and 3162.7-4 shall be submitted to the appropriate District Office within 30 days of installation or first production, whichever occurs first. All site security regulations as specified in 43 CFR 3162.7 shall be adhered to. All product lines entering and leaving hydrocarbon storage tanks will be effectively sealed in accordance with 43 CFR 3162.7-4.

A first production conference will be scheduled within 15 days after receipt of the first production notice.

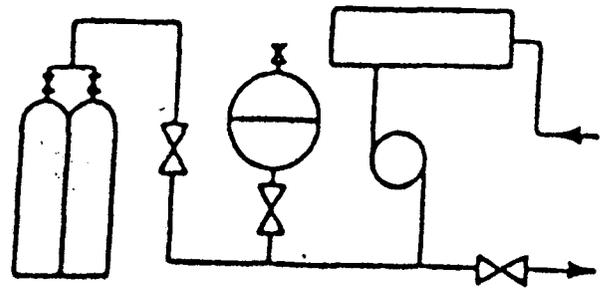
No well abandonment operations will be commenced without the prior approval of the AO. In the case of newly drilled dry holes or failures, and in emergency situations, oral approval will be obtained from the AO. A "Subsequent Report of Abandonment" form 3160-5, will be filed with the AO within 30 days following completion of the well for abandonment. This report will indicate where plugs were placed and the current status of surface restoration. Final abandonment will not be approved until the surface reclamation work required by the approved APD or approved abandonment notice has been completed to the satisfaction of the AO or his representative, or the appropriate Surface Managing Agency.

Pursuant to Onshore Oil and Gas Order No.1, leasees and operators have the responsibility to see that their exploration, development, production, and construction operations are conducted in a manner which conforms with applicable Federal laws and regulations and with State and local laws and regulations to the extent that such State and local laws are applicable to operations on Federal or Indian lands.

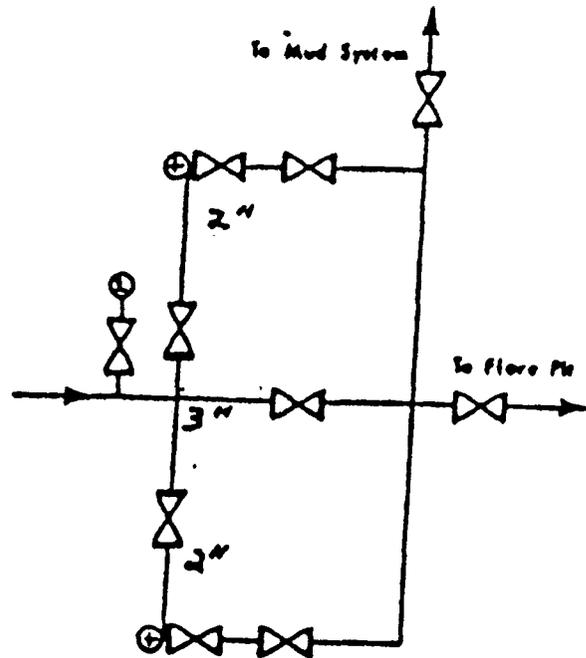
PRESSURE RATING  
3,000 psi



BLOWOUT PREVENTION STACK



ACCUMULATOR SYSTEM

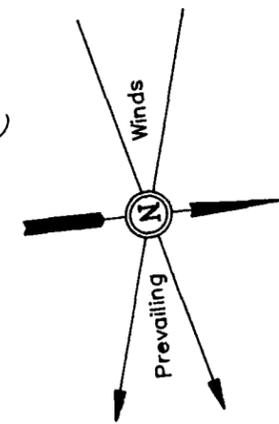


Flogged Connections Throughout  
MANIFOLD SYSTEM

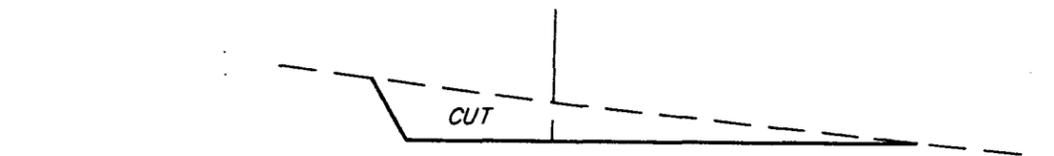
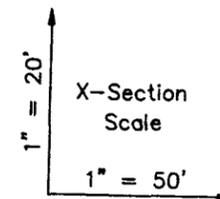
COCHRANE RESOURCES, INC.

LOCATION LAYOUT FOR

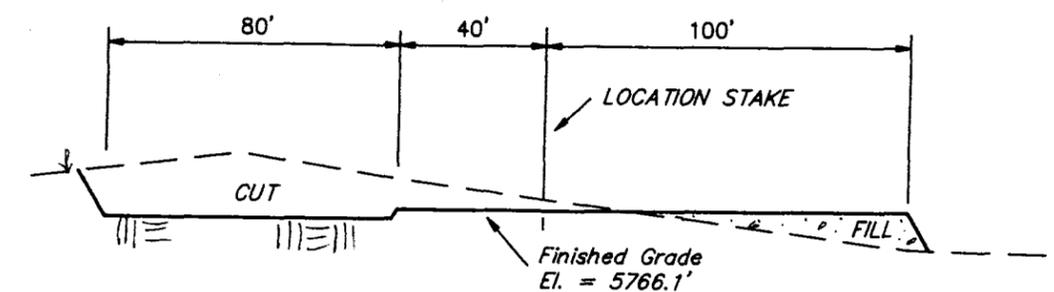
WILKIN RIDGE FEDERAL #13-9  
SECTION 9, T10S, R17E, S.L.B.&M.



