CHUSKA ENERGY COMPANY

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

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

10 December, 1990

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

Ref: Application for Permit to Drill
Sterling 36L-1 Well, San Juan County, Utah

Gentlemen

Attached for your examination and approval is the original and two copies of an Application for Permit to Drill the Sterling 36L Well No. 1 in San Juan County, Utah. This well will be drilled as part of an ongoing exploration and development program.

The location for this well falls outside the guidelines for the State of Utah spacing requirements. However, the area surrounding the desired location has a high density of archaeological sites and is such as to preclude the well being located in accordance with State requirements and yet remain in a position which will allow the well bore to penetrate geological structures which have been identified by seismic interpretation. We therefore apply for an exception to the General State Spacing requirements. The well is being drilled in farmin acreage, as indicated on the attached land plat. We attached signed consent forms from the farmors to allow drilling of a non-standard location in proximity to the E/2 SE/4 of Section 35, which is exempt from the farmin.

Please advise if you require additional information concerning this application. Chuska Energy will greatly appreciate your prompt consideration.

Sincerely,

Larry G. Sessions
Operations Manager

LGS/cswh
File: C:\WP51\STERLING.36L\APDCOVER

encl.

(November 1983)
(formerly 9-331C)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

(Other instructions on reverse side)

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

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

5. LEASE DESIGNATION AND SERIAL NO.: 14-20-603-248

6. IF INDIAN, ALLOTTEE OR TRIBE NAME: Navajo Tribal

1a. TYPE OF WORK: DRILL [X] DEEPEN [ ] PLUG BACK [ ]

7. UNIT AGREEMENT NAME:

b. TYPE OF WELL: OIL WELL [ ] GAS WELL [ ] OTHER — SINGLE ZONE [ ] MULTIPLE ZONE [ ]

8. FARM OR LEASE NAME: Sterling 36L

2. NAME OF OPERATOR: Chuska Energy Company

9. WELL NO.: 1

3. ADDRESS OF OPERATOR: P.O. Box 780, Farmington, New Mexico 87499

10. FIELD AND POOL, OR WILDCAT: ~~Wildcat~~ Desert Creek

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)*
At Surface: 1390' FSL, 250' FWL

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: S36 T41S R23E

350

At proposed prod. zone: Same ~NWSW

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*: 6 1/2 miles SSW of Montezuma Creek, Utah

12. COUNTY OR PARISH: San Juan

13. STATE: Utah

15. DISTANCE FROM PROPOSED LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any): 1390'

16. NO. OF ACRES IN LEASE:

17. NO. OF ACRES ASSIGNED TO THIS WELL:

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

19. PROPOSED DEPTH: 5,503 GR Akah

20. ROTARY OR CABLE TOOLS: Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.): 5,003' GR

22. APPROX. DATE WORK WILL START*: 3-17-91

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
12 1/4"	8 5/8"	24 lb	500'	371 sx 'G' + 2% CaCl2
7 7/8"	5 1/2"	15.5 lb	5,503'	770 sx 'G', 65:35 Poz + 6% Gel

Refer to attached 10-Point Drilling Plan etc.

RECEIVED
DEC 14 1990
DIVISION OF
OIL, GAS & MINING

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24.

SIGNED: ~~Christopher S. Kelly~~ TITLE: Petroleum Engineer DATE: 10 December, 1990

(This space for Federal or State office use)

API ~~PERMIT~~ NO. 43-037-31595 APPROVAL DATE:

APPROVED BY: TITLE:

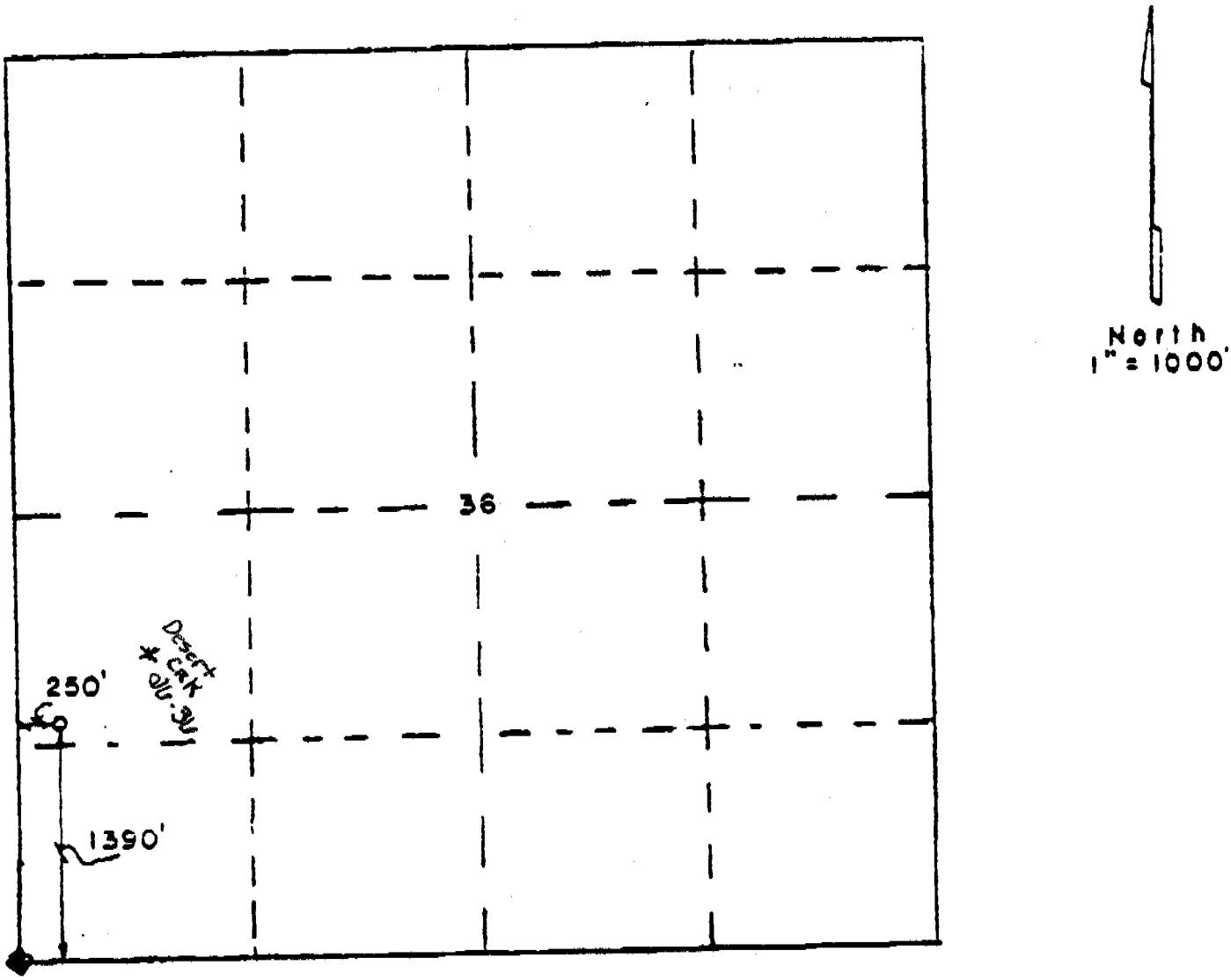
CONDITIONS OF APPROVAL, IF ANY:

APPROVED BY THE STATE
OF UTAH DIVISION OF
OIL, GAS, AND MINING
DATE: 12-19-90
BY: [illegible]
WELL SPACING: 615-3-3

*(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.

WELL LOCATION PLAT



WELL LOCATION DESCRIPTION:
CHUSKA ENERGY COMPANY, Sterling 36- L - 1
1390'FSL & 250'FWL
Section 36, T.41 S., R.23 E., SLM
San Juan, UT.
5003' ground elevation
State plane coordinates from seismic control:
x = 2,626,700 y = 193,053

The above plat is true and correct to my knowledge.

Gerald G. Huddleston, LS

05 December 1990

REGISTERED LAND SURVEYOR
GERALD G. HUDDLESTON
STATE OF UTAH

213 East Montezuma Avenue • Cortez, Colorado 81321 • 303-565-3330

CHUSKA ENERGY COMPANY

10 POINT DRILLING PLAN

Sterling 36L Well No. 1
Section 36, Township 41S, Range 23E
1390' FSL, 250' FWL
San Juan County, Utah

1. SURFACE FORMATION

Geological name of surface formation: Morrison

2. ELEVATION

Surface elevation is 5,003' GR.

3. ESTIMATED FORMATION TOPS

Depth	Formation	Sub Sea Elevation	
Surface	Morrison	+ 5,003'	
1,301'	Navajo	+ 3,702'	
1,981'	Chinle	+ 3,022'	
2,671'	DeChelly	+ 2,332'	
2,901'	Organ Rock	+ 2,102'	
3,639'	Cedar Mesa	+ 1,364'	
4,371'	Hermosa	+ 632'	
5,103'	Upper Ismay	- 100'	
5,213'	Lower Ismay	- 210'	
5,253'	Desert Creek	- 250'	Primary Objective
5,417'	Akah	- 414'	
5,503'	Total Depth	- 500'	

4. PROPOSED CASING/CEMENTING PROGRAM

	Depth	Size	Weight	Grade	Coupling
Surface	500'	8 5/8"	24 lb	K-55	STC
Production:	5,503'	5 1/2"	15.5 lb	K-55	STC

Surface Cementing:

371 sx (427 ft^3) Class 'G' cement with 2% $CaCl_2$ and 1/4 lb/sk Celloflake. Weight = 15.8 ppg, yield = 1.15 ft^3/sk. Slurry volume calculated at 100% excess over annular volume.

Production Cementing:

First Stage

T.D. to 3,500' (stage collar @ ± 3,500'). Lead with 134 sx Class 'G' cement, 65:35 Pozmix, with 6% gel and 1/4 lb/sk Celloflake. Weight = 12.7 ppg, yield = 1.85 ft^3/sk. Tail with 181 sx Class 'G' cement with 2% $CaCl_2$. Weight = 15.8 ppg, yield = 1.15 ft^3/sk. Total of 457 ft^3. Bring Class 'G' slurry to 500' above top of Upper Ismay. Cement volumes calculated at 30% excess in open hole. WOC 4 hours between stages.

Second Stage

3,500' to surface. Lead with 355 sx Class 'G' cement, 65:35 Pozmix with 6% gel and 1/4 lb/sk Celloflake. Weight = 12.7 ppg, yield = 1.85 ft/sk. Tail with 100 sx Class 'G' cement with 2% $CaCl_2$. Weight = 15.8 ppg, yield = 1.15 ft^3/sk. Total of 772 ft^3. Cement volumes calculated at 30% excess in open hole.

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.

5. BLOWOUT PREVENTER (See attached schematics)

As abnormal pressure is not anticipated, a 2,000 psi BOP system would be sufficient for the drilling of this well. However, due to availability constraints, a 3,000 psi system will be used, as per the attached Exhibits "A" and "B". This will be a 10" x 900 Series double ram preventer, equipped with a set of pipe and blind rams.

An accumulator system, with a pressure capacity sufficient to operate the rams three complete cycles without rig power, will be required as part of the rig equipment.

6. PROPOSED MUD PROGRAM

Surface to 3,000'

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

3,000' to T.D.

Low solids, non-dispersed polymer system. Weight 8.6 - 9.5 ppg. Gel/lime sweeps as hole conditions dictate for hole cleaning. Fluid loss to be maintained at 15 - 20 cc. Fluid loss to be further reduced to 15 cc or less prior to coring, logging or DSTs.

7. AUXILIARY EQUIPMENT

A. A kelly cock will be installed during drilling operations, with handle available on the rig floor.

B. Floor (stabbing) valves will be available, on the rig floor at all times, with necessary subs to fit all of the drilling assemblies.

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

8. WELL EVALUATION

Open hole electric logging program will consist of a minimum program of DLL-MSFL-SP-GR-Cal, FDC-CNL-GR-Lithodensity from T.D. to 4,000'.

Coring and/or drill stem testing will be as per the wellsite geologist's recommendations, based on shows. A mud logging unit will be utilized during drilling operations from at least 500' above the Upper Ismay.

9. ABNORMAL PRESSURES/GAS

Abnormal pressures are not anticipated. Monitoring of gas and hydrocarbon shows will be by wellsite mud logging unit. H_2S gas is not anticipated, however regular checks will be made while drilling the well.

10. TIMING

The drilling and evaluation of this well is estimated to be 14 days. Anticipated spud date is 3-17-91.

EXHIBIT "A"

BLOWOUT PREVENTER

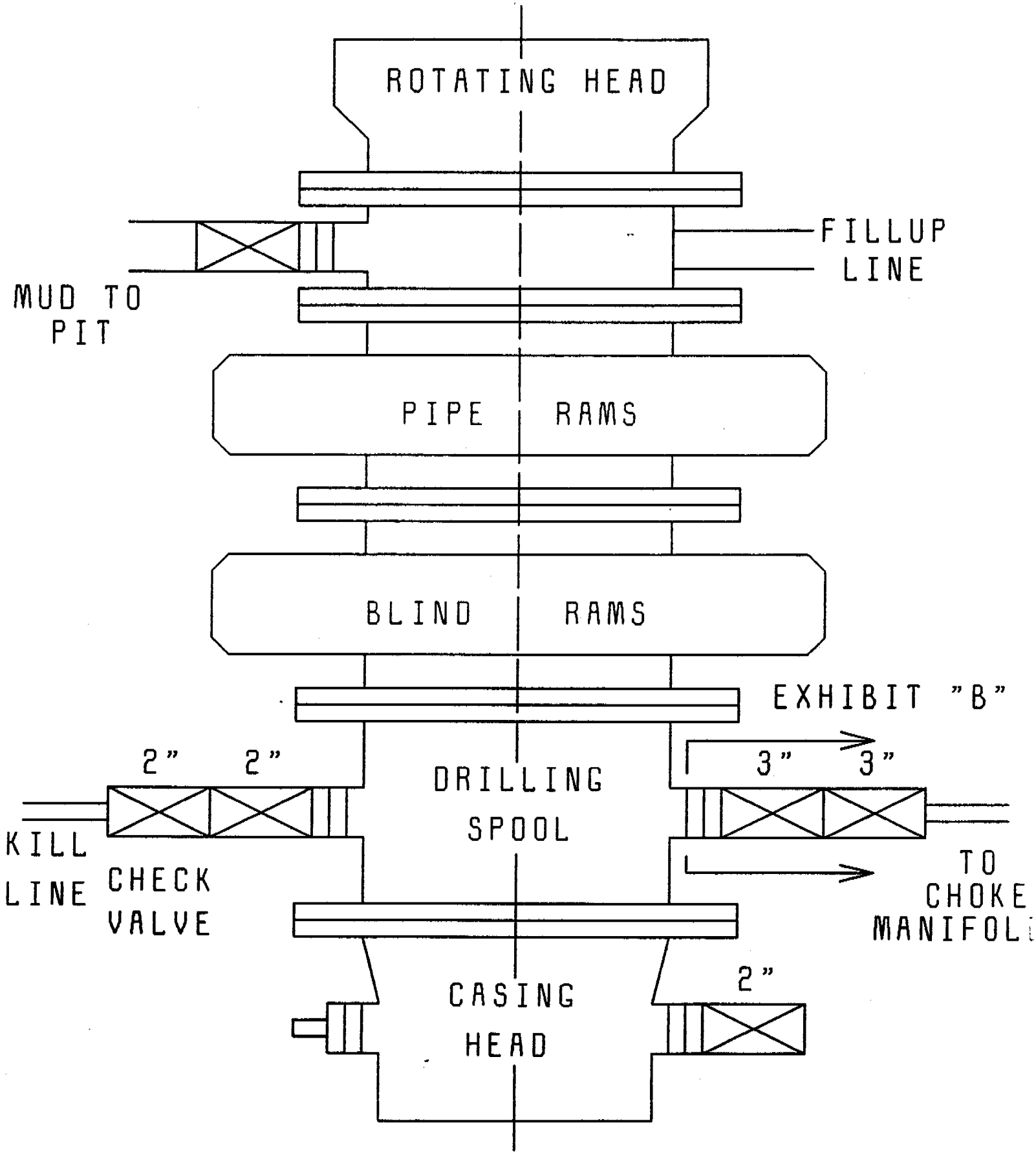
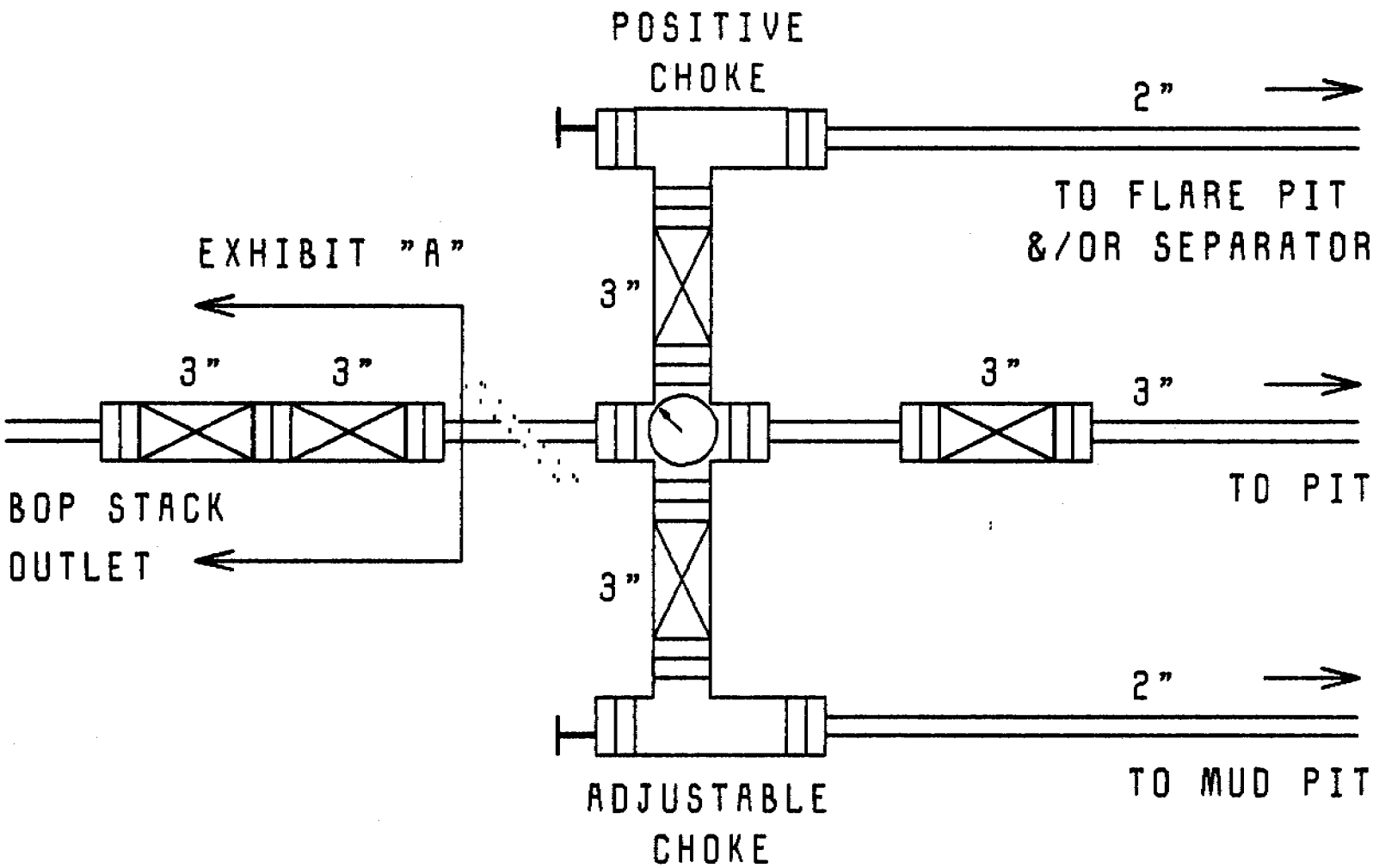


EXHIBIT "B"

CHOKE MANIFOLD



DETAILED DRILLING PROGRAM

DATE: 10 December, 1990

WELL NAME: Sterling 36L WELL NO.: 1

LOCATION: Section 36, Township 41S, Range 23E
1390' FSL, 250' FWL
San Juan County, Utah

ELEVATION: 5,003' GR

TOTAL DEPTH: 5,503 GR

PROJECTED HORIZON: Primary target is Desert Creek at 5,253'.

DRILLING, CASING AND CEMENTING PROGRAM

1. Move in and rig up spud rig. Notify BLM of time of spud and intent to run surface casing.

2. Drill 12 1/4" hole to ± 500'. Use fresh water gel/lime spud mud for drilling surface hole. Well bore inclination is not to exceed 1° at 500'. Deviation surveys will be run at least at 250' and at casing point.

3. Run 8 5/8", 24 lb/ft, K-55, STC casing to T.D. Cement with 371 sx (427 ft^3) of Class 'G' cement with 2% $CaCl_2$ and 1/4 lb/sk Celloflake (sufficient slurry volume to circulate cement to surface). Release spud rig and W/O drilling rig.

4. Move in and rig up rotary rig. Nipple up BOP stack and related equipment. See BOP schematics for details.

5. Pressure test BOP to 2,000 psig for 30 minutes. Pressure test manifold and all related equipment to 2,000 psig. Pressure test casing to 1,500 psig for 30 min.

6. Drill out surface casing with 7 7/8" bit. Drill 7 7/8" hole to T.D. Deviation surveys are to be taken every 500' or on a bit trip, whichever occurs first. Maximum allowable deviation will be 5° at T.D., with the maximum allowable rate of change to be 1°/100'.

