

CHUSKA Energy Co., Black Rock #9
22.40N, 29E, SE NW 872

SUNDRY NOTICES AND REPORTS

1. Name of Operator Chuska Energy Compa

2. OIL WELL GAS WELL OTHER (Specify) _____

3. Well Name Black Rock #11

Location 565' FSL, 815' FWL

Sec. 15 Twp. 40N Rge. 29E County Apache, Arizona.

4. Federal, State or Indian Lease Name, or lessor's name if fee lease _____

NOG 8702-1116 Navajo Tribal

**AZ OIL & GAS
CONSERVATION COMMISSION**

5. Field or Pool Name Black Rock Paradox JUL 9 1991

6. 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"/>	MONTHLY PROGRESS <input type="checkbox"/>
FRACTURE TREAT <input type="checkbox"/>	DIRECTIONAL DRILL <input type="checkbox"/>	FRACTURE TREATMENT <input type="checkbox"/>	REPAIRING WELL <input type="checkbox"/>
SHOOT OR ACIDIZE <input type="checkbox"/>	PERFORATE CASING <input type="checkbox"/>	SHOOTING OR ACIDIZING <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
REPAIR WELL <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	(OTHER) _____	ABANDONMENT <input type="checkbox"/>
(OTHER) <u>Extend APD approval</u> <input checked="" type="checkbox"/>			

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

7. 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.)

Owing to further evaluation of the prospect and reserves, spud of this well has been delayed. Chuska Energy therefore applies for a six-month extension to the approved APD on this well.

2-1-92

APPROVED

By SL Ranig

Date 7-10-91
ARIZONA STATE OIL & GAS
CONSERVATION COMMISSION

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

Signed Christopher S.W. Hill Title Operations Engineer Date 7-5-91

STATE OF ARIZONA
OIL & GAS CONSERVATION COMMISSION
Sundry Notices and Reports on Wells
File One Copy

Permit No. 00874

Form No. 25

SUNDRY NOTICES AND REPORTS

1. Name of Operator Chuska Energy Company

2. OIL WELL [] GAS WELL [] OTHER [] (Specify) _____

3. Well Name Black Rock #9

Location 1530' FNL, 2390' FWL

Sec. 17 Twp. 40N Rge. 29E County Apache, Arizona.

4. Federal, State or Indian Lease Name, or lessor's name if fee lease _____

**AZ OIL & GAS
CONSERVATION COMMISSION**

NOG 8702-1116 Navajo Tribal JAN 31 1991

5. Field or Pool Name Black Rock Paradox

6. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO		SUBSEQUENT REPORT OF	
TEST WATER SHUT OFF []	PULL OR ALTER CASING []	WATER SHUT OFF []	MONTHLY PROGRESS []
FRACTURE TREAT []	DIRECTIONAL DRILL []	FRACTURE TREATMENT []	REPAIRING WELL []
SHOOT OR ACIDIZE []	PERFORATE CASING []	SHOOTING OR ACIDIZING []	ALTERING CASING []
REPAIR WELL []	CHANGE PLANS []	(OTHER) _____ []	ABANDONMENT []
(OTHER) <u>Extend APD approval</u> [X]			

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

7. 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.)

Owing to further evaluation of the prospect and reserves, spud of this well has been delayed. Chuska Energy therefore applies for a six-month extension to the approved APD on this well.

APPROVED

By Steven L. Rain
Date 2-1-91

RECEIVED
JAN 25 1991

DIVISION OF
OIL, GAS & MINING

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

Signed Christopher S.W. Hill Title Operations Engineer Date 1-17-91

STATE OF ARIZONA
OIL & GAS CONSERVATION COMMISSION
Sundry Notices and Reports on Wells
File One Copy

Permit No. 00872

Form No. 25

APPLICATION FOR PERMIT TO DRILL OR RE-ENTER

APPLICATION TO DRILL

RE-ENTER OLD WELL

NAME OF COMPANY OR OPERATOR

Chuska Energy Company

Address 315 N. Behrend

City Farmington

State N.M.

Drilling Contractor

To be determined

Address

DESCRIPTION OF WELL AND LEASE

Federal, State or Indian Lease Number, or if fee lease, name of lessor <u>NOG 8702-1116</u>	Well number <u>Black Rock 9</u>	Elevation (ground) <u>6270'</u>
Nearest distance from proposed location to property or lease line: <u>1530</u> feet	Distance from proposed location to nearest drilling, completed or applied for well on the same lease: <u>2600</u> feet	
Number of acres in lease: <u>50,000</u>	Number of wells on lease, including this well, completed in or drilling to this reservoir: <u>4</u>	
If lease, purchased with one or more wells drilled, from whom purchased: <u>N/A</u>		
Well location (give footage from section lines) <u>1530' ENL x 2390' FWL</u>	Section--township--range or block and survey <u>17 T40N R29E</u>	Dedication (Comply with Rule 105)
Field and reservoir (if wildcat, so state) <u>Black Rock Paradox</u>	County <u>Apache</u>	
Distance in miles, and direction from nearest town or post office <u>7 miles west-southwest Teec Nos Pos, Arizona</u>		
Proposed depth: <u>6047'</u>	Rotary or cable tools <u>Rotary</u>	Approx. date work will start <u>2-1-1990</u>
Bond Status <u>Pending</u>	Organization Report	Filing Fee of \$25.00
Amount <u>\$25,000</u>	On file Or attached	Attached

Remarks:

Well will be drilled to test the Paradox formation. If the Paradox is productive the well will TD @ 5729'. If the Paradox is non-productive, the well will be deepened to 6047' for use as a SWD well.

CERTIFICATE: I, the undersigned, under the penalty of perjury, state that I am the Operations Manager of the Chuska Energy Company (company), and that I am authorized by said company to make this report; and that this report was prepared under my supervision and direction and that the facts stated therein are true, correct and complete to the best of my knowledge.

Signature

Donald S. Barnes

Date

11-7-89

Permit Number: 872

Approval Date: 2 February 1990

Approved By: [Signature]

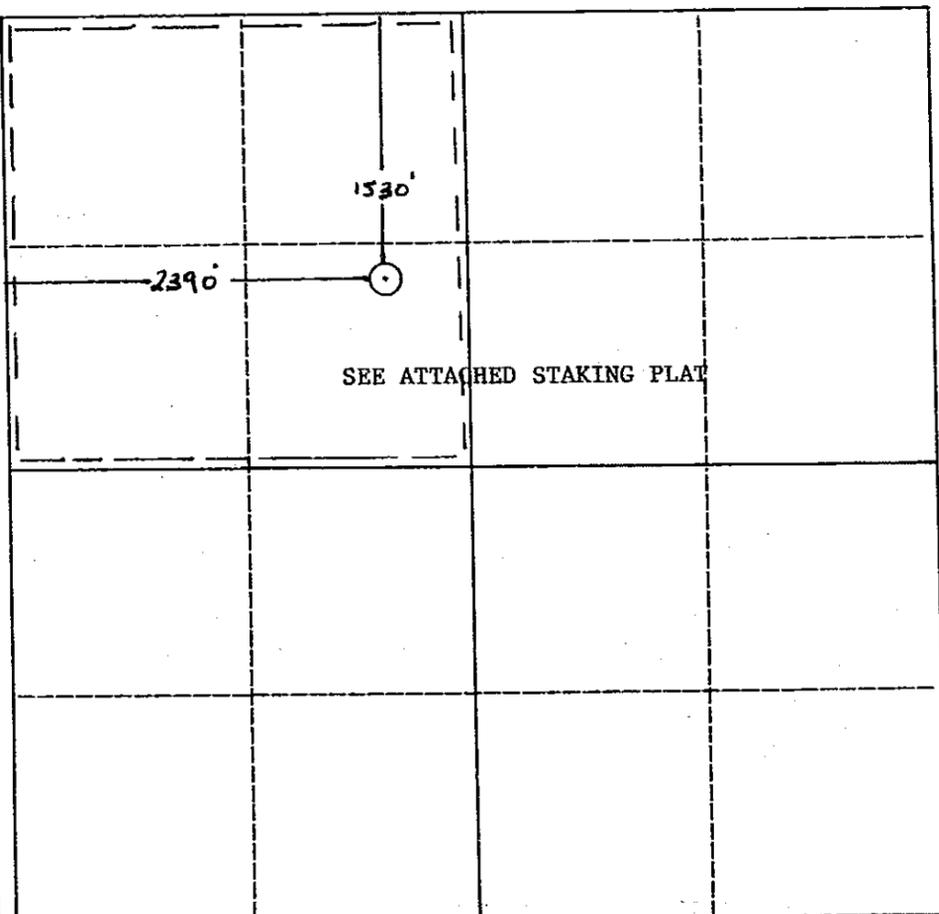
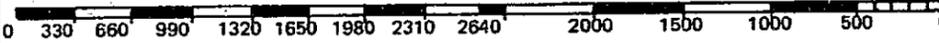
Notice: Before sending in this form be sure that you have given all information requested. Much unnecessary correspondence will thus be avoided.

