

HARKEN SOUTHWEST BLACK ROCK NO. 20
SE SE 7-40N-29E, Apache Co. (882)

COUNTY APACHE AREA BLACK ROCK LEASE NO. NOG 8707-1141

WELL NAME HARKEN SOUTHWEST CORPORATION BLACK ROCK NO. 20

LOCATION SE SE SEC 7 TWP 40N RANGE 29E FOOTAGE 1200' FSL & 700' FEL
 STATUS OIL TOTAL 5060' PBTD
 ELEV 5990' GR 6003 KB SPUD DATE 5/6/95 COMP. DATE 6/30/95 DEPTH 5432'

CONTRACTOR FOUR CORNERS DRLG RIG 14, FARMINGTON

CASING SIZE	DEPTH	CEMENT	LINER SIZE & DEPTH	DRILLED BY ROTARY	<u>YES</u>
<u>13-3/8"</u>	<u>48#</u>	<u>212'</u>	<u>CIRC</u>	DRILLED BY CABLE TOOL	
<u>4-1/2"</u>	<u>10.5#</u>	<u>5430'</u>	<u>405 sks</u>	PRODUCTIVE RESERVOIR	<u>PARADOX</u>
				INITIAL PRODUCTION	<u>117 BO/404 MCF</u>
					<u>GOR 5941</u>

FORMATION TOPS	DEPTHS	SOURCE		REMARKS
		L.L.	E.L.	
TRI CHINLE	991			TOPS RPTD BY OPERATOR
PERM DE CHELLE	2320'			
PENN HERMOSA	4037'			
PENN PARADOX	4611'			
PENN MOLAS	5404'			

ELECTRIC LOGS	PERFORATED INTERVALS	PROD. INTERVALS	SAMPLE LOG NO
GR/CDN/MICROLOG	SEE COMP RPT	PARADOX	SAMPLE DESCRP. NO
			SAMPLE NO. <u>N/A</u>
			CORE ANALYSIS
			DSTs

REMARKS OIL WELL BASED ON LOW GOR (LESS THAN 50,000) APP. TO PLUG _____
 PLUGGING REP. _____
 COMP. REPORT 7/18/95

WATER WELL ACCEPTED BY _____

BOND CO. VALLEY NATIONAL BANK BOND NO. C.D. NO. 2578904
 DATE 12/10/89
 BOND AMT. \$ 25,000 CANCELLED _____ ORGANIZATION REPORT YES
 FILING RECEIPT 3068 LOC. PLAT ✓ WELL BOOK ✓ PLAT BOOK ✓
 API NO. 02-001-20297 DATE ISSUED 7/22/94 DEDICATION SE QTR

PERMIT NUMBER 882

Form 3160-4
(July 1992)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN DUPLICATE*
(See other instructions on reverse side)

FORM APPROVED
OMB NO. 1004-0137
Expires: February 28, 1995

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. CONVR. Other _____

2. NAME OF OPERATOR
Harken Southwest Corporation

3. ADDRESS AND TELEPHONE NO.
5605 N. MacArthur Blvd., Ste. 400 Irving, TX 75038 214/753-6900

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements)*
At surface 1200' FSL & 700' FEL
At top prod. interval reported below
At total depth

14. PERMIT NO. 882-Arizona DATE ISSUED 7/21/94
12. COUNTY OR PARISH Apache 13. STATE AZ

15. DATE SPUNDED 5/6/95 16. DATE T.D. REACHED 5/16/95 17. DATE COMPL. (Ready to prod.) 6/30/95 18. ELEVATIONS (DF, RKB, RT, CR, ETC.)* 5990' GL/6003' KB

20. TOTAL DEPTH, MD & TVD 5432' 21. PLUG, BACK T.D., MD & TVD BP @ 5060' 22. IF MULTIPLE COMPL. HOW MANY* 23. INTERVALS DRILLED BY 0-TD

24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)*
Paradox Formation as follows: Akah 4927'-5028'
Desert Creek 4786'-4857'/Lower Ismay 4680'-4752'

25. WAS DIRECTIONAL SURVEY MADE No
26. TYPE ELECTRIC AND OTHER LOGS RUN GR/Neutron Density/Microlog 27. WAS WELL CORED No

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

CASING SIZE/GRADE	WEIGHT, LB./FT.	DEPTH SET (MD)	HOLE SIZE	TOP OF CEMENT, CEMENTING RECORD	AMOUNT PULLED
13-3/8" H-40	48#	212'	17-1/2"	Cmt. to surface	0
4-1/2"	10.5 & 11.6#	5430'	7-7/8"	Stage cmt: DVC @ 4185' 80 sx CL "G" tail 325 sx Prem "G" 2nd stage - 100 sx CL "B" circ to pit	

29. LINER RECORD				30. TUBING RECORD			
SIZE	TOP (MD)	BOTTOM (MD)	BACKS CEMENT*	SCREEN (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)
N/A					2-3/8"	4647'	4640'

31. PERFORATION RECORD (Interval, size and number)		32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.	
.37 hole @ 1JSPF		DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED
5294-96'; 5242'-52'; 5145-54'; 5080'-83';		5242-52	1000 gal 15% HCL
5073-77'; 5023'-28'; 4950-60'; 4927'-31';		5145-54	2000 gal 15% HCL
4854-57'; 4816'-18'; 4786-97'; 4752' & 4743'		5073-83	400 gal 15% HCL
4734'; 4713-17'; 4688-99'; 4680-83'		-CONTINUED ON BACK-	

33. PRODUCTION							
DATE FIRST PRODUCTION		PRODUCTION METHOD (Flowing, gas lift, pumping—size and type of pump)				WELL STATUS (Producing or shut-in)	
6/29/95		Flowing				Producing	
DATE OF TEST	HOURS TESTED	CHOKER SIZE	PROD'N. FOR TEST PERIOD	OIL—BBL.	GAS—MCF.	WATER—BBL.	GAS-OIL RATIO
6/30/95	14	16/64	→	68	404	32	5941
FLOW. TUBING PRBL.	CASING PRESSURE	CALCULATED 24-HOUR RATE	OIL—BBL.	GAS—MCF.	WATER—BBL.	OIL GRAVITY-API (CORR.)	
280		→	117	693	54		

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

35. LIST OF ATTACHMENTS
Log sent under separate cover

36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records
SIGNED: *R. Montgomery* TITLE: Production Administrator DATE: 7/18/95

(See Instructions and Spaces for Additional Data 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.

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

FORMATION	TOP	BOTTOM	DESCRIPTION, CONTENTS, ETC.
NO DST'S OR CORING PERFORMED			
ACID JOB CONTINUED			
5023-28'	600 gal	15% HCL	
4950-60'	1200 gal	15% HCL	
4927-31'	400 gal	15% HCL	
4816-18'	200 gal	15% HCL	
4786-97'	800 gal	15% HCL	
4752	200 gal	15% HCL	
4743	200 gal	15% HCL	
4734	200 gal	15% HCL	
4713-17'	580 gal	15% HCL	
4688-99'	1495 gal	15% HCL	
4680-83'	650 gal	15% HCL + 6000 gal gelled 28% HCL	
Not Acidized	4854-57' & 5294-96'		

38. GEOLOGIC MARKERS

NAME	TOP	
	MEAS. DEPTH	TRUE VERT. DEPTH
Chinle	991'	
DeChelly	2320'	
Hermosa	4037'	
Ismay	4611'	
L. Ismay	4675'	
Desert Creek	4765'	
Akah	4898'	
Barker Creek	5058'	
Pinkerton Trail	5181'	
Molas	5404'	

STATE: ARIZONA
COUNTY: APACHE
API 02-001-20297
FIELD: BLACK ROCK
WELL CLASS: WOE
OPR: HARKEN SOUTHWEST

40N-29E 7
SE SE
1200 FSL 700 FEL
STATUS: GAS

20 BLACK ROCK

SPUD: 05/06/95 COMP: 06/30/95 ELEV: 8002 KB 5990 GR
TD: 5432 (05/16/95) FM/TD: MOLAS PBTD: 5960
CONTR: FOUR CORNERS DRLG RIG # 14 (R) RIG SUB: 12 (VERTICAL)
PROJ DEPTH/FM: PARADOX

COMP 6/30/95, IPF 117 BO, 693 MCFGPD, 54 BWPD, 16/64 CK, GOR 5941, FTP 280.
PROD ZONE - ISMAY L 4680-4752(GROSS) DESERT CREEK 4786-4857(GROSS) AKAH
4927-5028(GROSS). NO CORES OR DSTS (PARADOX EXTENSION - BLACK ROCK
FIELD)

LOC DESCRIPTION: N OFFSET TO FLD(MISSISSIPPIAN/PARADOX) 6 MI W-SW TEEC NOS POS, AZ; LAT:
3688368 LONG: 10926667;
CASING: 13 3/8 @ 212, 4 1/2 @ 5430 W/505 SX; IBG: 2 3/8 @ 4647;
LOG TYPES: DENL, GRN, MICL;

LOG TOPS:					
CHINLE	991	5011	DESERT CREEK	4765	1237
DE CHELLY	2320	3682	AKAH	4898	1104
HERMOSA	4037	1965	BARKER CREEK	5058	944
ISMAY	4811	1391	PINKERTON TRAIL	5181	821
ISMAY L	4675	1327	MOLAS	5404	598

(OVER)
COPYRIGHT 1995 PETROLEUM INFORMATION CORPORATION DATE 10/16/95CARD # 00003-F COR

STATE: ARIZONA
COUNTY: APACHE
API 02-001-20297
FIELD: BLACK ROCK
WELL CLASS: WOE
OPR: HARKEN SOUTHWEST

40N-29E 7
SE SE
1200 FSL 700 FEL
STATUS: GAS

20 BLACK ROCK

(CONTINUED)

TD 5432 570 |
SUBSEA MEASUREMENTS FROM KB;
PROD TEST(S): PERF (BARKER CREEK) 5073-5154 W/1 PF, GROSS, PERF (PINKERTON TRAIL) 5242-5298
W/1 PF, GROSS, 5073-5077, 5145-5154, 5242-5252, 5294-5296, ACID (5073-5154) W/2400 GALS, 15% HCL
ACID (5242-5252) W/1000 GALS, 15% HCL
PRODUCING INTERVAL: PERF (ISMAY L) 4680-4752 W/1 PF GROSS, PERF (DESERT CREEK) 4786-4857
W/1 PF GROSS, PERF (AKAH) 4927-5028 W/1 PF GROSS, 4734, 4743, 4752, 4680-4683, 4688-4689, 4713-4717,
4786-4797, 4816-4818, 4854-4857, 4927-4931, 4950-4960, 5023-5028, ACID (4927-5028) W/2200 GALS, 15%
HCL ACID (4786-4857) W/1000 GALS, 15% HCL ACID (4688-4752) W/2675 GALS, 15% HCL TRT (4680-4683)
W/6650 GALS, 650 GALS 15% HCL, 6000 GALS GEL-28% HCL, FLWD 398 BO, 4612 MCFD, 49 BW/4 DAYS -
JUNE 95.
OPER ADD: DRAWER 612007, DALLAS, TX, 75261 PHONE (817) 695-4900;

DATE 10/16/95CARD # 00003-F COR

Form 3160-5
(June 1990)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

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 <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other	5. Lease Designation and Serial No. NOG 8707-1141
2. Name of Operator Harken Southwest Corporation	6. If Indian, Allottee or Tribe Name Navajo Nation
3. Address and Telephone No. P.O. Box 612007 Dallas, Texas 75261-2007 (214)753-6900	7. If Unit or CA, Agreement Designation file 882 NTA
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) SE/SE Sec. 7-40N-29E 1200' FSL & 700' FEL	8. Well Name and No. Black Rock #20
	9. API Well No. 02-001-20297
	10. Field and Pool, or Exploratory Area Black Rock (Paradox)
	11. County or Parish, State Apache Co., AZ

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

TYPE OF SUBMISSION	TYPE OF ACTION
<input type="checkbox"/> Notice of Intent	<input type="checkbox"/> Abandonment
<input checked="" type="checkbox"/> Subsequent Report	<input type="checkbox"/> Recompletion
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Plugging Back
	<input type="checkbox"/> Casing Repair
	<input type="checkbox"/> Altering Casing
	<input checked="" type="checkbox"/> Other Reclamation & Reseeding
	<input type="checkbox"/> Change of Plans
	<input type="checkbox"/> New Construction
	<input type="checkbox"/> Non-Routine Fracturing
	<input type="checkbox"/> Water Shut-Off
	<input type="checkbox"/> Conversion to Injection
	<input type="checkbox"/> 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.)

The reserve pit reclamation was completed on June 28, 1996.

Reseeding was performed prior to the July 1 APD stipulation with BLM approval. The seed mixture was pursuant to BLM conditions of approval (seed mixture Number 3). A copy of the seed mixture analysis is attached.

cc: State of Arizona
Navajo Nation - Minerals Department
BIA - Gallup, NM



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

Signed [Signature] Title Production Administrator Date 07/15/96
(This space for Federal or State office use)

Approved by _____ Title _____ Date _____
Conditions of approval, if any:

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

JUL 12 '96 08:12 CHUSKA FARMINGTON NM

P.3

SEED FOR ALL NEEDS
SEED CONSULTING SERVICE

file 882

CUSTOM BULK SEED MIXTURE ANALYSIS M05325

TYPE	SPECIES	VARIETY	LOT #	ORIG	YR	IBRA	CROP	YR	1/4	WT	GRN	PLS	DATE	SOLE LBS	P&S LBS	% OF MIX
1	SEED: FOURRING SALTROSE	CO	059640	CO	98.86	1.32	0.20	0.06	87	37	58.00	157.21	02/05/96	2.00	1.14	28.57
2	SEEDS 9: ALSALI SACATON	7MS	05603	CS	93.14	5.74	0.18	0.74	87	87	42.00	176.37	11/22/95	1.00	0.78	16.29
3	SEEDS: SHAWSCALE	7AS	95316	87	97.01	2.99	0.60	0.00	87	87	57.00	155.79	11/01/96	2.00	1.11	28.57
4	SEED: BICORASS	882PAK	04762	SN	99.33	0.01	0.30	0.06	87	87	92.00	191.34	05/30/96	2.00	1.44	28.57
														7.00	6.35	100.00

M05325

BLACK ROCK #20

THE DATE IS 06/26/96
THE TIME IS 13:42:36



Form 3160-5
(June 1990)

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 <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other	5. Lease Designation and Serial No. NOG 8707-1141
2. Name of Operator Harken Southwest Corporation	6. If Indian, Allottee or Tribe Name Navajo
3. Address and Telephone No. P.O. Box 612007, Dallas, Texas 75261 (214) 753-6900	7. If Unit or CA, Agreement Designation N/A
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) SE/SE Section 7-40N-29E 1200' FSL & 700' FEL	8. Well Name and No. Black Rock #20
	9. API Well No. 02-001-20297
	10. Field and Pool, or Exploratory Area Black Rock (Paradox)
	11. County or Parish, State Apache Co., AZ

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

TYPE OF SUBMISSION	TYPE OF ACTION
<input type="checkbox"/> Notice of Intent	<input type="checkbox"/> Abandonment
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Recompletion
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Plugging Back
	<input type="checkbox"/> Casing Repair
	<input type="checkbox"/> Altering Casing
	<input type="checkbox"/> Other <u>Site Security</u>
	<input type="checkbox"/> Change of Plans
	<input type="checkbox"/> New Construction
	<input type="checkbox"/> Non-Routine Fracturing
	<input type="checkbox"/> Water Shut-Off
	<input type="checkbox"/> Conversion to Injection
	<input type="checkbox"/> 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.)*

Attached is the site security diagram for the above referenced location.

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



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

Signed: [Signature] Title: Production Administrator Date: 10/13/95

(This space for Federal or State office use)

Approved by _____ Title _____ Date _____

Conditions of approval, if any: _____

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*See instruction on Reverse Side

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

5. Lease Designation and Serial No.

NOG 8707-1141

6. If Indian, Allottee or Tribe Name

Navajo Nation

7. If Unit or CA. Agreement Designation

N/A file 882

8. Well Name and No.

Black Rock #20

9. API Well No.

02-001-20297

10. Field and Pool, or Exploratory Area

Black Rock (Paradox)

11. County or Parish, State

Apache Co., Arizona

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, Texas 75261-2007 (214) 753-6900

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)
SE/SE Section 7-40N-29E
1200' FSL and 700' FEL

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	<input type="checkbox"/> Casing Repair
	<input type="checkbox"/> Altering Casing
	<input checked="" type="checkbox"/> Other <u>Site Security</u>
	<input type="checkbox"/> Change of Plans
	<input type="checkbox"/> New Construction
	<input type="checkbox"/> Non-Routine Fracturing
	<input type="checkbox"/> Water Shut-Off
	<input type="checkbox"/> Conversion to Injection
	<input type="checkbox"/> Dispose Water

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

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Harken Southwest is still in the process of getting all of the permanent facilities in place at the Black Rock #20 location. Therefore, please be advised a site security diagram will be filed immediately upon completion of the permanent facilities, but no later than October 15, 1995.



cc: State of Arizona
Navajo Nation - Minerals Department

14. I hereby certify that the foregoing is true and correct.
Signed Rachelle Montgomery Title Production Administrator Date 09/11/95

(This space for Federal or State office use)

Approved by _____ Title _____ Date _____
Conditions of approval, if any:

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SUBMIT IN TRIPLICATE

1. Type of Well

Oil Well Gas Well Other

2. Name of Operator

Harken Southwest Corporation

3. Address and Telephone No.

5605 N. MacArthur Blvd., Ste. 400 Irving, TX 75038 214/753-6900

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

**SE/SE Section 7-40N-29E
1200' FSL & 700' FEL**

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

5. Lease Designation and Serial No.

NOG 8707-1141

6. If Indian, Allottee or Tribe Name

Navajo Nation

7. If Unit or CA, Agreement Designation

N/A

P/N 882

8. Well Name and No.

Black Rock #20

9. API Well No.

02-001-20297

10. Field and Pool, or Exploratory Area

Black Rock (Paradox)

11. County or Parish, State

Apache Co., AZ

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

TYPE OF SUBMISSION	TYPE OF ACTION	
<input type="checkbox"/> Notice of Intent	<input type="checkbox"/> Abandonment	<input type="checkbox"/> Change of Plans
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Recompletion	<input type="checkbox"/> New Construction
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Plugging Back	<input type="checkbox"/> Non-Routine Fracturing
	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> Water Shut-Off
	<input type="checkbox"/> Altering Casing	<input type="checkbox"/> Conversion to Injection
	<input checked="" type="checkbox"/> Other First Sales	<input type="checkbox"/> 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 verbal communication by field personnel, this sundry notice serves as written communication that first sales of crude from the Black Rock #20 was Thursday, June 29, 1995. This initial sale of production was test production which contained some water and completion fluids thereby requiring additional separation.

CC: State of Arizona ✓
Navajo Nation - Minerals
BIA - Gallup, NM

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

Signed [Signature]

Title **Production Administrator**

Date **7/3/95**

(This space for Federal or State office use)

Approved by _____
Conditions of approval, if any:

Title _____ Date _____

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(June 1990)

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Expires: March 31, 1993

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NOG 8707-1141

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Navajo Nation

7. If Unit or CA, Agreement Designation

N/A P/N 882

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Black Rock #20

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11. County or Parish, State

Apache Co., AZ

1. Type of Well
 Oil Well Gas Well Other

2. Name of Operator

Harken Southwest Corporation

3. Address and Telephone No.

5605 N. MacArthur Blvd., Suite 400 Irving, TX 75038 214/753-6900

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

SE/SE Section 7-40N-29E
1200' FSL & 700' FEL

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

TYPE OF SUBMISSION	TYPE OF ACTION	
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	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> Water Shut-Off
	<input type="checkbox"/> Altering Casing	<input type="checkbox"/> Conversion to Injection
	<input checked="" type="checkbox"/> Other Gathering Pipeline	<input type="checkbox"/> Dispose Water

(Note: Report results of multiple completion on Well Completion/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.)*

Attached is the map of the Black Rock #20 pipeline

The pipeline will be ±2700' in length running from Black Rock #20 to the Black Rock #8 location. The majority of the pipeline follows the road to an existing well pack (Black Rock #8) which is located approximately 1/2 mile south of the #20 location.

The line will be 2-7/8" o.d., external tar wrap with welded connections. Estimated line and working pressure is not expected to exceed 75 psi based on equipment specifications. The gathering line will lay mostly on the surface, but will be partially buried in accordance with the Archeological survey notes and agreement with the local residents.

Conditions of approval for the pipeline were attached to the APD.

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:

[Signature] Title **Production Administrator**

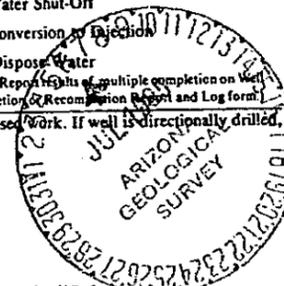
Date **7/3/95**

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



Form 3160-5
(June 1990)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

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

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

5. Lease Designation and Serial No.

NOG 8707-1141

6. If Indian, Allottee or Tribe Name

Navajo Nation

7. If Unit or CA, Agreement Designation

N/A

8. Well Name and No.

Black Rock #20

9. API Well No.

02-001-20297

10. Field and Pool, or Exploratory Area

Black Rock (Paradox)

11. County or Parish, State

Apache Co., Arizona

1. Type of Well
 Oil Well Gas Well Other

2. Name of Operator
HARKEN SOUTHWEST CORPORATION

3. Address and Telephone No.
P. O. Box 712007, Dallas, TX 75261-2007 (214) 753-6900

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)
SE/SE Section 7-40N-29E
1200' FSL & 700' FEL

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

TYPE OF SUBMISSION	TYPE OF ACTION	
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Abandonment	<input type="checkbox"/> Change of Plans
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Recompletion	<input type="checkbox"/> New Construction
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Plugging Back	<input type="checkbox"/> Non-Routine Fracturing
	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> Water Shut-Off
	<input type="checkbox"/> Altering Casing	<input type="checkbox"/> Conversion to Injection
	<input type="checkbox"/> Other <u>Completion</u>	<input type="checkbox"/> 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.)*

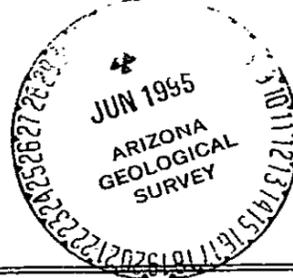
Attached you will find the completion procedure on the subject well.

The drilling rig was release on 5/17/95 and a sundry reflecting the production casing information was submitted at that time.

Should any questions arise, please contact Mr. Richard Cottle @ 505/327-5531 or Marshall Watson @ 214/753-6900.

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

CONFIDENTIAL



14. I hereby certify that the foregoing is true and correct.
Signed Rachelle Culomery Title Production Administrator Date 5/31/95
(This space for Federal or State office use)
Approved by _____ Title _____ Date _____
Conditions of approval, if any: _____

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

PROCEDURE

1. Hole safety meeting and review H2S Program and completion procedure w/rig crew.
2. MIRU completion rig. Rig to include BOP, power swivel, and reversing and circulation system.
3. NU BOP. Pressure test to 1,500 psig using rig pump.
4. PU 3 7/8" bit, bit sub, 4 - 3 1/8" drill collars, top sub and RIH on 2 3/8" tubing to DV collar at 4186' KB.
5. Close tubing rams and pressure test casing above DV collar to 1,500 psig for 15 minutes.
6. Drill out DV collar using fresh water as circulating fluid.
7. Continue RIH and clean out to float collar at 5389' KB.
8. Close tubing rams and pressure test casing to 1,500 psig for 15 minutes.
9. Circulate hole clean with fresh water (continue until returns are free of cement).
10. POH with completion string. LD Collars. RU wire line and run CCL/GR from PBDT to 4300'.
11. RU perforators. Review H2S Plan with rig crew and perforator employees'. Perforate with select fire 1JSPF, decentralized Hollow carrier casing gun. Depths to be correlated reference log. Perforate from bottom up as follows:

NOTE: Report fluid level drop to Dallas office. Under no circumstances will fluids flowing from the well be produced into the reserve pit. All flow from the well will be into temporary frac tanks.

ZONE	TOP MD (KB)	SS	PERFS
Upper Ismay	4611	+1392	None
Lower Ismay	4675	+1328	4752, 4743, 4734 4713-17 4688-99 4680-83
Desert Creek	4775	+1228	4854-57, 4816-18, 4786-97
Akah	4887	+1116	5023-28, 4950-60, 4927-31
Upper Barker Creek	5058	+945	5080-83 5073-77
Lower Barker Creek	5114	+889	5145-54
Pinkerton Trail	5182	+821	5294-96, 5242-49, 5251-52

12. PU 3-7/8" bit and sub, 4-1/2" x 3-1/2' casing scraper, on 2-3/8" tubing strapping in hole (SIH) and clean out through DV interval (4186' KB) and through perforation intervals to float collar at 5389' KB. POH and LD scraper, and bit.
13. PU RBP, retrieving head, tandem electronic pressure gauges housed in 2-3/8" x 14' perforated sub with pin collar, 1-1/2" SN, collar locator, PPI packer (1.8" ID) with 12 foot spacing between elements, 2-3/8" x 4' PU sub, 1 jt. 2-3/8" tbg, 2-3/8" SN (1.78" ID) and RIH on 2-3/8" tubing to 5350' KB and set RBP. Reference completion assembly diagram on page 5.
14. PU to 5310' KB and set packer and pressure test RBP to 1,500 psig. Drop standing valve & test elements to 1500 psi. Unseat packer and PU to 5288'.
15. Spot heated 15% HCl acid to bottom of tubing. A total of 15,900 gal (100 gal/ft) of acid will be used for the breakdowns as follows at pump rates and pressures of 1-3 BPM and 2,000-3,000 psi:

ZONE	SETTING DEPTH	VOLUME ACID (GALLONS)	PERFS
Pinkerton Trail	5288-5300	400	5294-96
Pinkerton Trail	5238-5250	1000	5242-52
Lower Barker Creek	5144-5156	2000	5145-54
Upper Barker Creek	5072-5084	400	5073-83
Akah	5020-5032	600	5023-28
Akah	4949-4961	1200	4950-60
Akah	4925-4937	400	4927-31
Desert Creek	4850-4862	300	4854-57
Desert Creek	4810-4822	200	4816-18
Desert Creek	4785-4797	800	4786-97
Lower Ismay	4750-4762	200	4752
Lower Ismay	4737-4749	200	4743
Lower Ismay	4727-4739	200	4734
Lower Ismay	4710-4722	500	4713-17
Lower Ismay	4688-4700	1000	4688-99
Lower Ismay	4674-4686	400	4680-83
		9800 Gallons	

Note on following steps use stripperrubber & minimize circulation and fluid pumped in the hole.

