

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK
 DRILL DEEPEN PLUG BACK

b. TYPE OF WELL
 OIL WELL GAS WELL OTHER
 SINGLE ZONE MULTIPLE ZONE

2. NAME OF OPERATOR
Inland Fuels Corporation

3. ADDRESS OF OPERATOR
2121 South Columbia, Tulsa, Okla. 74114

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)*
 At surface NE. NW. Sec. 11, T 20S, R 23E, S.L.M.
 At proposed prod. zone 2340' fr. W-line and 550' fr. N-line

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*
Approximately 6 miles NE. of Cisco, Utah

15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any)
550'

16. NO. OF ACRES IN LEASE
1840

17. NO. OF ACRES ASSIGNED TO THIS WELL
40 Acres

18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.
1500'

19. PROPOSED DEPTH
2500 ft

20. ROTARY OR CABLE TOOLS
Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.)
4805' Grd; 4815' K.B.

22. APPROX. DATE WORK WILL START*
Oct. 20, 1979

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"	24.00#	150'	80 sks
7 7/8"	4 1/2"	10.50#	Thru pay zones	es-cemented to 200' above Kd

It is planned to drill a well at the above location to test the oil and/or gas production possibilities of the sands in the Dakota, Cedar Mt., and Morrison formations. The well will be drilled to a point which is near the top of the Entrada formation or to commercial production, whichever is at the lesser depth. The well will be drilled with rotary tools, using air for circulation. The surface casing will be set at about 150 ft. and cemented with returns to the surface. A blowout preventer with hydraulically operated blind and pipe rams will be installed on top of the surface casing, and a rotating head will be used on top of the blowout preventer. Fill and kill lines (2") will be connected below the blind rams. Any gas encountered will be flared at the end of the blowout line, and roughly checked for volume thru 2" line after the pipe rams have been closed. A float valve will be used in the bottom drill collar at all times. A prognosis for the well is attached.

*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 [Signature] TITLE President DATE Sept. 19, 1979

(This space for Federal or State office use)

PERMIT NO. _____ APPROVAL DATE _____

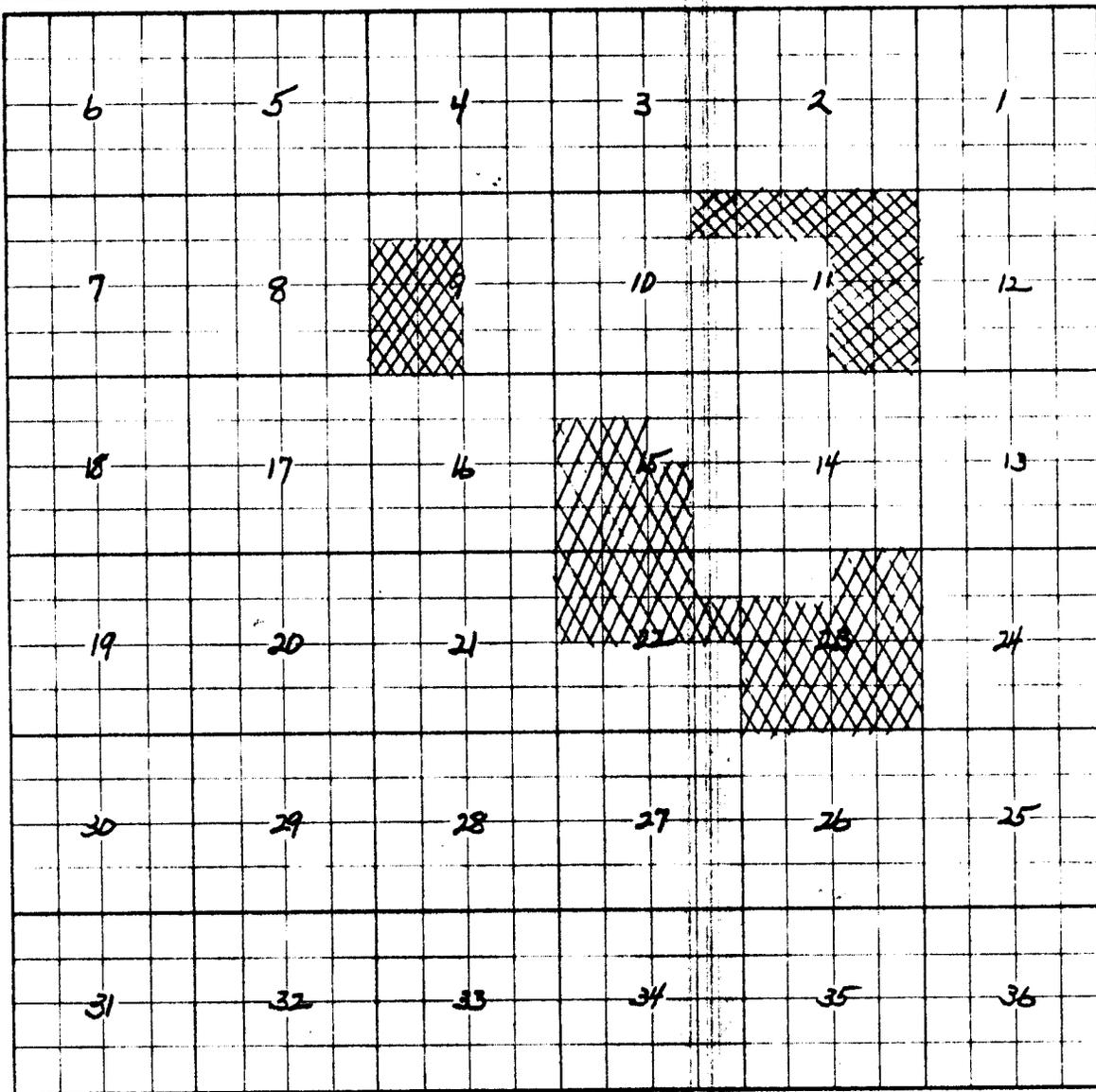
APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

TOWNSHIP 20S RANGE 23E COUNTY Grand County STATE Utah

REMARKS: Lease #U-42223

COMPANY Inland Fuels Corp.
2121 South Columbia
Tulsa, Oklahoma 74114



WELL CONTROL EQUIPMENT FOR
INLAND FUELS CORP.
FEDERAL #11-2 WELL
NE. NW, SEC. 11-20S-23E.
GRAND COUNTY, UTAH

The following control equipment is planned for the above designated well: (See attached diagram)

1. Surface Casing:

- A. Hole size for surface casing is 12½".
- B. Setting depth for surface casing is approx. 200 ft.
- C. Casing specs. are: 2 5/8" O.D., K-55, 24.00#, 3 rd. thread, R-3 new or used.
- D. Anticipated pressure at setting depth is approx. 20 lbs.
- E. Casing will be run using three centralizers and a guide shoe, and will be cemented with 75 sks of cement with returns to the surface.
- F. Top of the casing will be near ground level.

2. Casing Head:

Flange size: 10", A.P.I. Pressure rating: 2000# W.P., Series 600; Cameron, OCT, or equivalent; new or used; equipped w/two 2" ports with nipples and 2", 2000# W.P. ball or plug valves. Casing head and valves set above ground level. (A flange only may be used on top of the casing, if the B.O.P. is equipped with 2" outlets below the blind rams.)

3. Intermediate Casing:

None

4. Blowout Preventors:

- A. Double rams; hydraulic; one set of blind rams; one set of rams for 3½" or 4" drill pipe; 10" flange; 2000# or greater W.P.; Series 900; equipped with mechanical wheels and rod for back-up; set on top of casing head flange and securely bolted down, and pressure tested for leaks up to 2000# p.s.i. A hydraulically operated hy-drill may be used in place of the above B.O.P., if equipped with 2" outlets below the rams. B.O.P. will be tested for leaks at 2000# p.s.i. prior to drilling below surface casing.
- B. Rotating Head: Shaffer, Grants or equivalent; set on top of blowout preventor and bolted securely; complete with kelly drive, pressure lubricator; 3½" or 4" rubber for

2000# W.P.; need not have hydril assembly on bottom, if a separate hydril or B.O.F. is used.

C. **Fill and Kill Lines:** The fill and kill lines (2" tubing or heavy duty line pipe) are to be connected thru the 2" valves on the casing head and thru a manifold to permit ready switching from the fill to kill lines.

5. Auxillary Equipment:

A float valve is to be used in the bottom drill collar at all times. A safety valve that can be used in the drill pipe will be kept within easy reach on the rig floor at all times.

6. Anticipated Pressures:

The shut-in pressures of the Dakota, Cedar Mountain, and Morrison formations at depths of 2000' to 3000' in the area have been measured at about 500# to 800# maximum. No toxic gases have ever been encountered in the area and none are anticipated.