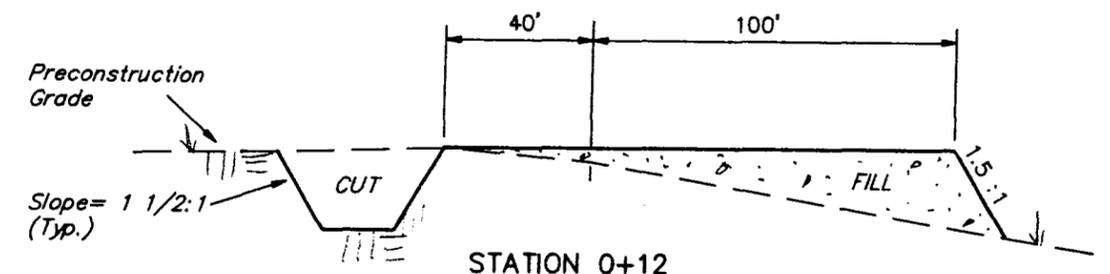
SCALE: 1" = 50'  
DATE: 6-27-89



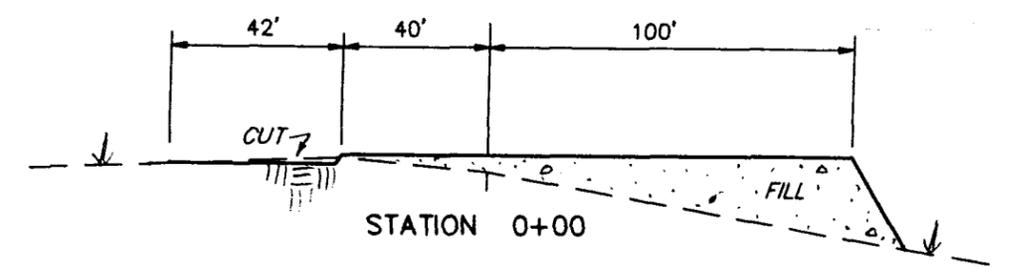
STATION 3+00.00



STATION 150+00



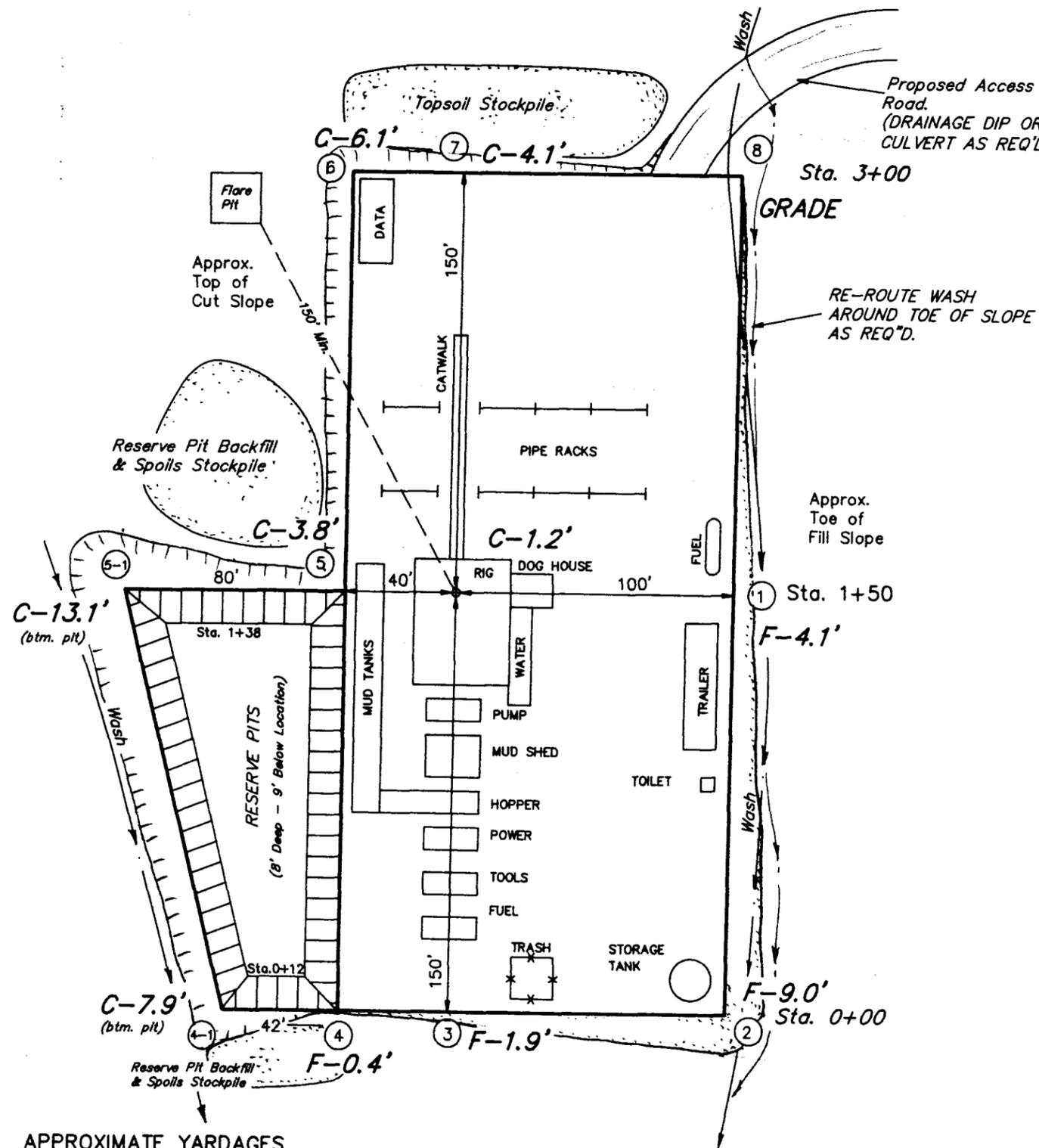
STATION 0+12



STATION 0+00

TYP. LOCATION LAYOUT

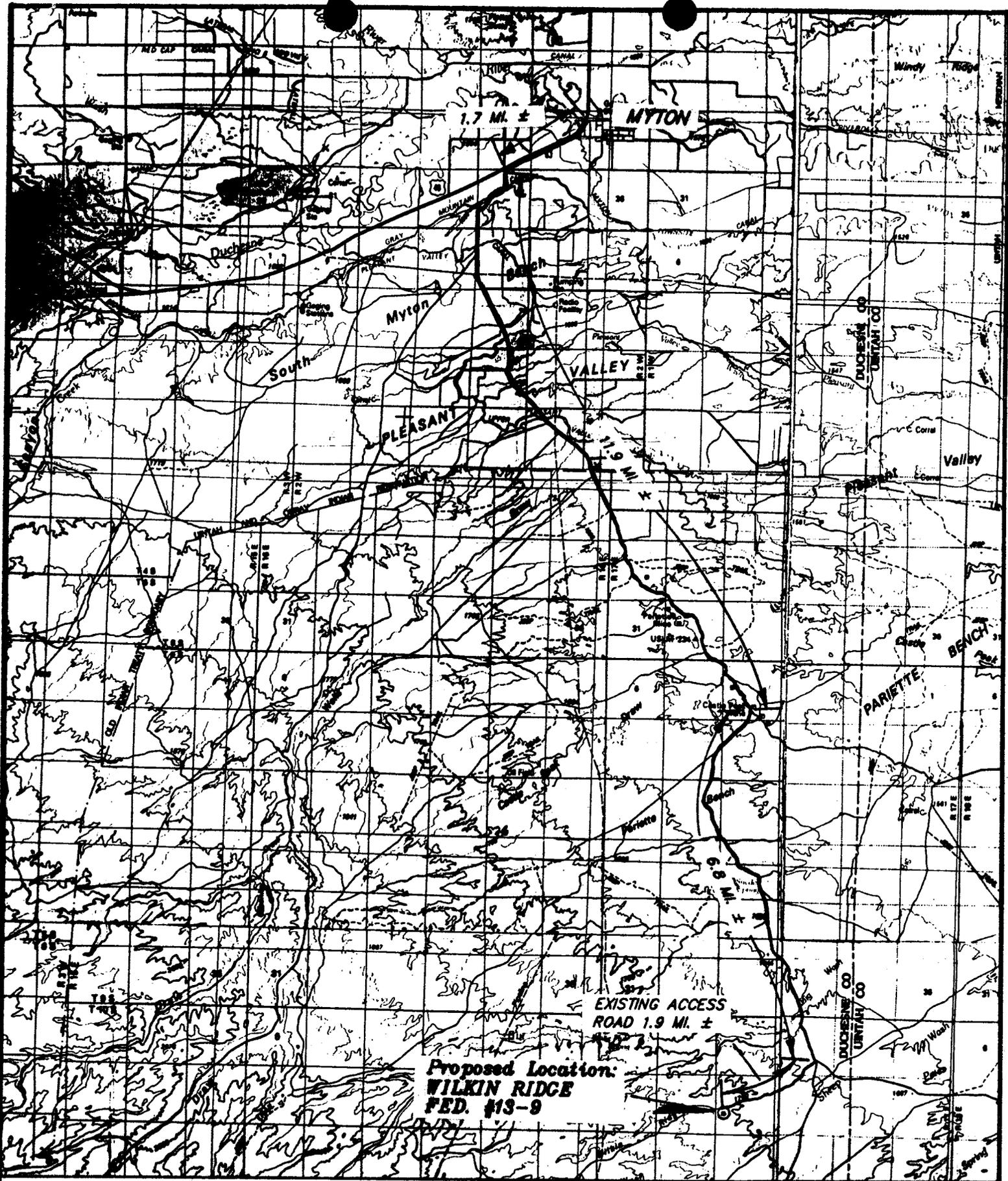
TYP. CROSS SECTIONS



APPROXIMATE YARDAGES

CUT	
(6") Topsoil Stripping	= 947 Cu. Yds.
Pit Volume (Below Grade)	= 2,004 Cu. Yds.
Remaining Location	= 2,447 Cu. Yds.
<b>TOTAL CUT</b>	<b>= 5,398 CU.YDS.</b>
<b>FILL</b>	<b>= 3,265 CU.YDS.</b>

EXCESS MATERIAL AFTER 5% COMPACTION	= 1,961 Cu. Yds.
Topsoil & Pit Backfill (1/2 Pit Vol.)	= 1,949 Cu. Yds.
EXCESS UNBALANCE (After Rehabilitation)	= 12 Cu. Yds.