16. After treatment of top setting interval PU packer, circ 1 hole volume, and set at 4600' KB and pull standing valve. Swab well back until cleaned up and flow test through test separator to obtain fluid and gas flow rates and pressures. Report data to Dallas office as advised.

Zone #1: PINKERTON TRAIL: (5240-5296)

17. After clean up all zones GIH and set PIP @ 5200'. Swab in and test Pinkerton Trail interval 5240-5296'. Report data to Dallas. SI for 24 hours. Build up upon instruction from Dallas.
18. After flow test and build up of Zone #1 is completed, retrieve RBP at 5350' KB and PU and set at 5200' KB. Set packer at 5165' KB and pressure test RBP to 1,500 psig.

ZONE #2: LOWER BARKER CREEK: (5145-54)

19. PU packer and set at 5100' KB. Swab well back until cleaned up and flow test through test separator to obtain fluid and gas flow rates and pressures. Report data to Dallas office for possible build up.
20. After flow test of Zone #2 (Lower Barker Creek) is completed, retrieve RBP at 5200' KB and PU and set at 5130' KB. Set packer at 5090' KB and pressure test RBP to 1,500 psig.

ZONE #3: UPPER BARKER CREEK: (5073'-5083')

21. PU packer and set at 5050' KB. Swab well back until cleaned up and flow test through test separator to obtain fluid and gas flow rates and pressures. Report Data to Dallas office for possible build up.
22. After flow test of Zone #2 (Upper Barker Creek) is completed, retrieve RBP at 5130' KB and PU and set at 5060' KB. Set packer at 5035' KB and pressure test RBP to 1,500 psig.

ZONE #3: AKAH-DESERT CREEK: (4786'-5028')

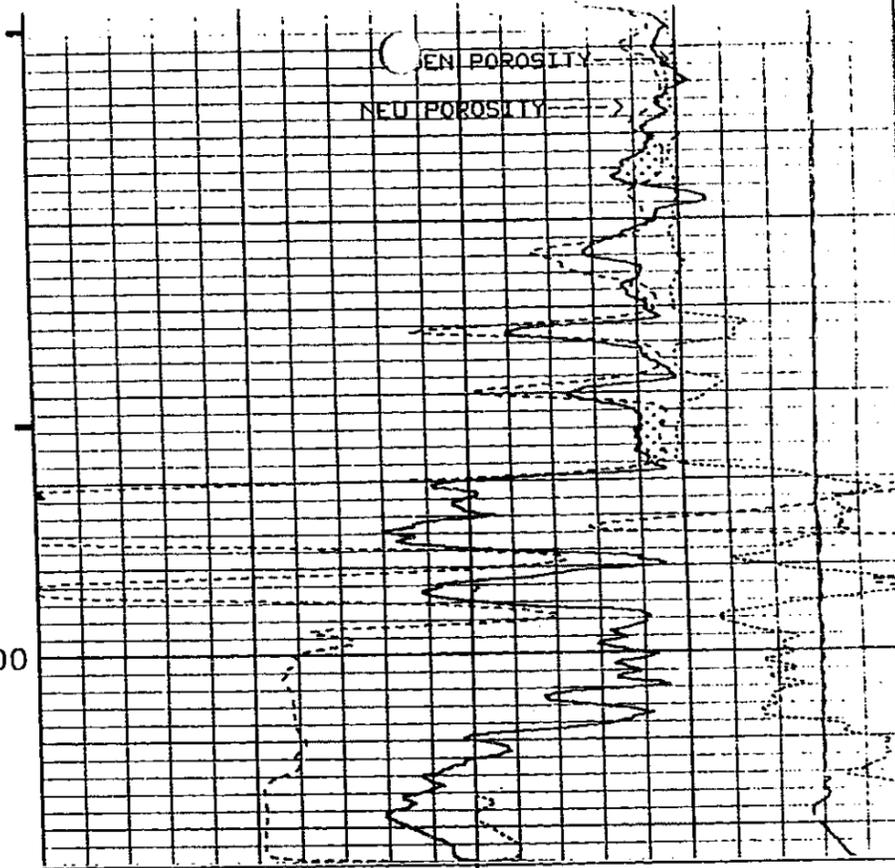
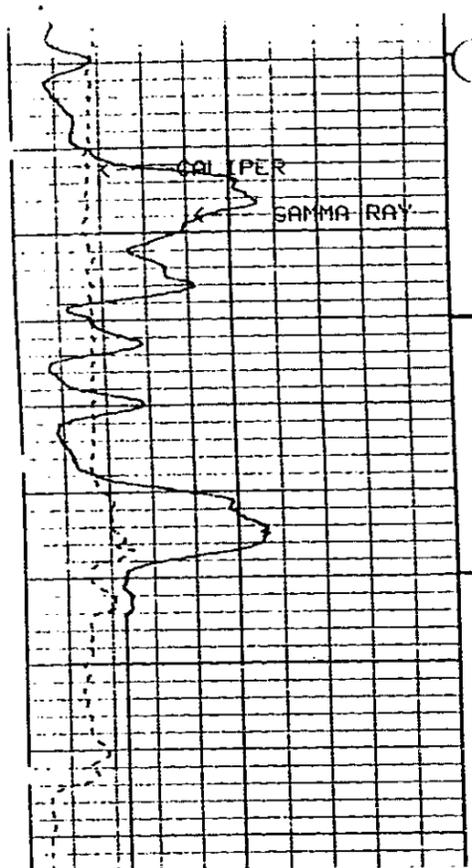
23. PU packer and set at 4765' KB. Swab well back until cleaned up and flow test through test separator to obtain fluid and gas flow rates and pressures. Report data to Dallas office for possible build up.
24. After flow test of Zone #3 is completed, retrieve RBP at 5060' KB and PU and set at 4770' KB. Set packer at 4756' KB and pressure test RBP to 1,500 psig.

ZONE #5: LOWER ISMAY: (4680' - 4752')

25. PU packer and set at 4600' KB. Swab well back until cleaned up and flow test through test separator to obtain fluid and gas flow rates and pressures. Report data to Dallas office for possible build up.
26. After flow test of Zone #4 is completed, retrieve RBP at 4770' KB, TOH, and LD packer, bridge plug, and electronic gauges. Overnight pressure results to Dallas who will advise on possible sand fracture treatment(s).
27. Wait on orders.
28. PU 4-1/2" Model 'R' completion packer, 1 jt. 2-3/8", 2-3/8" FN (1.81" ID) and RIH on 2-3/8 tbg to 4600' KB. Circulate packer fluid (fresh water mixed with corrosion and sulfide cracking inhibitor and oxygen scavenger) down back side to packer and set.
29. Swab well to unload and flow test for 2 hours.
30. Complete well facility installation and pipeline and place well on line ASAP. Must be Flowing prior to July 15, 1995.

NOTE:

Consultant to account for and report on Daily Completion Report all fluids injected into and removed from well bore during work over operations.



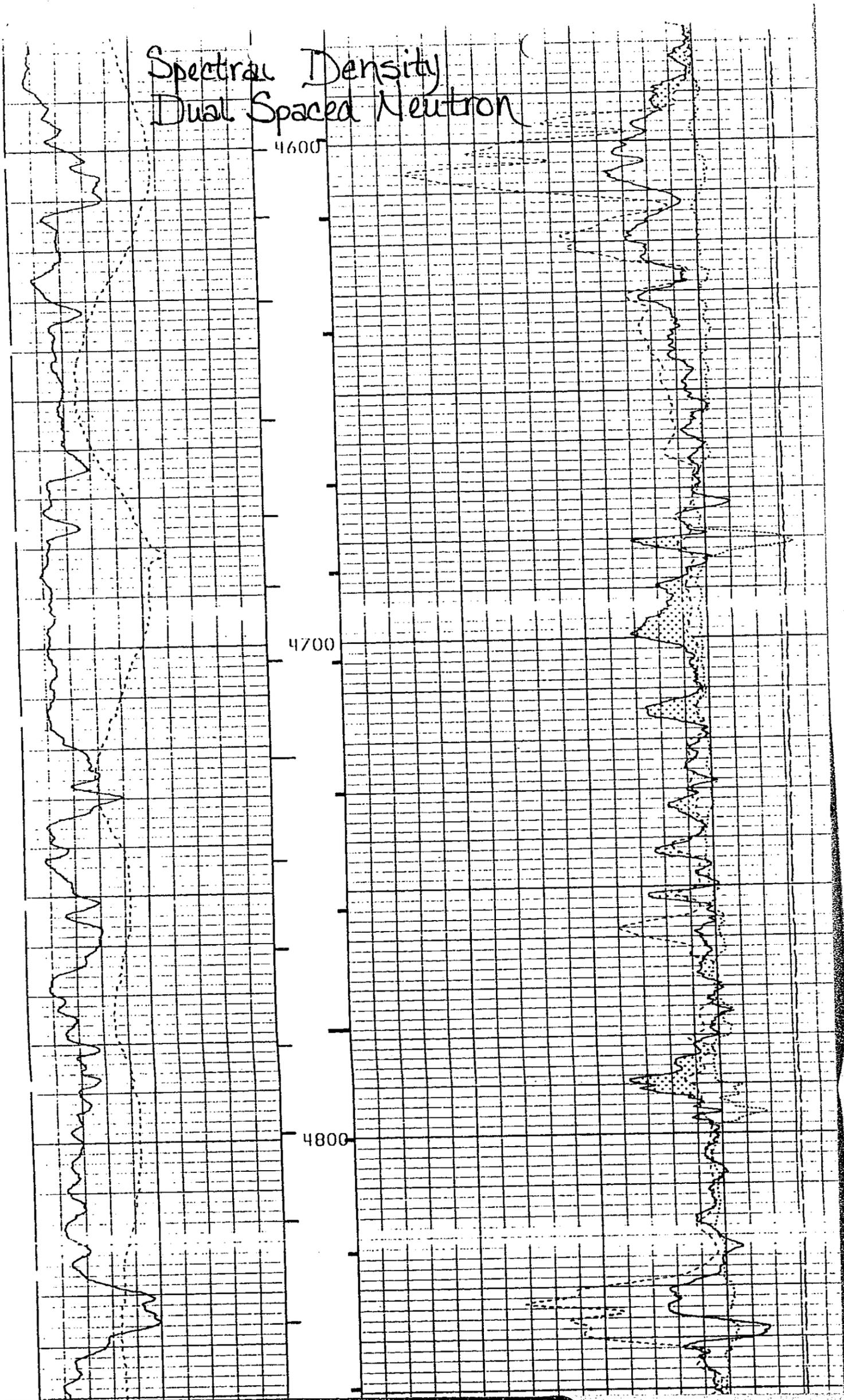
				SURFACE TENS	
				16500	POUNDS
					DEN CORR
				-.25	GM/CC
CALIPER		BHV	DEN POROSITY		
6	INCHES 16	FT3	30	PERCENT MATRIX DENSITY = 2.71	
GAMMA RAY		AHV	NEU POROSITY		
0	API COUNTS 200	FT3	30	PERCENT NEUTRON MATRIX = LIME	

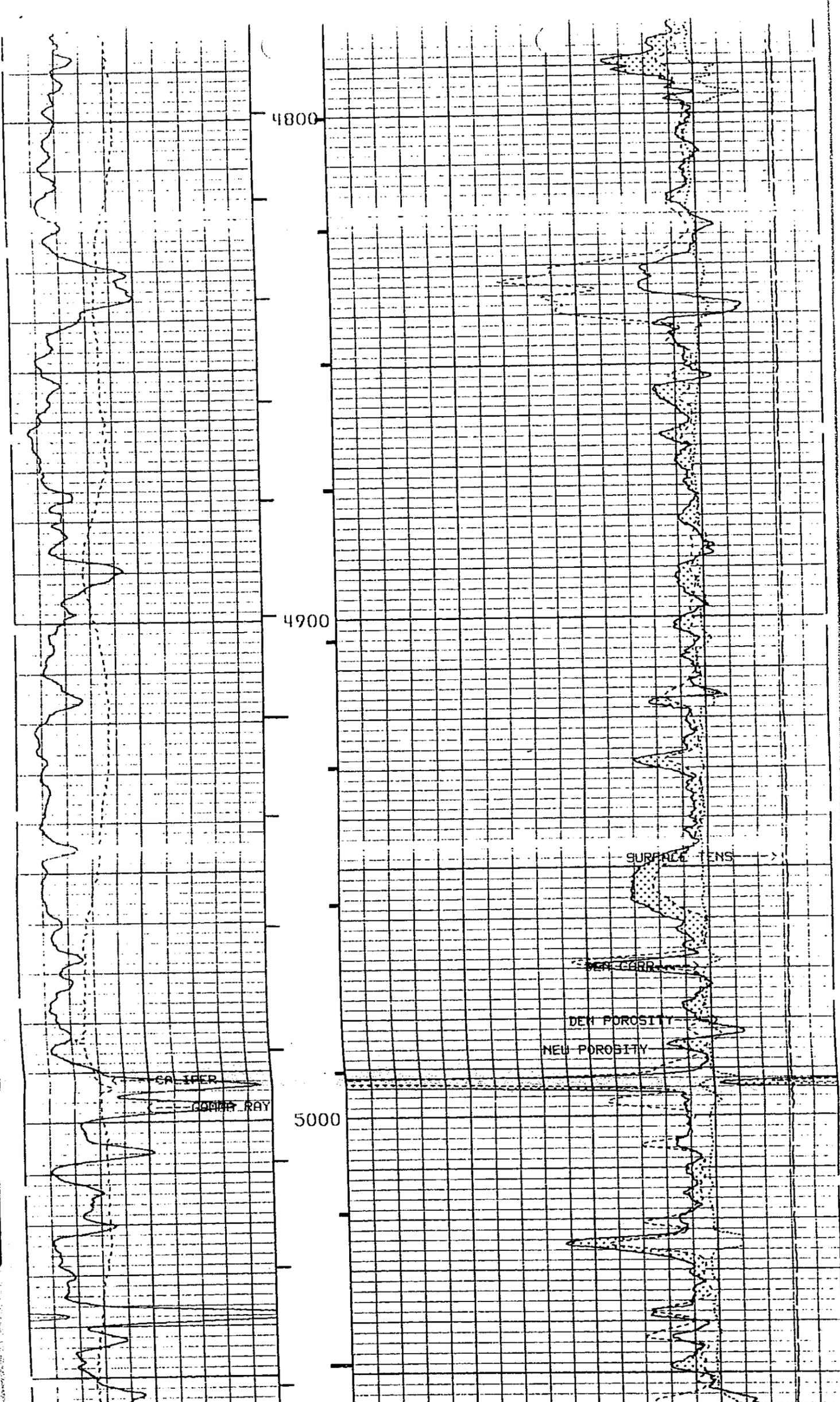
UPLOG # 2 Depth: 5424.00 Service: 2400. Unit: 51943
 Realtime Log Date: 15-MAY-1995 Time: 22:41:49 Vers: 2.60

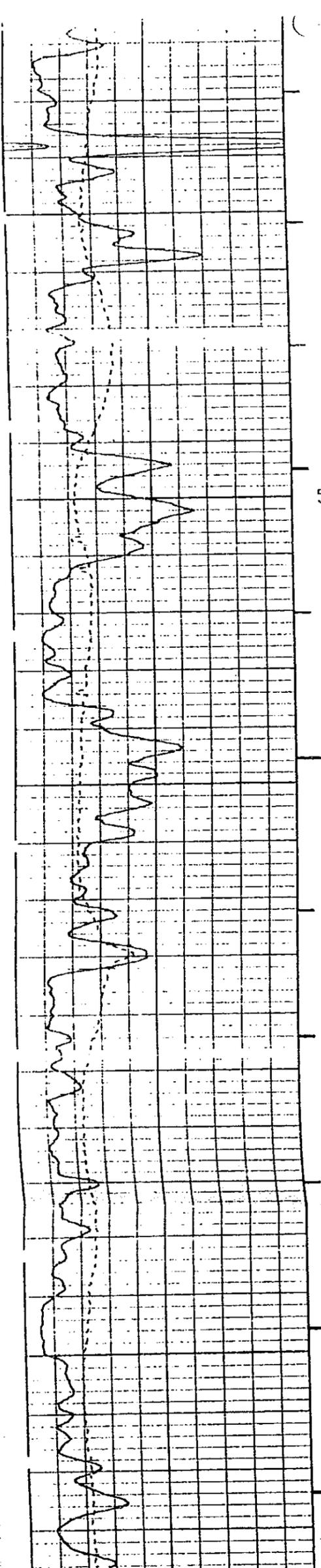
REPEAT SECTION

GAMMA RAY	AHV	NEU POROSITY
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Spectral Density
Dual Spaced Neutron

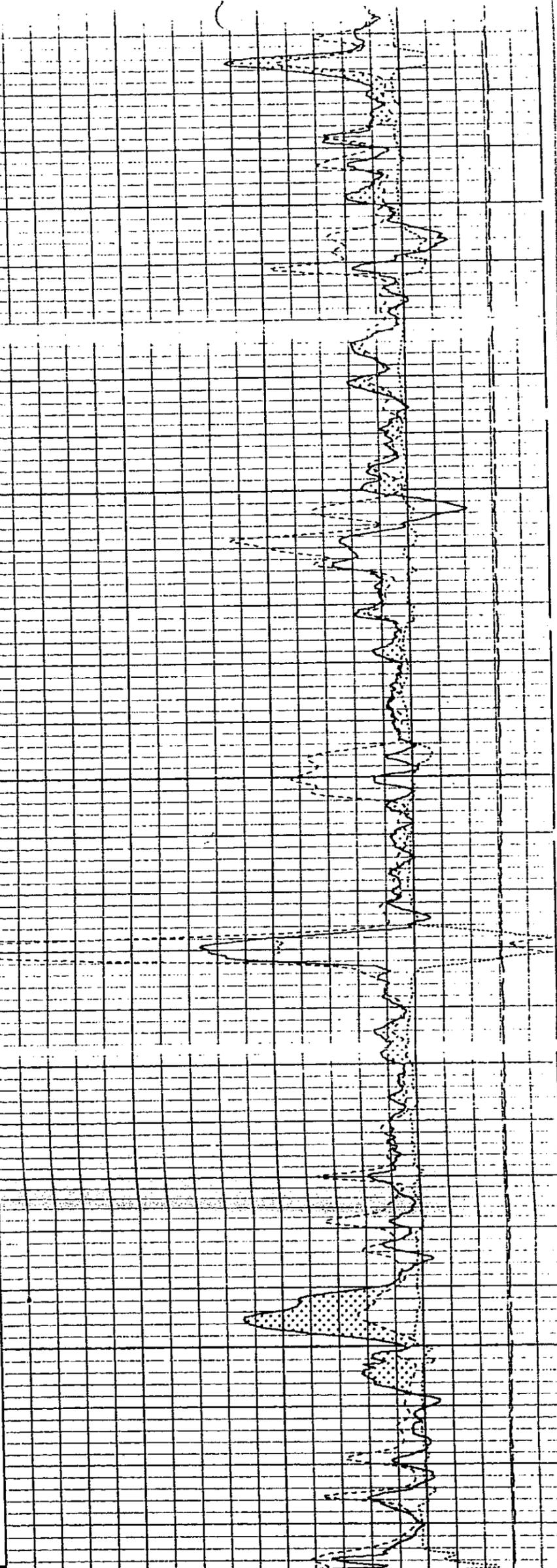






5100

5200



Form 3160-5
(June 1990)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

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 (214) 753-6900

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)
SE SE Section 7 - 40N - 29E 1200' FSL & 700' FEL

FORM APPROVED
Budget Bureau No. 1004-0135
Expires: March 31, 1993
5. Lease Designation and Serial No.
NOG 8707-1141
6. If Indian, Allottee or Tribe Name
Navajo Tribal
7. If Unit or CA. Agreement Designation
N/A Permit 882
8. Well Name and No.
Black Rock #20
9. API Well No.
02-001-20297
10. Field and Pool, or Exploratory Area
Black Rock (Paradox)
11. County or Parish, State
Apache County, AZ

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

TYPE OF SUBMISSION	TYPE OF ACTION
<input type="checkbox"/> Notice of Intent	<input type="checkbox"/> Abandonment
<input checked="" type="checkbox"/> Subsequent Report	<input type="checkbox"/> Recompletion
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Plugging Back
	<input type="checkbox"/> Casing Repair
	<input type="checkbox"/> Altering Casing
	<input type="checkbox"/> Other _____ Status _____
	<input type="checkbox"/> Change of Plans
	<input type="checkbox"/> New Construction
	<input type="checkbox"/> Non-Routine Fracturing
	<input type="checkbox"/> Water Shut-Off
	<input type="checkbox"/> Conversion to Injection
	<input type="checkbox"/> Dispose Water

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.)

Production csg was set on May 16th as follows:
Ran 131 jts (5437.91') - 4-1/2", J-55, STC csg, landed @ 5430', FC @ 5388', DVC @ 4185'.
Cement 1st stage - mixed 80sx (26 bbl) Prem "G" + additives, yield 1.88 ft³/sx, 12.4 ppg, followed by 325 sx Prem "G" + additives. Displ 84 bbls. Circ between stages - 65 sx cmt to surf. Cement 2nd stage - mixed 870 sx Prem "G" + additives, 1.88 ft³/sx, 12.4 ppg followed by 100 sx Cl "B" + additives, yield 1.15 ft³/sx, 15.6 ppg. Displ 66 bbl H₂O, circ, 70 sx cmt to pit. Bump plug w/1500 psi. Plug down 8:18 p.m., Land csg on slips w/5600#.

Rig released @ 05/17/95 - Current Status - SI - WO Completion

Completion procedures will be forthcoming.

PLEASE CONSIDER THIS DATA * CONFIDENTIAL *****

CC: St of Arizona; Navajo Nation - EPA; Navajo Nation - Minerals; BIA - Gallup, NM

14. I hereby certify that the foregoing is true and correct.
Signed: Richard Montgomery Title: Production Administrator Date: 5/17/95
(This space for Federal or State office use)
Approved by: _____ Title: _____ Date: _____
Conditions of approval, if any:



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

Form 3160-5
(June 1990)

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

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Use "APPLICATION FOR PERMIT—" for such proposals

SUBMIT IN TRIPLICATE

1. Type of Well <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other	5. Lease Designation and Serial No. NOG 8707-1141
2. Name of Operator HARKEN SOUTHWEST CORPORATION	6. If Indian, Allottee or Tribe Name Navajo Nation
3. Address and Telephone No. P. O. Box 612007, Dallas, TX 75261 (214) 753-6900	7. If Unit or CA, Agreement Designation N/A <i>Permit 882</i>
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) SE/SE 1200' FSL & 700' FEL	8. Well Name and No. Black Rock #20
	9. API Well No. 02-001-20297
	10. Field and Pool, or Exploratory Area Black Rock (Paradox)
	11. County or Parish, State Apache, AZ

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

TYPE OF SUBMISSION	TYPE OF ACTION	
<input type="checkbox"/> Notice of Intent	<input type="checkbox"/> Abandonment	<input type="checkbox"/> Change of Plans
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Recompletion	<input type="checkbox"/> New Construction
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Plugging Back	<input type="checkbox"/> Non-Routine Fracturing
	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> Water Shut-Off
	<input type="checkbox"/> Altering Casing	<input type="checkbox"/> Conversion to Injection
	<input type="checkbox"/> Other _____	<input type="checkbox"/> 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.)*

The subject well was spud with a spudder rig on 5/2/95. Four Corners Rig #14 MIRU on 5/5/95 - 5/6/95. Drilling commenced on 5/7/95.

Surface casing set w/spudder rig & Halliburton squeezed as follows:

Spud well. Drlg to 212' & set 13-3/8" conductor casing and cement w/256.5 ft³ of 8 bags per yard³ grout down the backside to surface.

RU Halliburton. Loaded csg, est rate into formation, 1.6 BPM/350 psi, mixed 160 sx Class "B" cmt w/3% CaCl₂, 1/4 pps Flocele, yield 1.18 ft³/sx, 15.6 ppg, hesitate squeeze w/500 psi, approx 2 bbl into formation. Opened rams, TIH & circ 160' of cmt out. TOH, closed rams & hesitate squeezed, closed in w/500 psi. WOC. Press test csg - 1100 psi - 30 min - OK.

I hereby certify that the foregoing is true and correct.

Signed *Rachelle Montgomery* Title Production Administrator Date 05/10/95

(This space for Federal or State office use)

Approved by _____ Title _____ Date _____
Conditions of approval, if any:

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

APR-19-1995 11:01 FROM HARKEN BAHRAIN TO 916026285106811 P.02

Form 3160-3 (July 1992)

SUBMIT IN TRIPPLICATE* (Other instructions on reverse side)

FORM APPROVED OMB NO. 1004-0136 Expires February 28, 1995

UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR DEEPEN

Form with fields for: 1. TYPE OF WORK (DRILL, DEEPEN), 2. NAME OF OPERATOR (Harken Southwest Corporation), 3. ADDRESS AND TELEPHONE NO., 4. LOCATION OF WELL, 5. LEASE DESIGNATION AND SERIAL NO., 6. IF INDIAN, ALLOTTEE OR TRIBE NAME, 7. UMYA AGREEMENT NAME, 8. NAME OR LEASE NAME, WELL NO., 9. AP WELL NO., 10. FIELD AND POOL OR WELDCAT, 11. SEC. T. R. M., OR B.L. AND SURVEY OR AREA, 12. COUNTY OR PARISH, 13. STATE, 14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE, 15. DISTANCE FROM PROPOSED LOCATION TO NEAREST PROPERTY OR LEASE LINE, 16. NO. OF ACRES IN LEASE, 17. NO. OF ACRES ASSIGNED TO THIS WELL, 18. PROPOSED DEPTH, 19. ROTARY OR CABLE TOOLS, 20. APPROX. DATE WORK WILL START, 21. ELEVATIONS, 22. PROPOSED CASING AND CEMENTING PROGRAM.

Attached:

- Ten Point Drilling Plan
Surface Use Plan
Detailed Drilling Plan
H2S Contingency Plan
Attachments & Exhibits as referenced
Complies with State of Arizona Spacing Order 56.

RECEIVED
BLM
94 JUL 22 AM 10:40
070 FARMINGTON, NM

cc. State of Arizona
IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen, give data on present productive zones and proposed new productive zones. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout prevention program, if any.

SIGNATURE: [Signature] TITLE: Production Administrator DATE: 7/19/94

PERMIT NO. 882 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 be necessary to conduct operations thereon. CONDITIONS OF APPROVAL, IF ANY:

APPROVED BY: [Signature] TITLE: OPERATOR DATE: APR 12 1995

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.

