

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR DEEPEN

1a. TYPE OF WORK

DRILL ☒

DEEPEN ☐

b. TYPE OF WELL

OIL  
WELL ☒

GAS  
WELL ☐

kick off for directional well

SINGLE  
ZONE ☐

MULTIPLE  
ZONE ☐

2. NAME OF OPERATOR

Chuska Energy Company

3. ADDRESS AND TELEPHONE NO.

3315 Bloomfield Highway, Farmington, NM 87401 505-326-5525

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

At surface 370 FNL & 2170 FEL (Surface)

At proposed prod. zone

830 FNL & 2470 FWL (Subsurface)

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

18 miles to Montezuma Creek, Utah

15. DISTANCE FROM PROPOSED\*

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

370' Surface

830' Subsurface

16. NO. OF ACRES IN LEASE

2,522 acres

17. NO. OF ACRES ASSIGNED  
TO THIS WELL

2,522 acres

18. DISTANCE FROM PROPOSED LOCATION\*

TO NEAREST WELL, DRILLING, COMPLETED,  
OR APPLIED FOR, ON THIS LEASE, FT.

20' /

3000'

19. PROPOSED DEPTH

6267' MD / 6108' TVD

20. ROTARY OR CABLE TOOLS

Rotary

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

5210' GR/5223' KB This action is subject to technical and

22. APPROX. DATE WORK WILL START\*

August 1, 1993

23. procedural review pursuant to 43 CFR 3165.3

and appeal pursuant to 43 CFR 3165.4. PROPOSED CEMENTING PROGRAM

DRILLING OPERATIONS AUTHORIZED AND  
SUBJECT TO COMPLIANCE WITH ATTACHED

SIZE OF HOLE	GRADE, SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH
12 1/4"	K-55, 8 5/8"	24 ppf	425'
7 7/8"	J-55, 5 1/2"	15.5 ppf	6267' MD

"GENERAL REQUIREMENTS"  
305 sx Class 'G' cement w/2% CaCl<sub>2</sub>  
1/4 lb/sk celloflake.  
1st Stage: TD to 3500'. Lead w/381  
sx Class 'G' cement, 65:35 Pozmix  
w/6% gel and 1/4 lb/sk Celloflake.  
2nd Stage: Lead w/499 sx Class 'G'  
Cement, 65:35 Pozmix w/6% gel and  
1/4 lb/sk Celloflake

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SEE ATTACHED 10 POINT DRILLING PLAN

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DIVISION OF  
OIL GAS & MINING

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IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen, 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

*B. A. Wideman*

TITLE

Operations Manager

DATE

7/15/93

(This space for Federal or State office use)

PERMIT NO.

43-037-31721

APPROVAL DATE

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.  
CONDITIONS OF APPROVAL, IF ANY:

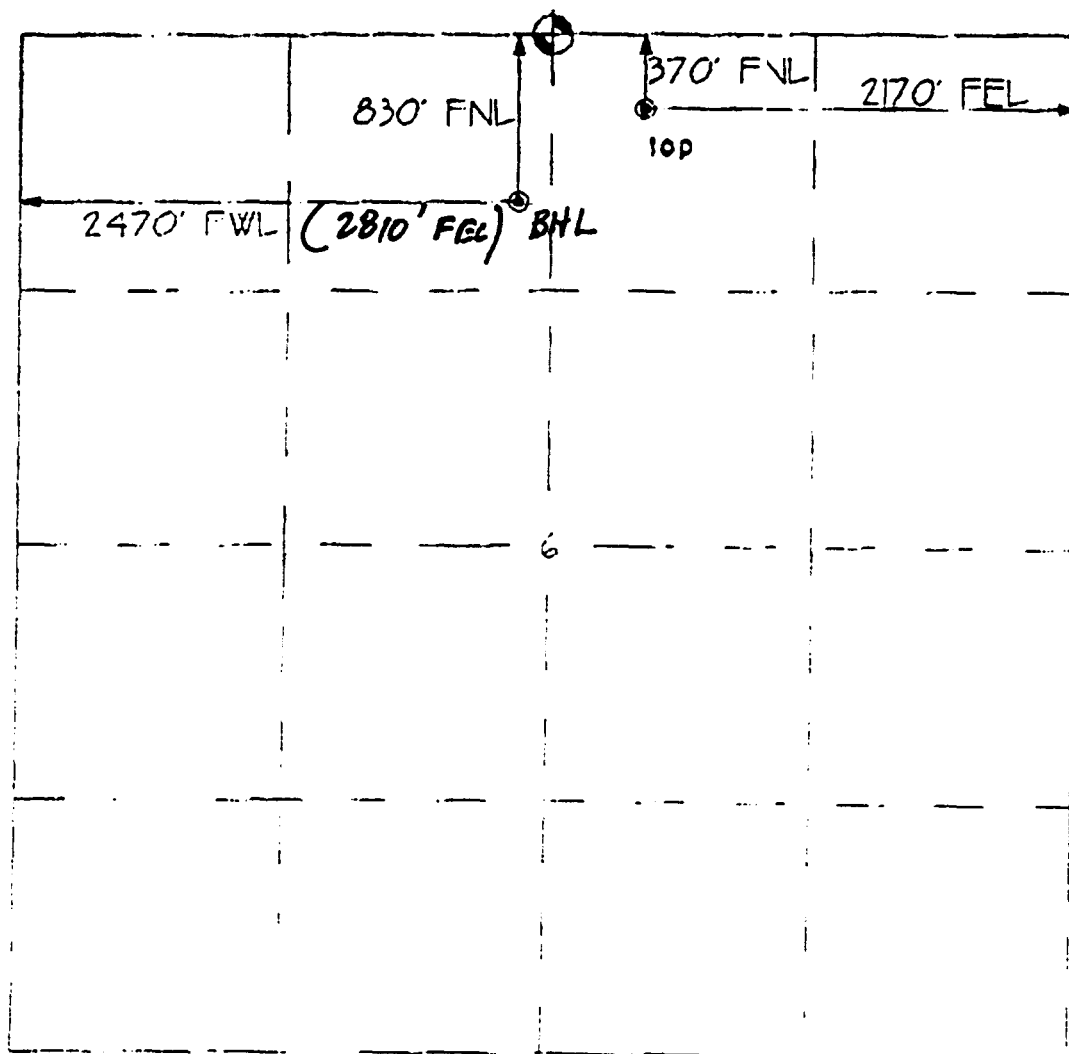
APPROVED BY

TITLE

\*See Instructions On Reverse Side

DATE

DISTRICT MANAGER

Well Location Plat

North  
0' 1000'  
1" = 1000'

⊙ brass cap  
□ stone

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Chuska Energy Co.

Hillside 6-C

370' FNL &amp; 2170' FEL (top hole)

830' FNL &amp; 2470' FWL (bottom hole)

Section 6, T.42 S., R.25 E., SLM

San Juan County, Utah

5286' ground elevation from seismic

State plane coordinates from seismic control

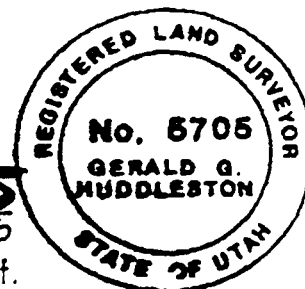
x - 2,666,288 y - 191,577 (top hole)

x - 2,665,829 y - 191,119 (bottom hole)

8 July 1993

*Gerald G. Huddleston*  
Gerald G. Huddleston, LS

The above is true and correct to my knowledge and belief.

Huddleston Land Surveying - Drawer KK - Cortez, CO 81321 - (303) 565-3330

CHUSKA ENERGY COMPANY

HILLSIDE 6-C-1  
SECTION 6, TOWNSHIP 42S, RANGE 25E  
370 FNL & 2170 FEL (Surface)  
830 FNL & 2470 FWL (Subsurface)  
SAN JUAN COUNTY, UTAH

10 POINT DRILLING PLAN

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1. SURFACE FORMATION:

Geological name of surface formation: Morrison

2. ELEVATION:

Surface elevation is 5210' GR/ 5223' KB

3. ESTIMATED FORMATION TOPS

MD	TVD	FORMATION	SUB-SEA ELEV.
968'	968'	Navajo	+4255' Water-bearing
1608'	1608'	Chinle	+3615'
2583'	2583'	DeChelly	+2640' Water-bearing
2683'	2683'	Organ Rock	+2540'
3783'	3783'	Cedar Mesa	+1440'
4896'	4866'	Hermosa	+357'
5803'	5688'	Upper Ismay	-465'
5931'	5804'	Lower Ismay	-581' Secondary
6035'	5898'	Desert Crk	-675' Primary
6211'	6058'	Akah	-835'
6267'	6108'	TD	-885'

4. PROPOSED CASING/CEMENTING PROGRAM

	DEPTH	SIZE	WEIGHT	GRADE	COUPLING
SURFACE	425'	8 5/8"	24.0 ppf	K-55	ST&C
PROD.	6267' MD	5 1/2"	15.5 ppf	J-55	LT&C

SURFACE CEMENTING:

305 sx Class 'G' Cement with 2% CaCl and 1/4 lb/sk Celloflake. Weight = 15.8 ppg, yield = 1.15 ft<sup>3</sup>/sk. Slurry volume will be calculated at 100% excess over annular volume.

## PRODUCTION CEMENTING:

### First Stage

TD to 3500' (stage collar @ +3500'MD). Lead with 381 sx Class 'G' cement, 65:35 Pozmix with 6% gel and 1/4 lb/sk Celloflake. Weight = 12.7 ppg, yield = 1.85 ft<sup>3</sup>/sk. Tail with 100 sx Class 'G' cement with 2% CaCl<sub>2</sub>. Weight = 15.8 ppg, yield = 1.15 ft<sup>3</sup>/sk. Total of 814 ft<sup>3</sup> w/ 30% excess over annular volume.

### SECOND STAGE

3500'MD to surface. Lead with 499 sx Class 'G' cement, 65:35 Pozmix with 6% gel and 1/4 lb/sk Celloflake. Weight = 12.7 ppg, yield = 1.85 ft<sup>3</sup>/sk. Tail with 100 sx Class 'G' cement with 2% CaCl<sub>2</sub>. Weight = 15.8 ppg, yield = 1.15 ft<sup>3</sup>/sk. Total of 1038 ft<sup>3</sup> w/ 30% excess.

NOTE: Exact slurry volumes for the production string will be adjusted according to the caliper log which will be run prior to cementing. Special adjustments may be necessary if significant amounts of salt are drilled.

### CENTRALIZERS:

8 5/8" Surface String: Center of shoe jt, jt.3, jt.5, jt.7, and surface jt.

5 1/2" Production String: Center of shoe jtl, jt.2, jt.4, jt.6, jt.8, and every 3rd jt., up to DV Tool @ +/-3500'. Four (4) centralizers through DeChelly and two (2) centralizers @ surface.

NOTE: Put asterik on each pipe tally joint for each centralizer installed.

## 5. BLOWOUT PREVENTER (SEE ATTACHED SCHEMATICS)

As abnormal pressure is not anticipated, a 2000 psi BOP system would be sufficient for the drilling of this well. However, due to availability constraints, a 3000 psi system will be used, as per 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 as part of the rig equipment.

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## DETAILED DRILLING PROGRAM

DATE: June 22, 1993

WELL NAME: HILLSIDE WELL NO.:6-C-1

LOCATION: Section 6-Township 42S-Range 25E  
370 FNL & 2170 FEL (Surface)  
830 FNL & 2470 FWL (Subsurface)  
San Juan County, Utah

ELEVATION: 5210' GR / 5223' KB

TOTAL DEPTH: 6108' TD

PROJECTED HORIZON: Primary Target is Desert Crk @ 5898'  
Secondary Target is Lower Ismay @ 5804'

### DRILLING, CASING AND CEMENTING PROGRAM

1. Move in and rig up rotary tools. Notify BLM of time of spud.
2. Drill mouse hole and rat hole. Mix mud prior to spudding well.
3. Drill 12 1/4" hole to +/- 425'. Use fresh water and lime spud mud for drilling surface hole. Well bore inclination is not to exceed 1 degree at 500'. Deviation surveys will be run at least at 250' and at casing point.
4. Run 8 5/8", 24 lb/ft, K-55, ST&C casing to 500'. Cement with 370 sx (426 ft<sup>3</sup>) of Class 'B' cement with 2% CaCl<sub>2</sub> and 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 for BOP stack and related equipment. See BOP schematics for details.
6. Ensure that plug has been down at least 8 hours prior to commencing pressure testing procedures. Pressure test BOP to 2,500 psig for 30 minutes. Pressure test manifold and all related equipment to 2,500 psig. Pressure test casing to 2000 psig for 30 min.
7. Drill out surface casing with 7 7/8" bit. Drill 7 7/8" hole to TD. Deviation surveys are to be taken every 500' or on a bit trip, whichever occurs first. Rig up directional tools and start building angle as per **directional well** profile data schedule. Note projected KOP @ 3910' MD.

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HILLSIDE WELL NO. 6-C-1  
Section 6-Township 42S-Range 25E  
370 FNL & 2170 FEL (Surface)  
830 FNL & 2470 FWL (Subsurface)  
San Juan County, Utah

8. Run open hole logs and evaluate. Coring and/or drill stem testing will be as per well site geologist's recommendation.
9. If the well is determined to be productive run 5 1/2" casing to TD., as per casing program in 10 Point Drilling Plan. Set stage cementing collar at +/- 3,500 ft. In addition to placing centralizers over potential production zones, they will also be run to cover the aquifer sands of the Navajo and DeChelly formations, as per BLM stipulations. Cement production casing in two stages as per cementing program in 10-Point Drilling Plan.
10. Nipple down BOPE. Set 5 1/2" casing slips and 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, and Navajo Tribal stipulations.

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HILLSIDE WELL NO. 6-C-1  
Section 6-Township 42S-Range 25E  
370 FNL & 2170 FEL (Surface)  
830 FNL & 2470 FWL (Subsurface)  
San Juan County, Utah

GENERAL COMPLETION PROCEDURE:

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

PLUGGING AND ABANDONMENT:

If the well is determined not to be productive, the well bore will be plugged as per BIA, BLM and State requirements.

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HILLSIDE WELL NO. 6-C-1  
Section 6-Township 42S-Range 25E  
370 FNL & 2170 FEL (Surface)  
830 FNL & 2470 FWL (Subsurface)  
San Juan County, Utah

1. EXISTING ROADS

Shown on the attached topographic map are the existing roads in the immediate area. Outlined is the route to be followed to Montezuma Creek. Existing roads will be maintained, as needed, while operations are in progress.

