

STATE CORPORATION COMMISSION OF KANSAS
OIL & GAS CONSERVATION DIVISION
WELL COMPLETION FORM
ACD-1 WELL HISTORY
DESCRIPTION OF WELL AND LEASE

Operator: License # 3869

Name: Imperial Oil Properties, Inc.

Address 212 North Market - Suite 513

City/State/Zip Wichita, Kansas 67202

Purchaser: UNKNOWN

Operator Contact Person: Bob Williams

Phone (316) 265-6977

Contractor: Name: Duke Drilling Co., Inc.

License: 5929

Wellsite Geologist: Jon T. Williams

Designate Type of Completion

New Well Re-Entry Workover

Oil SWD SIOV Temp. Abd.

Gas ENHR SIGW

Dry Other (Core, WSW, Expl., Cathodic, etc)

If Workover/Re-Entry: old well KANSAS CORPORATION COMMISSION

Operator: 05-09-1997

Well Name: MAY 09 1997

Comp. Date 02-13-97 Old Total Depth 02-27-97

Deepening Re-perf. Casing, etc / SWD

Plug Back PBD

Commingled Docket No. _____

Dual Completion Docket No. _____

Other (SWD or Inj?) Docket No. _____

02-13-97 02-27-97 02-28-97

Spud Date 02-13-97 Date Reached TD 02-27-97 Completion Date 02-28-97

API NO. 15- 033-20925 0000

County Comanch County, Kansas

C - SW-SW - Sec. 16 Twp. 32S Rge. 18 XXXV

660 Feet from (S)W (circle one) Line of Section

660 Feet from E (circle one) Line of Section

Footages Calculated from Nearest Outside Section Corner:
NE, SE, NW or (S) (circle one)

Lease Name Bergner Well # 1-16

Field Name NESCATUNGA

Producing Formation VIOLA

Elevation: Ground 2131' KB 2144'

Total Depth 5806' PBD 6050'

Amount of Surface Pipe Set and Cemented at 624' Feet

Multiple Stage Cementing Collar Used? Yes No

If yes, show depth set _____ Feet

If Alternate II completion, cement circulated from _____

feet depth to _____ v/ _____ sx cmt.

Drilling Fluid Management Plan ALT 1 2/6-16-97
(Data must be collected from the Reserve Pit)

Chloride content 12,600 ppm Fluid volume 160 bbls

Dewatering method used hauled off

Location of fluid disposal if hauled offsite: _____

Operator Name KBW OIL & GAS

Lease Name HARMON SWD License No. 5993

NW Quarter Sec. 11 Twp. 33 S Rng. 20 E/W

County COMANCHE Docket No. CD 98329

KDHE C22304

INSTRUCTIONS: An original and two copies of this form shall be filed with the Kansas Corporation Commission, 200 Colorado Derby Building, Wichita, Kansas 67202, within 120 days of the spud date, recompletion, workover or conversion of a well. Rule 82-3-130, 82-3-106 and 82-3-107 apply. Information on side two of this form will be held confidential for a period of 12 months if requested in writing and submitted with the form (see rule 82-3-107 for confidentiality in excess of 12 months). One copy of all wireline logs and geologist well report shall be attached with this form. ALL CEMENTING TICKETS MUST BE ATTACHED. Submit CP-4 form with all plugged wells. Submit CP-111 form with all temporarily abandoned wells.

All requirements of the statutes, rules and regulations promulgated to regulate the oil and gas industry have been fully complied with and the statements herein are complete and correct to the best of my knowledge.

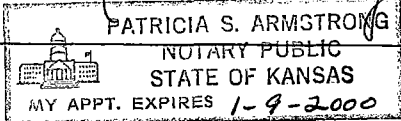
Signature [Signature]

Title GEOLOGIST-AGENT Date 5/6/97

Subscribed and sworn to before me this 6 day of MAY 19 97.

Notary Public Patricia S. Armstrong

Date Commission Expires _____



K.C.C. OFFICE USE ONLY
F Letter of Confidentiality Attached
C Wireline Log Received
C Geologist Report Received
Distribution
 KCC SWD/Rep NGPA
 KGS Plug Other
(Specify)

SIDE TWO

Operator Name Imperial Oil Properties, Inc. Lease Name Bergner Well # 1-16
 Sec. 16 Twp. 32S Rge. 18 East West
 County Comanche County, Kansas

INSTRUCTIONS: Show important tops and base of formations penetrated. Detail all cores. Report all drill stem tests giving interval tested, time tool open and closed, flowing and shut-in pressures, whether shut-in pressure reached static level, hydrostatic pressures, bottom hole temperature, fluid recovery, and flow rates if gas to surface during test. Attach extra sheet if more space is needed. Attach copy of log.

| | | | | |
|---|---|---|----------------------------------|---------------------------------|
| Drill Stem Tests Taken (Attach Additional Sheets.) | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | <input checked="" type="checkbox"/> Log | Formation (Top), Depth and Datum | <input type="checkbox"/> Sample |
| Samples Sent to Geological Survey | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | Name | Top | Datum |
| Cores Taken | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | Heebner | 4328 | -2184 |
| Electric Log Run (Submit Copy.) | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | Brown Lime | 4506 | -2362 |
| List All E.Logs Run: | COMPENSATED NEUTRON COMPENSATED SONIC MICRO-RESISTIVITY ARRAYINDUCTION | Lansing | 4525 | -2381 |
| | | Base K.C. | 4936 | -2792 |
| | | Marmaton | 4993 | -2849 |
| | | Cherokee Sh. | 5131 | -2987 |
| | | Mississippi | 5184 | -3040 |
| | | Viola | 5650 | -3506 |

| CASING RECORD <input type="checkbox"/> New <input checked="" type="checkbox"/> Used | | | | | | | |
|---|-------------------|---------------------------|-----------------|---------------|--------------------|--------------|----------------------------|
| Report all strings set-conductor, surface, intermediate, production, etc. | | | | | | | |
| Purpose of String | Size Hole Drilled | Size Casing Set (In O.D.) | Weight Lbs./Ft. | Setting Depth | Type of Cement | # Sacks Used | Type and Percent Additives |
| Conductor | | 20" | | 60' | Redi Mix | 370 | 2%cc |
| Surface | 12-1/4" | 8-5/8" | 23# | 624' | HLC & STD | 110&100 | 3%cc |
| Production | 7-7/8" | 5-1/2" | 15.5# | 5802' | Mid-Con II EA-2 | 125 175 | |

| ADDITIONAL CEMENTING/SQUEEZE RECORD | | | | | |
|---|------------------|----------------|-------------|----------------------------|--|
| Purpose: | Depth Top Bottom | Type of Cement | #Sacks Used | Type and Percent Additives | |
| <input type="checkbox"/> Perforate | | | | | |
| <input type="checkbox"/> Protect Casing | | | | | |
| <input type="checkbox"/> Plug Back TD | | | | | |
| <input type="checkbox"/> Plug Off Zone | | | | | |

| Shots Per Foot | PERFORATION RECORD - Bridge Plugs Set/Type Specify Footage of Each Interval Perforated | | Acid, Fracture, Shot, Cement Squeeze Record (Amount and Kind of Material Used) | | Depth |
|----------------|---|-------------------|---|------------------|-------|
| | 2 SPF | 5692-98 & 5702-10 | | 1,000 gal 15% FE | |
| | | | | | |
| | | | | | |

| | | | | | | | | |
|--|---|-----------------|-------------------|--|---------------|-------|---------------|---------|
| TUBING RECORD | Size 2 3/8" | Set At 5710' | Pecker At None | Liner Run <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | | | | |
| Date of First, Resumed Production, SWD or Inj. | 4/30/97 testing | | | | | | | |
| Producing Method | <input checked="" type="checkbox"/> Flowing <input type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other (Explain) | | | | | | | |
| Estimated Production Per 24 Hours | Oil NONE | Bbls. | Gas 3,063 | Hcf NONE | Water NONE | Bbls. | Gas-Oil Ratio | Gravity |

Disposition of Gas: Vented Sold Used on Lease (If vented, submit ACD-18.)

METHOD OF COMPLETION: Open Hole Perf. Dually Comp. Commingled Other (Specify) _____

Production Interval: 5692'-5698'
5702'-5710'

TAKING FOUR-POINT TEST.



HALLIBURTON ENERGY SERVICES

HAL-1906-P

CHARGE TO: **Imperial Oil Properties**
 ADDRESS: **212 W Market St, Suite 513**
 CITY, STATE, ZIP/PCODE: **28 W. KS 67202-2013**

CLASSIFIED COPY

TICKET

No.

218994 - 6

PAGE 1 OF 2

| | | | | | | | |
|--|--|-----------------------------------|----------------------------------|------------------------------|----------------------------|------------------------|----------------------|
| SERVICE LOCATIONS Pratt KS | WELL PROJECT NO. 1-16 | LEASE Berger | COUNTY-PARISH Comanche | STATE KS | CITY-OFFSHORE LOCATION | DATE 2-28-97 | OWNER Sime |
| 2. TICKET TYPE <input type="checkbox"/> SERVICE <input type="checkbox"/> SALES | NITROGEN JOB? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO | CONTRACTOR ID Duke Drlg | RIG NAME NO #7 | SHIPPED VIA Howco | DELIVERED TO Loc | ORDER NO. | |
| 3. WELL TYPE 02 | WELL CATEGORY 01 | JOB PURPOSE 035 | WELL PERMIT NO. | WELL LOCATION hand | | | |
| 4. REFERRAL LOCATION | INVOICE INSTRUCTIONS API # 15033209250000 | | | | | | |

| PRICE REFERENCE | SECONDARY REFERENCE/ PART NUMBERS | ACCOUNTING LOC ACCT DF | DESCRIPTION | QTY | | UNIT PRICE | | AMOUNT | |
|-----------------|---|---------------------------|---------------------------------------|---------------------------|-----|------------|-----|---------------|-------------|
| | | | | U/M | U/M | | | | |
| 000-117 | ORIGINAL RECEIVED KANSAS CORPORATION COMMISSION MAY 09 1997 | 1 | MILEAGE 53387 th RD TP | 120 | mi | 2 | 99 | 358 80 | |
| 000-119 | | 1 | Crew mileage 40042 th RDTP | 120 | mi | 1 | 60 | 192 - | |
| 001-016 | | 1 | Pump Charge 1 Trk | 5802 | ft | 6 | hrs | 2060 - 2060 - | |
| 030-016 | | 1 | Top Swiper Plug | 1 | eq | 5.5 | in | 60 - 60 - | |
| 018-317 | | 1 | Super flush | 10 | SKs | | | 100 - 1000 - | |
| 12-A | | 825 205 | 1 | Guide Shoe | 1 | eq | 5.5 | in | 121 - 121 - |
| 24-A | | 815 19251 | 1 | Insert Float Valve | 1 | eq | 5.5 | in | 131 - 131 - |
| 27 | | 815 19313 | 1 | Fill-up Assy | 1 | eq | | | 69 - 69 - |
| 40 | | 806 60022 | 1 | Centralizer's S-4 | 9 | eq | | | 60 - 540 - |
| 58 | | 806 71230 | 1 | Scratcher's Reciprocating | 27 | eq | 5.5 | in | 19 - 513 - |
| 320 | 806 70030 | 1 | Cement Basket | 1 | eq | 5.5 | in | 120 - 120 - | |
| 350 | 840 10802 | 1 | Weld-A | 1 | eq | 1 | lb | 16 75 16 75 | |

LEGAL TERMS: Customer hereby acknowledges and agrees to the terms and conditions on the reverse side hereof which include, but are not limited to, **PAYMENT RELEASE, INDEMNITY, and LIMITED WARRANTY** provisions.