7. Run open hole logs and evaluate. Coring and/or drill stem testing will be as per wellsite geologist's recommendation.

8. If the well is determined to be productive, run 5 1/2", 15.5 lb/ft, K-55, STC casing to T.D. Set stage cementing collar at ± 3,500'. In addition to placing centralizers over potential production zones, they will also be run to cover the aquifer sands of the Navajo and DeChelly formations, as per BLM stipulations. Cement production casing in two stages as per cementing program in 10-point Drilling Plan.

9. Nipple down BOPE. Set 5 1/2" casing slips and cut off casing. Install well head. Release drilling rig and move rig off location.

10. If well is non-productive it will be plugged and abandoned as per State, BLM and Navajo Tribal stipulations.

Sterling 36L Well No. 1
Section 36, Township 41S, Range 23E
1390' FSL, 250' FWL
San Juan County, Utah

GENERAL COMPLETION PROCEDURE

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

PLUGGING AND ABANDONMENT

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

7. METHODS OF HANDLING WASTE MATERIAL

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

8. ANCILLARY FACILITIES

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

9. WELL SITE LAYOUT

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

10. PLANS FOR RESTORATION OF THE SURFACE

The location is laid out on an east/west trend and will require up to 8' of cut in the reserve pit (up to 8' of cut in the north eastern corner of the location pad) and up to 7' of fill in the south western corner of the location pad. Top soil removed from the pad will be stored at the well site. A reserve pit will be built on terrain containing sparse native vegetation. After drilling operations are complete, drilling fluid in the reserve pit will be allowed to evaporate. All remaining fluid in the pit will be disposed of into an approved disposal site. The reserve pit will remain fenced during the evaporation and disposal process. The pit will then be covered and the topsoil will be returned to the disturbed area. The terrain will be returned as near to its original condition as possible. Following operations, rehabilitation seeding will be in accordance with APD/BLM/BIA stipulations. There are no residents in the immediate area of the site.

11. OPERATORS REPRESENTATIVE

CHUSKA ENERGY COMPANY
3315 BLOOMFIELD HIGHWAY
FARMINGTON, NEW MEXICO 87402
LARRY G. SESSIONS

12. CERTIFICATION

I hereby certify that either I, or persons under my direct supervision have inspected the proposed drill site and access route: that I am familiar with the conditions which presently exist: that the statements made in this plan are, to the best of my knowledge, true and correct and that the work planned will be performed by Chuska Energy, or its sub-contractors, in conformity with the terms and conditions under which it is approved.

LARRY G. SESSIONS
Operations Manager

CHUSKA ENERGY COMPANY

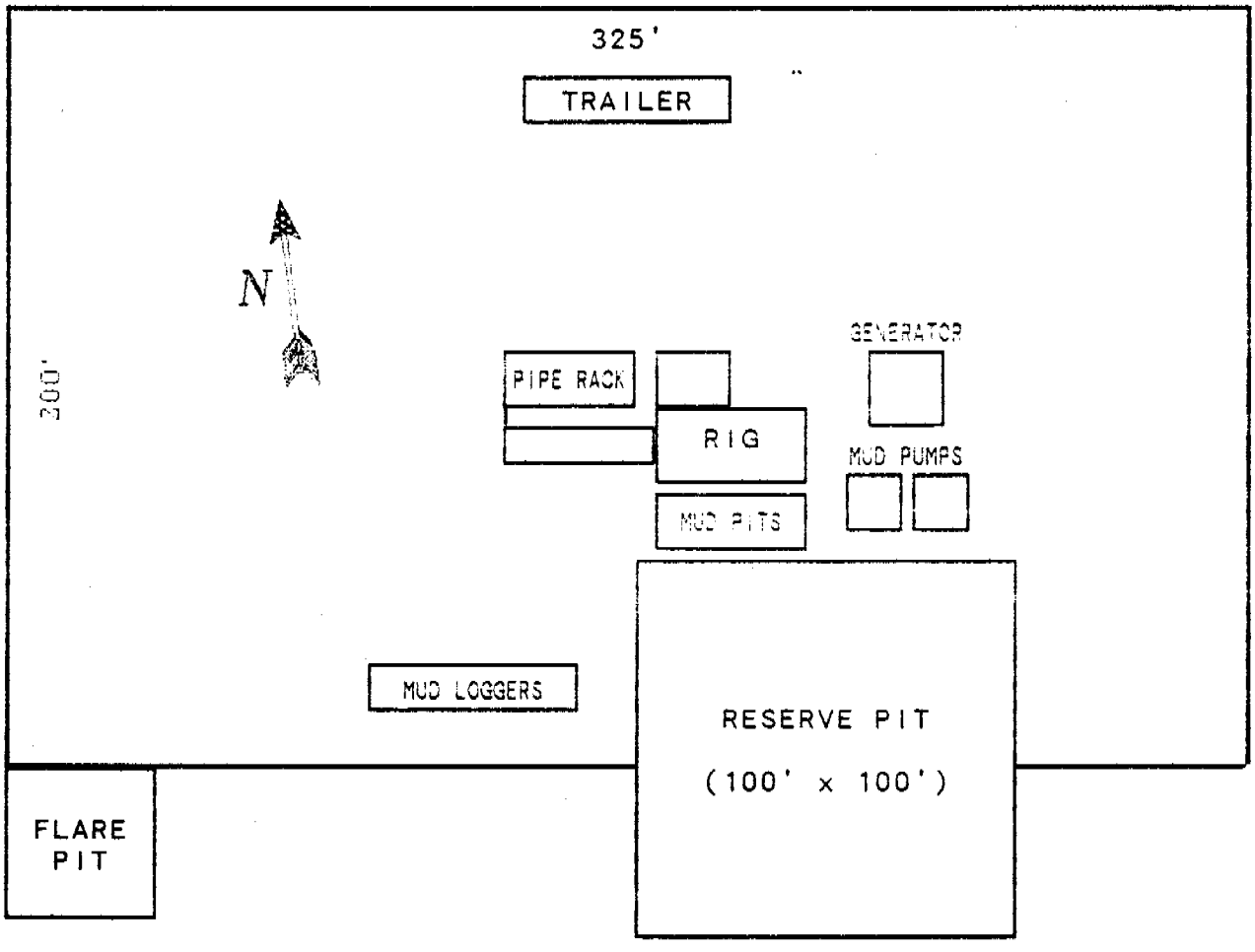
LOCATION LAYOUT

STERLING 36L-1

1390' FSL, 250' FWL

SECTION 36, TOWNSHIP 41S, RANGE 23E

SAN JUAN COUNTY, UTAH



Sterling 36L Well No. 1
Section 36, Township 41S, Range 23E
1390' FSL, 250' FWL
San Juan County, Utah

SURFACE USE PLAN

1. EXISTING ROADS

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

2. PLANNED ACCESS ROAD

The access road will be as shown on the attached topographic map. The road will be flat bladed, constructed 14' in width and will be maintained as necessary to prevent excessive damage to the existing terrain. The road will be upgraded if commercial production is established. It is anticipated that less than 300' of new road will need to be constructed to the location pad.

3. LOCATION OF EXISTING WELLS & TANK BATTERIES

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

4. LOCATION OF EXISTING AND PROPOSED FACILITIES

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

5. LOCATION & TYPE OF WATER SUPPLY

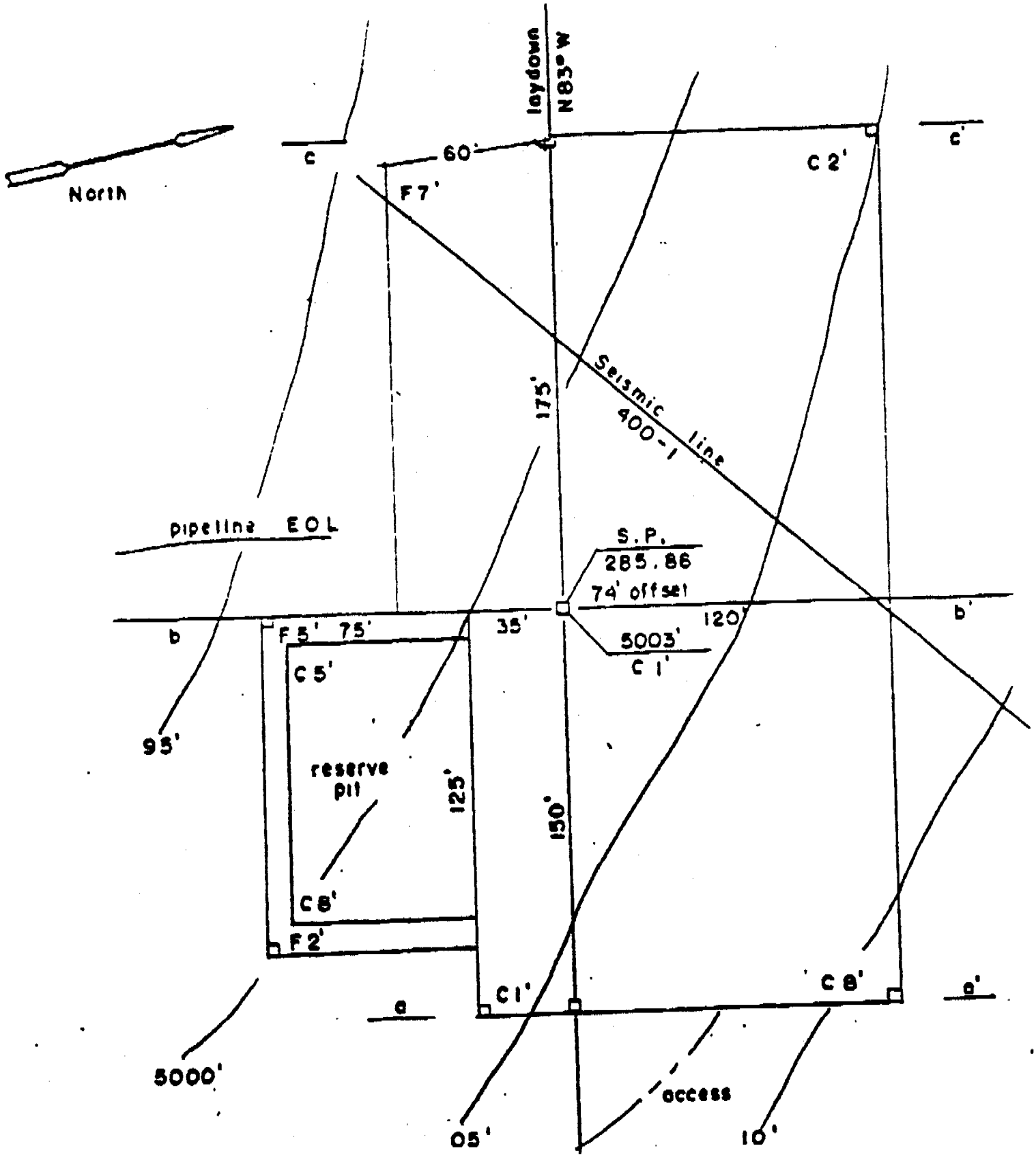
Water will be acquired from the San Juan River and will be hauled using Chuska Energy Company water trucks, under State of Utah Division of Water Rights Permit Numbers 09-1724 (T64796).

6. SOURCE OF CONSTRUCTION MATERIALS

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

Plan View

Sterling 36 - L - 1



CROSS SECTION

Sterling 36 - L - 1

Cut //////
Fill

I"=50' vert. & horz.

c

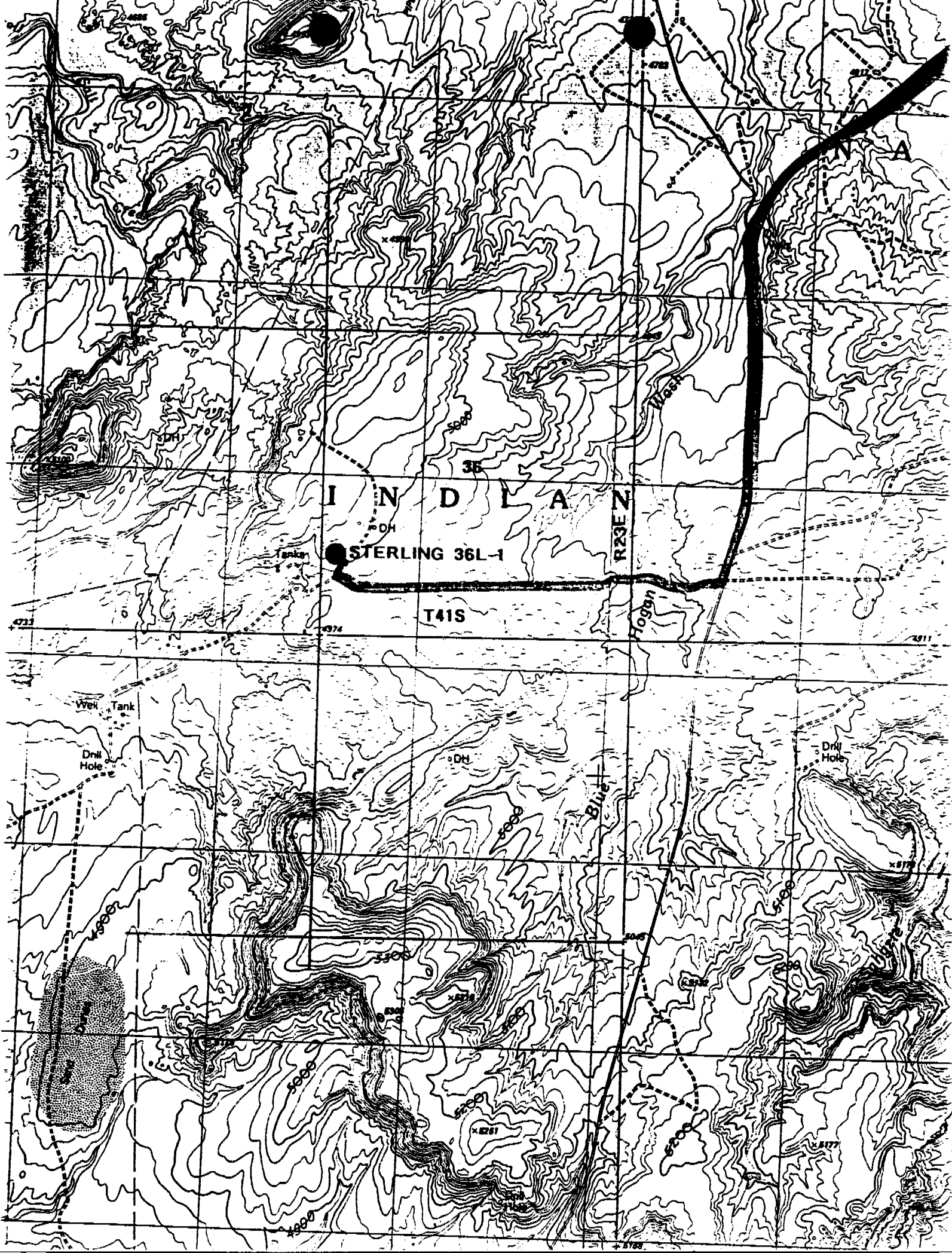
c'

b

b'

a

a'


I N D I A N
35
R23E
T41S
STERLING 36L-1
Tanks
Hogan
Wash
Blue
Well
Tank
Drill Hole
Drill Hole
DH
DH
5000
5200
5400
5600
5800
5000

OPERATOR Chuska Energy Co N-9090 DATE 10-18-90

WELL NAME Sterling 36 L #1

SEC NWSW 36 T 41S R 03E COUNTY San Juan

43-037-31595
API NUMBER

Indian (D)
TYPE OF LEASE

CHECK OFF:

[ ] PLAT [ ] BOND [ ] NEAREST WELL

[ ] LEASE [ ] FIELD SLBM [ ] POTASH OR OIL SHALE

PROCESSING COMMENTS:

Water Permit 09-1704 (T64796)

APPROVAL LETTER:

SPACING: [ ] R615-2-3 N/A UNIT [ ] R615-3-2

[ ] ~~17 0 9/1-60~~ CAUSE NO. & DATE [X] R615-3-3

STIPULATIONS:

cc: BIA

CONFIDENTIAL PERIOD EXPIRED ON 7-10-92

0218T

Norman H. Bangerter
Governor
Dee C. Hansen
Executive Director
Dianne R. Nielson, Ph.D.
Division Director

State of Utah

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

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

December 19, 1990

Chuska Energy Company
P. O. Box 780
Farmington, New Mexico 87499

Gentlemen:

Re: Sterling 36L #1 - NW SW Sec. 36, T. 41S, R. 23E - San Juan County, Utah
1390' FSL, 250' FWL

Approval to drill the referenced well is hereby granted in accordance with Rule R615-3-3, Oil and Gas Conservation General Rules.

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

1. Spudding notification within 24 hours after drilling operations commence.

2. Submittal of an Entity Action Form within five working days following spudding and whenever a change in operations or interests necessitates an entity status change.

3. Submittal of the Report of Water Encountered During Drilling, Form 7.

4. Prompt notification if it is necessary to plug and abandon the well. Notify R. J. Firth, Associate Director, (Office) (801) 538-5340, (Home) 571-6068, or Jim Thompson, Lead Inspector, (Home) 298-9318.

5. Compliance with the requirements of Rule R615-3-20, Gas Flaring or Venting, Oil and Gas Conservation General Rules.

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

7. This approval shall expire one (1) year after date of issuance unless substantial and continuous operation is underway or an application for an extension is made prior to the approval expiration date.

The API number assigned to this well is 43-037-31595.

Sincerely,

R. J. Firth
Associate Director, Oil & Gas

tas
Enclosures
cc: Bureau of Land Management
Bureau of Indian Affairs
J. L. Thompson
we14/1-28

WATER PERMIT OK

DIVISION OF OIL, GAS AND MINING

API NO. 43-037-31595

SPUDDING INFORMATION

NAME OF COMPANY: CHUSKA ENERGY COMPANY

WELL NAME: STERLING 36L-1

SECTION NWSW 36 TOWNSHIP 41S RANGE 23E COUNTY SAN JUAN

DRILLING CONTRACTOR AZTEC WELL SERVICE

RIG # 184

SPUDDED: DATE 4-19-91

TIME 6:00 a.m.

HOW ROTARY

DRILLING WILL COMMENCE _____

REPORTED BY CHRIS HILL

TELEPHONE # 505-326-5525

DATE 4-20-91 SIGNED TAS

STATE OF UTAH
DIVISION OF OIL, GAS AND MINING

OPERATOR Chuska Energy Company

OPERATOR ACCT. NO. N 9290

ADDRESS P.O. Box 780, Farmington, NM 87401

ENTITY ACTION FORM - FORM 6

ACTION CODE	CURRENT ENTITY NO.	NEW ENTITY NO.	API NUMBER	WELL NAME	WELL LOCATION QQ	SC	TP	RG	COUNTY	SPUD DATE	EFFECTIVE DATE
A	99999	11224	43-037-31595	Sterling 36L#1	NW/SW	36	41S	23E	San Juan	4-19-91	

WELL 1 COMMENTS: Spudded 2000 hrs, 4-19-91 with Aztec Well Services Rig 184.

WELL 2 COMMENTS: Indian-Lease
Field-Desert Creek
Unit-N/A
Proposed Zone-Akah
(New entity 11224 added 5-1-91) lp

WELL 3 COMMENTS:

WELL 4 COMMENTS:

WELL 5 COMMENTS:

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

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

(3/89)

RECEIVED
APR 26 1991
DIVISION OF
OIL GAS & MINING

Signature

Operations Engineer — 4-22-91
Title — Date

Phone No. 505-326-5525

CHUSKA ENERGY COMPANY

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

22 April, 1991

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

Ref: Sundry Notice: Sterling 36L 1 Well
Spud/Surface Casing

Gentlemen

Attached for your examination and approval are the original and two copies of the subject Sundry Notice.

Please advise if you require additional information concerning this submission.

Sincerely,

Larry G. Sessions

Larry G. Sessions
Operations Manager

LGS/cswh
File: C:\WP51\STERLING.36L\SPUDSUN.CVR

encl.

FORM 9

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

6. Lease Designation and Serial Number: 14-20-603-248

7. Indian Allottee or Tribe Name: Navajo Tribal

8. Unit or Communitization Agreement:

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, deepen existing wells, or to reenter plugged and abandoned wells.
Use APPLICATION FOR PERMIT-- for such proposals

1. Type of Well: ☐ Oil Well ☐ Gas Well ☐ Other (specify)

9. Well Name and Number: Sterling 36L 1

2. Name of Operator: Chuska Energy Company

10. API Well Number: 43-037-31595

3. Address of Operator: P.O. Box 780, Farmington, NM 87401

4. Telephone Number: 505-326-5525

11. Field and Pool, or Wildcat: Wildcat

5. Location of Well
Footage : 1390' FSL, 250' FWL
QQ, Sec, T., R., M.: NW/4 SW/4 S36 T41S R23E
County : San Juan
State : UTAH

12. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

NOTICE OF INTENT
(Submit in Duplicate)

- ☐ Abandonment
- ☐ Casing Repair
- ☐ Change of Plans
- ☐ Conversion to Injection
- ☐ Fracture Treat
- ☐ Multiple Completion
- ☐ Other
- ☐ New Construction
- ☐ Pull or Alter Casing
- ☐ Recompletion
- ☐ Shoot or Acidize
- ☐ Vent or Flare
- ☐ Water Shut-Off

Approximate Date Work Will Start _____

SUBSEQUENT REPORT
(Submit Original Form Only)

- ☐ Abandonment *
- ☐ Casing Repair
- ☐ Change of Plans
- ☐ Conversion to Injection
- ☐ Fracture Treat
- ☒ Other Spud/Surface Casing
- ☐ New Construction
- ☐ Pull or Alter Casing
- ☐ Recompletion
- ☐ Vent or Flare
- ☐ Water Shut-Off

Date of Work Completion 4-19-91

Report results of Multiple Completions and Recompletions to different reservoirs on WELL COMPLETION OR RECOMPLETION AND LOG form.