2. PLANNED ACCESS ROAD

The access road will be as shown on the attached topographic map. The road will be maintained as necessary to prevent excessive damage to the existing terrain. The road will be upgraded if commercial production is established.

3. LOCATION OF EXISTING WELLS & TANK BATTERIES

There are no other producing wells or facilities in the immediate area.

4. LOCATION OF EXISTING AND PROPOSED FACILITIES

No production facilities are presently in place. Should the well prove to be productive, facilities (tank battery etc) will be sited on the drilling location pad.

5. LOCATION AND TYPE OF WATER SUPPLY

Water will be acquired from the San Juan River or McElmo Creek and will be hauled using Chuska Energy Company water trucks, under State of Utah Division of Water Rights Permit Numbers 09-1724, (T64796) or 09-1723 (T64795).

6. SOURCE OF CONSTRUCTION MATERIAL

The need for additional construction materials is not anticipated. In the event that additional materials are required, they will be acquired from private sources.

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7. METHODS OF HANDLING WASTE MATERIAL

Trash will be contained on location in an enclosed 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 as required, with an approved 7 mil liner, for containing drilling fluids. The pit will also 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, back filled and restored to natural terrain status upon completion of drilling operations.

8. ANCILLARY FACILITIES

Chemical portable toilet facilities will be provided on location during drilling and completion operations. No camps or air strips are planned for this well.

9. WELL SITE LAYOUT

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

10. PLANS FOR RESTORATION OF THE SURFACE

After drilling operations are completed, the location and surrounding area will be cleared of all remaining debris and materials not required for production. Compacted areas will be plowed or ripped to a depth of 12 to 16 inches before reseeding. The existing reserve pit will be used. 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 into an approved disposal site. The reserve pit will remain fenced during the evaporation and disposal process. The pit will then be covered and topsoil will be returned to the disturbed area. The terrain will be returned as near to its original condition as possible. Following operations, rehabilitation seeding will be in accordance with APD/BLM/St stipulations. There are no residents in the immediate area of the site.

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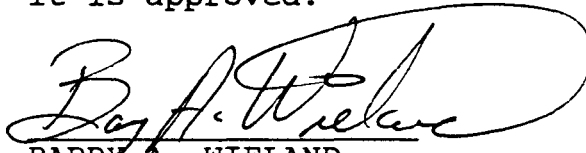
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11. OPERATORS REPRESENTATIVE

CHUSKA ENERGY COMPANY  
3315 BLOOMFIELD HIGHWAY  
FARMINGTON, NM 87401  
BARRY A. WIELAND

12. CERTIFICATION

I hereby certify that either 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 planned will be performed by Chuska Energy, or its sub-contractors, in conformity with the terms and conditions under which it is approved.

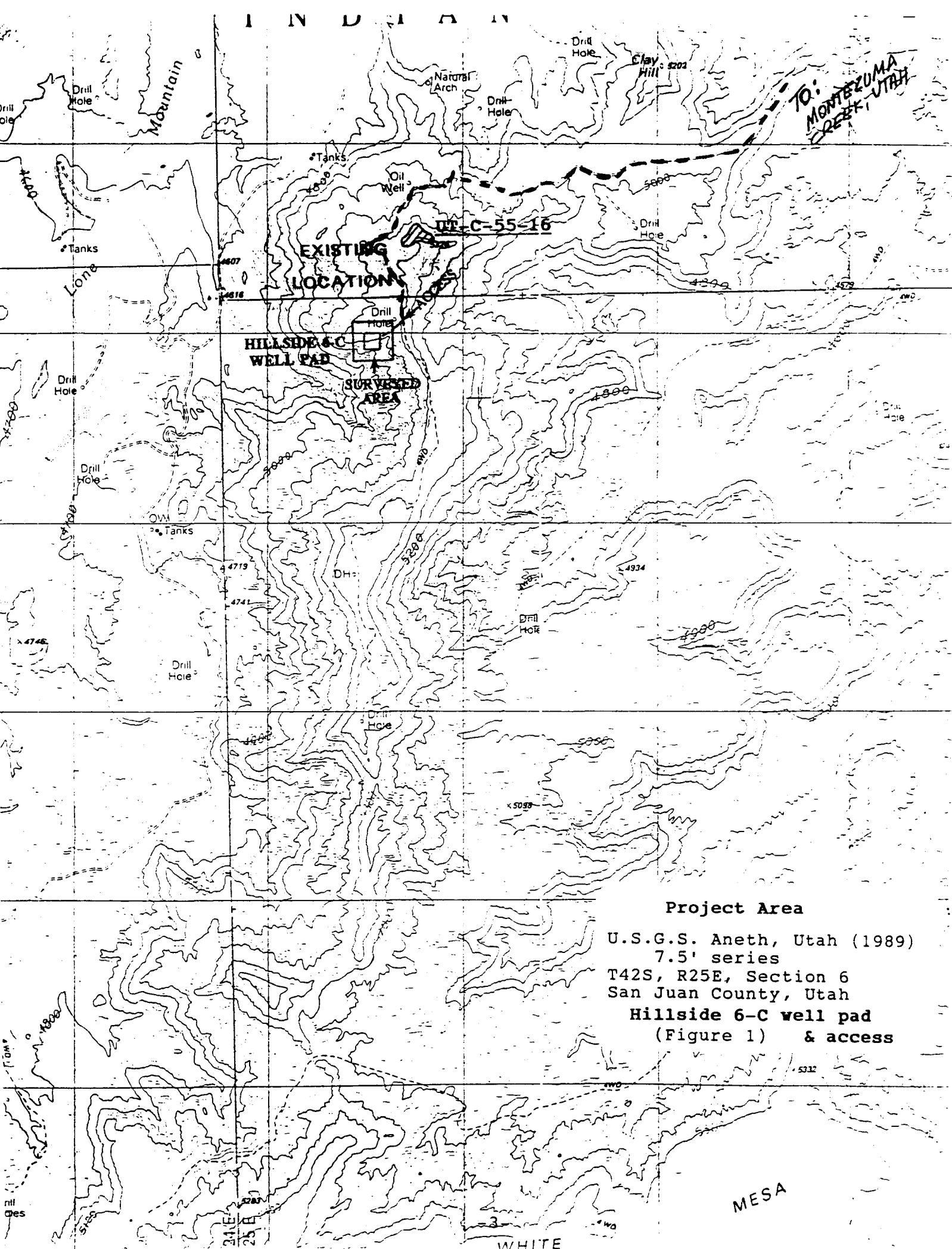


BARRY A. WIELAND  
OPERATIONS MANAGER

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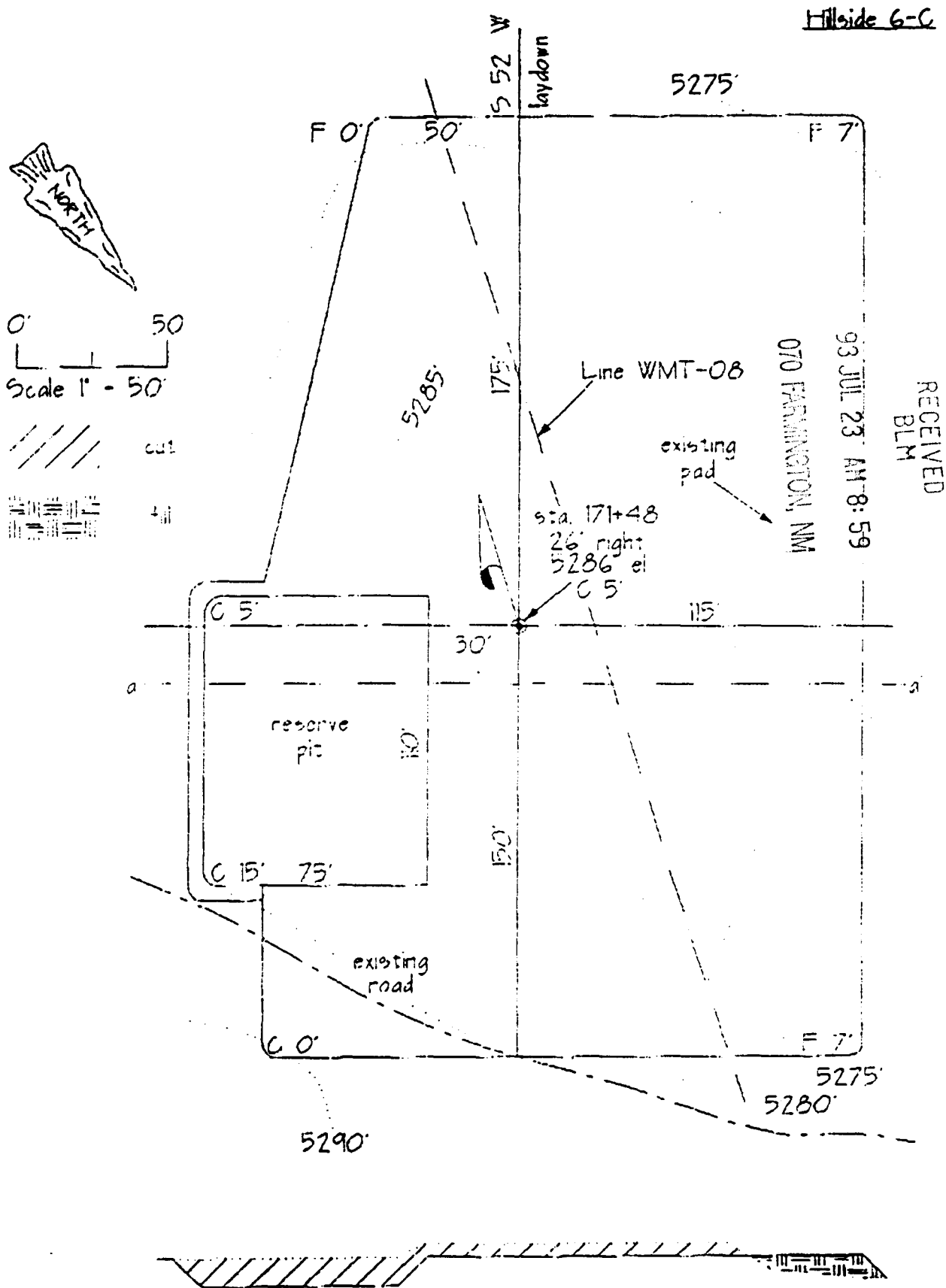
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**Project Area**

U.S.G.S. Aneth, Utah (1989)  
7.5' series  
T42S, R25E, Section 6  
San Juan County, Utah  
**Hillside 6-C well pad**  
(Figure 1) & access



Section a - a

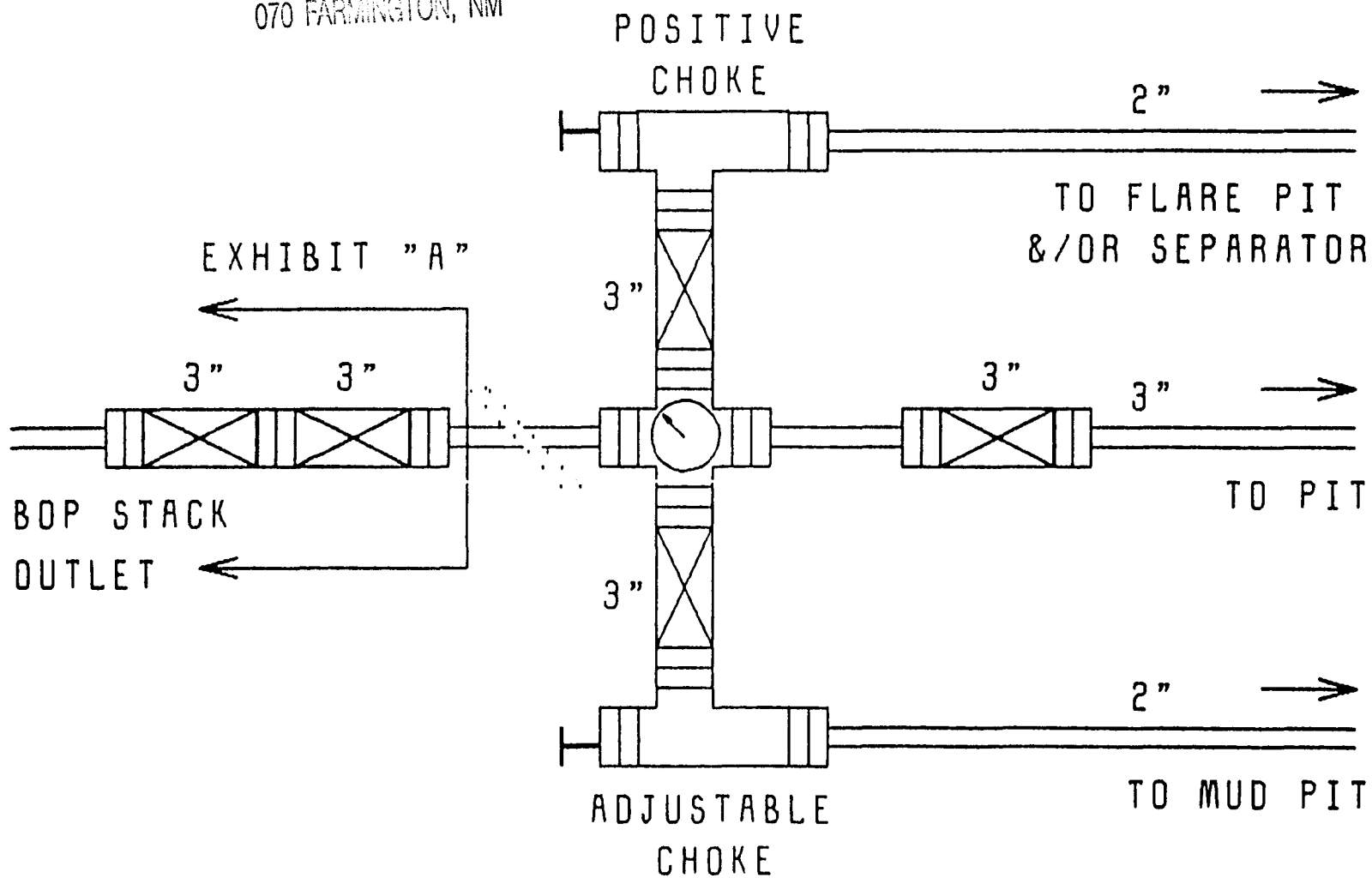
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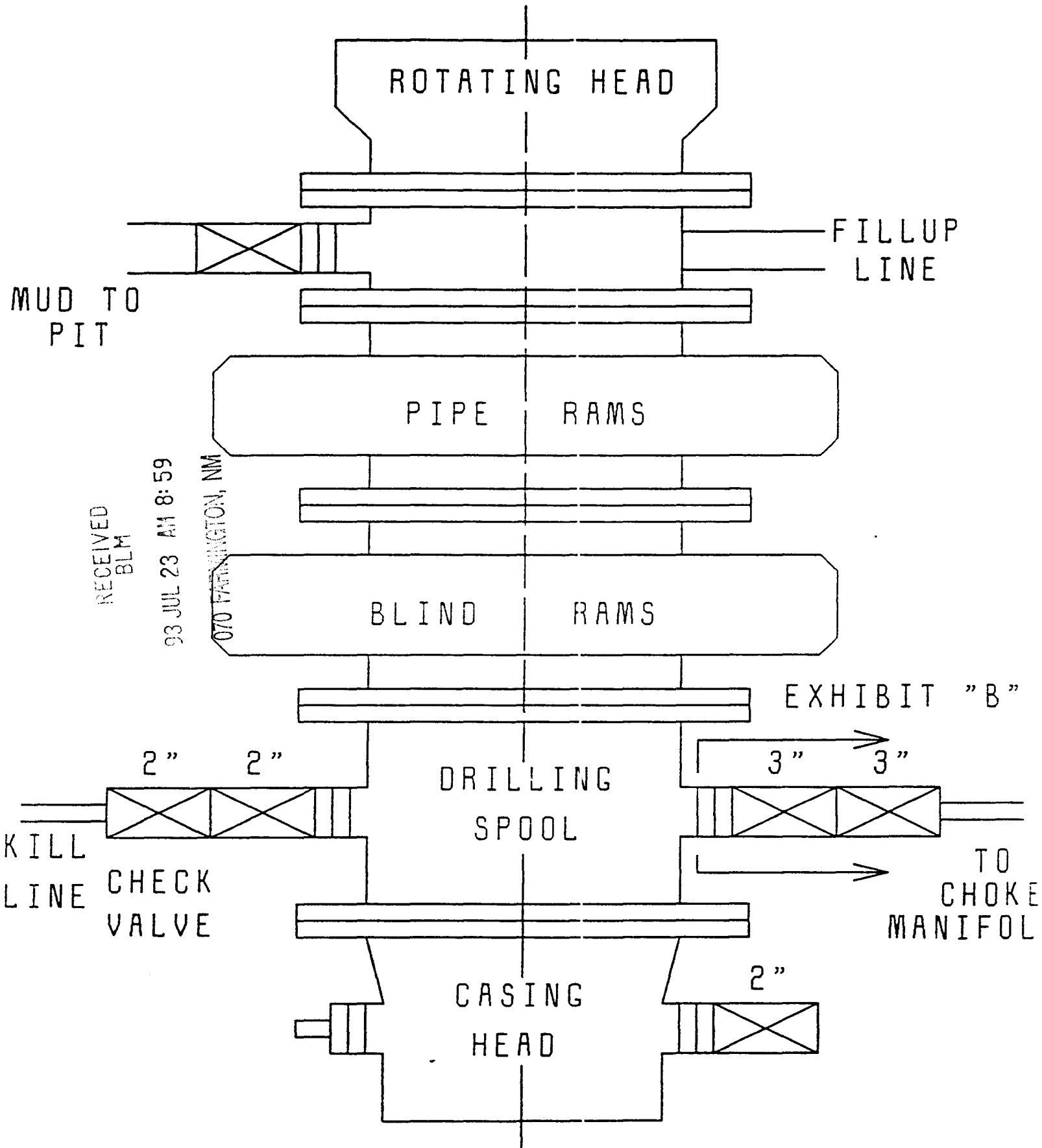
# EXHIBIT "B"

