

**FILE NOTATIONS**

Entered in NID File .....  
Location Map Pinned .....  
Card Indexed .....  
✓  
✓  
✓

Checked by Chief .....  
Approval Letter .....  
Disapproval Letter .....

**COMPLETION DATA:**

W..... WW..... TA.....  
GW..... OS..... BA.....

Location Inspected

State or Fee Land

**LOGS FILED**

Driller's Log.....  
Electric Logs (No.) .....  
E..... I..... Dual I Lat..... GR-N..... Micro.....  
GR..... Lat..... MI-L..... Sonic.....

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  
 Columbia Gas Development Corporation

3. ADDRESS OF OPERATOR  
 c/o T P Engineering, Inc.  
 1201 Security Life Building, Denver, CO 80202

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)\*  
 At surface  
 NENW (761' FNL, 1956' FWL) Sec. 12  
 At proposed prod. zone Same

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE\*  
 Approx. 30 miles NE of Hanksville, Utah

15. DISTANCE FROM PROPOSED\* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any)  
 751'

16. NO. OF ACRES IN LEASE  
 2560

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.  
 N.A.

19. PROPOSED DEPTH  
 4750

20. ROTARY OR CABLE TOOLS  
 Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.)  
 4759' Ground

22. APPROX. DATE WORK WILL START\*  
 June 1, 1979

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
15"	10 3/4"	40.5	400'	400 sacks
8 3/4"	4 1/2"	9.5	4750"	200 sacks

Set 18" or 20" pipe for conductor string @ 30' w/dry hole digger. Cement to surface.  
 Drill 15" hole to approx. 400' w/air.  
 Set 10 3/4" surface casing @ approx. 400'. Circulate cement to surface.  
 Drill 8 3/4" hole to total depth w/air.  
 Test all shows while drilling.  
 Run induction - Gammaray and Neutron Density logs.  
 Set 4 1/2" production casing or plug and abandon as indicated

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. T P Engineering, Inc.  
 SIGNED D. Morrison TITLE Agent DATE 5/9/79

(This space for Federal or State office use)

PERMIT NO. \_\_\_\_\_ APPROVAL DATE \_\_\_\_\_  
 APPROVED BY W.P. Matus TITLE ACTING DISTRICT ENGINEER DATE JUL 21 1979  
 CONDITIONS OF APPROVAL, IF ANY:

STATE OF APPROVAL  
 STATE O&G

CONDITIONS OF APPROVAL ATTACHED TO OPERATOR'S COPY

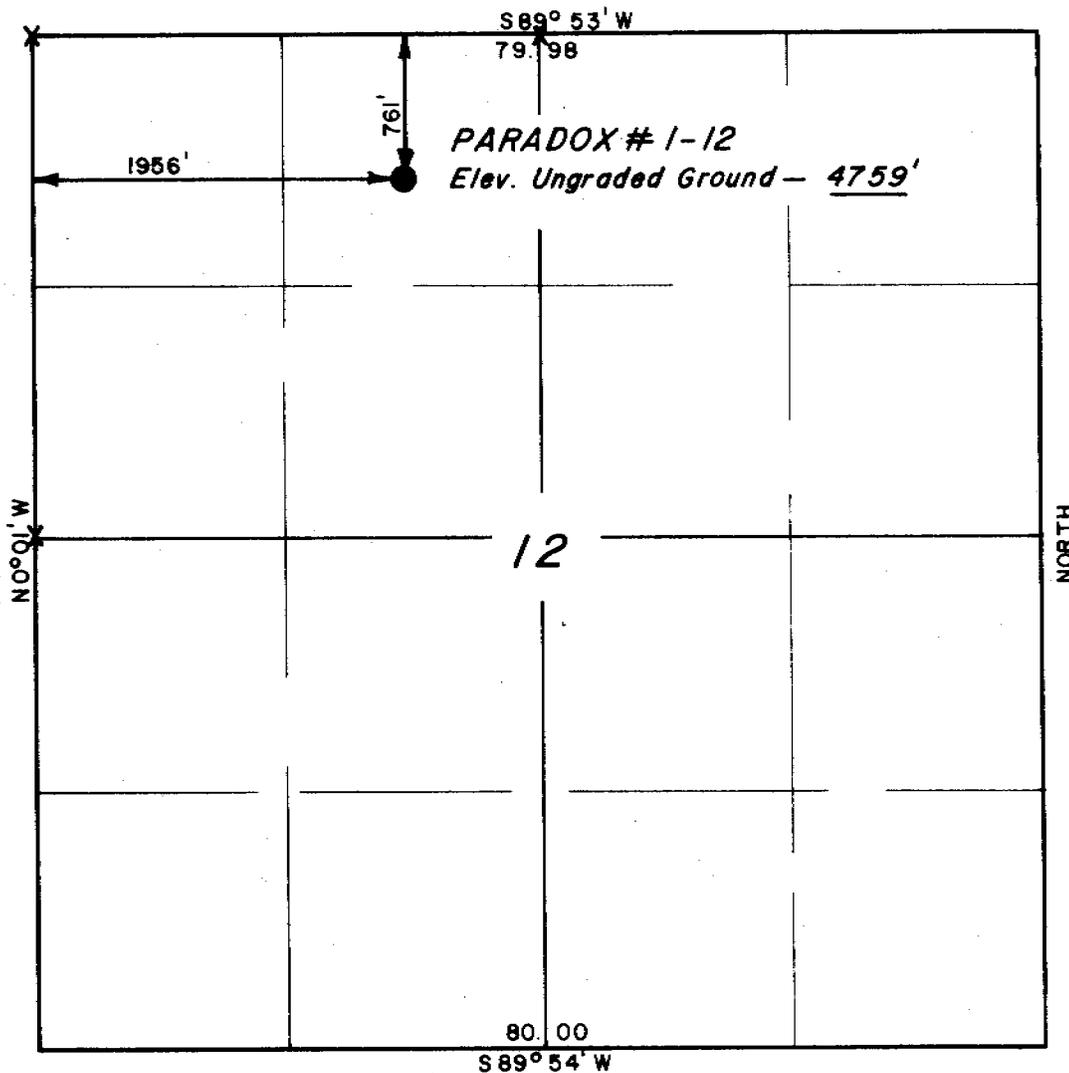
NECESSARY FLARING OF GAS DURING DRILLING AND COMPLETION APPROVED SUBJECT TO ROYALTY (NTL-4)

T25S, R13E, S.L. B. & M.

PROJECT

COLUMBIA GAS DEV. CORP.

Well location, PARADOX #1-12  
located as shown in the NE 1/4  
NW 1/4 Section 12, T25S, R13E,  
S.L. B. & M. Emery County, Utah



CERTIFICATE

THIS IS TO CERTIFY THAT THE ABOVE PLAT WAS PREPARED FROM THE 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.

*Lawrence C. Taylor*  
REGISTERED LAND SURVEYOR  
REGISTRATION NO 3137  
STATE OF UTAH

UINTAH ENGINEERING & LAND SURVEYING  
P.O. BOX Q - 110 EAST - FIRST SOUTH  
VERNAL, UTAH - 84078

SCALE 1" = 1000'	DATE 4/23/79
PARTY RK DB TJ	REFERENCES TB GLO Plat
WEATHER Clear & Hot	FILE Columbia Gas Dev. Corp.