* Must be accompanied by a cement verification report.

13. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)

Spudded 2000 hrs, 4-19-91 Aztec Well Services Rig 184. Drilled to 525'. RU and ran 12 joints 8 5/8", 24 lb/ft, K-55, STC casing and landed at 525'. Cemented with 371 sx class 'G' cement with 2% $CaCl_2$ and 1/4 lb/sk Celloflake. Circulated 22 bbl slurry to surface. Notification of spud to State of Utah (Frank Matthews) at 1615 hrs, 4-18-91, by Chris Hill.

RECEIVED
APR 26 1991
DIVISION OF
OIL GAS & MINING

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

Name & Signature Christopher S.W. Hill Title Operations Engineer Date 22 Apr 91

(State Use Only)

(8/90)

See Instructions on Reverse Side

CHUSKA ENERGY COMPANY

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

7 May, 1991

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

Ref: Sundry Notice: Sterling 36L 1 Well
Production Casing

Gentlemen

Attached for your examination and approval are the original and two copies of the subject Sundry Notice.

Please advise if you require additional information concerning this submission.

Sincerely,

Larry G. Sessions
Operations Manager

LGS/cswh
File: C:\WP51\STERLING.36L\PRCSGSUN.CVR

encl.

FORM-9

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

6. Lease Designation and Serial Number: 14-20-603-248

7. Indian Allottee or Tribe Name: Navajo Tribal

8. Unit or Communitization Agreement:

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, deepen existing wells, or to reenter plugged and abandoned wells. Use APPLICATION FOR PERMIT—for such proposals.

CONFIDENTIAL

1. Type of Well: [X] Oil Well [ ] Gas Well [ ] Other (specify)

9. Well Name and Number: Sterling 36L 1

2. Name of Operator: Chuska Energy Company

10. API Well Number: 43-037-31595

3. Address of Operator: P.O. Box 780, Farmington, NM 87401

4. Telephone Number: 505-326-5525

11. Field and Pool, or Wildcat: Wildcat

5. Location of Well
Footage : 1390' FSL, 250' FWL
QQ, Sec, T., R., M.: NW/4 SW/4 S36 T41S R23E
County : San Juan
State : UTAH

12. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

NOTICE OF INTENT
(Submit in Duplicate)

- [ ] Abandonment
- [ ] Casing Repair
- [ ] Change of Plans
- [ ] Conversion to Injection
- [ ] Fracture Treat
- [ ] Multiple Completion
- [ ] Other
- [ ] New Construction
- [ ] Pull or Alter Casing
- [ ] Recompletion
- [ ] Shoot or Acidize
- [ ] Vent or Flare
- [ ] Water Shut-Off

Approximate Date Work Will Start

SUBSEQUENT REPORT
(Submit Original Form Only)

- [ ] Abandonment *
- [ ] Casing Repair
- [ ] Change of Plans
- [ ] Conversion to Injection
- [ ] Fracture Treat
- [X] Other Production Casing
- [ ] New Construction
- [ ] Pull or Alter Casing
- [ ] Recompletion
- [ ] Vent or Flare
- [ ] Water Shut-Off

Date of Work Completion 5-6-91

Report results of Multiple Completions and Recompletions to different reservoirs on WELL COMPLETION OR RECOMPLETION AND LOG form.

* Must be accompanied by a cement verification report.

13. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)

Drilled to 5,576', TD. Logged. RU and ran 132 joints 5 1/2", 15.5 lb/ft, K-55, LTC casing and landed at 5,562', float collar at 5,541', DV tool at 3,508'. Cemented first stage. Lead with 380 sx class 'G', 35:65 poz with 6% gel and 1/4 lb/sk celloflake. Tailed with 260 sx class 'G', with 1/4 lb/sk celloflake. Dropped bomb and circulated between stages. Circulated ± 24 bbl slurry to pit. Cemented second stage. Lead with 980 sx class 'G', 35:65 poz with 6% gel and 1/4 lb/sk celloflake. Tailed with 100 sx class 'G', with 1/4 lb/sk celloflake. Displaced cement and circulated ±30 bbl slurry to pit. ND BOPE. Set slips. Cut off casing. Rig released 1500 hrs, 5-6-91.

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

Name & Signature: Christopher S.W. Hill Title: Operations Engineer Date: 7 May 91

(State Use Only)

RECEIVED
MAY 13 1991
DIVISION OF
OIL GAS & MINING

(8/90)

See Instructions on Reverse Side

CHUSKA ENERGY COMPANY

1775 SHERMAN STREET - SUITE 1800 • DENVER, COLORADO 80203 • PHONE: (303) 863-7021
FAX #: (303) 863-7210

May 17, 1991

Ms. Vicki Kearney
Utah Oil & Gas Commission
355 West North Temple
Three Triad Center
Suite 350
Salt Lake City, Utah
84180-1203

Dear Ms. Kearney:

Please keep all Chuska Energy Company data confidential until further notice.

Thanks,

Herbert P. Mosca
Chuska Staff Geologist

CHUSKA ENERGY COMPANY

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

11 June, 1991

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

Ref: Completion Report: Sterling 36L-1 Well

Gentlemen

Attached for your examination and approval is the original and two copies of the subject Completion Report.

Chuska requests that the information contained in this report be kept confidential.

Please advise if you require additional information concerning this submission.

Sincerely,

Larry G. Sessions
Operations Manager

LGS/cswh
File: C:\WP51\STERLING.36L\CRCOVER

encl.

FORM 8

STATE OF UTAH
DIVISION OF OIL, GAS AND MINING

CONFIDENTIAL

5. LEASE DESIGNATION AND SERIAL NO.
14-20-603-248

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

6. IF INDIAN, ALLOTTEE OR TRIBE NAME
Navajo Tribal

1a. TYPE OF WELL: OIL WELL [X] GAS WELL [ ] DRY [ ] Other

7. UNIT AGREEMENT NAME

b. TYPE OF COMPLETION: NEW WELL [X] WORK OVER [ ] DEEP-EN [ ] PLUG BACK [ ] DIFF. RESVR [ ] Other

8. FARM OR LEASE NAME
Sterling 36L

2. NAME OF OPERATOR
Chuska Energy Company

RECEIVED
JUN 17 1991
DIVISION OF OIL GAS & MINING

9. WELL NO.
1

3. ADDRESS OF OPERATOR
P.O. Box 780, Farmington, NM 87401

10. FIELD AND POOL, OR WILDCAT
Wildcat

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements)
At Surface: 1390' FSL, 250' FWL
At top prod. interval reported below: Same
At total depth: Same

11. SEC., T., R., M., OR BLOCK AND SURVEY OR AREA
S36 T41S R23E

14. API NO.	DATE ISSUED	12. COUNTY	13. STATE
43-037-31595	12-19-90	San Juan	Utah

15. DATE SPUDDED	16. DATE T.D. REACHED	17. DATE COMPL. (Ready to prod. or Plug & Abd.)	18. ELEVATIONS (DF, RKB, RT, GR ETC.)	19. ELEV. CASINGHEAD
4-19-91	5-4-91	6-10-91	5,003' GR/5,016' KB	5,003' GR

20. TOTAL DEPTH, MD & TVD	21. PLUG BACK T.D., MD & TVD	22. IF MULTIPLE COMPL., HOW MANY	23. INTERVALS DRILLED BY	ROTARY TOOLS	CABLE TOOLS
5,576'(D)/5,571'(L)	5,350'	-	→	Rotary	

24. PRODUCING INTERVAL(S), OF THIS COMPLETION - TOP, BOTTOM, NAME (MD AND TVD)
5,300' - 5,308' Paradox

25. WAS DIRECTIONAL SURVEY MADE
No

26. TYPE ELECTRIC AND OTHER LOGS RUN
DLL/MSFL/GR/CAL, LDT/CNL/GR/CAL
MLT, BHCS/GR/CAL, RFT

27. WAS WELL CORED YES [X] NO [ ] (Submit analysis)
DRILL STEM TEST YES [ ] NO [X] (See reverse side)

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

CASING SIZE	WEIGHT, LB./FT.	DEPTH SET (MD)	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
8 5/8"	24	500	12 1/4"	371 sx G + 2% CaCl, 22 bbl to pit	
5 1/2"	15.5	5,562'	7 7/8"	S1: 380 sx G 35:65 Poz/6% Gel + 260 sx G. 24 bbl to pit	
				S2: 980 sx G 35:65 Poz/6% Gel + 100 sx G. 30 bbl to pit.	
				DV tool at 3,508'	

29. LINER RECORD

SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT	SCREEN (MD)

30. TUBING RECORD

SIZE	DEPTH SET (MD)	PACKER SET (MD)
2 7/8"	5,285'	5,285'

31. PERFORATION RECORD (Interval, size and number)
All perforations with 4" casing guns at 4 spf
5460 - 5467/5488 - 5495'
5418 - 5450
5365 - 71/5374-79/5389-94/5397-5400
5300 - 5308

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

DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED
5460-67/5488-95	150 gal 15% HCl + 4,200 gal 28% MSR-100
5418-5450	150 gal 15% HCl
5365-71/74-79/89-94/97-00	150 gal 15% HCl
5300-5308	150 gal 15% HCl + 2,400 gal 28% MSR-100

33. PRODUCTION

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

DATE OF TEST	HOURS TESTED	CHOKE SIZE	PROD'N. FOR TEST PERIOD →	OIL - BBL.	GAS - MCF.	WATER - BBL.	GAS-OIL RATIO

FLOW. TUBING PRESS.	CASING PRESSURE	CALCULATED 24-HOUR RATE →	OIL - BBL.	GAS - MCF.	WATER - BBL.	OIL GRAVITY-API (CORR.)

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

TEST WITNESSED BY

35. LIST OF ATTACHMENTS
No zone capable of sustained production. Well suspended pending further evaluation

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

SIGNED Christopher S.W. Hill TITLE Operations Engineer DATE 6-11-91

PTS 6-25-91

See Spaces for Additional Data on Reverse Side

(3/89)

INSTRUCTIONS

This form should be completed in compliance with the Utah Oil and Gas Conservation General Rules. If not filed prior to this time, all logs, tests, and directional surveys as required by Utah Rules should be attached and submitted with this report.

ITEM 18: Indicate which elevation is used as reference for depth measurements given in other spaces on this form and on any attachments.

ITEMS 22 and 24: If this well is completed for separate production from more than one interval zone (multiple completion), so state in item 22, and in item 24 show the producing interval, or intervals, top(s), bottom(s) and name(s) for only the interval reported in item 33. Submit a separate report (page) on this form, adequately identified, for each additional interval to be separately produced, showing the additional data pertinent to such interval.

ITEM 29: "Sacks Cement": Attached supplemental records for this well should show the details of any multiple stage cementing and the location of the cementing tool.

ITEM 33: Submit a separate completion report on this form for each interval to be separately produced (see instructions for items 22 and 24 above).

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.
Paradox	5460 5488	5467 } 5495 }	Limestone, Dolomite. Depleted
Paradox	5418	5450	Limestone. Depleted
Paradox	5365 5374 5389 5397	5371 } 5379 } 5394 } 5400 }	Dolomite, Limestone. Depleted
Paradox	5300	5308	Limestone, Dolomite, Shale
Core #1	5372	5432	Paradox. Recovered 100%
Core #2	5432	5492	Paradox. Recovered 100%
Core #3	5492	5516	Paradox. Recovered 21' of 24' cut
Core #4	5516	5576	Paradox. Recovered 48' of 60' cut

38. GEOLOGIC MARKERS

Name	Top	
	Meas. Depth	True Vert. Depth
Hermosa	4420	4420
Upper Ismay	5178	5178
Hovenweep Shale	5270	5270
Lower Ismay	5287	5287
Gothic Shale	5311	5311
Desert Creek	5332	5332
Chimney Rock Shale	5495	5495
Akah	5515	5515

FORM 10

STATE OF UTAH
DIVISION OF OIL, GAS AND MINING
355 West North Temple, 3 Triad, Suite 350, Salt Lake City, UT 84180-1203

MONTHLY OIL AND GAS PRODUCTION REPORT

OPERATOR NAME AND ADDRESS:

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

UTAH ACCOUNT NUMBER: N9290

REPORT PERIOD (MONTH/YEAR): 12 / 93

AMENDED REPORT ☐ **(Highlight Changes)**

Well Name / API Number / Entity / Location	Producing Zone	Well Status	Days Oper	Production Volumes OIL(BBL)	GAS(MCF)	WATER(BBL)
RUNWAY 10-E #2 ✓4303731550 11128 40S 25E 10	DSCR					
MONUMENT 17E #2 ✓4303731547 11139 40S 25E 17	DSCR					
NAVAJO CANYON 331 #1 ✓4303731546 11145 39S 25E 33	IS-DC					
LONE MOUNTAIN CREEK 12F #1 ✓4303731545 11148 42S 24E 12	DSCR					
RUNWAY 10C-5A ✓4303731597 11152 40S 25E 10	DSCR					
BLUE HOGAN 1J #1 ✓4303731562 11161 42S 23E 1	DSCR					
ASAZI 5L #3 ✓4303731572 11207 42S 24E 5	PRDX					
NW CAJON 11 #1 ✓4303731510 11210 40S 24E 1	DSCR					
BROWN HOGAN 1A #2 ✓4303731573 11215 42S 23E 2	PRDX					
STERLING 36L #1 ✓4303731595 11224 41S 23E 36	PRDX					
MULE 31-K-1 ✓4303731617 11326 41S 24E 31	DSCR					
NORTH HERON 35C ✓4303731616 11479 41S 25E 35	DSCR					
BURRO 31I ✓4303731708 11496 41S 24E 31	DSCR	— No Cardex/DTS NO FILE		✓ done /o-ts		
			TOTALS			

COMMENTS:

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

Name and Signature: Telephone Number:

HARKEN SOUTHWEST CORPORATION

(formerly Chuska Energy Company)

We are pleased to announce that effective January 18, 1994, Chuska Energy Company, has changed its name to Harken Southwest Corporation. This is in line with the February 1993 merger with Harken Exploration Company.

Harken Southwest Corporation is still located at 3315 Bloomfield Highway, Farmington, New Mexico, 87401. You may still contact us at (505) 326-5525.

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

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

Sincerely,

By A. Wieland

Barry A. Wieland
Operations Manager

3315 BLOOMFIELD HIGHWAY • FARMINGTON, NEW MEXICO 87401 • PHONE: (505) 326-5525 • FAX: (505) 325-5423

Division of Oil, Gas and Mining

PHONE CONVERSATION DOCUMENTATION FORM

Route original/copy to:

[ ] **Well File** _____

(Location) Sec___Twp___Rng___

(API No.) _____

[ ] **Suspense**

(Return Date) _____

(To - Initials) _____

[X] **Other** Oper. Nm. Change

1. Date of Phone Call: 2-9-94 Time: 12:29

2. DOGM Employee (name) L. Cordova (Initiated Call [X])

Talked to:

Name Wayne Townsend (or Ken Townsend) (Initiated Call [ ]) - Phone No. (505) 599-8900

of (Company/Organization) Blm / Farmington N.M.

3. Topic of Conversation: Chuska Energy Co. to Harken Southwest Corp.

4. Highlights of Conversation:

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

* 94o210 Per Admin. OK to change.

Division of Oil, Gas and Mining
OPERATOR CHANGE WORKSHEET

Routing:

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

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

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

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

TO (new operator) HARKEN SOUTHWEST CORPORATION
(address) 3315 BLOOMFIELD HWY
FARMINGTON NM 87401

phone (505) 326-5525
account no. N 9290

FROM (former operator) CHUSKA ENERGY COMPANY
(address) 3315 BLOOMFIELD HWY
FARMINGTON NM 87401

phone (505) 326-5525
account no. N9290

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

Name: **SEE ATTACHED**	API: 037 31595	Entity:	Sec	Twp	Rng	Lease Type:
Name:	API:	Entity:	Sec	Twp	Rng	Lease Type:
Name:	API:	Entity:	Sec	Twp	Rng	Lease Type:
Name:	API:	Entity:	Sec	Twp	Rng	Lease Type:
Name:	API:	Entity:	Sec	Twp	Rng	Lease Type:
Name:	API:	Entity:	Sec	Twp	Rng	Lease Type:
Name:	API:	Entity:	Sec	Twp	Rng	Lease Type:

OPERATOR CHANGE DOCUMENTATION

Lec 1. (Rule R615-8-10) Sundry or other legal documentation has been received from former operator (Attach to this form). (Rec'd 2-7-94)

N/A 2. (Rule R615-8-10) Sundry or other legal documentation has been received from new operator (Attach to this form).

Lec 3. The Department of Commerce has been contacted if the new operator above is not currently operating any wells in Utah. Is company registered with the state? (yes/no) _____ If yes, show company file number: #096704.

Lec 4. **(For Indian and Federal Wells ONLY)** The BLM has been contacted regarding this change (attach Telephone Documentation Form to this report). Make note of BLM status in comments section of this form. Management review of **Federal and Indian** well operator changes should take place prior to completion of steps 5 through 9 below.

Lec 5. Changes have been entered in the Oil and Gas Information System (Wang/IBM) for each well listed above. (2-10-94)

Lec 6. Cardex file has been updated for each well listed above. (2-10-94)

Lec 7. Well file labels have been updated for each well listed above. (2-10-94)

Lec 8. Changes have been included on the monthly "Operator, Address, and Account Changes" memo for distribution to State Lands and the Tax Commission.

Lec 9. A folder has been set up for the Operator Change file, and a copy of this page has been placed there for reference during routing and processing of the original documents.

– OVER –

'ERATOR CHANGE WORKSHEET (CONTINUED) Initial each item when completed. Write N/A if item is not applicable.

ENTITY REVIEW

Lec 1. (Rule R615-8-7) Entity assignments have been reviewed for all wells listed above. Were entity changes made? (yes/no) ____ (If entity assignments were changed, attach copies of Form 6, Entity Action Form).

N/A 2. State Lands and the Tax Commission have been notified through normal procedures of entity changes.

BOND VERIFICATION (Fee wells only)

N/A 1. (Rule R615-3-1) The new operator of any fee lease well listed above has furnished a proper bond.
Lec

___ 2. A copy of this form has been placed in the new and former operators' bond files.

___ 3. The former operator has requested a release of liability from their bond (yes/no) ___. Today's date _____ 19___. If yes, division response was made by letter dated _____ 19___.

LEASE INTEREST OWNER NOTIFICATION RESPONSIBILITY

N/A 1. (Rule R615-2-10) The former operator/lessee of any **fee lease** well listed above has been notified by letter dated _____ 19___, of their responsibility to notify any person with an interest in such lease of the change of operator. Documentation of such notification has been requested.
DTS 3/2/94

N/A 2. Copies of documents have been sent to State Lands for changes involving **State leases**.

FILMING

✓ 1. All attachments to this form have been microfilmed. Date: March 7 1994.

FILING

Lec 1. Copies of all attachments to this form have been filed in each well file.

Lec 2. The original of this form and the original attachments have been filed in the Operator Change file.

COMMENTS

_____

_____

_____

_____

_____

Form 3160-5
(June 1990)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

RECEIVED
SEP 18 1995
DIV. OF OIL, GAS & MINING

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

SUNDRY NOTICES AND REPORTS ON WELLS

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

SUBMIT IN TRIPLICATE

1. Type of Well
☐ Oil Well ☐ Gas Well ☐ Other

2. Name of Operator
Harken Southwest Corp.

3. Address and Telephone No.
P.O. Box 612007 Dallas, Texas 75261 (214) 753-6900

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)
1390' FSL & 250' FWL
Sec. 36 - 41S - 23E

5. Lease Designation and Serial No.
14-20-603-248

6. If Indian, Allottee or Tribe Name
Navajo Nation

7. If Unit or CA, Agreement Designation
N/A

8. Well Name and No.
Sterling 36L #1

9. API Well No.
43-037-31595

10. Field and Pool, or Exploratory Area

11. County or Parish, State
San Juan, Utah

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

TYPE OF SUBMISSION	TYPE OF ACTION	
☐ Notice of Intent	☐ Abandonment	☐ Change of Plans
☐ Subsequent Report	☐ Recompletion	☐ New Construction
☐ Final Abandonment Notice	☐ Plugging Back	☐ Non-Routine Fracturing
	☐ Casing Repair	☐ Water Shut-Off
	☐ Altering Casing	☐ Conversion to Injection
	☒ Other Status	☐ Dispose Water

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

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

Harken Southwest plans to maintain a shut-in status on the subject wellbore until May, 1996, at which time the economics of secondary recovery operations can be ascertained.

CC: State of Utah
Navajo Nation (Minerals Dept)
BIA - Gallup

Accepted by the Utah Division of Oil, Gas and Mining

FOR RECORD ONLY

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

Signed D. Montgomery Title Production Administrator Date

(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

HARKEN SOUTHWEST CORPORATION

(formerly Chuska Energy Company)

September 15, 1995

Bureau of Land Management
Farmington District Office
1235 LaPlata Highway
Farmington, New Mexico 87401

ATTENTION: Ken Townsend/Steve Mason

RE: #1 Sterling 36L
UT 14-20-603-248
Sec 36-41S-23E - 1390' FSL & 250' FWL
San Juan County, Utah

Gentlemen:

The #1 Sterling 36L remains in a shut-in status. Harken maintains the wellbore can be used for secondary recovery operations. Harken believes this fits in with the overall DOE/Federal Government strategy to not prematurely abandon wells which can be utilized for enhanced oil recovery. The Desert Creek Field has produced 633,000 barrels to date from the Shell Desert Creek #2. Upon drilling of the Sterling 36L in May, 1991, We found the Desert Creek Reservoir was pressure depleted by production from the Shell Desert Creek #2.