## CHOKE MANIFOLD



# EXHIBIT "A"

## BLOWOUT PREVENTER



FORM 3

STATE OF UTAH  
DIVISION OF OIL, GAS AND MINING

<b>APPLICATION FOR PERMIT TO DRILL OR DEEPEN</b>			5. Lease Designation and Serial Number: 14-20-603-373	
			6. If Indian, Allottee or Tribe Name: Navajo	
1A. Type of Work: DRILL <input checked="" type="checkbox"/> DEEPEN <input type="checkbox"/>			7. Unit Agreement Name:	
8. Type of Well: OIL <input checked="" type="checkbox"/> GAS <input type="checkbox"/> OTHER: SINGLE ZONE <input type="checkbox"/> MULTIPLE ZONE <input type="checkbox"/>			8. Farm or Lease Name: Hillside	
2. Name of Operator: Chuska Energy Company			9. Well Number: 6C-1	
3. Address and Telephone Number: 3315 Bloomfield Highway, Farmington, NM 87401 505-326-5525			10. Field and Pool or Wildcat: Wildcat	
4. Location (ages) At S. 30' FNL & 2170' FEL (Surface)  At Proposed Producing Zone: 30' FNL & 2470' FWL (Subsurface)			11. Qtr/Qtr, Section, Township, Range, Meridian:  6-428-25E	
14. Distance in miles and direction from nearest town or post office: 18 Miles to Montezuma Creek Utah			12. County: San Juan	13. State: Utah
15. Distance to nearest property or lease line (feet): 370' Surface		16. Number of acres in lease: 2522	17. Number of acres assigned to this well: 2522	
18. Distance to nearest well, drilling, completed, or applied for, on this lease (feet): 20'		19. Proposed Depth: 6267 MD/6108' TVD	20. Rotary or cable tools: Rotary	
21. Surveys (show whether OF, AT, GR, etc.): 3210' GR/5223' KB			22. Approximate date work will start: August 1, 1993	

## PROPOSED CASING AND CEMENTING PROGRAM

SIZE	GRADE, SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
8 5/8"	K-55, 8 5/8"	24	425	
5 1/2"	J-55, 5 1/2"	15.5	6267' md/6108' TVD	

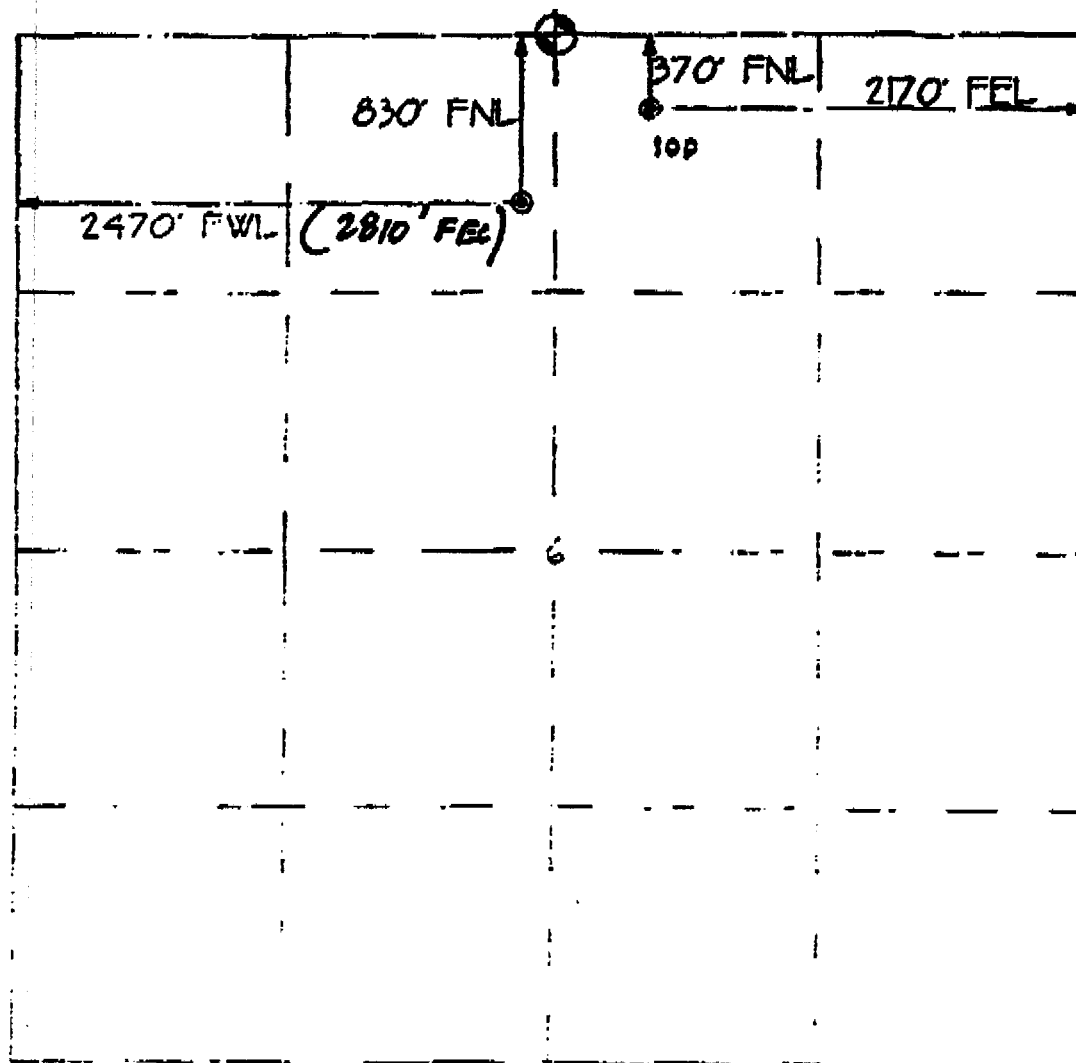
DESCRIBE PROPOSED PROGRAM: If proposal is to deepen, give data on present productive zone and proposed new productive zone. If proposal is to  
subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

FILED DRILLING PROGRAM, PLEASE SEE ATTACHED 10 POINT DRILLING PLAN

**CONFIDENTIAL**  
OCT 04 1993DIVISION OF  
OIL, GAS & MINING

24	APPROVED BY: [Signature] OF UTAH DIVISION OF OIL, GAS & MINING DATE: 7/21/93 BY: [Signature] WELL SPACING: 649-3-2
Name & Signature: [Signature] (This space is for State use only)	APN: 43-037-3172L



Well Location Plot

North

0 1000'

1" = 1000'

S brass cap

□ stone

Well Location Description

Chuska Energy Co.

Hillside 6-C

370' FNL &amp; 2170' FEL (top hole)

830' FNL &amp; 2470' FWL (bottom hole)

Section 6, T.42 R.25 E., S.1M

San Juan County, Utah

5286' ground elevation from seismic

State plane coordinates from seismic control

x - 2,666,288 y - 191,577 (top hole)

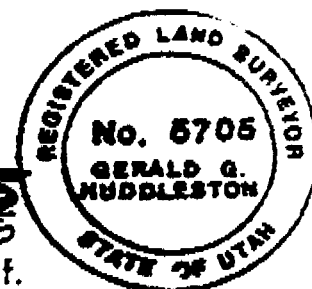
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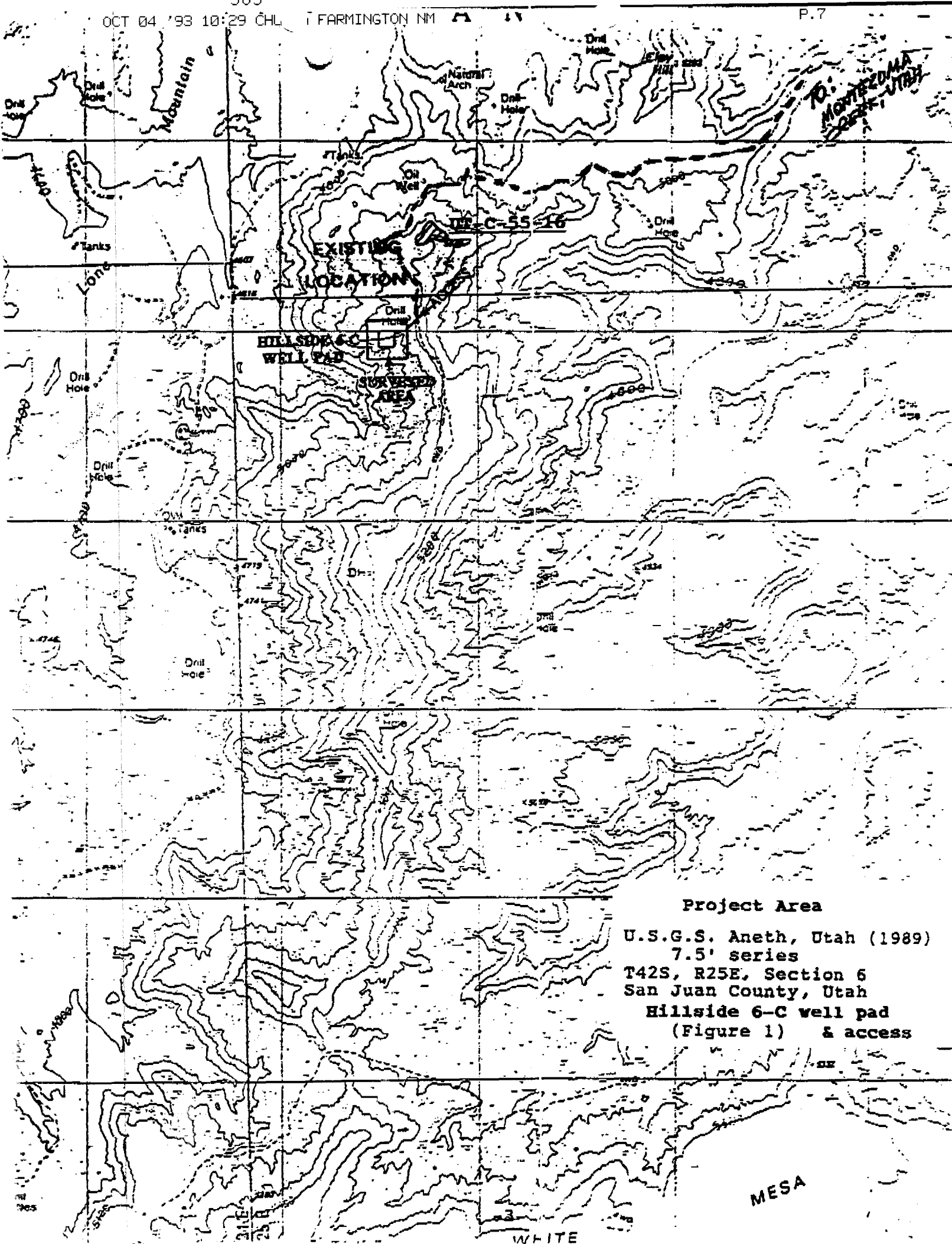
8 July 1993

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Gerald G. Huddleston, L.S.