7. Drilling Fluids:

Air will be used to drill the subject well until water is encountered, then air-soap-water mist will be used to drill the well deeper. In case of excessive caving problems, it may be necessary to convert to mud.

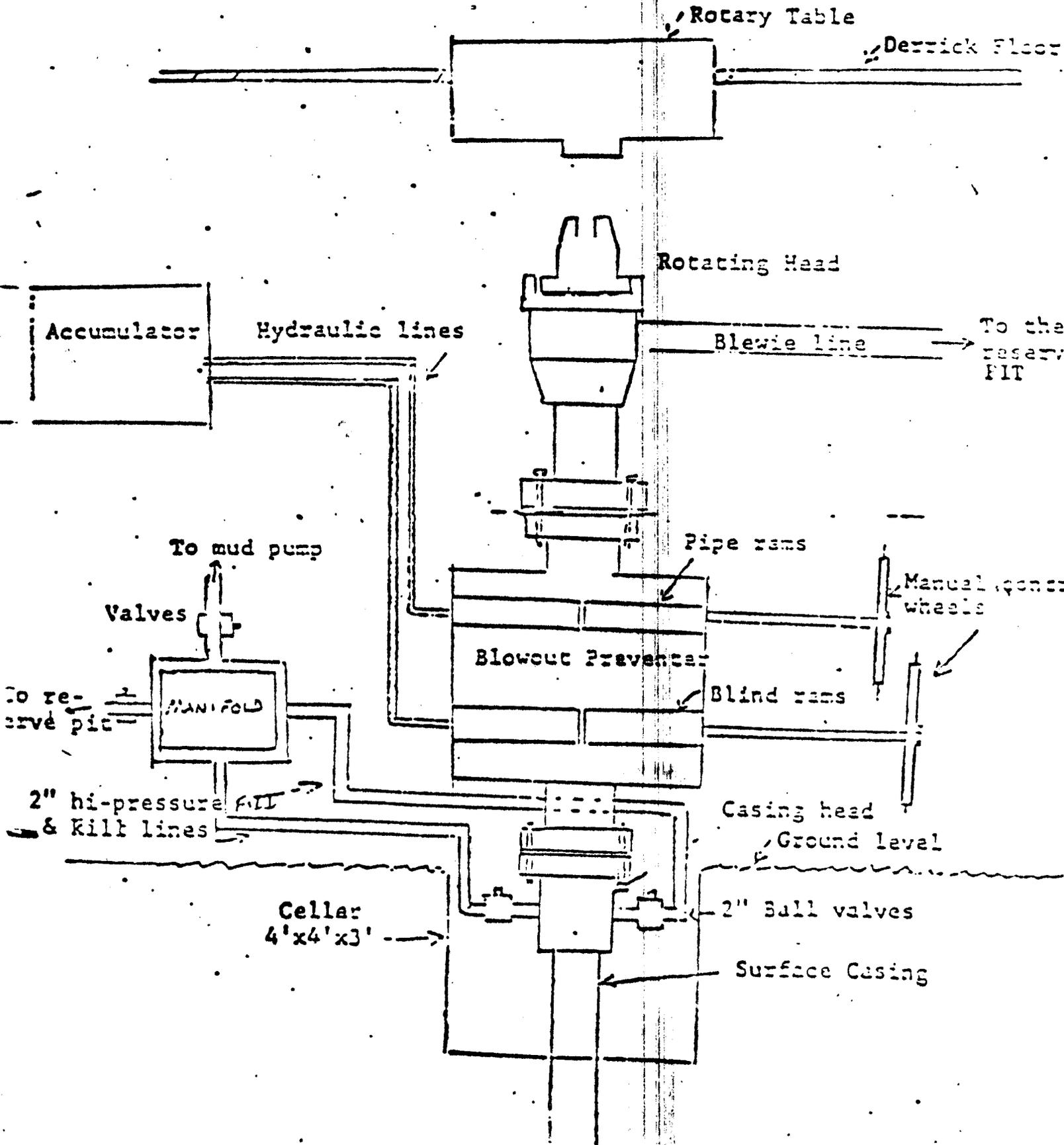
8. Production Casing:

- A. Hole size for production casing will be 6 $\frac{1}{2}$ ".
- B. Approx. setting depth will be about 3500'.
- C. Casing Specs. are: 4 $\frac{1}{2}$ " O.D.; K-55; 10.50#; 8-rd thread; R-3, new.
- D. If good production is obtained, the casing will be run with a guide shoe at the bottom and about six centralizers and cemented conventionally with sufficient R.F.C. cement to cover 200 ft. above the top of the Dakota formation. The production zone will be perforated, 2 3/8" O.D. tubing will be run, and the well completed conventionally. In the event the production is small, it may be desirable to minimize the damage to the formation by keeping all mud and cement off the formation. In this case the procedure outlined below will be used.
- E. Casing will be run with about six centralizers and a cement basket with DV tool set above the production zone.

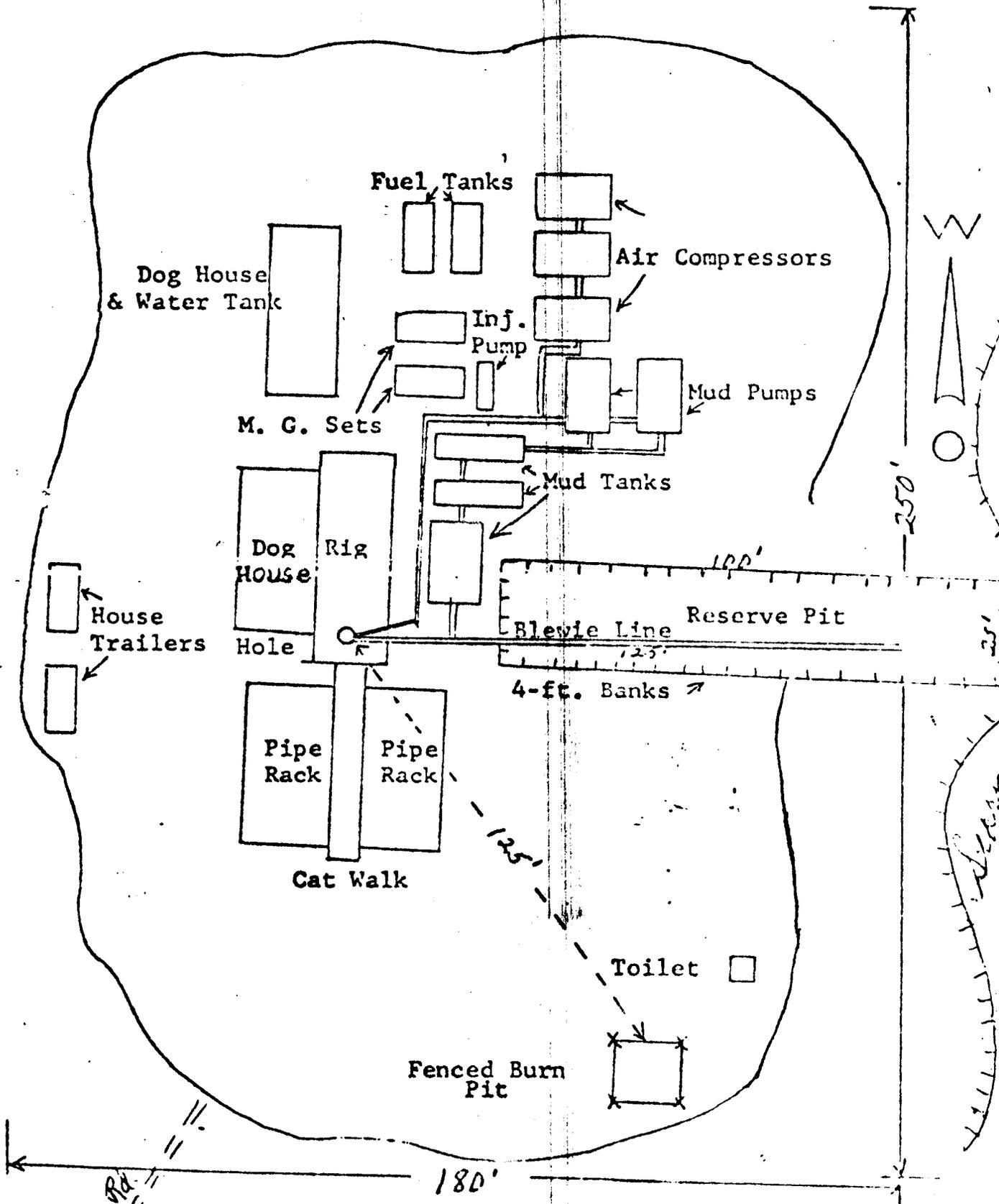
There will be sufficient casing to extend thru the production zone below the basket with a blind guide shoe on the bottom. The casing will be cemented above the packer with about 85 sks of cement (sufficient to cement thru the Dakota formation). The cement will be allowed to cure at least 48 hrs. The plug can then be drilled out and the casing perforated below the DV tool. Two inch tubing will be run and secured in the tubing head prior to perforating.