Form 3160-5
(June 1990)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUNDRY NOTICES AND REPORTS ON WELLS

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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. Drawer 612007, Dallas, TX 75261 (214) 753-6900

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)
1200' FSL & 700' FEL
Section 7-40N-29E

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

5. Lease Designation and Serial No.

NOG 8707-1141

6. If Indian, Allottee or Tribe Name

Navajo

7. If Unit or CA, Agreement Designation

N/A Permit 882

8. Well Name and No.

Black Rock #20

9. API Well No.

02-001-20297

10. Field and Pool, or Exploratory Area

Black Rock (Paradox)

11. County or Parish, State

Apache Co., AZ

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

TYPE OF SUBMISSION	TYPE OF ACTION
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Abandonment
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Recompletion
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Plugging Back
	<input type="checkbox"/> Casing Repair
	<input type="checkbox"/> Altering Casing
	<input type="checkbox"/> Other Amend APD
	<input type="checkbox"/> Change of Plans
	<input type="checkbox"/> New Construction
	<input type="checkbox"/> Non-Routine Fracturing
	<input type="checkbox"/> Water Shut-Off
	<input type="checkbox"/> Conversion to Injection
	<input type="checkbox"/> 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.)*

Due to personnel changes please note the following changes in the previously submitted APD:

Surface Use Plan - Item 14 - Field Representative:
Richard Cottle, Engineer
Harken Southwest Corporation

H₂S Contingency Plan:

Oil Company Emergency Phone Numbers
Harken Operations Engineer - Richard Cottle - 24 hr number (505) 326-5545
Cellular (505) 320-3284



CC: State of Arizona

I hereby certify that the foregoing is true and correct.
Signed Richard Cottle Title Production Administrator Date 3/21/95
(This space for Federal or State office use)
Approved by _____ Title _____ Date _____
Conditions of approval, if any:

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



PERMIT TO DRILL

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

To: HARKEN SOUTHWEST CORPORATION
(OPERATOR)

to drill a well to be known as

BLACK ROCK NO. 20
(WELL NAME)

located 1200 FT FROM SOUTH LINE & 700 FT FROM EAST LINE OF

Section 7 Township 40N Range 29E, APACHE County, Arizona.

The SOUTHEAST QUARTER 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 22 day of JULY, 1994.

OIL AND GAS CONSERVATION COMMISSION

By Steven L. Rainey
EXECUTIVE DIRECTOR

OIL & GAS PROGRAM ADMINISTRATOR

PERMIT 00882

RECEIPT NO. 3068

A.P.I. NO. 02-001-20297

State of Arizona
Oil & Gas Conservation Commission
Permit to Drill

FORM NO. 27

APPLICATION FOR PERMIT TO DRILL OR RE-ENTER
 APPLICATION TO DRILL RE-ENTER OLD WELL

NAME OF COMPANY OR OPERATOR
Harken Southwest Corporation
 Address **P.O. Drawer 612007** City **Dallas** State **TX 75261**

Drilling Contractor
Unassigned
 Address

DESCRIPTION OF WELL AND LEASE

Federal, State or Indian Lease Number, or if fee lease, name of lessor NOG 8707-1141	Well number 20	Elevation (ground) 5990'
Nearest distance from proposed location to property or lease line: 700 feet	Distance from proposed location to nearest drilling, completed or applied—for well on the same lease: feet	
Number of acres in lease: 215	Number of wells on lease, including this well, completed in or drilling to this reservoir: 4	

If lease, purchased with one or more wells drilled, from whom purchased:
 Name Address

Well location (give footage from section lines) 1200' FSL & 700' FEL	Section—township—range or block and survey 7-40N-29E	Dedication (Comply with Rule 105) 160
Field and reservoir (if wildcat, so state) Black Rock (Paradox)	County Apache	

Distance in miles, and direction from nearest town or post office
+/-6 miles west-southwest of Teec Nos Pos, Arizona

Proposed depth: 5476'	Rotary or cable tools Rotary	Approx. date work will start 3rd Quarter 1994
Bond Status on file	Organization Report	Filing Fee of \$25.00
Amount \$25,000	On file <input checked="" type="checkbox"/> Or attached	Attached

Remarks:
Primary zone is intended to be the Paradox formation Spaced under Order 56 dated 9/89

CERTIFICATE: I, the undersigned, under the penalty of perjury, state that I am the **Vice President** of the **Harken Southwest Corp** (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.

Marshall C. Watson
 Signature **Marshall C. Watson**
7-20-94
 Date

Permit Number: **882**
 Approval Date: **7-22-94**
 Approved By: *Steven L. Rainey*

STATE OF ARIZONA
OIL & GAS CONSERVATION COMMISSION
 Application to Drill or Re-enter
 File Two Copies
 Form No. 3

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

APPLICATION FOR PERMIT TO DRILL OR RE-ENTER

APPLICATION TO DRILL

RE-ENTER OLD WELL

NAME OF COMPANY OR OPERATOR

Harken Southwest Corporation

Address **P.O. Drawer 612007** City **Dallas** State **TX 75261**

Drilling Contractor

Unassigned

Address

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Marshall C. Watson
Signature **Marshall C. Watson**

API # **02-001-20297**

7-20-94
Date

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Approval Date: **7-22-94**
Approved By: *Steven L. Rainey*

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OIL & GAS CONSERVATION COMMISSION
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Form No. 3

Form 3160-3
(July 1992)

SUBMIT IN TRIPLICATE*
(Other instructions on reverse side)

FORM APPROVED
OMB NO. 1004-0136
Expires: February 28, 1995

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 OTHER SINGLE ZONE MULTIPLE ZONE

2. NAME OF OPERATOR
 Harken Southwest Corporation

3. ADDRESS AND TELEPHONE NO.
 P.O. Drawer 612007 Dallas, TX 75261 (817) 695-4900

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)*
 At surface: 1200' FSL & 700' FEL
 At proposed prod. zone: Same

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*
 +/-6 miles west-southwest Teec Nos Pos, AZ

15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drig. unit line, if any): 700'

16. NO. OF ACRES IN LEASE: 215

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.: 5476'

19. PROPOSED DEPTH: 5476'

20. ROTARY OR CABLE TOOLS: Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.): 5990' GR/6003' KB

22. APPROX. DATE WORK WILL START*: 3rd Quarter 1994

5. LEASE DESIGNATION AND SERIAL NO.
 NOG 8707-1141

6. IF INDIAN, ALLOTTEE OR TRIBE NAME
 Navajo

7. UNIT AGREEMENT NAME
 # 882

8. FARMOR LEASE NAME, WELL NO.
 Black Rock #20

9. AN WELL NO.

10. FIELD AND POOL OR WILDCAT
 Black Rock (Paradox)

11. SEC., T., E., N., OR BLK. AND SURVEY OR AREA
 Sec. 7-40N-29E

12. COUNTY OR PARISH 13. STATE
 Apache AZ

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	GRADE SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
18"	13-3/8"-H-40	48#	200'	265 sxs
7-7/8"	4-1/2"-J-55	10.5#	5476'	2 stages = Total 1333 sx

Attached:

- Ten Point Drilling Plan
- Surface Use Plan
- Detailed Drilling Plan
- H2S Contingency Plan
- Attachments & Exhibits as referenced
- Complies with State of Arizona Spacing Order 56.

cc. State of Arizona
 IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen, give data on present productive zones 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.

SIGNATURE: [Signature] TITLE: Production Administrator DATE: 7/19/94

(This space for Federal or State office use)

PERMIT NO. _____ 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 _____ DATE _____

*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.

APPLICATION FOR PERMIT TO DRILL OR RE-ENTER

APPLICATION TO DRILL

RE-ENTER OLD WELL

Copy

NAME OF COMPANY OR OPERATOR

Harken Southwest Corporation

Address P.O. Drawer 612007 City Dallas State TX 75261

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Unassigned

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Bond Status <u>on file</u> Amount \$25,000	Organization Report On file <input checked="" type="checkbox"/> Or attached	Filing Fee of \$25.00 Attached

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Spaced under Order 56 dated 9/89

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Marshall C. Watson
Signature **Marshall C. Watson**

API # 02-001-20297

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OIL & GAS CONSERVATION COMMISSION
Application to Drill or Re-enter
File Two Copies

Form No. 3

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Copy

- Operator shall outline the dedicated acreage for both oil and gas wells on the plat.
- 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.
- ALL DISTANCES SHOWN ON THE PLAT MUST BE FROM THE OUTER BOUNDARIES OF THE SECTION.
- Is the Operator the only owner in the dedicated acreage outlined on the plat below? YES NO
- 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 _____
- If the answer to question four is "no," list all the owners and their respective interests below:

Owner	Land Description
<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> </div> <div style="width: 50%; padding-left: 10px;"> <p 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>R. Montgomery</i> Rachelle Montgomery Name Production Administrator Position Harken Southwest Corp. Company 7/19/94 Date</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 6/22/94 Registered Professional Engineer and/or Land Surveyor Gerald G. Huddleston Certificate No. 14668</p> </div> </div>	

PROPOSED CASING PROGRAM

Size of Casing	Weight	Grade & Type	Top	Bottom	Cementing Depths	Sacks Cement	Type
13-3/8"	48#	H-40/STC	Surf.	200'	200' to surface	265 sx	Class "G"
4-1/2"	10.5#	J-55/STC	Surf	5476'	Stage Cement Per 10 Poin	1. Lead 81 Plan Tail 557 2. Lead 566 Tail 129	Class "G"

HARKEN SOUTHWEST CORPORATION

DETAILED DRILLING PLAN

**Black Rock No. 20
Section 7-40N-29E
Surface: 1200' FSL & 700' FEL
Apache County, Arizona**

ELEVATION: 5990' GL/6003' KB

PROPOSED TOTAL DEPTH: 5476' MD

PROJECTED HORIZON - Primary Target: Paradox Formation

GENERAL DRILLING PROCEDURES:

1. Build location and prepare access road. Fence reserve pit on 3 sides. NOTIFY BLM - Farmington, New Mexico (505/327-5344) and STATE of ARIZONA (602/882-4795) 24 hours prior to spud. NOTE on report the person(s) contacted. Post copies of all regulatory permits in the doghouse. Erect a well location sign.
2. Report GL to KB measurement and also report any conductor casing depth on IADC tour sheets and morning reports. Have water checked by cementing company for compatibility.
3. Drill mousehole and rathole. Mix mud prior to spudding well.
4. Rig up spudder rig. Drill 18" hole to +/- 200'. Use fresh water gel/lime spud mud for drilling surface hole. Well bore inclination is not to exceed 1° at 200'. Deviation surveys will be run at least at casing point.
5. Run 13-3/8", 48 lb/ft, H-40, ST&C casing to 200'. Cement with 265 sx (313 ft³) of Class 'G' cement with 2% CaCl₂ and 1/4 #/sk Celloflake (sufficient slurry volume to circulate cement to surface).
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 1500 psig for 30 min.
7. Drill out surface casing w/12-1/4" bit. 12-1/4" hole to 400'. Deviation surveys are to be taken at 400' or on a bit trip, whichever occurs first.
8. Reduce hole size to 7-7/8" and drill to TD of +/- 5476'.

Harken Southwest Corporation
Black Rock No.20
Detail Drilling Plan
Page 2 of 2

9. Run open hole logs and evaluate. Coring and/or drill stem testing will be as per well site geologist's recommendation.
10. If the well is determined to be productive run 4-1/2" casing to TD, as per casing program in Ten Point Drilling Plan. Set stage cementing collar at +/- 4200 ft. In addition to placing centralizers over potential production zones, they will also be run to cover the aquifer sands of the DeChelly formation, as per BLM stipulations. Cement production casing in two stages as per cementing program in Ten Point Drilling Plan.
11. Nipple down BOPE. Set 4-1/2" casing slips and cut off casing. Install well head. Release drilling rig and move rig off location.
12. If well is non-productive it will be plugged and abandoned as per State and BIA/BLM stipulations.

HARKEN SOUTHWEST CORPORATION

TEN POINT DRILLING PLAN

Black Rock No. 20
Section 7-40N-29E
Surface: 1200' FSL & 700' FEL
Apache County, Arizona

SURFACE FORMATION:

Geological name of surface formation: Morrison

ELEVATION:

Surface Elevation is 5990' GR/6008' KB

ESTIMATED FORMATION TOPS:

FORMATION	SUB-SEA ELEVATION	TD	COMMENTS
Chinle	+4670'	1338'	
DeChelly	+3670'	2338'	
Organ Rock	+3298'	2710'	
Hermosa	+1960'	4048'	Gas
Ismay	+1366'	4642'	Gas
Lower Ismay	+1310'	4698'	Gas
Desert Creek	+1222'	4786'	Gas
Akah	+1084'	4924'	Gas/Water
Barker Creek	+932'	5076'	Gas
Pinkerton Trail	+810'	5198'	Gas
Molas	+582'	5426'	
TD	+532'	5476'	

Harken Southwest Corporation
 Black Rock No. 20
 Ten Point Drilling Plan
 Page 2 of 4

4. PROPOSED CASING/CEMENTING PROGRAM:

	Depth (MD)	Size	Weight	Grade	Coupling
Surface	200'	13-3/8"	48 ppf	H-40	STC
Production	5476'	4-1/2"	10.50 ppf	J-55	STC

SURFACE CEMENTING:

265 sx (313 cf) Class 'G' Cement with 2% CaCl₂ and 1/4 lb/sk Celloflake. Weight = 15.8 ppg, yield = 1.18 ft³/sk. Slurry volume will be calculated at 100% excess over annular volume (sufficient slurry volume to circulate cement to surface).

CASING EQUIPMENT:

Centralizers: Center of shoe jt. 1, and surface jt.

Guide shoe, Baffle Plate, Baker Lok Shoe, Shoe jt. & 1st jt. Top Plug

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

PRODUCTION CEMENTING:

DV tool at 4200'

Stage 1: (TD - 4200') Lead with 81 sx Class 'G' cement, 65:35 Pozmix with 6% gel and 1/4lb/sk Celloflake. Weight = 12.4 ppg, yield = 1.82 ft³/sk. Tail with 557 sx Class 'G' cement with 2% CaCl₂. Weight = 15.8 ppg, yield = 1.15 ft³/sk. Total of 789 ft³ @ 30% excess. Circulate 4 hours between stages.

Stage 2: (4200 - Surface): Lead w/566 sx Class 'G' cement, 65:35 Pozmix with 6% gel and 1/4 lb/sk Celloflake. Weight = 12.4 ppg, yield = 1.82 ft³/sk. Tail w/129 sx, Class 'G' cement w/2% CaCl₂. Weight = 15.8 ppg, yield = 1.15 ft³/sk. Total of 1178 ft³ @ 30% excess.

Harken Southwest Corporation
Black Rock No. 20
Ten Point Drilling Plan
Page 3 of 4

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.

CASING EQUIPMENT:

Centralizers: Middle of shoe jt., every jt. to 5300', every 34d jt. to DV tool, 3 across DeChelly and 1 at surface casing shoe.

Other: Float Shoe, Float Collar, DV Tool, Baker Lok Shoe, Shoe jt., Float Collar and 1 jt. above Float Collar.

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. 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 by the operator.

6. PROPOSED MUD PROGRAM

Surface to 2650'

Fresh water, gel/lime, & native solids. Weight 8.3 - 8.7 ppg. Gel/lime seeps as necessary for hole cleaning.

2650' to Total Depth

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 DST's.

Harken Southwest Corporation
Black Rock No. 20
Ten Point Drilling Plan
Page 4 of 4

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.
- C. Mud will be the circulating fluid. No abnormal formation pressures are expected.

8. WELL EVALUATION

Open hole electric logging program will consist of the following:

DLL/GR (No MSFL)
LDT/CNL/GR (Minimum or to 4300 whichever is greater)
Micro Log

No DSTs or Coring are planned. A mud logging unit will be utilized during drilling operations from 4300' to TD.

9. ABNORMAL PRESSURES/GAS

Abnormal pressures are not anticipated. Monitoring of gas and hydrocarbon shows will be by wellsite mud logging unit. H₂S gas could be encountered, and regular checks will be made while drilling the well. See attached H₂S Program for detail.

10. TIMING

The drilling and evaluation of this well is estimated by 14 days. Anticipated drilling will be Third Quarter of 1994.

HARKEN SOUTHWEST CORPORATION

SURFACE USE PLAN

**Black Rock No. 20
Section 7-40N-29E
Surface: 1200' FSL & 700' FEL
Apache County, Arizona**

1. EXISTING ROADS

Shown on the attached topographic map, are the existing roads in the immediate area. Farmington, NM to Shiprock, NM (29 miles). Turn on Highway 504 towards Teec Nos Pos (20 miles). Go 5 miles West of Teec Nos Pos and turn South on County Road 5049 and go 3.0 miles on main road and turn left on access road. Go approximately 0.75 miles to Black Rock A-20 location.

2. PLANNED ACCESS ROAD (SHOWN IN RED)

The access road as shown on the topographic map will exit from road 5049. 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 0.1 miles of new road will be constructed to the location pad.

3. EXISTING WELLS

Black Rock #8 - NE/4 - Sec. 18, T40N R29E (Producing)
Black Rock #12 - SW/4 - Sec. 7, T40N R29E (Producing)
Kenai Oil 7 Gas - Navajo 34-7 SWSE Sec. 7 - T40N R29E (P&A)
Atlantic Navajo 7 - #1 SE/SE Sec. 7 T40N R29E (P&A)

4. LOCATION OF EXISTING AND/OR PROPOSED FACILITIES

Upon a successful commercial completion, all production facilities will be situated on the drilling location pad. Berm/dike or firewalls will be constructed around all storage facilities sufficient in size to contain liquid incase of rupture.

5. LOCATION AND TYPE OF WATER

Water will be acquired from a private source.

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. No gravel or other related minerals from Federal/Navajo land will be used in construction of roads or wellsite without prior approval from the Surface Managing Agency.

7. METHODS OF HANDLING WASTE MATERIAL

- a. The reserve pit will be designed to prevent the collection of surface runoff. The pit will be lined with a 7 mil liner, for containing drilling fluids. Prior to use, the reserve pit will be fenced on three side, the fourth side will be fenced at the time the drill rig is removed.
- b. Liquid hydrocarbons will be stored in temporary storage tanks and trucked to approved sales facilities.
- c. Garbage and other trash will be contained on location. It will be hauled to an approved disposal site or burned on location if a burning permit is obtained. Any trash on the pad will be cleaned up prior to the rig move off location.
- d. Sewage will be handled in self-contained, chemically treated portable toilets and the contents hauled off location to an authorized sanitary disposal facility.
- e. Upon completion of operations, fluids in the reserve pit will be allowed to evaporate or will be emptied. Upon drying, the pit will be backfilled and the area restored with the natural terrain.

8. ANCILLARY FACILITIES

There will be no ancillary facilities associated with this project, including camps.

9. WELL SITE LAYOUT

- a. Well Location Description is attached.
- b. Well Pad Layout is detailed in attached diagram.

Harken Southwest Corporation
Black Rock No. 20
Surface Use Plan
Page 3 of 5

9. WELL SITE LAYOUT (CONT.)

- c. Cut and fill requirements due to topography are detailed in the attached diagram.
- d. Reserve pit will be fenced and lined as detailed in item 7(a).
- e. Soil material will not be pushed into drainage. All disturbed soil material will be placed in an area where it can be retrieved for reclamation purposes.

10. SURFACE RECLAMATION PLANS

- a. The reserve pit will be allowed to dry prior to the commencement of backfilling work. No attempts will be made to backfill the reserve pit until the pit is free of standing water. The reserve pit will remain fenced prior to reclamation.
- b. Rat and mouse holes will be filled and compacted from bottom to top immediately upon release of the drilling rig from the location.
- c. All remaining debris will be cleared from the location. Any materials not required for production operations will be removed.
- d. Areas of the well pad which are not needed for production operations will be reshaped as provided below:
 - 1. Unnatural backslopes and foreslopes will be reduced as practical and returned to natural contour.
 - 2. Compacted areas will be plowed or ripped to a depth of 12 to 16 inches prior to reseeding.
 - 3. Natural soil stock piled for reclamation activity will be utilized whenever possible. Additional topsoil will be obtained as necessary to return the terrain as near as possible to its original contour.

Harken Southwest Corporation
Black Rock No. 20
Surface Use Plan
Page 4 of 5

10. SURFACE RECLAMATION PLANS (CONT.)

- e. In the event of a dry hole, the well site and newly constructed access road will be restored to their approximate original contour. Items d 1, 2 and 3 as listed above will be adhered to. In addition:
 - 1. Care will be taken during reshaping of the pad and access road to insure there will be no depressions that will trap water or form ponds.
 - 2. Seed mixture will be drilled to a depth of .5 to .75 inches or broadcast and followed by a drag or packer. Hand broadcasting may occur in areas too steep for machinery. If hand broadcast, the rate below will be 150%. The seed mixture will be as prescribed in the conditions of approval.
- d. Reclamation operations for the well pad are expected to require approximately 7 to 10 days and will begin when the fluids in the reserve pit are dry for backfilling. Seeding will take place between July and September. If the well is a producer, restoration of unutilized portions of the location will commence as soon as practical after the installation of production facilities, but not later than 12 months after drilling is completed.

11. SURFACE OWNERSHIP

The surface ownership at the well location and access road is Navajo Indian Reservation.

12. BONDING

- a. Blanket Bond is in effect and applies to operations within the State of Arizona.
- b. Bond BIA 14-20-603-373 has a Certificate of Deposit (#8015) held at Western Bank, Farmington, New Mexico as a performance bond
- c. All bonding under the name of Chuska Energy Company is currently being updated to Harken Southwest Corporation, pursuant to the name change as set out in the Amendment to the Articles of Incorporation dated 9/93.

Harken Southwest Corporation
Black Rock No. 20
Surface Use Plan
Page 5 of 5

13. OTHER INFORMATION

- a. Spud report will be called into the BLM - Farmington, New Mexico (505/327-5344) within 48 hours. Time and ate of spud along with BLM notification will be noted on the drilling report.
- b. The BLM - Farmington, New Mexico will be notified 24 hours in advance of all BOP test.

14. REPRESENTATIVE AND CERTIFICATION

Field Representative - Mr. Larry A. Chambers
Engineer
Harken Southwest Corporation
501 Airport Drive, Suite 158
Farmington, New Mexico 87401
(505) 327-5531

Certification:

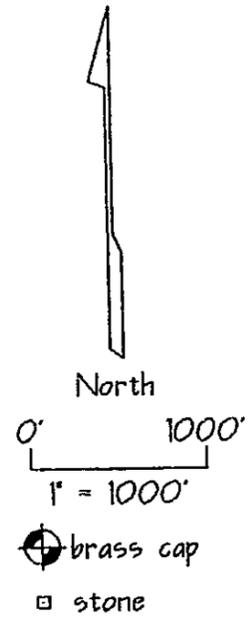
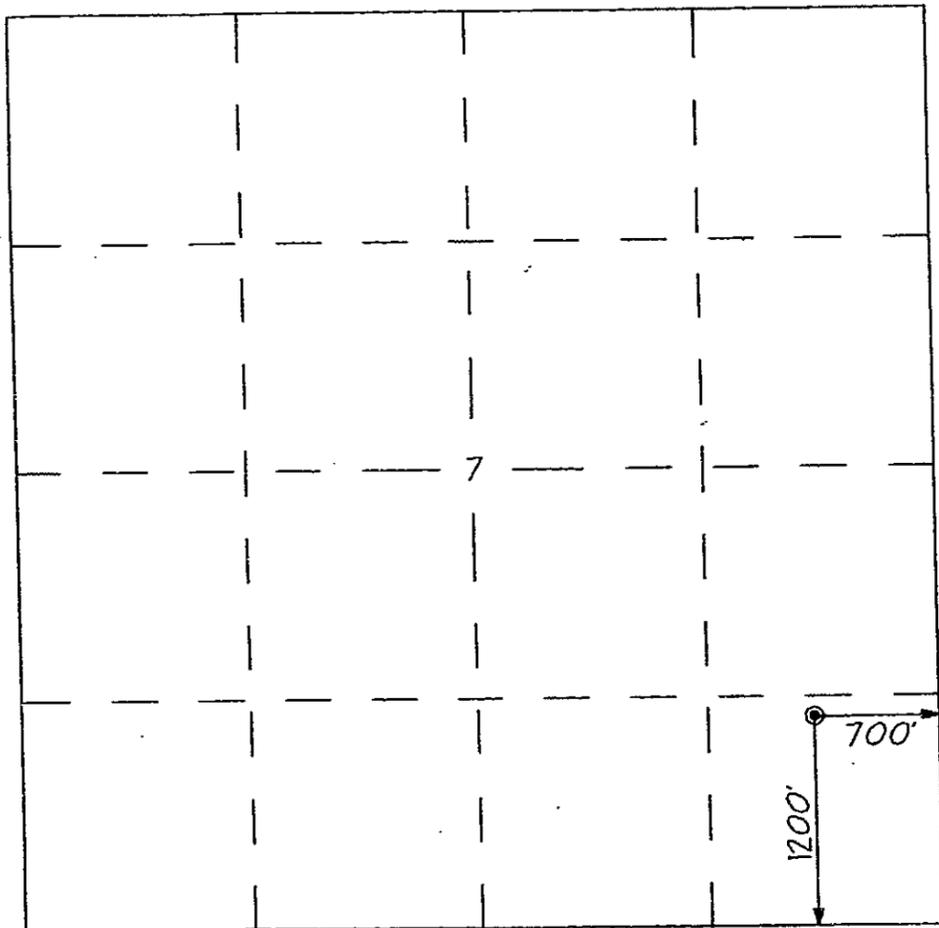
I hereby certify that I, or persons under my direct supervision, have inspected the proposed drill site and access route, that I am familiar with the conditions which currently exist; that the statements made in this plan are to the best of my knowledge, true and correct; and that the work associated with operations proposed here in will be performed by Harken Southwest Corporation and its contractors and subcontracts in conformity with this plan and the terms and conditions under which it is approved.