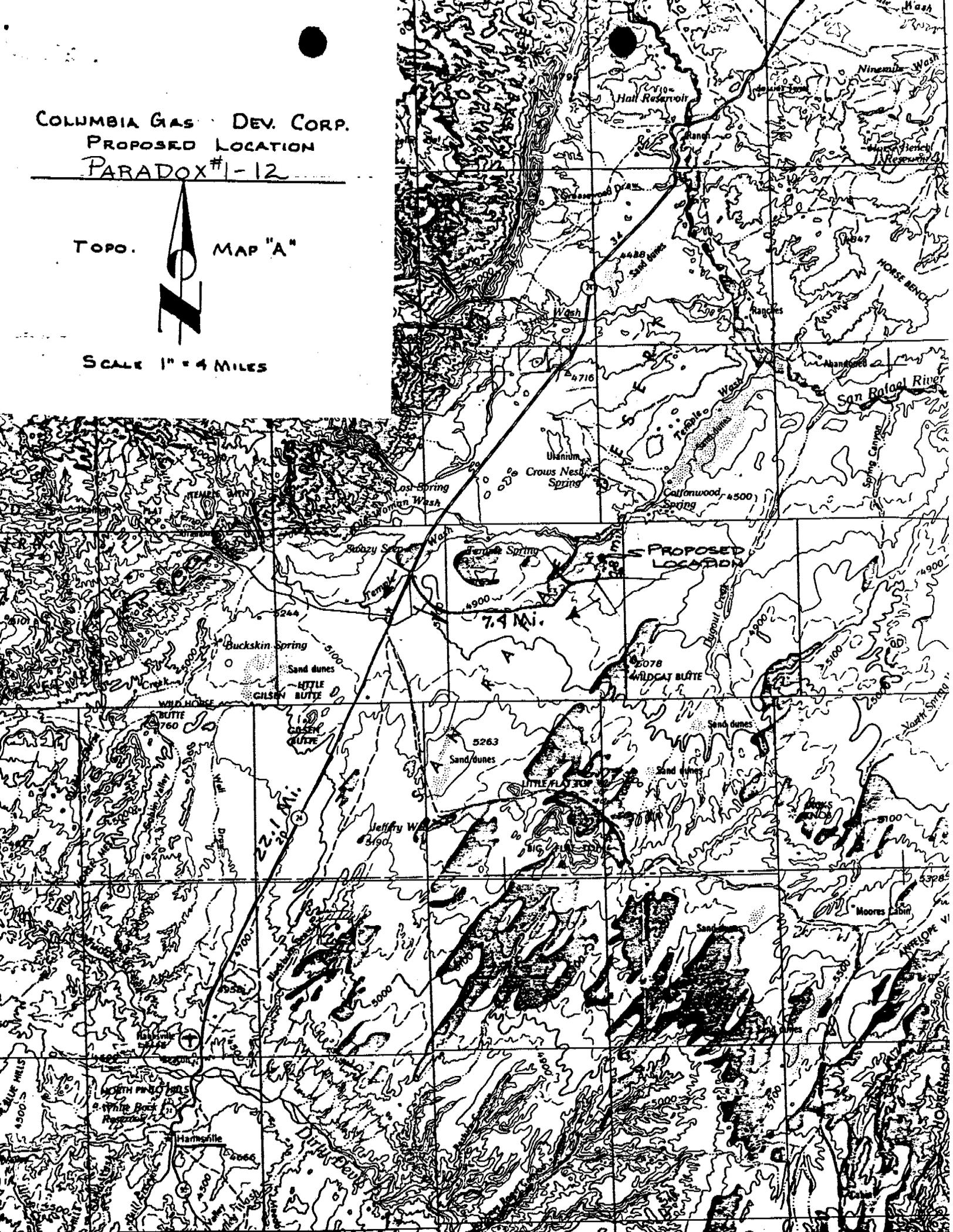
X = Section Corners Located

COLUMBIA GAS DEV. CORP.  
PROPOSED LOCATION  
PARADOX #1-12

TOPO. MAP "A"



SCALE 1" = 4 MILES



Date 6/1/79

Person and Division making request Allen Higgen - Cons. Div. Min. Eval.

AREA: County and State Emery Co. Utah

Township 25 S Range 13 E Section 12 NE  $\frac{1}{4}$  NW  $\frac{1}{4}$  S 2 BL&M

Altitude of surface at site 4759 Formation at surface (if known) Entrada

PURPOSE:

Protection of useful ground water (casing program); check ✓  
 Other (describe):

4759	4759
- 3650	- 4750
1109	579

For WRD use Date in: 6/1/79

Person assigned: Hood Date out: 6/1/79

Evaluation: An oil test in sec. 11 found base of Navajo at 4100 (alt) & base of Wingate at 3636. In sec. 14 base of wingate is about 3650 (alt) water in Navajo and wingate is reported as "brackish" i.e., saline but not briny - useful for livestock - other wells in vicinity show useful water in Navajo

- 1) Navajo must be protected to base at depth of approx 500ft
- 2) If air drilling done, watch water quality in wingate and protect if dissolved solids are 3000 mg/l or less.

General remarks for site in T24S, R13E, sec. 22 apply - especially watch for water in white Rim SS.

continue over

Signed by evaluator James M. Hood Time used 1/2

Evaluator: Send copy to coordinator - original direct to originator of request

United States Department of the Interior  
Geological Survey  
8440 Federal Building  
Salt Lake City, Utah 84138

Usual Environmental Analysis

Lease No. U22103

Operator: Columbia Gas Development

Well No. 1-12

Location: NENW 761 FNL, 1956 FWL Sec. 12 T. 25 S R. 13 E

County: Emery

State: Utah

Field: Wildcat

Status: Surface Ownership: Public Minerals: Federal

Joint Field Inspection Date: May 30, 1979

Participants and Organizations:

Craig Hansen

U.S.G.S., Vernal

Jeff Williams

B.L.M., Moab

Gene Stewart

Uintah Engineering

Tom Popp

T.P. Engineering

Neil Simmons

B.L.M., Price

Related Environmental Analyses and References:

San Rafael Planning Unit (06-0), B.L.M., Price

*Red 165 x 300  
Pct 100 x 150  
4/10 mi. 1/2 access road  
Upstate 7 1/2 miles east  
Flowline road to 10'  
3 1/2 ac  
Mitigates 086  
3) A-C*

Analysis Prepared by: Craig Hansen, Environmental Scientist, Vernal, Utah

Reviewed by: George Diwachak, Environmental Scientist, Salt Lake City, Utah

Date: June 1, 1979

Noted - G. Diwachak

### Proposed Action:

On May 16, 1979, Colombia Gas Development filed an Application for Permit to Drill the No. 1-12 exploratory well, a 4750-foot gas test of the Elbert Formation; located at an elevation of 4759 ft. in the NE $\frac{1}{4}$  NW $\frac{1}{4}$  Sec 12 T 25 S R 13E on federal mineral lands and public surface; lease No. U22103. There was no objection raised to the wellsite nor to the access road.

A rotary rig would be used for the drilling. An adequate casing and cementing program is proposed. Fresh-water sands and other mineral-bearing formations would be protected. A Blowout Preventor would be used during the drilling of the well. The proposed pressure rating should be adequate. Details of the operator's NTL-6 10-Point Subsurface Plan are on file in the U.S.G.S. District Office in Salt Lake City, Utah and the U.S.G.S. Northern Rocky Mountain Area Office in Casper, Wyoming. The 13-Point Surface Protection Plan is on file in the District Office in Salt Lake City.

A working agreement has been reached with the B.L.M., the controlling surface agency. Rehabilitation plans would be decided upon as the well neared completion; the Surface Management Agency would be consulted for technical expertise on those arrangements.

The operator proposes to construct a drill pad 165 ft. wide x 300 ft. long and a reserve pit 100 ft x 150 ft. A new access road would be constructed 18 ft. wide x .8 miles long and an existing trail would be upgraded to 18 ft wide by 7.4 miles long from a maintained road. The operator proposes to construct production facilities on disturbed area of the proposed drill pad. If production is established, plans for a gas flow line would be submitted to the appropriate agencies for approval. The anticipated starting date is June 1 and duration of drilling activities would be about 30 days.

### Location and Natural Setting:

The proposed drillsite is approximately 30 miles NE of Hanksville, Utah, the nearest town. A good road runs to within 7.4 miles of the location. This well is a wildcat field.

### Topography:

The location is in the San Rafael desert created by the San Rafael swell and reef complex to the west and mesas and buttes of Summerville Formations to the east and south of the location, large migrating sand dunes exist on the location.

### Geology:

The surface geology is Entrada Sandstone Lower Jurassic in age. The soil is sandy quartz to sandy clay. No geologic hazards are known near the drillsite. Seismic risk for the area is minor. Anticipated geologic tops are filed with the 10-Point Subsurface Protection Plan.

Approval of the proposed action would be conditioned that adequate and sufficient radioactive and density logging surveys would be made to locate and identify any potential mineral resources. Production casing and cementing would be adjusted to assure no influence of the hydrocarbon zones through the well bore on these minerals. In the event the well is abandoned, cement plugs would be placed with drilling fluid in the hole to assure protection of any mineral resources.

A geologic review of the proposed action has been furnished by the Area Geologist, U. S. Geological Survey, Salt Lake City, Utah.

The operator's drilling, cementing, casing and blowout prevention programs have been reviewed by the Geological Survey engineers and determined to be adequate.

### Soils:

No detailed soil survey has been made of the project area. The top soils in the area range from a sandy clay to sandy quartz type soil. The soil is subject to runoff from rainfall and has a high runoff potential and sediment production would be high. The soils are mildly to moderately alkaline and support the salt-desert shrub community.

Top soil would be removed from the surface and stockpiled. The soil would be spread over the surface of disturbed areas when abandoned to aid in rehabilitation of the surface. Rehabilitation is necessary to prevent erosion and encroachment of undesired species on the disturbed area. The operator proposes to rehabilitate the location and access road per the recommendations of the Bureau of Land Management.

Approximately 3.2 acres of land would be stripped of vegetation. This would increase the erosional potential. Proper construction practice, construction of water bars, reseeding of slope-cut area would minimize this impact.