MUST BE SIGNED BY CUSTOMER OR CUSTOMER'S AGENT PRIOR TO START OF WORK OR DELIVERY OF GOODS

DATE SIGNED: **2-28-97** TIME SIGNED: **0300**
 do do not require IPC (Instrument Protection) Not offered

SUB-SURFACE SAFETY VALVE WAS:
 PULLED & RETURN PULLED RUN

| | | |
|------------------------|-----------------|------------|
| TYPE LOCK | DEPTH | |
| BEAN SIZE | SPACERS | |
| TYPE OF EQUALIZING SUB | CASING PRESSURE | |
| TUBING SIZE | TUBING PRESSURE | WELL DEPTH |
| TREE CONNECTION | TYPE VALVE | |

SURVEY

| | | |
|--|---|-----------------------------|
| AGREE | UN-DECIDED | DIS-AGREE |
| OUR EQUIPMENT PERFORMED WITHOUT BREAKDOWN? | | |
| WE UNDERSTOOD AND MET YOUR NEEDS? | | |
| OUR SERVICE WAS PERFORMED WITHOUT DELAY? | | |
| WE OPERATED THE EQUIPMENT AND PERFORMED JOB CALCULATIONS SATISFACTORILY? | | |
| ARE YOU SATISFIED WITH OUR SERVICE? | <input checked="" type="checkbox"/> YES | <input type="checkbox"/> NO |
| <input type="checkbox"/> CUSTOMER DID NOT WISH TO RESPOND | | |

PAGE TOTAL: **5181 50**

FROM CONTINUATION PAGE(S): **BULK TRK B-338130**

SUB-TOTAL APPLICABLE TAXES WILL BE ADDED ON INVOICE: **11,198 40**

CUSTOMER ACCEPTANCE OF MATERIALS AND SERVICES The customer hereby acknowledges receipt of the materials and services listed on this ticket.

| | | | | |
|---|--|---|-----------------------|--|
| CUSTOMER OR CUSTOMER'S AGENT (PLEASE PRINT) Ronald S. Schroeder | CUSTOMER OR CUSTOMER'S AGENT (SIGNATURE) <i>Ronald S. Schroeder</i> | HALLIBURTON OPERATOR/ENGINEER David L Scott | EMP # B9475 | HALLIBURTON APPROVAL D L Scott |
|---|--|---|-----------------------|--|



HALLIBURTON

HALLIBURTON ENERGY SERVICES

TICKET CONTINUATION

CUSTOMER COPY

TICKET No. 338130

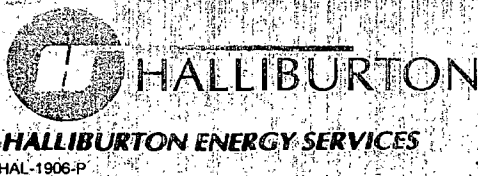
FORM 1911 R-10

CUSTOMER IMPERIAL OIL PROPERTIES WELL BERGNER 1-16 DATE 02-22-97 PAGE 2 OF 2

| PRICE REFERENCE | SECONDARY REFERENCE/PART NUMBER | ACCOUNTING | | | DESCRIPTION | QTY. | | U/M. | | UNIT PRICE | AMOUNT |
|---|---------------------------------|------------|------|----|-------------------------|--------------|--------------|-----------|--------|------------|----------|
| | | LOC | ACCT | DF | | | | | | | |
| 504-280 | | 1 | | | WIDCON-II STD | 145 | SKS | | | 13.53 | 1,961.85 |
| 508-291 | 516.00337 | 1 | | | GILSONITE BLD 5# | 725 | LBS | | | .40 | 290.00 |
| 509-406 | 890.50812 | 1 | | | CALCIUM CHLORIDE BLD 2% | 3 | SKS | | | 40.75 | 122.25 |
| 507-210 | 890.50071 | 1 | | | FLOCELE BLD 1/4# | 36 | LBS | | | 1.65 | 59.40 |
| LOADED ON TRL#7488-3734-FRONT | | | | | | | | | | | |
| 504-308 | 516.00261 | 1 | | | STANDARD CEMENT | 120 | SKS | | | 10.83 | 1,353.75 |
| 508-291 | 516.00337 | 1 | | | GILSONITE BLD 5# | 625 | LBS | | | .40 | 250.00 |
| 508-127 | 890.50131 | 1 | | | CALSEAL BLD 5% | 2 | SKS | | | 25.90 | 51.80 |
| 509-968 | 516.00158 | 1 | | | SALT BLD 10% | 550 | LBS | | | .15 | 82.50 |
| 507-970 | 70.15764 | 1 | | | D-AIR 1 BLD .25% | 30 | LBS | | | 3.25 | 97.50 |
| 507-775 | 516.00144 | 1 | | | HALAD-322 BLD .5% | 59 | LBS | | | 7.00 | 413.00 |
| LOADED ON TRL#7488-3734-BACK | | | | | | | | | | | |
| <p>ORIGINAL</p> <p>RECEIVED KANSAS CORPORATION COMMISSION MAY 09 1997 CONSERVATION DIVISION WICHITA, KS</p> | | | | | | | | | | | |
| 500-207 | | 1 | | | SERVICE CHARGE | CUBIC FEET | | 325 | | 1.35 | 438.75 |
| 500-306 | | 1 | | | MILEAGE CHARGE | TOTAL WEIGHT | LOADED MILES | TON MILES | 853.38 | 1.05 | 896.05 |
| | | | | | | 28,445 | 60 | | | | |

No. B 338130

CONTINUATION TOTAL 6011.55



CHARGE TO
IMPERIAL OIL PROPERTIES INC.
 ADDRESS
 CITY, STATE, ZIP CODE

TICKET No. **218959 - 4**
 PAGE 1 OF 2

30

| | | | | | | | |
|---|--|---|--|--------------------------|---|------------------------|-----------------------|
| SERVICE LOCATIONS 1 KAH 1/2 25555 | WELL PROJECT NO. 1-16 | LEASE BERGNER | COUNTY-PARISH LAFFACHE | STATE LA | CITY-OFFSHORE LOCATION | DATE 2-14-97 | OWNER SBNNE |
| 2 | TICKET TYPE <input checked="" type="checkbox"/> SERVICE <input type="checkbox"/> SALES | NITROGEN JOB? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO | CONTRACTOR DUKE WLLC | RIG NAME-NO #7 | SHIPPED VIA C.T. WELL SITE | DELIVERED TO | ORDER NO. |
| 3 | WELL TYPE 02 | WELL CATEGORY 01 | JOB PURPOSE 010 UNIT SURF. PSL | WELL PERMIT NO. | WELL LOCATION LAND 16-325-18W | | |
| 4 | REFERRAL LOCATION | INVOICE INSTRUCTIONS API # 15033209250000 | | | | | |

| PRICE REFERENCE | SECONDARY REFERENCE/ PART NUMBER | ACCOUNTING | | | DESCRIPTION | QTY. | | U/M | | UNIT PRICE | AMOUNT |
|-----------------|-------------------------------------|------------|------|----|---------------------|------|--|-------|-----------|------------|--------|
| | | LOG | ACCT | DF | | | | | | | |
| 000-117 | | | | | MILEAGE 1 UNIT R.T. | 120 | | miles | | 2.99 | 358.00 |
| 000-119 | | | | | CREW MILEAGE | 120 | | miles | | 1.60 | 192.00 |
| 001-016 | | | | | PUMP CHANGE | 6 | | hrs | 629 FT. | 915.00 | 915.00 |
| 030-016 | | | | | TOP PLUG SW ALUM | 1 | | LN | 8 7/8 in. | 120.00 | 120.00 |
| 12H | 825.217 | | | | GUIDE SHOE | 1 | | LN | 8 7/8 in. | 216.00 | 216.00 |
| 24H | 815.19502 | | | | INSERT FLOW VALVE | 1 | | LN | 8 7/8 in. | 221.00 | 221.00 |
| 27 | 815.19415 | | | | FILL-UP UNIT | 1 | | LN | 8 7/8 in. | 64.00 | 64.00 |
| 40 | 806.60059 | | | | REINFORCED | 2 | | LN | 8 7/8 in. | 80.00 | 160.00 |
| 320 | 806.71460 | | | | CEMENT BASKET | 1 | | LN | 8 7/8 in. | 124.00 | 124.00 |

RECEIVED
 KANSAS CORPORATION COMMISSION
 MAY 09 1997

LEGAL TERMS: Customer hereby acknowledges and agrees to the terms and conditions on the reverse side hereof which include, but are not limited to, **PAYMENT, RELEASE, INDEMNITY, and LIMITED WARRANTY** provisions.

MUST BE SIGNED BY CUSTOMER OR CUSTOMER'S AGENT PRIOR TO START OF WORK OR DELIVERY OF GOODS

| | | | | | | |
|--|----------------------------|---|---|---|---|------------------------------|
| DATE SIGNED 2-14-97 | TIME SIGNED 0645 | <input checked="" type="checkbox"/> A.M. <input type="checkbox"/> P.M. | SUB-SURFACE SAFETY VALVE WAS: <input checked="" type="checkbox"/> PULLED & RETURN <input type="checkbox"/> PULLED <input type="checkbox"/> RUN | SURVEY OUR EQUIPMENT PERFORMED WITHOUT BREAKDOWN? WE UNDERSTOOD AND MET YOUR NEEDS? OUR SERVICE WAS PERFORMED WITHOUT DELAY? WE OPERATED THE EQUIPMENT AND PERFORMED JOB CALCULATIONS SATISFACTORILY? ARE YOU SATISFIED WITH OUR SERVICE? <input type="checkbox"/> YES <input type="checkbox"/> NO | AGREE UN-DECIDED DIS-AGREE | PAGE TOTAL 2370.80 |
| <input type="checkbox"/> do <input type="checkbox"/> do not require IPC (Instrument Protection) <input type="checkbox"/> Not offered | | | TYPE LOCK DEPTH | BEAN SIZE SPACERS | FROM CONTINUATION PAGE 01 4735.20 | |
| <input type="checkbox"/> do <input type="checkbox"/> do not require IPC (Instrument Protection) <input type="checkbox"/> Not offered | | | TYPE OF EQUALIZING; SUB. | CASING PRESSURE | SUB-TOTAL APPLICABLE TAXES WILL BE ADDED ON INVOICE 7106.00 | |
| <input type="checkbox"/> do <input type="checkbox"/> do not require IPC (Instrument Protection) <input type="checkbox"/> Not offered | | | TUBING SIZE TUBING PRESSURE WELL DEPTH | TREE CONNECTION TYPE VALVE | <input type="checkbox"/> CUSTOMER DID NOT WISH TO RESPOND | |

CUSTOMER ACCEPTANCE OF MATERIALS AND SERVICES The customer hereby acknowledges receipt of the materials and services listed on this ticket.

| | | | | |
|--|--|---|-----------------------|--|
| CUSTOMER OR CUSTOMER'S AGENT (PLEASE PRINT) JOHN T. WILLIAMS | CUSTOMER OR CUSTOMER'S AGENT (SIGNATURE) <i>[Signature]</i> | HALLIBURTON OPERATOR/ENGINEER KEVIN P. GURNEY | EMP # 00500 | HALLIBURTON APPROVAL <i>[Signature]</i> |
|--|--|---|-----------------------|--|

ORIGINAL

WELL NAME: Bergner # 1-16
COMPANY: Imperial Oil Properties
LOCATION: Sec. 16 Twp. 32S Rge. 18W
Comanche County Kansas
DATE: 03/03/97

15-033-20925

RECEIVED
KANSAS CORPORATION COMMISSION

MAY 09 1997

CONSERVATION DIVISION
WICHITA, KS

TRILOBITE TESTING L.L.C.