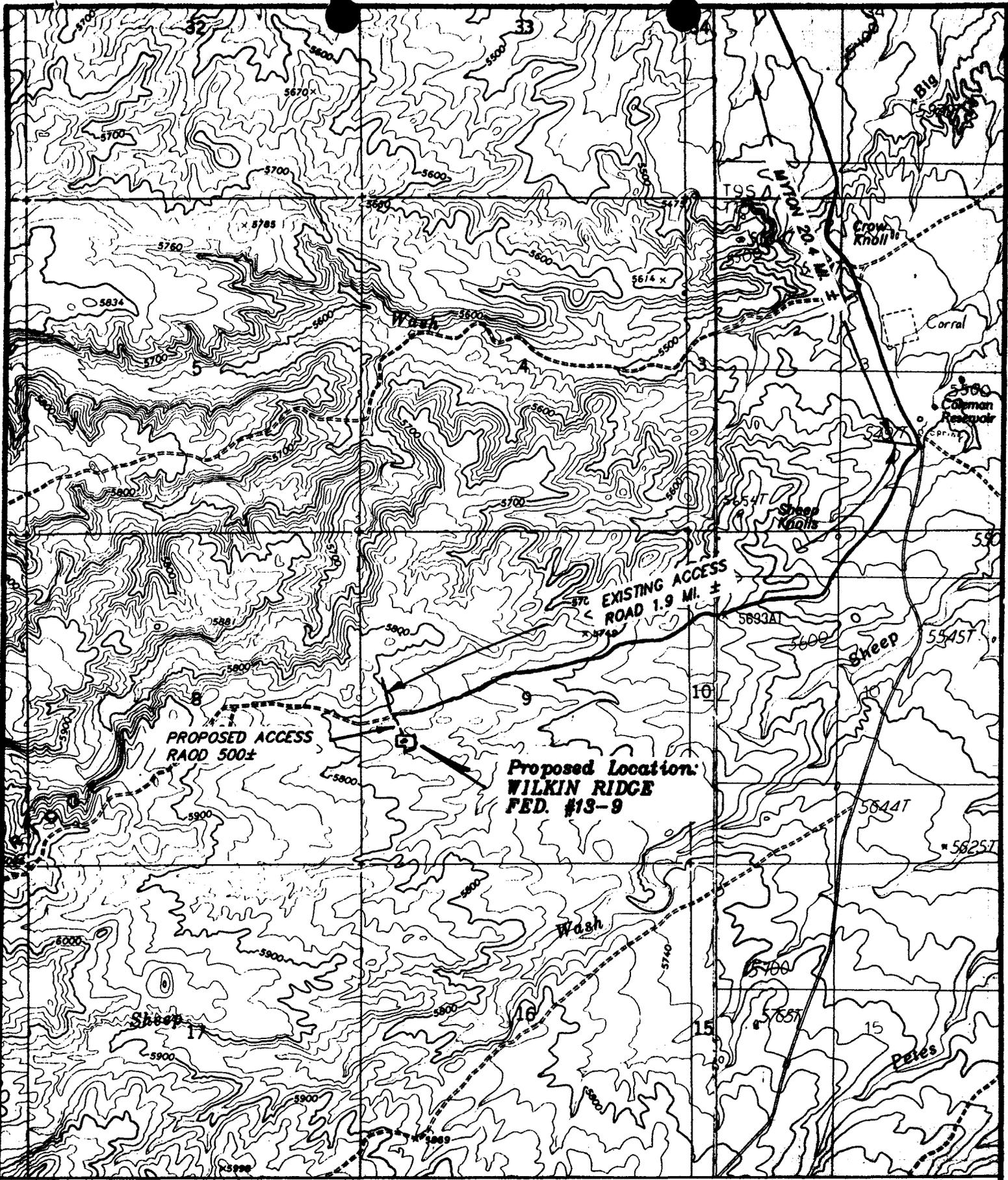


TOPOGRAPHIC  
MAP "A"



**COCHRANE RESOURCES, INC.**

WILKIN RIDGE FED. #13-9  
SEC. 9, T10S, R17E, S.L.B.&M.



TOPOGRAPHIC  
MAP "B"



SCALE: 1" = 2000'

**COCHRANE RESOURCES, INC.**

WILKIN RIDGE FED. #13-9  
SEC. 9, T10S, R17E, S.L.B.&M.

OPERATOR Cochrane Resources Inc. DATE 7-17-89

WELL NAME Wilkins Ridge 13-9

SEC NWSW 9 T 10S R 17E COUNTY Duchesne

43-013-31237  
API NUMBER

Federal  
TYPE OF LEASE

CHECK OFF:

PLAT

BOND

NEAREST WELL

LEASE

FIELD

POTASH OR OIL SHALE

PROCESSING COMMENTS:

No other well within 920'  
Need Water Permit

APPROVAL LETTER:

SPACING:  R615-2-3 N/A  
UNIT

R615-3-2

N/A  
CAUSE NO. & DATE

R615-3-3

STIPULATIONS:

1. Water Permit



Norman H. Bangerter  
Governor

Dee C. Hansen  
Executive Director

Dianne R. Nielson, Ph.D.  
Division Director

# State of Utah

DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

355 West North Temple  
3 Triad Center, Suite 350  
Salt Lake City, Utah 84180-1203  
801-538-5340

July 18, 1989

Cochrane Resources, Inc.  
P. O. Box 1656  
Roosevelt, Utah 84066

Gentlemen:

Re: Wilkins Ridge 13-9 - NW SW Sec. 9, T. 10S, R. 17E - Duchesne County, Utah  
1980' FSL, 660' FWL

Approval to drill the referenced well is hereby granted in accordance with Rule R615-3-2, Oil and Gas Conservation General Rules, subject to the following stipulation:

1. Prior to commencement of drilling, receipt by the Division of evidence providing assurance of an adequate and approved supply of water as required by Chapter 3, Title 73, Utah Code Annotated.