### Air:

No specific data on air quality is available at the proposed location. There would be a minor increase in air pollution due to emissions from rig and support traffic engines. Particulate matter would increase due to dust from travel over unpaved dirt roads. The potential for increased air pollution due to leaks, spills, and fire would be possible.

Relatively heavy traffic would be anticipated during the drilling-operations phase, increasing dust levels and exhaust pollutants in the area. If the well was to be completed for production, traffic would be reduced substantially to a maintenance schedule with a corresponding decrease of dust levels and exhaust pollutants to minor levels. If the project results in a

dry hole, all operations and impact from vehicular traffic would cease after abandonment. Due to the limited number of service vehicles and limited time span of their operation, the air quality would not be substantially reduced.

Toxic or noxious gases would not be anticipated.

#### Precipitation:

Annual rain fall should range from about 6" to 8" at the proposed location. The majority of the numerous drainages in the surrounding area are of a non-perennial nature flowing only during early spring runoff and during extremely heavy rain storms. This type of storm is rather uncommon as the normal annual precipitation is around 7".

Winds are medium and gusty, occurring predominately from west to east. Air mass inversions are rare. The climate is semi-arid with abundant sunshine, hot summers and cold winters with temperature variations on a daily and seasonal basis.

#### Surface Water Hydrology:

The location slopes southeast gently toward Cottonwood Wash. No drainages from the pad exist to the wash.

Cottonwood wash drains northeast to the San Rafael River which in turns flows to the Green River.

Some additional erosion would be expected in the area since surface vegetation would be removed. If erosion became serious, drainage systems such as water bars and dikes would be installed to minimize the problem. The proposed project should have minor impact on the surface water systems. The potentials for pollution would be present from leaks or spills. The operator is required to report and clean up all spills or leaks.

#### Ground Water Hydrology:

Some minor pollution of ground water systems would occur with the introduction of drilling fluids (filtrate) into the aquifer. This is normal and unavoidable during rotary drilling operations. The potential for communication, contamination and comingling of formations via the well bore would be possible. The drilling program is designed to prevent this. There is need for more data on hydrologic systems in the area and the drilling of this well may provide some basis information as all shows of fresh water would be reported. Water production with the gas would require disposal of produced water per the requirements of NTL-2B. The depths of fresh water formations are listed in the 10-Point Subsurface Protection Plan. The pits would be unlined. If fresh water should be available from the well, the owner or surface agency may request completion as a water well if given approval.

Vegetation:

Sagebrush, astragalus, desert lillies, cactus, yucca, and small amounts of native grasses exist on the location. Plants in the area are of the salt-desert-shrub types.

Proposed action would remove about 3.2 acres of vegetation. Removal of vegetation would increase the erosional potential and there would be a minor decrease in the amount of vegetation available for grazing.

The Operator proposes to rehabilitate the surface upon completion of operations.

Wildlife:

The fauna of the area consists predominately of mule deer, antelope, coyotes, rabbits, foxes, and varieties of small ground squirrels and other types of rodents and various types of reptiles. The area is used by man for the primary purpose of grazing domestic livestock and sheep. The birds of the area are raptors, finches, ground sparrows, magpies, crows, and jays.

An animal and plant inventory has been made by the B.L.M. No endangered plants or animals are known to inhabit the project area.

Social-Economic Effect:

An on the ground surface archaeological reconnaissance would be required prior to approval of the proposed action. Appropriate clearances would then be obtained from the surface managing agency. If a historic artifact, an archaeological feature or site is discovered during construction operations, activity would cease until the extent, the scientific importance, and the method of mitigating the adverse effects could be determined by a qualified cultural resource specialist.

There are no occupied dwellings or other facilities of this nature in the general area. Minor distractions from aesthetics would occur over the lifetime of the project and is judged to be minor. All permanent facilities placed on the location would be painted a color to blend in with the natural environment. Present use of the area is grazing, recreation, and oil and gas activities.

Noise from the drilling operations may temporarily disturb wildlife and people in the area. Noise levels would be moderately high during drilling and completion operations. Upon completion, noise levels would be infrequent and significantly less. If the area is abandoned, noise levels should return to pre-drilling levels.

The site is not visible from any major roads. After drilling operations, completion equipment would be visible to passersby of the area but would not present a major intrusion.

The economic effect of one well would be difficult to determine. The overall effect of oil and gas drilling and production activity are significant in Emery County.

But should this well discover a significant new hydrocarbon source, local, state and possibly national economics might be improved. In this instance, other development wells would be anticipated, with substantially greater environmental and economic impacts.

Should the wellsite be abandoned, surface rehabilitation would be done according to the surface agency's requirements and to U.S.G.S.'s satisfaction. This would involve leveling, contouring, reseeding, etc., of the location and possibly the access road. If the well should produce hydrocarbons, measures would be undertaken to protect wildlife and domestic stock from the production equipment.

There are no national, state, or local parks, forest, wildlife refuges or ranges, grasslands, monuments, trails or other formally designated recreational facilities near the proposed location.

The proposed location is within the San Rafael Planning Unit 06-0. This Environmental Assessment Record was compiled by the Bureau of Land Management, the surface managing agency of the Federal surface in the area. The study includes additional information on the environmental impact of oil and gas operations in this area and gives land use recommendations. The E.A.R. is on file in the agency's State offices and is incorporated herein by reference.

#### Waste Disposal:

The mud and reserves pits would contain all fluids used during the drilling operations. A trash pit would be utilized for any solid wastes generated at the site and would be buried at the completion of the operations. Sewage would be handled according to State sanitary codes. For further information, see the 13-Point Surface Plan.

#### Alternative to the Proposed Action:

(1) Not Approving The Proposed Permit--The Oil and Gas Lease Grants The Lessee Exclusive Right To Drill For, Mine, Extract, Remove and Dispose of All Oil and Gas Deposits.

Under leasing provisions, the Geological Survey has an obligation to allow mineral development if the environmental consequences are not too severe or irreversible. Upon rehabilitation of the site, the environmental

effects of this action would be substantially mitigated, if not totally annulled. Permanent damage to the surface and subsurface would be prevented as much as possible under U.S.G.S. and other controlling agencies supervision with rehabilitation planning reversing almost all effects. Additionally, the growing scarcity of oil and gas should be taken into consideration. Therefore, the alternative of not proceeding with the proposed action at this time is rejected.

(2) Minor relocation of the wellsite and access road or any special, restrictive stipulations or modifications to the proposed program would not significantly reduce the environmental impact. There are no severe vegetative, animal or archaeological-historical-cultural conflicts at the site. Since only a minor impact on the environment would be expected, the alternative of moving the location is rejected. At abandonment, normal rehabilitation of the area such as contouring, reseeding, etc., would be undertaken with an eventual return to the present status as outlined in the 13-Point Surface Plan.

(3) Drilling should be allowed provided the following mitigative measures are incorporated into the proposed APD and adhered to by the operator.

- A. Minimum disturbance of existing trail to reduce erosion of road.
- B. Water and wet down road to keep dust down.
- C. Possible water well will be drilled to provide water for drilling activities.

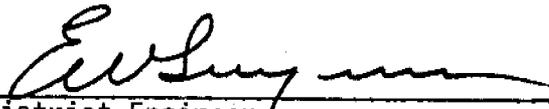
#### Adverse Environmental Effects Which Cannot Be Avoided:

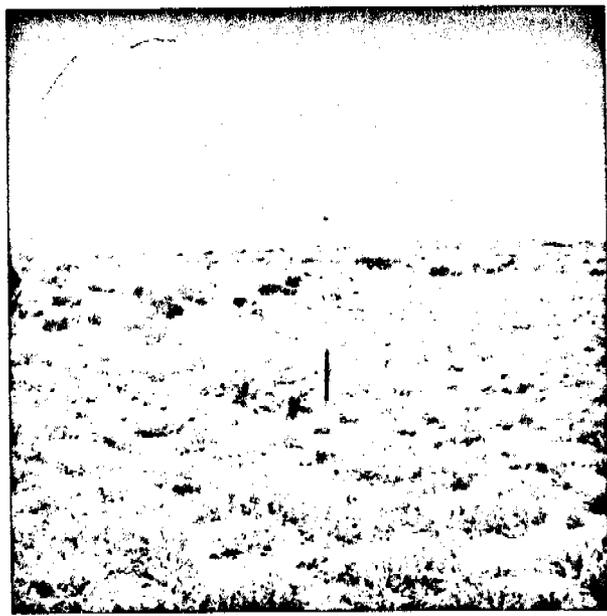
Surface disturbance and removal of vegetation from approximately 3.2 acres of land surface for the lifetime of the project which would result in increased and accelerated erosional potential. Grazing would be eliminated in the disturbed areas and there would be a minor and temporary disturbance of wildlife and livestock. Minor induced air pollution due to exhaust emissions from rig engines of support traffic engines would occur. Minor increase in dust pollution would occur due to vehicular traffic associated with the operation. If the well is a gas producer, additional surface disturbance would be required to install production pipelines. The potential for fires, gas leaks, and spills of oil and water would exist. During the construction and drilling phases of the project, noise levels would increase. Potential for sub-surface damage to fresh water aquifers and other geologic formations exists. Minor distractions from aesthetics during the lifetime of the project would exist. If the well is a producer, an irreplaceable and irretrievable commitment of resources would be made. Erosion from the site would eventually be carried as sediment in the San Rafael River. The potential for pollution to the Cottonwood Wash would exist through leaks and spills.