OPERATOR : Imperial Oil Properties
 WELL NAME: Bergner # 1-16
 LOCATION : 16-32S-18W Comanche KS
 INTERVAL : 4712.00 To 4738.00 ft

DATE 2/19/97
 KB 2144.00 ft TICKET NO: 9685 DST #1
 GR 2131.00 ft FORMATION: Drum
 TD 4738.00 ft TEST TYPE: CONV

RECORDER DATA

| Mins | Field | 1 | 2 | 3 | 4 | TIME DATA----- |
|--------------------|--------|--------|--------|-----|-----|------------------------|
| PF 30 Rec. | 11084 | 11084 | 10991 | | | PF Fr. 1623 to 1653 hr |
| SI 60 Range (Psi) | 4300.0 | 4300.0 | 4200.0 | 0.0 | 0.0 | IS Fr. 1653 to 1753 hr |
| SF 60 Clock (hrs) | 12 HR | 12 HR | 12 HR | | | SF Fr. 1753 to 1853 hr |
| FS 90 Depth (ft) | 4735.0 | 4735.0 | 4725.0 | 0.0 | 0.0 | FS Fr. 1853 to 2023 hr |

| | Field | 1 | 2 | 3 | 4 | |
|----------------|--------|--------|-----|-----|-----|-------------------------------|
| A. Init Hydro | 2306.0 | 2304.0 | 0.0 | 0.0 | 0.0 | T STARTED 1330 hr |
| B. First Flow | 55.0 | 53.0 | 0.0 | 0.0 | 0.0 | T ON BOTM 1623 hr |
| B1. Final Flow | 55.0 | 53.0 | 0.0 | 0.0 | 0.0 | T OPEN 2020 hr |
| C. In Shut-in | 1681.0 | 1668.0 | 0.0 | 0.0 | 0.0 | T PULLED 2023 hr |
| D. Init Flow | 66.0 | 78.0 | 0.0 | 0.0 | 0.0 | T OUT 2200 hr |
| E. Final Flow | 77.0 | 75.0 | 0.0 | 0.0 | 0.0 | |
| F. Fl Shut-in | 1660.0 | 1646.0 | 0.0 | 0.0 | 0.0 | TOOL DATA----- |
| G. Final Hydro | 2252.0 | 2196.0 | 0.0 | 0.0 | 0.0 | Tool Wt. 2100.00 lbs |
| Inside/Outside | 0 | 0 | I | | | Wt Set On Packer 20000.00 lbs |
| | | | | | | Wt Pulled Loose 102000.00 lbs |
| | | | | | | Initial Str Wt 72000.00 lbs |
| | | | | | | Unseated Str Wt 72000.00 lbs |
| | | | | | | Bot Choke 0.75 in |
| | | | | | | Hole Size 7.88 in |
| | | | | | | D Col. ID 2.25 in |
| | | | | | | D. Pipe ID 3.80 in |
| | | | | | | D.C. Length 241.00 ft |
| | | | | | | D.P. Length 4471.00 ft |

RECOVERY

Tot Fluid 190.00 ft of 190.00 ft in DC and 0.00 ft in DP
 190.00 ft of Gas Cut Muddy Water
 0.00 ft of 18%gas 40%water 42%mud
 0.00 ft of
 0.00 ft of
 0.00 ft of
 0.00 ft of
 0.00 ft of
 0.00 ft of
 0.00 ft of

SALINITY 10000.00 P.P.M. A.P.I. Gravity 0.00

BLOW DESCRIPTION

Initial Flow:
 Strong blow, bottom of bucket instant
 Gas to surface in 8 mins.

Initial Shut In:

Bled down for 15 mins, blow built to
 bottom of bucket

Final Flow:

Strong blow

Final Shut In:

Bled down for 15 min, built back to
 bottom of bucket

SAMPLES:

SENT TO:

MUD DATA-----

| Mud Type | Chmical |
|----------------|-----------------|
| Weight | 9.10 lb/c |
| Vis. | 47.00 S/L |
| W.L. | 13.20 in3 |
| F.C. | 0.00 in |
| Mud Drop | |
| Amt. of fill | 0.00 ft |
| Btm. H. Temp. | 118.00 F |
| Hole Condition | |
| % Porosity | 0.00 |
| Packer Size | 6.75 in |
| No. of Packers | 2 |
| Cushion Amt. | 0.00 |
| Cushion Type | |
| Reversed Out | |
| Tool Chased | |
| Tester | Darren Amerine |
| Co. Rep. | Jon T. Williams |
| Contr. | Duke |
| Rig # | 7 |
| Unit # | |
| Pump T. | |

Test Successful: Y

GAS RECOVERY

COMPANY: Imperial Oil Properties DATE: 2/19/97
WELL NAME: Bergner # 1-16 KB Elev: 2144.00 ft TICKET #9685 DST #1
WELL LOCATION: 16-32S-18W Comanche KS GR Elev: 2131.00 ft FORMATION: Drum
INTERVAL Fr.: 4712.00 To 4738.00 T.D.: 4738.00 ft TEST TYPE: CONV

GAS RECOVERY MEASURED WITH Merla Gauge

***** GAS RATES FOR FLOW #1

| Time (min) | Orifice (in) | Pressure (Psi) | H2O (in) | Rate (cf/d) |
|------------|--------------|----------------|----------|-------------|
| 5 | 1.00 | 0 | 18 | 110000.0 |
| 10 | 1.00 | 0 | 18 | 110000.0 |
| 15 | 1.00 | 0 | 18 | 110000.0 |
| 20 | 1.00 | 0 | 19 | 113000.0 |

***** GAS RATES FOR FLOW #2

| Time (min) | Orifice (in) | Pressure (Psi) | H2O (in) | Rate (cf/d) |
|------------|--------------|----------------|----------|-------------|
| 5 | 1.00 | 0 | 41 | 165000.0 |
| 10 | 1.00 | 0 | 26 | 132000.0 |
| 15 | 1.00 | 0 | 19 | 113000.0 |
| 20 | 1.00 | 0 | 15 | 101000.0 |
| 25 | 0.75 | 0 | 45 | 95000.0 |
| 30 | 0.75 | 0 | 39 | 88500.0 |
| 35 | 0.75 | 0 | 34 | 82800.0 |
| 40 | 0.75 | 0 | 32 | 80300.0 |
| 45 | 0.75 | 0 | 30 | 77800.0 |
| 50 | 0.75 | 0 | 28 | 75100.0 |
| 55 | 0.75 | 0 | 27 | 73500.0 |
| 60 | 0.75 | 0 | 26 | 72400.0 |

NATURAL GAS ANALYSIS REPORT

Sampled by:
Trilobite Testing, L.L.C.
Hays, Kansas
Scott City, Kansas
Phone: 800-728-5369
Fax: 913-625-5620

Analyzed by:
Caraway Analytical, L.L.C.
P. O. Box 2137
Liberal, Kansas 67905
Phone: 316-624-5389
Fax: 316-626-7108

Lab Number: 970108
Sample From: Bergner 1-16 DST 1
Producer: Imperial Oil Prop.
Date:
Time:
Sampler:
Source:

Analyzed: 02/21/97
Pressure:
Temperature:
Location: 16-32-18
County: Comanche
State: Kansas
Formation: Drum

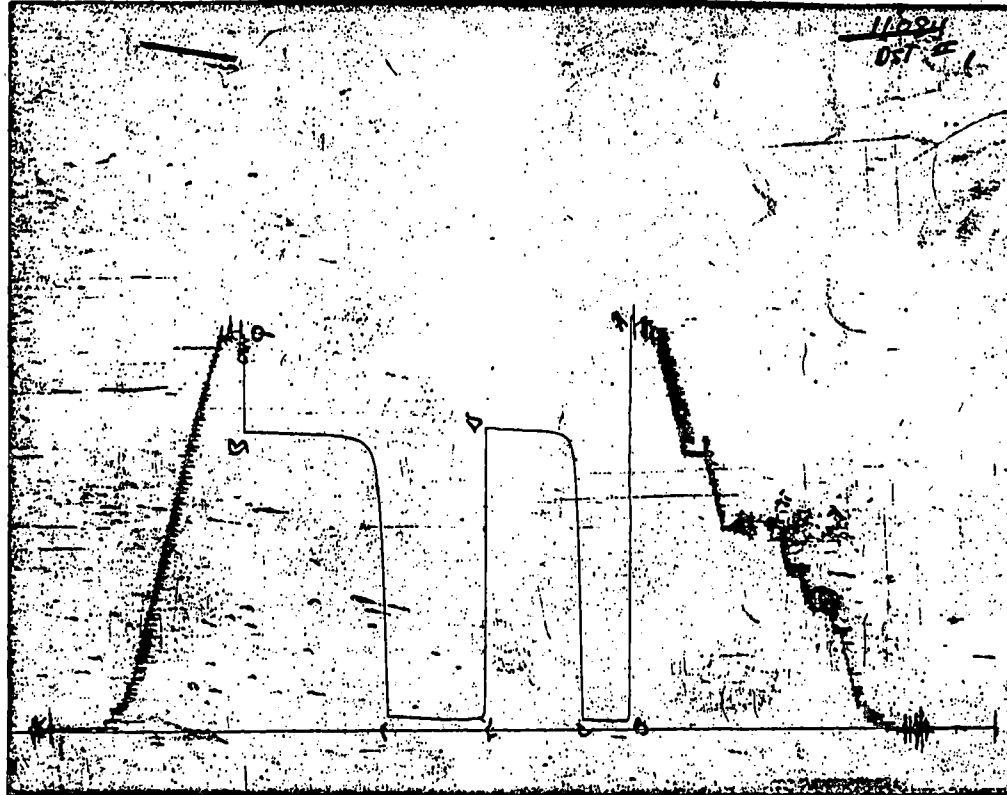
| | Mole % | GPM |
|----------------|------------|-------|
| Helium | He: 0.262 | 0.000 |
| Oxygen | O2: 0.000 | 0.000 |
| Nitrogen | N2: 10.655 | 0.000 |
| Carbon Dioxide | CO2: 1.214 | 0.000 |
| Methane | C1: 79.666 | 0.000 |
| Ethane | C2: 4.184 | 1.119 |
| Propane | C3: 2.170 | 0.598 |
| Iso Butane | iC4: 0.317 | 0.104 |
| Normal Butane | nC4: 0.754 | 0.238 |
| Iso Pentane | iC5: 0.193 | 0.071 |
| Normal Pentane | nC5: 0.205 | 0.074 |
| Hexanes Plus | C6+: 0.380 | 0.166 |

TOTAL: 100.000 2.369
Z Fact: 0.9977
SP.GR.: 0.6848
BTU (SAT): 990.7 @ 14.73 psia
BTU (DRY): 1008.2 @ 14.73 psia
OCTANE RATING: 111.3

COMMENTS:

0.000

CHART PAGE



This is a photocopy of the actual AK-1 recorder chart

TRILOBITE TESTING L.L.C.