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

1. Spudding notification within 24 hours after drilling operations commence.
2. Submittal of an Entity Action Form within five working days following spudding and whenever a change in operations or interests necessitates an entity status change.
3. Submittal of the Report of Water Encountered During Drilling, Form 7.
4. Prompt notification if it is necessary to plug and abandon the well. Notify John R. Baza, Petroleum Engineer, (Office) (801) 538-5340, (Home) 298-7695, or Jim Thompson, Lead Inspector, (Home) 298-9318.
5. Compliance with the requirements of Rule R615-3-20, Gas Flaring or Venting, Oil and Gas Conservation General Rules.

Page 2  
Cochrane Resources, Inc.  
Wilkins Ridge 13-9  
July 18, 1989

6. Prior to commencement of the proposed drilling operations, plans for facilities for disposal of sanitary wastes at the drill site shall be submitted to the local health department. These drilling operations and any subsequent well operations must be conducted in accordance with applicable state and local health department regulations. A list of local health departments and copies of applicable regulations are available from the Division of Environmental Health, Bureau of General Sanitation, telephone (801) 538-6121.
7. 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 43-013-31237.

Sincerely,



R. J. Firth  
Associate Director, Oil & Gas

lcr  
Enclosures  
cc: Bureau of Land Management  
D. R. Nielson  
J. L. Thompson  
WE14/1-2

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

SUBMIT IN TRIPLICATE\*  
(Other instructions re-  
verse side)

Form approved  
Budget Bureau No. 1004-0135  
Expires August 31, 1985

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 "APPLICATION FOR PERMIT—" for such proposals.)

1. OIL WELL  GAS WELL  OTHER

2. NAME OF OPERATOR  
Cochrane Resources, Inc.

3. ADDRESS OF OPERATOR  
P.O. Box 1656 Roosevelt, Utah 84066

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.\*  
See also space 17 below.)  
At surface  
660' FWL 1980' FSL

14. PERMIT NO.  
43-013-31237

15. ELEVATIONS (Show whether DF, RT, or, etc.)  
5767' G.R.

RECEIVED  
JUL 20 1989  
DIVISION OF  
OIL, GAS & MINING

5. LEASE DESIGNATION AND SERIAL NO.  
U-43355

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME  
Wilkins Ridge II Unit

8. FARM OR LEASE NAME

9. WELL NO.  
13-9

10. FIELD AND POOL, OR WILDCAT

11. SEC., T., R., M., OR BLE. AND SURVEY OR AREA  
Sec 9, T10S, R17E SLB&M

12. COUNTY OR PARISH 13. STATE  
Duchesne Utah

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

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
TEST WATER SHUT-OFF <input type="checkbox"/>	PULL OR ALTER CASING <input type="checkbox"/>	WATER SHUT-OFF <input type="checkbox"/>	REPAIRING WELL <input type="checkbox"/>
FRACTURE TREAT <input type="checkbox"/>	MULTIPLE COMPLETE <input type="checkbox"/>	FRACTURE TREATMENT <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
SHOOT OR ACIDIZE <input type="checkbox"/>	ABANDON* <input type="checkbox"/>	SHOOTING OR ACIDIZING <input type="checkbox"/>	ABANDONMENT* <input type="checkbox"/>
REPAIR WELL <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	(Other) _____	

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

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

Please be advised that Cochrane Resources, Inc. is considered to be the operator of well No 13-9, N.W. 1/4, S.W. 1/4, section 9, twp 10 S, Rge 17 E; lease no. U-43355, Duchesne County, Utah; and is responsible under the terms and conditions of the lease for the operations conducted upon the leased lands. Bond coverage is provided by First Interstate Bank in the form of a Book Entry Deposit to the Department of the Interior.

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

SIGNED [Signature] TITLE President DATE July 19, 1989

(This space for Federal or State office use)

APPROVED BY \_\_\_\_\_ TITLE \_\_\_\_\_ DATE \_\_\_\_\_

CONDITIONS OF APPROVAL, IF ANY:

\*See Instructions on Reverse Side

43-013-237

SUBMIT IN TRIPLICATE\*  
(Other instructions on reverse side)

Form approved.  
Budget Bureau No. 1004-0136  
Expires August 31, 1985

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

5. LEASE DESIGNATION AND SERIAL NO.  
U-43355

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME  
Wilkins Ridge II Unit

9. WELL NO.  
13-9

10. FIELD AND POOL, OR WILDCAT

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA  
Sec 9, T10S, R17E SLB&M

12. COUNTY OR PARISH | 13. STATE  
Duchesne | Utah

17. NO. OF ACRES ASSIGNED TO THIS WELL  
40

20. ROTARY OR CABLE TOOLS  
Rotary

22. APPROX. DATE WORK WILL START\*  
July 24, 1989

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

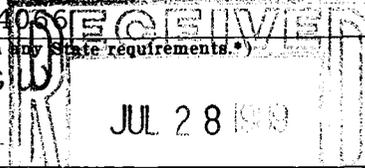
1a. TYPE OF WORK  
DRILL  DEEPEN  PLUG BACK

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

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Cochrane Resources, Inc.