Determination:

This requested action ~~does~~ does not constitute a major Federal action significantly affecting the environment in the sense of NEPA, Sec. 102(2)(C).

Date 7/13/79

  
District Engineer  
U. S. Geological Survey  
Conservation Division  
Oil and Gas Operations  
Salt Lake City District



Colombia Gas Dev Corp    1  
#1-12                            11

COLUMBIA GAS DEVELOPMENT CORPORATION

13 Point Surface Use Plan

Well Location

Paradox #1 - 12

Located In

Section 12, T25S, R13E, S.L.& M.

Emery County, Utah

COLUMBIA GAS DEVELOPMENT CORPORATION  
Paradox #1 - 12  
Section 12, T25S, R13E, S.L.B. & M.

1. EXISTING ROADS

See attached Topographic Map "A", to reach Columbia Gas Development Corporation well location, located in the NE  $\frac{1}{4}$  NW  $\frac{1}{4}$ , Section 12, T25S, R13E, S.L.B. & M., from Hanksville, Utah:

Proceed Northerly out of Hanksville, Utah on Utah State Highway .24, 22.1 miles to its junction with a dirt road which exits to the Northeast; proceed Northeasterly along this road 7.4 miles to its junction with the proposed access road (to be discussed in Item #2).

At the present time there is no major construction anticipated along any portion of the above described road.

The road will be maintained and kept at the necessary standards required for an orderly flow of traffic during the drilling, completion, and production activities of this location.

2. PLANNED ACCESS ROAD

See Topographic Map "B".

The planned access road leaves the existing road described in Item #1 in the NE  $\frac{1}{4}$  SE  $\frac{1}{4}$ , Section 11, T25S, R13E, S.L.B. & M., and proceeds in a Northeasterly direction approximately 0.8 miles to the proposed location site in the NE  $\frac{1}{4}$  NW  $\frac{1}{4}$  Section 12, T25S, R13E, S.L.B. & M.

In order to facilitate the anticipated traffic flow necessary to drill and produce this well the following standards will be met:

This proposed access road will be an 18' crown road (9' either side of the centerline) with drain ditches along either side of the proposed road where it is determined necessary in order to handle any run-off from any normal meteorological conditions that are prevalent to this area.

Back slopes along the cut areas of the road will be  $1\frac{1}{2}$  to 1 slopes and terraced.

The road will be centerline flagged prior to the commencement of construction.

The grade of this road will vary from flat to 8% but will not exceed this amount. This road will be constructed from native borrow accumulated during construction.

If deemed necessary by the local governmental agencies or their representatives turnouts will be installed for safety purposes every 0.25 miles or on the top of ridges that will provide the greatest sight distance. These turnouts will be 200' in length and 12' in width and will be tapered from the shoulder of the road for a distance of 50' in length at both the access and outlet ends.

COLUMBIA GAS DEVELOPMENT CORPORATION  
Paradox #1 - 12  
Section 12, T25S, R13E, S.L.B. & M.

2. PLANNED ACCESS ROAD - Continued

Any fences that are encountered along this access road will be cut and replaced with a cattleguard with a minimum width of 18' and a loading factor large enough to facilitate the heavy trucks required in the drilling and production of this well.

If cattleguards are to be located at existing gates, they will be installed with the above requirements and with a new gate installed at one end of the cattleguard.

The access from the road to the gate will be of such a nature that there will be no impedance of traffic flow along the main access road and no difficulties encountered by traffic utilizing the gate either leaving or entering the proposed road.

There will be no culverts along this road as it crosses no major drainages.

The terrain that this road traverses is over rolling hill type terrain and is vegetated by sagebrush, grasses and cacti.

3. LOCATION OF EXISTING WELLS

See Topographic Map "B".

There are no water wells, temporarily abandoned wells, producing wells, abandoned wells, drilling wells, shut in wells, injection wells, monitoring or observation wells for other resources within a one mile radius of this location site.

4. LOCATION OF EXISTING AND PROPOSED FACILITIES

There are no tank batteries, production facilities, oil gathering lines, gas gathering lines, injection lines or disposal lines, belonging to Columbia Gas Development Corporation within a one mile radius of this location site.

All petroleum production facilities are to be contained within the areas shown in the location layout sheet, until lines can be run by the company purchasing the product, it is not known at this time where the proposed lines will be. The plans for any proposed lines will be submitted to the appropriate authorities when the decision is made and upon completion of drilling if production is established.

The rehabilitation of the disturbed area that is not required for the production of this well, will meet the requirements of Items #7 and #10 and these requirements and standards will be adhered to.

COLUMBIA GAS DEVELOPMENT CORPORATION  
Paradox #1 - 12  
Section 12, T25S, R13E, S.L.B. & M.

5. LOCATION OF AND TYPE OF WATER SUPPLY

Water to be used in the drilling of this well will be hauled by truck over existing roads and the proposed access road from the Dirty Devil River at the point that Utah State Highway 24 crosses it in Section 10, T28S, R11E, S.L.B. & M. This water will be hauled approximately 30.3 miles to the location site.

There will be no water well drilled.

6. SOURCE OF CONSTRUCTION MATERIALS

All construction materials for this location site and access road shall be borrow materials accumulated during construction of the location site and access road. No additional road gravels or pit lining materials from other sources are anticipated at this time, but if they are required, the appropriate actions will be taken to acquire them from private sources.

All ground used in this road and location site are under B.L.M. jurisdiction.

7. METHODS FOR HANDLING WASTE DISPOSAL

See location layout sheet.

A reserve and burn pit will be constructed.

The reserve pit will be approximately 8' deep and at least one-half of this depth shall be below the surface of the existing ground.

One-half of the reserve pit will be used as a fresh water storage area during the drilling of this well and the other one-half will be used to store non-flammable materials such as cuttings, salts, drilling fluids, chemicals, produced fluids, etc.

If deemed necessary by the agencies concerned to prevent contamination to surrounding areas the reserve pits will be lined with a gel.

The pits will have wire and overhead flagging installed at such time as deemed necessary to protect the water fowl, wildlife and domesticated animals.

At the onset of drilling, this reserve pit will be fenced on three sides and at the time the drilling activities are completed, it will be fenced on the fourth side and allowed to dry completely prior to the time that back-filling and reclamation activities are attempted.

When the reserve pit dries and the reclamation activities commence, the pits will be covered with a minimum of four feet of soil and all requirements in Item #10 will be followed.

COLUMBIA GAS DEVELOPMENT CORPORATION  
Paradox #1 - 12  
Section 12, T25S, R13E, S.L.B. & M.

7. METHODS FOR HANDLING WASTE DISPOSAL - Continued

The burn pits will be constructed and fenced on all four sides with a small mesh wire to prevent any flammable materials from escaping and creating a fire hazard.

All flammable materials will be burned and then buried upon completion of this well.

A portable chemical toilet will be supplied for human waste.

8. ANCILLARY FACILITIES

There are no ancillary facilities planned for at the present time and none foreseen in the near future.

9. WELL SITE LAYOUT

See location layout sheet.

The B.L.M. District Manager, and State Representatives shall be notified before any construction on the proposed location site.

As mentioned in Item #7, the pits will be unlined unless it is determined by the representative of the agencies involved that the materials are too porous and would cause contamination to the surrounding area; then the pits will be lined with a gel and any other type materials necessary to make it safe and tight.

10. PLANS FOR RESTORATION OF SURFACE

As there is some topsoil on the location site all topsoil shall be stripped and stockpiled (See location layout sheet, and Item #9). When all drilling and production activities have been completed, the location site and access road will be reshaped to the original contour and stockpiled topsoil spread over the disturbed area.

Any drainages re-routed during construction activities shall be restored to their original line of flow as near as possible. Fences around pits will be removed upon completion of drilling activities and all waste being contained in the trash pits shall be buried with a minimum of 5' of covering.

As mentioned in Item #7 the reserve pits will be completely fenced and wired and overhead flagging installed if there is oil in the pits, and then allowed to dry completely before covering.

Restoration activities shall begin within 90 days after completion of this well. Once completion activities have begun, they shall be completed within 30 days.