OPERATOR : Imperial Oil Properties
 WELL NAME: Bergner 1-16
 LOCATION : 16-32S-18W Comanche KS
 INTERVAL : 4904.00 To 4965.00 ft

DATE 2/20/97
 KB 2144.00 ft TICKET NO: 9686 DST #2
 GR 2131.00 ft FORMATION:
 TD 4965.00 ft TEST TYPE: CONV

RECORDER DATA

| Mins | | Field | 1 | 2 | 3 | 4 | TIME DATA----- | | |
|-------|--------------|--------|--------|--------|-----|-----|----------------|----|----|
| PF 30 | Rec. | 11084 | 11084 | 10991 | | | PF Fr. | to | hr |
| SI 0 | Range (Psi) | 4300.0 | 4300.0 | 4200.0 | 0.0 | 0.0 | IS Fr. | to | hr |
| SF 0 | Clock (hrs) | 12 HR | 12 HR | 12 HR | | | SF Fr. | to | hr |
| FS 0 | Depth(ft) | 4962.0 | 4962.0 | 4910.0 | 0.0 | 0.0 | FS Fr. | to | hr |

| | Field | 1 | 2 | 3 | 4 | | | |
|----------------|-------|-----|-----|-----|-----|-----------|------|----|
| A. Init Hydro | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | T STARTED | 1830 | hr |
| B. First Flow | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | T ON BOTM | | hr |
| B1. Final Flow | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | T OPEN | | hr |
| C. In Shut-in | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | T PULLED | | hr |
| D. Init Flow | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | T OUT | 2300 | hr |
| E. Final Flow | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | | |
| F. Fl Shut-in | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | | |
| G. Final Hydro | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | | |
| Inside/Outside | 0 | 0 | I | | | | | |

RECOVERY

Tot Fluid 0.00 ft of 0.00 ft in DC and 0.00 ft in DP
 0.00 ft of
 0.00 ft of
 0.00 ft of
 0.00 ft of
 0.00 ft of
 0.00 ft of
 0.00 ft of
 0.00 ft of

SALINITY 0.00 P.P.M. A.P.I. Gravity 0.00

BLOW DESCRIPTION

Initial Flow:
 Misrun : Hit bridge 4300'
 Initial Shut In:
 Final Flow:
 Final Shut In:

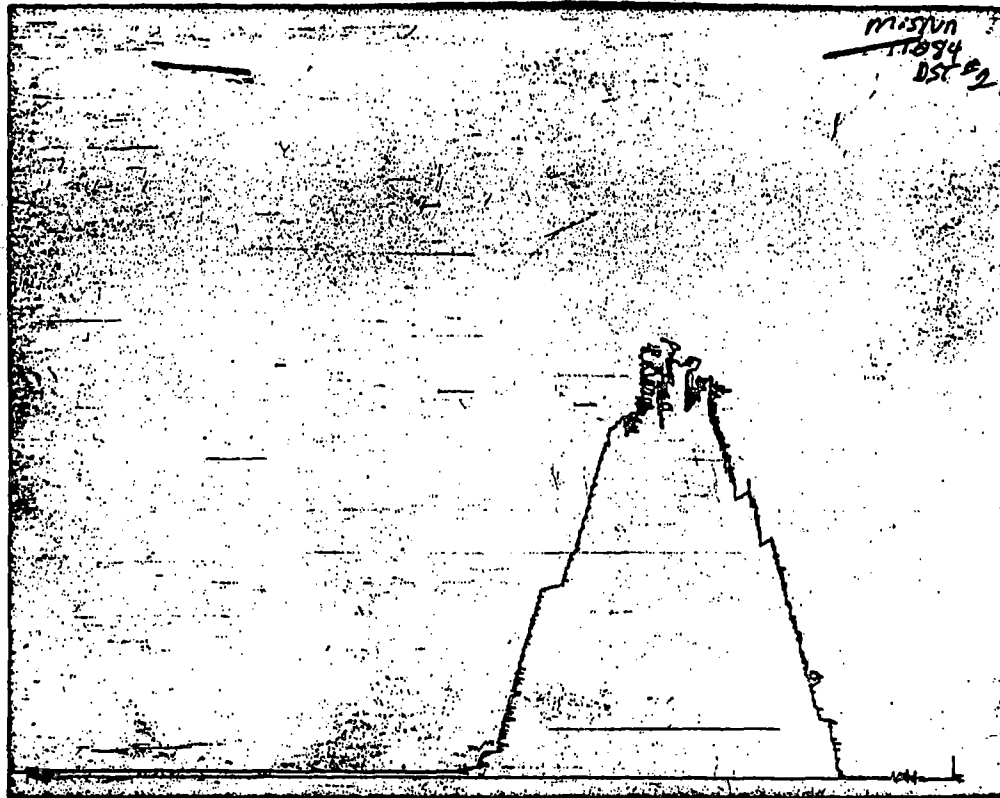
SAMPLES:
 SENT TO:

TOOL DATA-----
 Tool Wt. 2100.00 lbs
 Wt Set On Packer 25000.00 lbs
 Wt Pulled Loose 0.00 lbs
 Initial Str Wt 0.00 lbs
 Unseated Str Wt 0.00 lbs
 Bot Choke 0.75 in
 Hole Size 7.88 in
 D Col. ID 2.25 in
 D. Pipe ID 3.80 in
 D.C. Length 241.00 ft
 D.P. Length 4677.00 ft

MUD DATA-----
 Mud Type Chemical
 Weight 9.20 lb/c
 Vis. 49.00 S/L
 W.L. 11.80 in3
 F.C. 0.00 in
 Mud Drop
 Amt. of fill 0.00 ft
 Btm. H. Temp. 0.00 F
 Hole Condition
 % Porosity 0.00
 Packer Size 6.75 in
 No. of Packers 2
 Cushion Amt. 0.00
 Cushion Type
 Reversed Out
 Tool Chased
 Tester Darren Amerine
 Co. Rep. Jon T Williams
 Contr. Duke
 Rig # 7
 Unit #
 Pump T.

Test Successful: Y

CHART PAGE



This is a photocopy of the actual AK-1 recorder chart

TRILOBITE TESTING L.L.C.

OPERATOR : Imperial Oil Properties
 WELL NAME: Bergner 1-16
 LOCATION : 16-32S-18W Comanche KS
 INTERVAL : 4904.00 To 4965.00 ft

DATE 2/21/97

KB 2144.00 ft TICKET NO: 9687 DST #3
 GR 2131.00 ft FORMATION: Hertha
 TD 4965.00 ft TEST TYPE: CONV

RECORDER DATA

| Mins | | Field | 1 | 2 | 3 | 4 | TIME DATA----- |
|-------|-------------|--------|--------|--------|-----|-----|------------------------|
| PF 30 | Rec. | 13849 | 13849 | 10991 | | | PF Fr. 1219 to 1249 hr |
| SI 45 | Range(Psi) | 4375.0 | 4375.0 | 4200.0 | 0.0 | 0.0 | IS Fr. 1249 to 1334 hr |
| SF 45 | Clock(hrs) | 12 HR | 12 HR | 12 HR | | | SF Fr. 1334 to 1419 hr |
| FS 45 | Depth(ft) | 4902.0 | 4902.0 | 4962.0 | 0.0 | 0.0 | FS Fr. 1419 to 1504 hr |

| | Field | 1 | 2 | 3 | 4 | |
|----------------|--------|--------|-----|-----|-----|-------------------------------|
| A. Init Hydro | 2587.0 | 2636.0 | 0.0 | 0.0 | 0.0 | T STARTED 1015 hr |
| B. First Flow | 67.0 | 78.0 | 0.0 | 0.0 | 0.0 | T ON BOTM 1215 hr |
| B1. Final Flow | 67.0 | 68.0 | 0.0 | 0.0 | 0.0 | T OPEN 1219 hr |
| C. In Shut-in | 1657.0 | 1662.0 | 0.0 | 0.0 | 0.0 | T PULLED 1504 hr |
| D. Init Flow | 78.0 | 95.0 | 0.0 | 0.0 | 0.0 | T OUT 1800 hr |
| E. Final Flow | 78.0 | 86.0 | 0.0 | 0.0 | 0.0 | |
| F. Fl Shut-in | 1591.0 | 1600.0 | 0.0 | 0.0 | 0.0 | TOOL DATA----- |
| G. Final Hydro | 2478.0 | 2426.0 | 0.0 | 0.0 | 0.0 | Tool Wt. 2100.00 lbs |
| Inside/Outside | I | I | O | | | Wt Set On Packer 25000.00 lbs |
| | | | | | | Wt Pulled Loose 100000.00 lbs |
| | | | | | | Initial Str Wt 75000.00 lbs |
| | | | | | | Unseated Str Wt 75000.00 lbs |
| | | | | | | Bot Choke 0.75 in |
| | | | | | | Hole Size 7.88 in |
| | | | | | | D Col. ID 2.25 in |
| | | | | | | D. Pipe ID 3.80 in |
| | | | | | | D.C. Length 241.00 ft |
| | | | | | | D.P. Length 4677.00 ft |

RECOVERY

Tot Fluid 90.00 ft of 90.00 ft in DC and 0.00 ft in DP
 90.00 ft of Water Cut Mud 40%water 60%mud
 0.00 ft of
 0.00 ft of
 0.00 ft of
 0.00 ft of
 0.00 ft of
 0.00 ft of .3 @ 52F

SALINITY 30000.00 P.P.M. A.P.I. Gravity 0.00

BLOW DESCRIPTION

Initial Flow:
 Weak surface blow, built to 1" in water.

Initial Shut In:

No blow back

Final Flow:

Weak surface blow, built to .75"-.5" in water

Final Shut In:

Slight blow back, surface blow

SAMPLES:

SENT TO:

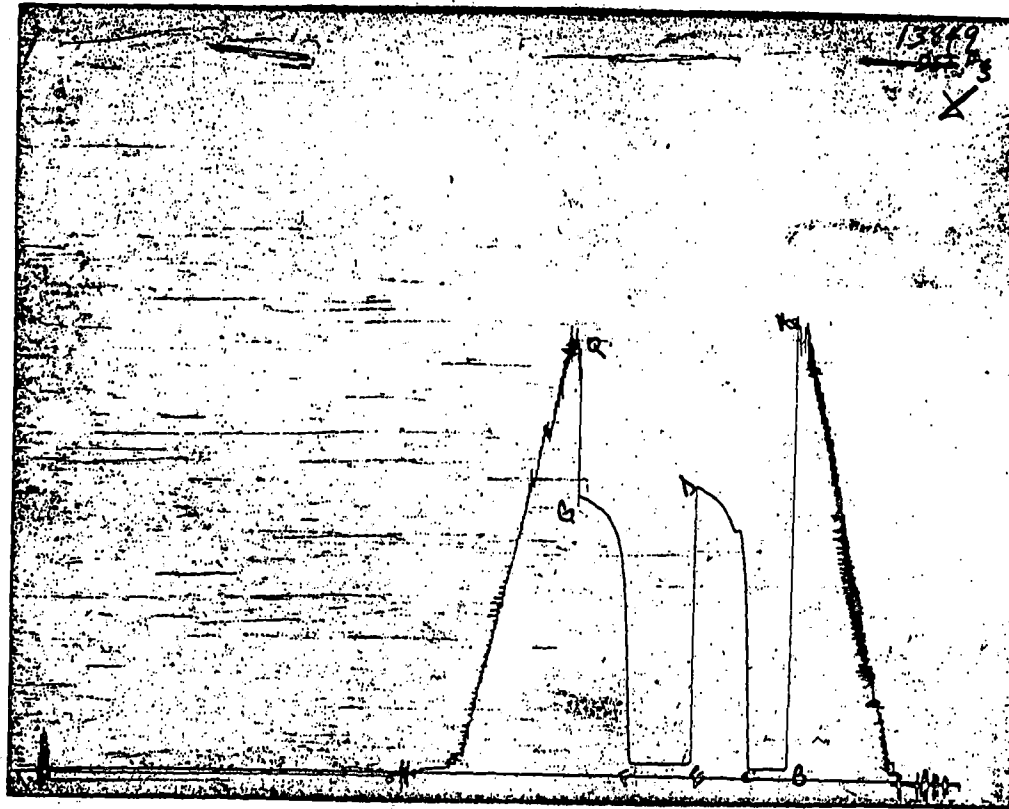
MUD DATA-----

| Mud Type | Chemical |
|----------|-----------|
| Weight | 9.00 lb/c |
| Vis. | 65.00 S/L |
| W.L. | 10.40 in3 |
| F.C. | 0.00 in |
| Mud Drop | |

| | |
|----------------|----------------|
| Amt. of fill | 0.00 ft |
| Btm. H. Temp. | 0.00 F |
| Hole Condition | |
| % Porosity | 0.00 |
| Packer Size | 6.75 in |
| No. of Packers | 2 |
| Cushion Amt. | 0.00 |
| Cushion Type | |
| Reversed Out | |
| Tool Chased | |
| Tester | Darren Amerine |
| Co. Rep. | Jon T Williams |
| Contr. | Duke |
| Rig # | 7 |
| Unit # | |
| Pump T. | |

Test Successful: Y

CHART PAGE



This is a photocopy of the actual AK-1 recorder chart

TRILOBITE TESTING L.L.C.