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At proposed prod. zone



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22 Miles South West from Myton, Utah

15. DISTANCE FROM PROPOSED\* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any)  
660'

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

21. ELEVATIONS (Show whether DF, RT, GR, etc.)  
5767; G.R.

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SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
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7 7/8"	5 1/2"	555 17#	5400' new	as required

T.D. on this well will be 5400' in the Green River Formation.

- See:
- 8 point compliance program
  - 13 point surface use plan
  - B.O.P. Diagram
  - Plat of Location
  - Cut and fill sheets
  - Topographic map



\* Changes made as per tele conversation w/Ken Allen on 7/21/89

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 [Signature] TITLE President DATE July 12, 1989

(This space for Federal or State office use)

PERMIT NO. \_\_\_\_\_ APPROVED BY [Signature] TITLE ASSISTANT DISTRICT MANAGER MINERALS DATE 7-27-89

NOTICE OF APPROVAL

CONDITIONS OF APPROVAL ATTACHED TO OPERATOR'S COPY

\*See Instructions On Reverse Side

CONDITIONS OF APPROVAL FOR NOTICE TO DRILL

Company Cochrane Resources, Inc. Well No. 13-9

Location NW/SW Sec. 9, T 10S, R 17E Lease No. U-43355

Approval of this application does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

All lease and/or unit operations will be conducted in such a manner that full compliance is made with applicable laws, regulations (43 CFR 3100), Onshore Oil and Gas Order No. 1, and the approved plan of operations. The operator is fully responsible for the actions of his subcontractors. A copy of these conditions will be furnished the field representative to insure compliance.

Note: If this well is to be considered the first obligatory well of the Wilkins Ridge II Unit, the target formation must not be penetrated prior to Unit approval.

A. DRILLING PROGRAM

1. Estimated Depth at Which Oil, Gas, Water, or Other Mineral Bearing Zones are Expected to be Encountered

Report ALL water shows and water-bearing sands to the hydrologist of this office. Copies of State of Utah form OGC-8-X are acceptable. If noticeable water flows are detected, submit samples to this office along with any water analyses conducted.

2. Pressure Control Equipment

The BOP and related equipment shall meet the minimum requirements of Onshore Oil and Gas Order No. 2 for equipment and testing requirements, procedures, etc. and individual components shall be operable as designed.

The Vernal District Office shall be notified, with sufficient lead time, in order to have a BLM representative present while pressure testing.

3. Casing Program and Auxiliary Equipment

The District Office shall be notified, with sufficient lead time, in order to have a BLM representative on location while running all casing strings and cementing.

Surface casing shall have centralizers on every fourth joint of casing starting with the shoe joint and up to the bottom of the cellar.

Usable water may be encountered at depths of + 300-640 ft. in the Uinta Formation and from + 1928-2078 ft., + 2190-2266, + 4250-4340 ft., and + 5000-5260 ft. In the Green River formation. The Mahogany oil shale and L1 oil shale have been identified from + 2078-2190 ft. and + 2266-2326 ft., respectively. Therefore, the resources will be isolated and/or protected via the cementing program for the production casing by having a cement top for the intermediate casing at lease 200 ft. above the oil shale.

#### 4. Coring, Logging and Testing Program

Daily drilling and completion progress reports shall be submitted to this office on a weekly basis.

All Drill Stem tests (DST) shall be accomplished during daylight hours, unless specific approval to start during other hours is obtained from the Authorized Officer. However, DSTs may be allowed to continue at night if the test was initiated during daylight hours and the rate of flow is stabilized and if adequate lighting is available (i.e., lighting which is adequate for visibility and vaporproof for safe operations). Packers can be released, but tripping should not begin before daylight, unless prior approval is obtained from the Authorized Officer.

A cement bond log (CBL) shall be utilized to determine the top of cement (TOC) for the intermediate and production casing.

#### 5. Notifications of Operations

Operator shall report production data to MMS pursuant to 30 CFR 216.5 using form MMS/3160.

Gas produced from this well may not be vented or flared beyond an initial authorized test period of 30 days or 50 MMCF following its completion, whichever occurs first, without the prior written approval of the Authorized Officer. Should gas be vented or flared without approval beyond the authorized test period, the operator may be directed to shut-in the well until the gas can be captured or approval to continue venting or flaring as uneconomic is granted and the operator shall be required to compensate the lessor for that portion of the gas vented or flared without approval which is determined to have been avoidably lost.

#### 6. Other Information

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

All site security guidelines identified in Onshore Oil and Gas Order No. 3 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.

Gas meter runs for each well will be located within 500 feet of the wellhead. The gas flowline will be buried or anchored down 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 Vernal District Office. All meter measurement facilities will conform with the API standards for liquid hydrocarbons and the AGA standard for natural gas measurement.

The use of materials under BLM jurisdiction will conform to 43 CFR 3610.2-3.

There will be no deviation from the proposed drilling and/or work-over 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.

"Sundry Notice and Report on Wells" (Form 3160-5) will be filed for approval for all changes of plans and other operations in accordance with 43 CFR 3162.3-2.