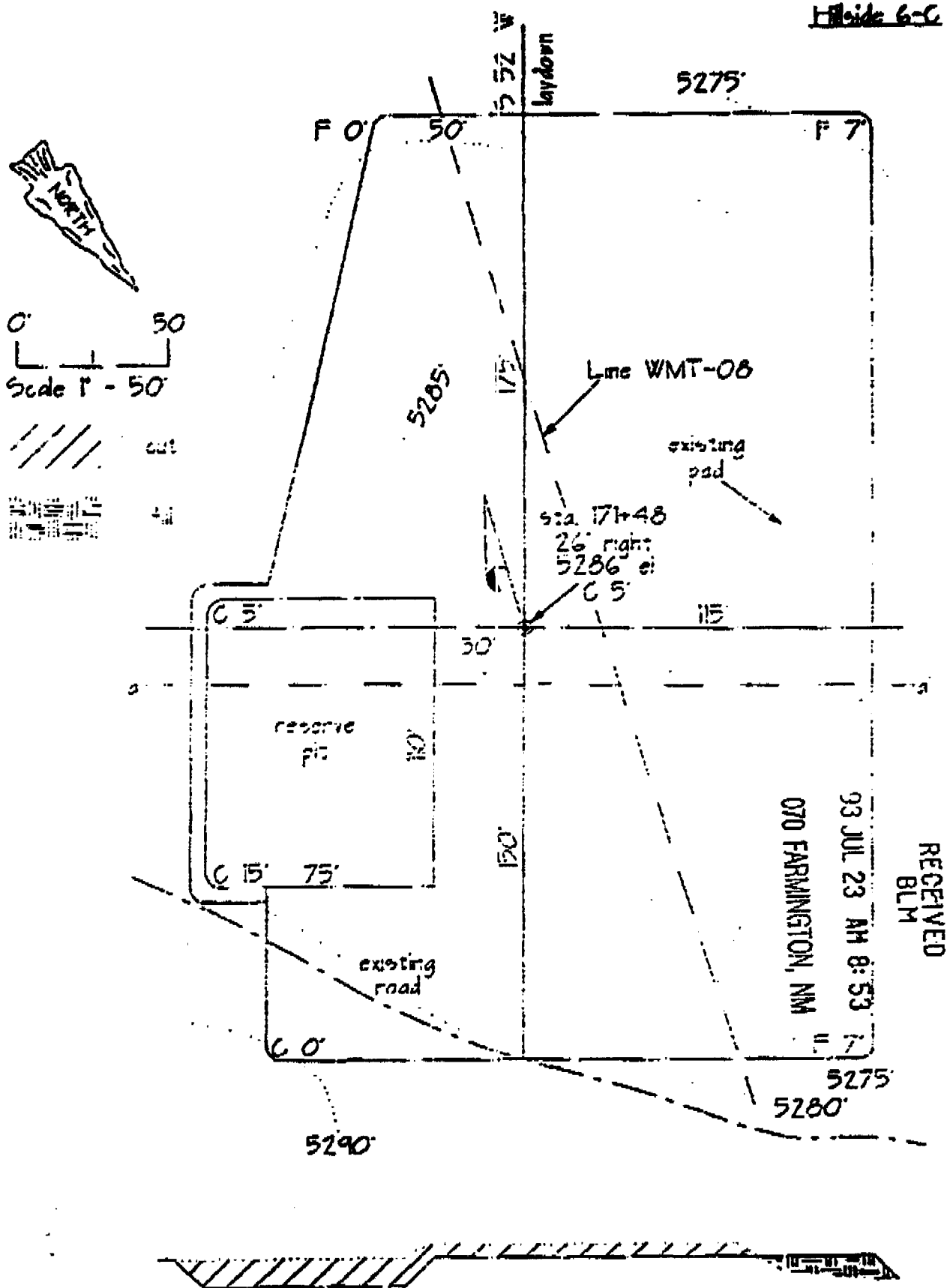
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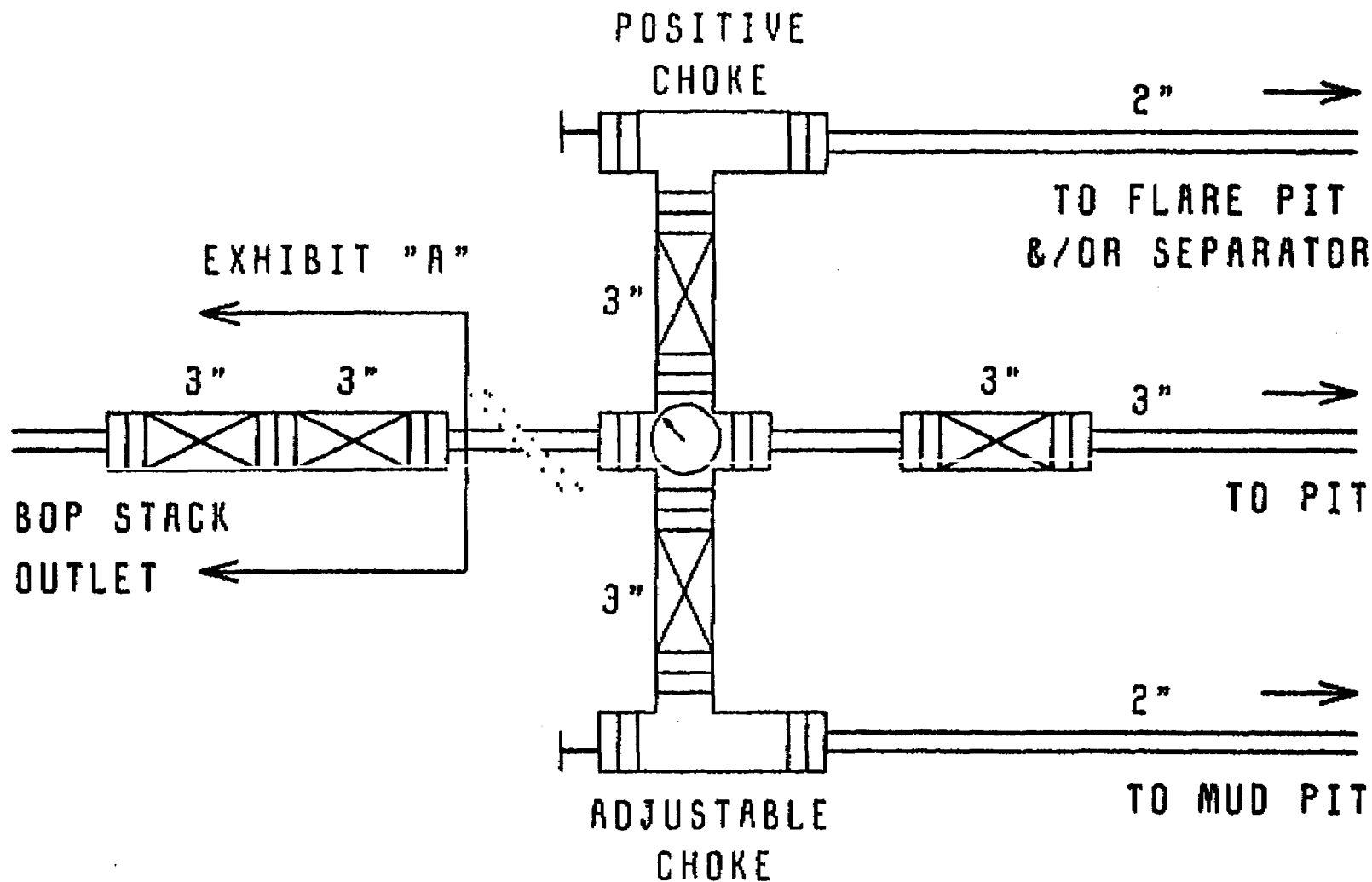
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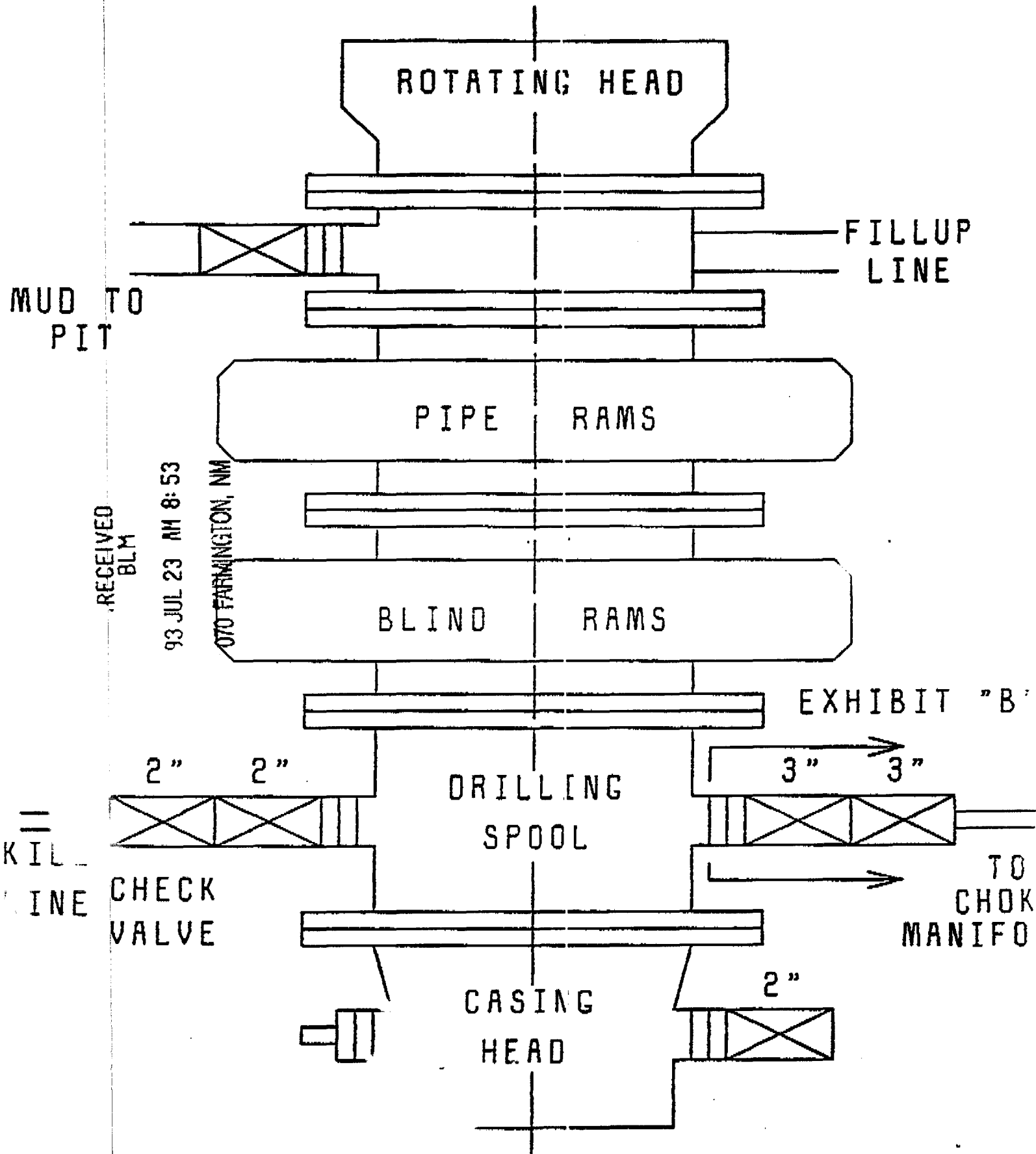
# CHOKER MANIFOLD



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## EXHIBIT "A"

## BLOWOUT PREVENTER



# CHUSKA ENERGY COMPANY

HILLSIDE 6-C-1  
SECTION 6, TOWNSHIP 42S, RANGE 25E  
370 FNL & 2170 FEL (Surface)  
830 FNL & 2470 FWL (Subsurface)  
SAN JUAN COUNTY, UTAH

## 10 POINT DRILLING PLAN

### 1. SURFACE FORMATION:

Geological name of surface formation: Morrison

### 2. ELEVATION:

Surface elevation is 5286' GR/ 5299' KB

### 3. ESTIMATED FORMATION TOPS

MD	TVD	FORMATION	SUB-SEA ELEV.
1044'	1044'	Navajo	+4255' Water-bearing
1684'	1684'	Chinle	+3615'
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	DEPTH	SIZE	WEIGHT	GRADE	COUPLING
SURFACE	425'	8 5/8"	24.0 ppg	K-55	ST&C
PROD.	6346' MD	5 1/2"	15.5 ppg	J-55	LT&C

#### SURFACE CEMENTING:

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**PRODUCTION CEMENTING:****First Stage**

TD to 3500' (stage collar @ +3500'MD). Lead with 381 sx Class 'G' cement, 65:35 Pozmix with 6% gel and 1/4 lb/sk Celloflake. Weight = 12.7 ppg, yield = 1.85 ft<sup>3</sup>/sk. Tail with 100 sx Class 'G' cement with 2% CaCl<sub>2</sub>. Weight = 15.8 ppg, yield = 1.15 ft<sup>3</sup>/sk. Total of 814 ft<sup>3</sup> w/ 30% excess over annular volume.

**SECOND STAGE**

3500'MD to surface. Lead with 499 sx Class 'G' cement, 65:35 Pozmix with 6% gel and 1/4 lb/sk Celloflake. Weight = 12.7 ppg, yield = 1.85 ft<sup>3</sup>/sk. Tail with 100 sx Class 'G' cement with 2% CaCl<sub>2</sub>. Weight = 15.8 ppg, yield = 1.15 ft<sup>3</sup>/sk. Total of 1038 ft<sup>3</sup> w/ 30% excess.

NOTE: Exact slurry volumes for the production string will be adjusted according to caliper log which will be run prior to cementing. Special adjustments may be necessary if significant amounts of salt are drilled.

**CENTRALIZERS:**

8 5/8" Surface String: Center of shoe jt, jt.3, jt.5, jt.7, and surface jt.

5 1/2" Production String: Center of shoe jt1, jt.2, jt.4, jt.6, jt.8, and every 3rd jt., up to DV Tool @ +/-3500'. Four (4) centralizers through DeChelly and two (2) centralizers @ surface.

NOTE: Put asterik on each pipe tally joint for each centralizer installed.

**5. BLOWOUT PREVENTER (SEE ATTACHED SCHEMATICS)**

As abnormal pressure is not anticipated, a 2000 psi BOP system would be sufficient for the drilling of this well. However, due to availability constraints, a 3000 psi system will be used, as per 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 as part of the rig equipment.