OPERATOR : Imperial Oil Properties
 WELL NAME: Bergner #1-16
 LOCATION : 16-32s-18w
 INTERVAL : 5035.00 To 5059.00 ft

DATE 2/22/97

KB 2144.00 ft TICKET NO: 9688 DST #4
 GR 2131.00 ft FORMATION: Marmaton(Altamont)
 TD 5059.00 ft TEST TYPE: CONV.

RECORDER DATA

| Mins | | Field | 1 | 2 | 3 | 4 | TIME DATA----- |
|-------|-------------|--------|--------|--------|-----|-----|------------------------|
| PF 30 | Rec. | 11084 | 11084 | 2350 | | | PF Fr. 0826 to 0856 hr |
| SI 60 | Range(Psi) | 4300.0 | 4300.0 | 4995.0 | 0.0 | 0.0 | IS Fr. 0856 to 0956 hr |
| SF 60 | Clock(hrs) | 12 hr | 12 hr | Elec | | | SF Fr. 0956 to 1056 hr |
| FS 90 | Depth(ft) | 5056.0 | 5056.0 | 5040.0 | 0.0 | 0.0 | FS Fr. 1056 to 1226 hr |

| | Field | 1 | 2 | 3 | 4 | |
|----------------|--------|--------|--------|-----|-----|-------------------------------|
| A. Init Hydro | 2511.0 | 2497.0 | 2467.0 | 0.0 | 0.0 | T STARTED 0613 hr |
| B. First Flow | 66.0 | 59.0 | 34.0 | 0.0 | 0.0 | T ON BOTM 0824 hr |
| B1. Final Flow | 66.0 | 50.0 | 47.0 | 0.0 | 0.0 | T OPEN 0826 hr |
| C. In Shut-in | 395.0 | 397.0 | 404.0 | 0.0 | 0.0 | T PULLED 1226 hr |
| D. Init Flow | 66.0 | 58.0 | 45.0 | 0.0 | 0.0 | T OUT 1430 hr |
| E. Final Flow | 66.0 | 58.0 | 58.0 | 0.0 | 0.0 | |
| F. Fl Shut-in | 710.0 | 696.0 | 696.0 | 0.0 | 0.0 | TOOL DATA----- |
| G. Final Hydro | 2371.0 | 2327.0 | 2382.0 | 0.0 | 0.0 | Tool Wt. 2100.00 lbs |
| Inside/Outside | 0 | 0 | I | | | Wt Set On Packer 25000.00 lbs |
| | | | | | | Wt Pulled Loose 98000.00 lbs |
| | | | | | | Initial Str Wt 75000.00 lbs |
| | | | | | | Unseated Str Wt 77000.00 lbs |
| | | | | | | Bot Choke 0.75 in |
| | | | | | | Hole Size 7.88 in |
| | | | | | | D Col. ID 2.25 in |
| | | | | | | D. Pipe ID 3.80 in |
| | | | | | | D.C. Length 241.00 ft |
| | | | | | | D.P. Length 4775.00 ft |

RECOVERY

Tot Fluid 70.00 ft of 70.00 ft in DC and 0.00 ft in DP
 70.00 ft of Very Slight Oil Cut Watery Mud
 0.00 ft of 10%gas 4%oil 14%water 72%mud
 0.00 ft of
 13300.00 ft of Gas in pipe
 0.00 ft of
 0.00 ft of
 0.00 ft of
 0.00 ft of

SALINITY 0.00 P.P.M. A.P.I. Gravity 0.00

BLOW DESCRIPTION

Initial Flow:
 Strong blow, bottom of bucket in
 1 1/2 mins

Initial Shut In:

Bled down for 10 mins, came back to
 1/2 inch in water

Final Flow:

Strong blow, bottom of bucket in 25sec

Final Shut In:

Bled down for 10 mins, came back to
 3 1/2 inches in water

SAMPLES:

SENT TO:

MUD DATA-----

Mud Type Chemical
 Weight 9.10 lb/c
 Vis. 56.00 S/L
 W.L. 10.50 in3
 F.C. 0.00 in
 Mud Drop

Amt. of fill 0.00 ft
 Btm. H. Temp. 115.00 F
 Hole Condition good

% Porosity 0.00
 Packer Size 6.75 in
 No. of Packers 2
 Cushion Amt. 0.00

Cushion Type
 Reversed Out

Tool Chased

Tester Darren Amerine

Co. Rep. Jon T. Williams

Contr. Duke

Rig # 7

Unit #

Pump T.

Test Successful: Y

*** TOOL DIAGRAM *** CONV.

WELL NAME: Bergner #1-16

LOCATION : 16-32s-18w

TICKET No. 9688 D.S.T. No. 4 DATE 2/22/97

TOTAL TOOL TO BOTTOM OF TOP PACKERS 29'

INTERVAL TOOL

TOTAL PACKERS AND ANCHOR 24'

TOTAL TOOL 53'

DRILL COLLAR ANCHOR IN INTERVAL

C. ANCHOR STAND.Stands Single Total

P. ANCHOR STAND.Stands Single Total

TOTAL ASSEMBLY

C. ABOVE TOOLS.Stands 4 Single Total 241'

P. ABOVE TOOLS.Stands 77 Single Total 4775'

TOTAL DRILL COLLARS DRILL PIPE & TOOLS .. 5069'

TOTAL DEPTH 5059'

TOTAL DRILL PIPE ABOVE K.B. 10'

REMARKS:

| | |
|-----------------------------|-------|
| P.O. SUB | |
| C.O. SUB | 5007' |
| S.I. TOOL | 5013' |
| | |
| HMV | 5018' |
| JARS | 5024' |
| | |
| SAFETY JOINT | 5026' |
| PACKER Top | 5030' |
| PACKER Bottom | 5035' |
| DEPTH | |
| STUBB 1' | 5036' |
| ANCHOR | |
| Alpine rec.@5040' | |
| | |
| 21'of perms.to | 5057' |
| | |
| T.C. DEPTH | |
| | |
| Ak-1 rec.@ 5056 | |
| | |
| BULLNOSE 2'Bullnose to T.D. | 5059' |

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: #9688 Bergner #1-16 DST#4 Imperial Oil Prop.
 DATE: 02/22/97 TIME: 06:14:30

| | Time | Pressure PSig | delta P PSig | Temp. DEG F | (T+dT)/dT | P^2/10^6 |
|----------------------|--------|------------------|-----------------|----------------|-----------|----------|
| ***** Initial Hydro. | 133.00 | 2467.2 | 0.0 | 101.64 | | |
| ***** Start Flow 1 | 0.00 | 34.3 | 0.0 | 102.58 | | |
| | 1.00 | 35.0 | 0.7 | 103.35 | | |
| | 2.00 | 35.9 | 1.6 | 104.13 | | |
| | 3.00 | 37.1 | 2.8 | 104.79 | | |
| | 4.00 | 38.3 | 3.9 | 105.31 | | |
| | 5.00 | 38.8 | 4.5 | 105.72 | | |
| | 6.00 | 39.4 | 5.1 | 106.01 | | |
| | 7.00 | 39.9 | 5.5 | 106.24 | | |
| | 8.00 | 40.0 | 5.7 | 106.41 | | |
| | 9.00 | 40.2 | 5.9 | 106.54 | | |
| | 10.00 | 40.3 | 6.0 | 106.65 | | |
| | 11.00 | 42.1 | 7.8 | 106.74 | | |
| | 12.00 | 42.5 | 8.2 | 106.80 | | |
| | 13.00 | 42.0 | 7.6 | 106.88 | | |
| | 14.00 | 41.5 | 7.2 | 106.93 | | |
| | 15.00 | 41.7 | 7.4 | 106.99 | | |
| | 16.00 | 42.5 | 8.1 | 107.03 | | |
| | 17.00 | 42.6 | 8.3 | 107.07 | | |
| | 18.00 | 43.1 | 8.8 | 107.10 | | |
| | 19.00 | 43.2 | 8.9 | 107.15 | | |
| | 20.00 | 42.7 | 8.4 | 107.19 | | |
| | 21.00 | 42.2 | 7.9 | 107.23 | | |
| | 22.00 | 42.6 | 8.3 | 107.27 | | |
| | 23.00 | 43.7 | 9.4 | 107.30 | | |
| | 24.00 | 42.7 | 8.4 | 107.32 | | |
| | 25.00 | 42.9 | 8.6 | 107.35 | | |
| | 26.00 | 44.5 | 10.2 | 107.37 | | |
| | 27.00 | 44.3 | 10 | 107.41 | | |
| | 28.00 | 43.9 | 9.6 | 107.45 | | |
| ***** End Flow 1 | 29.00 | 47.2 | 12.8 | 107.49 | | |
| ***** Start Shutin 1 | 0.00 | 47.2 | 0.0 | 107.49 | 0.0000 | 0.002 |
| | 1.00 | 54.4 | 7.2 | 107.54 | 30.0000 | 0.003 |
| | 2.00 | 61.2 | 14.0 | 107.58 | 15.5000 | 0.004 |
| | 3.00 | 68.2 | 21.1 | 107.61 | 10.6667 | 0.005 |
| | 4.00 | 74.5 | 27.4 | 107.64 | 8.2500 | 0.006 |
| | 5.00 | 81.1 | 33.9 | 107.68 | 6.8000 | 0.007 |
| | 6.00 | 87.7 | 40.5 | 107.70 | 5.8333 | 0.008 |
| | 7.00 | 94.2 | 47.1 | 107.74 | 5.1429 | 0.009 |
| | 8.00 | 100.7 | 53.5 | 107.79 | 4.6250 | 0.010 |
| | 9.00 | 107.3 | 60.1 | 107.83 | 4.2222 | 0.012 |
| | 10.00 | 113.7 | 66.6 | 107.88 | 3.9000 | 0.013 |
| | 11.00 | 120.1 | 72.9 | 107.92 | 3.6364 | 0.014 |
| | 12.00 | 126.3 | 79.1 | 107.98 | 3.4167 | 0.016 |
| | 13.00 | 132.6 | 85.4 | 108.03 | 3.2308 | 0.018 |
| | 14.00 | 139.1 | 91.9 | 108.09 | 3.0714 | 0.019 |
| | 15.00 | 145.4 | 98.2 | 108.14 | 2.9333 | 0.021 |
| | 16.00 | 151.7 | 104.6 | 108.20 | 2.8125 | 0.023 |
| | 17.00 | 158.1 | 111.0 | 108.25 | 2.7059 | 0.025 |
| | 18.00 | 164.1 | 116.9 | 108.31 | 2.6111 | 0.027 |
| | 19.00 | 170.8 | 123.6 | 108.36 | 2.5263 | 0.029 |

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: #9688 Bergner #1-16 DST#4 Imperial Oil Prop.