COLUMBIA GAS DEVELOPMENT CORPORATION  
Paradox #1 - 12  
Section 12, T25S, R13E, S.L.B. & M.

10. PLANS FOR RESTORATION OF SURFACE - Continued

When restoration activities have been completed, the location site and access road shall be reseeded with a seed mixture recommended by the B.L.M. District Manager, Federal and State Representatives, when the moisture content of the soil is adequate for germination. The Lessee further covenants and agrees that all of said cleanup and restoration activities shall be done and performed in a diligent and most workmanlike manner and strict conformation with the above mentioned Item #7 and #10.

11. OTHER INFORMATION

The Topography of the General Area - (See Topographic Map "A").

The area is located on what is known as the San Rafael Desert which is a basin area formed by the San Rafael Reef to the West and North and the Dirty Devil River and Sams Mesa to the South and East.

The area is interlaced with numerous canyons, ledges and plateaus of which the sides are extremely steep with numerous ledges formed in sandstone and conglomerates.

The soils of this semi-arid area are Dunes, chiefly quartz sand, includes active and inactive accumulations of the Quaternary Epoch and Entrods Sandstone of the Jurassic Epoch.

The majority of the numerous washes and streams in the area are of a non-perennial nature flowing during the early spring run-off and extremely heavy rain storms of long duration which are extremely rare as the normal annual rainfall in the area is only 8".

The Dirty Devil River flows from the Northwest to the Southeast and lies approximately 23 miles South of the location.

The San Rafael River flows from the North to the East and lies approximately 9 miles North of the location.

Due to the low precipitation average, climate conditions and the marginal types of soils, the vegetation that is found in the area is common of the semi-arid region we are located in, it consists of sagebursh, and some grasses and cacti.

The fauna of the area consists predominately of the mule deer, coyotes, rabbits, and varieties of small ground squirrels and other types of rodents.

The area is used by man for the primary purpose of grazing domesticated sheep and cattle.

The birds of the area are raptors, finches, ground sparrows, magpies, crows, and jays.

COLUMBIA GAS DEVELOPMENT CORPORATION  
Paradox #1 - 12  
Section 12, T25S, R13E, S.L.B. & M.

11. OTHER INFORMATION - Continued

The Topography of the Immediate Area - (See Topographic Map "B").

The well location sits on the Southeast side of a large wash known as Cottonwood Wash which drains to the Northeast into the San Rafael River.

The terrain in the immediate vicinity of the well site slopes from the top of the flat to the Southeast, down through the location to the Northwest at approximately a 1% grade to the edge of the aforementioned Cottonwood Wash.

All washes and draws in the immediate area are of a non-perennial nature.

The vegetation in the immediate area surrounding the location site is predominantly sagebrush and grasses.

There are no occupied dwellings or other facilities of this nature in the general area.

All surface disturbance is on B.L.M. lands and is under their jurisdiction.

There are no visible archaeological historical, or cultural sites within any reasonable proximity of the proposed location site. (See Topographic Map "B").

12. LESSEE'S OR OPERATOR'S REPRESENTATIVE

Columbia Gas Development Corporation  
c/o T P Engineering Inc.  
1201 Security Life Building  
Denver, Colorado 80202

Telephone: 303-623-5219

13. CERTIFICATION

I hereby certify that I, or persons under my direct supervision, have inspected the proposed drill site and access route; that I am familiar with the conditions which presently 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 operation proposed herein will be performed by the Columbia Gas Development Corporation and its contractors and sub-contractors in conformity with this plan and terms and conditions under which it is approved.

5-9-79.  
Date

D. Morrison  
T P Engineering Inc.

FROM: DISTRICT GEOLOGIST, SALT LAKE CITY, UTAH  
TO: DISTRICT ENGINEER, O&G, SALT LAKE CITY, UTAH  
SUBJECT: APD MINERAL EVALUATION REPORT

LEASE NO. U 22103

OPERATOR: Columbia Gas Development

WELL NO. 1-12

LOCATION: 1/2 NE 1/2 NW 1/2 sec. 12, T. 25S, R. 13E, SLM  
Emery County, Utah

1. Stratigraphy: 4770 klm

- Entrada - surface
- Navajo - 165'
- Kayenta - 576'
- Wingate - 797'
- Chinle - 1120'
- Shinarump - 1400'
- Moenkopi - 1450'
- Sinbad ls. - 1800'
- Cocanino - 1950'
- Organ Rock - 2700'
- Elephant Canyon - 2815'
- Hermosa - 3365'
- Mississippian - 3500'

~~ALBERT~~ Oway 4340  
Elbert 4830  
TD 4750

2. Fresh Water:

see WRD

3. Leasable Minerals:

O+G shows common.

4. Additional Logs Needed:

none

5. Potential Geologic Hazards:

H<sub>2</sub>S dissolved in water in Shinarump, Moenkopi, Cocanino + Hermosa (Not a probable health hazard but corrosive).

6. References and Remarks:

IAPCI Field conference 1956

Signature: [Handwritten Signature]

Date: 6 - 1 - 79

COLUMBIA GAS DEVELOPMENT CORPORATION

Paradox No. 1-12  
NENW Sec. 12, T25S, R13E  
Wayne County, Utah

Federal Lease No. U22103

Continuation of Form 9-331-C

1. The surface formation is Entrada.
2. Estimated formation tops:

Chinle	1100	Kiabab	1900
Shinarump	1400	Coconino	1950
Moenkopi	1450	Mississippian	3400
Sinbad	1800	Elbert	4700

3. Estimated depths at which water, oil, gas, or other mineral bearing formations are expected: Water bearing formations are not known. Operator expects to discover hydrocarbons in the Elbert formation. All water flows and hydrocarbon shows will be protected and reported.

4. Proposed casing program:

Conductor pipe: 20", 94.0#, H-40, ST&C, new, set at 30' and cemented to surface.

Surface Casing: 10 3/4", 40.5#, H-40 or K-55, ST&C, used, set at 400' and cement circulated to the surface.

Production Casing: 4 1/2", 9.5#, K-55, ST&C, used, set at approximately 4750' w/100 sacks cement.

5. Operators minimum specifications for pressure control equipment (see diagram):

Blowout preventers: Cameron, Type SS, or equivalent, 10" series 900, dual control, w/80 gallon accumulator.

Manifold: 2" X 5000 psi.

Blowout preventers and manifold will be installed on 10 3/4" surface casing and tested at 1500 psi before plug is drilled. BOP operation will be checked daily.

6. Circulating medium: Air and/or air mist will be used to drill the surface hole for 10 3/4" casing and to drill to total depth below surface casing. If hole conditions preclude the use of air or air mist, low fluid loss mud (8.5# to 9.0# per gallon) will be substituted.

7. Auxiliary Equipment:
  - A. Rotating head for air drilling.
  - B. Kelly cock
  - C. Float valve
  - D. Full-opening floor valve
8. Testing, logging and coring programs: Use of air or air mist for drilling will permit continuous monitoring of all formations and fluids encountered, and will permit testing of all shows with minimum hole and formation damage. No other testing is anticipated and no coring is planned. Completion procedures will be determined from well data and will be reviewed with Federal and State Agencies before implementation. Induction-Gammarray and Neutron Density logs will be run.
9. No abnormal pressures or temperatures and no hydrogen sulfide gas are anticipated.
10. It is anticipated that the access road will be built and the location cleared soon after approval of the application to drill. Drilling is expected to begin about June 1, 1979, and should be completed in less than 30 days.

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  
 Columbia Gas Development Corporation

3. ADDRESS OF OPERATOR  
 c/o T P. Engineering, Inc.  
 1201 Security Life Building, Denver, CO 80202

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)\*  
 At surface  
 At proposed prod. zone  
 NEW (761' FNL, 1956' FWL) Sec. 12  
 Same

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE\*  
 Approx. 30 miles NE of Hanksville, Utah

15. DISTANCE FROM PROPOSED\* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drig. unit line, if any)  
 751'

16. NO. OF ACRES IN LEASE  
 2560

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.  
 N.A.

19. PROPOSED DEPTH  
 4750

20. ROTARY OR CABLE TOOLS  
 Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.)  
 4759' Ground

22. APPROX. DATE WORK WILL START\*  
 June 1, 1979

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
15"	10 3/4"	40.5	400'	400 sacks
8 3/4"	4 1/2"	9.5	4750"	200 sacks

Set 18" or 20" pipe for conductor string @ 30' w/dry hole digger. Cement to surface.  
 Drill 15" hole to approx. 400' w/air.  
 Set 10 3/4" surface casing @ approx. 400'. Circulate cement to surface.  
 Drill 8 3/4" hole to total depth w/air.  
 Test all shows while drilling.  
 Run induction - Gammaray and Neutron Density logs.  
 Set 4 1/2" production casing or plug and abandon as indicated.