Marshall C. Watson, P.E.
Vice-President

Date: 7-20-94

Well Location Plat



Well Location Description

HARKEN SOUTHWEST CORPORATION
Black Rock # 20
1200' FSL & 700' FEL
Section 7, T.40 N., R.29 E.
Apache County, Arizona
5990' ground elevation



22 June 1994

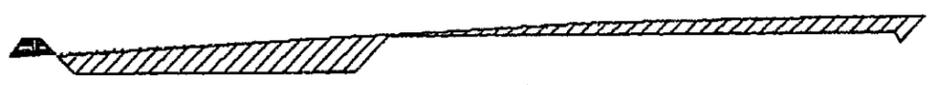
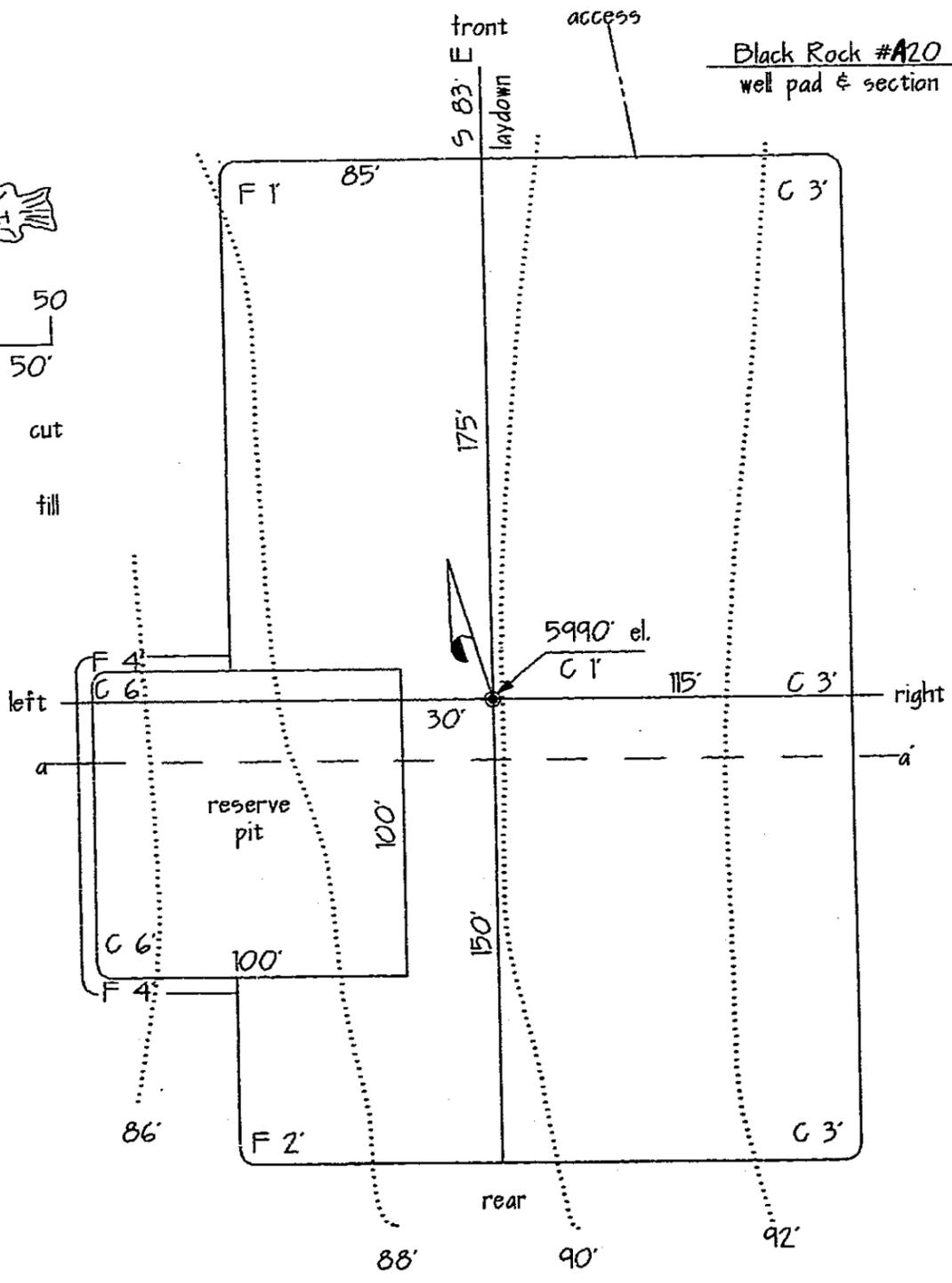
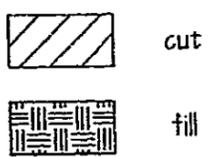
Gerald G. Huddleston
Gerald G. Huddleston, LS

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

Black Rock #A20
well pad & section



0' 50'
Scale 1" = 50'



Section a - a'

EXHIBIT "A"
BLOWOUT PREVENTER

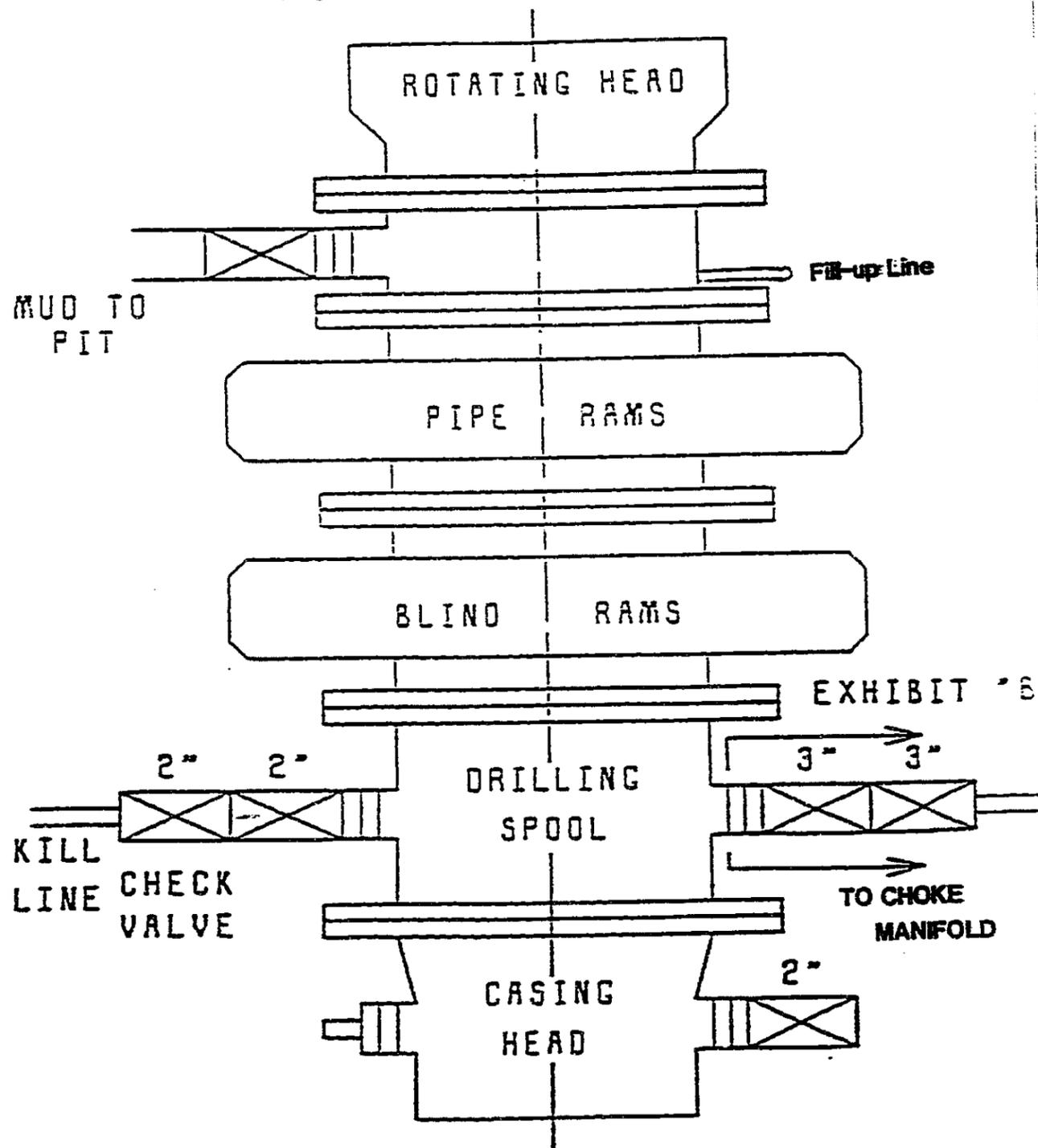
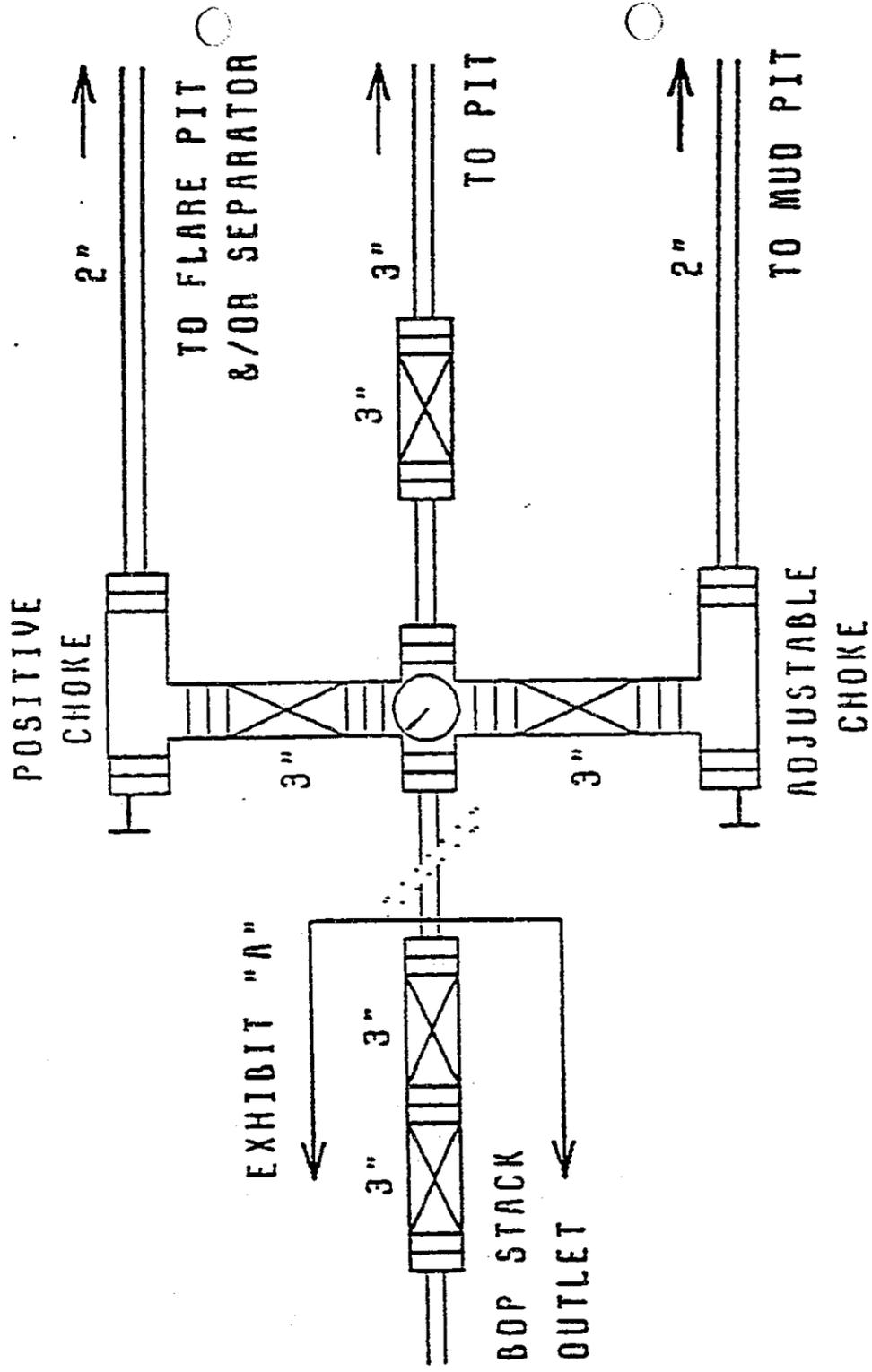


EXHIBIT "B"
CHOKE MANIFOLD



**CONTINGENCY PLAN
INFORMATION WORKSHEET**

OIL COMPANY NAME: Harken Southwest Corporation (formerly Chuska Energy Company)
Local Office:
501 Airport Drive, #158
Farmington, NM 87401
(505) 327-5531

DRILLING OPERATOR NAME: Unassigned

WELL NAME: Black Rock No. 20

BLOCK AND SECTION #: Section 21-T31N- R18W

COUNTY AND STATE: San Juan County, New Mexico

ROAD DIRECTIONS: Farmington, NM to Shiprock, NM (29 miles). Turn on Highway 504 towards Teec Nos Pos (20 miles). Go 5 miles west of Teec Nos Pos and turn south on County Road 5049 and go 3.0 miles on main road and turn left on access road. Go approximately 0.75 miles to Black Rock A-20 location.

THE SUSPECTED ZONE WHERE H₂S MAY BE ENCOUNTERED IS: Akah, at +/- 6900' feet.

THE CONCENTRATION IS EXPECTED TO BE: 80 ppm with a potential open flow capacity of 4 MMCFD.

H₂S RADIUS OF EXPOSURE:

100 PPM: 50'
500 PPM: 44'

THE PLAN SHOULD BE IMPLEMENTED BEFORE DRILLING INTO THE Akah Formation @ 6942'.

OIL COMPANY EMERGENCY PHONE NUMBERS:

Harken Farmington Office (505) 327-5531
Harken Operations Engineer - Larry A. Chambers-(505) 327-2941 (Home)
(505) 320-3284 (Cellular)
Harken Montezuma Creek Office (801) 651-3491
Harken V.P. of Operations - Marshall Watson -(817) 695-4900

HARKEN SOUTHWEST CORPORATION

**BLACK ROCK NO. 20
CONTINGENCY PLAN**

INDEX

- I. PURPOSE
- II. EMERGENCY EVACUATION PLAN/RESPONSIBILITIES
- III. EMERGENCY PHONE NUMBERS
- IV. WELLSITE DIRECTIONS
- V. LOCATION LAYOUT AND EQUIPMENT
- VI. EQUIPMENT LIST
- VII. CHECK LIST

HARKEN SOUTHWEST CORPORATION

**BLACK ROCK NO. 20
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CONTINGENCY PLAN

I. PURPOSE

The purpose of this plan is to safeguard the lives of the public, contract personnel, and company personnel in the event of equipment failures of formations which may contain hydrogen sulfide gas (H_2S). However, as a precautionary measure, evacuation plan has concern should a disaster occur.

II. DESCRIPTION OF HYDROGEN SULFIDE GAS

H_2S is a colorless gas which smells similar to rotten eggs in low concentrations. In large concentrations or over long periods of exposure, the sense of smell may be paralyzed. H_2S is an extremely toxic gas that must be treated with extreme care to prevent injury to people.

H_2S is heavier than air (specific gravity = 1.19), and on still days tends to accumulate in low places. The accumulation could build up and lead to dangerous concentrations. If the H_2S is warmer than air, it will tend to rise until cooled off and could affect workers above the escaping source.

The toxicity of H_2S gas is as follows:

<u>Period of Exposure</u>	<u>Parts H₂S Gas (PPM)</u>
Prolonged exposure, no adverse effects	10 ppm
Over 1 hour, could be hazardous	150 ppm
Possibly fatal in less than one-half hour	300 ppm
Fatal in a few minutes	700 ppm

III. TREATMENT OF HYDROGEN SULFIDE POISONING

- A. Remove the patient to fresh air, call physician or ambulance, if possible.
- B. If breathing is labored or has ceased, give artificial respiration IMMEDIATELY. Continue until physician available, even if person appears not to be breathing.

Should disaster conditions make it impossible to move to fresh air, keep your mask on and use resuscitator on patient.

NOTE: The H_2S trained operator will rig up equipment on second day after rig up and train all drilling hands, water/mud drivers, and Harken personnel. After completing H_2S training, the H_2S operator will be on standby until 4500' MD. At 4500', the H_2S operator will be on

location twenty-four hours per day until end of completion.

A continuous H₂S monitoring system with one H₂S detection head will be in operation located at the ranch house. Windssocks will also be set up to be easily seen at the ranch house.

C. H₂S Training and Drills:

1. Blowout Prevention Drills:

Pit drill and trip drill training will be held with each crew until proficient in closing in the well. Drills will be held on a regular basis thereafter, with at least one drill per crew each week. Drills are to be on a surprise basis with the drilling foreman or contract tool pusher triggering the alarm. Reaction time will be checked from the time the alarm goes off until the simulated well shut-in is completed. Closing time should be under two minutes. A copy of drilling procedures will be posted on the rig floor.

2. Hydrogen Sulfide Training and Drills:

H₂S safety training will be given to all personnel, including the correct fit and use of the self-contained breathing apparatuses, resuscitator, and artificial respirator. H₂S drills will be held on a surprise basis during the drilling, completion and tripping operations. The drilling foreman or contract tool pusher will trigger the H₂S alarm and crews will proceed to get the masks on and secure, as per posted completion procedures. Similar drills will be held during well completions to which completion foreman or unit operator will trigger alarms.

BEARDS WILL NOT BE PERMITTED

3. Safety Equipment

H₂S safety protection equipment will be available to (or assigned to) each person on location and training will be given in correct usage.

IV. CONTINGENCY PROCEDURES

A. Responsibility

In order to assure the proper execution of this plan, it is essential that one person be responsible for and in complete charge of implementing these procedures. The responsibility will be as follows:

1. Larry Chambers, Engineer, Harken Southwest Corporation, Farmington, New Mexico.

2. Drilling contractor, tool pusher; or, should he become disabled, foreman on tour.

B. Precaution

1. The drilling rig will be located to allow prevailing winds to blow across the rig towards the reserve pit.
2. Briefing stations will be provided with a safety equipment trailer at one or more stations. Personnel will assemble at the most upwind station under alarm conditions, or when so ordered by the drilling foreman or the safety representative. A wind sock or streamer will be anchored to the trailer.

A second streamer will be anchored at the end of the catwalk on a pole about 30 feet high so as to be in easy view of the rig floor and visible at night.

A separate supply of air cylinders must be located at the opposite side of location than the safety unit. At least one briefing area with wind sock will be upwind at all times.

3. Warning signs will be posted on the access road to the location. "NO SMOKING" signs will also be posted.
4. One automatic H₂S monitor will be provided by the safety company and the detector will be at the shale shaker. Another automatic detector will be on the rig floor, monitoring either on the rig floor or in the logging unit. Should the alarm be shut off to silence the siren, the blinking light must continue to warn of H₂S presence. The safety representative will continuously monitor the detector and will reactivate the alarm if H₂S concentrations increase to a dangerous level.
5. Do not permit sleeping in cars on location. Maintain a parking area remote from the location, preferably on the predominate upwind side of the site.
6. Explosion-proof electric fans (bug blowers) will be positioned to insure adequate circulation at all critical locations.
7. A gas trap, choke manifold and degasser will be installed.
8. A kill line, securely anchored and of ample strength, will be laid to the wellhead from a safe location. This line is to be used only in an emergency.
9. All swabbing and drill stem testing fluids containing H₂S shall be run through a separator to permit flaring of gas. The flare shall have a continuous flame.

10. Provision for blocking or monitoring access to the location during critical operations shall be provided.

C. Emergency Procedures and Definitions of Warning Signs

Condition GREEN - Normal Operations

Condition YELLOW - Moderate Danger, more than 10 ppm on location, authorized personnel only; uncontrolled well, poison gas present above threshold levels.

Safety Action:

1. Check safety equipment and keep it with you.
2. Do not panic.
3. The decision to ignite the well will be made only as a last resort and when it is clear that:
 - a. human life is endangered, and
 - b. there is no hope of controlling the well under prevailing conditions.Every effort should be made to notify Harken Southwest emergency phone numbers.
4. Order evacuation of local people within the danger zone from local authorities (State Police and Sheriff's Department) to evacuate people and to control traffic.
5. Notify Harken Southwest Corporation of well conditions.

D. Evacuation Procedures

1. The person in charge will activate the siren and notify the appropriate agencies and law officers that an emergency exists and help is needed.
2. The State Police will contact residents in the danger zone. they will start with those in a downwind direction.

EMERGENCY EVACUATION PLAN

Note:

This attachment shall be posted on the bulletin board contained in the doghouse, with extra copies contained in the contract tool pusher's trailer, company trailer and in the safety trailer.

Designation of Responsibility

In order to assure the proper execution of this plan, it is essential that one person is responsible for an in complete charge of implementing these procedures. therefore, responsibility shall be designated in the following order, depending on the person on location.

1. The company representative (foreman or consultant)
2. Contract tool pusher

Definition of Warning Signs

Condition GREEN: Normal Operations - with caution - potential danger

1. Be alert for a "change in condition" warning sign.
2. Before a zone has been perforated.
3. After a zone has been plugged and pressure tested.

Condition RED: Danger

1. Any time a well has been perforated in a known H₂S zone.
2. Circulation known H₂S zone.
3. Circulation gas out of known H₂S zone.
4. When swabbing known H₂S zone.
5. When testing known H₂S zone.
6. when performing DST in know H₂S zone.
7. Uncontrollable well.

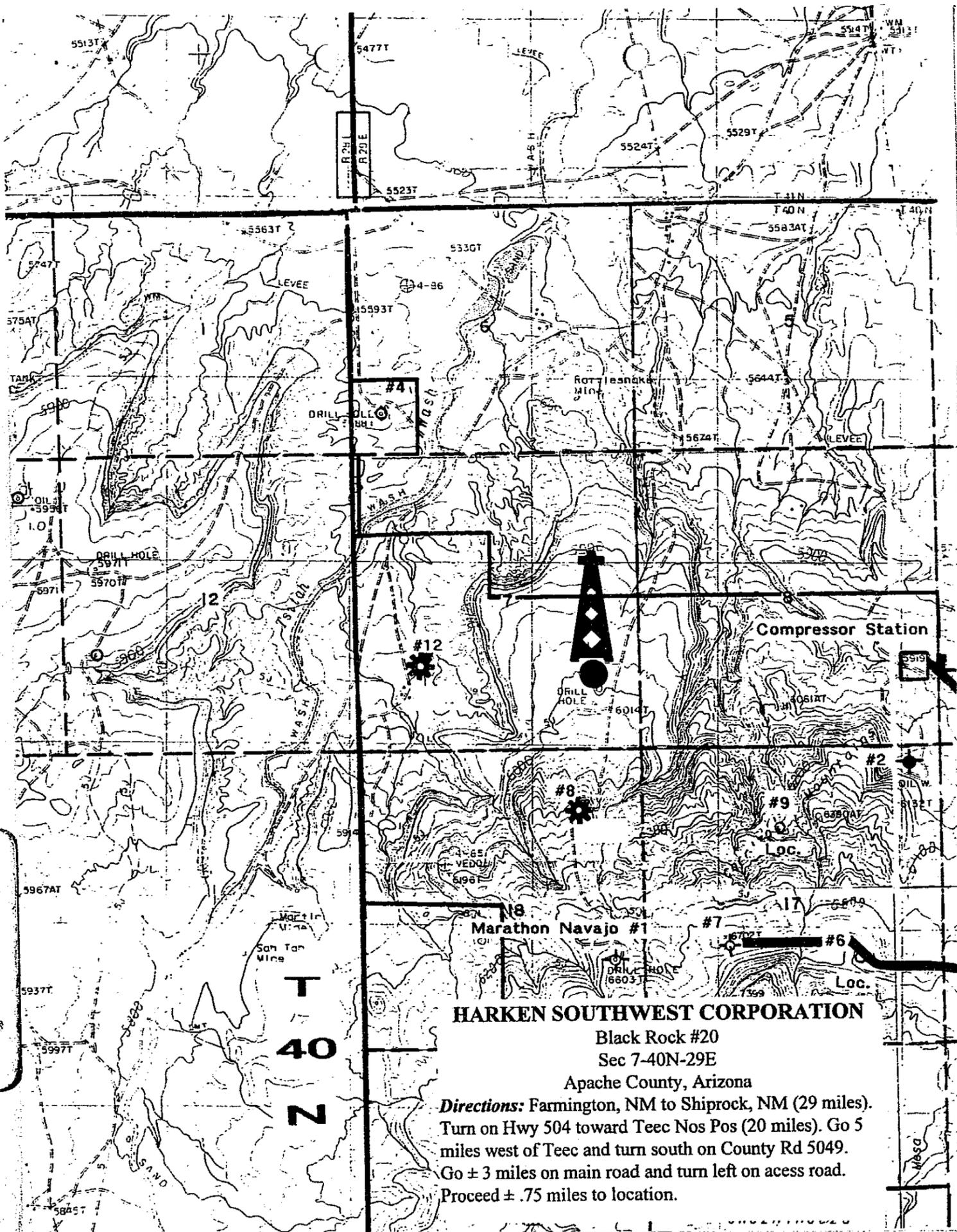
After any accidental release of potentially hazardous volume of H₂S, this program shall be initiated immediately.

1. Set off alarm. Evacuate all persons off location to "safe" briefing area, upwind. Check that all persons are present. If not, proceed with evacuation from hazardous area in the following manner:
 - a. two persons, if available, re-enter hazardous area with air packs and each

attached to an assistant via safety line. the assistant shall also be wearing respiratory equipment, but shall be outside the hazardous area.

- b. locate and evacuate all other persons in hazardous area to "safe" briefing area.
 - c. proceed with emergency first aid to all injured. Call hospital emergency ward. Alert them of the problems and have them send rescue vehicle immediately.
2. Locate, define problem, and proceed with emergency shut-in procedures per company blowout drill procedure.
 3. Stay in "safe" briefing area unless instructed to do otherwise.
 4. Only enter hazardous area with adequate air supply and attended by someone with a safety rope.