DATE: 02/22/97

TIME: 06:14:30

| Time | Pressure PSig | delta P PSig | Temp. DEG F | (T+dT)/dT | P ² /10 ⁶ |
|---------------------|------------------|-----------------|----------------|-----------|---------------------------------|
| 20.00 | 176.7 | 129.6 | 108.41 | 2.4500 | 0.031 |
| 21.00 | 182.7 | 135.5 | 108.46 | 2.3810 | 0.033 |
| 22.00 | 189.2 | 142.1 | 108.51 | 2.3182 | 0.036 |
| 23.00 | 195.5 | 148.3 | 108.57 | 2.2609 | 0.038 |
| 24.00 | 201.5 | 154.3 | 108.62 | 2.2083 | 0.041 |
| 25.00 | 207.7 | 160.6 | 108.67 | 2.1600 | 0.043 |
| 26.00 | 213.9 | 166.8 | 108.72 | 2.1154 | 0.046 |
| 27.00 | 220.1 | 173.0 | 108.76 | 2.0741 | 0.048 |
| 28.00 | 226.2 | 179.0 | 108.82 | 2.0357 | 0.051 |
| 29.00 | 232.4 | 185.2 | 108.86 | 2.0000 | 0.054 |
| 30.00 | 238.7 | 191.5 | 108.91 | 1.9667 | 0.057 |
| 31.00 | 244.8 | 197.6 | 108.96 | 1.9355 | 0.060 |
| 32.00 | 251.1 | 203.9 | 109.01 | 1.9062 | 0.063 |
| 33.00 | 257.1 | 210.0 | 109.05 | 1.8788 | 0.066 |
| 34.00 | 263.3 | 216.1 | 109.09 | 1.8529 | 0.069 |
| 35.00 | 269.7 | 222.5 | 109.14 | 1.8286 | 0.073 |
| 36.00 | 275.7 | 228.5 | 109.19 | 1.8056 | 0.076 |
| 37.00 | 281.8 | 234.7 | 109.23 | 1.7838 | 0.079 |
| 38.00 | 287.8 | 240.6 | 109.28 | 1.7632 | 0.083 |
| 39.00 | 294.0 | 246.8 | 109.32 | 1.7436 | 0.086 |
| 40.00 | 300.0 | 252.9 | 109.36 | 1.7250 | 0.090 |
| 41.00 | 306.0 | 258.8 | 109.40 | 1.7073 | 0.094 |
| 42.00 | 311.9 | 264.7 | 109.45 | 1.6905 | 0.097 |
| 43.00 | 317.9 | 270.8 | 109.49 | 1.6744 | 0.101 |
| 44.00 | 323.7 | 276.5 | 109.53 | 1.6591 | 0.105 |
| 45.00 | 329.4 | 282.2 | 109.58 | 1.6444 | 0.109 |
| 46.00 | 335.3 | 288.1 | 109.61 | 1.6304 | 0.112 |
| 47.00 | 341.1 | 293.9 | 109.66 | 1.6170 | 0.116 |
| 48.00 | 346.9 | 299.7 | 109.69 | 1.6042 | 0.120 |
| 49.00 | 352.6 | 305.4 | 109.74 | 1.5918 | 0.124 |
| 50.00 | 358.1 | 311.0 | 109.78 | 1.5800 | 0.128 |
| 51.00 | 363.7 | 316.5 | 109.82 | 1.5686 | 0.132 |
| 52.00 | 369.1 | 321.9 | 109.86 | 1.5577 | 0.136 |
| 53.00 | 374.6 | 327.5 | 109.90 | 1.5472 | 0.140 |
| 54.00 | 380.0 | 332.9 | 109.94 | 1.5370 | 0.144 |
| 55.00 | 385.1 | 338.0 | 109.97 | 1.5273 | 0.148 |
| 56.00 | 390.2 | 343.0 | 110.02 | 1.5179 | 0.152 |
| 57.00 | 395.0 | 347.9 | 110.06 | 1.5088 | 0.156 |
| 58.00 | 399.9 | 352.7 | 110.10 | 1.5000 | 0.160 |
| 59.00 | 404.3 | 357.1 | 110.13 | 1.4915 | 0.163 |
| ***** End Shut-in 1 | | | | | |
| ***** Start Flow 2 | 0.00 | 45.5 | 0.0 | 110.16 | |
| | 1.00 | 46.7 | 1.2 | 110.16 | |
| | 2.00 | 49.6 | 4.1 | 110.16 | |
| | 3.00 | 49.8 | 4.4 | 110.16 | |
| | 4.00 | 50.0 | 4.5 | 110.17 | |
| | 5.00 | 51.4 | 5.9 | 110.19 | |
| | 6.00 | 50.7 | 5.2 | 110.22 | |
| | 7.00 | 50.7 | 5.2 | 110.24 | |
| | 8.00 | 50.8 | 5.3 | 110.28 | |
| | 9.00 | 51.0 | 5.5 | 110.32 | |
| | 10.00 | 51.4 | 5.9 | 110.35 | |

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: #9688 Bergner #1-16 DST#4 Imperial Oil Prop.

DATE: 02/22/97 TIME: 06:14:30

| Time | Pressure PSig | delta P PSig | Temp. DEG F | (T+dT)/dT | P ² /10 ⁶ |
|-------|------------------|-----------------|----------------|-----------|---------------------------------|
| 11.00 | 51.9 | 6.5 | 110.39 | | |
| 12.00 | 53.0 | 7.6 | 110.43 | | |
| 13.00 | 51.7 | 6.2 | 110.48 | | |
| 14.00 | 51.4 | 5.9 | 110.52 | | |
| 15.00 | 51.9 | 6.4 | 110.57 | | |
| 16.00 | 52.3 | 6.8 | 110.62 | | |
| 17.00 | 52.2 | 6.7 | 110.67 | | |
| 18.00 | 52.7 | 7.2 | 110.71 | | |
| 19.00 | 52.5 | 7.0 | 110.75 | | |
| 20.00 | 52.4 | 7.0 | 110.79 | | |
| 21.00 | 52.7 | 7.2 | 110.81 | | |
| 22.00 | 52.7 | 7.2 | 110.84 | | |
| 23.00 | 51.9 | 6.5 | 110.87 | | |
| 24.00 | 53.0 | 7.6 | 110.91 | | |
| 25.00 | 53.7 | 8.2 | 110.95 | | |
| 26.00 | 52.9 | 7.5 | 110.99 | | |
| 27.00 | 52.8 | 7.3 | 111.05 | | |
| 28.00 | 53.0 | 7.6 | 111.10 | | |
| 29.00 | 52.9 | 7.5 | 111.14 | | |
| 30.00 | 53.1 | 7.6 | 111.20 | | |
| 31.00 | 54.0 | 8.6 | 111.26 | | |
| 32.00 | 53.5 | 8.1 | 111.30 | | |
| 33.00 | 53.1 | 7.6 | 111.35 | | |
| 34.00 | 53.5 | 8.1 | 111.40 | | |
| 35.00 | 54.6 | 9.1 | 111.45 | | |
| 36.00 | 54.3 | 8.8 | 111.51 | | |
| 37.00 | 54.4 | 8.9 | 111.56 | | |
| 38.00 | 54.7 | 9.2 | 111.61 | | |
| 39.00 | 54.6 | 9.1 | 111.66 | | |
| 40.00 | 54.3 | 8.8 | 111.71 | | |
| 41.00 | 55.5 | 10 | 111.77 | | |
| 42.00 | 55.0 | 9.5 | 111.81 | | |
| 43.00 | 54.5 | 9.0 | 111.86 | | |
| 44.00 | 54.7 | 9.2 | 111.91 | | |
| 45.00 | 54.9 | 9.4 | 111.96 | | |
| 46.00 | 55.4 | 9.9 | 112.00 | | |
| 47.00 | 55.4 | 9.9 | 112.06 | | |
| 48.00 | 55.6 | 10.2 | 112.10 | | |
| 49.00 | 56.3 | 10.8 | 112.15 | | |
| 50.00 | 55.5 | 10 | 112.20 | | |
| 51.00 | 56.1 | 10.6 | 112.24 | | |
| 52.00 | 56.1 | 10.6 | 112.29 | | |
| 53.00 | 56.0 | 10.6 | 112.33 | | |
| 54.00 | 56.0 | 10.5 | 112.39 | | |
| 55.00 | 55.7 | 10.2 | 112.43 | | |
| 56.00 | 56.2 | 10.7 | 112.47 | | |
| 57.00 | 56.4 | 10.9 | 112.52 | | |
| 58.00 | 57.2 | 11.7 | 112.57 | | |
| 59.00 | 57.9 | 12.4 | 112.61 | | |

***** End Flow 2

***** Start Shutin 2

| | | | | | |
|------|------|-----|--------|---------|-------|
| 0.00 | 57.9 | 0.0 | 112.61 | 0.0000 | 0.003 |
| 1.00 | 63.7 | 5.8 | 112.65 | 89.0000 | 0.004 |

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: #9688 Bergner #1-16 DST#4 Imperial Oil Prop.

DATE: 02/22/97

TIME: 06:14:30

| Time | Pressure PSI _g | delta P PSI _g | Temp. DEG F | (T+dT)/dT | P ² /10 ⁶ |
|-------|------------------------------|-----------------------------|----------------|-----------|---------------------------------|
| 2.00 | 71.9 | 14.0 | 112.70 | 45.0000 | 0.005 |
| 3.00 | 79.8 | 21.9 | 112.75 | 30.3333 | 0.006 |
| 4.00 | 87.7 | 29.8 | 112.79 | 23.0000 | 0.008 |
| 5.00 | 95.3 | 37.4 | 112.83 | 18.6000 | 0.009 |
| 6.00 | 102.9 | 45.0 | 112.88 | 15.6667 | 0.011 |
| 7.00 | 110.6 | 52.7 | 112.93 | 13.5714 | 0.012 |
| 8.00 | 117.9 | 60.0 | 112.96 | 12.0000 | 0.014 |
| 9.00 | 118.2 | 60.3 | 113.01 | 10.7778 | 0.014 |
| 10.00 | 125.7 | 67.8 | 113.05 | 9.8000 | 0.016 |
| 11.00 | 132.9 | 75.0 | 113.10 | 9.0000 | 0.018 |
| 12.00 | 140.2 | 82.2 | 113.15 | 8.3333 | 0.020 |
| 13.00 | 147.3 | 89.4 | 113.19 | 7.7692 | 0.022 |
| 14.00 | 154.4 | 96.5 | 113.23 | 7.2857 | 0.024 |
| 15.00 | 161.5 | 103.6 | 113.26 | 6.8667 | 0.026 |
| 16.00 | 168.5 | 110.6 | 113.32 | 6.5000 | 0.028 |
| 17.00 | 175.5 | 117.6 | 113.34 | 6.1765 | 0.031 |
| 18.00 | 182.5 | 124.5 | 113.38 | 5.8889 | 0.033 |
| 19.00 | 189.5 | 131.6 | 113.42 | 5.6316 | 0.036 |
| 20.00 | 196.4 | 138.5 | 113.47 | 5.4000 | 0.039 |
| 21.00 | 203.3 | 145.4 | 113.50 | 5.1905 | 0.041 |
| 22.00 | 210.1 | 152.2 | 113.54 | 5.0000 | 0.044 |
| 23.00 | 216.9 | 159.0 | 113.57 | 4.8261 | 0.047 |
| 24.00 | 223.6 | 165.7 | 113.61 | 4.6667 | 0.050 |
| 25.00 | 230.1 | 172.2 | 113.64 | 4.5200 | 0.053 |
| 26.00 | 236.7 | 178.8 | 113.67 | 4.3846 | 0.056 |
| 27.00 | 243.2 | 185.3 | 113.71 | 4.2593 | 0.059 |
| 28.00 | 249.7 | 191.8 | 113.74 | 4.1429 | 0.062 |
| 29.00 | 256.1 | 198.2 | 113.76 | 4.0345 | 0.066 |
| 30.00 | 262.5 | 204.6 | 113.79 | 3.9333 | 0.069 |
| 31.00 | 269.0 | 211.1 | 113.82 | 3.8387 | 0.072 |
| 32.00 | 275.3 | 217.4 | 113.86 | 3.7500 | 0.076 |
| 33.00 | 281.4 | 223.5 | 113.89 | 3.6667 | 0.079 |
| 34.00 | 287.4 | 229.5 | 113.91 | 3.5882 | 0.083 |
| 35.00 | 293.4 | 235.5 | 113.95 | 3.5143 | 0.086 |
| 36.00 | 299.4 | 241.5 | 113.97 | 3.4444 | 0.090 |
| 37.00 | 305.2 | 247.3 | 114.01 | 3.3784 | 0.093 |
| 38.00 | 311.0 | 253.1 | 114.04 | 3.3158 | 0.097 |
| 39.00 | 316.7 | 258.8 | 114.06 | 3.2564 | 0.100 |
| 40.00 | 322.3 | 264.4 | 114.09 | 3.2000 | 0.104 |
| 41.00 | 327.9 | 270.0 | 114.11 | 3.1463 | 0.108 |
| 42.00 | 333.4 | 275.5 | 114.14 | 3.0952 | 0.111 |
| 43.00 | 338.8 | 280.9 | 114.17 | 3.0465 | 0.115 |
| 44.00 | 344.3 | 286.4 | 114.20 | 3.0000 | 0.119 |
| 45.00 | 349.5 | 291.6 | 114.22 | 2.9556 | 0.122 |
| 46.00 | 354.6 | 296.7 | 114.24 | 2.9130 | 0.126 |
| 47.00 | 359.8 | 301.9 | 114.27 | 2.8723 | 0.129 |
| 48.00 | 364.8 | 306.9 | 114.30 | 2.8333 | 0.133 |
| 49.00 | 369.8 | 311.9 | 114.32 | 2.7959 | 0.137 |
| 50.00 | 374.7 | 316.8 | 114.35 | 2.7600 | 0.140 |
| 51.00 | 379.8 | 321.9 | 114.37 | 2.7255 | 0.144 |
| 52.00 | 384.5 | 326.6 | 114.40 | 2.6923 | 0.148 |