**SCHEMATIC DIAGRAM
CONTROL EQUIPMENT FOR THE**

**INLAND FUELS CORP.
FEDERAL #11-2 WELL
NE. NW. SEC. 11-20S-23E.**



LOCATION PLAN FOR
 INLAND FUELS CORP.
 FEDERAL #11-2 WELL
 NE. NW. SEC. 11-20S-23E.



Scale: 1 in. = approx. 30 ft.

Plat No. 3

PROGNOSIS FOR
INLAND FUELS CORP.
FEDERAL #11-2 WELL

Location: NE. NW Section 11, T 20S, R 23E, S.L.M., Grand County, Utah (2360' from W-line and 950' from N-line)

Elevations: 4805' grd; 4815' K.B.

Surface Casing: 150' of 8 5/8", 24.00#, K-55, R-3 casing set and cemented with 80 sks cement w/3% CaCl; with returns to surface. The surface hole (12 1/4") will be drilled to 150' K.B. and will be no more than 1° deviation.

Expected Formation Tops:

<u>Formation</u>	<u>Depth to Top</u>	<u>Thickness</u>	<u>Datum</u>
Mancos	Surface	1790'	4790' K.B.
Dakota *	1790'	100'	3000'
Cedar Mountain *	1890'	90'	2900'
Morrison (Brushy Basin) *	1980'	280'	2810'
(Salt Wash) *	2260'	250'	2530'
Curtis-Summerville	2510'	80'	2280'
Entrada	2590'	—	2200'
Total Depth	2650'		

* Formations with possible hydrocarbons in paying amounts.

1. It is planned to drill a 12 1/4" surface hole for the surface casing down to a depth of about 150 ft. and set 8 5/8 inch casing with approx. 80 sks of cement with returns to the surface. A casing head or flange will be mounted on top of the surface casing and a blowout preventer with blind and pipe rams (hydraulic) will be mounted on top of the blowout preventer. A blowline, at least 125 ft. long, will then be attached to the rotating head and extended into the reserve pit. B.O.P. will be tested to 2000 lbs. before drilling below surface casing.
2. A 7 7/8 hole will then be drilled below the surface casing, using air for circulation. A flare will be maintained at 500' and below. This will insure that no gas will be missed. The air drill-

ing will also minimize the damage to the hydrocarbon reservoir. No toxic gases have ever been encountered in this area and none are expected.

3. Samples of the cuttings will begin at 1200'. 30-ft. samples will be taken from 1200' to 1700', and then 10-ft. samples will be taken from 1700' to total depth.
4. It is planned to drill the well to a depth which is approximately 100 feet below the top of the Entrada formation unless good commercial flow of gas is obtained above this depth.
5. If a high gas flow (several million cubic feet) and/or when the total depth of the well is reached, electric logs will be run. Prior to running logs, high viscosity mud (not less than 100 vis.) will be pumped into the hole to provide control of the gas and to provide a conductive medium for the logs. A dual-induction-latero-log will be run from bottom to the top of the hole, and a gamma-density and compensated neutron porosity log will be run from the bottom to a point which is 150' above the top of the Dakota formation.
6. If good production (over 750 MCF) is obtained, 4½" O.D., 10.50#, K-55, R-3 new casing will be run and cemented conventionally with sufficient R.F.C. cement to cover 200 ft. above the top of the Dakota formation. The production zone will then be perforated, 2 3/8" O.D. tubing run, and completed conventionally.
7. It is anticipated that the drilling of the well will require less than one week.


W. Don Quigley
Consulting Geologist
Suite 440
57 West South Temple
Salt Lake City, Utah 84101

N T L - 6 P L A N R E P O R T

For

Well Name: Inland Fuels Corporation - Federal #11-2Location: NE. NW. Sec. 11, T 20S, R 23E, S.L.M., Grand County, Utah1. Existing Roads: (See attached Maps)

A. Well Location: (See Plat #1)

Reference Stakes: 150' N-S-E-WPerimeter Stakes: As above. Stakes outline maximum perimeter of well pad.B. Route and Distance to Well Site From Reference Point: (See att. maps)
From the E. Cisco Exit on I-70, the site is 6½ miles along secondary and unimproved roads on Danish Flat.C. Access Roads (Identify secondary roads to be used): (See att. maps)
The Cisco Mesa road going NW. from the E. Cisco Exit is used for the first 4½ miles. At this point a road trending north is used for about ½ mile and then a road trending NE to the Adams well is used for 1½ miles.D. Roads Within 3 mile Radius: (See att. maps) The main Danish Flat road is a county road, is partially gravelled, graded, crowned, and ditched. All the other roads around the well site are unimproved and are flat with no drainage provisions. The last 2 miles of road will have no improvement. It is on Mancos soil and topography and is on shale and silt in the low areas and on gravel across the benches.
Surface type and conditions: _____E. Roads Within 1 mile Radius: (See att. maps) See 1-D Above.
The roads within 1-mile of the site are mostly dozed trails (old seis trails) dozed across natural topography and soil. The road base is Mancos shale and soil with some gravel and conglomerate on the bench areas. They are normally about 14 ft. wide.F. Plans for Road Improvement & Maintenance: In the event of production, the last two miles of road will be widened to a maximum disturbed width of 20', graded and crowned with ditches (18" deep) on each side

F. The road across small washes will be ditched on both sides of the road and the road base will be cut to the bottom of the shallow washes. There are about 3 of these washes and the cuts will be short (20' or less) and 4' deep at the most.

2. Planned Access Roads: (See att. maps) No new road will be required.

(1) Width: Maximum disturbed width will be 20 ft.

(2) Maximum Grades: Less than 3%

(3) Turnouts: None needed

(4) Drainage Design: None needed

(5) Location and Size of Culverts, Cuts, and Fills: None needed

(6) Surfacing Material: The road is across Mancos shale and soil which is composed of gravel and silt. No other material will be used.

(7) Gates, Cattleguards, or Fence Cuts: None

(8) All new roads have been flagged as required.

3. Location of Existing Wells: (See Map No. 2)

(1) Water Wells: None

(2) Abandoned Wells: See Map #2

(3) Temporarily Abandoned Wells: None

(4) Disposal Wells: None

(5) Drilling Wells: None at present

(6) Producing Wells: Several - See Map #2

(7) Shut-in Wells: Three

(8) Injection Wells: None

(9) Monitoring or Observation Wells: None

4. Location of Existing and/or Proposed Facilities:

A. Within 1-mile radius of location show the following existing facilities owned or controlled by lessee/operator:

(1): Tank Batteries: (Size) None

(2) Production Facilities: None

(3) Oil gathering lines: None

(4) Gas gathering lines: None

(5) Injection lines: None

(6) Disposal lines: None

(7) Are lines buried? No

B. If new facilities are contemplated, in the event of production, show: (These facilities depend on the outcome of the proposed well and are really unknown at this time.) Show a general proposed plan. (See Plat No. 2)

(1) Are any facilities planned off well pad? None at this time. If the well is a successful gas well, a gas gathering line (3 1/2") will have to be laid and connected to the main gas line; but this will be covered by a separate proposed plan, accompanied with maps, surveys, etc., at a later date.

(2) Give dimensions of facilities: See Plat #2

(3) Construction methods and materials: Location will be levelled for production equipment. Tank batteries will be placed on a 3-in. gravel pad and surrounded with an 18" dike (15' from tanks). Separators and heater-treaters will be placed on gravel pads or cement bases. Pump jacks will be on cement platforms or on raised dirt and gravel mounds. All pipe lines on the pad will be buried.

(4) Protective measures for livestock and wildlife: All open pits will be fenced with woven wire (sheep) fence (40") and pump jacks or rotating machinery will have guards to prevent danger by moving parts.

C. Plan for rehabilitation of disturbed areas no longer needed after drilling operations are completed: Well site will be cleaned, levelled, and graded for production equipment; pits folded-in or

C. fenced with woven wire if full of fluid before the rig is moved.
While production ensues, previous areas of well pad not needed for
production operations will be restored as in Item 10 below. Cleaning
the site and pit work will be done within 30 days after the well is
completed, if possible.

5. Location & Type of Water Supply: (See att. maps)

A. Type of Water Supply: Cisco Springs (natural flow) located in
Section 9 of T 20S, R 23E. (See Map #3)

B. Method of Transporting Water: The water will be hauled from the spring
to the well site by truck along the Cisco Mesa road. This will be
approximately 5 miles from the spring to the well site.