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. T P Engineering, Inc.  
 SIGNED D. Morrison TITLE Agent DATE 5/9/79

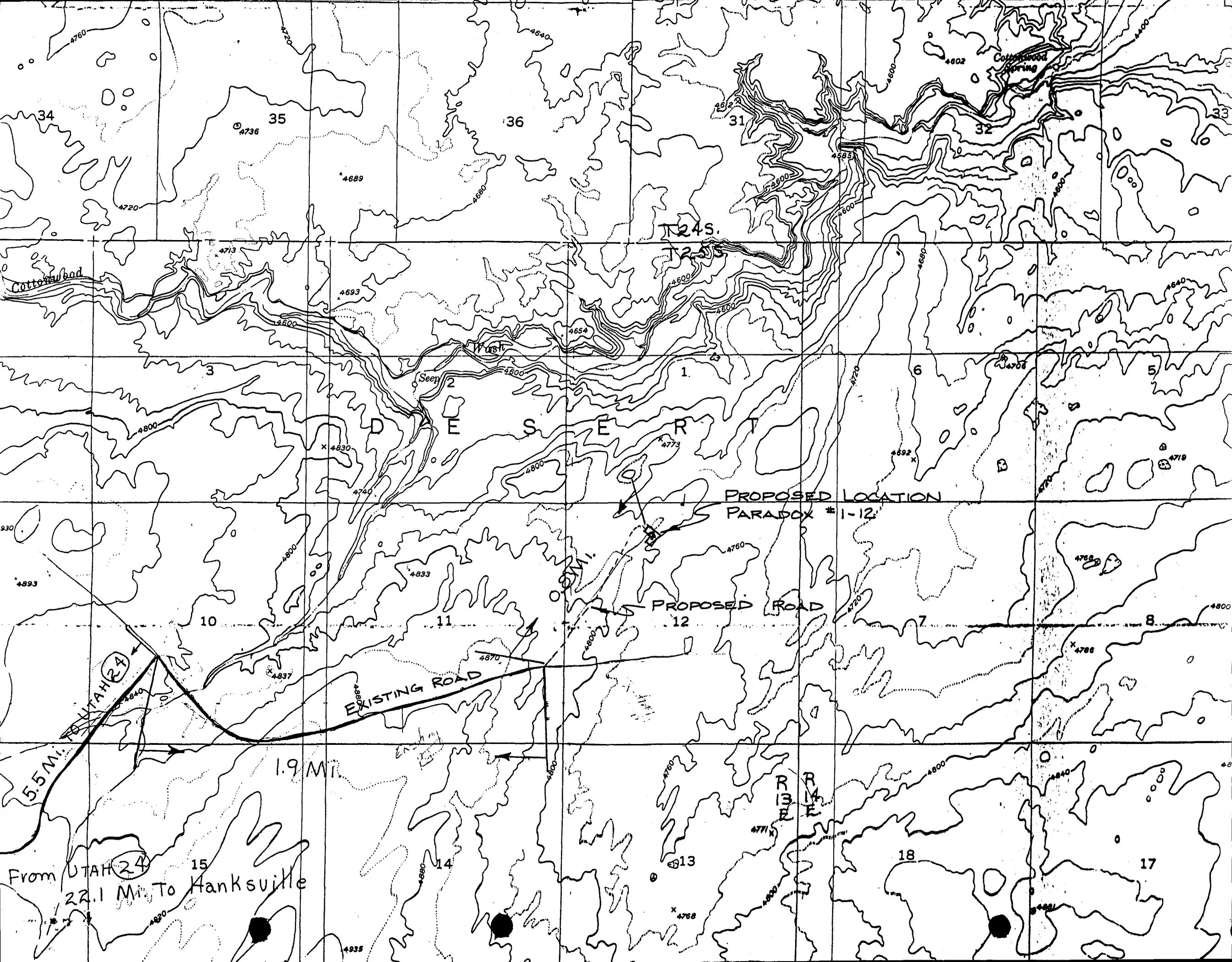
(This space for Federal or State office use)

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

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

CONDITIONS OF APPROVAL, IF ANY:





T24S.

T25S

DESSERT

PROPOSED LOCATION  
PARADOX #1-12

PROPOSED ROAD

EXISTING ROAD

5.5 Mi. UTAH (24)

1.9 Mi.

From UTAH (24)  
22.1 Mi. To Hanksville

Cottonwood Spring

Cottonwood

Wash

Seep

REPT  
RIVER

34

35

36

31

32

33

3

1

6

5

10

11

7

8

15

14

18

17

4736

4689

4640

4802

4713

4693

4654

4600

4640

4830

4773

4692

4719

4893

4833

4760

4759

4840

4837

4870

4786

4760

4800

4840

4913

4768

4935



STATE OF UTAH  
DIVISION OF OIL, GAS, AND MINING

\*\* FILE NOTATIONS \*\*

Date: May 17, 1979

Operator: Columbia Gas Development Corp.

Well No: Paradox 1-12

Location: Sec. 12 T. 25S R. 13E County: Emery

File Prepared:

Entered on N.I.D.:

Card Indexed:

Completion Sheet:

API Number: 43-015-30065

CHECKED BY:

Administrative Assistant: \_\_\_\_\_

Remarks:

Petroleum Engineer: \_\_\_\_\_

Remarks:

Director: aprine

Remarks:

INCLUDE WITHIN APPROVAL LETTER:

Bond Required:

Survey Plat Required:

Order No. \_\_\_\_\_

Surface Casing Change   
to \_\_\_\_\_

Rule C-3(c), Topographic exception/company owns or controls acreage  
within a 660' radius of proposed site

O.K. Rule C-3

O.K. In \_\_\_\_\_ Unit

Other:

Letter Written/Approved

CORE ANALYSIS RESULTS FOR  
COLUMBIA GAS DEVELOPMENT CORPORATION  
PARADOX NO. 1-12  
WILDCAT  
EMERY COUNTY, UTAH

COLUMBIA GAS DEVELOPMENT CORP. FORMATION : SINBAD  
 PARADOX 1-12 DRLG. FLUID: AIR  
 WILDCAT LOCATION : SEC. 12-T25S-R13E  
 EMERY COUNTY STATE : UTAH

DATE : 8-29-79  
 FILE NO. : RP-2-5956  
 ANALYSTS : BL:RG  
 ELEVATION: 4773' KB

CONVENTIONAL CORE ANALYSIS--BOYLE'S LAW HELIUM POROSITY

SAMP. NO.	DEPTH	PERM. TO AIR (MD) HORZ. VERTICAL	POR. B.L.	FLUID SATS. OIL WATER	GR. DNS.	DESCRIPTION
	1875-1876.5					SHALE - NO ANALYSIS
1	1876.5-77	0.05	4.3	56.9 13.6	2.63	SD DRK TN-GY VFG SLTY LMY
2	1877-78	0.06	4.2	61.7 16.8	2.62	SD DRK TN-GY VFG SLTY LMY
3	1878-79	0.05	3.1	61.1 16.7	2.60	SD DRK TN-GY VFG SLTY LMY
4	1879-80	0.12	5.8	40.6 11.6	2.62	SD DRK TN-GY VFG SLTY LMY
5	1880-81	0.06	4.2	62.1 14.1	2.63	SD DRK TN-GY VFG SLTY LMY
6	1881-82	0.08	3.4	51.8 27.2	2.62	SD DRK TN-GY VFG SLTY LMY
7	1882-83	0.03	0.8	48.0 36.0	2.70	LM DRK GY VF-XLN SLTY
8	1883-84	0.10	4.6	69.4 15.8	2.64	SD DRK TN-GY VFG SLTY LMY
9	1884-85	0.04	3.6	68.8 16.2	2.64	SD DRK TN-GY VFG SLTY LMY
10	1885-86	0.03	1.8	62.2 20.7	2.62	SD DRK TN-GY VFG SLTY LMY
11	1886-87	0.05	2.8	66.2 19.5	2.63	SD DRK TN-GY VFG SLTY LMY
12	1887-88	0.04	2.7	26.9 29.9	2.62	VF SD DRK TN-GY VFG SLTY LMY
	1888-1892					SHALE - NO ANALYSIS
13	1892-93	0.03	3.6	68.7 16.5	2.62	SD DRK TN-GY VFG SLTY LMY
14	1893-94	0.03	1.0	62.4 23.4	2.64	SD DRK TN-GY VFG SLTY LMY
15	1894-95	0.04	2.7	66.5 17.5	2.60	SD DRK TN-GY VFG SLTY LMY
	1895-99.5					SHALE - NO ANALYSIS
16	1899.5-00	0.07	5.0	62.5 16.5	2.65	SD DRK TN-GY VFG SLTY LMY
17	1900 -1	1.5	6.9	48.8 7.8	2.64	SD DRK TN-GY VFG SLTY LMY
18	1901 -2	2.7	7.9	44.6 8.9	2.64	SD DRK TN-GY VFG SLTY LMY
19	1902 -3	0.04	2.0	54.5 31.2	2.64	SD DRK TN-GY VFG SLTY LMY
	1903-1920					SHALE - NO ANALYSIS
20	1920-21	0.27	7.1	52.5 13.1	2.66	LM DRK TN-GY VF-XLN SLTY
21	1921-22	1.8	13.8	46.9 15.6	2.71	LM DRK TN-GY VF-XLN SLTY