**THERE ARE NO RESIDENCES
WITHIN A 3000' RADIUS OF EXPOSURE**



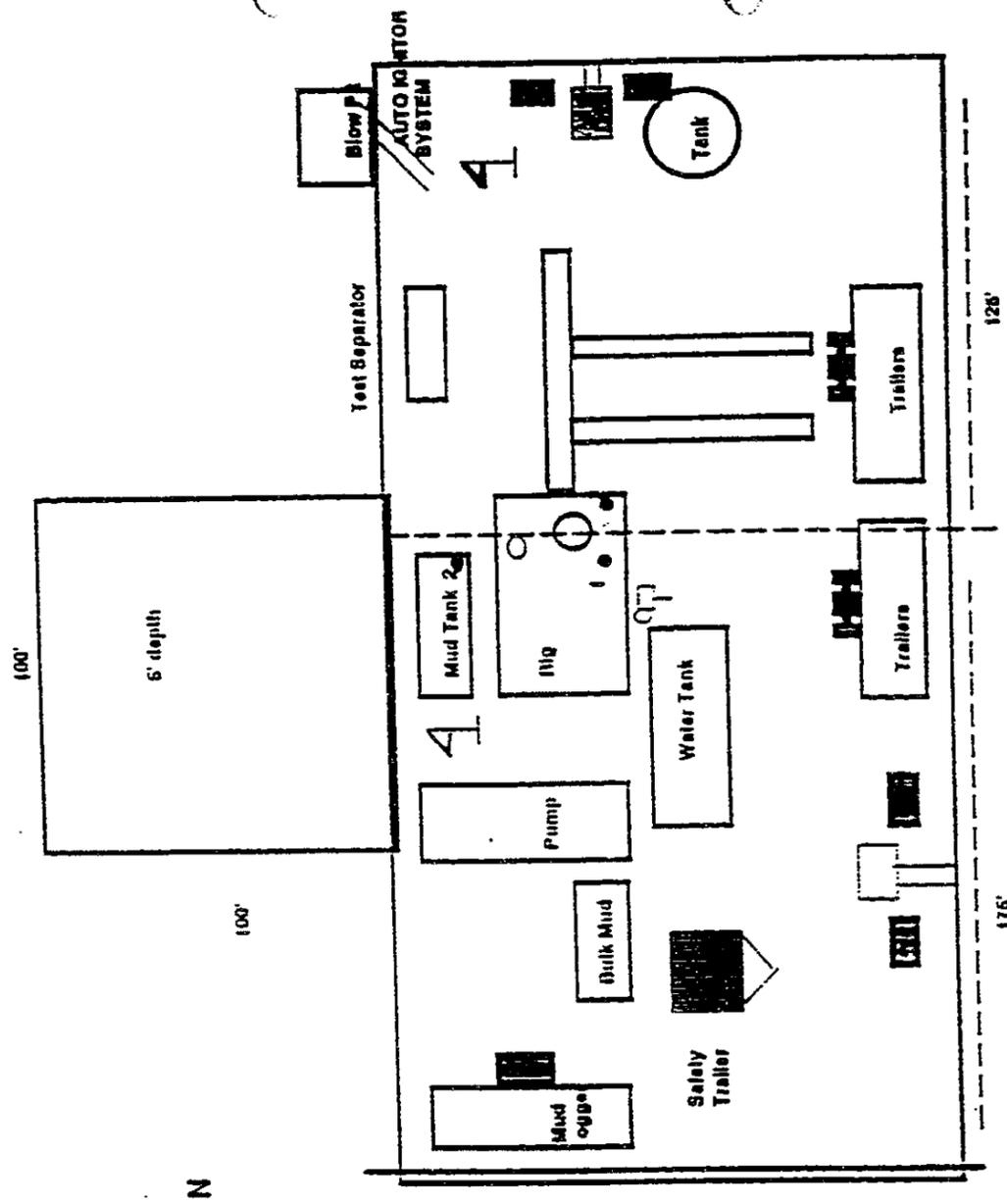
HARKEN SOUTHWEST CORPORATION

Black Rock #20

Sec 7-40N-29E

Apache County, Arizona

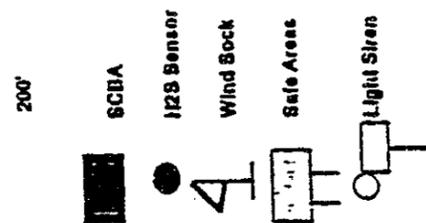
Directions: Farmington, NM to Shiprock, NM (29 miles).
 Turn on Hwy 504 toward Teec Nos Pos (20 miles). Go 5
 miles west of Teec and turn south on County Rd 5049.
 Go ± 3 miles on main road and turn left on access road.
 Proceed ± .75 miles to location.



HARKEN SOUTHWEST CORPORATION

Black Rock #20
 Sec 7-40N-29E
 Apache County, Arizona

Location Layout and Equipment



EMERGENCY TELEPHONE NUMBERS

San Juan County Sherrif's Department:

(602) 337-4321
(800) 352-1857

Arizona Department of Public Safety:

(602) 773-3600

Window Rock:(Dispatch for Navajo Nation)

(602) 871-6111 or 871-6112

Harken Southwest Corporation:

Farmington Office (505) 327-5531

Farmington Operations Engineer:

Larry Chambers (Cellular) (505) 320-3284
(Home) (505) 327-2941

Montezuma Creek Office (801) 651-3491

V. P. of Operations - Grand Prairie, TX:

Marshall Watson (817) 695-4900

NOTE: An Employee of Harken Southwest Corporation will notify the Bureau of Land Management - Farmington, New Mexico and the State of Arizona - Oil & Gas Conservation Commission.

EQUIPMENT LIST

1. (1) Safety Trailer with (10) 300 cu. ft. breathing bottles
2. Three (3) 5 man manifold systems
3. One (1) filler hose for hip pak and escape units
4. One (1) three channel monitor with alarm systems
5. Six (6) Scott SKA-PAK 30-minute units
6. Six (6) Scott SKA-PAK 5-minute workline units
7. Two (2) windsocks complete with frame and poles
8. Five (5) escape units
9. Two (2) briefing area signs
10. One (1) well condition sign
11. 1000 ft. breathing air hose
12. One (1) 24 unit first aid kit
13. One (1) 20 lb. fire extinguisher

CHECKLIST FOR DRILLING OR WORKOVER IN H₂S ENVIRONMENT

Pending Approval of Proposed NTL-10

Items 1-4 to be shown on site layout diagram. (Part 9 of NTL-6, 13 Point checklist.)

1. Two safety briefing areas at least 200 feet from wellhead and arranged so that at least one area will always be upwind of the well at all times.
2. Direction of prevailing winds.
3. Windssock locations. (minimum of two. NTL-10, 11-A-4).
4. A second emergency escape route from the location. (Flagged trail minimum.)
5. Number, types, and storage locations of H₂S respirators for personnel, and number of personnel to be expected at any on time.
6. H₂S detector locations. (Should at least include cellar or bell nipple and mud tanks at shale shaker.) Type and location of audible, visual alarm to be used (NTL-10, 11-A-3).
7. H₂S evacuation and emergency training procedures and frequency. (NTL-10, aa-A-1-b).
8. Area residents within a two mile radius and agencies to be notified in an emergency (contingency plan). (NTL-10-1D).
9. Types and quantities of mud additives and scavengers to be available to location from H₂S operations.
10. Design features and operational procedures to be used to protect the drill string, casing strings, wellhead, BOP's, choke lines and manifold, and other well killing equipment H₂S environment. (A certification by the operator on the APD that all equipment meets standards for H₂S service is acceptable to compliance).
11. Appropriate warning signs and flags on all access roads to location (NTL-10, 11-(4).)
12. Provision for blocking or monitoring access to location during critical operations.
13. Ventilation fan under rig floor.
14. In event of uncontrolled blowout, a local official has the authority to ignite flow.
15. Swabbing or drill stem testing fluids containing H₂S should be through a separator to permit flaring of gas. Flare should have continuous pilot light to insure ignition of all such gas.

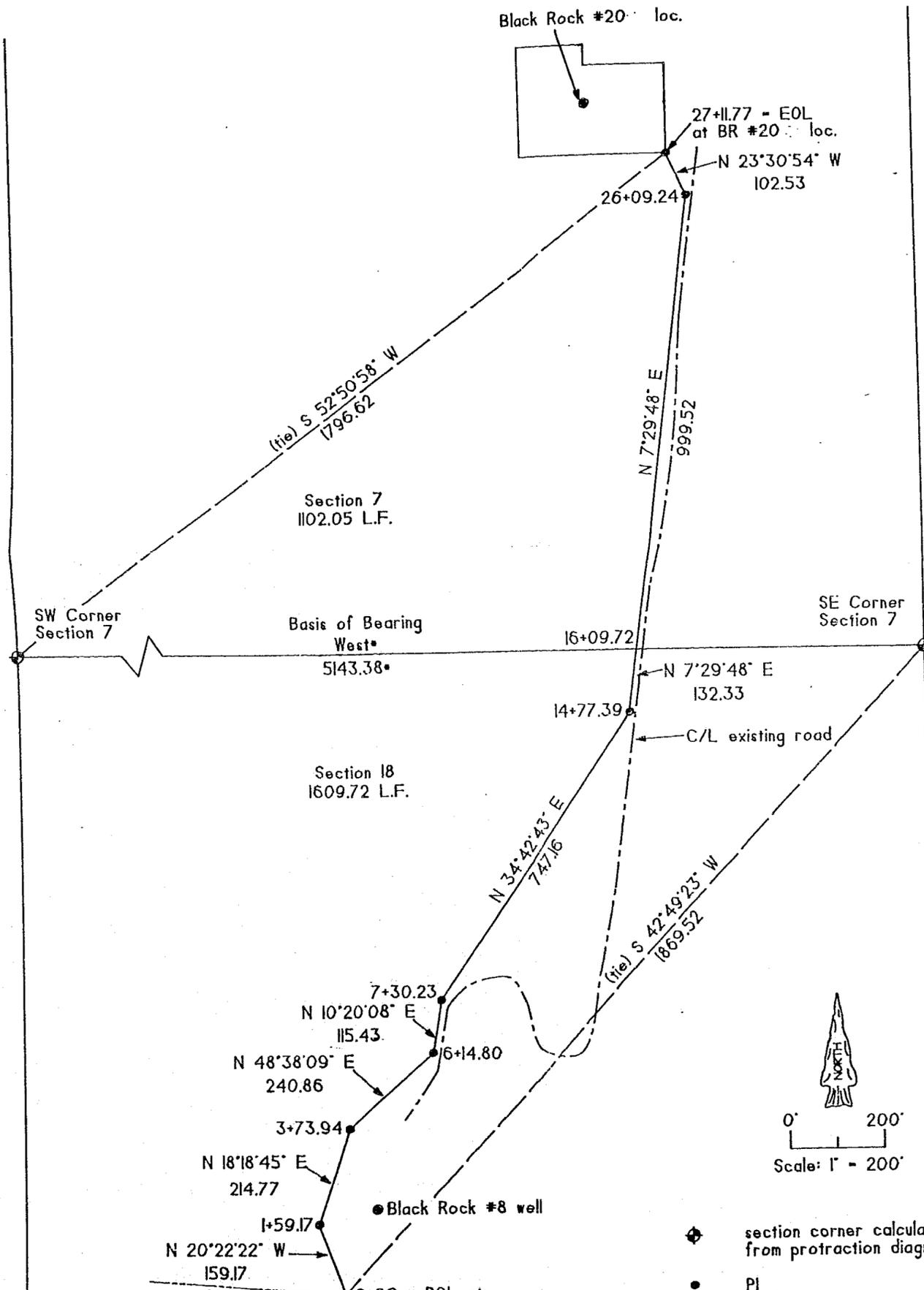
CHUSKA ENERGY CO.
CHAP COST TRANSACTION ACCOUNT

P.O. BOX 619
DALLAS, TX 75202

NO. 009578

PAYMENT ADVICE

INVOICE		COMMENT	GROSS	DEDUCTIONS	AMOUNT PAID
NUMBER	DATE				
7/19/94 ck req	7/19/94	State permitting fee for Black Rock #20 Apache Co., Arizona <i>rec'd 7-21-94 # 3068</i>			\$25.00



"APPLICANT'S CERTIFICATE"

I, Larry A. Chamberlain do hereby certify that I am the manager for HARKEN SOUTHWEST CORP., hereafter designated the applicant; that Gerald G. Huddleston who subscribed to the foregoing affidavit, is employed by the applicant as a Land Surveyor and that he was directed by the applicant to survey the location of the pipeline right-of-way, on Navajo Tribal Trust Land, located in Apache County, Arizona, 2711.77 feet, 0.51 miles in length, beginning at station 0+00 at the existing Black Rock Main Pipeline in Section 18, T.40 N., R.29 E., G.S.R.B.M., to station 27+11.77 at the Black Rock #20 location in Section 7, T.40 N., R.29 E., G.S.R.B.M., is accurately represented on this map; that such survey as represented on this map has been adopted by the applicant as the definite location of the right-of-way thereby shown; and that the map has been prepared to be filed with the Secretary of the Interior or his duly authorized representative as part of the application for said right-of-way to be granted the applicant, its successors and assigns, with right to construct, maintain and repair improvements, thereon and thereover, for such purposes, and with the further right in the applicant, its successors and assigns, to transfer this right-of-way by assignment, grant or otherwise.

Larry A. Chamberlain 7-26-98
 Manager, Harken Southwest Corp. - Applicant

"SURVEYOR'S AFFIDAVIT"

STATE OF COLORADO:

: ss

COUNTY OF MOHAVE :

Gerald G. Huddleston being first duly sworn, deposes and states that he is a Land Surveyor; that the survey was made by him (or under his direction); that he has examined the field notes of the survey for a right-of-way, as described and shown on this map; located on Navajo Tribal Trust Land, Apache County, Arizona, 2711.77 feet, 0.51 miles in length, beginning at station 0+00 at the existing Black Rock Main Pipeline in Section 18, T.40 N., R.29 E., G.S.R.B.M., to station 27+11.77 at the Black Rock #20 location in Section 7, T.40 N., R.29 E., G.S.R.B.M., is accurately located on this map.

Subscribed and sworn to before me this 25 day of July 19 98
Ricardo B. Balle
 Notary Public, My Commission expires July 13, 1998

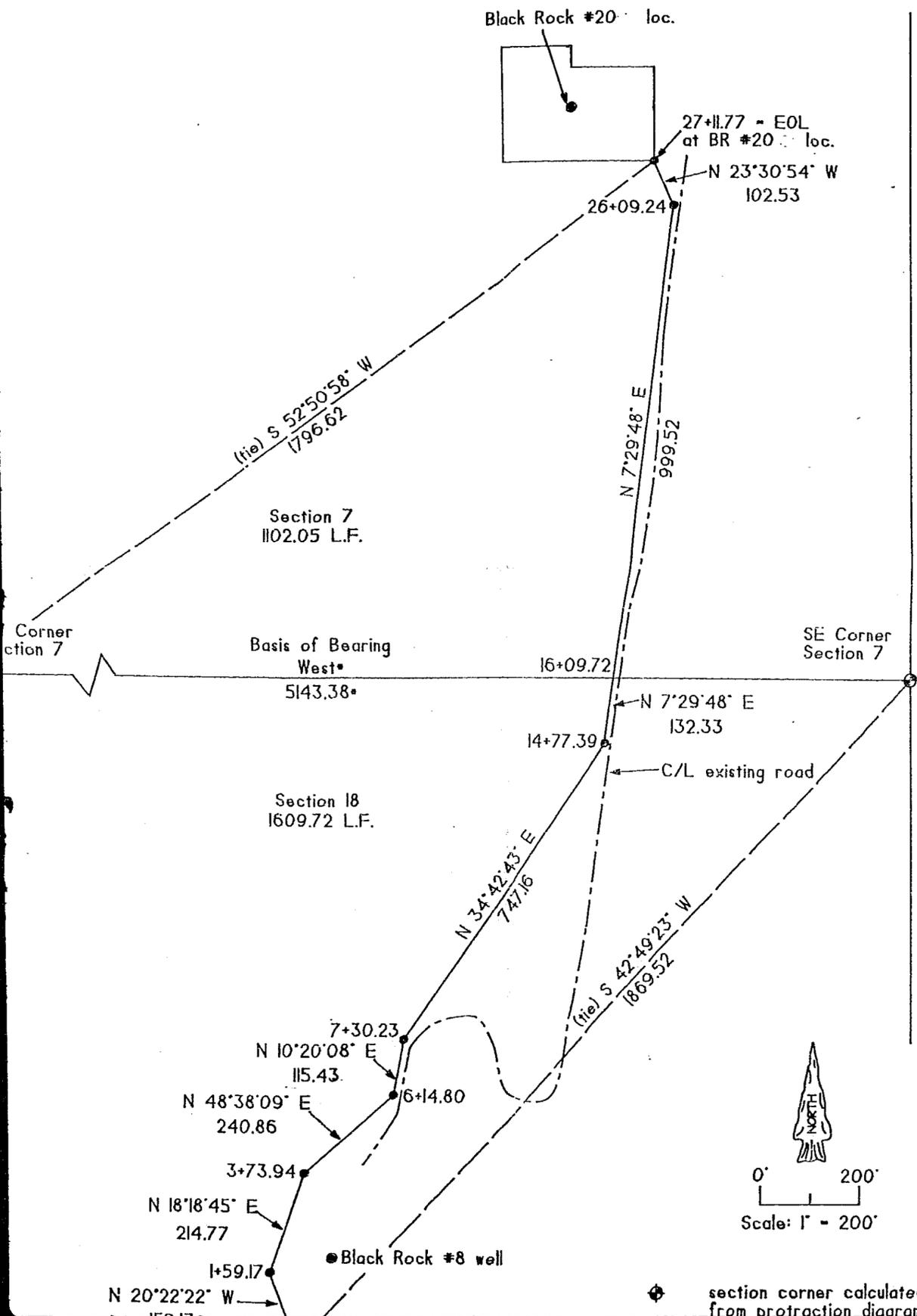
CENTERLINE DESCRIPTION DATA:

POINT	BEARING	DISTANCE
SE CORNER SECTION 7, T.40 N., R.29 E.		
(TIE)	S 42°49'23" W	1869.52
0+00 = BOL AT EXISTING BLACK ROCK MAIN PIPELINE	N 20°22'22" W	159.17
1+59.17	N 18°18'45" E	214.77
3+73.94	N 48°38'09" E	240.86
6+14.80	N 10°20'08" E	115.43
7+30.23	N 34°42'43" E	747.16
14+77.39	N 07°29'48" E	132.33
16+09.72 SECTION LINE 18/7	N 07°29'48" E	999.52
26+09.24	N 23°30'54" W	102.53
27+11.77 = EOL AT BLACK ROCK #20 LOCATION (TIE)	S 52°50'58" W	1796.62
SW CORNER SECTION 7, T.40 N., R.29 E.		



HARKEN SOUTHWEST CORP.

Proposed pipeline right-of-way for



"APPLICANT'S CERTIFICATE"

I, Larry A. Chambers do hereby certify that I am the manager for HARKEN SOUTHWEST CORP., hereafter designated the applicant; that Gerald G. Huddleston who subscribed to the foregoing affidavit, is employed by the applicant as a Land Surveyor and that he was directed by the applicant to survey the location of the pipeline right-of-way, on Navajo Tribal Trust Land, located in Apache County, Arizona, 2711.77 feet, 0.51 miles in length, beginning at station 0+00 at the existing Black Rock Main Pipeline in Section 18, T.40 N., R.29 E., G.S.R.B.M., to station 27+11.77 at the Black Rock #20 location in Section 7, T.40 N., R.29 E., G.S.R.B.M., is accurately represented on this map; that such survey as represented on this map has been adopted by the applicant as the definite location of the right-of-way thereby shown; and that the map has been prepared to be filed with the Secretary of the Interior or his duly authorized representative as part of the application for said right-of-way to be granted the applicant, its successors and assigns, with right to construct, maintain and repair improvements, thereon and thereover, for such purposes, and with the further right in the applicant, its successors and assigns, to transfer this right-of-way by assignment, grant or otherwise.

Larry A. Chambers 7-26-98
 Manager, Harken Southwest Corp. - Applicant

"SURVEYOR'S AFFIDAVIT"

STATE OF COLORADO:

:ss

COUNTY OF MONTEZUMA :

Gerald G. Huddleston being first duly sworn, deposes and states that he is a Land Surveyor; that the survey was made by him (or under his direction); that he has examined the field notes of the survey for a right-of-way, as described and shown on this map; located on Navajo Tribal Trust Land, Apache County, Arizona, 2711.77 feet, 0.51 miles in length, beginning at station 0+00 at the existing Black Rock Main Pipeline in Section 18, T.40 N., R.29 E., G.S.R.B.M., to station 27+11.77 at the Black Rock #20 location in Section 7, T.40 N., R.29 E., G.S.R.B.M., is accurately located on this map.

Subscribed and sworn to before me this 25 day of July, 19 98
Gerald G. Huddleston
 Notary Public, My Commission expires July 13 1998

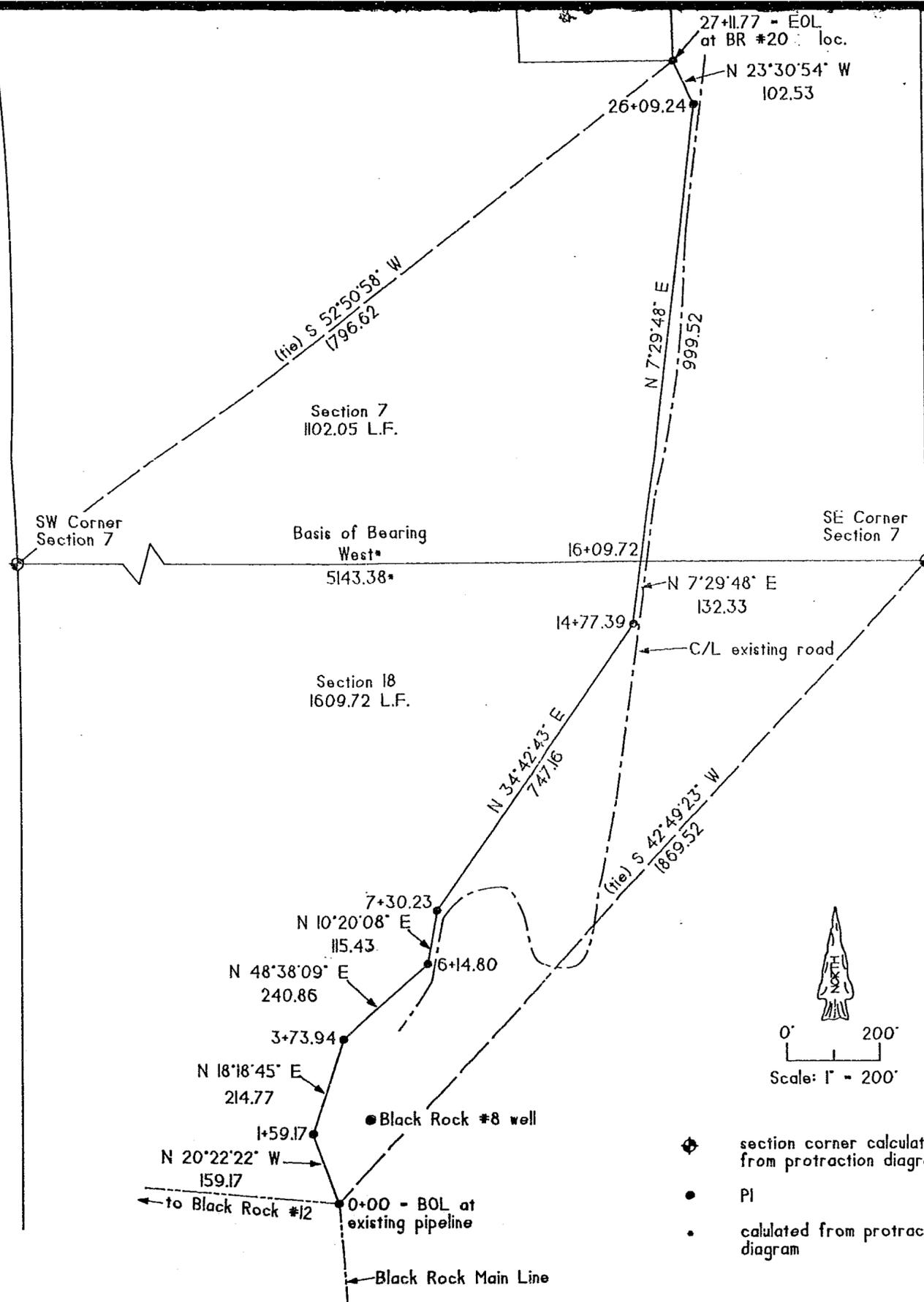


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HARKEN SOUTHWEST CORP.

SECTION 7-40N-29E, Apache Co., (882)



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Gary R. Haddleston 7-26-98
Manager, Harken Southwest Corp. - Applicant

"SURVEYOR'S AFFIDAVIT"

STATE OF COLORADO:

:ss

COUNTY OF MONTEZUMA:

Gerald G. Haddleston being first duly sworn, deposes and states that he is a Land Surveyor; that the survey was made by him (or under his direction); that he has examined the field notes of the survey for a right-of-way, as described and shown on this map; located on Navajo Tribal Trust Land, Apache County, Arizona, 2711.77 feet, 0.51 miles in length, beginning at station 0+00 at the existing Black Rock Main Pipeline in Section 18, T.40 N., R.29 E., G.S.R.B.M., to station 27+11.77 at the Black Rock #20 location in Section 7, T.40 N., R.29 E., G.S.R.B.M., is accurately located on this map.

Gerald G. Haddleston
Subscribed and sworn to before me this 25 day of July, 1998
Diana Brubaker
Notary Public, My Commission expires July 13, 1998

CENTERLINE DESCRIPTION DATA:

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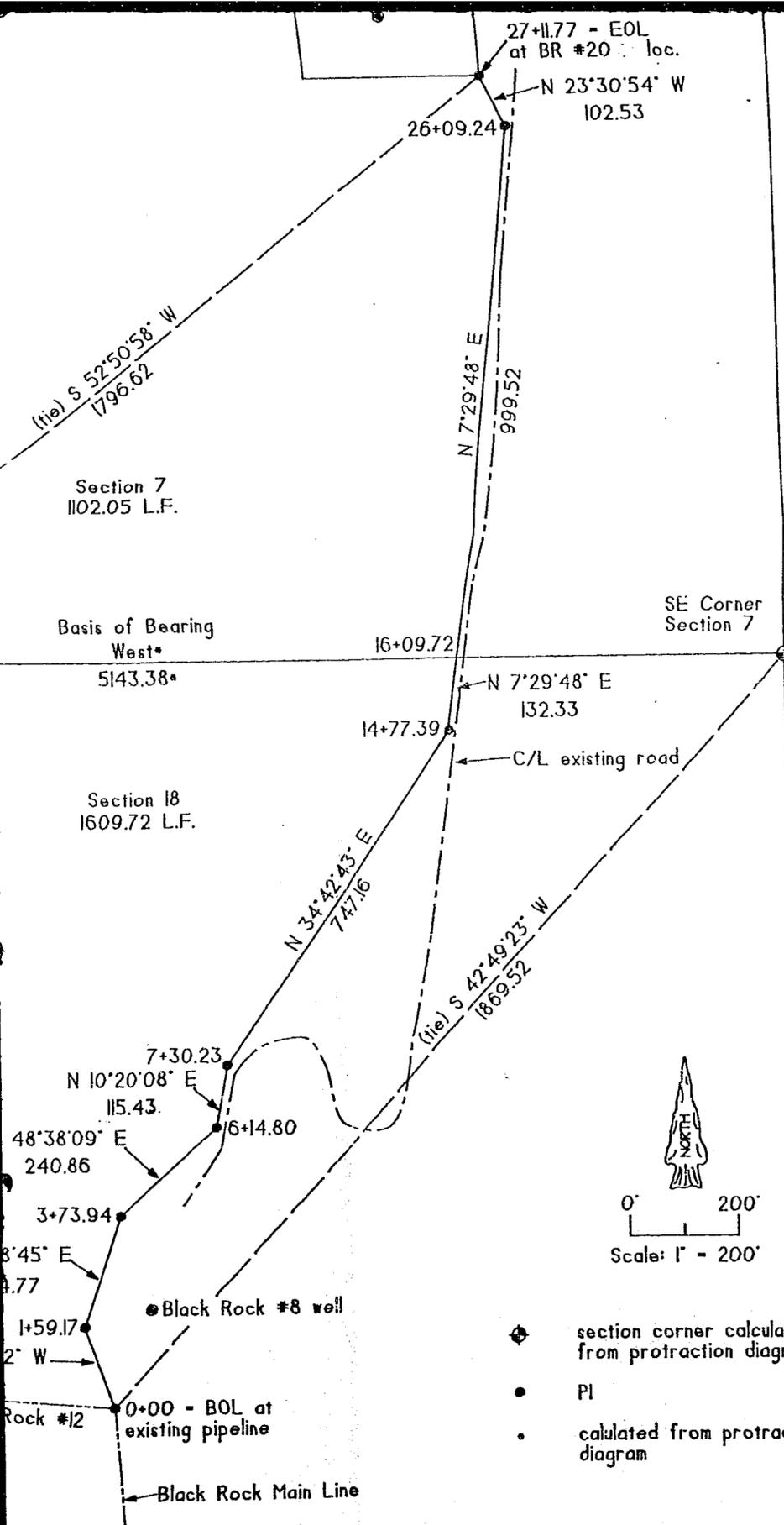


HARKEN SOUTHWEST CORP.