C. Is Water Well Planned? No
If so, describe location, depth and formation: _____

6. Source of Construction Materials:

A. See attached map and describe: None will probably be required, since
the well will be drilled during the good weather season.

B. Identify if Federal, Indian, or Fee Land: _____

C. Describe Material: (Where from and how used) _____

D. See item 1-C and 2 above.

7. Waste Disposal:

- The cuttings will be blown into the reserve pit, and the
- (1) Cuttings: blewie line will be directed into the cut portion of the pi
 - (2) Drilling Fluids: In mud tanks; excess put into reserve pit.
 - (3) Producing Fluids (oil or water) Oil in tanks; water in reserve pit.
 - (4) Human Waste: Toilet with pit (4' deep) with lime for odor and sani-
tation control. Will be covered with soil (3' deep) at end of operation

prior to commencement
of drilling

(5) Garbage & Other Waste: (Burn pit will be adequately fenced with chicken wire to prevent scattering of debris by wind) Into burn pit, (4'X6'X6' deep) and burned periodically. The burn pit will be approx. 125' from well head.

(6) Clean-up: (See item 10 below) All garbage and unburned debris will be buried by at least 3 ft. of cover after the drilling and completion operations are finished. The unused material and all equipment will be removed from the site and taken to supply yards or to the next drill site, as soon as the well is completed.

8. Airstrips and/or Camp Sites (Describe): None needed.

9. Well Site Layout: (See Plat No. 3)

(1) Describe cuts or fills: The location is on fairly level ground, which will be levelled to the sides after the top soil has been removed. The south side will have about 2 ft. of fill.

(2) Describe pits, living facilities, soil stockpiles: Reserve pit is long and narrow as shown, and will be placed on the north side. Excavated material will be piled at the north end of pit. Top soil, mostly graded (12" deep), will be piled at the west and east ends of the site. Two or three trailer houses will be provided for the supervisory personnel.

(3) Rig Orientation, Pipe rack, Access Road Entrance, etc.: (See Plat #3)

(4) Are Pits Lined? Unlined with 4-ft. banks.

10. Plans For Restoration:

A. If Well is completed: Site will be cleaned, debris removed, pits folded-in or fenced with woven wire if full of fluid, and site levelled for production equipment. All unused portions will be contoured, graded, scarred, and seeded with wheat grass, or acceptable seed mix authorized by BLM.

B. If Well is abandoned:

(1) Clean-up, levelling, folding pits-in, contouring: These items will be done as soon as possible. Clean-up will be accomplished at

- B. (1) time rig is removed. The rest of the work should be done within 10 to 60 days after well is completed.
- (2) Seeding location and access road: Site will be seeded with crested wheat grass, or with a seed mix suggested by BLM by hand broadcasting and then scarred with a dozer or spike-toothed drag. The access road, if no longer needed, will be erased, contoured, seeded, and scarred as above. Water bars will be placed where needed.
- (3) Will pits be fenced or covered? If there is a large amount of fluid in the reserve pit, it will be fenced with woven wire before rig is released & remain fenced until the fluid dries up & the pit is re-
claimed.
- (4) Is there any oil in reserve pit?
If so, describe disposal: Should not be any great amount. If there is a large amount, it will be removed prior to covering pit.
- (5) When will restoration work be done? As soon as possible. Within 60 days after equipment is removed if weather and availability of clean-up equipment permit and will be completed within 10 days thereafter.

11. Description of Land Surface:

- (1) Topography & Surface Vegetation: Location is on fairly flat ground with a gentle slope to the south. It is on typical Mancos soil and gravel. Sparse sage brush, shad scale, grass and tumble weed are present.
- (2) Other Surface Activities & Ownership: The land around the drill site is federal land with minerals and surface owned by the public. Inland Fuels Corp. has an Oil & Gas lease on the E $\frac{1}{2}$ of Sec. 11; Sec. 2 to the N. is State land. The area does have some grazing by sheep. There are no powerlines, powersites, irrigation ditches or cultivation in (cont. pg. 7)
- (3) Describe other dwellings, archaeological, historical, or cultural sites: There are no known buildings, archaeological, historical or cultural sites in the area. Other oil and gas well drilling and production are present in the general area.

12. Operators Representative: (Address & Phone number)

W. Don Quigley, Suite 440, 57 W. So. Temple, Salt Lake City, Utah 84101
801-359-3575

13. Certification:

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

Date: Sept. 19, 1979

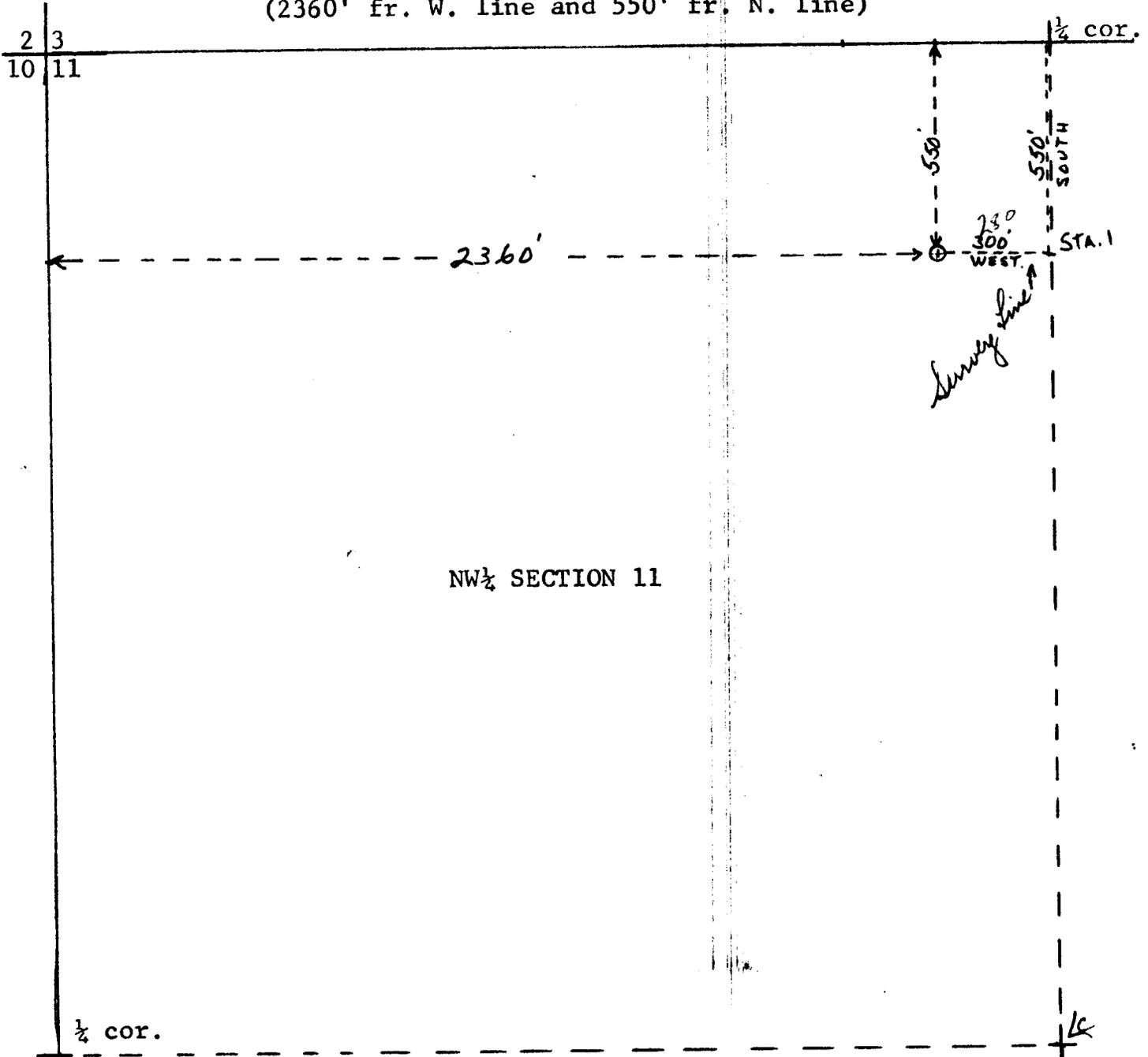
Name: H. Don Peigley

Title: Geological Consultant

11. (2): the area. Another oil well is located 800' away.

LOCATION PLAT FOR
INLAND FUELS CORP.
FEDERAL #11-2 WELL
NE. NW. SEC. 11-20S-23E.
GRAND COUNTY, UTAH
ELEV: 4805' Grd.