Harken, in cooperation with the Utah Geologic Survey, is currently engaged in a DOE sponsored study (Class II program) to evaluate enhanced oil recovery operations in small Desert Creek Aneth Area oil fields. The study will be completed in March, 1996. Upon completion of the study Harken personnel will be able to ascertain the economics of enhanced oil recovery operations involving the subject wellbore, as well as many other Aneth Area fields. Therefore, Harken respectfully request approval of the attached sundry requesting and extension of shut-in status through May 1, 1996.

Very truly yours,
HARKEN SOUTHWEST CORPORATION

M. C. Watson

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

MCW/rlm

MacArthur Center II • 5605 N. MacArthur Blvd. • Suite 400 • Irving, Texas 75038
P.O. Drawer 612007 • Dallas, Texas 75261 • Phone: (214) 753-6900

Form 3160-5
(June 1990)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

RECEIVED
OCT 0 3 1996
DIV OF OIL, GAS & MINING

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

5. Lease Designation and Serial No.
14-20-603-248

6. If Indian, Allottee or Tribe Name
Navajo

7. If Unit or CA, Agreement Designation
N/A

1. Type of Well
☐ Oil Well ☐ Gas Well ☐ Other

8. Well Name and No.
Sterling 36L #1

2. Name of Operator
Harken Southwest Corporation

9. API Well No.
43-037-31595

3. Address and Telephone No.
P.O. Box 612007 Dallas, Texas 75261-2007 972-753-6900

10. Field and Pool, or Exploratory Area

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)
1390' FSL & 250' FWL
Section 36-41S-25E
23

11. County or Parish, State
San Juan, Utah

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

TYPE OF SUBMISSION	TYPE OF ACTION	
☐ Notice of Intent	☐ Abandonment	☐ Change of Plans
☐ Subsequent Report	☐ Recompletion	☐ New Construction
☐ Final Abandonment Notice	☐ Plugging Back	☐ Non-Routine Fracturing
	☐ Casing Repair	☐ Water Shut-Off
	☐ Altering Casing	☐ Conversion to Injection
	☒ Other Status	☐ Dispose Water

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

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

Harken Southwest (HSW) plans to maintain this wellbore for the the possibility of a secondary recovery project.

As HSW continues to work with the Utah Geological Survey and the Department of Energy on a Class II project, more information and analysis becomes available. This study will have a major impact upon the feasibility of secondary recovery operations on HSW acreage. Therefore, HSW respectfully request a 12 month extension on the current well status.

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

14. I hereby certify that the foregoing is true and correct
Signed Rachelle Montgomery Title Production Administrator Date 10/01/96

(This space for Federal or State office use)
Approved by [illegible] Title Petroleum Engineer Date 10/3/96
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

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

5. Lease Designation and Serial No.: 14-20-603-248

6. If Indian, Allottee or Tribe Name: Navajo Nation

7. If Unit or CA, Agreement Designation: N/A

1. Type of Well: ☐ Oil Well ☐ Gas Well ☐ Other

8. Well Name and No.: Sterling 36-L #1

2. Name of Operator: Harken Southwest Corporation

9. API Well No.: 43-037-31595

3. Address and Telephone No.: P.O. Box 612007 Dallas, Texas 75261-2007 (972)753-6900

10. Field and Pool, or Exploratory Area:

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)
1390' FSL & 250' FWL
Section 36, 41S-23E

11. County or Parish, State: San Juan, Utah

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

TYPE OF SUBMISSION	TYPE OF ACTION	
☒ Notice of Intent	☐ Abandonment	☐ Change of Plans
☐ Subsequent Report	☐ Recompletion	☐ New Construction
☐ Final Abandonment Notice	☐ Plugging Back	☐ Non-Routine Fracturing
	☐ Casing Repair	☐ Water Shut-Off
	☐ Altering Casing	☐ Conversion to Injection
	☒ Other Status	☐ Dispose Water

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

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

Harken Southwest continues to work with the Department of Energy on a Class II reservoir study. As part of the study, we request authorization to maintain the Shut-In status of the subject wellbore for possible use in secondary recovery operations.

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

RECEIVED
MAY 05 1997
DIV. OF OIL, GAS & MINING

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

Signed [signature] Title Production Administrator Date 04/30/97

(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 statemen 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

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

5. Lease Designation and Serial No.: 14-20-603-248

6. If Indian, Allottee or Tribe Name: Navajo Nation

7. If Unit or CA, Agreement Designation: N/A

1. Type of Well: ☐ Oil Well ☐ Gas Well ☐ Other

8. Well Name and No.: Sterling 36-L #1

2. Name of Operator: Harken Southwest Corporation

9. API Well No.: 43-037-31595

3. Address and Telephone No.: P.O. Box 612007, Dallas, Texas 75261-2007 214-753-6900

10. Field and Pool, or Exploratory Area:

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)
1390' FSL & 250' FWL
Sec. 36-41S-23E

11. County or Parish, State: San Juan, UT

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

TYPE OF SUBMISSION	TYPE OF ACTION	
☒ Notice of Intent	☐ Abandonment	☐ Change of Plans
☐ Subsequent Report	☐ Recompletion	☐ New Construction
☐ Final Abandonment Notice	☐ Plugging Back	☐ Non-Routine Fracturing
	☐ Casing Repair	☐ Water Shut-Off
	☐ Altering Casing	☐ Conversion to Injection
	☒ Other Status	☐ Dispose Water
		(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

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

Harken Southwest continues to work with the Department of Energy on a Class II reservoir study. As part of the study, we request authorization to maintain the TA status of the subject wellbore for possible use in secondary recover operations.

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

RECEIVED
APR 2 6 1996
DIV. OF OIL, GAS & MINING

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

Signed Rochelle Montgomery Title Production Administrator Date 04/24/96

(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

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
☐ Oil Well ☐ Gas Well ☐ Other

2. Name of Operator
Harken Southwest Corporation

3. Address and Telephone No.
P. O. Box 612007, Dallas, TX 75261 (972) 753-6900

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)
Section 36-41S-23E
1390' FSL & 250' FWL

5. Lease Designation and Serial No.
14-20-603-248

6. If Indian, Allottee or Tribe Name
Navajo

7. If Unit or CA, Agreement Designation
N/A

8. Well Name and No.
Sterling 36-L #1

9. API Well No.
43-037-31595

10. Field and Pool, or Exploratory Area

11. County or Parish, State
San Juan Co., Utah

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

TYPE OF SUBMISSION	TYPE OF ACTION	
☒ Notice of Intent	☐ Abandonment	☐ Change of Plans
☐ Subsequent Report	☐ Recompletion	☐ New Construction
☐ Final Abandonment Notice	☐ Plugging Back	☐ Non-Routine Fracturing
	☐ Casing Repair	☐ Water Shut-Off
	☐ Altering Casing	☐ Conversion to Injection
	☐ Other Status	☐ Dispose Water

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

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

Harken Southwest continues to work with the Department of Energy on the Class II Reservoir Study. This study is expected to conclude by 1998 year-end. Therefore, Harken respectfully request to continue the current status of shut-in until such time analysis can determine if there is a viable alternative for this wellbore.

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

RECEIVED
JUN 15 1998
DIV. OF OIL, GAS & MINING

COPY SENT TO OPERATOR
Date: 6.29.98
Initials: TDH

14. I hereby certify that the foregoing is true and correct
Signed D. Montgomery Title Production Administrator Date 06/10/98

(This space for Federal or State office use)

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

APPROVED BY THE STATE OF UTAH DIVISION OF OIL, GAS, AND MINING
DATE: 6-24-98
BY: R. K. [illegible]

Federal Approval of this Action is Necessary

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

STATE OF UTAH
DIVISION OF OIL, GAS AND MINING
1594 West North Temple, Suite 1210, PO Box 145801, Salt Lake City, UT 84114-5801

MONTHLY OIL AND GAS PRODUCTION REPORT

OPERATOR NAME AND ADDRESS

HARKEN ~~RIM~~ Susan Herrera
SOUTHWEST CORPORATION
C/O HOLCOMB OIL AND GAS, INC.
PO BOX 2058
FARMINGTON, NM 87499-2058

UTAH ACCOUNT NUMBER: N9290

REPORT PERIOD (MONTH/YEAR): 02/2001

AMENDED REPORT ☐ (Highlight Changes)

WELL NAME			Producing	Well	Well	Days	Production Volumes		
API Number	Entity	Location	Zone	Status	Type	Oper	OIL (BBL)	GAS (MCF)	WATER (BBL)
NAVAJO TRIBAL 23-13									
4303730971	09420	40S 24E 13	DSCR	P	OW	28	1,071	551	2,296
NAVAJO TRIBAL 41-2									
4303731041	09437	42S 24E 02	DSCR	P	OW	19	174	23	0
NAVAJO TRIBAL 32-26									
4303731060	09990	40S 22E 26	DSCR	P	OW	8	104	291	0
NAVAJO TRIBAL 14-10									
4303730977	10130	40S 24E 05	DSCR	P	OW	28	93	0	0
SAHGZIE 1									
4303731472	11032	42S 24E 05	DSCR	P	OW	28	1,025	476	0
ANASAZI 1									
4303731478	11042	42S 24E 05	DSCR	P	OW	28	1,308	1,349	0
CAJON MESA 8D-1									
4303731497	11074	40S 25E 08	DSCR	P	OW	27	245	355	61
MONUMENT 8N-2									
4303731509	11087	40S 25E 08	DSCR	P	OW	28	239	496	0
RUNWAY 10G-1									
4303731515	11105	40S 25E 10	DSCR	S	OW	28	1,412	1,613	432
RUNWAY 10E-2									
4303731550	11128	40S 25E 10	DSCR	S	GW	27	279	917	0
MONUMENT 17E-2									
4303731547	11139	40S 25E 17	DSCR	S	OW	26	157	548	0
LONE MOUNTAIN CREEK 12F-1									
4303731545	11148	42S 24E 12	DSCR	P	OW	22	149	533	12
RUNWAY 10C-5A									
4303731597	11152	40S 25E 10	DSCR	P	OW	24	221	899	40
						TOTALS	6477	8051	2841

COMMENTS:

I hereby certify that this report is true and complete to the best of my knowledge. Date: April 13, 2001

Signature Susan M. Herrera Telephone Number (505) 326-0550

Susan M. Herrera

RECEIVED
APR 17 2001
DIVISION OF
OIL, GAS AND MINING

STATE OF UTAH
DIVISION OF OIL, GAS AND MINING
1594 West North Temple, Suite 1210, PO Box 145801, Salt Lake City, UT 84114-5801

MONTHLY OIL AND GAS PRODUCTION REPORT

OPERATOR NAME AND ADDRESS

Susan Herrera
RIM SOUTHWEST CORPORATION
C/O HOLCOMB OIL AND GAS, INC.
PO BOX 2058
FARMINGTON, NM 87499-2058

UTAH ACCOUNT NUMBER: N9290

REPORT PERIOD (MONTH/YEAR): 02/2001

AMENDED REPORT ☐ (Highlight Changes)

WELL NAME			Producing	Well	Well	Days	Production Volumes		
API Number	Entity	Location	Zone	Status	Type	Oper	OIL (BBL)	GAS (MCF)	WATER (BBL)
BLUE HOGAN 1J-1									
4303731562	11161	42S 23E 01	DSCR	P	OW	27	800	778	36
ANASAZI 5L-3									
4303731572	11207	42S 24E 05	DSCR	P	OW	28	1,187	1,284	0
BROWN HOGAN 1A-2									
4303731573	11215	42S 23E 01	DSCR	P	OW	28	297	504	0
STERLING 36L-1									
4303731595	11224	41S 23E 36	DSCR	S	OW	0	0	0	0
MULE 31K (N)									
4303731617	11326	41S 24E 31	DSCR	P	OW	28	308	348	73
NORTH HERON 35C									
4303731616	11479	41S 25E 35	DSCR	S	OW	0	0	0	0
BURRO 31I									
4303731708	11496	41S 24E 31	DSCR	P	OW	28	489	0	0
JACK 31G									
4303731709	11497	41S 24E 31	DSCR	S	OW	0	0	0	0
MULE 31M									
4303731710	11498	41S 24E 31	DSCR	P	OW	28	1,074	333	120
BIG SKY 6E (6L) 1									
4303731714	11722	42S 25E 06	DSCR	P	OW	26	262	551	0
CLAY HILL CANYON 32D									
4303731741	11734	41S 25E 32	DSCR	TA	NA	0	0	0	0
ANASAZI 6H-1									
4303731744	11773	42S 24E 06	DSCR	P	OW	28	205	303	0
						TOTALS	4622	4101	229

COMMENTS:

I hereby certify that this report is true and complete to the best of my knowledge. Date: April 13, 2001

Signature Susan M. Herrera
Susan M. Herrera

Telephone Number (505) 326-0550

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

FORM 9

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

5. LEASE DESIGNATION AND SERIAL NUMBER: SEE ATTACHED	
6. IF INDIAN, ALLOTTEE OR TRIBE NAME: Navajo	
7. UNIT or CA AGREEMENT NAME: SEE ATTCHED	
1. TYPE OF WELL: OIL WELL ☑ GAS WELL ☑ OTHER SEE ATTACHED	8. WELL NAME and NUMBER: SEE ATTACHED
2. NAME OF OPERATOR: RIM Southwest Corporation	9. API NUMBER: SEE ATTACH
3. ADDRESS OF OPERATOR: P.O. Box 145 CITY Farmington STATE NM ZIP 87499 PHONE NUMBER: (505) 327-5531	10. FIELD AND POOL, OR WILDCAT: Greater Aneth
4. LOCATION OF WELL: FOOTAGES AT SURFACE: SEE ATTACHED	COUNTY: San Juan
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:	STATE: UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
☐ NOTICE OF INTENT (Submit in Duplicate)	☐ ACIDIZE	☐ DEEPEN	☐ REPERFORATE CURRENT FORMATION
Approximate date work will start:	☐ ALTER CASING	☐ FRACTURE TREAT	☐ SIDETRACK TO REPAIR WELL
	☐ CASING REPAIR	☐ NEW CONSTRUCTION	☐ TEMPORARILY ABANDON
	☐ CHANGE TO PREVIOUS PLANS	☐ OPERATOR CHANGE	☐ TUBING REPAIR
	☐ CHANGE TUBING	☐ PLUG AND ABANDON	☐ VENT OR FLARE
☐ SUBSEQUENT REPORT (Submit Original Form Only)	☐ CHANGE WELL NAME	☐ PLUG BACK	☐ WATER DISPOSAL
Date of work completion:	☐ CHANGE WELL STATUS	☐ PRODUCTION (START/RESUME)	☐ WATER SHUT-OFF
	☐ COMMINGLE PRODUCING FORMATIONS	☐ RECLAMATION OF WELL SITE	☑ OTHER: Corporate Name Change
	☐ CONVERT WELL TYPE	☐ RECOMPLETE - DIFFERENT FORMATION	

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

Corporate Name Change from Harken Southwest Corporation to RIM Southwest Corporation, effective December 1, 2000 for reporting requirements.

RECEIVED
[illegible] 2001
DIVISION OF
OIL, GAS AND MINING

NAME (PLEASE PRINT) W.J. Holcomb TITLE Vice-President

SIGNATURE [signature] DATE 4/23/2001

(This space for State use only)

(5/2000) (See Instructions on Reverse Side)

RIM Southwest Corporation
5 Inverness Drive East
Englewood, Colorado 80112
(303) 799-9828 ext. # 303
(303) 799-4259 (fax)

December 17, 2002

Mr. Stephen Mason
United States Department of the Interior
Bureau of Land Management
Farmington Field Office
1235 La Plata Highway, Suite A
Farmington, New Mexico 87401

Re: Sterling 36L #1 1390' FSL & 250' FWL sec ~~33~~ 36 T 41S R 23E, Lse. 14-20-603-248
Clay Hill Canyon #32D 744' FNL & 378' FWL sec 32 T 41S R 25E, Lse. 14-20-603-373
San Juan Co., Utah
Navajo #208 1759' FNL & 1070' FEL sec 2 T 29N R 19W, Lse. NOG-8707-1145
Navajo #157 760' FNL & 585' FWL sec 12 T 29N R 19W, Lse. NOG-8707-1145
Navajo #158 1980' FSL & 1070' FWL sec 12 T 29N R 19W, Lse. NOG-8707-1145
San Juan Co., New Mexico

Dear Mr. Mason:

Rim Southwest Corporation is in receipt of your letter's of December 11, 2002 concerning the Sterling 36L #1 & the Clay Canyon #32D in San Juan Co., Utah and the Navajo #208, #157, & #158 in San Juan Co., New Mexico. RIM Southwest intends to P & A all of the above wells as per the sundry notice's submitted. We are having difficulty obtaining recognition as operator of these wells and others from the Navajo Nation. We will not Plug any wells until we obtain that recognition from the Navajo Nation. Hopefully that recognition will be shortly forth coming as we would like to conduct the work this summer or early fall of 2003. I will try to keep you informed as to our progress in being recognized as operator. Thank you for you patience.

Sincerely,

Kenneth J Kundrik

Kenneth J Kundrik
Operations Engineer

CC: BIA Window Rock,
Navajo Nation Minerals Department, Akhtar Zaman Director

State of New Mexico
Energy, Minerals, & Natural Resources Department

State of Utah
Division of Oil, Gas & Mining

Division of Oil, Gas and Mining

OPERATOR CHANGE WORKSHEET

ROUTING

1. GLH
2. CDW
3. FILE

Change of Operator (Well Sold) — Designation of Agent/Operator

X Operator Name Change — Merger

The operator of the well(s) listed below has changed, effective: **12/1/2000**

FROM: (Old Operator):	**TO:** (New Operator):
N9290-Harken Southwest Corporation	N1715-Rim Southwest Corporation
5 Inverness Drive, East	PO Box 145
Denver, CO 80112	Farmington, NM 87499
Phone: (303) 799-9828	Phone: (505) 327-5531

CA No. **Unit:**

WELL(S)

NAME	SEC	TWN	RNG	API NO	ENTITY NO	LEASE TYPE	WELL TYPE	WELL STATUS
NAVAJO TRIBAL 32-26	26	400S	220E	4303731060	9990	Indian	OW	S
NAVAJO TRIBAL 14-10	10	400S	240E	4303730977	10130	Indian	OW	P
NAVAJO TRIBAL 23-13	13	400S	240E	4303730971	9420	Indian	OW	P
CAJON MESA 8D-1	08	400S	250E	4303731497	11074	Indian	OW	P
MONUMENT 8N-2	08	400S	250E	4303731509	11087	Indian	OW	P
RUNWAY 10G-1	10	400S	250E	4303731515	11105	Indian	OW	P
RUNWAY 10E-2	10	400S	250E	4303731550	11128	Indian	GW	P
RUNWAY 10C-5A	10	400S	250E	4303731597	11152	Indian	OW	P
MONUMENT 17E-2	17	400S	250E	4303731547	11139	Indian	OW	P
STERLING 36L-1	36	410S	230E	4303731595	11224	Indian	OW	S
MULE 31K (N)	31	410S	240E	4303731617	11326	Indian	OW	P
BURRO 31I	31	410S	240E	4303731708	11496	Indian	OW	P
MULE 31M	31	410S	240E	4303731710	11498	Indian	OW	P
JACK 31G	31	410S	240E	4303731709	11497	Indian	OW	S
CLAY HILL CANYON 32D	32	410S	250E	4303731741	11734	Indian	OW	TA
NORTH HERON 35C	35	410S	250E	4303731616	11479	Indian	OW	S
BLUE HOGAN 1J-1	01	420S	230E	4303731562	11161	Indian	OW	P
BROWN HOGAN 1A-2	01	420S	230E	4303731573	11215	Indian	OW	P
NAVAJO TRIBAL 41-2	02	420S	240E	4303731041	9437	Indian	OW	P
SAHGZIE 1	05	420S	240E	4303731472	11032	Indian	OW	P
ANASAZI 1	05	420S	240E	4303731478	11042	Indian	OW	P
ANASAZI 5L-3	05	420S	240E	4303731572	11207	Indian	OW	P
ANASAZI 6H-1	06	420S	240E	4303731744	11773	Indian	OW	P
LONE MOUNTAIN CREEK 12F-1	12	420S	240E	4303731545	11148	Indian	OW	P
BIG SKY 6E (6L) 1	06	420S	250E	4303731714	11722	Indian	OW	P

OPERATOR CHANGES DOCUMENTATION

Enter date after each listed item is completed

1. (R649-8-10) Sundry or legal documentation was received from the **FORMER** operator on: 4/27/2001

2. (R649-8-10) Sundry or legal documentation was received from the **NEW** operator on: 4/27/2001

3. The new company was checked on the **Department of Commerce, Division of Corporations** Database on: 6/30/2003

4. Is the new operator registered in the State of Utah: YES Business Number: 794466-0143

5. If NO, the operator was contacted contacted on:

6. (R649-9-2)Waste Management Plan has been received on: 8/13/2003

7. **Federal and Indian Lease Wells:** The BLM and or the BIA has approved the merger, name change, or operator change for all wells listed on Federal or Indian leases on: not given

8. **Federal and Indian Units:**
The BLM or BIA has approved the successor of unit operator for wells listed on: n/a

9. **Federal and Indian Communization Agreements ("CA"):**
The BLM or BIA has approved the operator for all wells listed within a CA on: n/a

10. **Underground Injection Control ("UIC")** The Division has approved UIC Form 5, **Transfer of Authority to Inject,** for the enhanced/secondary recovery unit/project for the water disposal well(s) listed on: n/a

DATA ENTRY:

1. Changes entered in the **Oil and Gas Database on:** 8/26/2003

2. Changes have been entered on the **Monthly Operator Change Spread Sheet on:** 8/26/2003

3. Bond information entered in RBDMS on: n/a

4. Fee wells attached to bond in RBDMS on: n/a

STATE WELL(S) BOND VERIFICATION:

1. State well(s) covered by Bond Number: n/a

FEDERAL WELL(S) BOND VERIFICATION:

1. Federal well(s) covered by Bond Number: n/a

INDIAN WELL(S) BOND VERIFICATION:

1. Indian well(s) covered by Bond Number: RLB0001937

FEE WELL(S) BOND VERIFICATION:

1. (R649-3-1) The NEW operator of any fee well(s) listed covered by Bond Number n/a

2. The **FORMER** operator has requested a release of liability from their bond on: n/a
The Division sent response by letter on: n/a

LEASE INTEREST OWNER NOTIFICATION:

3. (R649-2-10) The **FORMER** operator of the fee wells has been contacted and informed by a letter from the Division of their responsibility to notify all interest owners of this change on: n/a

COMMENTS:

Because this was a merger, all LA and PA wells belong to Rim Southwest also. However, they are still on our computer as Harken Southwest because no list was provided to move them.