VF = VERTICAL FRACTURE

COLUMBIA GAS DEVELOPMENT CORP. FORMATION : SINBAD  
 PARADOX 1-12 DRLG. FLUID: AIR  
 WILDCAT LOCATION : SEC. 12-T25S-R13E  
 EMERY COUNTY STATE : UTAH

DATE : 8-29-79  
 FILE NO. : RP-2-5956  
 ANALYSTS : BL:RG  
 ELEVATION: 4773' KB

CONVENTIONAL CORE ANALYSIS--BOYLE'S LAW HELIUM POROSITY

SAMP. NO.	DEPTH	PERM. TO AIR (MD) HORZ. VERTICAL	POR. B.L.	FLUID SATS. OIL WATER	GR. DNS.	DESCRIPTION
22	1922-23	0.75	10.1	52.5 15.4	2.69	VF DOLO DRK TN-GY VF-XLN SLTY
23	1923-24	1.1	10.8	50.3 33.5	2.73	DOLO DRK TN-GY VF-XLN SLTY
24	1924-25	0.04	1.9	75.2 15.7	2.67	LM DRK TN-GY VF-XLN SLTY
25	1925-26	0.04	1.6	62.5 22.3	2.65	VF LM DRK TN-GY VF-XLN SLTY
26	1926-27	0.03	1.1	65.1 18.6	2.70	LM DRK TN-GY VF-XLN SLTY
27	1927-28	10	19.2	53.1 12.6	2.80	DOLO DRK TN-GY VF-XLN SLTY
28	1928-29	0.07	4.8	56.5 24.7	2.67	DOLO DRK TN-GY VF-XLN SLTY
29	1929-30	0.13	5.8	60.3 16.9	2.69	DOLO DRK TN-GY VF-XLN SLTY
30	1930-31	0.03	8.6	35.6 51.2	2.76	DOLO DRK TN-GY VF-XLN SLTY
31	1931-32	0.77	8.4	50.7 15.0	2.82	DOLO DRK TN-GY VF-XLN SLTY
32	1932-33	0.41	9.0	58.9 22.8	2.73	DOLO DRK TN-GY VF-XLN SLTY
33	1933-34	0.22	6.3	46.9 18.8	2.78	DOLO DRK TN-GY VF-XLN SLTY
34	1934-35	7.1	8.9	54.9 13.7	2.82	VF DOLO DRK GY-TN VF-XLN
35	1935-36	* 89	7.2	41.0 19.5	2.81	VF DOLO DRK GY-TN VF-XLN
36	1936-37	* 51	11.2	40.7 10.7	2.83	DOLO DRK GY-TN VF-XLN

\*FRACTURED PERMEABILITY PLUG

VF = VERTICAL FRACTURE

COLUMBIA GAS DEVELOPMENT CORP. FORMATION : MISSISSIPPIAN  
 PARADOX 1-12 DRLG. FLUID: AIR  
 WILDCAT LOCATION : SEC. 12-T25S-R13E  
 EMERY COUNTY STATE : UTAH

DATE : 9-8-79  
 FILE NO. : RP-2-5956  
 ANALYSTS : BL:RG  
 ELEVATION: 4773' KB

CONVENTIONAL CORE ANALYSIS--BOYLE'S LAW HELIUM POROSITY

SAMP. NO.	DEPTH	PERM. TO AIR (MD)		POR. B.L.	FLUID SATS.		GR. DNS.	DESCRIPTION
		HORZ.	VERTICAL		OIL	WATER		
	3766-3779							DNS - LM & DOLO - NO ANALYSIS
	3779-3781							DNS - LMY SHL - NO ANALYSIS
	3781-3783							DNS - ANHY - DOLO - NO ANALYSIS
	3783-3784							DNS - LM - NO ANALYSIS
	3784-3823							DRILLED
37	3823-24	0.36		11.2	0.0	44.4	2.81	DOLO LT TN VF-XLN
38	3824-25	0.70		12.0	0.7	35.9	2.82	DOLO LT TN VF-XLN
39	3825-26	0.39		7.2	0.0	60.0	2.83	DOLO LT TN VF-XLN
40	3826-27	0.17		8.0	6.7	45.7	2.77	DOLO TN VF-XLN SL/VGY
41	3827-28	0.70		12.2	1.5	62.1	2.83	DOLO LT TN VF-XLN
42	3828-29	2.6		20.2	4.1	37.4	2.81	DOLO LT TN VF-XLN
43	3829-30	1.1		19.6	1.1	40.4	2.82	DOLO LT TN VF-XLN
44	3830-31	1.0		19.7	0.6	38.0	2.82	DOLO LT TN VF-XLN
45	3831-32	0.91		18.6	2.6	44.1	2.81	DOLO LT TN VF-XLN
46	3832-33	1.5		21.3	0.6	46.9	2.83	DOLO LT TN VF-XLN
47	3833-34	1.5		17.7	0.9	37.6	2.83	VF DOLO LT TN VF-XLN
48	3834-35	6.0		21.6	8.3	36.8	2.83	VF DOLO TN VF-XLN CHLKY
49	3835-36	7.0		15.8	16.3	10.3	2.83	VF DOLO TN VF-XLN CHLKY
50	3836-37	5.1		20.1	20.3	12.9	2.78	VF DOLO TN VF-XLN CHLKY
51	3837-38	0.28		11.4	6.0	23.9	2.83	DOLO TN VF-XLN CHLKY
52	3838-39	0.23		11.3	0.0	33.4	2.82	DOLO TN VF-XLN CHLKY
53	3839-40	0.43		13.2	21.3	20.0	2.77	DOLO TN VF-XLN CHLKY
	3840-3844							DNS - LM - NO ANALYSIS
	3844-3941							DRILLED

VF = VERTICAL FRACTURE

COLUMBIA GAS DEVELOPMENT CORP. FORMATION : MISSISSIPPIAN  
 PARADOX 1-12 DRLG. FLUID: AIR  
 WILDCAT LOCATION : SEC. 12-T25S-R13E  
 EMERY COUNTY STATE : UTAH

DATE : 9-8-79  
 FILE NO. : RP-2-5956  
 ANALYSTS : BL:RG  
 ELEVATION: 4773' KB

CONVENTIONAL CORE ANALYSIS--BOYLE'S LAW HELIUM POROSITY

SAMP. NO.	DEPTH	PERM. TO AIR (MD)		POR. B.L.	FLUID SATS.		GR. DNS.	DESCRIPTION
		HORZ.	VERTICAL		OIL	WATER		
54	3941-42	0.08		1.5	0.0	61.7	2.80	DOLO LT TN VF-XLN ANHY
55	3942-43	0.06		4.3	0.0	51.0	2.87	DOLO LT TN VF-XLN ANHY
56	3943-44	0.02		2.1	8.4	72.2	2.78	DOLO TN VF-XLN
57	3944-45	0.15		6.5	8.5	67.8	2.75	DOLO TN VF-XLN
58	3945-46	0.21		10.0	1.8	71.6	2.80	DOLO TN VF-XLN
59	3946-47	0.04		6.6	0.0	82.4	2.84	DOLO LT TN VF-XLN ANHY
60	3947-48	0.05		8.3	6.1	68.3	2.85	DOLO TN VF-XLN
61	3948-49	0.11		10.3	9.6	59.8	2.83	DOLO TN VF-XLN
62	3949-50	0.18		9.1	20.0	50.6	2.81	DOLO TN VF-XLN
63	3950-51	0.07		8.3	13.7	52.4	2.80	DOLO TN VF-XLN
64	3951-52	0.03		7.7	6.4	53.6	2.82	DOLO LT TN VF-XLN
65	3952-53	0.02		5.9	0.0	82.0	2.85	DOLO LT TN VF-XLN
66	3953-54	0.02		6.0	0.0	82.0	2.82	DOLO LT TN VF-XLN
67	3954-55	0.03		7.1	0.0	80.9	2.82	DOLO LT TN VF-XLN
68	3955-56	*8.2		6.2	0.0	84.8	2.82	DOLO LT TN VF-XLN
69	3956-57	0.02		6.1	0.0	86.1	2.83	DOLO LT TN VF-XLN
70	3957-58	0.02		5.2	0.0	84.3	2.82	DOLO LT TN VF-XLN
71	3958-59	0.03		5.8	0.0	80.8	2.84	DOLO LT TN VF-XLN
72	3959-60	0.02		4.6	0.0	69.0	2.86	DOLO LT TN VF-XLN