(2360' fr. W. line and 550' fr. N. line)



Ref. pts. are 150' N-S-E-W

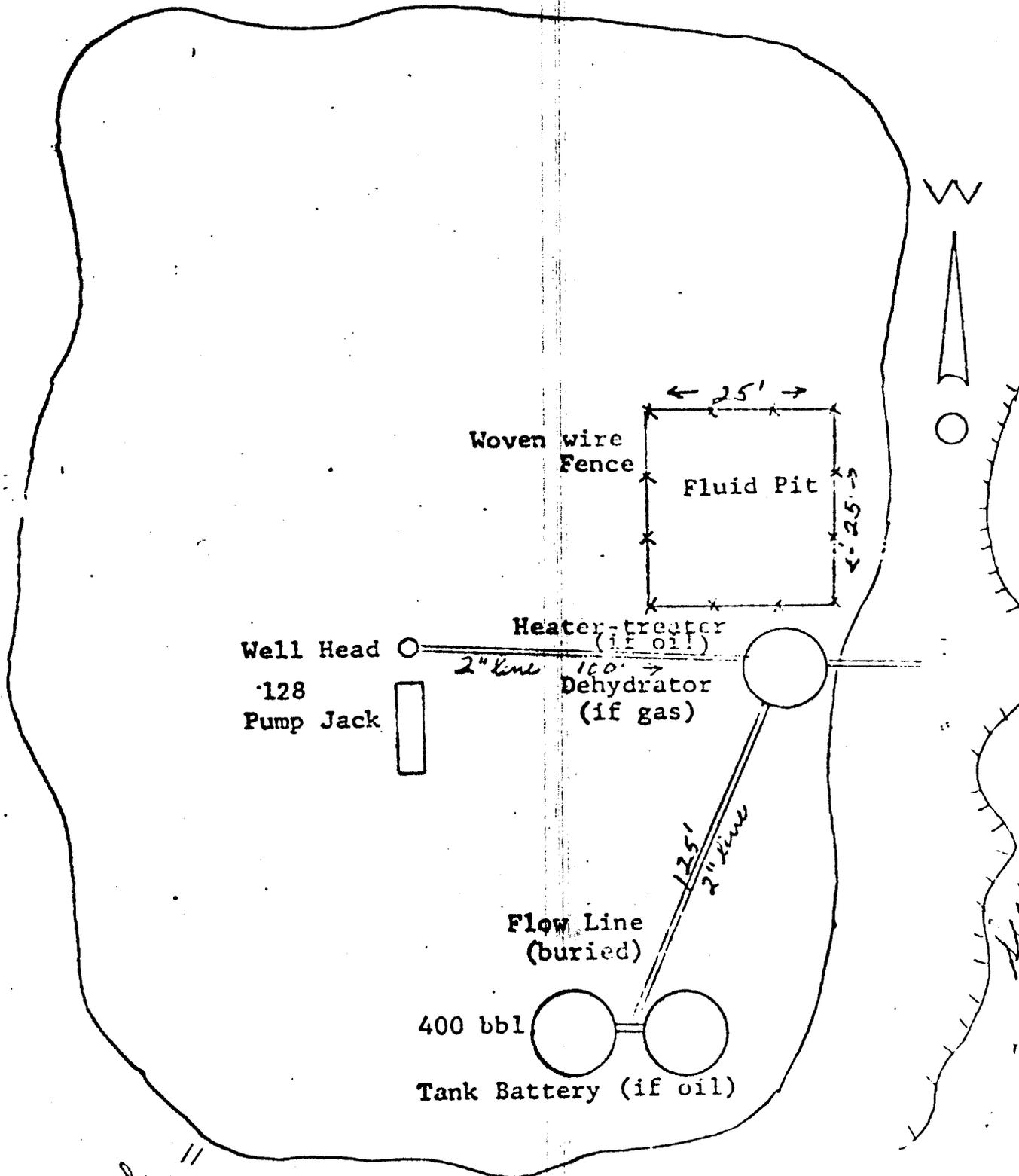
Scale: 1" = 400 ft.
Date: Sept. 19, 1979

I, Sherman D. Gardner, do hereby certify that this plat was plotted from notes of a field survey made under my direct supervision, responsibility, and checking on Sept. 17, 1979.

Sherman D. Gardner
Registered Land Surveyor
State of Utah #1556

PLAT NO. 1

PLAN FOR PRODUCTION EQUIP. NO. 1
INLAND FUELS CORP.
FEDERAL #11-2 WELL
N.E. NW. SEC. 11-20S-23E.



Scale: 1 in. = 30 ft.

Access Rd.

FROM: DISTRICT GEOLOGIST, ME, SALT LAKE CITY, UTAH

TO: DISTRICT ENGINEER, O&G, SALT LAKE CITY, UTAH

SUBJECT: APD MINERAL EVALUATION REPORT

LEASE NO. 0-42223

OPERATOR: INLAND FUELS CORPORATION

WELL NO. 11-2

LOCATION: 1/2 NE 1/4 NW 1/4 sec. 11, T. 20S, R. 23E, S.L.M.

GRAND County, UTAH

FORMATION DEPTH TO TOP

	FORMATION	DEPTH TO TOP
1. Stratigraphy:	MANCOS SHALE	SURFACE
	DAKOTA	1790'
	CEDAR MTN.	1850'
	MORRISON { BRUSHY BASIN	1980'
	{ SALT WASH	2260'
	CURTIS -	
	SUMMERVILLE	2510'
	ENTRADA	2500'
	TD	2650'

TAKEN FROM OPERATORS DEPTHS - ALL REASONABLE

2. Fresh Water: NO WATER WELLS IN THIS VICINITY ON RECORD. SAND LENSES WITH UPPER PART OF MANCOS SHALE MAY CONTAIN USABLE WATER IF LESS THAN 500' BENEATH SURFACE. FERRON SS MEMBER OF MANCOS IS SALINE, BUT ACCEPTABLE FOR STOCK. FORMATIONS AT GREATER DEPTHS CONTAIN SALTY WATER OR BRINE (WRD)

3. Leasable Minerals:

CONTAINS NO COAL RESOURCES OF ECONOMIC VALUE (FISHER, USGS BULL. 852)

4. Additional Logs Needed: NONE

5. Potential Geologic Hazards:

NONE APPARENT

6. References and Remarks: LOCATED APPROX. 3/4 MI. FROM "CISCO DOME" KTS.

MAP I-736

USGS BULL. 852

Signature:

[Handwritten Signature] For P. Bentner

Date: 10-31-79

United States Department of the Interior
Geological Survey
2000 Administration Building
Salt Lake City, Utah 84104

Usual Environmental Analysis

Lease No. U-42223

Operator Inland Fuels Corporation

Well No. 11-2

Location 2340' FWL & 550' FNL NENW Sec. 11 T. 20S. R. 23E.

County Grand State Utah Field Cisco Springs

Status: Surface Ownership Public Minerals Federal

Joint Field Inspection Date October 15, 1979

Participants and Organizations:

George Diwachak

USGS - Salt Lake City

Glenn Boyle

USGS - Grand Junction

Elmer Duncan

BLM - Moab

W. Don Quigley

Inland Fuels Corporation

Leonard Lewis

Mike's Water and Dozer Service

Related Environmental Analyses and References:

(1) Unit Resource Analysis Book Mountain Planning Unit, BLM, Moab, Utah

(2) EA No. 588-79

Analysis Prepared by: George Diwachak
Environmental Scientist
Date October 19, 1979 Salt Lake City, Utah

Handwritten notes:
Ped 180 x 250
Pit 25 x 100
1/4 mi x 1/4 mi new access
2 mi up grade exit road
Flow line not in ch
Stockpile top soil
12/10 a.c.
Noted - G. Diwachak
Bor water wood
Stipes
1-7

Proposed Action:

On September 20, 1979, Inland Fuels Corporation filed an Application for Permit to Drill the No. 11-2 development well, a 2500 foot oil and gas test of the Dakota, Cedar Mountain and Morrison Formations; located at an elevation of 4508 ft. in the NE $\frac{1}{4}$ NW $\frac{1}{4}$, Sec. 11, T. 20S., R. 23E. on Federal mineral lands and public surface; lease No. U-42223. There was no objection raised to the wellsite nor to the access road.

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

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

The operator proposes to construct a drill pad 180 ft. wide x 250 ft. long and a reserve pit 25 ft x 100 ft. partially contained in the pad. A new access road would be constructed 14 ft. wide x 0.25 miles long and upgrade 14 ft. wide by 2.0 miles long from a maintained road. The operator proposes to construct production facilities on disturbed area of the proposed drill pad.

If gas production is established, plans for a gas flow line would be submitted to the appropriate agencies for approval. The anticipated starting date is upon approval and duration of drilling activities would be about 7 days.

Location and Natural Setting:

The proposed drill site is approximately 6 miles Northeast of Cisco, Utah, the nearest ghost town. A poor road runs to within 0.25 miles of the location. This well is in the Cisco Springs field.

Topography:

The proposed location is situated in a relatively flat area approximately 500 ft. South of a highly eroded, steep sided mesa, within the Cisco desert.