Form 3160- 5
(September 2001)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB No. 1004- 0135
Expires: January 31,2004

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE - Other Instructions on reverse side

5. Lease Serial No.: 14-20-603-248 (BIA)

6. If Indian, Allottee, or Tribe Name: Navajo Nation

7. If Unit or CA. Agreement Designation: NA

1. Type of Well: [x] Oil Well [ ] Gas Well [ ] Other

8. Well Name and No.: Sterling 36L - 1

2. Name of Operator: RIM Southwest Corporation

9. API Well No.: 43-037-31595

3a. Address: 5 Inverness Drive East, Englewood CO 80112

3b. Phone No. *(include area code)*: (303) 799-9828

10. Field and Pool, or Exploratory Area: Undesignated

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

1390' FSL & 250" FWL sec 36 T 41S R 23E

11. County or Parish, State: San Juan Co., Utah

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

TYPE OF SUBMISSION	TYPE OF ACTION			
[ ] Notice of Intent	[ ] Acidize	[ ] Deepen	[ ] Production (Start/ Resume)	[ ] Water Shut-off
	[ ] Altering Casing	[ ] Fracture Treat	[ ] Reclamation	[ ] Well Integrity
[x] Subsequent Report	[ ] Casing Repair	[ ] New Construction	[ ] Recomplete	[ ] Other
	[ ] Change Plans	[x] Plug and abandon	[ ] Temporarily Abandon	
[ ] Final Abandonment Notice	[ ] Convert to Injection	[ ] Plug back	[ ] Water Disposal	

13. Describe Proposed or Completed Operation (clearly state all pertinent details including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths or pertinent markers and sands. Attach the Bond under which the work will performed or provide the Bond No. on file with the BLM/ BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notice shall be filed only after all requirements, including reclamantion, have been completed, and the operator has determined that the site is ready for final inspection.)

1) MIRU Higgins Well Service 1/5/04.
2) Rig up to fish tubing. PU Overshot and 2 7/8" tbg.
3) RIH tag fish 4881.51' KB. Latch on to fish recovered 13 jts tbg. & Baker R-3 packer.
4) PU Cmt. Retainer, TIH with 2 7/8" tbg.. Set Retiner @ 5150'. Roll hole to Brine. Pressure test csg to 500 psi.
5) Pumped 13.5 bbls Cls. "B" 15.6#/gal cement below the retiner and capped w/ 3.5 bbls. (63 sxs. Cls "B")
6) Plug set from 5308' to 5000'.
7) Set Plug #2 4546' to 4325' w/ 25 sxs Cls "B" 15.6#/gal cmt. (5.25 bbls)
8) Set Plug #3 2,800' to 2579' w/ 25 sxs Cls "B" cement 15/6#/gal (5.25 bbls).
9) Set Plug #4 1,692' to 1,491' w/ 25 sxs Cls "B" cmt. 15.6#/gal (5.25 gal).
10) Set Plug #5 625' to 404' w/ 25 sxs Cls. "B" 15.6#/gal cement. (5.25 bbls)
11) Set Surface plug from 100 ft. to surface w/ 13 sxs. Cls "B" 15.6#/gal cmt. (2.7 bbls) flush top casing and well head.
12) Release service rig 1/7/2004.
13) Dig cellar out.Cut off wellhead 3' below groung level on 1/11/2004.
14) Weld on steel cap w/ Company Name, Legal Description and Well Name on cap. Reclaim location in spring.

RECEIVED
JAN 14 2004
DIV. OF OIL, GAS & MINING

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

Name *(Printed/ Typed)*: Kenneth J. Kundrik — Title: Operations Engineer

Signature: Ken Kundrik — Date: 1/11/2004

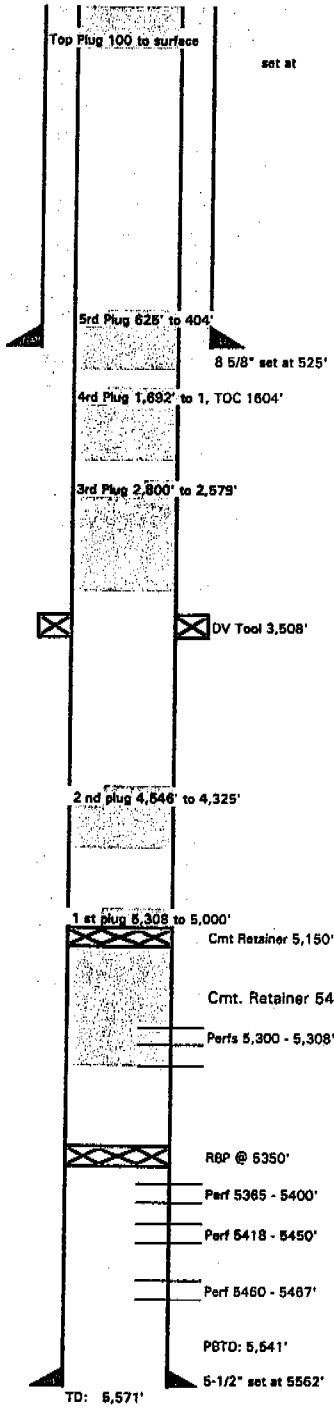
THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by — Title — Date

Conditions of approval, if any are attached. Approval of this notice 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. — Office

Title 18 U.S.C. Section 1001 AND Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make any department or agency of the United States any false, fictitiousor fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on reverse)



WELL: Sterling 26L	COUNTY: San Juan / API #: 4303731595	
FIELD: Greater Aneth	STATE: UT	SPUD DATE:
FORMATION: DC/Ismay	LOCATION: NW SW, Sec. 36, T41S-R23E	
TD: 5,571'	PBTD: 5,541'	ELEVATION: GL= 5,001', KB= 5,016'

CASING RECORD

SURFACE CASING

O.D.	WT./FT.	GRADE	THD	TOP	BTM	NO. JTS.	BIT SZ.	SX CMT.	TOP CMT.
8 5/8"	24.0#	K-55	ST&C	Surface	525	12		371	Surface

PRODUCTION CASING

O.D.	WT./FT.	GRADE	THD	TOP	BTM	NO. JTS.	BIT SZ.	SX CMT.	TOP CMT.
5-1/2"	15.5#	J-55	LT&C	Surface	5,562		7-7/8"	640	4700'
						DV TOOL	3508'	1080	surface

LINER

O.D.	WT./FT.	GRADE	THD	TOP	BTM	NO. JTS.	BIT SZ.	SX CMT.	TOP CMT.

TUBING

O.D.	WT./FT.	GRADE	THD	TOP	BTM	NO. JTS.	BIT SZ.

PERFORATION RECORD

DATE	TOP	BOTTOM	SPF	ZONE	STATUS
May-91	5,460'	5,467'	4 spf	D. Creek	RBP 5350'
May-91	5,488'	5,495'	4 spf	D. Creek	RBP 5350'
Jun-91	5,418'	5,450'	4 spf	D Creek	RBP 5350'
Jun-91	5,365'	5,371'	4 spf	D Creek	RBP 5350'
Jun-91	5,374'	5,379'	4 spf	D Creek	RBP 5350'
Jun-91	5,389'	5,394'	4 spf	D Creek	RBP 5350'
Jun-91	5,397'	5,400'	4 spf	D Creek	RBP 5350'
Jun-91	5,300'	5,308'	4 spf	L. Ismay	Open

TREATMENT

REMARKS

MISCELLANEOUS

RIM WI%:	
BHT:	
BHP:	
EST SITP:	
LOGS:	

CAPACITIES

Tubular Cap.	Bbl/ft	Ft3/ft
Tubing	0.00579	0.03250
Casing (15.5 #/ft)	0.02380	0.13360
Annular Cap.	**Bbl/ft**	**Ft3/ft**
Tbg x Csg (15.5 #/ft)	0.01580	0.08860
Csg x Open Hole	0.03090	0.17320

TUBULAR GOODS PERFORMANCE

Material	Tensile (lbs)	Burst (psi)	Collapse (psi)	ID (in)	Drift (in)
5-1/2",15.5# K-55 LT&C	202,000	4,810	4,040	4.950	4.825
2-7/8",6.5# J-55 8rd Coupling OD = 3.668"	99,660	7,260	7,680	2.441	2.347

Prepared By: KJK
Date: 02/06/2003
Updated: 02/06/2003

AMERICAN ENERGY SERVICES

P. O. BOX 302
FARMINGTON, NEW MEXICO 87499

CEMENT JOB DETAIL SHEET

CUSTOMER	DATE	F.R.#	SER. SUP.	TYPE JOB
Rim Operating	7-1-03	7003585	Bruce	P&A

LEASE & WELL NAME - OCSG	LOCATION	COUNTY
Sterling 36L #1	Sec 36-41S-23E	S.J. Utah

DRILLING CONTRACTOR RIG # | OPERATOR

MATERIAL FURNISHED	TYPE OF PLUGS TOP BTM	LIST CSG HARDWARE	SQ MANI FOLD Y N	TOP OF EACH FLUID	PHYSICAL SLURRY PROPERTIES: SLURRY WEIGHT PPG	SLURRY YIELD FT³	WATER GPS	PUMP TIME HR: MIN:	BBL SLURRY	BBL MIX WATER
1st Plug 63 sks B		Ret. @ 5150'			15.6	1.18	5.2		13.2	7.8
2nd Plug 25 sks B		tubing @ 4546'			15.6	1.18	5.2		5.3	3.1
3rd Plug 25 sks B		tubing @ 2800'			15.6	1.18	5.2		5.3	3.1
4th Plug 25 sks B		tubing @ 1692'			15.6	1.18	5.2		5.3	3.1
5th Plug 25 sks B		tubing @ 625'			15.6	1.18	5.2		5.3	3.1
6th Plug 13 sks B		tubing @ 100'		Surface	15.6	1.18	5.2		2.7	1.6

Available Mix Water Bbl. | Available Displ. Fluid Bbl. | TOTAL

HOLE SIZE	HOLE % EXCESS	HOLE DEPTH	TBG-CSG-D.P. SIZE	TBG-CSG-D.P. WGT.	TBG-CSG-D.P. TYPE	TBG-CSG-D.P. DEPTH	FBG-CSG-D.P. SIZE	FBG-CSG-D.P. WGT.	FBG-CSG-D.P. TYPE	FBG-CSG-D.P. DEPTH	COLLAR DEPTHS SHOE	COLLAR DEPTHS FLOAT	COLLAR DEPTHS STAGE
			5 1/2	15.5	K55	5541	2 7/8						

LAST CASING SIZE	LAST CASING WGT.	LAST CASING TYPE	LAST CASING DEPTH	PKR-CMT RET-BR PL-LINER BRAND & TYPE	DEPTH	PERF DEPTH TOP	PERF DEPTH BTM	TOP CONN. SIZE	TOP CONN. THREAD	WELL FLUID TYPE	WELL FLUID WGT
				Wireline Spec.	5150	5300	5490	2 7/8	EUE	Prod	H2O

CAL. DISPL. VOL. Bbl. TBG.	CAL. DISPL. VOL. Bbl. CSG.	CAL. DISPL. VOL. Bbl. CSG	CAL. DISPL. VOL. Bbl. TOTAL	CAL. PSI BUMP PLUG	CAL. MAX PSI TO REV	OP. MAX SQ PSI	MAX TBG PSI RATED	MAX TBG PSI OP	MAX CSG PSI RATED	MAX CSG PSI OP	DISPL. FLUID TYPE	DISPL. FLUID WGT	WATER SOURCE
.00579						3500					H2O	8.33	Tank

EXPLANATION: TROUBLE SETTING TOOL, RUNNING CSG., ETC., PRIOR TO CEMENTING:

PRESSURE RATE DETAIL

TIME HR: MIN:	PRESSURE - PSI PIPE	PRESSURE - PSI ANNULUS	RATE BPM	BBL FLUID PUMPED	FLUID TYPE	EXPLANATION
						SAFETY MEETING: CREW ☑ CO. REP. ☑
						TEST LINES 3500 PSI
						CIRCULATING WELL RIG ☑ WPS ☐
0835	900		3	5	H2O	St. Inj Rate
0838	1200		3 1/2	13.2	Cmt	St. Cmt
0847	2500		3 1/2	26.4	H2O	St. Dis Ret @ 5150' 13
0852						SD Stinger out Ret
0920	800		3	4 1/2	H2O	Hole
0932	800		3	5.3	Cmt	St. Cmt
0944	1200		4 1/4	21 1/2	H2O	St. Dis Tubing @ 4546' 3rd
1018	300		2	2 1/2	H2O	Ld Hole
1032	450		3	5.3	Cmt	St. Cmt Wait on Water Trucks
1039	600		4	13	H2O	St. Dis Tubing @ 2800
1114	350		3	4	H2O	Ld Hole
1130	500		4	5.3	Cmt	St. Cmt 4th
1136	400		3	8	H2O	St. Dis Tubing @ 1692'
1209	200		2	3	H2O	Ld Hole
1213	350		3	5.3	Cmt	St. Cmt 5th
1214	300		3	2 1/4	H2O	St Dis Tubing @ 625'
1313	150		3	1	H2O	St Dis
1314	150		2	2.1	Cmt	Ld Hole 6th
1320						St. Cmt

BUMPED PLUG Y N	PSI TO BUMP PLUG	TEST FLOAT EQUIP. Y N	TOTAL BBL PUMPED	BBL CMT RETURNS/ REVERSED	PSI LEFT ON CSG	SPOT TOP CEMENT	SER. SUP.	CUSTOMER REP.
				10		Surface	Bruce	Bobby

Form 3160- 5
(August 2007)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB No. 1004- 0137
Expires: July 31, 2010

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE – *Other Instructions on page 2.*

5. Lease Serial No.: 14-20-603-248-BIA
6. If Indian, Allottee, or Tribe Name: NAVAJO NATION
7. If Unit or CA/Agreement, Name and/or No.:
1. Type of Well: [✓] Oil Well [ ] Gas Well [ ] Other
8. Well Name and No.: STERLING 36L-1
2. Name of Operator: RIM SOUTHWEST CORPORATION
9. API Well No.: 43-037-31595
3a. Address: 5 Inverness Drive East, Englewood, CO 80112
3b. Phone No. (include area code): 303-799-9828
10. Field and Pool, or Exploratory Area: Undesignated
4. Location of Well *(Footage, Sec., T., R., M., or Survey Description)*: 1390' FSL & 250' FWL, NWSW Sec 36-T41S-R23E
11. County or Parish, State: San Juan, UT

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

TYPE OF SUBMISSION	TYPE OF ACTION			
[ ] Notice of Intent	[ ] Acidize	[ ] Deepen	[ ] Production (Start/ Resume)	[ ] Water Shut-off
	[ ] Altering Casing	[ ] Fracture Treat	[✓] Reclamation	[ ] Well Integrity
[ ] Subsequent Report	[ ] Casing Repair	[ ] New Construction	[ ] Recomplete	[ ] Other
	[ ] Change Plans	[ ] Plug and abandon	[ ] Temporarily Abandon	
[✓] Final Abandonment Notice	[ ] Convert to Injection	[ ] Plug back	[ ] Water Disposal	

13. Describe Proposed or Completed Operation: Clearly state all pertinent details including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with the BLM/ BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamantion, have been completed, and the operator has determined that the site is ready for final inspection.)

This well was plugged and abandoned in January 2004. The location has been reclaimed and is ready for final inspection.

Accepted by the
Utah Division of
Oil, Gas and Mining
For Record Only

14. I hereby certify that the foregoing is true and correct. Name *(Printed/ Typed)*: Kenneth Kundrik — Title: A&D Manager

Signature: Kenneth J Kundrik — Date: September 30, 2015

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by — Title — Date

Conditions of approval, if any, are attached. Approval of this notice 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. — Office

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitiousor fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on page 2)

FOUR CORNERS AREA U.S.A.
WELL DATA CARD

WELL NAME: Sterling 36-L-1
DESCRIPTIVE LOCATION: Section 36, T 41 S, R 23 E

Operator: Chuska Energy Company
Well Category: Wildcat Field: _____
Footings: 1390'FSL, 250' FWL
Seismic S.P./Line: 74' SE of Station 285.86 on Line 400-1
Elevations: 5003' G.L. 5016' K.B.
County: San Juan State: Utah
Rig: Aztec Well Service #184 Spud Date: April 20, 1991
Release Date: May 7, 1991 TD: 5571' (Schlumberger)
Well Status: Suspended

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Formation Tops:

Age	Group/Formation	Depths Drilling (ft)	Subsea (ft)	Thickness (ft)
Triassic	Navajo	750	4266	842
	Chinle	1592	3424	1108
Permian	DeChelly	2700	2316	225
	Organ Rock	2925	2091	667
	Cedar Mesa	3592	1424	854
Penn.	Hermosa	4446	570	732
	Upper Ismay	5178	- 162	97
	Hovenweep Sh.	5275	- 259	12
	Lower Ismay	5287	- 271	25
	Gothic	5312	- 296	20
	Desert Creek	5332	- 316	167
	Chimney Rock Sh.	5499	- 483	15
	Akah	5514	- 498	

EVALUATION:
CORES:

Formation	Number	Interval	Cut Rec.	Log Correlation
Desert Creek	#1	5372-5432'	60/60'	5370-5430'
Desert Creek	#2	5432-5492'	60/60'	5430-5490'
D.C./Chimn Rk	#3	5492-5516'	24/21'	5490-5514'
C.R./Akah/Salt	#4	5516-5576'	60/48'	5514-5574'

WIRELINE LOGS:

Log	Interval	Log	Interval
GR	5570-518'	CNL-FDC Litho Dens.	5568-4000'
DLL-Mic. SFL	5570-518'	Micro-Log	5542-4000'
BHC-Sonic	5565-2500'	RFT	Lower Ismay & D.C.
~~~~~~

FOUR CORNERS AREA U.S.A.
WELL DATA CARD

WELL NAME: Sterling 36-L-1

The Sterling 36-L-1 well drilled a well-developed and defined bottom loaded doubleton with amplitude dimming and associated drape. This seismic feature is located on the flank of the Desert Creek Anticline, only about 1350 feet from the original Shell Desert Creek well that produced about 615,000 barrels of oil.

We anticipated encountering an Anasazi-type mound with the top/Desert Creek prognosed at -250 feet (subsea). The top of the Desert Creek was actually encountered at -316 feet, or 66 feet low to prognosis. We had noted that a velocity gradient existed in the area, and we used an average of 5.98 feet/ms. A slightly higher velocity would have been more appropriate.

The Sterling well did encounter a well-developed algal mound in the Desert Creek below some tight dolomites. The well continously cored the Desert Creek, Chimney Rock and Akah intervals before bottoming in rock salt (halite). The cored interval within the Desert Creek contained 9 feet of heavily bioturbated, subtidal dolomitic mudstone (non-reservoir) at the top before encountering 39 feet (5381 to 5420 ft.) of alternating crinoidal/brachiopod/fusulinid limestones (bioclastic packstones to wackestones), massive lime mudstones, argillaceous limestones, thin black shales and partially dolomitized wackestones to packstones. Particularly large, articulated crinoid columnals are present between 5385.5-86.5 ft., 5389.5-91.2 ft. and 5408.0-12.8 ft. This entire interval represents open marine platform sediments to mound flank debris. No visible porosity and very little staining (confined to the thin, dolomitized intervals) was seen. Top of mound porosity was encountered at core depth 5620 ft with nearly continuous porosity over an interval of approximately 37 feet. Porosity between 5422.0 - 26.0 ft. is principally due to dolomitization of crinoidal and bioclastic mound flank or crest beds with leached in-place phylloid algal material beginning to appear at approximately 5427 ft. Porosity was measured at 18.8% in these dolomites (one analysis) with two permeabilities of 17.8 md. Porous lime bafflestones with a well-developed phylloid algal mound facies extend from 5427.0 to 5457.5 ft. Leached algal plate, shelter and vuggy porosity in full diameter samples ranges from 4.2 to 9.9% with permeabilities between 1.55 and 698 md within the mound proper. The algal mound continues as a tight, well-cemented limestone from 5457.5 to 63.3 ft. The mound and supra-mound porosity exhibited scattered staining and fluorescence despite the good to excellent petrophysical characteristics. These observations, as well as the well test results, indicated the porous reservoir was completely depleted by a much earlier well in the area.

Below the upper phylloid algal mound, 7.9 ft. of bioturbated dolomite mudstone occurs. Porosities (from two full diameter samples) range from 5.7 to 7.2% with no measurable permeability. An extremely tight lower phylloid algal lime mound was penetrated between core depths 5471.3 - 92.3 ft. Very minor visual porosity within this lower mound was encountered between 5487.2 - 91.4 ft, but measured only 3.1 - 3.3% in full diameter samples. Oil saturation was very low within this porosity zone. Otherwise, the lower phylloid algal mound was completely plugged with calcite and anhydrite cements, and exhibited very little leaching or dolomitization of the algal plate bafflestone framework. The thin, clay-rich dolomitic mudstone beneath the lower mound (from 5493.4 - 98.3 ft) was also very tight (F.D. Ø = 7.0 - 11.8%, k = <0.01 - 1.32 md) and had low oil saturations with poor fluorescence.

Beneath the Chimney Rock shale, 22.2 ft of Akah section was cored. The Akah consists of alternating dense lime mudstones (F.D. analysis of 4.3% porosity and 0.21 md permeability), exceedingly finely-crystalline dolomite, silty dolomite and massive to nodular bedded anhydrite. No reservoir potential was seen in the Akah section. Bedded anhydrite was encountered at 5541.0 ft followed by massive bedded salt at 5552.0 ft.

Sample cuttings (10 ft. intervals) from the Lower Ismay interval were examined under a stereomicroscope to evaluate any reservoir potential above the Desert Creek (completed study mailed 8/12/91). Nearly all of the Lower Ismay consists of tight limestones and shales. Two thin intervals of dolomites, however, are present. The best interval from samples is between 5300-5320 ft. where relatively clean dolomitic packstone to wackestone changes downward into a thin zone of bioclastic packstone to grainstone. Fair to good fine intercrystalline and moldic porosity with some oil stain was detected throughout the interval, although inspection of logs indicates less than 8 ft. of porosity.

Another thin zone of poor quality dolomite to limy dolomite is present in the cuttings sample between 5230-40 ft. However, this interval of non-skeletal packstone to wackestone appears to be plugged with anhydrite, exhibits poor staining, and have very little visible porosity.

Four intervals were perforated and tested. These zones which represent the below-mound dolomites, mound limestones, above-mound dolomites, and Lower Ismay intervals, all were depleted. The well was suspended pending further consideration.

Western Atlas International
A Litton/Dresser Company

CORE LABORATORIES

CORE ANALYSIS RESULTS

for

Chuska Energy Company

Sterling 36L-1 Well
Wildcat
San Juan County, Utah
File Number: 57121-91CHU041

Western Atlas International
A Litton/Dresser Company

CORE LABORATORIES

May 14, 1991

Chuska Energy Company
1775 Sherman Street, Suite 1880
Denver, CO 80203

Attn: Mr. Herb Mosca

Subject:
Core Analysis Project
Sterling 36L-1 Well
Wildcat
San Juan County, Utah
File Number: 57121-91CHU041

Gentlemen:

Core Laboratories was requested to analyze core material obtained from the subject well. The following analyses were performed:

1. Full Diameter Testing - Porosity, Horizontal & Vertical Permeability
2. Summation of Fluids - Saturations
3. Spectral Gamma Ray Log

The results of these tests are presented in tabular and graphic formats within this report. Laboratory test conditions have been included to better assist you in your evaluation of these data.

The objectives of the basic core analyses were to define permeability, porosity, grain density, residual fluids, gamma activity and the vertical variations of these properties for reservoir characterization. Additionally, the information provided by the core analyses was to be utilized for calibration and/or improved interpretation from downhole logs, and for storage capacity and flow capacity of the interval represented. Recommendations for additional analysis have been included to assist you in further characterizing your reservoir.

Thank you for the opportunity to perform these tests for Chuska Energy Company. Should you have any questions pertaining to these test results or if we may be of further assistance, please contact us at (303) 751-9334.

Sincerely,

Daniel J. Scott/tb

Daniel J. Scott
Project Coordinator

James E. Shriver
Laboratory Supervisor

DJS/tb

Additional Testing Recommendations

Upon review of conventional core analyses results and based upon experience with the particular formation, the following special core analysis tests are recommended for further reservoir evaluation:

1) Permeability and porosity as a function of confining stress analyses are recommended for a more accurate representation of reservoir values. In addition, equivalent non-reactive liquid (Klinkenberg) permeability values can be determined, which are more representative of reservoir permeability than air permeability measurements made routinely at low pore pressure.