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OCT 04 '93 10:00 CHL FARMINGTON NM

**6. PROPOSED MUD PROGRAM****Surface to 3500'**

Fresh water, gel, lime and native solids. Weight 8.3 - 11 ppg. Gel/lime sweeps are necessary for hole cleaning.

**3500' to TD**

Low solids, non-dispersed polymer system. Weight 8.6 - 8.8 ppg. Gel/lime sweeps as hole conditions dictate for hole cleaning. Fluid loss to be maintained at 15 cc or less. Fluid loss to be further reduced to 10 cc or less prior to coring, logging or DSTS.

**7. AUXILIARY EQUIPMENT**

- A. A kelly cock will be installed during drilling operations, with handle available on rig floor.
- B. Full Opening Safety Valves (FOSV) will be available, on the rig floor at all times, with necessary subs to fit all of the drilling assemblies. 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 - 4000'

Drill stem testing will be as per the wellsite geologists' recommendations, based on shows. A mud logging unit will be utilized during drilling operations from 4000' to TD.

**9. ABNORMAL PRESSURES/GAS**

Abnormal pressures are not anticipated. Monitoring of gas and hydrocarbon shows will be by wellsite mud logging unit. H<sub>2</sub>S 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 be 15 days. Anticipated drilling will be August 1993.

070 FARMINGTON, NM

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FARMINGTON NM

## DETAILED DRILLING PROGRAM

**DATE:** June 22, 1993

**WELL NAME:** HILLSIDE WELL NO.:6-C-1

**LOCATION:** Section 6-Township 42S-Range 25E  
370 FNL & 2170 FEL (Surface)  
830 FNL & 2470 FWL (Subsurface)  
San Juan County, Utah

**ELEVATION:** 5210' GR / 5223' KB

**TOTAL DEPTH:** 6108' TD

**PROJECTED HORIZON:** Primary Target is Desert Crk @ 5898'  
Secondary Target is Lower Ismay @ 5804'

## DRILLING, CASING AND CEMENTING PROGRAM

1. Move in and rig up rotary tools. Notify BLM of time of spud.
2. Drill mouse hole and rat hole. Mix mud prior to spudding well.
3. Drill 12 1/4" hole to +/- 425'. 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 least at 250' and at casing point.
4. Run 8 5/8", 24 lb/ft, K-55, ST&C casing to 500'. Cement with 370 sx (426 ft3) of Class 'B' cement with 2% CaCl2 and 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 for BOP stack and related equipment. See BOP schematics for details.
6. Ensure that plug has been down at least 8 hours prior to commencing pressure testing procedures. Pressure test BOP to 2,500 psig for 30 minutes. Pressure test manifold and all related equipment to 2,500 psig. Pressure test casing to 2000 psig for 30 min.
7. Drill out surface casing with 7 7/8" bit. Drill 7 7/8" hole to TD. Deviation surveys are to be taken every 500' or on a bit trip, whichever occurs first. Rig up directional tools and start building angle as per directional well profile data schedule. Note projected KOP @ 3910' MD.

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**HILLSIDE WELL NO. 6-1**  
**Section 6-Township 42S-Range 25E**  
**370 FNL & 2170 FEI (Surface)**  
**830 FNL & 2470 FWL (Subsurface)**  
**San Juan County, Utah**

8. Run open hole logs and evaluate. Coring and/or drill stem testing will be as per well site geologist's recommendation.
9. If the well is determined to be productive run 5 1/2" casing to TD., as per casing program in 10 Point Drilling Plan. Set stage cementing collar at +/- 3,500 ft. In addition to placing centralizers over potential production zones, they will also be run to cover the aquifer sands of the Navajo and DeChelly formations, as per BLM stipulations. Cement production casing in two stages as per cementing program in 10-Point Drilling Plan.
10. Nipple down BOPE. Set 5 1/2" casing slips and 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, and Navajo Tribal stipulations.

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**HILLSIDE WELL NO. 6-C**  
**Section 6-Township 42S-Range 25E**  
**370 FNL & 2170 FEL (Surface)**  
**830 FNL & 2470 FWL (Subsurface)**  
**San Juan County, Utah**

**GENERAL COMPLETION PROCEDURE:**

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

**PLUGGING AND ABANDONMENT:**

If the well is determined not to be productive, the well bore will be plugged as per BIA, BLM and State requirements.

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HILLSIDE WELL NO. 6-1  
Section 6-Township 42S-Range 25E  
370 FNL & 2170 FEI. (Surface)  
830 FNL & 2470 FWL (Subsurface)  
San Juan County, Utah

1. EXISTING ROADS

Shown on the attached topographic map are the existing roads in the immediate area. Outlined is the route to be followed to Montezuma Creek. Existing roads will be maintained, as needed, while operations are in progress.

2. PLANNED ACCESS ROAD

The access road will be as shown on the attached topographic map. The road will be maintained as necessary to prevent excessive damage to the existing terrain. The road will be upgraded if commercial production is established.

3. LOCATION OF EXISTING WELLS & TANK BATTERIES

There are no other producing wells or facilities in the immediate area.

4. LOCATION OF EXISTING AND PROPOSED FACILITIES

No production facilities are presently in place. Should the well prove to be productive, facilities (tank battery etc) will be sited on the drilling location pad.

5. LOCATION AND TYPE OF WATER SUPPLY

Water will be acquired from the San Juan River or McElmo Creek and will be hauled using Chuska Energy Company water trucks, under State of Utah Division of Water Rights Permit Numbers 09-1724, (T64796) or 09-1723 (T64795).

6. SOURCE OF CONSTRUCTION MATERIAL

The need for additional construction materials is not anticipated. In the event that additional materials are required, they will be acquired from private sources.

090 FARMINGTON, NM

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## 7. METHODS OF HANDLING WASTE MATERIAL

Trash will be contained on location in an enclosed 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 as required, with an approved 7 mil liner, for containing drilling fluids. The pit will also 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, back filled and restored to natural terrain status upon completion of drilling operations.

## 8. ANCILLARY FACILITIES

Chemical portable toilet facilities will be provided on location during drilling and completion operations. No camps or air strips are planned for this well.

## 9. WELL SITE LAYOUT

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

## 10. PLANS FOR RESTORATION OF THE SURFACE

After drilling operations are completed, the location and surrounding area will be cleared of all remaining debris and materials not required for production. Compacted areas will be plowed or ripped to a depth of 12 to 16 inches before reseeding. The existing reserve pit will be used. 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 into an approved disposal site. The reserve pit will remain fenced during the evaporation and disposal process. The pit will then be covered and topsoil will be returned to the disturbed area. The terrain will be returned as near to its original condition as possible. Following operations, rehabilitation seeding will be in accordance with APD/BLM/St stipulations. There are no residents in the immediate area of the site.

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**11. OPERATOR REPRESENTATIVE**

**CHUSKA ENERGY COMPANY  
3315 BLOOMFIELD HIGHWAY  
FARMINGTON, NM 87401  
BARRY A. WIELAND**

**12. CERTIFICATION**

I hereby certify that either 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 planned will be performed by Chuska Energy, or its sub-contractors, in conformity with the terms and conditions under which it is approved.



**BARRY A. WIELAND  
OPERATIONS MANAGER**

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070 FARMINGTON, NM

WORKSHEET  
APPLICATION FOR PERMIT TO DRILL

APD RECEIVED: 10/04/93

API NO. ASSIGNED: 43-037-31721

WELL NAME: HILLSIDE 6C-1  
OPERATOR: CHUSKA ENERGY COMPANY (N9290)

PROPOSED LOCATION:  
NENW 06 - T42S - R25E  
SURFACE: 0370-FNL-2170-FEL  
BOTTOM: 0830-FNL-2470-FWL  
SAN JUAN COUNTY  
UNDESIGNATED FIELD (002)

LEASE TYPE: IND  
LEASE NUMBER: 14-20-603-373

INSPECT LOCATION BY: / /		
TECH REVIEW	Initials	Date
Engineering		
Geology		
Surface		

RECEIVED AND/OR REVIEWED:

Y Plat  
Y Bond  
(Number FEDERAL)  
N Potash (Y/N)  
N Oil shale (Y/N)  
Water permit  
(Number \_\_\_\_\_)  
N RDCC Review (Y/N)  
(Date: \_\_\_\_\_)

LOCATION AND SITING:

\_\_\_\_ R649-2-3. Unit: \_\_\_\_\_  
✓ R649-3-2. General.  
\_\_\_\_ R649-3-3. Exception.  
\_\_\_\_ Drilling Unit.  
\_\_\_\_ Board Cause no: \_\_\_\_\_  
\_\_\_\_ Date: \_\_\_\_\_

COMMENTS: WELL DRILLED BEFORE APD WAS SUBMITTED  
OPERATOR CALLED FOR API NO. 9/30/91. WELL  
PRODUCING.

STIPULATIONS: \_\_\_\_\_

CONFIDENTIAL  
PERIOD  
EXPIRED  
ON 11-21-94



State of Utah  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

Michael O. Leavitt  
Governor

Ted Stewart  
Executive Director

James W. Carter  
Division Director

355 West North Temple  
3 Triad Center, Suite 350  
Salt Lake City, Utah 84180-1203  
801-538-5340  
801-359-3940 (Fax)  
801-538-5319 (TDD)

October 4, 1993

Chuska Energy Company  
3315 Bloomfield Highway  
Farmington, New Mexico 87401

Re: Hillside 6C-1 Well, 370' FNL, 2170' FEL, NW NE, Sec. 6, T. 42 S., R. 25 E., San Juan County, Utah

Gentlemen:

Pursuant to Utah Admin. R. 649-3-2, Location and Siting of Wells and Utah Admin. R. 649-3-4, Permitting of Wells to be Drilled, Deepened or Plugged-Back, approval to drill the referenced well is hereby granted.

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

1. Compliance with the requirements of Utah Admin. R. 649-1 et seq., Oil and Gas Conservation General Rules.
2. Notification within 24 hours after commencing drilling operations.
3. Submittal of Entity Action Form, Form 6, within five working days following commencement of drilling operations and whenever a change in operations or interests necessitates an entity status change.
4. Submittal of the Report of Water Encountered During Drilling, Form 7.
5. Prompt notification prior to commencing operations, if necessary, to plug and abandon the well. Notify Frank R. Matthews, Petroleum Engineer, (Office) (801)538-5340, (Home) (801)476-8613, or Mike Hebertson, Oil and Gas Field Specialist, (Home) (801)264-9212.
6. Compliance with the requirements of Utah Admin. R. 649-3-20, Gas Flaring or Venting, if the well is completed for production.



Page 2  
Chuska Energy Company  
Hillside 6C-1 Well  
October 4, 1993

This approval shall expire one year after date of issuance unless substantial and continuous operation is underway or a request for an extension is made prior to the approval expiration date. The API number assigned to this well is 43-037-31721.

Sincerely,



 R.J. Firth  
Associate Director, Oil and Gas

ldc  
Enclosures  
cc: San Juan County Assessor  
Bureau of Land Management, Moab  
WOI1

## ENTITY ACTION FORM - FORM 6

OPERATOR CHUSKA ENERGY COMPANYOPERATOR ACCT. NO. N 9290

ADDRESS \_\_\_\_\_

ACTION CODE	CURRENT ENTITY NO.	NEW ENTITY NO.	API NUMBER	WELL NAME	WELL LOCATION					SPUD DATE	EFFECTIVE DATE
					QQ	SC	TP	RG	COUNTY		
A	99999	11568	43-037-31504	<i>Conf.</i> LIGHTING ROCK #2J-1	NWSE	2	42S	25E	SAN JUAN		10-19-93
WELL 1 COMMENTS:											
A	99999	11569	43-037-31505	<i>Conf.</i> LIGHTING ROCK 2L-3	NWSW	2	42S	25E	SAN JUAN		10-19-93
WELL 2 COMMENTS:											
A	99999	11570	43-037-31721	<i>Conf.</i> HILLSIDE 6C-1	NWNE	6	42S	25E	SAN JUAN		10-19-93
WELL 3 COMMENTS:											
A	99999	11571	43-037-31632	<i>Conf.</i> GARTER 9-1	NESE	9	43S	26E	SAN JUAN		10-19-93
WELL 4 COMMENTS:											
WELL 5 COMMENTS:											

## ACTION CODES (See instructions on back of form)

- A - Establish new entity for new well (single well only)
- B - Add new well to existing entity (group or unit well)
- C - Re-assign well from one existing entity to another existing entity
- D - Re-assign well from one existing entity to a new entity
- E - Other (explain in comments section)

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

(3/89)

*fc*  
L. CORDOVA (DOGM)

Signature

ADMIN. ANALYST

10-19-93

Title

Date

Phone No. ( )

# MONTHLY OIL AND GAS PRODUCTION REPORT

OPERATOR NAME AND ADDRESS:

LARRY G SESSIONS  
CHUSKA ENERGY COMPANY  
3315 BLOOMFIELD HWY  
FARMINGTON NM 87401

UTAH ACCOUNT NUMBER: N9290

REPORT PERIOD (MONTH/YEAR): 12 / 93

AMENDED REPORT ☐ (Highlight Changes)

Well Name					Producing Zone	Well Status	Days Oper	Production Volumes		
API Number	Entity	Location		OIL(BBL)				GAS(MCF)	WATER(BBL)	
JACK 31G					DSCR	No Carder / DT's NO FILE		done / DT's		
✓ 4303731709	11497	41S	24E	31						
MULE 31M					DSCR					
✓ 4303731710	11498	41S	24E	31						
HERON 35H-A (RIG SKID)					PRDX					
✓ 4303731711	11499	41S	25E	35						
LIZARD 4m					DSCR					
✓ 4303731619	11555	41S	23E	4						
HILLSIDE GC-1					IS-DC	DRL (Cont.)				
✓ 4303731721	11570	42S	25E	6						
CLAY HILL 330					DSCR					
✓ 4303731723	11612	41S	25E	33						

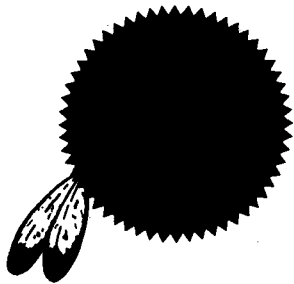
COMMENTS: \_\_\_\_\_

I hereby certify that this report is true and complete to the best of my knowledge.

Date: \_\_\_\_\_

Name and Signature: \_\_\_\_\_

Telephone Number: \_\_\_\_\_



# HARKEN SOUTHWEST CORPORATION

(formerly Chuska Energy Company)

We are pleased to announce that effective January 18, 1994, 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 is still located at 3315 Bloomfield Highway, Farmington, New Mexico, 87401. You may still contact us at (505) 326-5525.