Geology:

The surface geology is the Mancos Formation.

The soil is sandy clay.

No geologic hazards are known near the drillsite.

Seismic risk for the area is minor. Anticipated geologic tops are filed with the 10-Point Subsurface Protection Plan.

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

The well would be drilled with air as a circulating medium. The blowout line should be at least 125 ft. long and be misted to suppress dust.

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

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

Soils:

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

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

Approximately 1.7 acres of land would be stripped of vegetation. This would increase the erosional potential. Proper construction practice, construction of water bars, reseeding of slope-cut area would minimize this impact.

Air:

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

Relatively heavy traffic would be anticipated during the drilling-operations phase, increasing dust levels and exhaust pollutants in the area. If the well was to be completed for production, traffic would be reduced substantially to a maintenance schedule with a corresponding decrease of dust levels and exhaust pollutants to minor levels. If the project results in a dry hole, all operations and impact from vehicular traffic would cease after abandonment. Due to the limited number of service vehicles and limited time span of their operation, the air quality would not be substantially reduced.

Toxic or noxious gases would not be anticipated.

Precipitation:

Annual rain fall should range from about 5 to 9" at the proposed location. The majority of the numerous drainages in the surrounding area are of a non-perennial nature flowing only during early spring runoff and during extremely heavy rain storms. This type of storm is rather uncommon as the normal annual precipitation is around 7".

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

Surface Water Hydrology:

Drainage from the area would be toward Danish Wash, a non-perennial tributary of the Colorado River.

A small wash, running to the South cuts through the center of the pad area. The wash should be revouted around the North edge of the path intersecting a drainage near the Northwest edge of the pad.

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

Ground Water Hydrology:

Some minor pollution of ground water systems would occur with the introduction of drilling fluids (filtrate) into the aquifer. This is normal and unavoidable during rotary drilling operations. The potential for communication, contamination and comingling of formations via the well bore would be possible. The drilling program is designed to prevent this. There is need for more data on hydrologic systems in the area and the drilling of this well may provide some basic information as all shows of fresh water would be reported. Water production with the gas would require disposal of produced water per the requirements of NTL-2B.

The depths of fresh water formations are listed in the 10-Point Subsurface Protection Plan. The pits would be unlined. If fresh water should be available from the well, the owner or surface agency may request completion as a water well if given approval.

Vegetation:

The vegetation of the proposed location consists of sagebrush, horsebrush, rabbitbrush, cacti and grasses.

Plants in the area are of the salt-desert-shrub types.

Proposed action would remove about 1.7 acres of vegetation. Removal of vegetation would increase the erosional potential and there would be a minor decrease in the amount of vegetation available for grazing.

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

Wildlife:

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

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

Social-Economic Effect:

An on the ground surface archaeological reconnaissance would not be required. All of Sec. 11, T. 20S., R. 23E. has been cleared for archaeology. If however, a historic artifact, an archaeological feature or site is discovered during construction operations; activity would cease until the extent, the scientific importance, and the method of mitigating the adverse effects could be determined by a qualified cultural resource specialist.

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

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

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

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

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

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

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

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

Waste Disposal:

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

Alternative to the Proposed Action:

(1) Not approving the proposed permit-The oil and gas lease grants the lessee exclusive right to drill for, mine, extract, remove and dispose of all oil and gas deposits. Under leasing provisions, the Geological Survey has an obligation to allow mineral development if the environmental consequences are not too severe or irreversible. Upon rehabilitation of the site, the environmental effects of this action would be substantially mitigated, if not totally annulled. Permanent damage to the surface and subsurface would be prevented as much as possible under USGS and other controlling agencies supervision with rehabilitation

planning reversing almost all effects. Additionally, the growing scarcity of oil and gas should be taken into consideration. Therefore, the alternative of not proceeding with the proposed action at this time is rejected.

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

Mitigative Measures and Stipulations:

1. The wash running through the location would be rerouted to the West, intersecting another drainage near the West edge of the pad.
2. A map of the water supply source and haul route would be submitted to the BLM.
3. The reserve pit would be fenced on 3 sides during drilling and on 4 sides after the rig moves out if any fluids are present.
4. 12 inches of topsoil would be stripped off the surface and windrowed along the West and East sides of the pad.
5. Upon completion of the well, the areas no longer needed for production would be reshaped to original contours, and not levelled as reported in the APD. If the well would be non-productive the entire location would be reshaped to original contours.
6. All unused portions of the location would be reseeded per BLM recommendations by ripping, drilling and dragging the area with a dozer or spike-toothed drag.
7. The blooie line should be misted with water to suppress dust.

Adverse Environmental Effects Which Cannot Be Avoided:

Surface disturbance and removal of vegetation from approximately 1.7 acres of land surface for the lifetime of the project which would result in increased and accelerated erosional potential. Grazing would be eliminated in the disturbed areas and there would be a minor and temporary disturbance of wildlife and livestock. Minor induced air pollution due to exhaust emissions from rig engines of support traffic engines would occur. Minor increase in dust pollution would occur due to vehicular traffic associated with the operation. If the well is a gas producer, additional surface disturbance would be required to install production pipelines. The potential for fires, gas leaks, and spills of

** FILE NOTATIONS **

DATE: Sept. 20, 1979

Operator: Inland Fuels Corporation

Well No: Federal 11-2

Location: Sec. 11 T. 20S R. 23E County: Grand

File Prepared:

Entered on N.I.D.:

Card Indexed:

Completion Sheet:

API Number 43-019-30568

CHECKED BY:

Geological Engineer: _____

Petroleum Engineer: _____

Director: OK of # 102-21

APPROVAL LETTER:

Bond Required:

Survey Plat Required:

Order No. 102-21 10/24/79

O.K. Rule C-3

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

Lease Designation 9d

Plotted on Map

Approval Letter Written

9/24/79

htw

#3

hl PI

called Don Quigley - he will meet w/ Board on this case - if Bond OK's will put back order to start case 7

November 1, 1979

Inland Fuels Corporation
2121 South Columbia
Tulsa, Oklahoma 74114

Re: Well No. Federal 11-2
Sec. 11, T. 20S, R. 23E.,
Grand County, Utah

Insofar as this office is concerned, approval to drill the above referred to gas well is hereby granted in accordance with the Order issued in Cuase No. 102-21 dated October 24, 1979.

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

MICHAEL T. MINDER
Geological Engineer
Office: 533-5771
Home: 876-3001

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

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

The API number assigned to this well is 43-019-30568.

Sincerely,

DIVISION OF OIL, GAS AND MINING

Michael T. Minder
Geological Engineer

/b:tm

cc: USGS

DIVISION OF OIL, GAS AND MINING

PLUGGING PROGRAM

NAME OF COMPANY: Inland Fuels Corporation (Don Quigley)

WELL NAME: Federal 11-2

SECTION 11 NE NW TOWNSHIP 20S RANGE 23E COUNTY Grand

VERBAL APPROVAL GIVEN TO PLUG THE ABOVE REFERRED TO WELL IN THE FOLLOWING MANNER:

TOTAL DEPTH: 2650'

CASING PROGRAM:

- 8 5/8" @ 174'
- 7 7/8" @ Openhole

FORMATION TOPS:

- Dakota 1770'
- Cedar Mtn 1870'
- Morrison 1930'
- Salt Wash 2260'
- Curtis 2570'
- Entrada 2580'

PLUGS SET AS FOLLOWS:

- #1 2650' - 2530' 40 sx
- #2 2350' - 2200' 50 sx
- #3 1800' - 1600' 60 sx
- #4 200' - 110' 30 sx

DATE November 22, 1979

SIGNED _____

Original Signed By M. T. Minder

cc: USGS

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN DUPLICATE*
(See instructions on reverse side)

Form approved.
Budget Bureau No. 42-R3555.

5. LEASE DESIGNATION AND SERIAL NO.

U-42223

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME

Federal

9. WELL NO.

#11-2

10. FIELD AND POOL, OR WILDCAT

Cisco Springs

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

NE. NW. Sec. 11-20S-23E
S.L.M.

12. COUNTY OR PARISH

Grand

13. STATE

Utah

WELL COMPLETION OR RECOMPLETION REPORT AND LOG*

1a. TYPE OF WELL: OIL WELL GAS WELL DRY Other _____

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

2. NAME OF OPERATOR
Inland Fuels Corporation

3. ADDRESS OF OPERATOR
2121 South Columbia St., Tulsa, Oklahoma 74114

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements)*
At surface NE. NW. Sec. 11, T 20S, R 23E, S.L.M.
At top prod. interval reported below 2340' fr. W-line and 550' fr. N-line
At total depth _____

14. PERMIT NO. DATE ISSUED

15. DATE SPUDDED 16. DATE T.D. REACHED 17. DATE COMPL. (Ready to prod.) 18. ELEVATIONS (DF, REB, RT, GR, ETC.)* 19. ELEV. CASINGHEAD
Nov. 18, 79 Nov. 22, 79 11/23/79 P & A 4805 grd; 4815' K.B.