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: #9688 Bergner #1-16 DST#4 Imperial Oil Prop.

DATE: 02/22/97 TIME: 06:14:30

| Time | Pressure PSig | delta P PSig | Temp. DEG F | (T+dT)/dT | P ² /10 ⁶ |
|---------------------|------------------|-----------------|----------------|-----------|---------------------------------|
| 53.00 | 389.4 | 331.5 | 114.42 | 2.6604 | 0.152 |
| 54.00 | 394.5 | 336.6 | 114.44 | 2.6296 | 0.156 |
| 55.00 | 399.2 | 341.3 | 114.47 | 2.6000 | 0.159 |
| 56.00 | 403.8 | 345.9 | 114.49 | 2.5714 | 0.163 |
| 57.00 | 408.3 | 350.4 | 114.51 | 2.5439 | 0.167 |
| 58.00 | 412.4 | 354.5 | 114.54 | 2.5172 | 0.170 |
| 59.00 | 416.3 | 358.4 | 114.56 | 2.4915 | 0.173 |
| 60.00 | 420.1 | 362.2 | 114.59 | 2.4667 | 0.177 |
| 61.00 | 424.0 | 366.1 | 114.61 | 2.4426 | 0.180 |
| 62.00 | 427.9 | 370.0 | 114.62 | 2.4194 | 0.183 |
| 63.00 | 431.6 | 373.7 | 114.66 | 2.3968 | 0.186 |
| 64.00 | 435.2 | 377.3 | 114.68 | 2.3750 | 0.189 |
| 65.00 | 438.9 | 381.0 | 114.70 | 2.3538 | 0.193 |
| 66.00 | 442.5 | 384.6 | 114.72 | 2.3333 | 0.196 |
| 67.00 | 446.0 | 388.1 | 114.74 | 2.3134 | 0.199 |
| 68.00 | 449.3 | 391.4 | 114.77 | 2.2941 | 0.202 |
| 69.00 | 456.6 | 398.7 | 114.80 | 2.2754 | 0.208 |
| 70.00 | 465.0 | 407.0 | 114.81 | 2.2571 | 0.216 |
| 71.00 | 474.4 | 416.5 | 114.83 | 2.2394 | 0.225 |
| 72.00 | 485.3 | 427.4 | 114.85 | 2.2222 | 0.236 |
| 73.00 | 497.6 | 439.7 | 114.88 | 2.2055 | 0.248 |
| 74.00 | 509.3 | 451.4 | 114.89 | 2.1892 | 0.259 |
| 75.00 | 520.7 | 462.8 | 114.93 | 2.1733 | 0.271 |
| 76.00 | 528.0 | 470.1 | 114.95 | 2.1579 | 0.279 |
| 77.00 | 535.4 | 477.5 | 114.96 | 2.1429 | 0.287 |
| 78.00 | 544.3 | 486.4 | 115.00 | 2.1282 | 0.296 |
| 79.00 | 553.7 | 495.8 | 115.02 | 2.1139 | 0.307 |
| 80.00 | 564.9 | 507.0 | 115.04 | 2.1000 | 0.319 |
| 81.00 | 576.5 | 518.6 | 115.06 | 2.0864 | 0.332 |
| 82.00 | 587.9 | 530.0 | 115.07 | 2.0732 | 0.346 |
| 83.00 | 599.2 | 541.3 | 115.11 | 2.0602 | 0.359 |
| 84.00 | 610.1 | 552.2 | 115.13 | 2.0476 | 0.372 |
| 85.00 | 621.2 | 563.3 | 115.15 | 2.0353 | 0.386 |
| 86.00 | 632.1 | 574.2 | 115.17 | 2.0233 | 0.400 |
| 87.00 | 643.0 | 585.1 | 115.20 | 2.0115 | 0.413 |
| 88.00 | 653.7 | 595.8 | 115.21 | 2.0000 | 0.427 |
| 89.00 | 664.3 | 606.4 | 115.24 | 1.9888 | 0.441 |
| 90.00 | 675.1 | 617.2 | 115.27 | 1.9778 | 0.456 |
| 91.00 | 685.4 | 627.5 | 115.28 | 1.9670 | 0.470 |
| 92.00 | 696.1 | 638.2 | 115.31 | 1.9565 | 0.485 |
| ***** End Shut-in 2 | | | | | |
| ***** Final Hydro. | 376.00 | 2382.1 | 0.0 | 115.37 | |

TEST HISTORY

#9688 Bergner #1-16 DST#4 Imperial Oil Prop.

Flag Points

t(Min.) PC PSig)

| | | |
|----|-------|---------|
| A: | 0.00 | 2467.22 |
| B: | 0.00 | 34.32 |
| C: | 29.00 | 47.16 |
| D: | 59.00 | 404.27 |
| E: | 0.00 | 45.48 |
| F: | 59.00 | 57.90 |
| G: | 92.00 | 696.09 |
| Q: | 0.00 | 2382.11 |

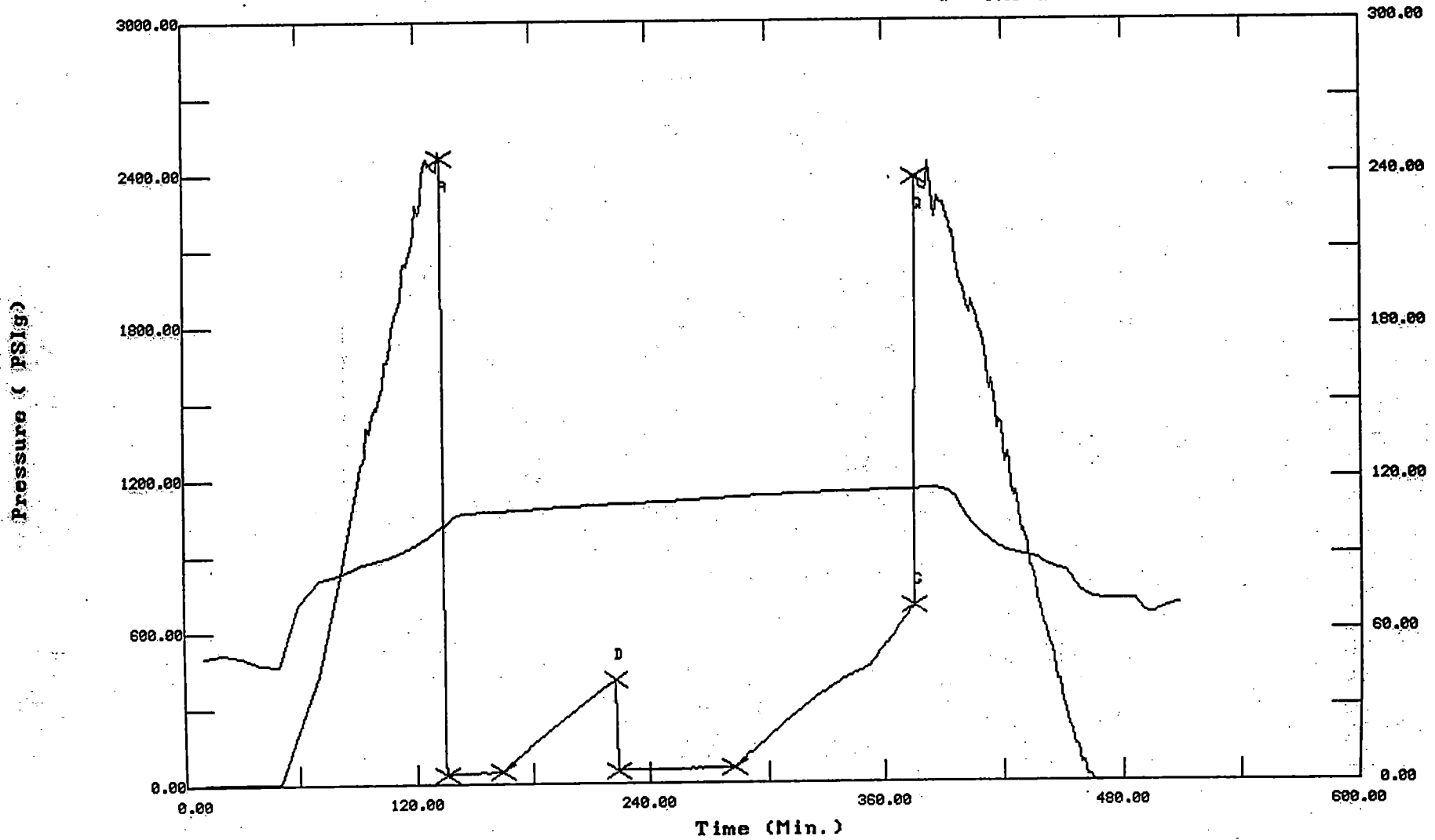


CHART PAGE



This is a photocopy of the actual AK-1 recorder chart

TRILOBITE TESTING L.L.C.