**STATE OF ARIZONA
OIL & GAS CONSERVATION COMMISSION**
Application to Drill or Re-enter
File Two Copies

Form No. 3

(Complete Reverse Side)

1. Operator shall outline the dedicated acreage for *both* oil and gas wells on the plat.
2. A registered professional engineer or land surveyor registered in the State of Arizona or approved by the Commission shall show on the plat the location of the well and certify this information in the space provided.
3. ALL DISTANCES SHOWN ON THE PLAT MUST BE FROM THE OUTER BOUNDARIES OF THE SECTION.
4. Is the Operator the only owner in the dedicated acreage outlined on the plat below? YES NO
5. If the answer to question four is "no," have the interests of all the owners been consolidated by communitization agreement or otherwise? YES NO . If answer is "yes," Type of Consolidation _____
6. If the answer to question four is "no," list all the owners and their respective interests below:

Owner	Land Description
	<p style="text-align: center;">CERTIFICATION</p> <p>I hereby certify that the information above is true and complete to the best of my knowledge and belief.</p> <p><i>Donald S. Barnes</i> Name Donald S. Barnes Position Operations Manager Company Chuska Energy Company Date 11-7-89</p> <p>I hereby certify that the well location shown on the plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief.</p> <p>Date Surveyed 10-13-89 Registered Professional Engineer and/or Land Surveyor Edgar L. Risenhoover 14207 Certificate No.</p>
	

PROPOSED CASING PROGRAM

Size of Casing	Weight	Grade & Type	Top	Bottom	Cementing Depths	Sacks Cement	Type
8 5/8	24	K55	0	500	500	360 sks	Class "G"
5 1/2	15.5	K55	0	6047	6047	710 sks	Class "G"

Form 3160-3
(November 1983)
(formerly 9-331C)

SUBMIT IN PLICATE*
(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

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

Chuska Energy Company

3. ADDRESS OF OPERATOR

315 N. Behrend, Farmington, N.M. 87401

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

At surface
1530' FNL x 2390' FWL
At proposed prod. zone

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*

7 miles west-southwest of Teec Nos Pos, Arizona

15. DISTANCE FROM PROPOSED*

LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any)

1530'

16. NO. OF ACRES IN LEASE

50,000

17. NO. OF ACRES ASSIGNED TO THIS WELL

160

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

2600'

19. PROPOSED DEPTH

6047

20. ROTARY OR CABLE TOOLS

Rotary

21. ELEVATIONS (Show whether DF, BT, GR, etc.)

6270' GR 6284' KB

22. APPROX. DATE WORK WILL START*

2-1-1990

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
12 1/4	8 5/8	24 PPF	500	360 sks (414 cf)
7 7/8	5 1/2	15.5 PPF	6047	710 sks (1174 cf)

Well will be drilled to test the Paradox formation. If the Paradox is productive, the well will TD @ 5729'. If the Paradox is non-productive the well will be deepened to 6047' for use as a SWD well.

See attachments.

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

Donald S. Barnes
DONALD S. BARNES

TITLE Operations Manager

DATE 11-7-89

(This space for Federal or State office use)

PERMIT NO.

APPROVAL DATE

APPROVED BY

TITLE

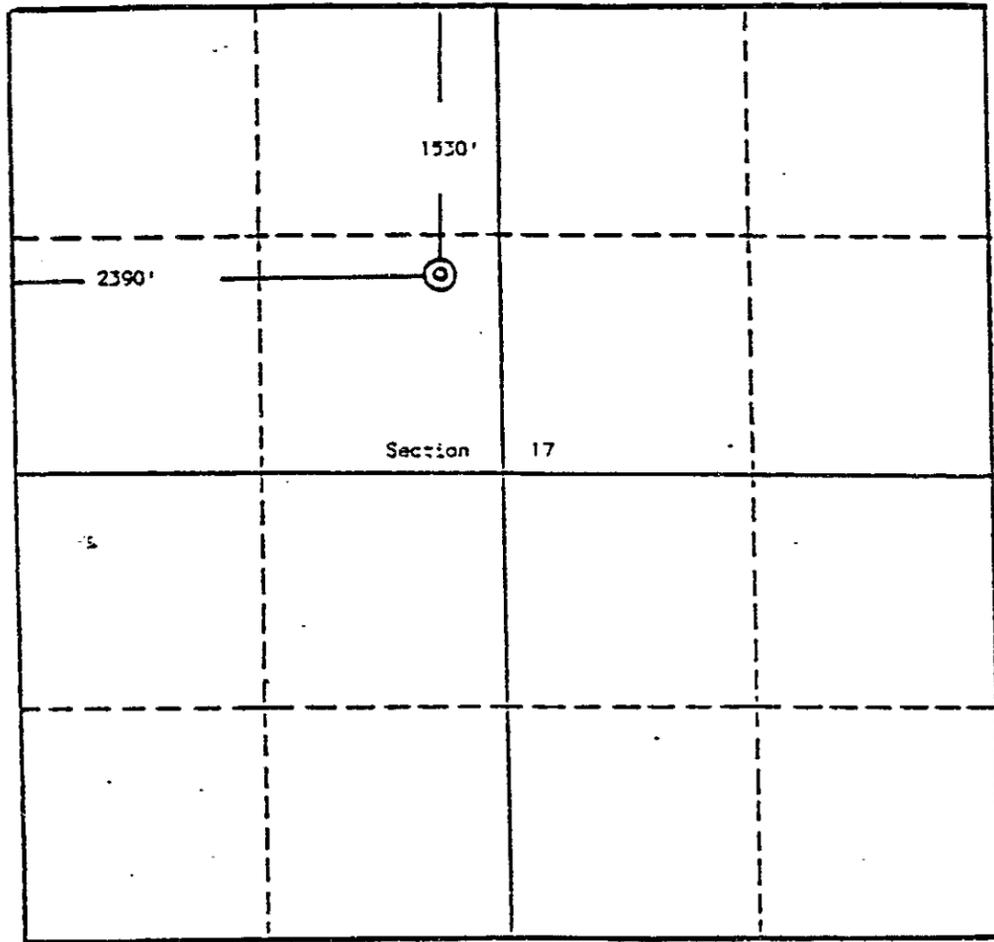
DATE

CONDITIONS OF APPROVAL, IF ANY:

*See Instructions On Reverse Side

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

Company Chuska Energy Company
 Well Name & No. Black Rock #9
 Location 1530' F/NL 2390' F/WL
 Sec. 17, T. 40 N., R. 29 E., G. & S. R. M., County Apache, Arizona
 Ground Elevation 6270