\*FRACTURED PERMEABILITY PLUG



SCOTT M. MATHESON  
Governor

OIL, GAS, AND MINING BOARD

CHARLES R. HENDERSON  
*Chairman*

GORDON E. HARMSTON  
*Executive Director,*  
NATURAL RESOURCES

STATE OF UTAH  
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL, GAS, AND MINING

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

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

CLEON B. FEIGHT  
*Director*

May 22, 1979

COLUMBIA GAS DEVELOPMENT CORPORATION  
C/O T P ENGINEERING INC  
1201 SECURITY LIFE BUILDING  
DENVER CO 80202

Re: Well No. Paradox 1-12, Sec. 12, T. 25S, R. 13E, Emery County, Utah

Gentlemen:

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

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

MICHAEL T. MINDER - Geological Engineer  
HOME: 876-3001  
OFFICE: 533-5771

Enclosed please find Form OGC-8-X, which is to be completed whether or not water sands (aquifers) are encountered during drilling. Your cooperation in completing this form will be appreciated.

Further, it is requested that this Division be notified within 24 hours after drilling operations commence, and that the drilling contractor and rig number be identified.

The API number assigned to this well is 43-015-30065.

Yours very truly,

DIVISION OF OIL, GAS, AND MINING

*Cleon B. Feight*  
Cleon B. Feight, Director

/lw

cc: U. S. Geological Survey

Lacked well time  
Morrison 4-8-80 - Well has been  
plugged + abandoned - well and  
Completion -

March 6, 1980

Columbia Gas Development Corp.  
W. E. P. Engineering Inc.  
201 Security Life Building  
Denver, Colorado 80202

Re: Well No. Paradox 1-23  
Sec. 23, T. 24S, R. 13E.  
Emery County, Utah

Well No. Paradox 1-12  
Sec. 12, T. 25S, R. 13E.  
Emery County, Utah

Gentlemen:

In reference to above mentioned wells, considerable time has gone by since approval was obtained from this office.

This office has not received any notification of spudding. If you do not intend to drill these wells, please notify this Division. If spudding or any other activity has taken place, please send necessary forms. If we do not hear from your company within fifteen (15) days, we will assume you do not intend to drill this location and action will be taken to terminate the application. If you plan on drilling these wells at a later date, please notify us as such.

Your prompt attention to the above will be greatly appreciated.

Very truly yours,

DIVISION OF OIL, GAS, AND MINING

*Janice Tabish*  
JANICE TABISH  
CLERK TYPIST

**UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY**

SUBMIT IN DUPLICATE\*

(See instructions on reverse side)

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

3

**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  
**Columbia Gas Development Corporation**

3. ADDRESS OF OPERATOR **c/o T P Engineering, Inc.  
1201 Security Life Bldg., Denver, CO 80202**

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements)\*  
At surface **NENW (761' FNL, 1956' FWL) Sec. 12**  
At top prod. interval reported below  
At total depth **Same**

14. PERMIT NO. **43-005-30065** DATE ISSUED **7/21/79**

5. LEASE DESIGNATION AND SERIAL NO.

**U22103**

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME

**Paradox**

9. WELL NO.

**1-12**

10. FIELD AND POOL, OR WILDCAT

**Wildcat**

11. SEC., T., R., N., OR BLOCK AND SURVEY OR AREA

**Sec. 12, T25S, R13E**

12. COUNTY OR PARISH  
**Emery**

13. STATE  
**Utah**

15. DATE SPUDDED **8-24-79** 16. DATE T.D. REACHED **9-13-79** 17. DATE COMPL. (Ready to prod.) **N.A. 9-28-79 RA** 18. ELEVATIONS (DF, RKB, RT, GR, ETC.)\* **4773' (KB) 4759' (GR)** 19. ELEV. CASINGHEAD **4759'**

20. TOTAL DEPTH, MD & TVD **4940'** 21. PLUG, BACK T.D., MD & TVD **P & A** 22. IF MULTIPLE COMPL., HOW MANY\* **P & A** 23. INTERVALS DRILLED BY **→** 24. ROTARY TOOLS **0-4940** 25. CABLE TOOLS **NONE**

24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)\*  
**Dry Hole**

25. WAS DIRECTIONAL SURVEY MADE  
**No**

26. TYPE ELECTRIC AND OTHER LOGS RUN  
**DIL, FDC, CNL, GR**

27. WAS WELL CORED  
**Yes**

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

CASING SIZE	WEIGHT, LB./FT.	DEPTH SET (MD)	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
13-3/8"	48.0	195	17-1/2"	230 sx	None
10-3/4"		1260	12-1/4"	75 sx	None
7-5/8"	26.4	2871	8-3/4"	100 sx 1st stage*	None
*DV tool @		2061		125 sx 2nd stage	

29. LINER RECORD

SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT*	SCREEN (MD)
None				

30. TUBING RECORD

SIZE	DEPTH SET (MD)	PACKER SET (MD)
None		

31. PERFORATION RECORD (Interval, size and number)

**None**

32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.

DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED
None	

33. PRODUCTION

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

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.	GAS—MCF.	WATER—BBL.	OIL GRAVITY—LFT (Lbs.)	
		→					

34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.) \_\_\_\_\_ TEST WITNESSED BY **8 1980**

35. LIST OF ATTACHMENTS

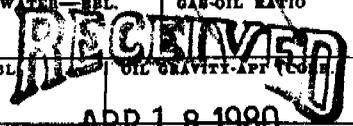
**Core Analyses.**

DIVISION OF  
OIL, GAS & MINING

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

SIGNED *D. Johnson* TITLE **Agent** DATE **January 22, 1980**

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



April 21, 1980

Columbia Gas Development  
c/o TP Engineering Inc.  
1201 Security Life Bldg.  
Denver, Colorado 80202

Re: WELL NO. PARADOX 1-12  
Sec. 12, T. 25S, R. 13E,  
Emery County, Utah

WELL NO. PARADOX 1-23  
Sec. 23, T. 24S, R. 13E,  
Emery County, Utah

WELL NO. Paradox 1-9  
Sec. 9, T. 27S, R. 12E,  
Wayne County, Utah

Gentlemen:

Our records indicate that you have not filed a Subsequent Report of Abandonment for the above subject wells.

Rule D-2, General Rules and Regulations and Rules of Practice and Procedure, requires that said reports be filed within (30) thirty days after the plugging of any well.

In order that we may keep our records accurate, and complete, please complete the enclosed Form OGC-1b in duplicate, and forward them to this office as soon as possible.

Your prompt attention to the above will be greatly appreciated.

Very truly yours,

DIVISION OF OIL, GAS, AND MINING

*Kathy Avila*

KATHY AVILA  
RECORDS CLERK

April 22, 1980

Columbia Gas Development Corp.  
C/O T P Engineering Inc.  
1201 Security Life Bldg.  
Denver, Colorado 80202

Re: Well No. Paradox 1-12  
Sec. 12, T. 25S, R. 13E.  
Emery County, Utah

Gentlemen:

According to our records, a "Well Completion Report" filed with this office 1-22-80, from above referred to well indicates the following electric logs were run: DIL, FDC, CNL, GR. As of today's date this office has not received these logs.

Rule C-5, General Rules and Regulations and Rules of Practice and Procedure, requires that a well log shall be filed with the Commission together with a copy of the electric and radioactivity logs.

Your prompt attention to the above will be greatly appreciated.

Sincerely,

DIVISION OF OIL, GAS, AND MINING

*Janice Tabish*  
JANICE TABISH  
CLERK-TYPIST

October 1, 1980

Columbia Gas Development Corporation  
C/O T P Engineering Incorporated  
1201 Security Life Building  
Denver, Colorado 80202

RE: Well No. Paradox 1-12  
Sec. 12, T. 25S, R. 13E.,  
Emery County, Utah

Gentlemen:

According to our records, a "Well Completion Report" filed with this office January 22, 1980, from above referred to well indicates the following electric logs were run: DIL, FDC, CNL, GR. As of today's date this office has only received the DIL log, please submit the rest of the logs indicated.

Rule C-5, General Rules and Regulations and Rules of Practice and Procedure, requires that a well log shall be filed with the Commission together with a copy of the electric and radioactivity logs.

Your prompt attention to the above will be greatly appreciated.

Sincerely,

DIVISION OF OIL, GAS, AND MINING

BARBARA HILL  
CLERK TYPIST

/bjh