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
2650' None 0-2650'

24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)* 25. WAS DIRECTIONAL SURVEY MADE
None No

26. TYPE ELECTRIC AND OTHER LOGS RUN 27. WAS WELL CORED
Dual-Induction-Laterolog; Gamma-Density-CNL No

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"	24.00#	174' K.B.	12 1/2"	130 sks cement	None

29. LINER RECORD 30. TUBING RECORD

SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT*	SCREEN (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)
	None						

31. PERFORATION RECORD (Interval, size and number) 32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.

DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED

33.* PRODUCTION

DATE FIRST PRODUCTION	PRODUCTION METHOD (Flowing, gas lift, pumping—size and type of pump)	WELL STATUS (Producing or shut-in)					
None	None	P & A					
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
Drilling History and Geologic Report

36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records
SIGNED H. Don Quigley TITLE Consultant DATE Nov. 24, 1979

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

DRILLING HISTORY
AND
GEOLOGIC REPORT
ON
INLAND FUELS CORPORATION
FEDERAL #11-2 WELL
GRAND COUNTY, UTAH

By

W. DON QUIGLEY
CONSULTANT
SALT LAKE CITY, UTAH

November 26, 1979

DRILLING HISTORY
AND
GEOLOGIC REPORT
ON
INLAND FUELS CORPORATION
FEDERAL #11-2 WELL

Operator: Inland Fuels Corporation
2121 South Columbia St., Tulsa, Oklahoma 74114

Contractor: Veco Drilling Company
2457 Industrial Blvd., Grand Junction, Colo. 81501

Location: NE. NW. Section 11, T 20S, R 23E, S.L.M., Grand County,
Utah (2340' fr. W-line and 550' fr. N-line)

Elevations: 4805' grd; 4815' K.B.

Spudded-in: November 18, 1979

Surface Casing: 4 jts of 8 5/8", 24.00#, K-55, R-3 casing (163.94').
Set casing at 174' K.B. Cemented w/130 sks reg. cement
and 3% CaCl.

Finished Drilling: November 22, 1979

Total Depth: 2650'

Producing Formation & Zones: None

Plugged & Abandoned: November 23, 1979

Drilling History

Nov. 17: Moving rig (Veco Rig #2) and rigging up.

Nov. 18: Finished rigging up. Drilled rat hole. Dug cellar.
Drilled surface hole (12 1/2") to 174'. Survey at 137' was
1/2°. Ran 4 jts of 8 5/8", 24.00#, K-55, R-3 casing (163.94')
and landed at 174' K.B. Cemented casing with 130 sks reg.
cement w/3% CaCl. Had returns to surface.

- Nov. 19: Finished cementing casing. Plug down at 1:00 A.M. Waited on cement to set for 4 hours. Nippled up to drill ahead with air. Drilled mouse hole. Dried up water in casing and drilled out plug. Tested B.O.P. to 2000# - no leaks. Drilled ahead with 7 7/8" bit, using air for circulation. Drilled 174' to 550' (376'). Survey at 415' was 1 3/4°.
- Nov. 20: Drilled 550' to 1760' (1210'). Survey at 585' was 1 3/4°. Drilling at avg. rate of 1 min/ft. (60 ft/hr.). Hole got wet at 915' and had to convert to air-mist drilling using air-soap-water. Survey at 810' was 1 3/4°. Survey at 1200' was 3°. Had short flare (15') after survey at 1200'. Samples had good odor, oil stain, and cut at 1180' to 1200'. Survey at 1745' was 2°.
- Nov. 21: Drilled 1760' to 2570' (810'). Est. top of Dakota at 1770'. Had a dirty, light brown v.f.g. sandstone with scattered fluorescence at this point. Had another sand, fine grained, angular to sub-rounded, with odor, blk. residual oil specks, and cut at 1810' to 1835'. Also had flare (25 ft. for 2 seconds) on connection at 1854'. Flare continued on each connection down to 2100'. Est. top of Cedar Mt. at 1860' and Morrison at 1930'. The Buckhorn sand at 1900-1920' was coarse-grained, rounded, but didn't have any shows. The Salt Wash section was topped at about 2260' and the upper two sands; at 2260-2280', and 2290-2310' had good fluorescence, oil stain, odor and cut, but no apparent increase in gas or oil. (Note: all the cuttings since about 1800' have an oil cut and are coated with a thin film of oil; but no free oil has been observed.) The cavings in the hole got so bad by 2570' that it was necessary to convert to mud to clean-up the hole and continue drilling. Pulled 15 stds and mudded up. Started back to bottom and began hitting bridges at 1884'.
- Nov. 22: Drilled 2570' to 2650' (80'). Continued washing back to bottom, (one joint at a time). Finally reached bottom at 11:30 A.M. and began drilling ahead. Drilled at rate of 30 ft/hr. Est. top of Entrada at 2580'. Samples were clr. m.g. rounded sandstone. Drilled about 70 ft. of Entrada sand. Finished drilling at 3 P.M. Circulated hole for 1 1/2 hrs in preparation to logging and came out of hole.

Began logging hole at 6 P.M. Finished logging at 11:00 P.M. Logs show promising zones in Salt Wash; but these zones have apparently been produced out by Boardwalk well to the SW. Decided to plug well. Called cementers.

Nov. 23: Laid down collars. Picked-up drill pipe (10 jts) to replace collars. Went into hole with drill pipe (open-ended). Waited on cementers till 3 P.M. (Cement truck blew-up and had to call and wait for another load of cement.) Placed cement plugs in the hole as follows:

Plug #1: 2650-2530' (120') 40 sks cement
Across top of Entrada formation

Plug #2: 2350-2200' (150') 50 sks cement
Across Salt Wash sands

Plug #3: 1800-1600' (200') 60 sks cement
Across top of Dakota formation

Plug #4: 200-110' (90') 30 sks cement
Across bottom of surface casing

Plug #5: At top of casing - 10 sks cement
with well marker.

Nov. 24: Rigged down and began moving rig to Federal #23-2 location.

GEOLOGIC REPORT
ON
INLAND FUELS CORPORATION
FEDERAL #11-2 WELL

1. The Inland Fuels Corporation Federal #11-2 well was designed and located to further develop and exploit the hydrocarbon reservoir found in the Boardwalk-Levon #1 well located in the SE. NW. of Section 11, T 20S, R 23E. The Boardwalk well produces gas and oil from sands at 1895-1918' in the Morrison formation.
2. Geophysical work (magnetic) was accomplished in the area around the Boardwalk well and on Inland Fuels acreage prior to the location of the Fed. #11-2 well. The purpose of this work was to determine the location of the faults in the area and to ascertain if the Boardwalk well was located on a significant anomaly or not. The fault locations were readily determined; but there was no significant anomaly around the Boardwalk well. In fact, the well appears to be located on a slight negative nose or trend which is not usually a favorable location for a well site. Nevertheless, the Inland Fuels #11-2 well was located on this same trend. The results of the well were very disappointing. The oil and gas reservoir sand which was completed in the Levon #1 well (upper sand in the Dakota formation) was not present in the subject well; even though the wells were only 1600 feet apart. Likewise, another good potential gas producing sand found in the Brushy Basin section in the Boardwalk-Levon #1 well at 1890' to 1915' was not present in the subject well. This is good evidence showing how erratic and discontinuous the lenticular sand reservoirs are in the area.
3. Water in a small amount was encountered in the subject well at 915'. The water apparently was coming from a fracture zone in the Mancos formation. The amount was small but sufficient to require conversion from air-drilling to air-mist drilling using air, soap, and water.
4. Good oil shows with obvious stain, odor, and cut were obtained in the samples at 1200 feet in a black sandy shale and siltstone; but no free oil was recovered from this zone. Some further shows were observed in the Mancos formation at 1670' to 1700' in a

glauconitic, dirty, fine-grained sandstone. This zone had good odor, fluorescence, and slight oil cut; but again no free oil was released.