Scale, 1 inch = 1,000 feet

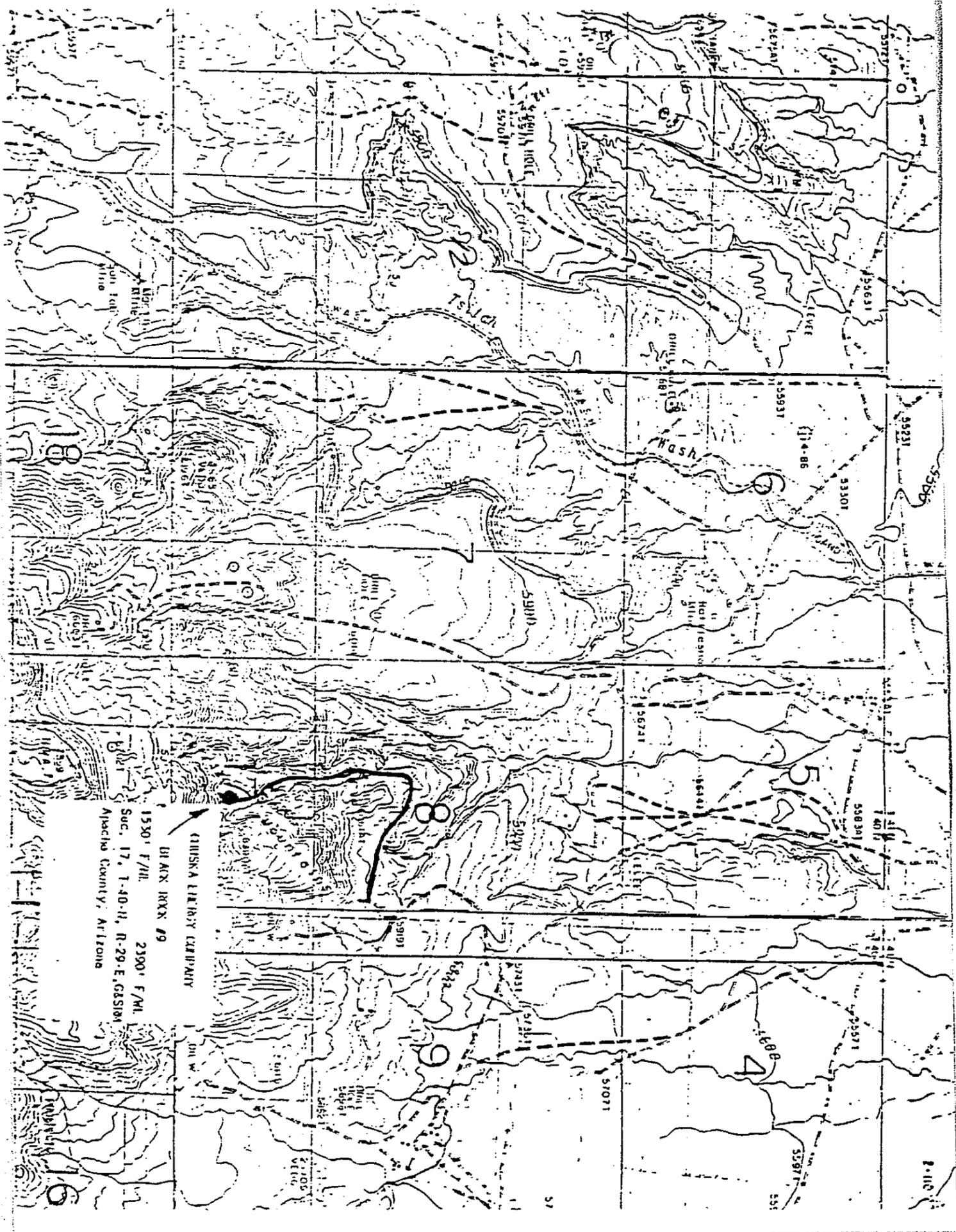
Surveyed October 13, 19 59

This is to certify that the above plat was prepared from field notes of actual surveys made by me or under my supervision and that the same are true and correct to the best of my knowledge and belief.

Seal:

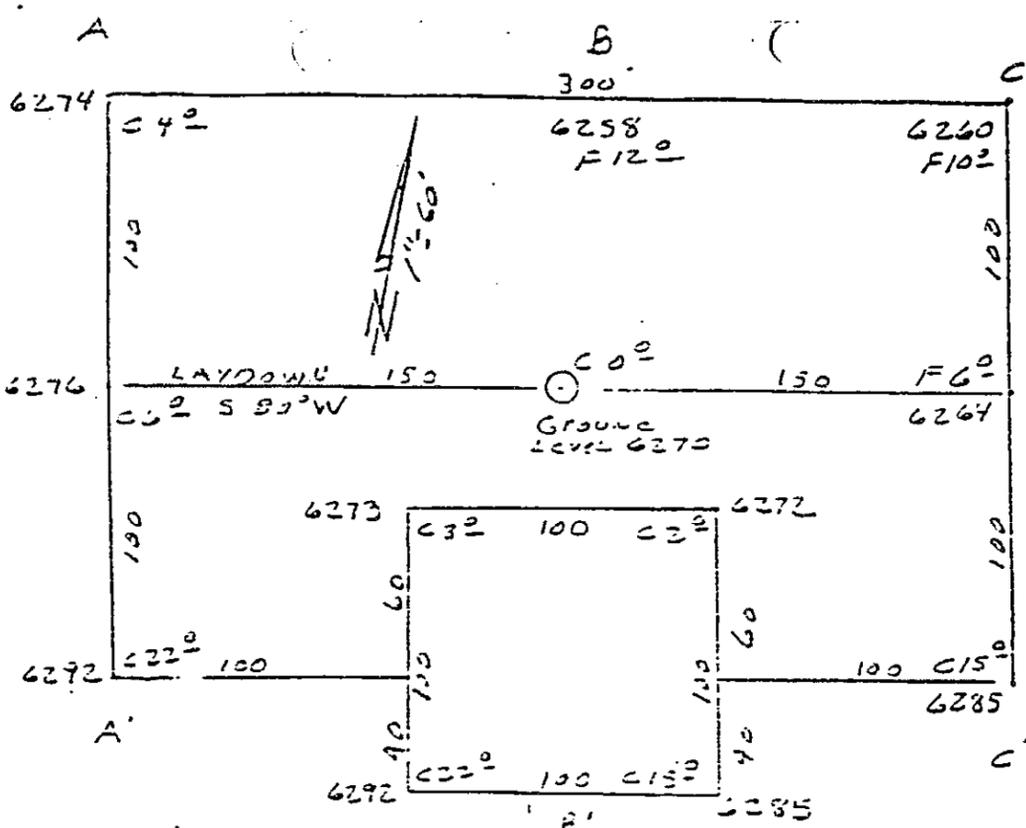


Edgar L. Risenhoover
 Edgar L. Risenhoover
 Professional Land Surveyor
 Arizona Reg. No. 14207



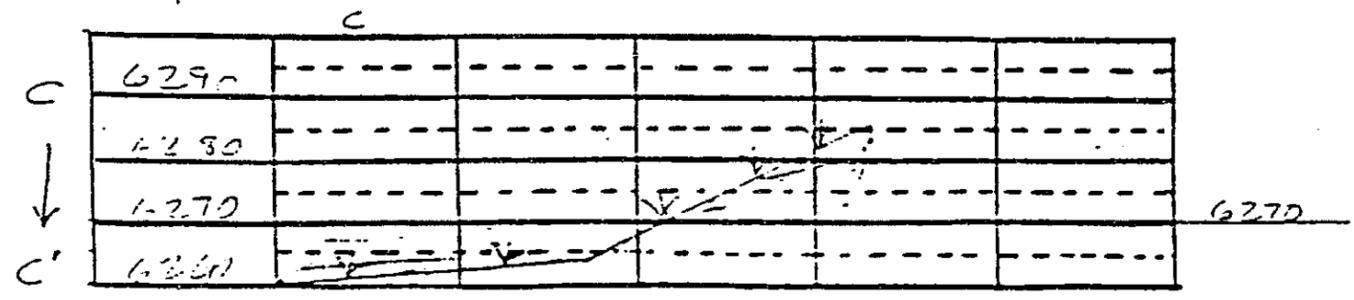
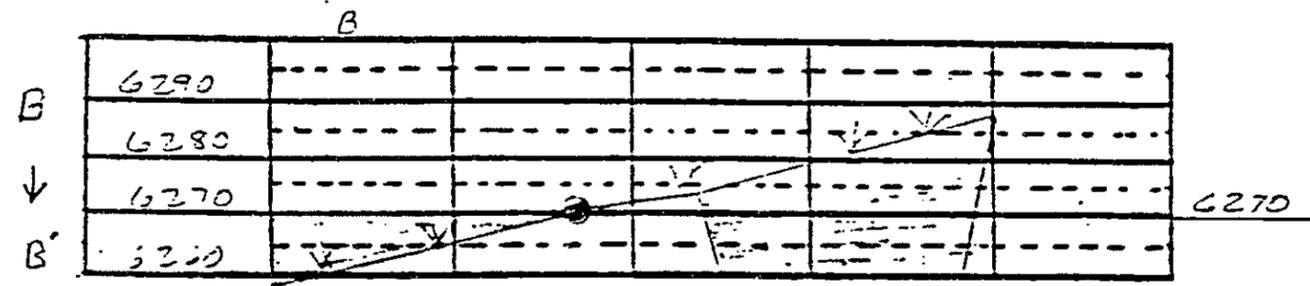
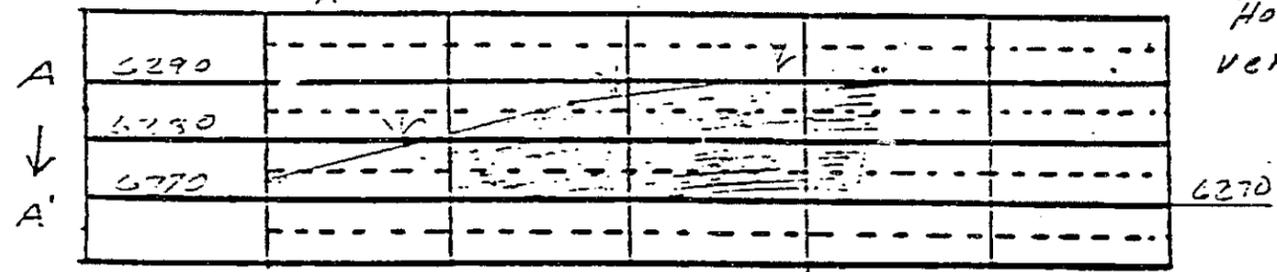
THE PEARL HOLE
HSDA
GUISNA LINDSEY EXHIBIT
U. S. DEPT. OF AGRICULTURE
1:25,000
1530' F. M.I. 2500' F. M.I.
Sec. 17, T-40-N, R-29-E, G. 51071
Apache County, Arizona





Chuska Energy Company
OPERATOR
 Black Rock #9
WELL NAME & NO.
 1530' F/ML 2390'
FOOTAGES
 17 40N 29E
SEC. TWP. RGE.
 Apache County, Ariz
COUNTY
 October 13, 1989
DATE

HORIZ 1"=60'
 VERT 1"=30'



CHUSKA ENERGY COMPANY

10 POINT DRILLING PLAN

Black Rock WELL NO. 9
SECTION 17, TOWNSHIP 40N, RANGE 29E
1530' FNL, 2390' FWL
Apache COUNTY, Arizona

1. SURFACE FORMATION

Geological name of surface formation; Morrison.