Proposed pipeline right-of-way for Black Rock #20 location Sections 7 & 18. T.40 N., R.29 E., G.S.R.B.M., Apache County, Arizona. 7/14/98

14 July 1994

HADDLESTON LAND SURVEYING
P.O.B KK - CORTEZ, COLORADO 81321 - (303) 565-3330



pipeline right-of-way, on Navajo Tribal Trust Land, located in Apache County, Arizona, 2711.77 feet, 0.51 miles in length, beginning at station 0+00 at the existing Black Rock Main Pipeline in Section 18, T.40 N., R.29 E., G.S.R.B.M., to station 27+11.77 at the Black Rock #20 location in Section 7, T.40 N., R.29 E., G.S.R.B.M., is accurately represented on this map; that such survey as represented on this map has been adopted by the applicant as the definite location of the right-of-way thereby shown; and that the map has been prepared to be filed with the Secretary of the Interior or his duly authorized representative as part of the application for said right-of-way to be granted the applicant, its successors and assigns, with right to construct, maintain and repair improvements, thereon and thereover, for such purposes, and with the further right in the applicant, its successors and assigns, to transfer this right-of-way by assignment, grant or otherwise.

Gary A. Hudson 7-26-94
 Manager, Harken Southwest Corp. - Applicant

"SURVEYOR'S AFFIDAVIT"

STATE OF COLORADO:

: ss

COUNTY OF MONTEZUMA :

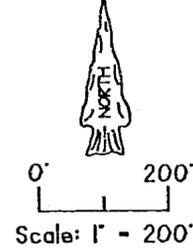
Gerald G. Huddleston being first duly sworn, deposes and states that he is a Land Surveyor; that the survey was made by him (or under his direction); that he has examined the field notes of the survey for a right-of-way, as described and shown on this map; located on Navajo Tribal Trust Land, Apache County, Arizona, 2711.77 feet, 0.51 miles in length, beginning at station 0+00 at the existing Black Rock Main Pipeline in Section 18, T.40 N., R.29 E., G.S.R.B.M., to station 27+11.77 at the Black Rock #20 location in Section 7, T.40 N., R.29 E., G.S.R.B.M., is accurately located on this map.

Gerald G. Huddleston

Subscribed and sworn to before me this 25 day of July, 19 94
Rene B. Balle
 Notary Public, My Commission expires July 13, 1998

CENTERLINE DESCRIPTION DATA:

POINT	BEARING	DISTANCE
SE CORNER SECTION 7, T.40 N., R.29 E.		
(TIE)	S 42°49'23" W	1869.52
0+00 = BOL AT EXISTING BLACK ROCK MAIN PIPELINE		
	N 20°22'22" W	159.17
1+59.17		
	N 18°18'45" E	214.77
3+73.94		
	N 48°38'09" E	240.86
6+14.80		
	N 10°20'08" E	115.43
7+30.23		
	N 34°42'43" E	747.16
14+77.39		
	N 07°29'48" E	132.33
16+09.72 SECTION LINE 18/7		
	N 07°29'48" E	999.52
26+09.24		
	N 23°30'54" W	102.53
27+11.77 = EOL AT BLACK ROCK #20 LOCATION		
(TIE)	S 52°50'58" W	1796.62
SW CORNER SECTION 7, T.40 N., R.29 E.		



- ◆ section corner calculated from protraction diagram
- PI
- calculated from protraction diagram

HARKEN SOUTHWEST CORP.

Proposed pipeline right-of-way for
 Black Rock #20 location P/N 882
 Sections 7 & 18.
 T.40 N., R.29 E., G.S.R.B.M.
 Apache County, Arizona
 14 July 1994

HUDDLESTON LAND SURVEYING
 P.O. BOX - CORTEZ, COLORADO 81321 - (303) 565-3330



SE SE 7-40N-29E, Apache Co. (882)

BLACK ROCK FIELD

Operator: RIM Southwest Corporation

Bond Company*: Indian lands, evidence of bond posted with BIA

RLI Insurance Co. \$150,000 BIA Nationwide Bond No. RLB0003993

Date of Bond: 11/26/01

Date approved: _____

*** Pursuant to Commission motion of October 31, 1997, no bond required with State of Arizona upon evidence of bond posted with the BIA.**

Permits covered by this bond posted with the BIA:

Dry Mesa Field 077
 106
 115
 852
 907

Black Rock Field 559
 581
 868
 871
 875
 882 ✓

IEC-07-2001 14:35

THE RIM COMPANIES

7995828 P.02/04

BOND No. RLB0003993

Form 5-5430
990

UNITED STATES
BUREAU OF INDIAN AFFAIRS

COPY

COLLECTIVE BOND

KNOW ALL MEN BY THESE PRESENTS, That we, RIM Operating, Inc., RIM Offshore, Inc., and
IM Southwest Corporation of _____, as principal _____,
and RLI Insurance Company

of 8 Greenway Plaza, #400, Houston, TX 77046, as surety _____, are held and firmly bound unto the United States of
America in the sum of One Hundred Fifty Thousand Dollars, lawful money of the United States, for the payment
of which, well and truly to be made, we bind ourselves and each of us, our and each of our heirs, successors, executors,
administrators, and assigns, jointly and severally, firmly by these presents.

Sealed with our seals and dated this 26th day of November _____, XX2001

The condition of this obligation is such that whereas the said principal _____, as lessee/operator _____, has heretofore
or may hereafter enter into or otherwise acquire an interest in Oil and Gas

lease(s)/permit(s)/mineral agreement(s) on the Navajo Nation
BIA Lease #14-20-603-373; BIA Lease #14-20-5297;
Reservation in the State of Utah covering: Lease Serial #N00-C-14-20-3002; BIA Lease #14-20-603-4190

of various dates and periods of duration, covering lands or interests in lands held by the United States in trust for individual
Indians, or bands or tribes of Indians, or subject to restrictions against alienation without the consent of the Secretary of
the Interior, or his authorized representative, which leases, permits or mineral agreements have been or may hereafter be
granted or approved by the Secretary of the Interior, or his authorized representative, and the identification of which herein
is expressly waived by both principal _____ and surety _____ hereto.

WHEREAS the principal _____ and surety _____ agree that the coverage of this bond shall extend to and include all
extensions and renewals of the leases, permits and mineral agreements covered by this bond, such coverage to continue
without any interruptions due to the expiration of the terms set forth therein.

WHEREAS the surety _____ hereby waives any right to notice of any modification of any such lease, permit or
mineral agreement, or obligation thereunder whether effected by extension of time for performance, by commitment of such
lease/permit/mineral agreement to unit, cooperative, or communitization agreement, by waiver, suspension, or change in
rental, by minimum royalty payment, or otherwise, this bond to remain in full force and effect notwithstanding.

WHEREAS the principal _____ and surety _____ agree that the neglect or forbearance of any obligee under this bond in
enforcing the payment of any rental or royalty or the performance of any other covenant, condition, or agreement of any
such lease/permit/mineral agreement or Federal regulations shall not in any way release the principal _____ and surety _____, or
either of them, from any liability under this bond; and

WHEREAS the principal _____ and surety _____ agree that in the event of any default under any such lease, permit or
mineral agreement, the obligee may prosecute any claim, suit, action, or other proceeding against the principal _____ and
surety _____, or either of them, without the necessity of joining the other.

Now, if the said principal herein shall faithfully carry out and observe all the obligations assumed in such lease(s), permit(s) or mineral agreement(s) to which * see below is now or may hereafter become a party, and shall observe all the laws of the United States and regulations made, or which shall be made thereunder, for the government of trade and intercourse with Indian tribes, and all rules and regulations that have been or shall hereafter be lawfully prescribed by the Secretary of the Interior relative to such lease(s), permit(s) and mineral agreement(s), and shall in all particulars comply with the provisions of such leases, permits, mineral agreements, rules, and regulations, then the obligation shall be null and void; otherwise, to remain in full force and effect. No bond liability shall be terminated without written approval of the Bureau of Indian Affairs.

The rate of premium charged on this bond is \$ _____; the total premium paid is \$ _____

Signed and sealed in the presence of-

WITNESSES:

BY: *Ken Kunsalik*
 5 INVERNESS DRIVE EAST
 P.O. ENGLEWOOD, CO. 80112

BY: *Shano M. Mung*
 5 INVERNESS DRIVE EAST
 P.O. ENGLEWOOD, CO. 80112

BY: *Mary Coy*
 8 Greenway Plaza, #400
 P.O. HOUSTON, TX 77046

BY: *[Signature]*
 8 Greenway Plaza, #400
 P.O. HOUSTON, TX 77046

*RIM Operating, Inc.; RIM Offshore, Inc. and RIM Southwest Corporation

as to *Robert A. Veer* (SEAL)
 Vice President,
 RIM OPERATING, INC.
 RIM OFFSHORE, INC.
 RIM SOUTHWEST CORPORATION

RLI Insurance Company

as to *Paul M. O'Sullivan* (SEAL)
 Paul M. O'Sullivan, Attorney-in-Fact

* Two witnesses to all signatures.

UNITED STATES
 DEPARTMENT OF THE INTERIOR
 BUREAU OF INDIAN AFFAIRS

APPROVED: Pursuant to Secretarial Redlegation
 Order 209 DM 8, Secretary's Order
 No. 3150, as amended, and 10 BIAM
 Bulletin 13, as amended.

_____, 19____
 Area Director

DEC-07-2001 14:36

THE RIM COMPANIES

7995828 P.04/04

RLI

RLI Insurance Company | 9025 North Lindbergh Dr.
Peoria, IL 61615-1499 | Ph. (309) 692-1000

BOND NO. RLB0003993

POWER OF ATTORNEY
RLI Insurance Company

Know All Men by These Presents:

That the RLI INSURANCE COMPANY, a corporation organized and existing under the laws of the State of Illinois, and authorized and licensed to do business in all states and the District of Columbia does hereby make, constitute and appoint: PAUL M. O'SULLIVAN in the City of HOUSTON, State of TEXAS, as Attorney-in-Fact, with full power and authority hereby conferred upon him to sign, execute, acknowledge and deliver for and on its behalf as Surety and as its act and deed, all of the following classes of documents to-wit:

\$150,000.00

Indemnity, Surety and Undertakings that may be desired by contract, or may be given in any action or proceeding in any court of law or equity; policies indemnifying employers against loss or damage caused by the misconduct of their employees; official, bail and surety and fidelity bonds. Indemnity in all cases where indemnity may be lawfully given; and with full power and authority to execute consents and waivers to modify or change or extend any bond or document executed for this Company, and to compromise and settle any and all claims or demands made or existing against said Company.

The RLI INSURANCE COMPANY further certifies that the following is a true and exact copy of a Resolution adopted by the Board of Directors of RLI Insurance Company, and now in force to-wit:

"All bonds, policies, undertakings, Powers of Attorney, or other obligations of the corporation shall be executed in the corporate name of the Company by the President, Secretary, any Assistant Secretary, Treasurer, or any Vice President, or by such other officers as the Board of Directors may authorize. The President, any Vice President, Secretary, any Assistant Secretary, or the Treasurer may appoint Attorneys-in-Fact or Agents who shall have authority to issue bonds, policies, or undertakings in the name of the Company. The corporate seal is not necessary for the validity of any bonds, policies, undertakings, Powers of Attorney, or other obligations of the corporation. The signature of any such officer and the corporate seal may be printed by facsimile."

(Blue shaded areas above indicate authenticity)

IN WITNESS WHEREOF, the RLI Insurance Company has caused these presents to be executed by its PRESIDENT, CEO with its corporate seal affixed this

ATTEST:

Camille J. Hensley
Corporate Secretary

RLI INSURANCE COMPANY

By: Jonathan E. Michael
President, CEO

State of Illinois)
County of Peoria) SS

On this 26 day of Nov. 2001 before me, a Notary Public, personally appeared Jonathan E. Michael and Camille J. Hensley, who being by me duly sworn, acknowledged that they signed the above Power of Attorney as President, CEO and Corporate Secretary, respectively, of the said RLI INSURANCE COMPANY, and acknowledged said instrument to be the voluntary act and deed of said corporation.

Cherie L. Montgomery
Notary Public



UTCS 904 (01/01)

TOTAL P.04



Jane Dee Hull
Governor

State of Arizona
Arizona Geological Survey
416 W. Congress, Suite 100
Tucson, Arizona 85701
(520) 770-3500



Larry D. Fellows
Director and State Geologist

February 13, 2001

CERTIFIED MAIL

Mr. Robert L. Vesco
Vice-President
RIM Southwest Corporation
5 Inverness Drive East
Denver CO 80112

Re: Release of State-wide Performance Bond CD #2578904

Dear Mr. Vesco:

This will acknowledge evidence of RIM Southwest Corporation's bonding with the U.S. Department of the Interior, Bureau of Indian Affairs. As a result, the referenced certificate of deposit and executed release form are enclosed.

Sincerely,

Steven L. Rauzi
Oil & Gas Administrator

Enclosures

SENDER: COMPLETE THIS SECTION		COMPLETE THIS SECTION ON DELIVERY	
U.S. Postal Service CERTIFIED MAIL RECEIPT <small>(Domestic Mail Only; No Insurance Coverage Provided)</small>		and 3. Also complete Delivery is desired. address on the reverse in the card to you. the back of the mailpiece, ce permits.	
ENGLEWOOD, CO 80112		A. Received by (Please Print Clearly)	B. Date of Delivery 2/16/01
Postage \$	0.34	C. Signature X Cathy Stentz	<input type="checkbox"/> Agent <input type="checkbox"/> Addressee
Certified Fee	1.90	D. Is delivery address different from item 1? If YES, enter delivery address below:	<input type="checkbox"/> Yes <input type="checkbox"/> No
Return Receipt Fee (Endorsement Required)	1.50		
Restricted Delivery Fee (Endorsement Required)		3. Service Type	<input checked="" type="checkbox"/> Certified Mail <input type="checkbox"/> Express Mail <input type="checkbox"/> Registered <input type="checkbox"/> Return Receipt for Merchandise <input type="checkbox"/> Insured Mail <input type="checkbox"/> C.O.D.
Total Postage & Fees \$	3.74	4. Restricted Delivery? (Extra Fee)	<input type="checkbox"/> Yes
Sent To MR ROBERT L VESCO - RIMSW Street, Apt. No. or PO Box No 5 INVERNESS DRIVE EAST City, State, ZIP+4 DENVER CO 80112		(from service label) 76 0006 0179 85916	
P.S. Form 3800, May 2000. See Reverse for Instructions.		Domestic Return Receipt 102595-00-M-0952	

SECURITIES SAFEKEEPING
 1700 WEST WASHINGTON ST. - PHOENIX, ARIZONA 85007

DATE: 02/05/01

STATE AGENCY NO. _____

STATE AGENCY ARIZONA GEOLOGICAL SURVEY/OIL&GAS COMM.

State Treasurer's Use Only

COMPANY CHUSKA ENERGY CO. / 7100 N. Southwest Hwy
1850 MT DIABLO BLVD STE 640
WALNUT CA 94500

DOMESTIC FOREIGN

DEPOSIT

C.D. NO.:

BANK:

MATURITY DATE:

INTEREST RATE: %

AMOUNT \$

C.D. ASSIGNMENT MUST BE ATTACHED UNLESS C.D. IS PAYABLE TO STATE TREASURER

RELEASE

C.D. NO.: 2578904 ✓
 ACCT NO.: 8272-4968 ✓
 BANK: VALLEY NATIONAL BANK OF ARIZONA ✓

MATURITY DATE: 05/30/90 ✓

INTEREST RATE: 7.30% Received Arizona State Treas Inc 07 February 2001 14:19:06

AMOUNT \$ 25,000.00 ✓

STATE TREASURER VALIDATION NO. _____

RECEIVED THE ABOVE RELEASE	STATE AGENCY AUTHORIZATION
BY <u>Larry D. Williams</u> 05 Feb 01 Authorized Signature Date	BY <u>Larry D. Williams</u> 05 Feb 01 Authorized Signature
ARIZONA GEOLOGICAL SURVEY Bank or Firm	BY <u>Katherine Liberto</u> Authorized Signature
FOR BANK USE ONLY	BANK AUTHORIZATION
Checked by _____ Verified by _____	BY _____ Authorized Signature
	STATE'S DEPOSITORY BANK

ASSIGNMENT TO ARIZONA STATE TREASURER
 SECURITY IN LIEU OF CASH DEPOSIT FOR COMPLIANCE WITH
 SECTION 35-155 ARIZONA REVISED STATUTES

AZ OIL & GAS
 CONSERVATION COMMISSION

DEC 11 1989

NAME Chuska Energy Company
 STREET ADDRESS 1250 N.E. Loop 410 Suite 710 San Antonio CITY
 COUNTY Bexar STATE Texas TELEPHONE NUMBER 512-821-6194

hereinafter referred to as ASSIGNOR, does hereby assign and transfer to the Treasurer of the State of Arizona, hereinafter referred to as the TREASURER, all right, title and interest of any kind whatsoever, owned or held by Assignor in the principal, but not in the interest hereinafter accruing after the date of this assignment in the insured account of ASSIGNOR so long as such funds remain on deposit in the

Valley National Bank of Arizona - Valley Center Office
 FINANCIAL INSTITUTION

whose address is 241 N. Central Phoenix Mariposa
 STREET ADDRESS CITY COUNTY

Arizona, as evidenced by an account in the amount of Twenty-Five Thousand dollars (\$ 25,000) identified by account number 8272-4968 which account is insured by the Federal Deposit Insurance Corporation or the Federal Savings and Loan Insurance Corporation. This assignment is given as security for compliance with ARS 27-501 to 539 and with the Rules of the Oil and Gas Conservation Commission.

Dated this 30th day of November, 19 89, at San Antonio Texas Arizona.

IMPORTANT - SIGNATURE OF ASSIGNOR

This Assignment shall be signed by the Individual Himself

BY: Chuska Energy Company
Name of Assignor Exactly as Shown Above
Kenneth P. Neelan Executive Vice



Valley National Bank of Arizona

BRANCH Valley Center

Certificate of Deposit
 NON TRANSFERABLE

2578904
 BRANCH NO. 137 DATE 12-1-89

THIS CERTIFIES THAT THERE HAS BEEN DEPOSITED IN THIS BANK

25,000 dol's 00cts
 PAY TO Arizona State Treasurer
 ACCOUNT NO. 8272-4968 \$ 25,000.00

(UPON SURRENDER OF THIS CERTIFICATE PROPERLY ENDORSED)

For Chuska Energy Co
 1850 Mt Diablo Blvd Ste 640
 Walnut CA 94500

THIS CERTIFICATE MATURES IN 180 Days FROM ISSUE DATE ON May 30, 1990
 INTEREST IS TO BE PAID Monthly
 AT THE RATE OF 7.3 % PER ANNUM ON A 365 DAY YEAR BASIS.
 FIRST INTEREST PAYMENT DUE 12-30-89

SINGLE MATURITY - INTEREST CEASES AT MATURITY.
 AUTOMATICALLY RENEWABLE - THIS CERTIFICATE WILL AUTOMATICALLY RENEW EVERY
 UNLESS REDEEMED WITHIN 10 CALENDAR DAYS (ONE BUSINESS DAY FOR MATURITIES OF 31 DAYS OR LESS) AFTER ANY MATURITY. THE BANK RETAINS THE RIGHT TO REDEEM THIS CERTIFICATE OR CHANGE THE INTEREST RATE AS OF ANY MATURITY.

[Signature]
 AUTHORIZED SIGNATURE

0-100-0075 REV. 6/85

revenue account of the above-named assignor.
 Dated this 14th day of DECEMBER, 19 89, at PHOENIX, Arizona.

ARIZONA STATE TREASURER

Treasurer or Authorized Representative

By: [Signature]
 (Prepare in duplicate. Please Type all Information)

Attach Original Assignment to Certificates of Deposit and File with State.

RECEIVED
 STATE TREASURER
 DEC 14 1 37 PM '89

Dec 30, 1993



Jane Dee Hull
Governor

State of Arizona
Arizona Geological Survey
416 W. Congress, Suite 100
Tucson, Arizona 85701
(520) 770-3500



Larry D. Fellows
Director and State Geologist

February 12, 2001

Ms. Debby Harrington
RIM Southwest Corporation
5 Inverness Drive East
Denver CO 80112

Dear Ms. Harrington:

I have enclosed an approved duplicate original of Form 8 for lease NOG 807-1141 for your files.

Sincerely,

A handwritten signature in cursive script that reads "Steven L. Rauzi".

Steven L. Rauzi
Oil & Gas Administrator

Enclosure

**RIM SOUTHWEST CORPORATION
5 INVERNESS DRIVE EAST
ENGLEWOOD, COLORADO 80112
(303) 799-9828
(303) 799-4259 FAX**

February 6, 2001

Mr. Steven Rauzi
Oil & Gas Program Administrator
Arizona Geological Survey
416 West Congress, Suite #100
Tucson, Arizona 85701



RE: RIM SOUTHWEST CORPORATION

Dear Mr. Rauzi:

As requested in your recent telephone call, please find enclosed Form 8 for NOG 8707-1141, which was omitted in the original package to you. Sorry for any inconvenience this may have caused your office and thank you for your continued assistance in submitting the appropriate forms required.

If you require anything further, please contact our office.

Sincerely,

Cydne Cramer

Cydne Cramer
Engineering Assistant

Enclosures

/cc



Jane Dee Hull
Governor

State of Arizona
Arizona Geological Survey
416 W. Congress, Suite 100
Tucson, Arizona 85701
(520) 770-3500



Larry D. Fellows
Director and State Geologist

February 5, 2001

Ms. Debby Harrington
RIM Southwest Corporation
5 Inverness Drive East
Denver CO 80112

Dear Ms. Harrington:

This will acknowledge receipt of documentation of name change, Organization Report (Form 1) and updated Operator's Certificate of Compliance and Authorization to Transport Oil or Gas from Lease (Form 8).

I have enclosed approved duplicate originals of Form 8 for your files.

Sincerely,

Steven L. Rauzi
Oil & Gas Administrator

Enclosures

RIM SOUTHWEST CORPORATION
5 INVERNESS DRIVE EAST
ENGLEWOOD, COLORADO 80112
303-799-9828

January 30, 2001

Mr. Steven Rauzi
Oil & Gas Program Administrator
Arizona Geological Survey
416 W. Congress, #100
Tucson, AZ. 85701



Re: RIM Southwest Corporation

Dear Mr. Rauzi,

As you requested, please find an Organization Report and documentation evidencing the name change from Harken Southwest Corporation for RIM Southwest Corporation.

Also enclosed is Form 8, in duplicate, for NOG 8707-1139, NOG 8707-1140 and NOG 8707-1142.

Please call me at (303) 799-9828, extension 305, if you have any questions or need anything further. Thank you for your assistance.

Very truly yours,


Debby Harrington
Senior Landman

The RIM Companies
5 Inverness Drive East
Englewood, Colorado 80112
303-799-9828
Fax 303-799-4259
E-Mail: rvesco@rimop.com



Oil & Gas
Acquisitions & Management
Rocky Mountains / Texas

January 25, 2001

Mr. Steven Rauzi (520) 770-3500
Oil & Gas Program Administrator Fax (520) 770-3505
Arizona Geological Survey
416 W. Congress, #100
Tucson, AZ. 85701

RE: Bonding for RIM Southwest Corporation

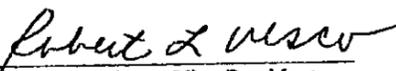
Dear Mr. Rauzi:

Enclosed please a copy of the approval letter dated May 18, 2000, from the United States Department of the Interior, Bureau of Indian Affairs for RIM's \$150,000 nationwide bond.

Additionally, RIM Southwest Corporation, (formerly known as Harken Southwest Corporation) has a \$25,000 certificate of deposit, certificate # 2578904, with the State of Arizona, maturing April 2, 2001. Please take the necessary action to release this certificate of deposit.

If you need any further information regarding the above referenced information, please contact me at extension 206. Thank you for your help.

Sincerely yours,


Robert L. Vesco, Vice-President
Secretary/Treasurer

The RIM Companies
5 Inverness Drive East
Englewood, Colorado 80112
303-799-9828
Fax 303-799-4259
E-Mail: rvesco@rimop.com



January 25, 2001

Mr. Steven Rauzi
Oil & Gas Program Administrator
Arizona Geological Survey
416 W. Congress, #100
Tucson, AZ. 85701



RE: Name Change of Harken Southwest Corporation

Dear Mr. Rauzi:

Enclosed please find the State of New Mexico filed copy of "Articles of Amendment to the Articles of Incorporation" changing "Harken Southwest Corporation's" name to "RIM Southwest Corporation" ("RIM"). The corporation's federal tax identification number has not changed (85-0284260). RIM's address is 5 Inverness Drive East, Englewood, Colorado 80112.

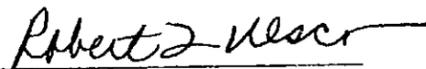
Additionally, the officers of RIM Southwest Corporation are as follows:

President	Stephen W. Rector
Vice President	Rene' Morin
Vice President	William J. Holcomb
VP, Secretary/Treasurer	Robert L. Vesco

Additionally, enclosed is a copy of RIM Operating, Inc. and RIM Offshore, Inc.'s "United States Department of the Interior, Bureau of Indian Affairs, Nationwide Oil and Gas Bond Number RLB0001937" in the amount of \$150,000, along with Bond Rider to Assume Liability Number 1 and RLI Insurance Company's Power of Attorney. With your concurrence, RIM would like to add RIM Southwest Corporation as an additional principal to this bond. Please coordinate with us regarding this matter.

If you need any further information regarding the above referenced information, please contact me at extension 206.