Please reflect this name change as necessary on all future correspondence.

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

Sincerely,

Barry A. Wieland  
Operations Manager

RECEIVED

FEB 17 1994

DIVISION OF  
OIL, GAS & MINING

## PHONE CONVERSATION DOCUMENTATION FORM

Route original/copy to:

☐ Well File \_\_\_\_\_☐ Suspense  
(Return Date) \_\_\_\_\_  
(To - Initials) \_\_\_\_\_☒ Other  
*Oper. Nm. Change*(Location) Sec \_\_\_\_\_ Twp \_\_\_\_\_ Rng \_\_\_\_\_  
(API No.) \_\_\_\_\_1. Date of Phone Call: 2-9-94 Time: 12:292. DOGM Employee (name) J. Cordova (Initiated Call ☒)  
Talked to:Name Wayne Townsend (Initiated Call ☐ - Phone No. (505) 599-8900  
*(or Ken Townsend)*  
of (Company/Organization) Btm / Farmington N.M.3. Topic of Conversation: Chuska Energy Co. to Harken Southwest Corp.

4. Highlights of Conversation: \_\_\_\_\_

*They have not rec'd doc. of name change. When they do receive doc. they will most likely keep "Chuska" as operator yet mail any correspondence % Harken, until BIA approval. (BIA approval may take a while!)*

*\* 940210 Per Admin. OK to change.*

Division of Oil, Gas and Mining  
**OPERATOR CHANGE WORKSHEET**

Routing:

1-REC	7-SJ
2-DTS	8-FILE
3-VLC	
4-RJF	
5-JEO	
6-PL	

Attach all documentation received by the division regarding this change.  
 Initial each listed item when completed. Write N/A if item is not applicable.

- ☐ Change of Operator (well sold)      ☐ Designation of Agent  
☐ Designation of Operator      ☒ Operator Name Change Only

The operator of the well(s) listed below has changed (EFFECTIVE DATE: 1-18-94)

TO (new operator) <b>HARKEN SOUTHWEST CORPORATION</b>	FROM (former operator) <b>CHUSKA ENERGY COMPANY</b>
(address) <b>3315 BLOOMFIELD HWY</b>	(address) <b>3315 BLOOMFIELD HWY</b>
<b>FARMINGTON NM 87401</b>	<b>FARMINGTON NM 87401</b>
phone ( 505 ) <b>326-5525</b>	phone ( 505 ) <b>326-5525</b>
account no. <b>N 9290</b>	account no. <b>N9290</b>

Well(s) (attach additional page if needed):

Name: <b>**SEE ATTACHED**</b>	API: <b>037-31721</b>	Entity: _____	Sec _____	Twp _____	Rng _____	Lease Type: _____
Name: _____	API: _____	Entity: _____	Sec _____	Twp _____	Rng _____	Lease Type: _____
Name: _____	API: _____	Entity: _____	Sec _____	Twp _____	Rng _____	Lease Type: _____
Name: _____	API: _____	Entity: _____	Sec _____	Twp _____	Rng _____	Lease Type: _____
Name: _____	API: _____	Entity: _____	Sec _____	Twp _____	Rng _____	Lease Type: _____
Name: _____	API: _____	Entity: _____	Sec _____	Twp _____	Rng _____	Lease Type: _____
Name: _____	API: _____	Entity: _____	Sec _____	Twp _____	Rng _____	Lease Type: _____

**OPERATOR CHANGE DOCUMENTATION**

- Lee 1. (Rule R615-8-10) Sundry or other legal documentation has been received from former operator (Attach to this form). (*Rec'd 2-7-94*)
- N/A 2. (Rule R615-8-10) Sundry or other legal documentation has been received from new operator (Attach to this form).
- Lee 3. The Department of Commerce has been contacted if the new operator above is not currently operating any wells in Utah. Is company registered with the state? (yes/no) \_\_\_\_ If yes, show company file number: #096704.
- Lee 4. (For Indian and Federal Wells ONLY) The BLM has been contacted regarding this change (attach Telephone Documentation Form to this report). Make note of BLM status in comments section of this form. Management review of **Federal and Indian** well operator changes should take place prior to completion of steps 5 through 9 below.
- Lee 5. Changes have been entered in the Oil and Gas Information System (Wang/IBM) for each well listed above. (*2-10-94*)
- Lee 6. Cardex file has been updated for each well listed above. (*2-10-94*)
- Lee 7. Well file labels have been updated for each well listed above. (*2-10-94*)
- Lee 8. Changes have been included on the monthly "Operator, Address, and Account Changes" memo for distribution to State Lands and the Tax Commission.
- Lee 9. A folder has been set up for the Operator Change file, and a copy of this page has been placed there for reference during routing and processing of the original documents.

## ENTITY REVIEW

- Lee 1. (Rule R615-8-7) Entity assignments have been reviewed for all wells listed above. Were entity changes made? (yes/no) no (If entity assignments were changed, attach copies of Form 6, Entity Action Form).
- N/A 2. State Lands and the Tax Commission have been notified through normal procedures of entity changes.

## BOND VERIFICATION (Fee wells only)

- N/A Lee 1. (Rule R615-3-1) The new operator of any fee lease well listed above has furnished a proper bond.
2. A copy of this form has been placed in the new and former operators' bond files.
3. The former operator has requested a release of liability from their bond (yes/no)    . Today's date                      19   . If yes, division response was made by letter dated                      19   .

## LEASE INTEREST OWNER NOTIFICATION RESPONSIBILITY

- N/A OTS 3/1/94 1. (Rule R615-2-10) The former operator/lessee of any fee lease well listed above has been notified by letter dated                      19   , of their responsibility to notify any person with an interest in such lease of the change of operator. Documentation of such notification has been requested.
- N/A 2. Copies of documents have been sent to State Lands for changes involving State leases.

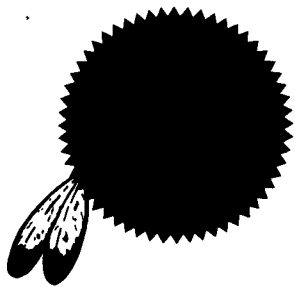
## FILMING

- ✓ 1. All attachments to this form have been microfilmed. Date: March 7 19 94.

## FILING

- Lee 1. Copies of all attachments to this form have been filed in each well file.
- Lee 2. The original of this form and the original attachments have been filed in the Operator Change file.

## COMMENTS

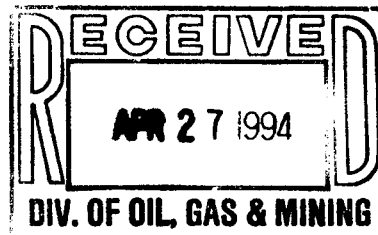


# HARKEN SOUTHWEST CORPORATION

(formerly Chuska Energy Company)

**CONFIDENTIAL**

April 25, 1994



Utah Department of Natural Resources  
ATTENTION: Mr. Frank Matthews  
355 N. Temple - 3 Triad Center, Suite 350  
Salt Lake City, UT 84180

RE: Hillside 6C  
Sec 6-42S-R25E  
San Juan County, UT


Dear Frank:

Pursuant to your request, enclosed is a copy of the completion report for the subject well, as filed with the BLM.

If you need additional information or if I can be of additional assistance, do not hesitate to give me a call. I remain . . .

Cordially yours,

HARKEN SOUTHWEST CORPORATION

  
Ms. Rachelle Montgomery

/rlm



UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

SUBMIT IN DUPLICATE\*

(1) In-  
no  
reverse side)FOR APPROVED  
OMB NO. 1004-0137  
Expires December 31, 1991

5. LEASE DESIGNATION AND SERIAL NO.

14-20-603-373

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

Navajo Tribal

7. UNIT AGREEMENT NAME

N/A

8. FARM OR LEASE NAME, WELL NO.

Hillside 6C

9. API WELL NO.

4303731721

10. FIELD AND POOL, OR WILDCAT

Wildcat

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

Sec 6-42S-R25E

12. COUNTY OR  
PARISH

San Juan

13. STATE

Utah

## 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. REVEN. ☐ Other ☐

2. NAME OF OPERATOR

Harken Southwest Corporation (Formerly Chuska Energy)

3. ADDRESS AND TELEPHONE NO.

3315 Bloomfield Highway, Farmington, NM 87401

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

At surface 370 FNL 2170 FEL (Surface)

At top prod. interval reported below 830 FNL 2470 FWL (Subsurface)

At total depth 830 FNL 2470 FWL (Subsurface)

14. PERMIT NO.

DATE ISSUED

15. DATE SPUDDED

8/5/93

16. DATE T.D. REACHED

8/25/93

17. DATE COMPL. (Ready to prod.)

10/21/93

18. ELEVATIONS (OF, RKB, RT, GR, ETC.)\*

5286 gr/5299 Kb

19. ELEV. CASINGHEAD

20. TOTAL DEPTH, MD &amp; TVD

6282 MD/6169TVD

21. PLUG, BACK T.D., MD &amp; TVD

N/A

22. IF MULTIPLE COMPL.,  
HOW MANY\*

N/A

23. INTERVALS  
DRILLED BY

ROTARY TOOLS

Rotary

CABLE TOOLS

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

6091-6160 MD (5986-6052 TVD) Desert Creek

25. WAS DIRECTIONAL  
SURVEY MADE

Yes

26. TYPE ELECTRIC AND OTHER LOGS RUN

DLL/BHC/FDC-CNL/ML LBL/GR &amp; CCL

27. WAS WELL CORED

Yes

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

CASING SIZE/GRAB	WEIGHT, LB./FT.	DEPTH SET (MD)	HOLE SIZE	TOP OF CEMENT, CEMENTING RECORD	AMOUNT PULLED
8 5/8/K-55	24 dpf	425' 579	300" Class	1' cement w/24, CaCl <sub>2</sub> and 1/4lb sx celloflake. Weight=15.8 ppg, yield=1.15 ft <sup>3</sup> /sx 100%	
5 1/2/J-55	25.5 dpf	6346' 6275	St 1: Lead w/38T sx Class 'G' cement, 65:35 pozmix, 6% gel and 1/4lb celloflake. St 2: lead w/499 sx Class 'G' cement, 65:35 pozmix, 6% gel. + 100		

29. LINER RECORD

SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT*	SCREEN (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)
2 7/8 6.5# J-ST 6205'							5982' TAC

31. PERFORATION RECORD (Interval, size and number)

6091-6160 w/2spf w/180 degree phasing 0.45 diameter using 4" gun w/22 gram chgs. 17ft total w/34 charges.

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

DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED
See reverse side.	

33. PRODUCTION

DATE FIRST PRODUCTION	PRODUCTION METHOD (Flowing, gas lift, pumping—size and type of pump)	WELL STATUS (Producing or shut-in)
10-24-93	Pumping 2 1/2 x1 1/4 x 8 x10 x14 RHAC	Producing

DATE OF TEST	HOURS TESTED	CHOKES SIZE	PROD'N. FOR TEST PERIOD	OIL—BSL.	GAS—MCF.	WATER—BSL.	GAS-OIL RATIO
10-14-93	9 hrs	N/A		12.9	30	195.9	2326

FLOW, TUBING PRESS.	CASING PRESSURE	CALCULATED 24-HOUR RATE	OIL—BSL.	GAS—MCF.	WATER—BSL.	OIL GRAVITY-API (CORR.)
Swabbing	25 psi		34.40	30	552	41

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

Sold

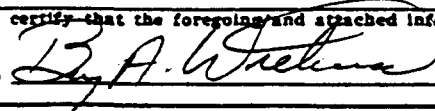
TEST WITNESSED BY

Fred Clausen

35. LIST OF ATTACHMENTS

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

SIGNED



TITLE

OPERATION manager

ACCEPTED FOR RECORD

DATE 07 FEB 94

\*(See Instructions and Spaces for Additional Data on Reverse Side) FEB 08 1994

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 the jurisdiction of such department or agency.

OPERATOR

BY

Sm

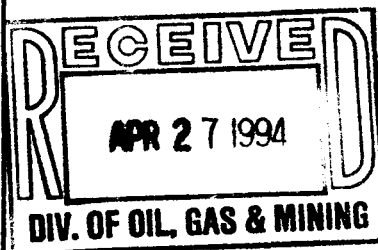
FARMINGTON DISTRICT OFFICE

37. SUMMARY OF POROUS ZONES: (Show all important zones of porosity and contents thereof; cored intervals; and all drill-stem, tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures, and recoveries):

38.

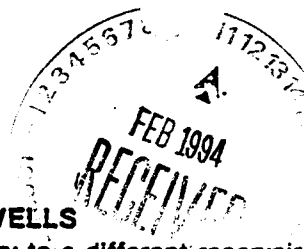
GEOLOGIC MARKERS

FORMATION	TOP	BOTTOM	DESCRIPTION, CONTENTS, ETC.	NAME	TOP	
					MEAS. DEPTH	TRUE VERT. DEPTH
Core #1	6088'	6148'	Recovered 61'; 6088-6132: Dolomite 6133-6143: Limestone 6144-6147: Dolomite 6148: Limestone	Morrison	Surface	Surface
				Navajo	1151	1151
				Chinle	1818	1816
				DeChelly	3011	3006
				Organ Rock	3275	3268
				Cedar Mesa	3898	3891
				Hermosa	5003	4961
				U. Ismay	5917	5822
				Hovenweep Sh	6001	5902
				L. Ismay	6012	5911
				Gothic Shale	6049	5946
				Desert Creek	6067	5963
				Chimney Rock	6237	6126
				Akah	6290	6138
				Salt	6275	6164
Perforating & Stimulation: MD: 6091-6094, 6099, 6117-6119, 6122, 6129-6134, 6136, 6138, 6140, 6150-6153 @ 2 SPF, 180 degree phasing 10-13-93 10-60: 1200 gal 28%, 9.4#, HCl ATR=0.3 BPM, ATP=850 psi MTR = 0.5 BPM, MTP = 1300 psi 10-14-93 6091-6140: 1000 gal 28% 9.4%, Fe HCl -api Breakdown 1500 gal 28% FeHCL & 3000 gal 20% FeHCl mixed w/311,600 SCF nitrogen. ATR = 8 BPM, ATP = 5200 psi, MTR = 10 BPM, MTP = 5535 psi.						
First Sale of Gas: 10-24-93 First Sale of Oil: 11-13-93						



**CONFIDENTIAL**

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT



FORM APPROVED  
Budget Bureau No. 1004-0135  
Expires: March 31, 1993

5. Lease Designation and Serial No.  
14-20-603-373

6. If Indian, Allottee or Tribe Name

Navajo Tribal

7. If Unit or CA, Agreement Designation

8. Well Name and No.  
Hillside 6C

9. API Well No.  
42-037-31721

10. Field and Pool, or Exploratory Area  
Exploratory

11. County or Parish, State

San Juan County, Utah

**SUNDRY NOTICES AND REPORTS ON WELLS**

Do not use this form for proposals to drill or to deepen or reentry to a different reservoir.  
Use "APPLICATION FOR PERMIT—" for such proposals

**SUBMIT IN TRIPLICATE**

1. Type of Well

☒ Oil Well ☐ Gas Well ☐ Other

2. Name of Operator

Harken Southwest Corp (formerly Chuska Energy Company)

3. Address and Telephone No.

3315 Bloomfield Highway, Farmington, NM 87401 505-326-5525

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

370 FNL 2170 FEL (surface)  
830 FNL 2470 FWL (Subsurface)

12. CHECK APPROPRIATE BOX(s) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION

☐ Notice of Intent  
☒ Subsequent Report  
☐ Final Abandonment Notice

TYPE OF ACTION

☐ Abandonment  
☐ Recompletion  
☐ Plugging Back  
☐ Casing Repair  
☐ Altering Casing  
☒ Other First sale of gas  
☐ Change of Plans  
☐ New Construction  
☐ Non-Routine Fracturing  
☐ Water Shut-Off  
☐ Conversion to Injection  
☐ Dispose Water

(Note: Report results of multiple completion on Completion or Recompletion Report and Log for

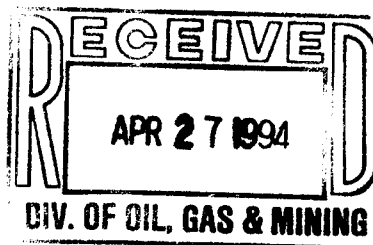
13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally c. give subsurface locations and measured and true vertical depths for all markers and zone: pertinent to this work.)