2. ELEVATION

Surface elevation is 6270' GR, 6284' KB.

3. ESTIMATED FORMATION TOPS

<u>Depth</u>	<u>Formation</u>	<u>Sub Sea Elevation</u>	
Surface	Morrison	+ 6284'	
1562	Chinle	+ 4722'	
2572	De Chelly	+ 3712'	water
2940	Organ Rock	+ 3344'	
3582	Cutler	+ 2702'	
4302	Hermosa	+ 1982'	gas
4892	Ismay	+ 1392'	gas
4952	Lower Ismay	+ 1332'	gas
5050	Desert Creek	+ 1234'	gas
5192	Akah	+ 1092'	gas/water
5349	Barker Creek	+ 935'	gas
5476	Pinkerton Trail	+ 808'	gas
5679	Molas	+ 605'	
5743	Mississippi	+ 541'	
5898	Mississippi Dolomite	+ 386'	
6007	Ouray	+ 277'	
6047	TD	+ 237'	

NOTE: Well is intended to TD at 5729'. If the Paradox appears to be unproductive, the well may be deepened to TD at 6047' for use as a SWD in the Mississippi Dolomite.

4. PROPOSED CASING/CEMENTING PROGRAM

	<u>Depth</u>	<u>Size</u>	<u>Weight</u>	<u>Grade</u>	<u>Coupling</u>
Surface:	500	8 5/8	24.0 ppf	K-55	STC
Production:	6047	5 1/2	15.5 ppf	K-55	STC

Surface Cementing:

360 sks (414 cf), Class 'G' cement with 2% CaCl₂ and 1/4 #/sk celloflake. Weight - 15.6 ppg, yield 1.14 cf/sk. Slurry volume calculated at 100% excess over annular volume.

Production Cementing:

First Stage

TD to 3500' (stage collar @ 3500'). Lead with 240 sks Class 'G' 65/35 poz + 6% gel + .25 #/sk celloflake (12.7 ppg, 1.85 cf/sk), tailed with 100 sks Class 'G' + 2% CaCl₂ (15.6 ppg, 1.15 cf/sk). Total of 559 cf.

Second Stage

3500' to surface. Lead with 270 sks Class 'G' 65/35 poz + 6% gel + .25 #/sk celloflake (12.7 ppg, 1.85 cf/sk), tailed with 100 sks Class 'G' + 2% CaCl₂ (15.6 ppg, 1.15 cf/sk). Total of 615 cf.

Note: Exact slurry volumes for the production string will be adjusted based on the caliper log to be run prior to cementing. Special adjustments may be made to the slurry if significant amounts of salt are drilled.

5. BLOWOUT PREVENTER (See attached schematics)

As abnormal pressure is not anticipated, a 2000 psi BOP system will be sufficient for the drilling of this well. However, due to availability constraints, a 3000 psi system will be used, as per the attached Exhibits "A" and "B". This will be a 10" x 900 Series double ram preventer, equipped with a set of pipe and blind rams.

An accumulator system, with a pressure capacity sufficient to operate the rams three complete cycles without rig power, will be required by the operator.

6. PROPOSED MUD PROGRAM

Surface to 3500'

Fresh water, gel/lime, & native solids. Weight 8.3 - 8.7 ppg, with gel/lime sweeps as necessary to clean hole.

3500' to Total Depth

Low solids - non dispersed polymer system. Weight 8.6 - 8.8 ppg. Sweep with gel/lime sweeps as hole conditions dictate. Fluid loss to be maintained at 15 cc or less. Fluid loss to be further reduced to 10 cc or less prior to drilling the Paradox formation.

7. AUXILIARY EQUIPMENT

- A. A kelly cock will be installed during drilling operations, with handle available on the rig floor.
- B. Floor (stabbing) valves will be available, on the rig floor at all times, with necessary subs to fit all of the drilling assemblies.
- C. Mud will be the circulating fluid. No abnormal formation pressures are expected.

8. WELL EVALUATION

Open hole electric logging program will consist of a minimum program of DLL-MSFL-SP-GR-Cal, FDC-CNL-GR-Lithodensity from TD to 4000'.

Drill stem testing will be as per well site geologist's recommendations, based on shows. A mud logging unit will be utilized during drilling operations from 4000' to TD.

9. ABNORMAL PRESSURES/GAS

Abnormal pressure is not anticipated. Monitoring of gas and hydrocarbon shows will be by wellsite mud logging unit. H₂S gas is not anticipated, however regular checks will be made while drilling the well.

10. TIMING

The drilling and evaluation of this well is estimated to be 18 days. Anticipated spud date is 2-1-90.

DETAILED DRILLING PROGRAM

DATE: November 6, 1989

WELL NAME: Black Rock WELL NO: 9

LOCATION: 1530' FNL, 2390' FWL
Section 17, Township 40N, Range 29E
Apache COUNTY, Arizona

ELEVATION: 6270' GR / 6284' KB

TOTAL DEPTH: 6047'

PROJECTED HORIZON: Paradox at 4892'; Mississippian at 5743'

DRILLING, CASING AND CEMENTING PROGRAM

1. Move in and rig up rotary tools. Notify BLM of intent to run surface casing and time of spud.
2. Drill mouse hole and rat hole. Mix mud prior to spudding well.
3. Drill 12 1/4" hole to 500'. Use fresh water gel/lime spud mud for drilling surface hole. Well bore inclination is not to exceed 1 degree at 500'. Deviation surveys will be run at 250' and at casing point.
4. Run 8 5/8", 24 ppg, K55, STC casing to TD. Cement with 360 sks (414 cf) of Class 'G' + 2% CaCl₂ + 1/4 #/sk celloflake (sufficient slurry volume to circulate cement to surface).
5. W.O.C. a minimum of 4 hours prior to nipping up BOP stack and related equipment. See BOP schematics for details.
6. Pressure test BOP to 2000 psi for 30 minutes. Pressure test manifold and all related equipment to 2000 psi. Pressure test casing to 1500 psi for 30 min.
7. Drill out of surface casing with 7 7/8" bit. Drill 7 7/8" hole to TD. Deviation surveys are to be taken every 500' or on bit trip whichever occurs first. Maximum allowable deviation will be 5 degrees at TD with the maximum allowable rate of change to be 1 degree/100'.

8. Run open hole logs and evaluate. Drill-stem test as per wellsite geologist's recommendation.
9. If well is determined to be commercial, run 5 1/2", 15.50 ppf, K55 casing to TD. Set stage cementing collar at +/- 3500'. Cement in two stages as follows: Cement first stage with 240 sks of Class 'G' 65/35 poz + 6% gel + .25 #/sk celloflake followed by 100 sks of Class 'G' + 2% CaCl₂ (559 cf). Circulate a minimum of 6 hrs between stages. Cement second stage with 270 sks of Class 'G' 65/35 poz + 6% gel + .25 #/sk celloflake followed by 100 sks of Class 'G' + 2 % CaCl₂ (615 cf).

*Note: exact slurry volumes will be calculated to circulate cement to surface, from caliper log to be run prior to cementing. Special adjustments may be made to the slurry if significant amounts of salt are drilled.
10. Nipple down BOPE. Set 5 1/2" casing slips, cut off casing. Install well head. Release drilling rig and move rig off location.
11. If well is non-productive it will be plugged and abandoned as per State, BLM, BLM, and Navajo Tribal stipulations.