Sincerely yours,


Robert L. Vesco, Vice-President
Secretary/Treasurer

Operator ~~CHUSKA ENERGY COMPANY~~ (*Harken Southwest Corp.*)

Bond Company VALLEY NATIONAL BANK - ARIZONA Amount \$25,000

Bond No. C.D. #2578904 Date Approved 12/01/89

CANCELLED

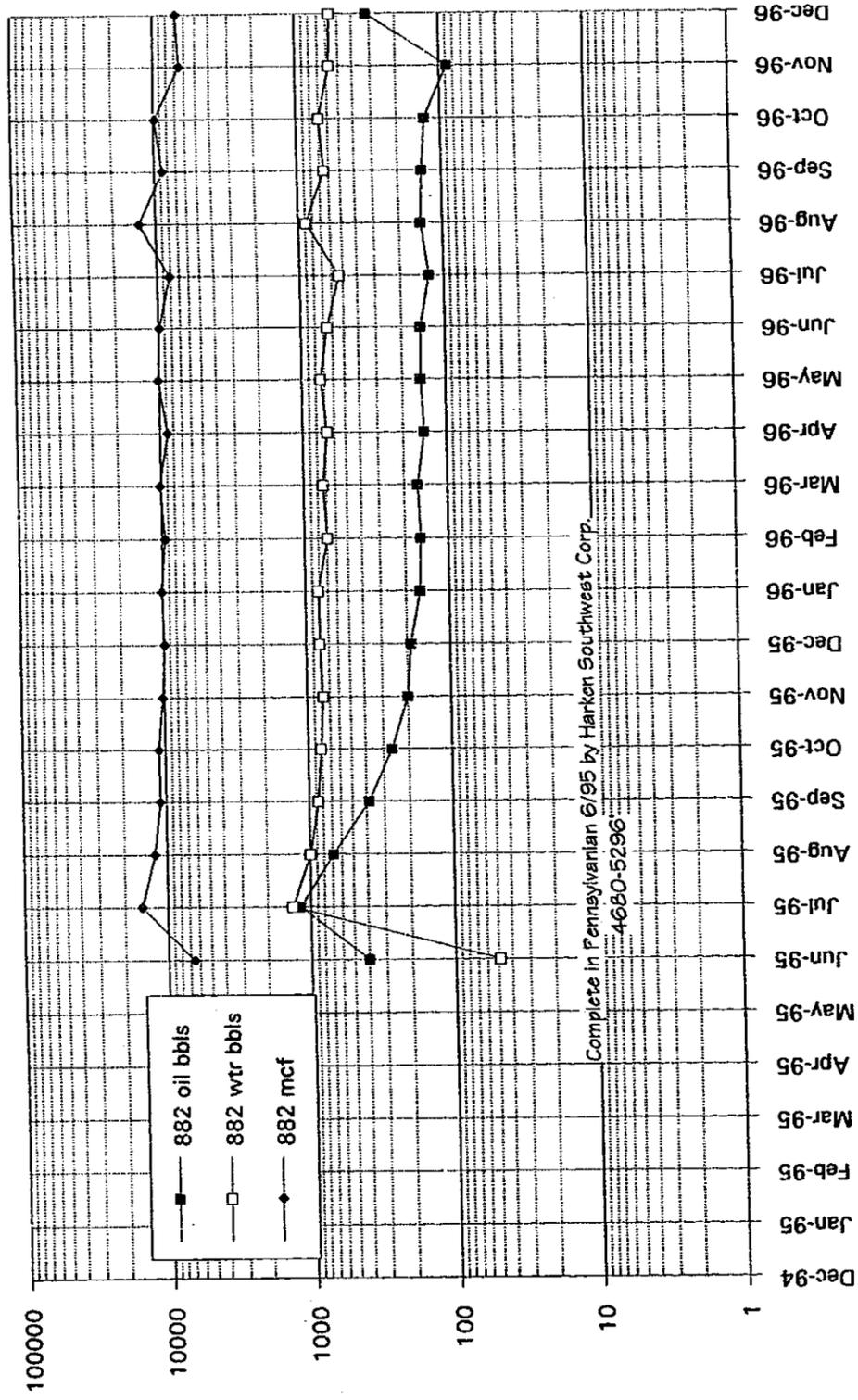
Permits covered by this bond:

DATE

- 559
- 581
- 610 (*P+A 11-21-95*)
- 615 (*P & A 5/10/91*)
- 868
- 869 expired
- 870 (*J & A 5/90*)
- 871
- 872 expired
- 873 (*P & A 8/4/93*)
- 874 expired
- 875
- 881
- 882
-
-
-
-
-
-
-

MONTHLY PRODUCTION AT 20 BLACK ROCK (882), ARIZONA: JUN 1995 - DEC 1996

se se 7-40n-29e, Black Rock Field, Apache County





HARKEN SOUTHWEST CORPORATION
(formerly Chuska Energy Company)

June 20, 1996

BUREAU OF LAND MANAGEMENT
Farmington District
1235 LaPlata Hwy
Farmington, NM 87401

RE: Black Rock #20
Section 6-42S-25E
Apache County, AZ
Pit Closure

file 887



Gentlemen:

The subject well was completed and put on production at the end of June, 1995. In accordance with the one year pit closure rule, please be advised that the drilling pit at the above reference location is dry and ready to be closed. Therefore, Harken Southwest expects closure work to begin on the Black Rock #20 pit within the next 24-72 hours. A contractor, with Navajo Nation Preference, will be moving in immediately upon completion of their current job.

Should additional information be required, please feel free to contact Mr. Richard Cottle in our Farmington office at (505) 327-5531 or the undersigned at the letterhead address.

Very truly yours,
HARKEN SOUTHWEST CORPORATION

R. Montgomery
Rachelle Montgomery

CC: State of Arizona

24

The 1 Mr. Jones-State, se nw 32-7n-23e, Guadalupe County, originally was set up as a 15,000-ft test of Pennsylvanian horizons. Labrador took sidewall cores and drillstem tested two intervals, but released no details.

Labrador's venture was drilled nine miles southeast of a non-commercial Abo (Permian) gas discovery completed in 1982. Nearest established production is some 60 miles to the southeast, in Roosevelt County's Tule field, a Permian Basin pool that produces gas from Pennsylvanian and the Ordovician Montoya between 6800 and 7200 ft.

Davis Petroleum Corp plugged and abandoned a remote wildcat drilled in the northern portion of the non-producing Albuquerque-Belen Basin about 14 miles north of Albuquerque.

Davis' 1-YT Amara, se se 3-13n-2e, Sandoval County, was set up as a 9100-ft test of Dakota and drilled to a depth of 8732 ft, with no other details disclosed. The venture is 36 miles southeast of the nearest production, at shallow Mesaverde wells on the southeastern flank of the San Juan Basin.

Arizona

Oil flowed at the rate of 117 bbls per day, with 693,000 cu ft of gas and 54 bbls of water daily, at a stepout from northeastern Arizona's Black Rock field completed by Harken Southwest Corp nine miles west and slightly south of Teec Nos Pos.

Harken tested the 20 Black Rock, se se 7-40n-29e, Apache County, through a 16/64-inch choke with a flowing tubing pressure of 280 psi. Production is commingled from perforations in Lower Ismay between 4680 and 4752 ft; Desert Creek between 4786 and 4818 ft; and Akah from 4927 to 5028 ft.

The 5432-ft well offsets to the north an abandoned Mississippian oil producer on the northwestern flank of Black Rock field and is three quarters of a mile east of the field's northwesternmost Paradox producer.

PREMCO Western in late November spudded an 8500-ft test to Precambrian on the western end of the Mogollon Plateau approximately 120 miles northwest of Flagstaff in northwestern Arizona.

The Mohave County venture, the 1-10 Mohave County in ne se 10-41n-11w, is about 24 miles southwest of the closest previous production, in Washington County, Utah's Virgin field, an inactive Timpoweap (Moenkopi) oil pool. The nearest current production is more than 100 miles to the northeast, in Utah's Upper Valley field, a Kaibab pool on the northern end of the Kaiparowits Basin. As the year ended, PREMCO had reached a depth of 1100 ft and was awaiting another rig to continue drilling.

Ridgeway Arizona Oil Co during the year began the process of delineating a carbon dioxide/helium accumulation discovered by the company in 1994 on the St. Johns Anticline near the town of St. Johns in eastern Arizona's Apache County.

The company, the U.S. operating subsidiary of Calgary-based Ridgeway Petroleum Corp, completed the 3-1 State 13-53-801, ne se 3-11n-29e, flowing 663,000 cu ft of gas per day from Fort Apache between 1536 and 1676 ft. Ridgeway said preliminary analysis of the gas—performed by the U.S. Bureau of Mines—indicated it is composed of 89 percent CO₂, 10 percent nitrogen, 0.7 percent helium and 0.1 percent each of methane and argon.

The 3-1 State 13-53-801 was drilled four miles south of Ridgeway's initial discovery in the area, which was completed in 1994 at the 1 Ridgeway/Canstar-Plateau Cattle Co, se nw 15-12n-29e. The latter well produced CO₂, helium and nitrogen from Supai at 1410-79 and 1680-1720 ft.

Ridgeway estimated reserves in the field at 260 billion cu ft of CO₂ and two billion cu ft of helium.

The area is approximately 55 miles south of the Pinta Dome-Navajo Springs area, which has produced nonflammable, helium-bearing gas.

Carbon dioxide from the wells is to be utilized for

file 782

December, 1995

ROCKY MOUNTAINS

ACTIVITY HIGHLIGHTS

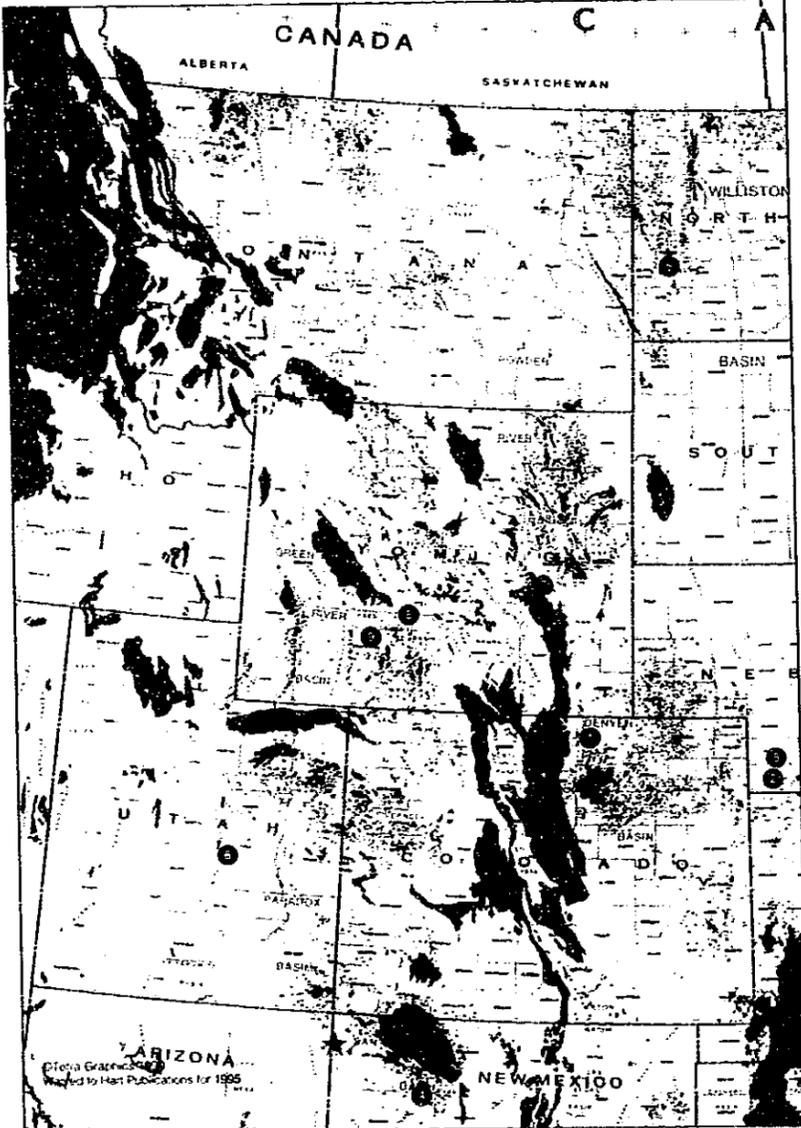
Play of the Month

★ A new well has been completed by Harken Southwest Corp. of Dallas in northeastern Arizona's Apache County. Black Rock #20, SE SE 7-40n-29e, produced an average of 99 bo/d, 49 bw/d and 1.6 MMcf/d on a four-day potential test, according to published state figures. Production is from unreported perforations in the Ismay and Akah members of the Paradox (Pennsylvanian) formation.

Located nine miles south of Teec Nos Pos, the 6,500-foot well is a north offset to an abandoned Mississippian

oil producer on the northwestern flank of Black Rock Field and is three quarters of a mile east of the field's most northwestern Paradox producer. Half a mile to the south, the company's Black Rock #8 has produced more than 997 MMcf and 3.5 Mbo, with a small amount of water, from the Paradox between 4,928 and 5,877 feet.

Black Rock Field, discovered in 1973, has cumulative production of approximately 5.77 Bcfg, 24 Mbo and 275,000 bw. Prior to the drilling of well #20, field daily average production was 145 bo, 8 bw and 1,137 MMcf.



COLORADO

1 WELD COUNTY. A remote wildcat drilled by Antelope Production Co., Kimball, Neb., at 24-1 Lind produced an average of 92 bo/d from Cretaceous J Sand during 8 days on line, according to state records. Petroleum Information (PI) reports the venture, which had a projected depth of 9,600 feet in J Sand, is in SW NW 24-11n-66w.

NEBRASKA

2 DUNDY COUNTY. Advantage Resources Inc., Denver, found oil in Pennsylvanian Lansing-Kansas City at its discovery 3-33 Ham, recovering 113 b/d on pump at completion of the wildcat. The 3-33 Ham, NW NE 33-2n-37w, is producing through perforations at 4,242-47 feet, according to PI.

3 DUNDY/FURNAS COUNTIES. Denver-based Hewit Family Partnership plans to drill two wildcats to Granite, reports the Nebraska Oil & Gas Conservation Commission. Deeper of the two is the 5,200-foot 23-14 Hayward in NE SW 14-1n-39w, Dundy County. Several miles to the east in Furnas County is Hewit's 14-4 Fecken, SW SW 4-2n-25w. Target depth is 3,600 feet.

NEW MEXICO

4 SAN JUAN COUNTY. A horizontal Jurassic Entrada redrill being completed by Merion Oil & Gas Corp., Farmington, flowed 248 bo during a 12-hour test taken on a 12/64-inch choke. The 1-H Santa Fe in SW NE 20-21n-8w, Snake Eyes Field, is producing from an openhole lateral between 5,766 and 6,410 feet, measured TD. PI notes true vertical depth is 5,582 feet. The well originally was completed in 1977 producing from Entrada at 5,604-12 feet.

NORTH DAKOTA

5 STARK COUNTY. Mississippian Lodgepole activity continues to dominate the news in Stark County. Dickinson Independent Armstrong Operating Inc.'s 20-1 Gruman, W2 SW 20-139-96w, yielded oil at the calculated rate of 1,700 b/d on drillstem test of the formation, according to interest-owner Columbia Gas Development Corp., Houston.

ROCKY MOUNTAINS

Rock
Sp...

Nebraska Board to Offer Single Tract at October 24 Sale

THE NEBRASKA Board of Educational Lands and Funds will offer one tract at an oral-bid oil and gas lease sale scheduled to begin at 10:00 am on Tuesday, October 24, at 555 North Corner Boulevard, Lincoln.

The 640-acre parcel covers all of section 16-16n-58w, Kimball County.

Primary term of the lease is five years, with a \$2.00 annual delay rental and a one-sixth royalty.

Pioneer Plugs Wildcat in Nevada's Railroad Valley

PIONEER OIL & Gas, Midvale, Utah, has plugged and abandoned a wildcat drilled about 27 miles south-southwest of Currant in Nevada's Railroad Valley.

The 13-14 Timber Mountain-Federal, sw sw 13-6n-56e, Nye County, was drilled by Cardinal Drilling's Rig #12 to a total depth of about 7000 ft at a site nearly seven miles southwest of Devonian oil production in the Bacon Flat/Grant Canyon field area (PI 3-10, 10-9-95). Pioneer apparently cased the wildcat for production tests of a lost circulation zone at 3999-4000 ft, but no other details are immediately available.

Meanwhile, Pioneer has reached

total depth at a wildcat drilled in a non-producing area along the west side of the Long Valley about 25 miles northeast of Eureka in White Pine County.

The 14-14 Grubstake-Federal, sw sw 14-21n-57e, is approximately 60 miles southeast of the closest production in Blackburn field, a Pine Valley pool with pays in Indian Well, Chainman and Nevada. Trap Spring field, a Railroad Valley Garrett Ranch pool, is about 70 miles to the south-southeast (PI 7-6-95). The 14-14 Grubstake-Federal was drilled by Cardinal's Rig #40 to a depth of approximately 7000 ft. No other details are yet available.

Nebraska Commission to Meet October 24 in Sidney

THE NEBRASKA Oil and Gas Conservation Commission will hold a hearing on Tuesday, October 24, beginning at 10:00 am in the Commission Office, 922 Illinois Street, Sidney.

In the only case on the docket, D. J. Gregory has requested approval of a unitization agreement and water-flood secondary recovery program—along with involuntary unitization of interests—for the J sand formation in Sidney Southwest field, Cheyenne County.

Details Disclosed on Northeastern Arizona Paradox Producer

file 882

OIL FLOWED at the rate of 117 bbls per day, with 693,000 cu ft of gas and 54 bbls of water daily, at a stepout from northeastern Arizona's Black Rock field completed by Harken Southwest Corp nine miles west and slightly south of Teec Nos Pos.

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from 4927 to 5028 ft. No shows were reported on tests of the deeper Barker Creek perforated at 5073-5154 and Pinkerton Trail at 5242-52 ft.

Pennsylvanian log tops, measured from a 6002-ft kelly bushing elevation, include Hermosa at 4037 ft, Ismay 4611, Lower Ismay 4675, Desert Creek 4765, Barker Creek 5058 and Pinkerton Trail at 5181 ft. The 5432-ft well offsets to the north an abandoned Mississippian oil producer on the northwestern flank of Black Rock field and is three quarters of a mile east of the field's northwesternmost Paradox well (PI 10-4-95).

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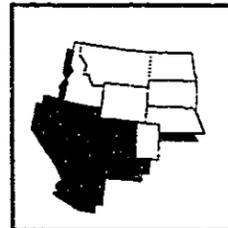
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file 882



ROCKY MOUNTAIN

REGION REPORT



FOUR CORNERS EDITION

Vol. 68, No. 191
10-4-95

Paradox Producer Extends Arizona's Black Rock Field

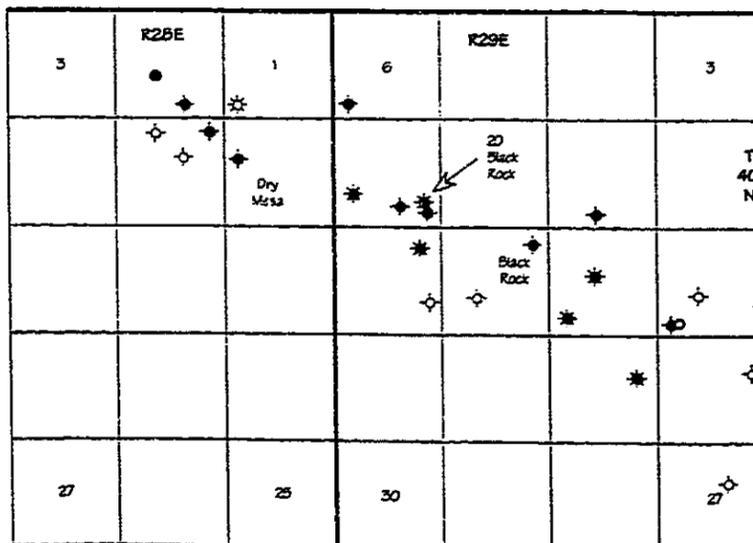
DALLAS-BASED HARKEN Southwest Corp has completed a new dual-zone producer nine miles west and slightly south of Teec Nos Pos in northeastern Arizona's Apache County.

According to state figures, the 20 Black Rock, se se 7-40n-29e, produced 6,512,000 cu ft of gas, 396 bbls of oil and 49 bbls of water during its first four days on line in June, an average of 1,628,000 cu ft of gas, 99 bbls of oil and 12 bbls of water daily. Production is from unreported intervals in the Ismay and Akah members of Paradox (Pennsylvanian).

The 6500-ft well offsets to the north an abandoned Mississippian oil producer on the northwestern flank of Black Rock field and is three quarters of a mile east of the field's northwesternmost Paradox producer.

Half a mile to the south, the company's 8 Black Rock, ne ne 18-40n-29e, has produced more than 997 million cu ft of gas, 3,500 bbls of oil and a small amount of water from Paradox between 4928 and 5877 ft.

Black Rock field, discovered in 1973, has cumulative production of approximately 5.77 billion cu ft of gas, 24,000 bbls of oil and 275,000 bbls of water. Production from the field's six active wells in June averaged about 1,137,000 cu ft of gas, 145 bbls of oil and eight bbls of water daily.



NEWSLETTER
DAILY ACTIVITY REPORT
WESTERN COLORADO
UTAH
NEW MEXICO
ARIZONA & NEVADA

SECTION I
SECTION II
SECTION III
SECTION IV
SECTION V
SECTION VI



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5-16-95 Rachelle Montgomery, Harken Energy calls

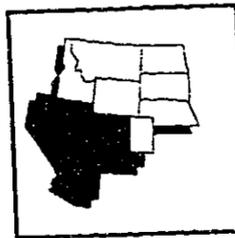
- T.D. BR 20 last night @ 5432'
 - Ran logs
 - Laying down drill pipe
 - will set production casing today
 - move off tomorrow.
-
- Reclaim location @ BR 7X
 - May consider directional hole later on

file 882



ROCKY MOUNTAIN

REGION REPORT



FOUR CORNERS EDITION

Vol. 68, No. 89
5-10-95

file 882

Harken, Meridian Drilling Stepouts from Four Corners Fields

EXPLORATORY TESTS targeting Paradox horizons are under way in two neighboring counties in the Four Corners region, including a test being drilled by Harken Southwest Corp nine miles west and

slightly south of Teec Nos Pos in northeastern Arizona.

Harken is using Four Corners Drilling's Rig #14 to drill the Apache County venture, the 20 Black Rock in se se 7-40n-29e. The drillsite offsets to

the north an abandoned Mississippian oil producer on the northwestern flank of Black Rock field. That 5782-ft well, also in se se 7-40n-29e, was completed by Atlantic Refining in 1961 producing from 5606-16 ft.

Prior to completion in Mississippian, Atlantic recovered gas at the rate of 650,000 cu ft per day on a drillstem test of Paradox between 5088 and 5107 ft. A test of another Paradox zone at 5250-67 ft yielded gas at the rate of 714,000 cu ft daily.

Valley Stakes Stepout from Uinta Basin Discovery

DENVER-BASED VALLEY Operating Inc has scheduled the company's second exploratory test on the Antelope Unit on the eastern flank of the Uinta Basin of northeastern Utah, this one about six miles southwest of Bonanza.

Primary objectives of the projected 7100-ft eastern Uintah County venture, the 20-2 Antelope-Federal in nw ne 20-10s-24e, are Wasatch and Mesaverde. The site is a mile north-northwest of a 7050-ft Castlegate (Mesaverde) gas discovery completed and shut in by the company in January at the 1-29 Antelope Unit in ne ne 29-10s-24e. Valley logged the top of Mesaverde at 4682 ft and perforated three Castlegate intervals between 6870 and 6911 ft, but did not report test results.

Two miles southeast of the new location, Consolidated Oil & Gas Inc recently completed a Mesaverde gas discovery at the 21-27 East Antelope-Federal, ne nw 27-10s-24e, flowing 415,000 cu ft of gas per day from 6303-15 ft (PI 4-21-95).

In northwestern New Mexico, Meridian Oil Inc has spudded a stepout from Barker Creek field nine miles west-northwest of La Plata in northern San Juan County.

Meridian's 26 Ute Com, nw nw 18-32n-14w, is three quarters of a mile northwest of the nearest Paradox producer in the field (PI 4-25-95). Four Corners' Rig #15 is on location at this probe.

NEWSLETTER
DAILY ACTIVITY REPORT
WESTERN COLORADO
UTAH
NEW MEXICO
ARIZONA & NEVADA

SECTION I
SECTION II
SECTION III
SECTION IV
SECTION V
SECTION VI



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4-26-95

Rich Cottle, Harken Energy calls:

- prep BR 7X + 20 locations
- spud rig moving on 20 a.m. 4-27-95
- will set ~200' conductor pipe.

file 882

5-1-95

Rich Cottle:

- set conductor on BR 20 a.m. 5-2-95

5-5-95

Rachelle Montgomery, Harken Energy:

- Spud BR 20 today or tomorrow
- Spud rig on 7X

5-10-95

Rich Cottle calls:

- set 200' 13³/₈" csg on BR 20
- Big rig moved in, drilling ahead below 3200'
- Gene Javine is consultant (mobil # 505-320-2425)
- BR 7X may go nowhere, up in air.
- Spud rig couldn't maintain hole below 40'
- caving, big boulders, same prob as with BR 7

MEMORANDUM TO FILE

file 882

DATE: April 19, 1995

FROM: Steven L. Rauzi *slr*
Oil and Gas Program Administrator

SUBJECT: Black Rock wells 7X and 20, Permits 881 and 882
Black Rock Field, Apache County

Rachelle Montgomery, Harken Energy Company, called this date to advise that the Navajo Tribe and BIA have approved the drilling of the referenced wells. Harken has the BLM permits in hand, and Lansing Construction to start location work as soon as possible.



HARKEN SOUTHWEST CORPORATION

(formerly Chuska Energy Company)

August 30, 1994

Mr. Steve L. Rauzi
Arizona Geological Survey
Oil & Gas Division
845 North Park Avenue #100
Tucson, AZ 85719



RE: Black Rock #7 - Permit #881
Black Rock #20 - Permit #882 ✓

Dear Mr. Rauzi:

Pursuant to rule R12-7-104(C), a permit to drill is valid for 180 days after the date of issuance. At the time the APD's were submitted on the two referenced wells, Harken believed the federal approval process could be accomplished within this time frame. However, the Navajo Nation has passed a new Resolution which requires additional permitting procedures. Due to the uncharted nature of this process, there is no predicting what the time frame will be. Therefore, Harken Southwest respectfully request the above referenced permits be placed on hold and the time clock stopped until we are able to determine the amount of time the Navajo Nation will require to process Applications for Permits to Drill.

Should you have any questions or need additional information, please feel free to contact me.