2) It is recommended that the mineralogy of a select group of samples be determined through petrographic analyses to identify any problematic minerals which may be present. In addition, the abundances of the individual clay minerals can be provided by X-ray diffraction. Scanning electron microscopy will assist in defining the relative position of any deleterious minerals within the pore system to ascertain potential completion and/or production problems.

3) For an independent assessment of reservoir water saturation values, it is recommended that capillary pressure determinations be performed on a representative group of samples. Capillary pressure results will help define the distribution of hydrocarbons in the subsurface by characterizing the hydrocarbon column as a function of height above the free water level, as defined in the literature (Pc = 0). Information may also be developed concerning seal and barrier rock capacity, secondary migration and entrapment, and up-dip and down-dip limits of hydrocarbon accumulation, all useful in field development.

4) Formation resistivity analyses are recommended for definition of "a", "m", and "n" parameters, which are used in the equation to calculate formation water saturations from downhole log response. Values can be obtained at simulated reservoir stress conditions.

Please contact us at (303) 751-9334 for additional information or to discuss any of the above recommendations.

CORE LABORATORIES

Company : Chuska Energy Company
Well : Sterling 36L-1
Location : NW SW Sec.36 T41N R23E
Co,State : San Juan, Utah

Field : Wildcat
Formation : Paradox
Coring Fluid : WBM
Elevation : 5003 GL

File No.: 57121-91chu041
Date : 11-May-1991
API No. :
Analysts: MW SM

CORE ANALYSIS RESULTS

	SAMPLE NUMBER	DEPTH ft	PERMEABILITY (MAXIMUM) Kair md	PERMEABILITY (90 DEG) Kair md	PERMEABILITY (VERTICAL) Kair md	POROSITY (HELIUM) %	SATURATION (PORE VOLUME) OIL %	SATURATION (PORE VOLUME) WATER %	GRAIN DENSITY gm/cc	DESCRIPTION
		Core No.1 5372.0-5432.0 Cut 60.0' Rec. 60.0' Desert Creek Zone								
		5372.0- 73.5								Dol - Not analysed by request
	1	5373.5- 74.0	0.10	0.08	0.02	11.1	22.3	39.2	2.75	Dol brn vf xln-suc sli calc
		5374.0- 76.0								Dol - Not analysed by request
	2	5376.0- 76.5	<.01	<.01	<.01	2.0	4.8	86.3	2.69	Dol gry-brn vf xln v arg calc
		5376.5- 79.0								Dol - Not analysed by request
	3	5379.0- 79.5	0.03	0.03	0.02	3.1	33.4	25.1	2.75	Dol brn vf xln v calc
		5379.5- 81.5								Dol - Not analysed by request
	4	5381.5- 82.0	<.01	<.01	<.01	1.0	42.9	32.2	2.71	Ls gry vf xln foss
		5382.0- 87.5								Ls - Not analysed by request
	5	5387.5- 88.0	<.01	<.01	<.01	0.1	19.0	38.1	2.73	Ls gry vf xln arg
		5388.0- 92.5								Dol - Not analysed by request
	6	5392.5- 93.2	0.01	<.01	<.01	1.6	11.6	46.5	2.71	Ls lt gry-bu vf xln foss
		5393.2- 00.5								Ls - Not analysed by request
	7	5400.5- 01.0	0.02	0.01	<.01	1.1	7.1	42.7	2.72	Ls lt gry-bu vf xln
		5401.0- 02.5								Dol - Not analysed by request
*	8	5402.5- 03.0	1.09	0.71	0.24	13.2	48.7	15.0	2.82	Dol brn vf xln-suc
		5403.0- 11.7								Dol - Not analysed by request
#	9	5411.7- 12.4	0.13	0.07	<.01	0.3	10.8	21.5	2.69	Ls gry vf xln arg foss
		5412.4- 19.5								Dol - Not analysed by request
	10	5419.5- 20.2	2.62	2.52	0.02	4.6	8.9	17.9	2.70	Ls lt gry-bu vf xln foss vug
		5420.2- 23.0								Dol - Not analysed by request
	11	5423.0- 23.5	17.8	17.2	13.2	18.8	28.5	13.7	2.84	Dol brn vf xln-suc foss vug
		5423.5- 27.0								Ls - Not analysed by request

Full Diameter Data 1 - 1

CORE LABORATORIES

Company : Chuska Energy Company
Well : Sterling 36L-1

Field : Wildcat
Formation : Paradox

File No.: 57121-91chu041
Date : 11-May-1991

CORE ANALYSIS RESULTS

	SAMPLE NUMBER	DEPTH ft	PERMEABILITY (MAXIMUM) Kair md	PERMEABILITY (90 DEG) Kair md	PERMEABILITY (VERTICAL) Kair md	POROSITY (HELIUM) %	SATURATION (PORE VOLUME) OIL %	SATURATION (PORE VOLUME) WATER %	GRAIN DENSITY gm/cc	DESCRIPTION
	12	5427.0- 27.5	10.4	9.73	7.31	8.7	28.0	13.4	2.68	Ls lt gry-bu vf xln foss vug
		5427.5- 32.0								Ls - Not analysed by request
		Core No.2 5432.0-5492.0 Cut 60.0' Rec. 60.0' Desert Creek Zone								
	13	5432.0- 32.7	698.	461.	163.	9.9	8.9	22.9	2.69	Ls lt gry-bu vf-f xln foss vug
		5432.7- 39.8								Ls - Not analysed by request
	14	5439.8- 40.0	55.2	36.3	3.91	7.2	25.2	43.3	2.70	Ls lt gry-bu vf-f xln foss vug
		5440.0- 44.0								Ls - Not analysed by request
	15	5444.0- 44.5	43.1	34.8	15.9	9.2	3.2	9.5	2.69	Ls lt gry-bu vf-f xln foss vug
		5444.5- 49.3								Ls - Not analysed by request
	16	5449.3- 49.8	<.01	<.01	<.01	6.4	28.0	35.9	2.80	Dol brn vf xln calc
		5449.8- 51.0								Ls - Not analysed by request
	17	5451.0- 51.5	1.55	0.81	<.01	4.2	5.0	10.0	2.71	Ls lt gry vf-f xln foss vug
		5451.5- 54.5								Ls - Not analysed by request
	18	5454.5- 54.8	15.1	14.9	6.75	8.5	13.2	31.6	2.71	Ls lt gry vf-f xln foss vug
		5454.8- 58.0								Ls - Not analysed by request
#	19	5458.0- 58.5	0.28	0.24	<.01	0.5	0.0	68.1	2.70	Ls lt gry vf xln arg styl
		5458.5- 61.0								Ls - Not analysed by request
	20	5461.0- 61.5	0.24	0.20	<.01	3.1	9.5	28.5	2.72	Ls lt gry vf xln
		5461.5- 66.5								Ls - Not analysed by request
	21	5466.5- 67.0	<.01	<.01	<.01	5.7	23.4	66.8	2.72	Dol gry-brn vf xln arg calc
		5467.0- 67.8								Dol - Not analysed by request
	22	5467.8- 68.4		0.11	0.01	7.2	31.1	50.6	2.73	Dol gry-brn vf xln arg calc
		5468.4- 77.3								Ls - Not analysed by request
	23	5477.3- 77.6	0.03	0.03	<.01	1.9	0.0	29.7	2.71	Ls gry vf xln
		5477.6- 86.0								Ls - Not analysed by request
	24	5486.0- 86.5	0.08	0.07	<.01	0.2	0.0	27.1	2.72	Ls gry vf xln
		5486.5- 88.0								Ls - Not analysed by request

Full Diameter Data 1 - 2

CORE LABORATORIES

Company : Chuska Energy Company
Well : Sterling 36L-1

Field : Wildcat
Formation : Paradox

File No.: 57121-91chu041
Date : 11-May-1991

CORE ANALYSIS RESULTS

	SAMPLE NUMBER	DEPTH ft	PERMEABILITY (MAXIMUM) Kair md	PERMEABILITY (90 DEG) Kair md	PERMEABILITY (VERTICAL) Kair md	POROSITY (HELIUM) %	SATURATION (PORE VOLUME) OIL %	SATURATION (PORE VOLUME) WATER %	GRAIN DENSITY gm/cc	DESCRIPTION
	25	5488.0- 88.5	0.68	0.44	<.01	3.1	9.1	18.2	2.71	Ls gry vf xln foss vug
		5488.5- 90.8								Ls - Not analysed by request
	26	5490.8- 91.4	0.24	0.20	0.02	3.3	0.0	11.4	2.71	Ls gry vf xln foss vug
		5491.4- 92.0								Ls - Not analysed by request
		Core No.3 5492.0-5513.0 Cut 24.0' Rec. 21.0' Desert Creek Zone								
		5492.0- 94.5								Ls - Not analysed by request
	27	5494.5- 95.0	<.01	<.01	<.01	7.0	0.0	89.6	2.69	Dol brn vf xln arg calc
		5495.0- 96.3								Dol - Not analysed by request
*	28	5496.3- 96.6	1.32	0.29	0.04	11.8	21.8	60.8	2.75	Dol brn vf xln arg calc
		5496.6- 13.0								Ls - Not analysed by request
		5513.0- 16.0								Lost core
		Core No.4 5516.0-5564.0 Cut 60.0' Rec. 48.0' Desert Creek Zone								
		5516.0- 34.7								Ls, shly - Not analysed by request
	29	5534.7- 35.1	0.21	0.12	<.01	4.3	0.0	20.7	2.66	Ls gry-brn vf xln v arg
		5535.1- 64.0								Ls, shly - Not analysed by request
		5564.0- 76.0								Lost core

# Denotes Laminae or Stylolite

* Denotes Fractured Permeability Sample

Full Diameter Data 1 - 3

CORE LABORATORIES

Company : Chuska Energy Company
Well : Sterling 36L-1

Field : Wildcat
Formation : Paradox

File No.: 57121-91chu041
Date : 11-May-1991

CORE ANALYSIS RESULTS

SAMPLE NUMBER	DEPTH ft	PERMEABILITY (MAXIMUM) Kair md	PERMEABILITY (90 DEG) Kair md	PERMEABILITY (VERTICAL) Kair md	POROSITY (HELIUM) %	SATURATION (PORE VOLUME) OIL %	SATURATION (PORE VOLUME) WATER %	GRAIN DENSITY gm/cc	DESCRIPTION

Note: Maximum Permeabilities Not Measureable for

Sample No. 22 Due to Dessication Fractures

CORE LABORATORIES

Company : Chuska Energy Company
Well : Sterling 36L-1

Field : Wildcat
Formation : Paradox

File No.: 57121-91chu041
Date : 11-May-1991

ANALYTICAL PROCEDURES AND QUALITY ASSURANCE

HANDLING & CLEANING

Core Transportation	: Pickup Truck to Aurora Facility
Solvent	: Toluene
Extraction Equipment	: CO2-Toluene Core Cleaner (Casper)
Extraction Time	: 3-4 Days
Drying Equipment	: Convection Oven
Drying Time	: 24 Hours
Drying Temperature	: 200 Degree Fahrenheit

ANALYSIS

Grain volume measured by Boyle's Law in a matrix cup using He
Bulk volume measured by calipering
Bulk volume by Archimedes Principle