Black Rock #9
1530' FNL X 2390' FWL
SEC 17, T40N, R29E
Apache County, Arizona

GENERAL COMPLETION PROCEDURE

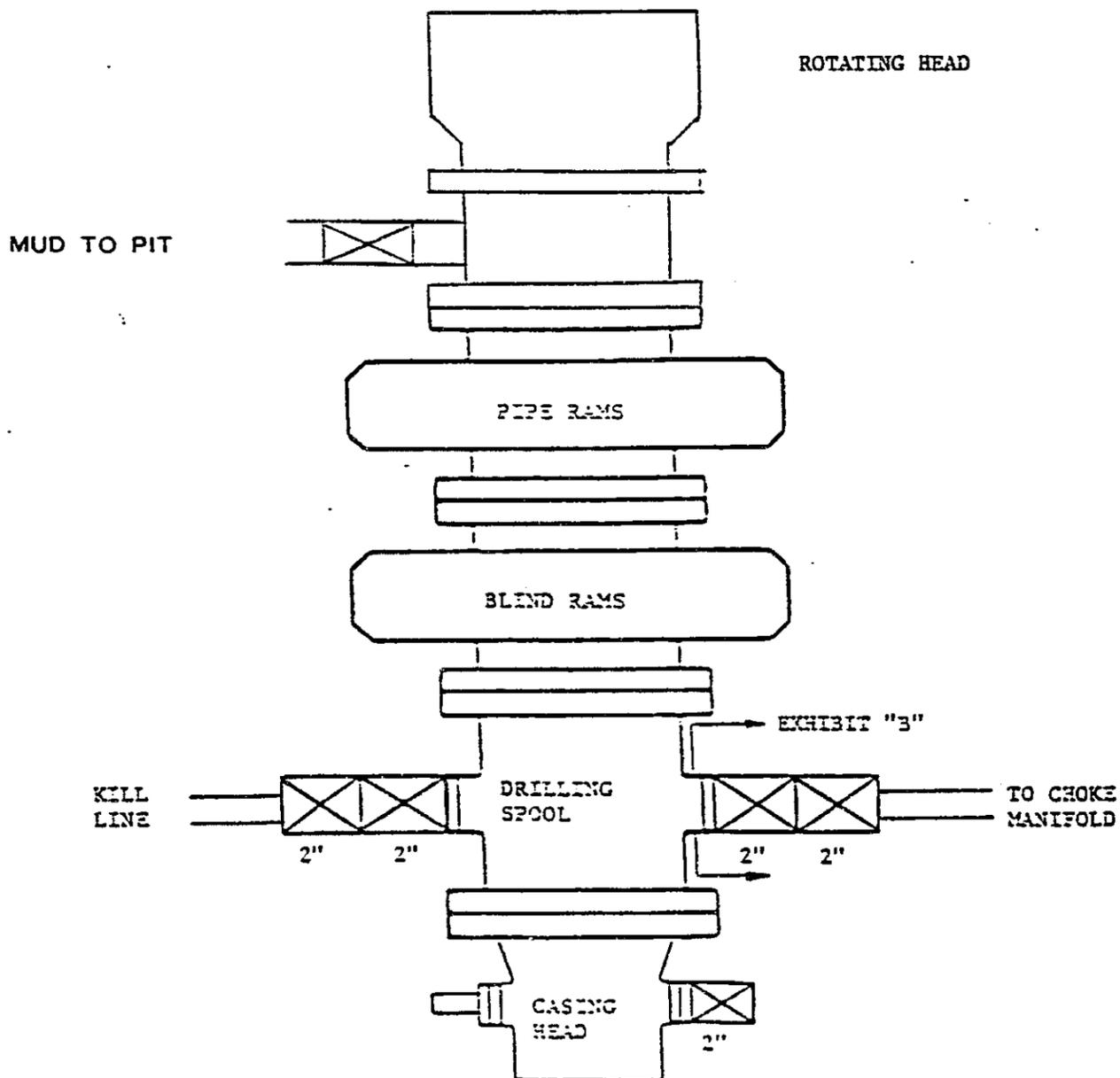
If the well is determined to be productive in the Paradox formation, move in completion rig. Perforate, acidize, and test each productive porosity zone. Completion work will commence after Sundry Notice approval is recieved. Detailed procedures to follow.

PLUGGING AND ABANDONMENT

If the well is determined not to be productive, the well bore will be plugged as per BLM instructions.

CHUSKA ENERGY COMPANY
BLACK ROCK 9
1530' FNL x 2390' FWL
Sec. 17, T40N, R29E
Apache County, Arizona

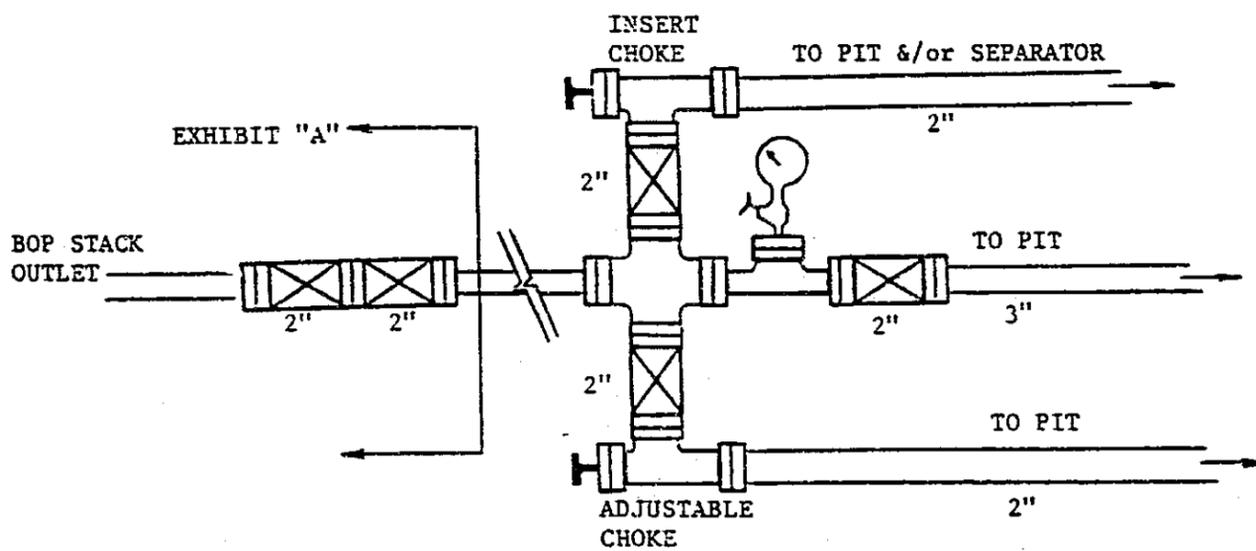
EXHIBIT A
BLOWOUT PREVENTER



CHUSKA ENERGY COMPANY
BLACK ROCK 9
1530' FNL x 2390' FWL
Sec. 17, T40N, R29E
Apache County, Arizona

EXHIBIT "B"

CHOKE MANIFOLD



Black Rock #9

SURFACE USE PLAN

1. EXISTING ROADS

Shown on the attached topographic map, are the existing roads in the immediate area. Outlined are the roads to be used from Road 5035, 7 miles west of Teec Nos Pos Arizona (exhibit 1). Existing roads will be maintained while operations are in progress.

2. PLANNED ACCESS ROAD (SHOWN IN RED)

The access road as shown on the Topo map will exit from road 5035 near the Black Rock #2 location. The road will be flat bladed, constructed 14' in width, and maintained as necessary to prevent excessive damage to the existing terrain. The road will be upgraded if commercial production is established. An estimated 1.25 miles of new road will be constructed to the location pad.

3. LOCATION OF EXISTING WELLS & TANK BATTERIES

The existing wells and facilities are shown on the topographic map.

4. LOCATION OF EXISTING AND PROPOSED FACILITIES

Production facilities will be utilized at the central compressor and production station located in section 8. Glycol pumps and a compressor may be required at a later date and will be installed on the location pad.

5. LOCATION & TYPE OF WATER SUPPLY

Water will be acquired from a private source. The water will be hauled from a flowing well permitted to Hay Hot Oil, Inc., permitted under Water Right 09-1419. A60809.

6. SOURCE OF CONSTRUCTION MATERIALS

The need for additional construction materials is not anticipated. In the event additional materials are required, they will be acquired from private sources or with the approval of the Navajo Nation.

7. METHODS OF HANDLING WASTE MATERIAL

Trash will be contained on location in an enclosed trash bin. It will be hauled to an approved disposal site or burned on location if a burning permit is granted. The reserve pit will be lined with an approved 7 mil liner for containing drilling fluids. The pit will be fenced. All drilling fluids, cuttings and chemical waste will be stored in the reserve pit. Liquid hydrocarbons will be stored in temporary storage tanks and hauled from location to approved sales facilities. The reserve pit will be emptied, backfilled, and restored to the natural terrain.

8. PORTABLE TOILET

Chemical portable toilet facilities will be provided on location during drilling and completion operations.

9. ANCILLARY FACILITIES

No camps or air strips are planned for this well.

10. WELL SITE LAYOUT

Attached is a surveyor's staking plat, cut and fill requirements and a schematic of the proposed rig layout.

11. PLANS FOR RESTORATION OF THE SURFACE

Top soil removed from the pad, will be stored at the well site. After drilling operations are complete, drilling fluid in the reserve pit will be allowed to evaporate. All remaining fluid in the pit will be disposed of into an approved disposal site. The reserve pit will remain fenced during the evaporation/disposal process. The pit will then be covered and the topsoil will be returned to the disturbed area. The terrain will be returned to its original condition as much as possible. Rehabilitation seeding will be in accordance with the APD/BLM/ BIA stipulations.

12. The location is laid out on an east/west trend requiring 22' of cut on the southeast corner and 10' of fill on the northwest corner. The reserve pit will be built on terrain containing sparse native vegetation. No residents are in the immediate area.