Section 102(b)(3) of the Federal Oil and Gas Royalty Management Act of 1982, as implemented by the applicable provisions of the operating regulations at Title 43 CFR 3162.4-1(c), requires that "not later than the 5th business day after any well begins production on which royalty is due anywhere on a lease site or allocated to a lease site, or resumes production in the case of a well which has been off production for more than 90 days, the operator shall notify the authorized officer by letter or sundry notice, Form 3160-5, or orally to be followed by a letter or sundry notice, of the date on which such production has begun or resumed."

The date on which production is commenced or resumed will be construed for oil wells as the date on which liquid hydrocarbons are first sold or shipped from a temporary storage facility, such as a test tank, and for which a run ticket is required to be generated or, the date on which liquid hydrocarbons are first produced into a permanent storage facility, whichever first occurs; and, for gas wells as the date on which associated liquid hydrocarbons are first sold or shipped from a temporary storage facility, such as a test tank, and for which a run ticket is required to be generated or, the date on which gas is first measured through permanent metering facilities, whichever first occurs.

If you fail to comply with this requirement in the manner and time allowed, you shall be liable for a civil penalty of up to \$10,000 per violation for each day such violation continues, not to exceed a maximum of 20 days. See Section 109(c)(3) of the Federal Oil and Gas Royalty Management Act of 1982 and the implementing regulations at Title 43 CFR 3162.4-1(b)(5)(ii).

APD approval is valid for a period of one (1) year from the signature date. An additional one (1) year approval period may be granted, if requested, prior to the expiration of the original approval period.

In the event after-hour approvals are necessary, please contact one of the following individuals:

Gerald E. Kenczka (801) 781-1190  
Petroleum Engineer

Ed Forsman (801) 789-7077  
Petroleum Engineer

Revised October 1, 1985

Date NOS Received 6-26-89

CONDITIONS OF APPROVAL  
FOR THE SURFACE USE PROGRAM OF THE  
APPLICATION FOR PERMIT TO DRILL

Company/Operator Cochrane Resources Inc.

Well Name & Number Fed #13-9

Lease Number U-43355

Location NW 1/4 SW 1/4 Sec. 9 T. 10S R. 17E

Surface Ownership \_\_\_\_\_

B. THIRTEEN POINT SURFACE USE PROGRAM:

1. Planned Access Roads

Length - The access road will be 500' ± and not 5400' as stated in 2A.

2. Methods for Handling Waste Disposal

In order to prevent contamination to surrounding areas and to conserve water, the reserve pits will be lined with a plastic liner of at least 10 ml. and with sufficient bedding to prevent rock cuts. The liner will overlap at the top to prevent slippage.



**COCHRANE RESOURCES, INC.**

Engineering  
Wellsite Supervision  
Lease Operating

P.O. Box 1656  
Roosevelt, Utah 84066  
Phone (801) 722-5081

July 31, 1989

State of Utah  
Department of Natural Resources  
Division of Oil, Gas & Mining  
355 West North Temple  
3 Triad Center, Suite 350  
Salt Lake City, Utah 84180-1203

**RECEIVED**  
AUG 01 1989

DIVISION OF  
OIL, GAS & MINING

Re: Cochrane Resources, Inc.  
Federal 13-9  
Sec 9, T10S, R17E  
Wilkin Ridge II Unit  
**43-013-31237**

Dear Sir:

Please be advised that the subject well was spudded on July 29, 1989 at 2:00 pm. A 12 1/4" hole will be drilled to 200' and 8 5/8" 24# csg will be run and cemented to surface.

Yours truly,



Ken Allen

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

SUBMIT IN TRIPLICATE\*  
(Other instructions re-  
verse side)

Form approved.  
Budget Bureau No. 1004-0135  
Expires August 31, 1985

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 "APPLICATION FOR PERMIT—" for such proposals)

RECEIVED  
SEP 15 1989

1. OIL WELL  GAS WELL  OTHER  P & A

2. NAME OF OPERATOR  
Cochrane Resources, Inc.

3. ADDRESS OF OPERATOR  
P.O. Box 1656 Roosevelt, Utah 84066

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.\*  
See also space 17 below.)  
At surface  
660 FWL 1980 FSL

5. LEASE DESIGNATION AND SERIAL NO.  
U-43355

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME

9. WELL NO.  
13-9

10. FIELD AND POOL, OR WILDCAT  
Undesignated

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA  
Sec 9, T10S, R17E, SLB&

12. COUNTY OR PARISH  
Duchesne

13. STATE  
Utah

14. PERMIT NO.  
43-013-31237

15. ELEVATIONS (Show whether DF, RT, OR, etc.)  
5767' GR

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

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
TEST WATER SHUT-OFF <input type="checkbox"/>	PULL OR ALTER CASING <input type="checkbox"/>	WATER SHUT-OFF <input type="checkbox"/>	REPAIRING WELL <input type="checkbox"/>
FRACTURE TREAT <input type="checkbox"/>	MULTIPLE COMPLETE <input type="checkbox"/>	FRACTURE TREATMENT <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
SHOOT OR ACIDIZE <input type="checkbox"/>	ABANDON* <input type="checkbox"/>	SHOOTING OR ACIDIZING <input type="checkbox"/>	ABANDONMENT* <input type="checkbox"/>
REPAIR WELL <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	(Other) <input type="checkbox"/>	

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

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

Well was P & A August 20, 1989.  
Set Cement plugs with 30% excess from  
4891' - 5085'  
1953' - 2109'  
824' - 967'  
220' - 90'  
30' - Surface

Note: Plug at 220' was set 60' high as drill pipe was miss counted by two joints coming out of the hole. Lower plugs may also be 60' high.