5. The Dakota formation was topped at 1775 feet and contained very little sand until toward the base. A sand at the base, 1820' to 1850', had good odor, black residual oil specks, scattered fluorescence, and slight cut. However, a very small amount of gas was released and the bottom portion of this sand contained water. Some small amount of oil was also contained in this sand; but the amount was not sufficient to provide any staining or oil slick to the mist water but did coat the samples with a thin film which fluoresced and was continuous for the rest of the hole. The later electric logs indicated that the upper portion of the sand could contain hydrocarbons and the bottom portion contained water with no barrier separation between the portions.
6. The Cedar Mountain formation and the Brushy Basin section of the Morrison contained no good reservoir sands and no hydrocarbon shows.
7. The upper two sands in the Salt Wash section of the Morrison at 2256' to 2264' and 2280' to 2308' had good shows in the samples but no good flow of hydrocarbons (oil or gas) was released when these sands were drilled. A small flare (5 ft. or less for 1 sec.) was observed at 2330' after these sands were drilled. This gas lasted for only two or three connections thereafter. The later electric logs showed no gas effect in these sands but calculations based on the log data indicated water saturations of 56% to 67%. Since no quantity of gas was released when the sands were drilled, it was felt that completion attempts would probably be unsuccessful.
8. Two lower sands in the Salt Wash at 2374' to 2392' and 2400' to 2416', did not have any shows in the samples and the electric log calculations indicated water saturations of 80% and 85% respectively.
9. There were no further shows of hydrocarbons in the Lower Salt Wash section, in the Curtis-Summerville formation, or in the Entrada formation.

10. The various formations with their tops, thicknesses, and datum points which were encountered in the subject well as determined from the electric logs are as follows:

<u>Formation</u>	<u>Depth to Top</u>	<u>Thickness</u>	<u>Datum</u>
Mancos	Surface	1776'	4815' K.B.
Dakota	1776'	74'	3039'
Cedar Mountain	1850'	105'	2965'
Morrison (Brushy Basin)	1955'	300'	2860'
(Salt Wash)	2255'	260'	2560'
Curtis-Summerville	2515'	55'	2300'
Entrada	2570'	—	2245'
Total Depth	2650'		

Comparison of the above data with similar data on the Boardwalk-Levon #1 well indicates that the subject well is about 65 feet lower structurally on the top of the Dakota formation and over 100 feet lower on the top of the Morrison formation. The Cedar Mountain formation in the subject well is approximately 40 feet thicker. This suggests that during the deposition of this formation, the area around the subject well was low and received much more sediments than the area around the Levon #1 well. The thickness of the Dakota formation was about the same in both wells.

11. A detailed sample log of the subject well from 1200 ft. to total depth is attached hereto.
12. It is concluded that the subject well was located in a low area during late Morrison and Cedar Mt. time as indicated by the geophysical work and was therefore in an unfavorable area to receive hydrocarbons generated then or in the subsequent periods. There is definite proof also of the erratic and unpredictable nature of the lenticular sand development in the Dakota, Cedar Mt., and Morrison formations. Future wells must be placed on positive anomalies and removed from faults. It is also concluded that the indicated low or negative anomaly around the Boardwalk-Levon #1 well may have been caused by equipment influence and was not realistic.

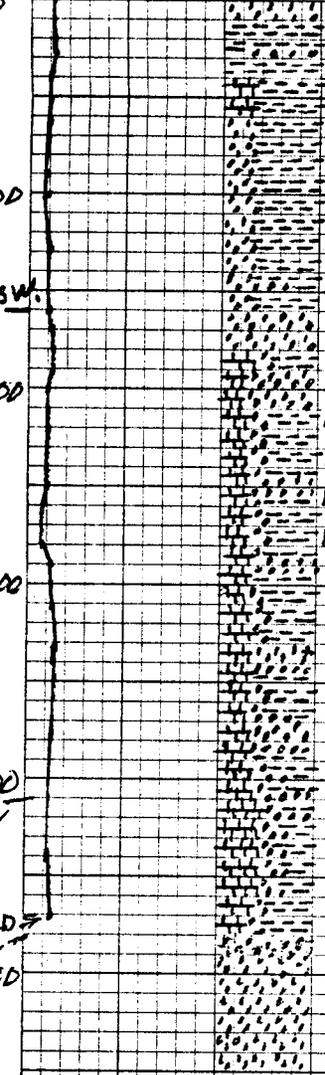
W. Don Quigley
W. Don Quigley
Consultant
AAPG Cert. #1296
APGS Cert. #3038

Inland Petroleum Corp
11-2 Well

2100'

2100

Wala King
Bent 1/2 10



2200

In SW

2300

2400

2500

SW

MUD

2600

Cl. fg. 100% gtz ss
Rd. sh. + dk. gny. sst. + vfg. ss.
Rd. sh. gny. + bn. sh. + bn. in ms.
Rd. sh. + sst.
Vanic. sh. + sst.
Rd. sh. + sst.
+ gny. sh.
+ cl. to wh. gtz ss
Rd. gny. sst. + sh. + pyn. w/ scat. fluv.
* Cl. to wh. gtz ss + good fluv. + sphs. of bn. (asc.)
* Vanic. calc. sh. + sst.
* Calc. in variable rd. ss w/ good fluv.
* Vanic. calc. sh. + sst. + bent. (Fluv. in com.)
SAME cl. calc. rd. mag. rd. ss - sst. fluv.
Vanic. calc. sh. + sst. + bent.
+ mag. cl. ss
Gny. + rd. sst. silic. sh. + blk. gny. + gny. + rd. sh.
Vanic. calc. sst. + sh.
Rd. sh. bn. fg. to vfg. calc. ss. - some mag. + rd. + sst. + sh.
Gny. + gny. calc. sh. + sst. + blk. sh. + cl. + rd. gtz ss
lt. bn. to rd. sh. fg. to mag. calc. ss. + Vanic. sh. + sst.
Rd. sh. calc. sst.
Gny. + bn. sh. + ms. + gny. calc. sh. + bn. vfg. ss.
+ gny. vfg. dns. ss. + brick rd. sh.
Brick rd. sh. sst. bn. ms. + vfg. bn. ss.
Brick rd. sh. sst. (calc.)
SAME cl. wh. to Tan. mag. ss
lt. to cl. mag. rd. ss (variable)

T.D. - 2650.

46 0860

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

SUBMIT IN TRIPlicate
(Other instructions on reverse side)

Form approved.
Budget Bureau No. 42-R1424.

5. LEASE DESIGNATION AND SERIAL NO.

U-42223

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME

Federal

9. WELL NO.

#11-2

10. FIELD AND POOL, OR WILDCAT

Cisco Springs

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

NE. NW. Sec 11-20S-23E
S.L.M.

12. COUNTY OR PARISH 13. STATE

Grand

Utah

SUNDRY NOTICES AND REPORTS ON WELLS

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

1. OIL WELL GAS WELL OTHER

2. NAME OF OPERATOR
Inland Fuels Corporation

3. ADDRESS OF OPERATOR
2121 South Columbia, Tulsa, Oklahoma 74114

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.)
At surface NE. NW. Sec. 11, T 20S, R 23E, S.L.M.,
2340' from W-line and 550' from N-line

14. PERMIT NO. 15. ELEVATIONS (Show whether DF, RT, GR, etc.)

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:

SUBSEQUENT REPORT OF:

TEST WATER SHUT-OFF <input type="checkbox"/>	PULL OR ALTER CASING <input type="checkbox"/>
FRACTURE TREAT <input type="checkbox"/>	MULTIPLE COMPLETE <input type="checkbox"/>
SHOOT OR ACIDIZE <input type="checkbox"/>	ABANDON* <input type="checkbox"/>
REPAIR WELL <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>
(Other) <input type="checkbox"/>	

WATER SHUT-OFF <input type="checkbox"/>	REPAIRING WELL <input type="checkbox"/>
FRACTURE TREATMENT <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
SHOOTING OR ACIDIZING <input type="checkbox"/>	ABANDONMENT* <input checked="" type="checkbox"/>
(Other) <input type="checkbox"/>	

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

17. 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.)*

Well was drilled to a total depth of 2650' which was about 70' below the top of the Entrada formation; and no sizeable recovery of hydrocarbons was obtained during the drilling operations using air. The well was therefore plugged and abandoned with cement plugs being placed as follows:

- Plug #1 - 2650-2530' (120') 40 sks cement - across top of Entrada formation
- Plug #2 - 2350-2200' (150') 50 sks cement - across Salt Wash sands
- Plug #3 - 1800-1600' (200') 60 sks cement - across top of Dakota formation
- Plug #4 - 200-110' (90') 30 sks cement - across bottom of surface casing
- Plug #5 - At top of casing - 10 sks cement with well marker

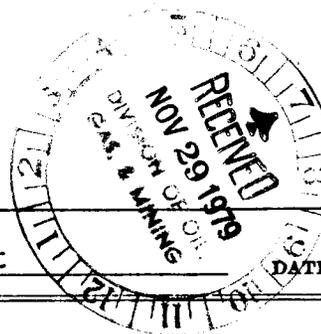
18. I hereby certify that the foregoing is true and correct

SIGNED *W. H. Quigley*

TITLE Consultant

DATE Nov. 24, 1979

(This space for Federal or State office use)



APPROVED BY _____
CONDITIONS OF APPROVAL, IF ANY:

TITLE _____

DATE _____