First sale of gas occurred on 10/24/93.

RECEIVED  
BLM

94 FEB -4 PM 3:25

070 FARMINGTON, NM



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

Signed

*[Signature]*

Title

OPERATIONS

MANAGER

Date 04 Feb 94

(This space for Federal or State office use)

ACCEPTED FOR RECORD

Approved by

Conditions of approval, if any:

Title

Date

FEB 08 1994

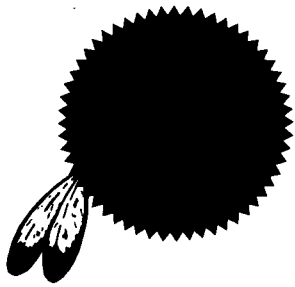
Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statement or representations as to any matter within its jurisdiction.

BY

*[Signature]*

OPERATOR

\*See instruction on Reverse Side



# HARKEN SOUTHWEST CORPORATION

(formerly Chuska Energy Company)

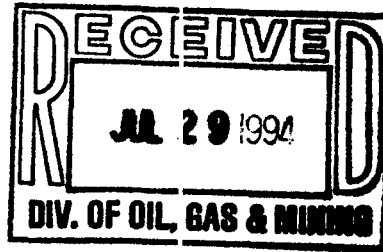
July 28, 1994

## CONFIDENTIAL

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

Attention: Ms. Vicky Carney

RE: Hillside 6C (43-037-31721)  
Section 6-42S-25E  
San Juan County, Utah



Gentlemen:

Pursuant to your request, enclosed please find the following log which were run on the subject wellbore:

Borehole Compensated Sonic Log ✓  
Compensated Neutron-Formation Density ✓  
Dual Laterolog ✓  
Microlog ✓

*TVD LOGS -*  
Sonic ✓  
Density-Neutron ✓  
Dual Laterolog ✓  
Microlog ✓

Should you need any additional information, please feel free to contact me at the letterhead address.

Very truly yours,  
HARKEN SOUTHWEST CORPORATION

Ms. Rachelle Montgomery  
Production Administrator

/rlm

Enclosures (8)

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

FORM APPROVED  
Budget Bureau No. 1004-0135  
Expires: March 31, 1993

**SUNDRY NOTICES AND REPORTS ON WELLS**

Do not use this form for proposals to drill or to deepen or reentry to a different reservoir.  
Use "APPLICATION FOR PERMIT—" for such proposals

**SUBMIT IN TRIPLICATE**

1. Type of Well

☒ Oil Well ☐ Gas Well ☐ Other

2. Name of Operator

Harken Southwest Corporation

3. Address and Telephone No.

P.O. Box 612007, Dallas, Texas 75261-2007 (972)-753-6900

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

370' FNL & 2170' FEL  
NW/NE Section 6-42S-25E

5. Lease Designation and Serial No.

14-20-603-373

6. If Indian, Allottee or Tribe Name

Navajo

7. If Unit or CA, Agreement Designation

N/A

8. Well Name and No.

Hillside 6C

9. API Well No.

43-037-31721

10. Field and Pool, or Exploratory Area

11. County or Parish, State

San Juan, Utah

12. CHECK APPROPRIATE BOX(s) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION

- ☐ Notice of Intent  
☒ Subsequent Report  
☐ Final Abandonment Notice

TYPE OF ACTION

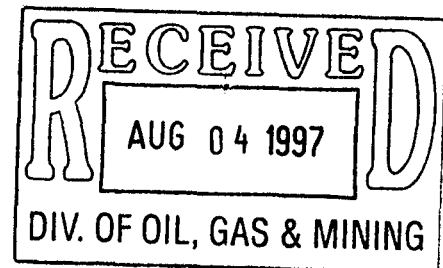
- ☐ Abandonment  
☐ Recompletion  
☐ Plugging Back  
☐ Casing Repair  
☐ Altering Casing  
☒ Other Status Change  
☐ Change of Plans  
☐ New Construction  
☐ Non-Routine Fracturing  
☐ Water Shut-Off  
☐ Conversion to Injection  
☐ Dispose Water

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

13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)\*

Please be advised the subject wellbore was Shut-in on June 22, 1997 due to a high water cut.  
Harken's engineering team is currently evaluating data to determine if there is an economic way to return the wellbore to production.

CC: State of Utah  
Navajo Nation - Minerals Dept  
BIA - Gallup, NM.



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

Signed

*[Signature]*  
Title Production Administrator

Date 07/31/97

(This space for Federal or State office use)

Approved by

Title

Date

Conditions of approval, if any:

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

RECEIVED  
SEP 07 1995  
OIL, GAS & MIN

FORM APPROVED  
Budget Bureau No. 1004-0135  
Expires: March 31, 1993

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to deepen or reentry to a different reservoir.  
Use "APPLICATION FOR PERMIT—" for such proposals.

SUBMIT IN TRIPLICATE

1. Type of Well

☐ Oil Well ☐ Gas Well ☐ Other

2. Name of Operator

Harken Southwest Corporation

3. Address and Telephone No.

P.O. Box 612007 Dallas, Texas 75261-2007 (214) 753-6900

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

See Attached List

5. Lease Designation and Serial No.

6. If Indian, Allottee or Tribe Name

NAVAJO

7. If Unit or CA, Agreement Designation

8. Well Name and No.

See Attached List

9. API Well No. 43-037-31721

See Attached List

10. Field and Pool, or Exploratory Area

11. County or Parish, State

San Juan, Utah

12. CHECK APPROPRIATE BOX(s) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION

- ☐ Notice of Intent  
☐ Subsequent Report  
☐ Final Abandonment Notice

TYPE OF ACTION

- ☐ Abandonment  
☐ Recompletion  
☐ Plugging Back  
☐ Casing Repair  
☐ Altering Casing  
☐ Other Flaring during plant shut-down

- ☐ Change of Plans  
☐ New Construction  
☐ Non-Routine Fracturing  
☐ Water Shut-Off  
☐ Conversion to Injection  
☐ Dispose Water

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

13. 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.)\*

Pursuant to the attached notice from Elkhorn Operating, Harken Southwest request permission to vent/flare all non-lease use gas from September 18, 1995 thru September 22, 1995 or until the Aneth Plant resumes operation.

Attached is a list of wells which will be affected by the plant shut down. The list is compiled in API number order.

Should any questions arise, please contact Mr. Richard Cottle, Farmington, New Mexico @ (505) 327-5531 or the undersigned.

cc: Navajo Nation  
State of Utah

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

Signed

Title

(This space for Federal or State office use)

Approved by

Title

Date

Conditions of approval, if any:

## HARKEN SOUTHWEST CORPORATION

Request permission to flare/vent gas production on the following wells during the shut-down of the Aneth Plant Monday, September 18 thru Friday, September 22, 1995.

<u>Well Name</u>	<u>Sec-Twnshp-Rng</u>	<u>API Number</u>
Navajo Tribal 23-13	13-40S-24E	43-037-30971
Navajo Tribal 41-2	02-42S-24E	43-037-31041
Sahgzie #1	05-42S-24E	43-037-31472
Anasazi #1	05-42S-24E	43-037-31478
Cajon Mesa 8D-1	08-40S-25E	43-037-31497
Monument 8N-2	08-40S-25E	43-037-31509
Runway 10G-1	10-40S-25E	43-037-31515
Monument 17E	17-40S-25E	43-037-31547
Runway 10E-2	10-40S-25E	43-037-31550
Blue Hogan 1J-1	01-42S-23E	43-037-31562
Anasazi 5L-3	05-42S-24E	43-037-31572
Brown Hogan 1A-2	01-42S-23E	43-037-31573
Runway 10C-5A	10-40S-25E	43-037-31597
North Heron 35C	35-41S-25E	43-037-31616
Burro 31-I	31-41S-24E	43-037-31708
Jack 31G	31-41S-24E	43-037-31709
Mule 31M	31-41S-24E	43-037-31710
Big Sky 6E (6L)	06-42S-25E	43-037-31714
Hillside 6C-1	06-42S-25E	43-037-31721



ELKHORN OPERATING COMPANY  
ANETH PLANT  
P.O. BOX 70  
MONTEZUMA CREEK, UTAH 84534  
**Memorandum**



**To:** See Distribution List  
**From:** Gene Gruette  
**Date:** August 18, 1995  
**Subject:** ANETH PLANT SHUTDOWN

---

Aneth Plant will be shut down on September 18, 1995 to make necessary repairs to the cooling tower, inspect and clean gas coolers, and repair other equipment which requires a plant shutdown.

We plan to have the plant started back up the afternoon of Friday, September 22, 1995.

Each operator will need to make whatever contacts with regulatory agencies and gas marketers, etc. they deem necessary.

Should you have questions, call the writer at (801)631-3254.



UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

FORM APPROVED  
Budget Bureau No. 1004-0135  
Expires: March 31, 1993

**SUNDRY NOTICES AND REPORTS ON WELLS**

Do not use this form for proposals to drill or to deepen or reentry to a different reservoir.  
Use "APPLICATION FOR PERMIT—" for such proposals

**SUBMIT IN TRIPLICATE**

1. Type of Well

☒ Oil Well ☐ Gas Well ☐ Other

2. Name of Operator

Harken Southwest Corporation

3. Address and Telephone No.

P. O. Box 612007, Dallas, TX 75261-2007 (972) 753-6900

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

NW/NE Section 6-42S-25E  
370' FNL & 2170' FEL

5. Lease Designation and Serial No.  
14-20-603-373

6. If Indian, Allottee or Tribe Name  
Navajo

7. If Unit or CA, Agreement Designation

N/A

8. Well Name and No.

Hillside 6C

9. API Well No.

43-037-31721

10. Field and Pool, or Exploratory Area

11. County or Parish, State

San Juan Co., UTAH

12. CHECK APPROPRIATE BOX(s) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION

- ☒ Notice of Intent  
☐ Subsequent Report  
☐ Final Abandonment Notice

TYPE OF ACTION

- ☒ Abandonment  
☐ Recompletion  
☐ Plugging Back  
☐ Casing Repair  
☐ Altering Casing  
☐ Other \_\_\_\_\_
- ☐ Change of Plans  
☐ New Construction  
☐ Non-Routine Fracturing  
☐ Water Shut-Off  
☐ Conversion to Injection  
☐ Dispose Water

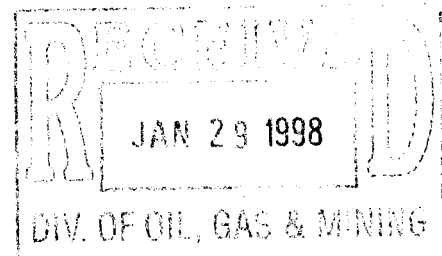
(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)\*

Please be advised that Harken Southwest has concluded the review of the subject well and has determined it can not economically be returned to production.

Therefore, current plans are to submit plugging procedures for review and approval within the next 30 days. Once plugging approval has been obtained, Harken anticipates abandonment operations to be performed during the summer months between June and September.

CC: State of Utah  
Navajo Nation - Minerals Dept  
BIA - Gallup, NM



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

Signed

(This space for Federal or State office use)

Approved by

Conditions of approval, if any:

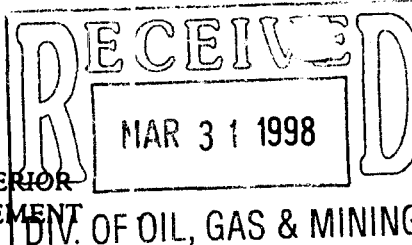
Title

Date

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.

\*See Instruction on Reverse Side

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT



FORM APPROVED  
Budget Bureau No. 1004-0135  
Expires: March 31, 1993

**SUNDRY NOTICES AND REPORTS ON WELLS**

Do not use this form for proposals to drill or to deepen or reentry to a different reservoir.  
Use "APPLICATION FOR PERMIT—" for such proposals

5. Lease Designation and Serial No.

14-20-603-373

6. If Indian, Allottee or Tribe Name

Navajo

7. If Unit or CA, Agreement Designation

N/A

8. Well Name and No.

Hillside 6C

9. API Well No.

43-037-31721

10. Field and Pool, or Exploratory Area

11. County or Parish, State

San Juan Co., Utah

**SUBMIT IN TRIPLICATE**

1. Type of Well

☒ Oil Well ☐ Gas Well ☐ Other

2. Name of Operator

Harken Southwest Corporation

3. Address and Telephone No.

P.O. Box 612007, Dallas, Texas 75261-2007 (972) 753-6900

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

370' FNL & 2170' FEL  
NW/NE Section 6-42S-25E

**12. CHECK APPROPRIATE BOX(s) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA**

**TYPE OF SUBMISSION**

☒ Notice of Intent

☐ Subsequent Report

☐ Final Abandonment Notice

**TYPE OF ACTION**

☒ Abandonment

☐ Recompletion

☐ Plugging Back

☐ Casing Repair

☐ Altering Casing

☐ Other

☐ Change of Plans

☐ New Construction

☐ Non-Routine Fracturing

☐ Water Shut-Off

☐ Conversion to Injection

☐ Dispose Water

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

13. 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.)\*

Pursuant to previous filings and correspondence, please find the following information attached:

1. Current wellbore data
2. A diagram of the current wellbore configuration
3. Proposed Plug and Abandonment procedures
4. Proposed P&A wellbore schematic

**NOTE:** Wellbore diagrams are not to scale

Harken will perform reclamation as outlined in the APD stipulations attached to the July 1993, permit unless notified otherwise. In addition, Harken Southwest plans to plugging of this well during the 3<sup>rd</sup> quarter (July - September) 1998.