OIL AND GAS	
DRN	RJF
JRB	GLH
DTS	SLS
1-TAS	
2	MICROFILM <input checked="" type="checkbox"/>
3	FILE <input checked="" type="checkbox"/>

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

SIGNED [Signature] TITLE President DATE September 14, 1989

(This space for Federal or State office use)

APPROVED BY \_\_\_\_\_ TITLE \_\_\_\_\_ DATE \_\_\_\_\_

CONDITIONS OF APPROVAL, IF ANY:

\*See Instructions on Reverse Side

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

RECEIVED  
SEP 15 1989

12

WELL COMPLETION OR RECOMPLETION REPORT AND LOG \*

LEASE DESIGNATION AND SERIAL NO.

U-43355

1a. TYPE OF WELL: OIL WELL  GAS WELL  DRY  Other DIVISION OF

7. UNIT AGREEMENT NAME

b. TYPE OF COMPLETION: NEW WELL  WORK OVER  DEEP-EN  PLUG BACK  DIFF. RENVR.  Other OIL, GAS & MINING P & A

8. FARM OR LEASE NAME

2. NAME OF OPERATOR  
Cochrane Resources, Inc.

9. WELL NO.  
13-9

3. ADDRESS OF OPERATOR  
P.O. Box 1656 Roosevelt, Utah 84066

10. FIELD AND POOL, OR WILDCAT  
Undesignated

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements)\*  
At surface 660 FWL 1980 FSL

11. SEC., T., R., M., OR BLOCK AND SURVEY OR AREA  
Sec 9, T10S, R17E SLB&M

At top prod. interval reported below  
At total depth

14. PERMIT NO. 43-013-31237 DATE ISSUED 7/27/89

12. COUNTY OR PARISH Duchesne 13. STATE Utah

15. DATE SPUDDED 7/29/89 16. DATE T.D. REACHED 8/17/89 17. DATE COMPL. (Ready to prod.) P & A 18. ELEVATIONS (DF, RKB, RT, GR, ETC.)\* 5767 GR 19. ELEV. CASINGHEAD 5767

20. TOTAL DEPTH, MD & TVD 5341' 21. PLUG BACK T.D., MD & TVD 22. IF MULTIPLE COMPL., HOW MANY\* 23. INTERVALS DRILLED BY 0 - TD ROTARY TOOLS CABLE TOOLS

24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)\* 25. WAS DIRECTIONAL SURVEY MADE

26. TYPE ELECTRIC AND OTHER LOGS RUN FDC - CNL - DLL - MSFL - Gamma Ray - S.P. 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	215'	10 3/4"	cemented to surface	none

29. LINER RECORD 30. TUBING RECORD

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

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

DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED

33.\* PRODUCTION

DATE FIRST PRODUCTION	PRODUCTION METHOD (Flowing, gas lift, pumping—size and type of pump)	WELL STATUS (Producing or shut-in)

DATE OF TEST	HOURS TESTED	CHOSE 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.	GAS—MCF.	WATER—BBL.	OIL GRAVITY-API (CORR.)

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

35. LIST OF ATTACHMENTS

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

SIGNED [Signature] TITLE President DATE 9/14/89

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

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):

38. GEOLOGIC MARKERS

FORMATION	TOP	BOTTOM	DESCRIPTION, CONTENTS, ETC.	NAME	TOP	
					MEAS. DEPTH	TRUE VERT. DEPTH
			DST #1 5037' 5337' no cushion Time - 12 min - ISIP 60 min - FF 60 min - FSI 28 1/2 hours. Pressures at 5041'	Green River Douglas Creek Black Shale Facies Wasatch Tongue Basal Lime- stone Wasatch	890' 2520'	890' 2520'
			Initial Final Hydrostatic 2545 2379 Initial Open 32 43 Initial S.I. 43 620 Final Open 56 56 Final S.I. 56 1632			
			Recoveries: No gas or fluid to surface Sample Chamber: 2CC oil, 500 cc water, 1100cc mud.			

OIL AND GAS		DRN	JRB	DTS	FILE
RJF	GLH	SLS	✓	✓	3-
		MICROFILM			

**RECEIVED**  
 SEP 28 1989

DIVISION OF  
 OIL, GAS & MINING

OPERATOR Cochrane Resources Inc OPERATOR ACCT. NO. N 7015  
 ADDRESS P.O. Box 1656  
Reeseville Utah 84066

ACTION CODE	CURRENT ENTITY NO.	NEW ENTITY NO.	API NUMBER	WELL NAME	WELL LOCATION					SPUD DATE	EFFECTIVE DATE
					QQ	SC	TP	RG	COUNTY		
A	99998		43-013-31237	Fed 13-9	NW-SE	9	10S	R17E	Duchesne	7-29-89	
WELL 1 COMMENTS: Well was plugged and abandon Aug 19 1989											
WELL 2 COMMENTS:											
WELL 3 COMMENTS:											
WELL 4 COMMENTS:											
WELL 5 COMMENTS:											

- ACTION CODES** (See instructions on back of form)
- A - Establish new entity for new well (single well only)
  - B - Add new well to existing entity (group or unit well)
  - C - Re-assign well from one existing entity to another existing entity
  - D - Re-assign well from one existing entity to a new entity
  - E - Other (explain in comments section)

NOTE: Use COMMENT section to explain why each Action Code was selected.

John Allen  
 Signature  
John Allen 9-27-89  
 Title Date  
 Phone No. (801) 722-9966