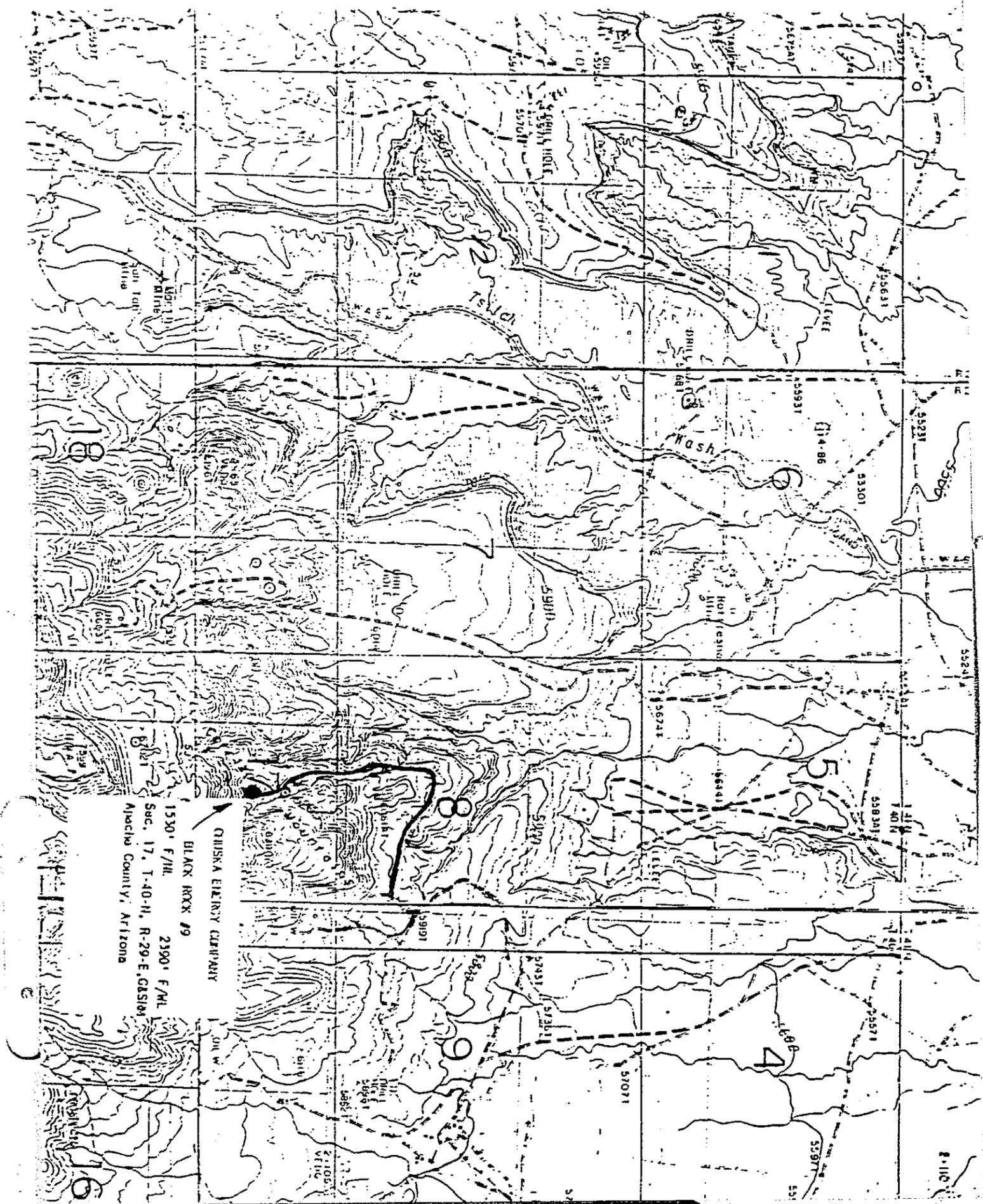
13. OPERATORS REPRESENTATIVE

CHUSKA ENERGY COMPANY
315 NORTH BREHREND AVENUE
FARMINGTON, NEW MEXICO 87401
DONALD S. BARNES

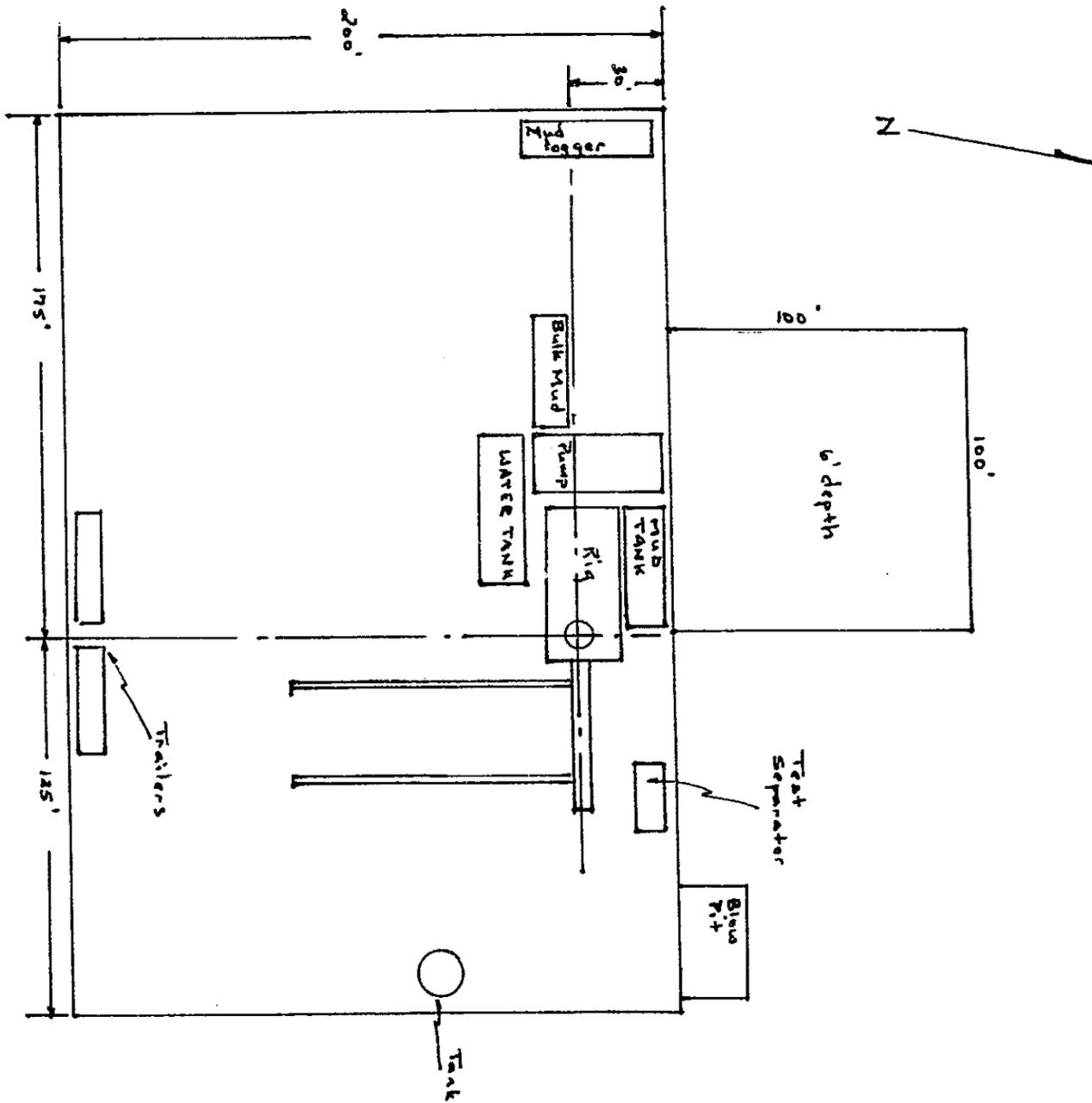
14. CERTIFICATION

I hereby certify that either I, or persons under my direct supervision have inspected the proposed drillsite 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 planned will be performed by Chuska Energy or its sub-contractors, in conformity with the terms and conditions under which it is approved.