Should any questions arise, please contact Mr. Richard Cottle or the undersigned at (972) 753-6900.

CC: State of Utah  
Navajo Nation - Minerals Dept.  
BIA - Gallup, NM

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

Signed

Title

Production Administrator

Date

3/25/98

(This space for Federal or State use)

Approved by

Title

Date

Conditions of approval, if any

**FOR RECORD ONLY**

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.

**Plug and Abandonment**  
**Hillside 6C**  
**370 FNL 2170 FEL Surface**  
**830 FNL 2470 FWL Subsurface**  
**Sec. 6-T42S-R25E**  
**San Juan County, Utah**

Present Status: Shut-In Uneconomic Oil Well

Elevation: 5286' GL Reference Elevation: 5299' KB 13' KB

Total Depth: 6282' MD, 6169' TVD PBTD: 6252' KB

Casing Program: 8-5/8", 24# Surface csg @ 519' KB to surface with 300 sacks  
Class "B" cement

5-1/2", 15.5#, Production csg @ 6275' KB with 1595 sacks of  
Class "G" in two stages

DV tool @ 3514' KB

Open Perforations: 6091', 6094', 6099', 6117-19', 6122', 6129-30', 6134', 6136',  
6138', 6140' and 6150-6160' w/2 SPF all depths KB

Production Equip: 191 jts of 2-7/8" tbg, tbg anchor @ 5982' KB, 7 jts of 2-7/8" tbg,  
SN @ 6205' KB, .5' perf'd sub, 31' mud anchor, 6' perf'd pup  
joint.  
End of tbg @ 6244' KB  
PBTD @ 6252'

**Casing and Tubing Detail**

Depth	Size (in)	Wt. #/ft	Grade Thread	Burst (psi)	Collapse (psi)	Yield M#	Drift (in)	Capacity (bbl/ft)
Surf 6275'	5-1/2	15.5	K-55 STC	4810	4040	222	4.825	0.0238
Surf 6205'	2-7/8"	6.5	J-55 EUE	7260	7680	99.7	2.347	0.00579

# WELL REPORT

COMPANY: Harken Southwest Corp.  
 WELL NAME: Hillside 6C

Present Configuration

Sec 6 - T42S - R25E  
 San Juan Co., Utah

8 5/8", 24# K-55  
 SURFACE CSG. SET @ 519' KB

① 300 sxs cement  
 Cement to surface

Chinle Top @ 1318' MD

DeChelly Top @ 3011' MD

DV tool @ 3514' KB

## NOTES:

- ① 1" x 26' Polish Rod
- ① 7/8" x 4' Pony Rod
- ① 7/8" x 6' Pony Rod
- ① 7/8" x 8' Pony Rod
- ① 7/8" x 25' D Rods (12) Scrapers
- ① 3/4" x 25' D Rods (12) Scrapers
- ① 7/8" x 25' D Rods (12) Scrapers
- ① 7/8" x 2' pony rod

2 1/2 x 1 1/4 x 12' x 14' x 17' RHAC Pump

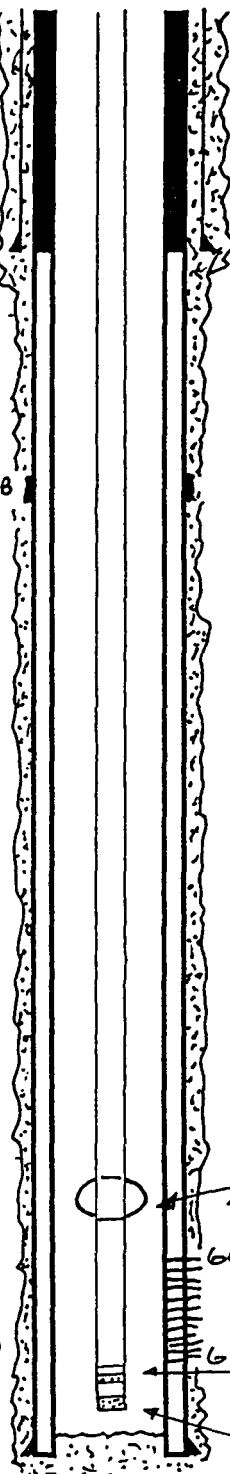
Hermosa Top @ 5003' MD

U. I. S. Top @ 5917' MD

5 1/2", 15.5# J-55  
 PRODUCTION STRING CSG. SET @  
6275' KB (1595 sxs cement  
 2 stages, cement to surface

TUBING SET @ 6244' KB (EOT)

PLUG BACK TOTAL DEPTH: 6252' KB



TD 6169' TVD

6282' KB MD

**Hillside 6C Plug and Abandonment  
Procedure  
370 FNL 2170 FEL Surface  
830 FNL 2470 FWL Subsurface  
Sec. 6-T42S-R25E  
San Juan Co., Utah**

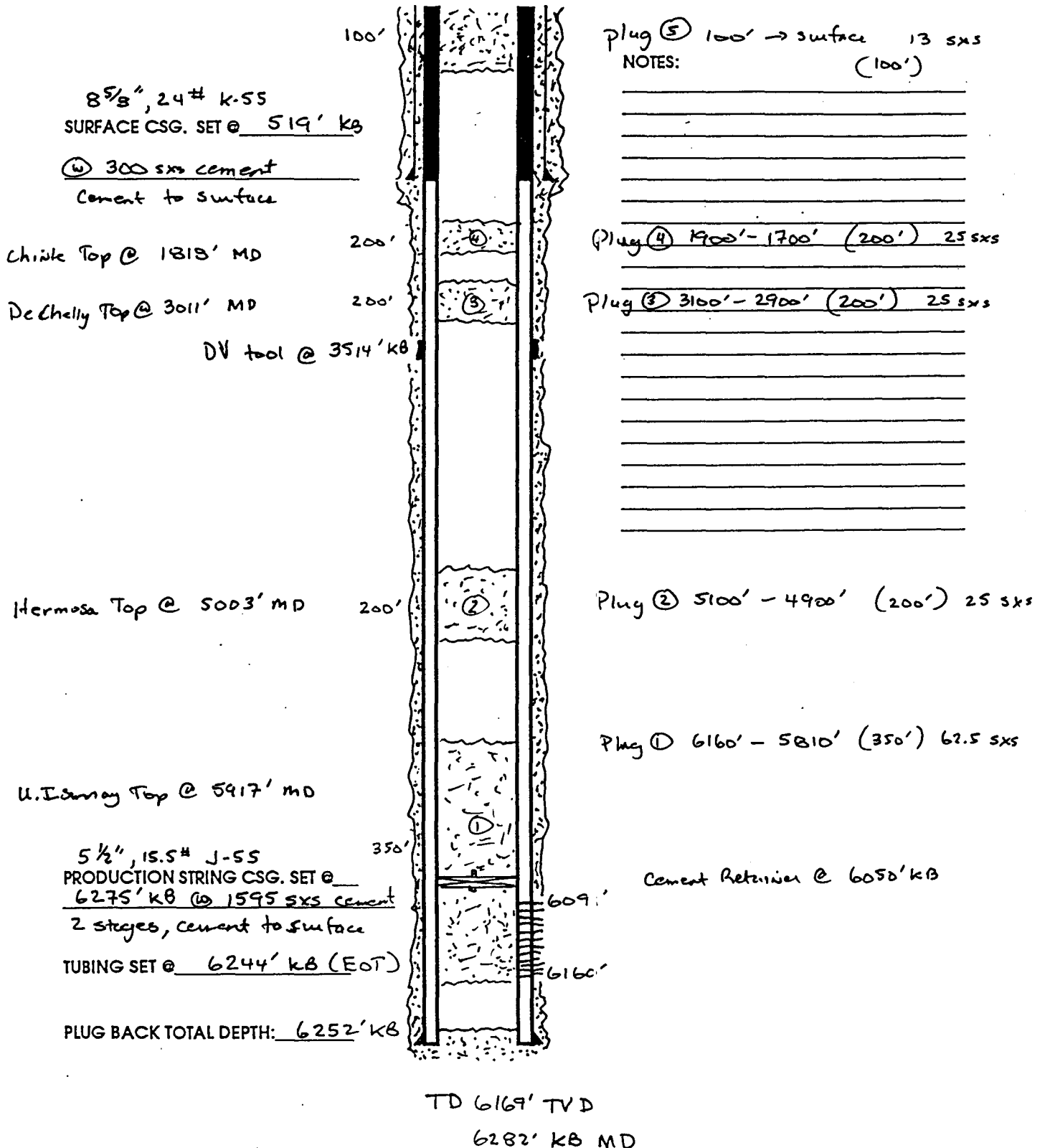
**P&A Procedure:**

1. MIRU, blow down, hold safety meeting, ND horsehead, unseat pump, POH with rods & pump, NU BOPs.
2. Unset tubing anchor and POH w/2-7/8" tubing and anchor.
3. PU cement retainer and RIH on tbg to 6050'.
4. Set retainer at 6050', mix up and circulate Plug #1, 63 sacks (12.5 bbls) of Class "B" cement to the end of the tubing, sting into cement retainer, pump 6.5 bbls cement thru retainer to squeeze Desert Creek perforations @ 6160'-6091'. Unsting from the cmt retainer. Pump remainder of plug #1 (6.0 bbl) on top of cmt retainer. PUH to lay cement plug top to 5798' KB. (Upper Ismay top @ 5917' KB).
5. POH to 5100' KB. With EOT @ 5100' KB mix up Plug #2, 25 sacks (5 bbls) of Class "B" cement. Pump plug to EOT. Lay plug #2 from 5100' KB to 4900' KB to cover Hermosa Top @ 5003' KB.
6. POH to 3100' KB. With EOT @ 3100' KB, mix up Plug #3, 25 sacks (5 bbl) of Class "B" cement. Pump plug to EOT. Lay plug #3 from 3100' KB to 2900' KB to cover DeChelly Top @ 3011' KB.
7. POH to 1900' KB. With EOT @ 1900' KB, mix up Plug #4, 25 sacks (5 bbls) of Class "B" cement. Pump plug to EOT. Lay Plug #4 from 1900' KB to 1700' KB to cover Chinle Top @ 1818' KB.
8. POH to 100' KB. With EOT @ 100' KB, mix up Plug #5, 13 sacks (3 bbls) of Class "B" cement. Pump plug #5 to EOT. Lay Plug #5 from 100' KB to surface while pulling out of hole.
9. ND BOP's, cut of wellhead flange and csg 4' below ground level and install below grade P&A marker.
10. Restore location

# WELL REPORT

COMPANY: Harken Southwest Corp.  
 WELL NAME: Hillside 6C

Plug & Abandonment  
 Sec 6 - T42S - R25E  
 San Juan Co., Utah



Drawing Not to Scale

3/24/98<sub>R</sub>

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

FORM APPROVED  
Budget Bureau No. 1004-0135  
Expires: March 31, 1993

**SUNDRY NOTICES AND REPORTS ON WELLS**

Do not use this form for proposals to drill or to deepen or reentry to a different reservoir.  
Use "APPLICATION FOR PERMIT—" for such proposals

5. Lease Designation and Serial No.

14-20-603-373

6. If Indian, Allottee or Tribe Name

Navajo

7. If Unit or CA, Agreement Designation

N/A

8. Well Name and No.

Hillside 6C

9. API Well No.

43-037-31721

10. Field and Pool, or Exploratory Area

11. County or Parish, State

San Juan Co., UT

**SUBMIT IN TRIPLICATE**

1. Type of Well

☒ Oil Well ☐ Gas Well ☐ Other

2. Name of Operator

Harken Southwest Corp.

3. Address and Telephone No.

P.O. Box 612007, Dallas, TX 75261-2007 (972) 753-6900

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

NW/NE Section 6-42S-25E  
370' FNL & 2170' FEL

**12. CHECK APPROPRIATE BOX(S) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA**

**TYPE OF SUBMISSION**

☒ Notice of Intent

☒ Subsequent Report

☐ Final Abandonment Notice

**TYPE OF ACTION**

☒ Abandonment

☐ Recompletion

☐ Plugging Back

☐ Casing Repair

☐ Altering Casing

☐ Other

☐ Change of Plans

☐ New Construction

☐ Non-Routine Fracturing

☐ Water Shut-Off

☐ Conversion to Injection

☐ Dispose Water

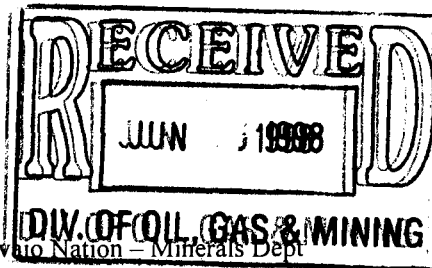
(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

13. 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.)\*

Harken Southwest Corporation plugged and abandoned the subject well bore on May 15, 1998 as follows:

Plug #1 6160' - 5810' (350') Set retainer @ 6040' KB, pumped 63 sxs Class B.  
Unsting out of retainer, set balance plug on top of retainer w/6 bbls cmt.  
Plug #2 5100' - 4900' (200') w/25 sxs Class B  
Plug #3 3100' - 2900' (200') w/25 sxs Class B  
Plug #4 2000' - 1800' (200') w/25 sxs Class B  
Plug #5 569' - 469' (100') w/19 sxs Class B  
Plug #6 120' - surface w/13 sxs Class B

05/18/98 Weld of subsurface P& A marker



CC: Navajo Nation - Minerals Dept  
State of Utah  
BIA - Gallup, NM

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

Signed

Accepted by the State

Title Production Administrator

Date 6/12/98

(This space for Federal or State Use)

Approved by

Oil, Gas and Mining

Title

Date

Conditions of approval, if any.

Date:

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.