Fluid saturations by retort
Permeabilities measured on four in. diameter drilled plugs
Core Gamma Spectral

REMARKS

The core material is being stored at our Aurora, Colorado facility.

CORE LABORATORIES

Company : Chuska Energy Company
Well : Sterling 36L-1

Field : Wildcat
Formation : Paradox

File No.: 57121-91chu041
Date : 11-May-1991

TABLE I

SUMMARY OF CORE DATA

ZONE AND CUTOFF DATA

ZONE:

Identification	Paradox
Top Depth	5373.0 ft
Bottom Depth	5536.0 ft
Number of Samples	29

DATA TYPE:

Porosity	(HELIUM)
Permeability	(MAXIMUM) Kair

CUTOFFS:

Porosity (Minimum)	0.0 %
Porosity (Maximum)	100.0 %
Permeability (Minimum)	0.0000 md
Permeability (Maximum)	100000. md
Water Saturation (Maximum)	100.0 %
Oil Saturation (Minimum)	0.0 %
Grain Density (Minimum)	2.00 gm/cc
Grain Density (Maximum)	3.00 gm/cc
Lithology Excluded	NONE

CHARACTERISTICS REMAINING AFTER CUTOFFS

ZONE:

Number of Samples	29
Thickness Represented	14.5 ft

POROSITY:

Storage Capacity	76.9 ϕ-ft
Arithmetic Average	5.3 %
Minimum	0.1 %
Maximum	18.8 %
Median	4.3 %
Standard Deviation	±4.6 %

GRAIN DENSITY:

Arithmetic Average	2.72 gm/cc
Minimum	2.66 gm/cc
Maximum	2.84 gm/cc
Median	2.71 gm/cc
Standard Deviation	±0.04 gm/cc

PERMEABILITY:

Flow Capacity	544.9 md-ft
Arithmetic Average	39.2 md
Geometric Average	0.27 md
Harmonic Average	0.02 md
Minimum	0.00 md
Maximum	698. md
Median	0.23 md
Standard Dev. (Geom)	$K \cdot 10^{\pm 1.430}$ md

HETEROGENEITY (Permeability):

Dykstra-Parsons Var.	0.974
Lorenz Coefficient	0.900

AVERAGE SATURATIONS (Pore Volume):

Oil	19.7 %
Water	30.8 %

CORE LABORATORIES

Company : Chuska Energy Company
Well : Sterling 36L-1

Field : Wildcat
Formation : Paradox

File No.: 57121-91chu041
Date : 11-May-1991

TABLE I

SUMMARY OF CORE DATA

ZONE AND CUTOFF DATA

ZONE:

Identification	Paradox
Top Depth	5373.0 ft
Bottom Depth	5536.0 ft
Number of Samples	29

DATA TYPE:

Porosity	(HELIUM)
Permeability	(VERTICAL) Kair

CUTOFFS:

Porosity (Minimum)	0.0 %
Porosity (Maximum)	100.0 %
Permeability (Minimum)	0.0000 md
Permeability (Maximum)	100000. md
Water Saturation (Maximum)	100.0 %
Oil Saturation (Minimum)	0.0 %
Grain Density (Minimum)	2.00 gm/cc
Grain Density (Maximum)	3.00 gm/cc
Lithology Excluded	NONE

CHARACTERISTICS REMAINING AFTER CUTOFFS

ZONE:

Number of Samples	29
Thickness Represented	14.5 ft

POROSITY:

Storage Capacity	76.9 ϕ-ft
Arithmetic Average	5.3 %
Minimum	0.1 %
Maximum	18.8 %
Median	4.3 %
Standard Deviation	±4.6 %

GRAIN DENSITY:

Arithmetic Average	2.72 gm/cc
Minimum	2.66 gm/cc
Maximum	2.84 gm/cc
Median	2.71 gm/cc
Standard Deviation	±0.04 gm/cc

PERMEABILITY:

Flow Capacity	135.4 md-ft
Arithmetic Average	9.34 md
Geometric Average	0.03 md
Harmonic Average	0.01 md
Minimum	0.00 md
Maximum	163. md
Median	0.01 md
Standard Dev. (Geom)	$K \cdot 10^{\pm 1.458}$ md

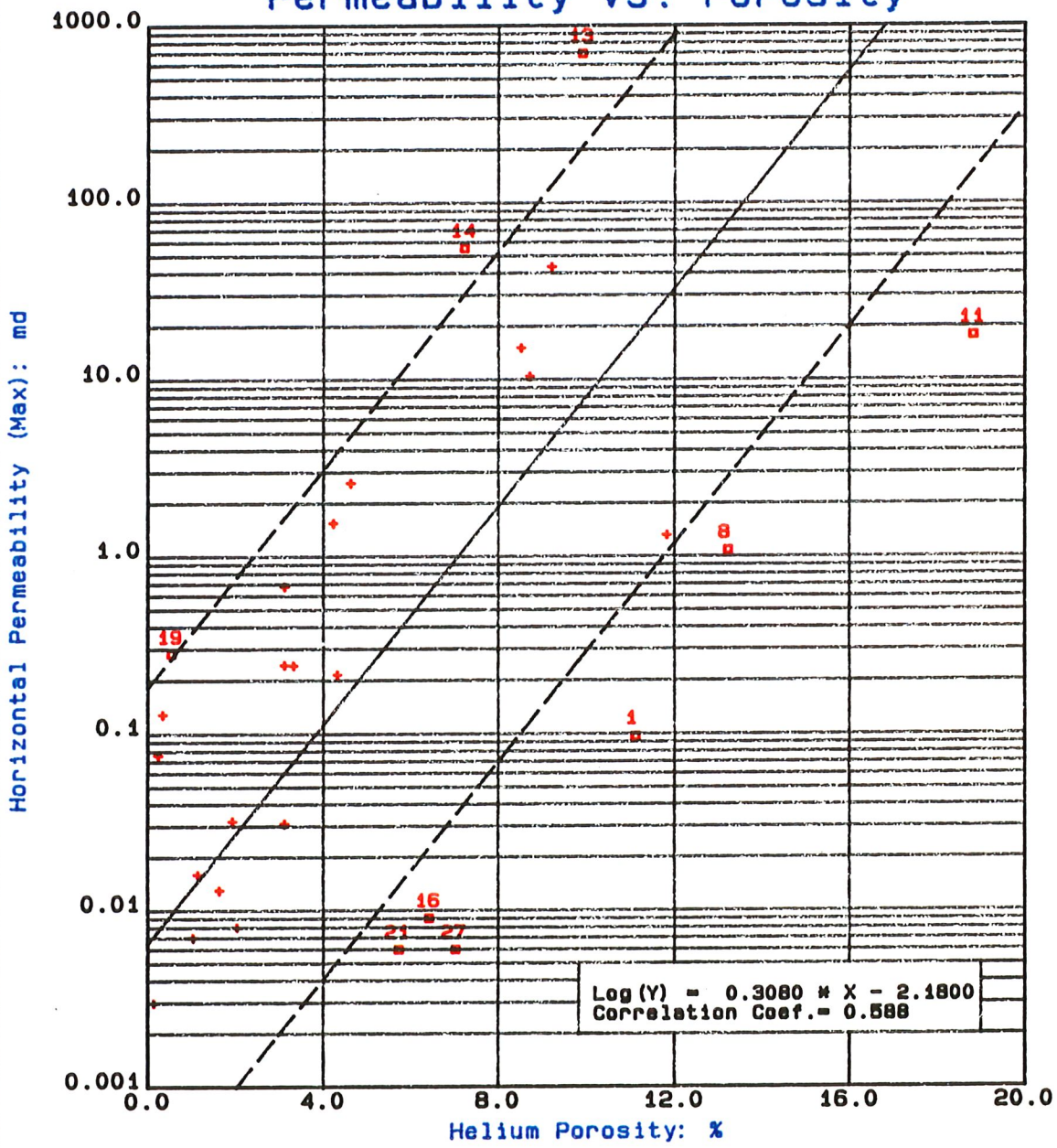
HETEROGENEITY (Permeability):

Dykstra-Parsons Var.	0.648
Lorenz Coefficient	0.886

AVERAGE SATURATIONS (Pore Volume):

Oil	19.7 %
Water	30.8 %

Permeability vs. Porosity



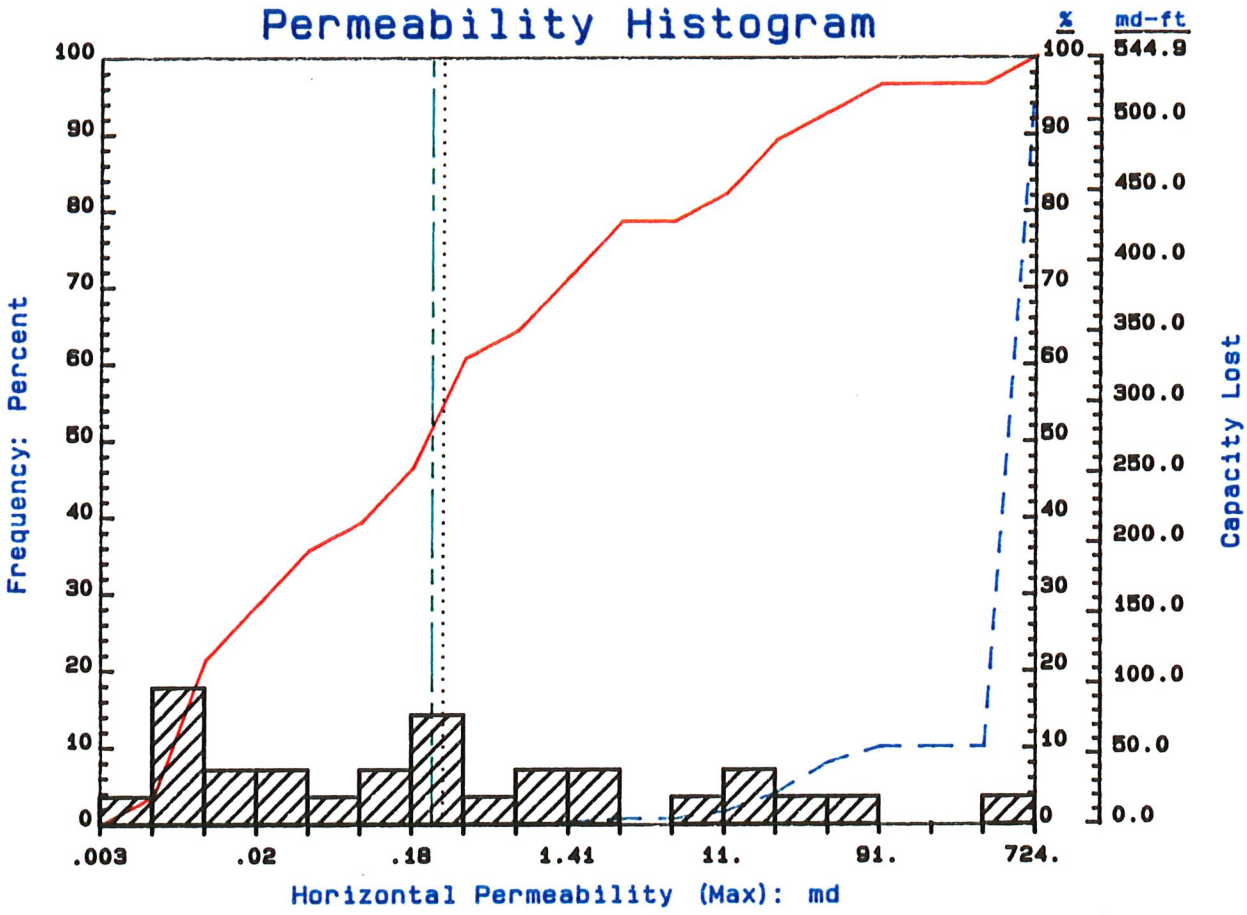
Chuska Energy Company
Sterling 36L-1
Wildcat
San Juan County, Utah
Paradox Fm. - Desert Creek Zone
Core No. 1-4 (5372.0'-5564.0')

Core Laboratories 11-May-1991

- LEGEND -

Paradox

▫ Selected



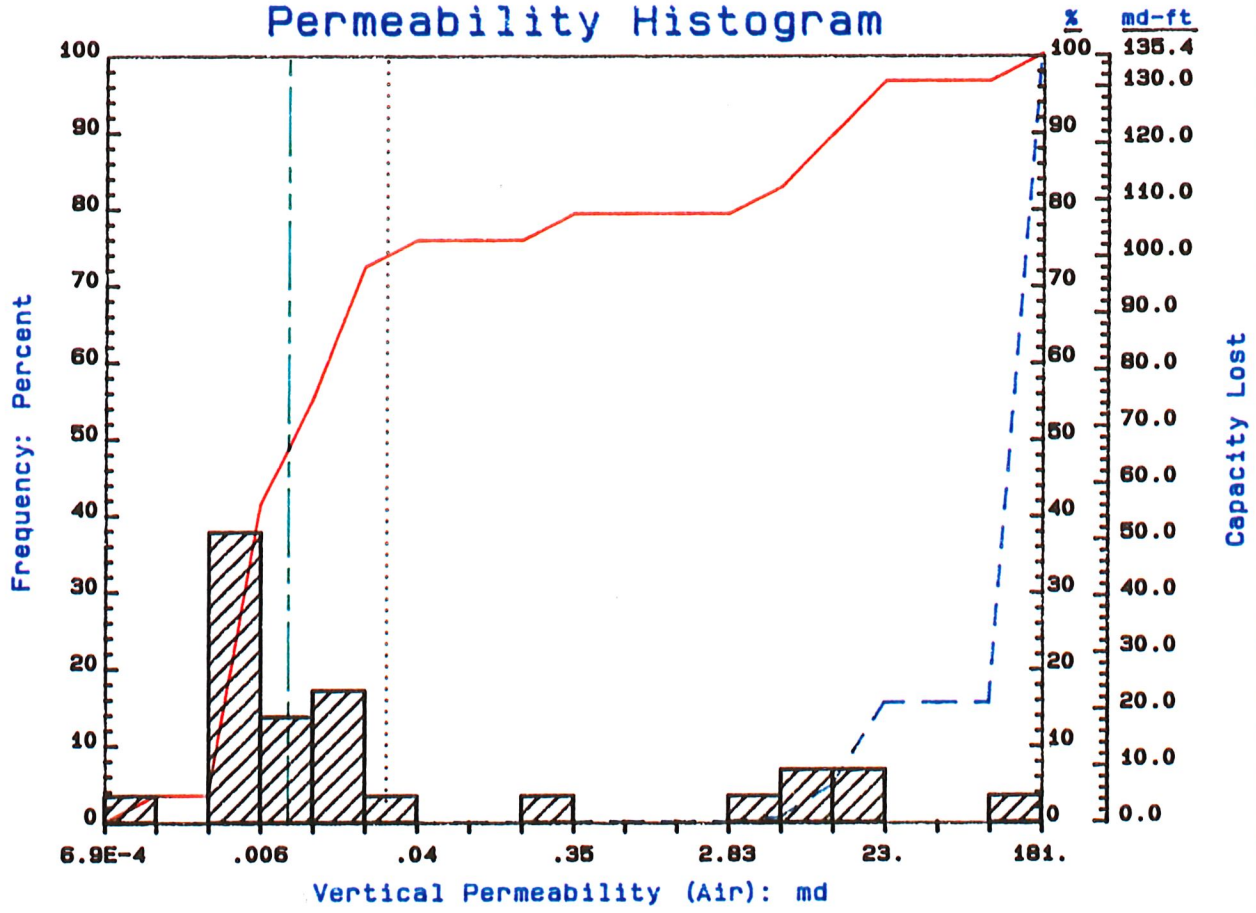
Chuska Energy Company
Sterling 36L-1
Wildcat
San Juan County, Utah
Paradox Fm. - Desert Creek Zone
Core No. 1-4 (5372.0'-5564.0')
Core Laboratories 11-May-1991

- LEGEND -

- Median Value (0.228)
- Geom. Average (0.267)
- Cumulative Frequency
- Cumulative Capacity Lost

28 Samples

Permeability Histogram



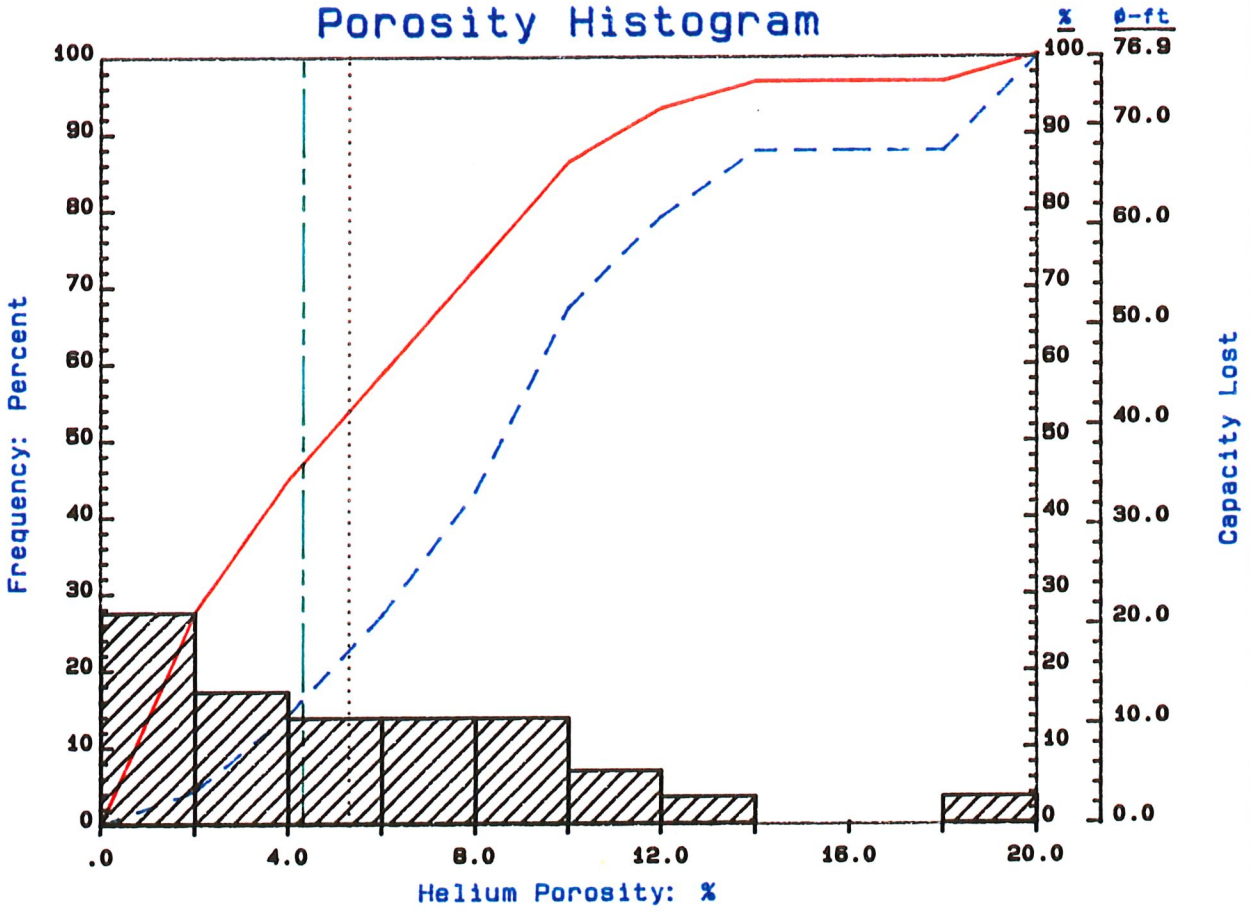
Chuska Energy Company
Sterling 36L-1
Wildcat
San Juan County, Utah
Paradox Fm. - Desert Creek Zone
Core No. 1-4 (5372.0'-5564.0')

Core Laboratories 11-May-1991

- LEGEND -

- Median Value (0.008)
- Geom. Average (0.030)
- Cumulative Frequency
- Cumulative Capacity Lost

29 Samples



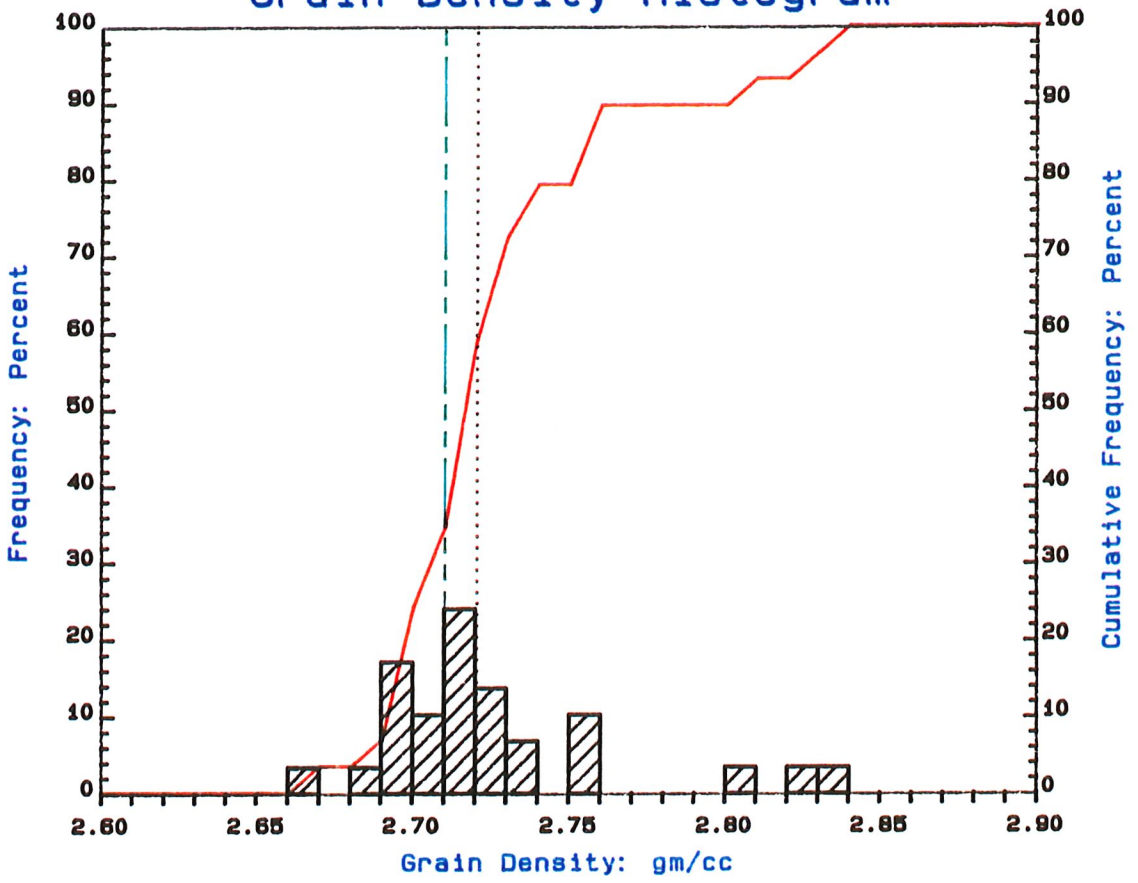
Chuska Energy Company
Sterling 36L-1
Wildcat
San Juan County, Utah
Paradox Fm. - Desert Creek Zone
Core No. 1-4 (5372.0'-5564.0')
Core Laboratories 11-May-1991

- LEGEND -

- Median Value (4.3)
- Arith. Average (5.3)
- Cumulative Frequency
- Cumulative Capacity Lost

29 Samples

Grain Density Histogram



Chuska Energy Company
Sterling 36L-1
Wildcat
San Juan County, Utah
Paradox Fm. - Desert Creek Zone
Core No. 1-4 (5372.0'-5564.0')
Core Laboratories 11-May-1991

- LEGEND -

- Median Value (2.71)
..... Arith. Average (2.72)
— Cumulative Frequency

29 Samples

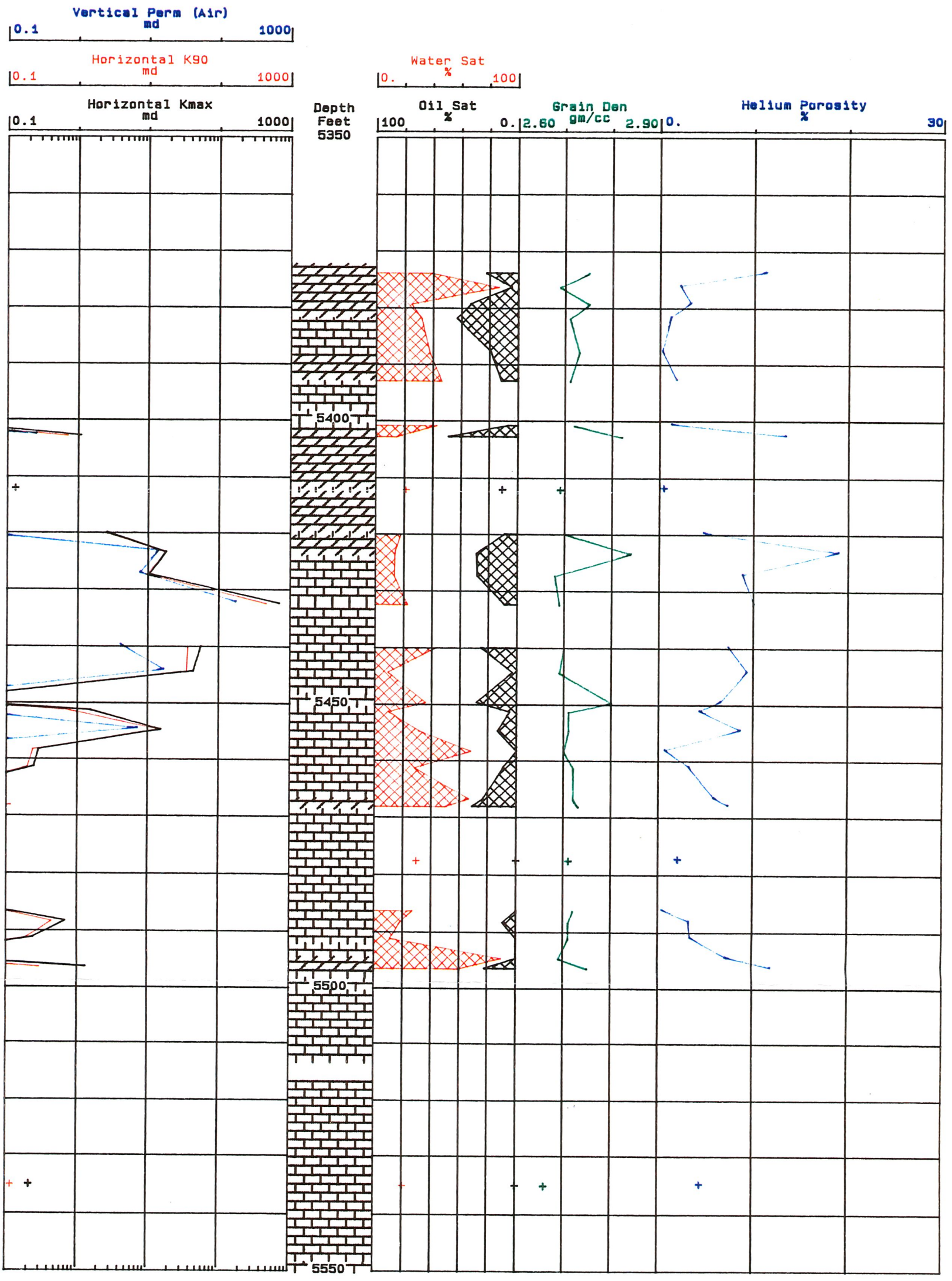
Correlation Coregraph

Chuska Energy Company
Sterling 36L-1
Wildcat
San Juan County, Utah
Paradox Fm. - Desert Creek Zone
Core No. 1-4 (5372.0'-5564.0')
Core Laboratories 11-May-1991

Vertical Scale
5.00 in = 100.0 ft

- Lithology Legend -

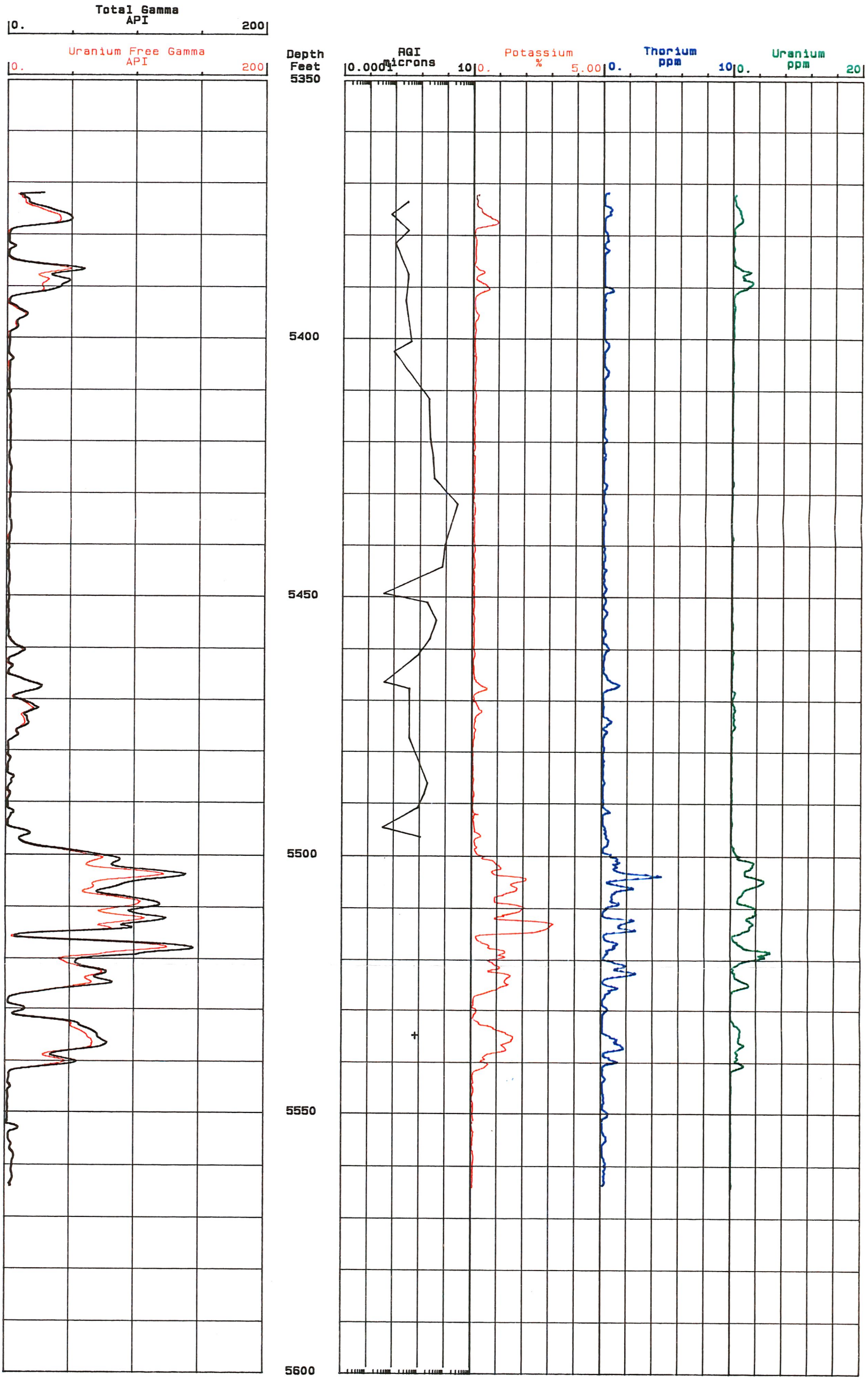
Dolomite Limestone

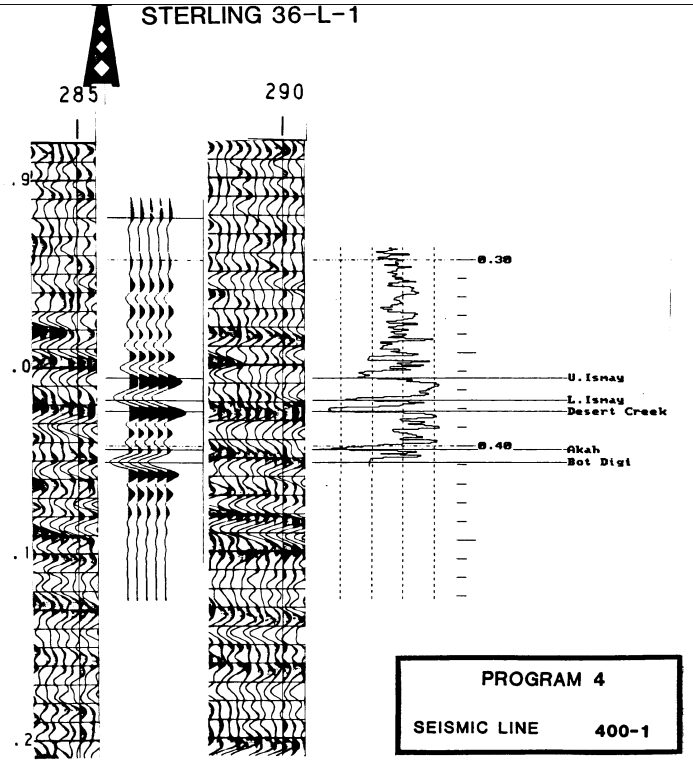


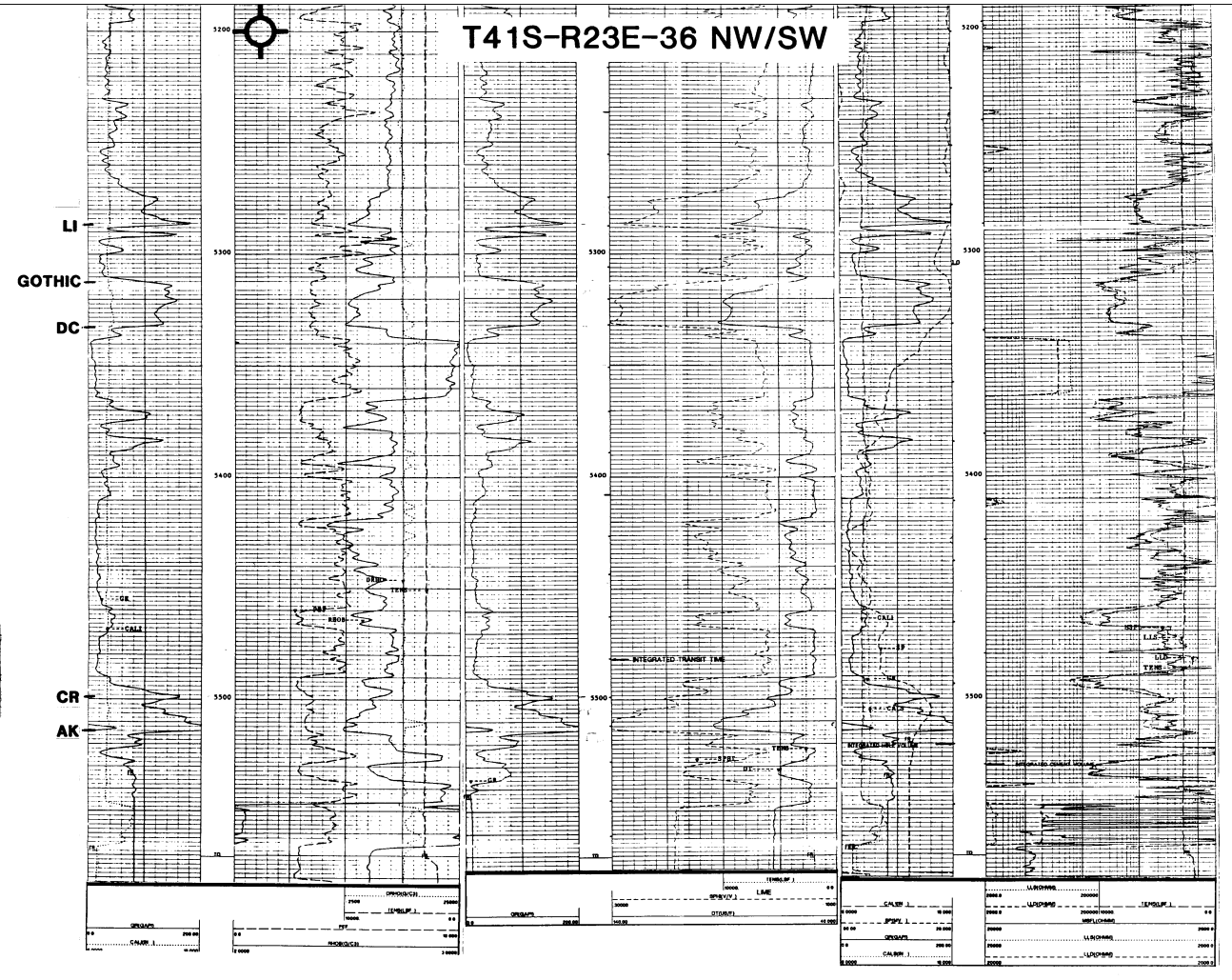
CORE LAB SPECTRAL GAMMA-RAY PLOT

Chuska Energy Company
Sterling 36L-1
Wildcat
San Juan County, Utah
Paradox Fm. - Desert Creek Zone
Core No. 1-4 (5372.0'-5564.0')
Core Laboratories 11-May-1991

Vertical Scale
5.00 in = 100.0 ft




STERLING 36-L-1
285
290
.9
.0
.1
.2
0.30
U. Ismay
L. Ismay
Desert Creek
0.40
Akah
Bot Digi
PROGRAM 4
SEISMIC LINE 400-1


T41S-R23E-36 NW/SW
LI
GOTHIC
DC
CR
AK
5200
5300
5400
5500
INTEGRATED TRANSIT TIME
GR
CALI

LOG INTERPRETATION

WELL: **STERLING 36L – 1** AUTHOR: M.D.BERRY COMPANY: MAGELLAN

OPERATOR: CHUSKA ENERGY
FIELD: WILDCAT
LOCATION: 1390' FSL, 250' FWL
SECTION: 36
TOWNSHIP: 41S
RANGE: 23E
INTERVAL: 5179' - 5576'

TOTAL DEPTH: DRILLER: 5576'
LOGGER: 5571'

ELEVATIONS: KB: 5016'
GL: 5003'

DATUM: MEAN SEA LEVEL
STATUS: SUSPENDED

TYPE OF FLUID IN HOLE: DISPERSED
DENSITY: 9.2 ppg
VISCOSITY: 56.0 S
pH: 11.0
FLUID LOSS: 12.0 C3
SOURCE OF SAMPLE: FLOWLINE

RM: .688 ohm-m @ 70 °F
RMF: .516 ohm-m @ 70 °F
RMC: 1.03 ohm-m @ 70 °F
MAX. RECORDED TEMP: 132 °F
MEAN SURFACE TEMP.: 65 °F
STABILISED BHT: —

POROSITY, ø, (PHI) :- NEUTRON DENSITY, HYDROCARBON CORRECTED
CORRECTED TO CORE DATA USING : $PHI_{(CORR)} = (PHI_{(LOG)} - .0115)\ .9009$
- DENSITY POROSITY USED IN AKAH (5514' - TD) : ρ_w =2.66 (CORE ANALYSIS), ρ_f =1.0

WATER SATURATION (SW) : FORMULA USED : ARCHIE

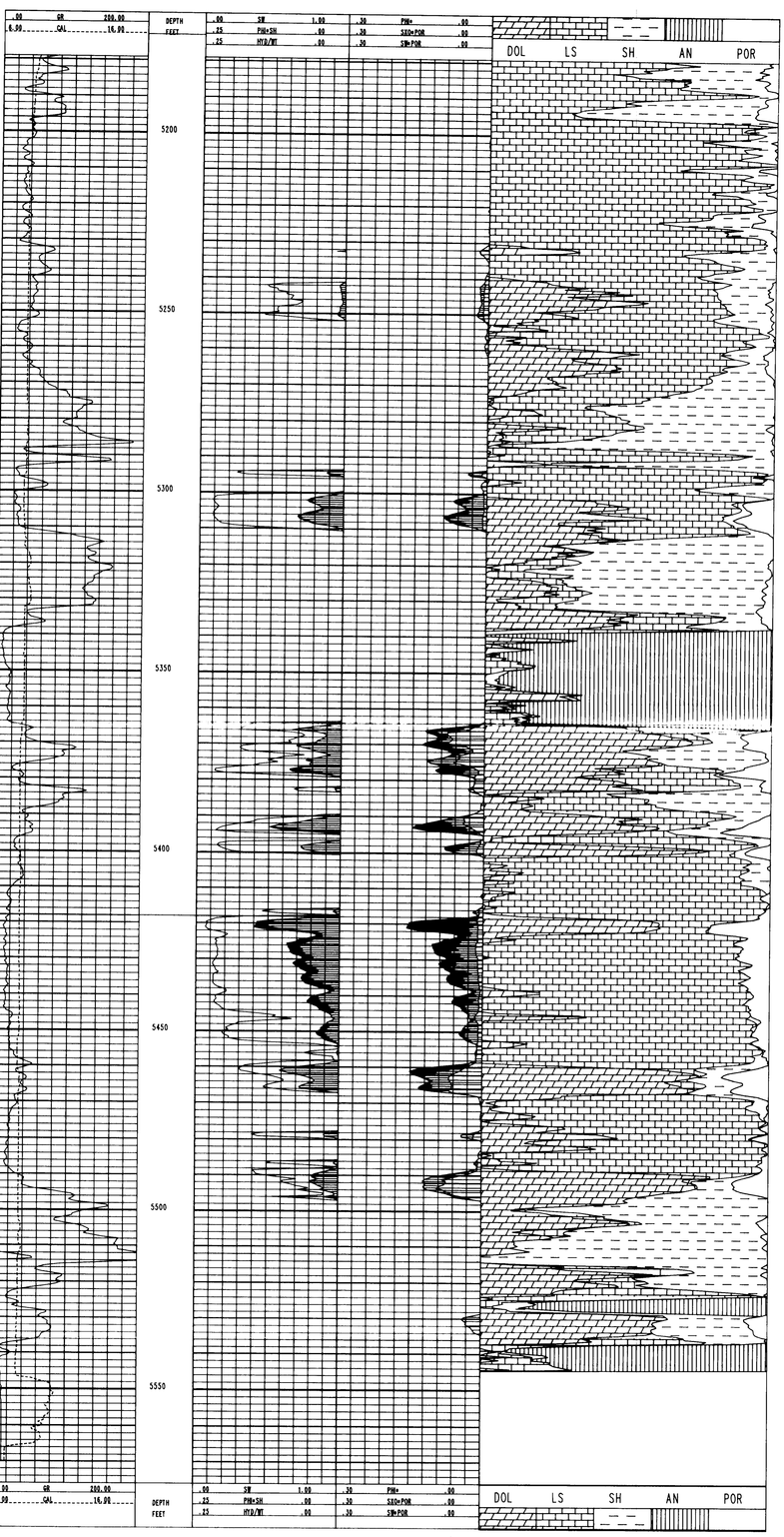
m = 2	n = 2	a = 1		
Rw(ohm-m)	INTERVAL (FT.)	TEMP.(°F)	SALINITY (ppm)	
.035	@ 5400	129.9	134,000	

NOTE : HYDROCARBON SATURATION, (SH) = 1-SW
HYDROCARBON DENSITY, ρh, (RH) = COMPUTED

LITHOLOGY COEFFICIENTS:

	INTERVAL (FT)	Pe (dol)	GR (dol)	RHOB (dol)
DOLOMITE	5230 - 5544	3.14	20	2.85
		Pe (ls)	GR (ls)	RHOB (ls)
LIMESTONE	5159 - 5544	5.08	20	2.71
		Pe (sh)	GR (sh)	RHOB (sh)
SHALE	5159 - 5544	3.4	180	2.5
		Pe (an)	GR (an)	RHOB (an)
ANHYDRITE	5337 - 5365; 5523 - 5528 5536 - 5544	5.05	10	2.98
		Pe (por)	GR (por)	RHOB (por)
POROSITY	5159 - 5337; 5365 - 5523 5528 - 5536	.36	10	1.0

JULY 1991



U.S.A.

FOUR CORNERS AREA - NAVAJO PROJECT

COMPOSITE WELL LOG

STERLING

36-L-1

SCALE 1" = 500'

WELL LOCATION: T41S R23E S36 NWSW
FOOTINGS: 1390' FSL 250' FWL
SEISMIC LINE / SHOT POINT: 400-1/SP 285.86 74'SW
ELEVATIONS: G.L. 5003 ft. K.B. 5016 ft.

STATE: Utah
COUNTY: San Juan
BASIN: Paradox
GEOLOGIST:

WELL CATEGORY: Exploration
COMPLETION: Oil well
TOTAL DEPTH: Driller: 5576 ft.
Logger: 5571 ft.
HOLE Size: 12 1/4 in. 7 7/8 in.
Depth: 525 ft. 5576 ft.
CASING Size: 8 5/8 in. 5 1/2 in.
Depth to shoe: 525 ft. 5562 ft.
TUBING Size: 2 7/8 in. Depth: ft.

SPUD DATE: 19/4/91
T.D. DATE: 5/5/91
RIG RELEASED: 6/5/91

DRILLING RIG: Aztec Rig 222
MUD LOGGING: Rocky Mountain Geo Engineering
WIRELINE LOGGING: Schlumberger
WIRELINE LOGS RUN: LDT/CNL- GR--DLL-MSFL-BHC-S- CAL-ML

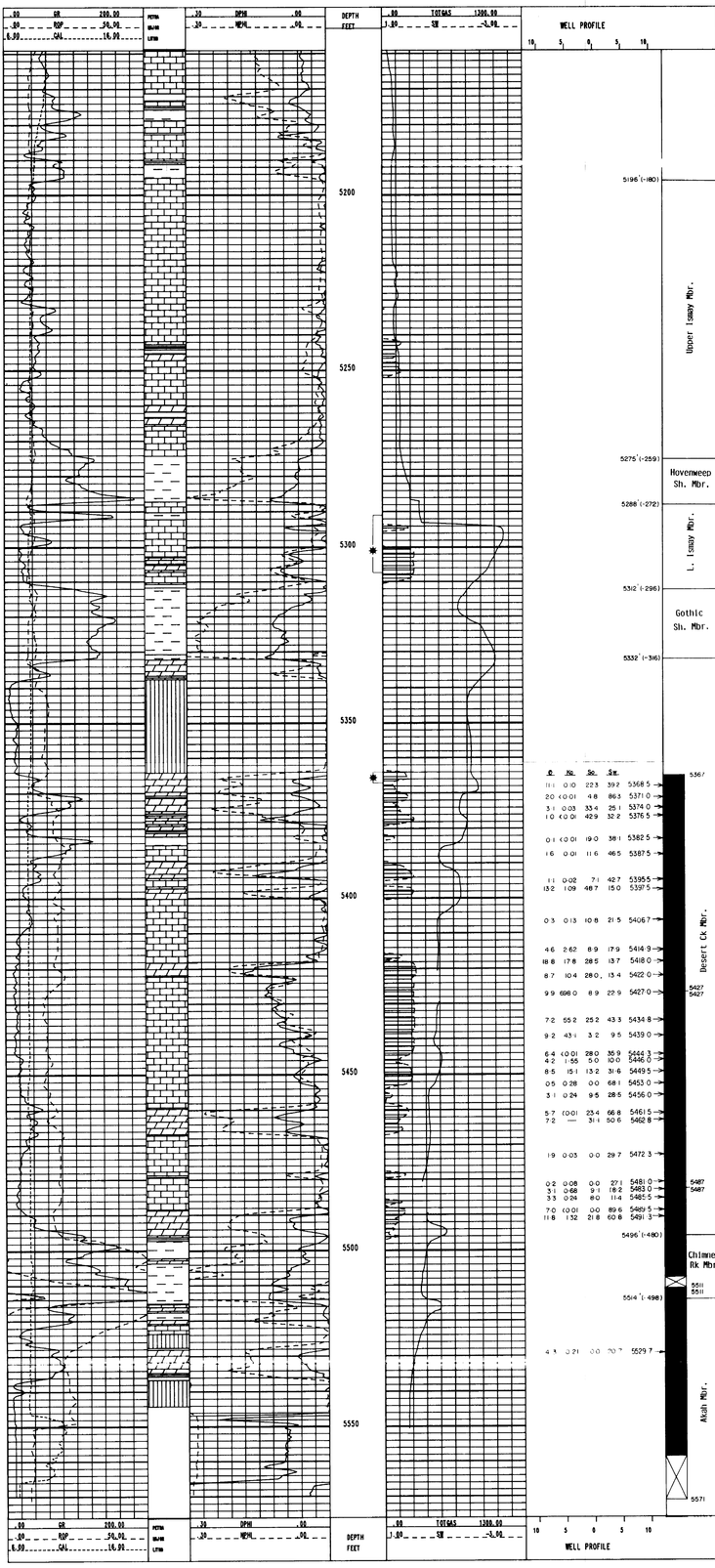
LEGEND

ROCK TYPES

- Limestone
- Dolomite
- Shale
- Siltstone
- Sandstone
- Anhydrite
- Salt

SYMBOLS

- Casing shoe
- Cement plug
- No Recovery — Conventional core
- Core sample location (Sidewall and conventional)
- D.S.T. interval
- Oil Show, Gas Show — Hydrocarbon indications and interval
- Perforated interval
- Bridge plug
- Permeability zone microlog



STERLING 36L-1