Very truly yours,

HARKEN SOUTHWEST CORPORATION

Ms. Rachelle Montgomery
Production Administrator



Fife Symington
Governor

State of Arizona
Arizona Geological Survey
845 North Park Avenue, #100
Tucson, Arizona 85719
(602) 882-4795



Larry D. Fellows
Director and State Geologist

August 26, 1994

Memo to Permit files 881 and 882
From: Steven L. Rauzi SLR

I called Rachelle Montgomery, Harken Energy, today to ask about the status of their federal permits for Black Rock wells No. 7X and No. 20. She indicated that the BIA and Navajo Tribe have initiated a *Signature Authorization Survey (SAS)* which requires that all new wells drilled on Navajo lands must receive signatures from 13 separate Tribal Councils. I advised her that state permits to drill are valid for 180 days from the date of issue and that in light of this new requirement on the part of the Navajo Tribe that the Commission would not start counting the 180 days until Harken had the federal permits in hand. She will advise me when they get the federal permits.

Harken Adds to Four Corners Exploratory Drilling Program

HARKEN SOUTHWEST Corp., Dallas, has scheduled three more tests of Paradox zones in the Four Corners area, two in northwestern New Mexico and one in northeastern Arizona.

In northwestern San Juan County, New Mexico, about 8-9 miles north-northwest of Shiprock, the company will drill the 1 N. Chimney Rock 10M in sw sw 10-31n-18w and, one and a half miles to the south, the 1 N. Chimney Rock 21H in se ne 21-31n-18w. Projected depths were not disclosed.

The new locations are 1-2 miles generally northwest of the Cone field discovery in se se 22-31n-18w. That 7174-ft well, the Standard Oil of Texas 1 Navajo 24-22, was completed in 1964 initially flowing 51 bbls of 44.5° oil, 1,045,000 cu ft of gas and 90 bbls of water per day from Paradox between 6843 and 6986 ft. It logged the top of Paradox at 6724 ft from a derrick floor elevation of 5108 ft.

Nine miles to the west-northwest, Harken recently staked location for another Paradox wildcat at the 1 Canal Creek 6K in ne sw 6-31n-19w (PI 7-20-94). The latter site is 15 miles northwest of Shiprock and five miles southeast of Paradox production in Four Corners field.

In Apache County, Arizona, Harken has scheduled the company's second Paradox test in as many weeks in the Black Rock field area, this one about nine miles west and slightly south of Teec Nos Pos.

Objectives of the 20 Black Rock, se se 7-40n-29e, were not disclosed, but presumably will include Paradox gas zones. It offsets to the north an abandoned Mississippian oil producer on the northwestern flank of the field. That 5782-ft well, also in se se 7-40n-29e, was completed by Atlantic Refining in 1961 producing from 5606-16 ft.

Prior to completion in Mississippian, Atlantic Refining recovered gas on two drillstem tests of the shallower Paradox. A drillstem test between 5088 and 5107 ft recovered gas at the rate of 650,000 cu ft per day; a test of

a deeper Paradox zone at 5250-67 ft recovered gas at the rate of 714,000 cu ft daily.

Harken's 20 Black Rock venture is half a mile north of the company's 8 Black Rock in ne ne 18-40n-29e, which has produced more than 953 million cu ft of gas, 3,500 bbls of oil and a small amount of water from Paradox between 4928 and 5877 ft.

A mile to the south-southeast, Harken recently staked location for a 6469-ft Paradox test at the 7X Black Rock in ne sw 17-40n-29e (PI 7-20-94). No activity has been reported at that site.

Snyder Expands Piceance Basin E&D Program

SNYDER OIL Corp will evaluate Mesaverde to 8196 ft at a wildcat to be drilled as part of the company's expanding Piceance Basin exploration and development program being carried out in an area within 10 miles generally south of Silt in western Colorado.

The southern Garfield County venture, the 30-16 Hunter Mesa Unit-Federal in se se 30-7s-92w, is a mile and a half south-southwest of the southern-most producer in Grand Slam field, a Mesaverde/Cameo gas pool. Snyder in May reached total depth at its 29-4 Mamm Creek Ranch in nw nw 29-7s-92w, a proposed 7393-ft test of Mesaverde between Grand Slam field and the new location. A little more than a mile west-northwest of the new wildcat, Snyder at last report was drilling an 8536-ft Mesaverde wildcat at the 25-10 Shideler in nw se 25-7s-93w.

Elsewhere in the area, Snyder in March completed a Mesaverde discovery at the 12-22 Knight, sw nw 22-7s-92w, two miles east and southeast of wells in Grand Slam field. According to state production figures, the undesignated discovery produced an average of 775,000 cu ft of gas, five bbls of condensate and 155 bbls of water per day during its first six days on line (PI 7-14-94).



Fife Symington
Governor

State of Arizona
Arizona Geological Survey

845 North Park Avenue, #100
Tucson, Arizona 85719
(602) 882-4795

July 22, 1994



Larry D. Fellows
Director and State Geologist

Mr. Clarence Bigelow
Apache County Manager
P. O. Box 428
St. Johns, Arizona 85936

Re: Harken Southwest Corporation Black Rock #20
Sec. 7, T. 40 N., R. 29 E.
State Permit #882

Dear Mr. Bigelow:

An approved application to drill the latest development well in the Black Rock gas field in northernmost Apache County on the Navajo Nation is enclosed. As I indicated in my last letter to you, wells drilled on the Navajo Nation in Arizona also require approval and a permit to drill from the U.S. Bureau of Land Management district office in Farmington, New Mexico.

As you know, the enclosed copy of the approved application to drill is being sent to you in accordance with the policy of the **Oil and Gas Conservation Commission of the State of Arizona** to provide this information to the County Manager of the County in which the well is located. This is done both as a courtesy to local governments and to keep them informed and advised on exploration and, in this particular case, development drilling efforts in the State of Arizona.

Again, the **Commission** issues the State Permit to drill pursuant to A.R.S. §§ 27-513 and 27-516 after it has determined that drilling of the well is in compliance with statutes and rules (*Arizona Administrative Code* Title 12, Chapter 7) and that correlative rights, public health and safety, and subsurface resources will not be compromised.

Please do not hesitate to contact me if I may be of any assistance.

Sincerely,

Steven L. Rauzi
Oil and Gas Program Administrator

Enclosure



Fife Symington
Governor

State of Arizona
Arizona Geological Survey

845 North Park Avenue, #100
Tucson, Arizona 85719
(602) 882-4795

July 22, 1994



Larry D. Fellows
Director and State Geologist

Ms. Rachelle Montgomery
Production Administrator
Harken Southwest Corporation
P. O. Drawer 612007
Dallas, Texas 75261

Re: Harken Southwest Corporation Black Rock No. 20 well
Sec. 7, T. 40 N., R. 29 E., Apache County, Arizona
State Permit #882

Dear Rachelle:

An approved duplicate copy of your Application for Permit to Drill the referenced well, Permit to Drill #882, and filing fee receipt #3068 are enclosed.

The State Permit is issued on the condition that you conduct operations substantially as outlined in the drilling program submitted with the application to drill and that you *notify this office at least 48 hours* before you

- 1) Commence drilling operations;
- 2) Run and cement surface casing; and
- 3) Nipple up and test the BOPE prior to drilling out of the surface casing.

I have also enclosed Form 4, *Well Completion Report* and, should it be necessary, Form 9, *Application to Plug and Abandon* and Form 10, *Plugging Record*. *Sundry Notices* of the BLM may be used to provide this office with a weekly update of wellsite activity.

The Oil and Gas Conservation Commission of the State of Arizona looks forward to a successful completion of this well.

Sincerely,

Steven L. Rauzi
Oil & Gas Program Administrator

Enclosures

ORGANIZATION REPORT

Full Name of the Company, Organization, or Individual

Harken Southwest Corporation

Post Office Address (Box or Street Address)

P. O. Drawer 612007, Dallas, TX 75261 -or- 2505 N. Hwy 360, Suite 800, Grand Prairie, TX

Plan of Organization (State whether organization is a corporation, joint stock association, firm or partnership, or individual)

Corporation

75050

Purpose of Organization (State type of business in which engaged)

Oil & Gas Exploration

If a reorganization, give name and address of previous organization.

Changed name from Chuska Energy Company

(1) State where incorporated	(2) Name and post office address of state agent Corporation Service Co.	(3) Date of permit to do business in state
Nevada	530 South 4th Street Las Vegas, Nevada 89101	1980
Principal Officers or Partners (if partnership) NAME	TITLE	POST OFFICE ADDRESS
Mikel D. Faulkner	Chairman of the Board Chief Executive Officer	P. O. Drawer 612007 Dallas, TX 75261
Richard Schroeder	President Chief Operating Officer	" "
Bruce Huff	Senior Vice President Chief Financial Officer	" "
Larry Cummings	Vice President General Council	" "

DIRECTORS NAME

POST OFFICE ADDRESS

/ All of the above

P. O. Drawer 612007, Dallas, TX 75261

Don Raymond

P. O. Drawer 612007, Dallas, TX 75261

CANCELLED

DATE _____

CERTIFICATE: I, the undersigned, under the penalty of perjury, state that I am the Production Administrator of the Harken Southwest Corporation (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 Rachelle L. Montgomery

Date 6/24/94

Date

STATE OF ARIZONA
OIL & GAS CONSERVATION COMMISSION

Organization Report
File One Copy

Form No. 1



882

**OPERATOR'S CERTIFICATE OF COMPLIANCE AND AUTHORIZATION
TO TRANSPORT OIL OR GAS FROM LEASE**

Federal, State or Indian Lease Number, or lessor's name if fee lease NOG 8707-1141	Field Black Rock	Reservoir Paradox
Survey or Sec-Twp-Rge Section 7-40N-29E	County Apache	State Arizona
Operator Harken Southwest Corporation		
ADDRESS ALL CORRESPONDENCE CONCERNING THIS FORM TO:		
Street 5605 N. MacArthur Blvd. Suite	City 400 Irving	State Texas 75038-2617
Above named operator authorizes (name of transporter) Giant Industries		
Transporter's street address 5764 Hwy 64	City Farmington	State New Mexico 87401
Field address		
Oil, condensate, gas well gas, casinghead gas		
To transport 100	% of the Condensate	from said lease.
OTHER GATHERERS TRANSPORTING FROM THIS LEASE ARE AS FOLLOWS:		
Name of gatherer Western Gas	% transported 100	Product transported Gas
Indicate whether or not this certificate is for a new lease. If not a new lease, indicate whether or not it is a change of operator, change of lease name, change of gatherer, or a consolidation or subdivision of leases and give effective date of change.		
Change of Condensate Purchaser (Black Rock #20)		

CANCELLED
DATE _____

The undersigned certifies that the rules and regulations of the State of Arizona Oil & Gas Conservation Commission have been complied with in drilling and producing operations on this lease, except as noted above, and that the above transporter is authorized to transport the above specified percentage of the allowable oil or gas produced from the above described property, and that this authorization will be valid until further notice or until cancelled by the State of Arizona Oil & Gas Conservation Commission.

CERTIFICATE: I, the undersigned, under the penalty of perjury, state that I am the Production Administrator of the Harken Southwest Corporation (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.

Date 11-29-95 Signature Rachelle Montgomery

Date approved: 11-30-95

STATE OF ARIZONA
OIL & GAS CONSERVATION COMMISSION
By: Steven L. Rain
Permit No. 882



STATE OF ARIZONA
OIL & GAS CONSERVATION COMMISSION
Operator's Certificate of Compliance & Authorization to
Transport Oil or Gas from Lease
File Two Copies
Form No. 8

(Black Rock #20)

OPERATOR'S CERTIFICATE OF COMPLIANCE AND AUTHORIZATION TO TRANSPORT OIL OR GAS FROM LEASE		
Federal, State, or Indian Lease Number, or lessor's name if fee lease ROG 8707-1141	Field Black Rock	Reservoir Paradox
Survey or Sec-Twp-Rge Section 7-40N-29E	County Apache	State Arizona
Operator RIM Southwest Corporation		
ADDRESS ALL CORRESPONDENCE CONCERNING THIS FORM TO:		
Street 5 Inverness Drive East	City Englewood	State Colorado 80112
Above named operator authorizes (name of transporter) Giant Industries		
Transporter's street address 5764 Hwy 64	City Farmington	State New Mexico 87401
Field Address		
Oil, condensate, gas well gas, casinghead gas		
To transport	100 % of the	Condensate from said lease
OTHER GATHERERS TRANSPORTING FROM THIS LEASE ARE AS FOLLOWS:		
Name of gatherer	% transported	Product transported
Western Gas	100%	Gas
Indicate whether or not this certificate is for a new lease. If not a new lease, indicate whether or not it is a change of operator, change of lease name, change of gatherer, or a consolidation or subdivision of leases and give effective date of change. Harken Southwest Corporation changed its name to RIM Southwest Corporation. See attached copy of Articles of Amendment to the Articles of Incorporation.		

The undersigned certifies that the rules and regulations of the State of Arizona Oil & Gas Conservation Commission have been complied with in drilling and producing operations on this lease, except as noted above, and that the above transporter is authorized to transport the above specified percentage of the allowable oil or gas produced from the above described property, and that this authorization will be valid until further notice or until cancelled by the State of Arizona Oil & Gas Conservation Commission.

CERTIFICATE: I the undersigned, under the penalty of perjury, state that I am the Vice President of the RIM Southwest Corporation (company), and that I am authorized by said company to make this report; 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.

2/6/01

Date

Signature Rene Morin, Vice President

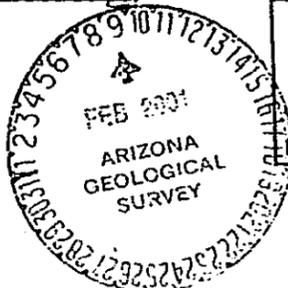
Date approved: 2-9-01

STATE OF ARIZONA
OIL & GAS CONSERVATION COMMISSION

By: Steven L. Rain

Permit No. 882

Mail two copies of completed form to:
Oil & Gas Program Administrator
Arizona Geological Survey
416 W. Congress #100
Tucson, AZ 85701-1315



STATE OF ARIZONA OIL & GAS CONSERVATION COMMISSION Operator's Certificate of Compliance & Authorization to Transport Oil or Gas from Lease File Two Copies Form No. 8
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TYPE OR PRINT LEGIBLY
FILE DUPLICATE ORIGINALS
FILING FEE: \$100.00

FILED IN OFFICE OF
NM STATE CORPORATION COMMISSION
DEC 22 2000
CORPORATION DEPARTMENT

ARTICLES OF AMENDMENT
TO THE
ARTICLES OF INCORPORATION

3214384

Pursuant to the provisions of Section 53-13-4, NMSA 1978, the undersigned corporation adopts the following Articles of Amendment to its Articles of Incorporation:

ARTICLE ONE: (Note 1) The Corporate name and NMSCC# of the corporation a

Harken Southwest Corporation ~~5306661~~ 1070770

ARTICLE TWO: (Note 2) The following amendment to the Articles of Incorporation was adopted by the Sole Shareholder of the corporation on December 21, 2000 in the manner prescribed by the New Mexico Business Corporation Act:

(Insert amendment or attach exhibit, if needed - Indication should be given to reflect which article(s) number has been amended.)

ARTICLE ONE is amended and shall read as follows:

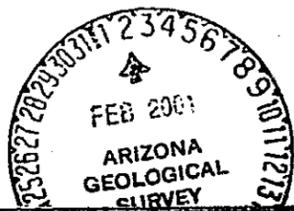
"The name of the corporation is RIM Southwest Corporation."

ARTICLE THREE: (Note 3) The number of shares of the corporation outstanding at the time of such adoption was 20,000 and the number of shares entitled to vote thereon was 20,000.

ARTICLE FOUR: (Note 4) The designation and number of outstanding shares of each class entitled to vote thereon as a class were as follows:

CLASS	NUMBER OF SHARES
One class only of Common Stock	20,000

ARTICLE FIVE: (Note 3) The number of shares voting for such amendment was 20,000 and the number of shares voting against such amendment was 0.



RECEIVED
DEC 22 2000

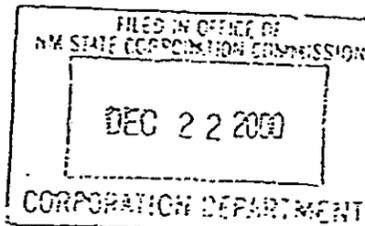
ARTICLE SIX: (Note 3) The number of shares of each class entitled to vote thereon as a class voted for and against such amendment, respectively, is as follows:

CLASS	FOR	AGAINST
Common -- only one class	20,000	0

ARTICLE SEVEN: (Note 4) The manner, if not set forth in such amendment, which any exchange, reclassification, or cancellation of issued shares provided for in the amendment shall be affected, is as follows:

inapplicable

DATED: December 21, 2000



Harken Southwest Corporation
(Note 1) CORPORATE NAME

BY: Stephen W. Rector
(Note 5) Its President
Stephen W. Rector

AND: Rene Marin
(Note 5) Its Vice President
Rene Marin

Under penalty of perjury, the undersigned declares that the foregoing document executed by the corporation and that the statements contained therein are true and correct to the best of my knowledge.

Harken Southwest Corporation
By: Stephen W. Rector
(Note 5) (One of the above officers sign)
Stephen W. Rector, President



RESOLUTION OF THE SOLE SHAREHOLDER
OF
HARKEN SOUTHWEST CORPORATION

A Special Meeting of the sole shareholder of HARKEN SOUTHWEST CORPORATION,
(the "Corporation"), was held beginning at 3:30, Mountain Time, on Thursday December
21, 2000, pursuant to which the sole shareholder consented to, voted in favor of and adopted the
following resolution:

RESOLVED, that the Articles of Incorporation of the Corporation be amended in
the form attached hereto by changing the name of the Corporation as follows:

ARTICLE I

NAME

The name of the corporation is RIM Southwest Corporation.

IN WITNESS WHEREOF, the undersigned has executed this written consent to be
effective as of the 21 day of December 2000.

RIM SW HOLDING CORPORATION, a Colorado
corporation

By: Stephen W. Rector
Name: Stephen W. Rector
Its: President



government of trade and intercourse with Indian tribes, and all rules and regulations that have been or shall hereafter be lawfully prescribed by the Secretary of the Interior relative to such lease(s), permit(s) and mineral agreement(s), and shall in all particulars comply with the provisions of such leases, permits, mineral agreements, rules, and regulations, then the obligation shall be null and void; otherwise, to remain in full force and effect. No bond liability shall be terminated without written approval of the Bureau of Indian Affairs.

The rate of premium charged on this bond is \$ _____; the total premium paid is \$ _____.

Signed and sealed in the presence of—

WITNESSES:*

BY: <u>Cathy Stump</u>	} Rim Operating, Inc., Rim Offshore, Inc.
P.O. 5 INVERNESS DRIVE EAST, ENGLEWOOD, CO. 80112	
BY: <u>Rita Schmitt</u>	} as to <u>Robert L. Veece, V.P.</u> [SEAL] Secretary
P.O. 5 INVERNESS DRIVE EAST, ENGLEWOOD, CO. 80112	
BY: <u>Nancy C.</u>	} RLI Insurance Company
P.O. 8 Greenway Plaza, #400 Houston, TX 77046	
BY: <u>Cynthia D. Taylor</u>	} as to <u>Greg E. Chilson</u> [SEAL] Greg E. Chilson, Attorney-in-Fact
P.O. 8 Greenway Plaza, #400 Houston, TX 77046	
_____ P.O. _____	} DATE _____ [SEAL]
_____ P.O. _____	} _____ [SEAL]
_____ P.O. _____	} _____ [SEAL]
_____ P.O. _____	} _____ [SEAL]

* Two witnesses to all signatures.

UNITED STATES
DEPARTMENT OF THE INTERIOR



_____ Date Approved _____



9025 North Lindbergh Dr. • Peoria, IL 61615
(309) 692-1000 or (800) 645-2402

RLB0001937
POWER OF ATTORNEY
RLI Insurance Company

Know All Men by These Presents:

That the RLI INSURANCE COMPANY, a corporation organized and existing under the laws of the State of Illinois, and authorized and licensed to do business in all states and the District of Columbia does hereby make, constitute and appoint: GREG E. CHILSON in the City of HOUSTON, State of TEXAS, as Attorney-in-Fact, with full power and authority hereby conferred upon him to sign, execute, acknowledge and deliver for and on its behalf as Surety and as its act and deed, all of the following classes of documents to-wit:

\$150,000.00

Indemnity, Surety and Undertakings that may be desired by contract, or may be given in any action or proceeding in any court of law or equity; policies indemnifying employers against loss or damage caused by the misconduct of their employees; official, bail and surety and fidelity bonds. Indemnity in all cases where indemnity may be lawfully given; and with full power and authority to execute consents and waivers to modify or change or extend any bond or document executed for this Company, and to compromise and settle any and all claims or demands made or existing against said Company.

The RLI INSURANCE COMPANY further certifies that the following is a true and exact copy of a Resolution adopted by the Board of Directors of RLI Insurance Company, and now in force to-wit:

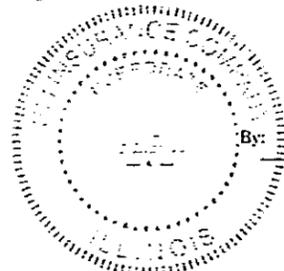
"All bonds, policies, undertakings, Powers of Attorney, or other obligations of the corporation shall be executed in the corporate name of the Company by the President, Secretary, any Assistant Secretary, Treasurer, or any Vice President, or by such other officers as the Board of Directors may authorize. The President, any Vice President, Secretary, any Assistant Secretary, or the Treasurer may appoint Attorneys-in-Fact or Agents who shall have authority to issue bonds, policies, or undertakings in the name of the Company. The corporate seal is not necessary for the validity of any bonds, policies, undertakings, Powers of Attorney, or other obligations of the corporation. The signature of any such officer and the corporate seal may be printed by facsimile.

(Blue shaded areas above indicate authenticity)

CANCELLED

IN WITNESS WHEREOF, the RLI Insurance Company has caused these presents to be executed by its CHAIRMAN, CEO with its corporate seal affixed this DATE

ATTEST:
Camille J. Hensey
Corporate Secretary



By: Gerald D. Stephens
Chairman, CEO

State of Illinois)
) SS
County of Peoria)

On this 6 day of April 2000 before me, a Notary Public, personally appeared Gerald D. Stephens and Camille J. Hensey, who being by me duly sworn, acknowledged that they signed the above Power of Attorney as Chairman, CEO and Corporate Secretary, respectively, of the said RLI INSURANCE COMPANY, and acknowledged said instrument to be the voluntary act and deed of said corporation.

Cynthia S. Dohm
Notary Public

"OFFICIAL SEAL"
CYNTHIA S. DOHM
NOTARY PUBLIC, STATE OF ILLINOIS
MY COMMISSION EXPIRES 02/24/02

BOND RIDER TO ASSUME LIABILITY

RIDER NO. 1

Attaching to and forming part of Nationwide Oil and Gas Lease Bond, Bond No. RLB0001937 effective April 6, 2000 on behalf of Rim Operating, Inc., Rim Offshore, Inc. as Principal, in favor of U.S. Department of the Interior, Bureau of Indian Affairs as obligee, in the amount of One Hundred Fifty Thousand and no/100 Dollars (\$150,000.00).

It is understood and agreed that effective April 6, 2000 this bond also extends to and covers all liability associated with the following bonds:

Bond No. B7112 and 9009356

All other conditions and terms to remain as originally written.

Signed, sealed and dated this 12th day of April, 2000

CANCELLED
DATE _____
Rim Operating, Inc.,
Rim Offshore, Inc.
Principal

By: Robert Z. Vesco, V.P.

RLI Insurance Company
Surety

By: Greg E. Chilson
Greg E. Chilson, Attorney-in-Fact



IN REPLY REFER TO:
Real Estate Services

United States Department of the Interior

BUREAU OF INDIAN AFFAIRS
Washington, D.C. 20240



MAY 18 2000

MAY 24 2000

Mr. Robert L. Vesco
Vice-President
The RIM Companies
5 Inverness Drive East
Englewood, Colorado 80112

* replaced with bond RLB0003993 Nov 2001

Dear Mr. Vesco:

* This is in response to your request for approval of RLI Insurance Company's Nationwide Oil and Gas Lease Bond No. RLB0001937 along with an Assumption of Liability Rider No. 1.

The bond shows Rim Operating, Inc., Rim Offshore, Inc., as principal and RLI Insurance Company as surety and was executed effective April 06, 2000, (\$150,000 coverage). The Assumption of Liability Rider No. 1 extends to and covers all liability associated with collective bonds 9009356 and B7112.

The bond and rider are hereby approved as of the date of this correspondence and will be retained in the Bureau's Division of Real Estate Services, 1849 C Street, N. W., MS-4610-MIB, Washington, D. C. 20240. All Bureau oil and gas regional offices and the surety are being informed of this action. In cases where you have existing individual and/or collective bonds on file with one of more of our field offices, you may now request those offices to terminate in lieu of coverage by this Nationwide Bond.

Enclosed is a copy of the approved bond and rider for your files. If we may be of further assistance in this matter, please advise.

Sincerely,

Director, Office of Trust Responsibilities

Enclosure

ORGANIZATION REPORT

Full Name of the Company, Organization, or Individual
RIM SOUTHWEST CORPORATION (FORMERLY KNOWN AS HARKEN SOUTHWEST CORPORATION)

Mailing Address and Phone Number
5 INVERNESS DRIVE EAST, ENGLEWOOD, COLORADO 80112 (303) 799-9828

Plan of Organization (State whether organization is a corporation joint stock association, firm or partnership, or Individual)
Corporation

Purpose of Organization (State type of business in which engaged)
Oil & Gas Production/Sales

If a reorganization, give name and address of previous organization
N/A

If a foreign corporation give (1) State where incorporated New Mexico	(2) Name and mailing address of state agent CT Corporation 322 5 N. Central Avenue Phoenix, AZ 85012	(3) Date of permit to do business in state 1/16/88
Principal Officers or Partners (if partnership) NAME	TITLE	MAILING ADDRESS
V. A. Isaacs, Jr.	Chairman, Board of Directors	5 Inverness Drive East Englewood, CO 80112
Stephen W. Rector	President	5 Inverness Drive East Englewood, CO 80112
Rene' Morin	Vice President	5 Inverness Drive East Englewood, CO 80112
Robert L. Vesco	Vice President/Secretary/ Treasurer	5 Inverness Drive East Englewood, CO 80112
William J. Holcomb	Vice President	Post Office Box 2058 Farmington, NM 87499

DIRECTORS NAME	MAILING ADDRESS
V. A. Isaacs, Jr.	SAME AS ABOVE
Stephen W. Rector	" "
Rene' Morin	" "
Robert L. Vesco	" "
William J. Holcomb	" "

CERTIFICATE I, the undersigned, under the penalty of perjury state that I am the Secretary of the RIM Southwest Corporation (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.

Robert L. Vesco
 Signature Robert L. Vesco, Secretary

1/25/01

Date



Mail completed form to
 Oil and Gas Program Administrator
 Arizona Geological Survey
 416 W Congress., #100
 Tucson, AZ 85701

STATE OF ARIZONA OIL & GAS CONSERVATION COMMISSION Organization Report File One Copy Form No. 1
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