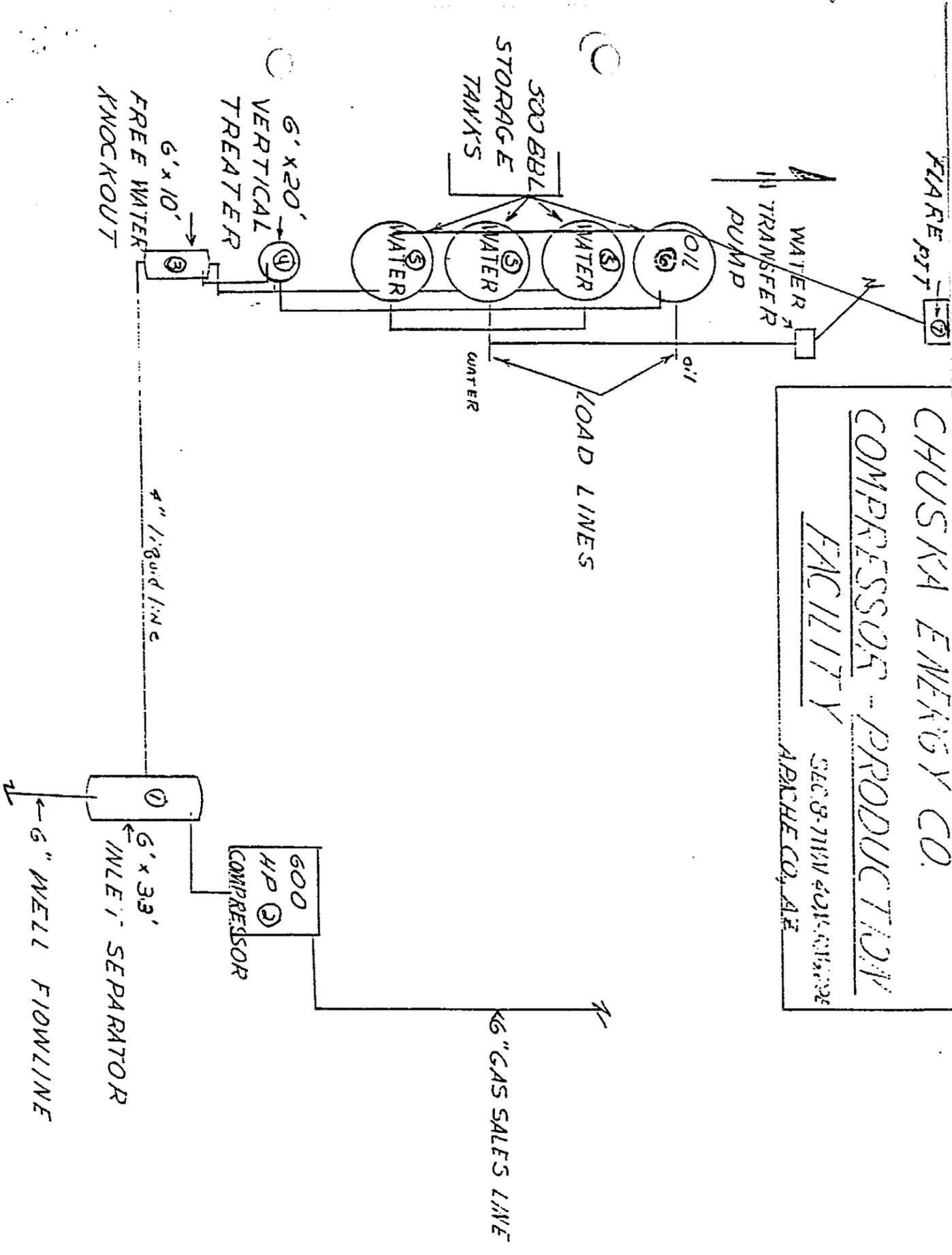

DONALD S. BARNES
Operations Manager



CHUSKA ENERGY COMPANY
BLACK ROCK 9
1530 FNL x 2390' FWL
Sec. 17, T40N, R29E
Apache County, Arizona



CHUSKA ENERGY CO.
 COMPRESSOR - PRODUCTION
 FACILITY
 SEC 8-T1W 40R 015 002
 ARACHE CO., AZ



STATE OF ARIZONA
OIL AND GAS CONSERVATION COMMISSION
REQUIREMENTS FOR PROPOSED OPERATIONS

PERMIT NO. 872

Chuska Energy Company
315 N. Behrend
Farmington, NM 87401

Phoenix, Arizona
February 2, 1990

Your proposal to drill well Black Rock No. 9, A.P.I. No. 02-001-20291,
Section 17, T.40N, R.29E, G&SR B. & M., Black Rock field, Apache County, dated 11/8/89,
received 11/89 has been examined in conjunction with records filed in this office.

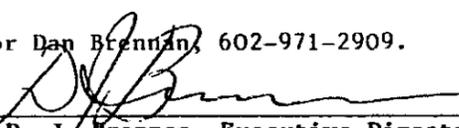
THE PROPOSAL IS APPROVED PROVIDED:

1. THIS WELL SHALL NOT BE USED FOR SALT WATER DISPOSAL UNLESS AUTHORIZED BY THE COMMISSION AFTER NOTICE AND HEARING PURSUANT TO RULE 12-7-176.
2. Mud pits are constructed and lined in a manner that will prevent contamination of surface or subsurface waters.
3. Drilling mud consistent with sound drilling practices shall be used at all times and sufficient amounts of lost circulation material shall be available at the drill site.
4. The well shall be cased and cemented in such a manner that will protect all zones that contain oil, gas, or fresh water.
5. Blowout prevention equipment shall be installed, tested, and maintained in a manner necessary to assure well control throughout the drilling, completion, or abandonment of the well.
6. Monitoring for H₂S shall be continuous from 4000' to T.D. An H₂S Safety Representative shall be on site for all Drill Stem Tests, cores, trip gas, and circulation of bottoms up.
7. Sundry reports shall be filed as required.
8. Two sets of samples of all cores and cuttings shall be taken at a maximum interval of ten feet. One set each shall be shipped prepaid to:
 - a. Oil & Gas Commission, 5150 N. 16th St., Ste. B141, Phoenix, AZ 85016.
 - b. Arizona Geological Survey, 845 N. Park Ave., Tucson, AZ 85719.
9. Samples and all logs and surveys of any description shall be filed within 30 days after the removal of the rig from the hole.
10. Application to Plug and Abandon (Form 9) shall be submitted to the Commission for approval prior to the beginning of operations to plug the well.
11. THIS COMMISSION SHALL BE NOTIFIED:
 - a. Immediately when drilling operations commence.
 - b. In time to witness the running and cementing of the surface casing.
 - c. In time to witness pressure testing of BOPE prior to drilling out of the surface casing.
 - d. In time to witness plugging and abandonment operations.

To witness operations, call 602-255-5161.

After office hours notify: Steve Rauzi, 602-864-9148 or Dan Brennan, 602-971-2909.

C.D. # 2578904, Valley National Bank

By 
D. J. Brennan, Executive Director

A COPY OF THIS REPORT AND THE PROPOSAL MUST BE POSTED AT THE DRILLER'S STATION PRIOR TO COMMENCING OPERATIONS.

RECORDS FOR WORK DONE UNDER THIS PERMIT ARE DUE WITHIN 30 DAYS AFTER THE WORK HAS BEEN COMPLETED OR THE OPERATIONS HAVE BEEN SUSPENDED.



PERMIT TO DRILL

This constitutes the permission and authority from the
OIL AND GAS CONSERVATION COMMISSION,
STATE OF ARIZONA,

To: CHUSKA ENERGY COMPANY
(OPERATOR)

to drill a well to be known as

Black Rock No. 9
(WELL NAME)

located 1530' FNL X 2390' FNL

Section 17 Township 40N Range 29E, Apache County, Arizona.

The NW 1/4 of said

Section, Township and Range is dedicated to this well.

Said well is to be drilled substantially as outlined in the attached Application and must be drilled in full compliance with all applicable laws, statutes, rules and regulations of the State of Arizona.

Issued this 2nd day of February, 1990.

OIL AND GAS CONSERVATION COMMISSION

By [Signature]
EXECUTIVE DIRECTOR

PERMIT 00872

RECEIPT NO. 2906

A.P.I. NO. 02-001-20291

State of Arizona
Oil & Gas Conservation Commission
Permit to Drill
FORM NO. 27

Operator CHUSKA ENERGY COMPANY

Bond Company VALLEY NATIONAL BANK - ARIZONA Amount \$25,000.00

Bond No. CD #2578904 Date Approved 12/01/89

Permits covered by this bond:

- 559
- 581
- 610 (P & A 11-21-95)
- 615 (P & A 5/10/91)
- 868
- 869 EXPIRED
- 870 (Junked & Abandoned 05/90)
- 871
- 872 Extension to ~~8-1-91~~ 2-1-92
- 873 Extension to ~~8-1-91~~ 2-1-92
- 874 Extension to ~~8-1-91~~ 2-1-92
- 875 Extension to 12-1-91
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Operator CHUSKA ENERGY COMPANY

Bond Company VALLEY NATIONAL BANK - ARIZONA Amount \$25,000.00

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- 875 Extension to 12-1-91
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HARKEN SOUTHWEST CORPORATION

(formerly Chuska Energy Company)

January 28, 1994

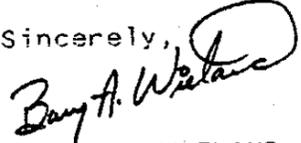
We are pleased to announce that Chuska Energy Company has changed its name to Harken Southwest Corporation. This is in line with the February, 1993 merger with Harken Exploration Company.

Harken Southwest Corporation will continue to be located at 3315 Bloomfield Highway, Farmington, New Mexico 87401. Our telephone number will remain (505) 326-5525.

Please reflect this name change on all future correspondence.

Thank you for your assistance in this matter. We look forward to working with you as Harken Southwest Corporation.

Sincerely,


BARRY A. WIELAND
Operations Manager





CHUSKA ENERGY COMPANY

3315 BLOOMFIELD HIGHWAY • FARMINGTON, NEW MEXICO 87401 • PHONE: (505) 326-5525

AZ OIL & GAS
CONSERVATION COMMISSION

JUL 9 1991

5 July, 1991

Arizona Oil and Gas Conservation Commission
5150 North 16th Street, Suite B141
Phoenix, Arizona 85016

Attn: Daniel J. Brennan

872

Ref: Sundry Notices: Extensions to APD
Black Rock #9, #10 and #11

Gentlemen

Attached for your examination and approval are the originals and two copies of the subject Sundry Notices.

Please advise if you require additional information concerning these submissions.

Sincerely,

Larry G. Sessions
Larry G. Sessions
Operations Manager

LGS/cswh
File: C:\WP51\BLAKROCK\91011EX2.CVR

encl.



Oil and Gas Conservation Commission
STATE OF ARIZONA

5150 N. 16th STREET, SUITE B-141
PHOENIX, ARIZONA 85016
PHONE: (602) 255-5161

February 1, 1991

Larry G. Sessions
Operations Manager
Chuska Energy Company
3315 Bloomfield Highway
Farmington, NM 87401

RE: Permit Extension for Black Rock 9, 10, and 11
Permit Numbers 872, 873, and 874, respectively

Dear Mr. Sessions:

We understand your need to further evaluate the Black Rock Field and its reserves. We therefore approve your request to extend the permits for the referenced wells.

These extensions are good through August 1, 1991.

Sincerely,

Steven L. Rauzi
Oil & Gas Specialist



CHUSKA ENERGY COMPANY

3315 BLOOMFIELD HIGHWAY • FARMINGTON, NEW MEXICO 87401 • PHONE: (505) 326-5525

P.O. BOX 780 • FARMINGTON, NEW MEXICO 87499

January 31, 1991

AZ OIL & GAS
CONSERVATION COMMISSION

JAN 31 1991

Arizona Oil & Gas Conservation Commission
5150 North 16th Street, Suite B141
Phoenix, Arizona 85016

ATTENTION: Daniel J. Brennan

RE: Sundry Notices: Extensions to APD
Black Rock #9, #10, and #11

Dear Mr. Brennan:

Attached for your examination and approval are the originals and two copies of the subject Sundry Notices.

Please advise if you require additional information concerning these submissions.

Sincerely,

Larry G. Sessions
LARRY G. SESSIONS
Operations Manager

LGS\csw
File:LGS\BRK91011



CHUSKA ENERGY COMPANY

315 N. BEHREND • FARMINGTON, NEW MEXICO 87401 • PHONE: (505) 326-5525

January 18, 1990

Arizona State Oil & Gas Commission
5150 N. 16th Street, Suite B-141
Phoenix, Arizona 85016

ATTENTION: Mr. Daniel J. Brennan

Dear Dan,

This letter is in response to our telephone conversation yesterday. I apologize for any inconvenience caused by Chuska or its personnel. I hope that this letter will assist you in making the necessary approvals on our behalf.

You are entirely correct to point out the fact that Hydrogen Sulfide will be present, as this has historically been one of our major concerns. We have trained all of Chuska's field personnel, as well as rig personnel on wells where H₂S is suspected. Each member of the crew and all of Chuska's operations personnel have been certified in Hydrogen Sulfide operations. We do have monitoring equipment, provided both by the mud logging unit as well as by safety personnel on location during DSTs or other evaluation operations during which gas could occur to surface. A safety company is notified prior to spud and is on call throughout the drilling of the well if needed.

The location of the three wells in question are explained as follows:

BLACK ROCK #9 #572

This well is planned as a replacement well for the Black Rock #2. The well is located within the mapped section of the Black Rock structure. The surface location is located in a very tight area in which the surrounding topography is very erratic. In addition to the topography, the area is heavy with archaeological artifacts to such a degree that the road to location had to be rerouted to miss three sites alone. The surveyors and field personnel who carried out the staking worked closely with the archaeological field personnel to find the best suitable location for all concerned. To move the location as you suggest would cause excessive damage to the surrounding area, create a greater economic burden, and from a geological point of view, would not provide us with the preferred drilling location.

Chuska controls all of the surrounding acreage in the section and will not be draining other operators' production.

For the reasons stated above, Chuska requests the approval of this permit as submitted.

As you are aware, we are planning to drill more wells in the area, with two more located in section 17, on the upper bench of the Carrizo mountain range.

BLACK ROCK #10 PN 873

The location of this well will be moved 20' and it will be staked 660' FEL. The well is planned to outline the limits of the Black Rock Field and is located on top of a mountain where access roads are already in place.

The location was selected in order to minimize disturbance to the surrounding area. We will restake this location and submit a revised staking plat as soon as possible.

BLACK ROCK #11 #874

The site required for a legal location falls within two forks of an existing wash. The location was moved as close as possible to the existing well bore in order to minimize surface damage. We have reviewed the suggestion to move the surface location. The reason we permitted the well is that we feel that we have sufficient established reserves in the area to justify another drainage point. However, surface pipe historically causes enough problems to deter any attempted re-entry of the old well bore. Considering both the elements and the environment, and in the interests of being a prudent operator, Chuska has elected to drill a new well rather than try to re-enter the existing well bore.

I hope that this letter will help in clarifying Chuska's position and reasons for selection of the three well locations under discussion. As I stated, we are in a time box due to the probability of shutting down for the wild life problems. Please advise if you require additional information. I would appreciate any consideration that you can give as time is of the greatest importance.

Sincerely



Donald S. Barnes
Operations Manager

CHUSKA ENERGY COMPANY



Oil and Gas Conservation Commission

STATE OF ARIZONA

5150 N. 16th STREET, SUITE B-141
PHOENIX, ARIZONA 85016
PHONE: (602) 255-5161

January 4, 1990

Mr. Thomas R. McCarthy
Chuska Energy Company
315 N. Behrend
Farmington, NM 87401

Dear Tom:

To confirm our telephone conversation of yesterday, we are holding up approval of the Applications for Permit to Drill for your Black Rock wells Nos. 9, 10, and 11. You have asked for administrative approval of irregular location for these three wells, but have not furnished enough justification for us to proceed.

As we examined the materials relevant to these applications we have made the following notes:

No. 9: Requested location is 2390 FWL and 1530 FNL of Section 15. On the topographic map there appears to be at least as good a potential location approximately 1200 feet WNW, at approximately 1200' FWL and 1000' FNL of the section.

No. 10 is spotted 640 FEL of Section 22. It appears that it could be moved 20' further west to a legal location, or as an alternative about 800' west.

No. 11 is apparently an attempt to use the location of the abandoned Universal Resources 1-15 Navajo. Requested location is 565 FSL and 815' FWL. Again the topographic map appears to show a suitable legal location to the north or northeast.

In addition, each of the applications includes a location plat which shows the pit on the north side of the location, while topographic profiles with a different plat show the pits on the south side of the location. Please clear up this inconsistency.

Also each well plan contains a statement that H₂S is not anticipated. This, of course, is contrary to your experience. Please modify the well plans to provide for H₂S monitoring equipment from 4000' to total depth.

We are looking forward to hearing from you. Best of luck on your next well.

Very truly yours,

Daniel J. Brennan
Executive Director



CHUSKA ENERGY COMPANY

315 N. BEHREND • FARMINGTON, NEW MEXICO 87401 • PHONE: (505) 326-5525

AZ OIL & GAS
CONSERVATION COMMISSION

DEC 21 1989

December 18, 1989

Mr. Daniel J. Brennan
Arizona Oil and Gas Conservation Commission
5150 North 16th Street, Suite B141
Phoenix, Arizona 85016

RE: Black Rock Nos. 5, 6, 7, 8, 9, 10, and 11
Drilling Permit Applications

Dear Dan:

Pursuant to our conversation on December 15th, I am enclosing a check for \$175.00 for the Applications to Drill the subject wells.

Please advise me if there is additional information or requirements for the approval of the subject APD's.

Sincerely,

Thomas R. McCarthy
Reservoir Engineer

TRM:bnp
Enclosure
File:TRM\DRPERBR



CHUSKA ENERGY COMPANY

315 N. BEHREND • FARMINGTON, NEW MEXICO 87401 • PHONE: (505) 326-5525

November 28, 1989

Mr. Dan Brennan
Arizona Oil & Gas Conservation Commission
5150 N. 16th Street
Suite B-141
Phoenix, Arizona 85016

Re: Black Rock No. 9
Non-standard Location
Apache County, Arizona

Dear Mr. Brennan:

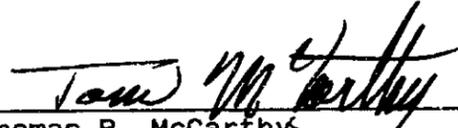
Please refer to our application for Permit to Drill the Black Rock No. 9 well located 1530' FNL & 2390' FWL, Section 17, T40N, R29E. As you are aware, this location does not comply with the Black Rock field rules which stipulate that a well be no closer than 660 feet to the 160 acre unit line.

Administrative approval for a non-standard location at the Black Rock No. 9 is requested due to topographic considerations. The well is staked at a location in the quarter section which will have the least amount of environmental impact both from a location construction stand point and from the stand point of subsequent construction of a pipeline to the well. No other standard drilling location exists in the quarter section.

Chuska Energy Company owns all acreage contiguous to this 160 acre drilling unit.

Please advise if administrative approval can be granted.

Sincerely,


Thomas R. McCarthy,
Senior Reservoir Engineer

TRM/bc

file:trm\Inonstan.br9