OPERATOR : Imperial Oil Properties
 WELL NAME: Bergner # 1-16
 LOCATION : 16-32S-18W Comanche KS
 INTERVAL : 5080.00 To 5116.00 ft

DATE 2/23/97
 KB 2144.00 ft TICKET NO: 9689 DST #5
 GR 2131.00 ft FORMATION: Pawnee
 TD 5116.00 ft TEST TYPE: CONV

RECORDER DATA

| Mins | | Field | 1 | 2 | 3 | 4 | TIME DATA----- |
|-------|-------------|--------|--------|--------|-----|-----|------------------------|
| PF 30 | Rec. | 11084 | 11084 | 2350 | | | PF Fr. 0240 to 0310 hr |
| SI 60 | Range(Psi) | 4300.0 | 4300.0 | 4995.0 | 0.0 | 0.0 | IS Fr. 0210 to 0410 hr |
| SF 60 | Clock(hrs) | 12 HR | 12 HR | 12 HR | | | SF Fr. 0410 to 0510 hr |
| FS 60 | Depth(ft) | 5113.0 | 5113.0 | 5085.0 | 0.0 | 0.0 | FS Fr. 0510 to 0610 hr |

| | Field | 1 | 2 | 3 | 4 | |
|----------------|--------|--------|--------|-----|-----|-------------------------------|
| A. Init Hydro | 2414.0 | 2508.0 | 240.0 | 0.0 | 0.0 | T STARTED 1227 hr |
| B. First Flow | 77.0 | 77.0 | 41.0 | 0.0 | 0.0 | T ON BOTM 0230 hr |
| B1. Final Flow | 88.0 | 80.0 | 73.0 | 0.0 | 0.0 | T OPEN 0240 hr |
| C. In Shut-in | 1099.0 | 1095.0 | 1098.0 | 0.0 | 0.0 | T PULLED 0610 hr |
| D. Init Flow | 99.0 | 99.0 | 72.0 | 0.0 | 0.0 | T OUT 0830 hr |
| E. Final Flow | 121.0 | 113.0 | 104.0 | 0.0 | 0.0 | |
| F. Fl Shut-in | 1024.0 | 1015.0 | 1000.0 | 0.0 | 0.0 | TOOL DATA----- |
| G. Final Hydro | 2425.0 | 2421.0 | 2428.0 | 0.0 | 0.0 | Tool Wt. 2100.00 lbs |
| Inside/Outside | 0 | 0 | I | | | Wt Set On Packer 25000.00 lbs |
| | | | | | | Wt Pulled Loose 11000.00 lbs |
| | | | | | | Initial Str Wt 75000.00 lbs |
| | | | | | | Unseated Str Wt 75000.00 lbs |
| | | | | | | Bot Choke 0.75 in |
| | | | | | | Hole Size 7.88 in |
| | | | | | | D Col. ID 2.25 in |
| | | | | | | D. Pipe ID 3.80 in |
| | | | | | | D.C. Length 241.00 ft |
| | | | | | | D.P. Length 4842.00 ft |

RECOVERY

Tot Fluid 130.00 ft of 130.00 ft in DC and 0.00 ft in DP
 100.00 ft of Very slight Gas Cut Mud
 0.00 ft of 2%water 98%mud
 0.00 ft of
 30.00 ft of Slight Gassy Watery Mud
 0.00 ft of 10%gas 30%water 60%mud
 0.00 ft of
 0.00 ft of
 0.00 ft of

SALINITY 0.00 P.P.M. A.P.I. Gravity 0.00

BLOW DESCRIPTION

Initial Flow:
 Weak surface blow

Initial Shut In:

Bled down, went back to check, Suspect some plugging action

Final Flow:

Strong blow, bottom of bucket in 1.5 mins

Final Shut In:

Bled down for 10 mins, weak surface blow.

SAMPLES:

SENT TO:

MUD DATA-----

Mud Type Chemical
 Weight 9.00 lb/c
 Vis. 51.00 S/L
 W.L. 11.10 in3
 F.C. 0.00 in
 Mud Drop

Amt. of fill 0.00 ft
 Btm. H. Temp. 118.00 F
 Hole Condition
 % Porosity 0.00
 Packer Size 6.75 in
 No. of Packers 2
 Cushion Amt. 0.00

Cushion Type
 Reversed Out
 Tool Chased
 Tester Darren Amerine
 Co. Rep. Jon T Williams
 Contr. Duke
 Rig # 7
 Unit #
 Pump T.

Test Successful: Y

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: #9689 Bergner #1-16 DST#5 Imperial Oil Prop.

DATE: 02/23/97 TIME: 00:28:13

| | Time | Pressure PSig | delta P PSig | Temp. DEG F | (T+dT)/dT | P ² /10 ⁶ |
|----------------------|--------|------------------|-----------------|----------------|-----------|---------------------------------|
| ***** Initial Hydro. | 132.00 | 2450.3 | 0.0 | 103.96 | | |
| ***** Start Flow 1 | 0.00 | 41.3 | 0.0 | 104.44 | | |
| | 1.00 | 42.5 | 1.2 | 105.03 | | |
| | 2.00 | 43.5 | 2.2 | 105.63 | | |
| | 3.00 | 46.1 | 4.8 | 106.14 | | |
| | 4.00 | 46.5 | 5.2 | 106.53 | | |
| | 5.00 | 48.5 | 7.2 | 106.80 | | |
| | 6.00 | 50.4 | 9.1 | 106.99 | | |
| | 7.00 | 51.4 | 10.1 | 107.14 | | |
| | 8.00 | 51.5 | 10.2 | 107.25 | | |
| | 9.00 | 53.1 | 11.8 | 107.33 | | |
| | 10.00 | 53.8 | 12.5 | 107.41 | | |
| | 11.00 | 54.7 | 13.4 | 107.49 | | |
| | 12.00 | 55.7 | 14.4 | 107.56 | | |
| | 13.00 | 56.6 | 15.3 | 107.63 | | |
| | 14.00 | 56.7 | 15.4 | 107.72 | | |
| | 15.00 | 58.7 | 17.5 | 107.83 | | |
| | 16.00 | 58.2 | 17.0 | 107.93 | | |
| | 17.00 | 59.6 | 18.3 | 108.03 | | |
| | 18.00 | 59.4 | 18.1 | 108.14 | | |
| | 19.00 | 60.1 | 18.8 | 108.25 | | |
| | 20.00 | 60.7 | 19.4 | 108.35 | | |
| | 21.00 | 61.2 | 19.9 | 108.47 | | |
| | 22.00 | 61.9 | 20.6 | 108.58 | | |
| | 23.00 | 62.9 | 21.6 | 108.69 | | |
| | 24.00 | 63.5 | 22.2 | 108.80 | | |
| | 25.00 | 63.9 | 22.7 | 108.91 | | |
| | 26.00 | 64.7 | 23.4 | 109.02 | | |
| | 27.00 | 65.4 | 24.1 | 109.13 | | |
| | 28.00 | 66.0 | 24.7 | 109.25 | | |
| | 29.00 | 66.6 | 25.3 | 109.35 | | |
| | 30.00 | 67.0 | 25.7 | 109.47 | | |
| | 31.00 | 67.6 | 26.4 | 109.58 | | |
| | 32.00 | 68.1 | 26.9 | 109.68 | | |
| ***** End Flow 1 | 33.00 | 72.6 | 31.3 | 109.79 | | |
| ***** Start Shutin 1 | 0.00 | 72.6 | 0.0 | 109.79 | 0.0000 | 0.005 |
| | 1.00 | 92.2 | 19.6 | 109.90 | 34.0000 | 0.009 |
| | 2.00 | 111.5 | 38.9 | 110.00 | 17.5000 | 0.012 |
| | 3.00 | 130.7 | 58.1 | 110.10 | 12.0000 | 0.017 |
| | 4.00 | 150.1 | 77.5 | 110.21 | 9.2500 | 0.023 |
| | 5.00 | 169.3 | 96.7 | 110.31 | 7.6000 | 0.029 |
| | 6.00 | 188.2 | 115.7 | 110.41 | 6.5000 | 0.035 |
| | 7.00 | 206.8 | 134.2 | 110.52 | 5.7143 | 0.043 |
| | 8.00 | 225.3 | 152.7 | 110.61 | 5.1250 | 0.051 |
| | 9.00 | 243.9 | 171.3 | 110.71 | 4.6667 | 0.059 |
| | 10.00 | 262.7 | 190.1 | 110.80 | 4.3000 | 0.069 |
| | 11.00 | 281.6 | 209.0 | 110.89 | 4.0000 | 0.079 |
| | 12.00 | 300.6 | 228.0 | 110.97 | 3.7500 | 0.090 |
| | 13.00 | 319.8 | 247.3 | 111.06 | 3.5385 | 0.102 |
| | 14.00 | 339.0 | 266.4 | 111.12 | 3.3571 | 0.115 |
| | 15.00 | 358.2 | 285.6 | 111.21 | 3.2000 | 0.128 |

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: #9689 Bergner #1-16 DST#5 Imperial Oil.Prop.

DATE: 02/23/97 TIME: 00:28:13

| Time | Pressure PSig | delta P PSig | Temp. DEG F | (T+dT)/dT | P ² /10 ⁶ |
|-------|------------------|-----------------|----------------|-----------|---------------------------------|
| 16.00 | 377.5 | 304.9 | 111.28 | 3.0625 | 0.143 |
| 17.00 | 396.6 | 324.0 | 111.35 | 2.9412 | 0.157 |
| 18.00 | 415.9 | 343.3 | 111.42 | 2.8333 | 0.173 |
| 19.00 | 435.0 | 362.4 | 111.48 | 2.7368 | 0.189 |
| 20.00 | 453.9 | 381.3 | 111.55 | 2.6500 | 0.206 |
| 21.00 | 472.3 | 399.7 | 111.61 | 2.5714 | 0.223 |
| 22.00 | 491.0 | 418.4 | 111.66 | 2.5000 | 0.241 |
| 23.00 | 514.0 | 441.5 | 111.72 | 2.4348 | 0.264 |
| 24.00 | 537.0 | 464.5 | 111.77 | 2.3750 | 0.288 |
| 25.00 | 559.3 | 486.7 | 111.83 | 2.3200 | 0.313 |
| 26.00 | 581.0 | 508.4 | 111.87 | 2.2692 | 0.338 |
| 27.00 | 602.3 | 529.7 | 111.92 | 2.2222 | 0.363 |
| 28.00 | 623.2 | 550.6 | 111.97 | 2.1786 | 0.388 |
| 29.00 | 644.1 | 571.5 | 112.02 | 2.1379 | 0.415 |
| 30.00 | 664.6 | 592.0 | 112.06 | 2.1000 | 0.442 |
| 31.00 | 684.8 | 612.3 | 112.20 | 2.0645 | 0.469 |
| 32.00 | 704.8 | 632.2 | 112.15 | 2.0312 | 0.497 |
| 33.00 | 724.5 | 651.9 | 112.20 | 2.0000 | 0.525 |
| 34.00 | 743.7 | 671.1 | 112.23 | 1.9706 | 0.553 |
| 35.00 | 762.8 | 690.2 | 112.27 | 1.9429 | 0.582 |
| 36.00 | 781.7 | 709.1 | 112.30 | 1.9167 | 0.611 |
| 37.00 | 800.2 | 727.7 | 112.34 | 1.8919 | 0.640 |
| 38.00 | 818.5 | 745.9 | 112.38 | 1.8684 | 0.670 |
| 39.00 | 836.3 | 763.7 | 112.42 | 1.8462 | 0.699 |
| 40.00 | 853.9 | 781.3 | 112.45 | 1.8250 | 0.729 |
| 41.00 | 871.2 | 798.6 | 112.49 | 1.8049 | 0.759 |
| 42.00 | 888.1 | 815.5 | 112.52 | 1.7857 | 0.789 |
| 43.00 | 904.8 | 832.2 | 112.55 | 1.7674 | 0.819 |
| 44.00 | 921.3 | 848.7 | 112.59 | 1.7500 | 0.849 |
| 45.00 | 937.6 | 865.0 | 112.62 | 1.7333 | 0.879 |
| 46.00 | 953.6 | 881.0 | 112.64 | 1.7174 | 0.909 |
| 47.00 | 969.2 | 896.6 | 112.67 | 1.7021 | 0.939 |
| 48.00 | 984.6 | 912.0 | 112.70 | 1.6875 | 0.970 |
| 49.00 | 999.6 | 927.0 | 112.73 | 1.6735 | 0.999 |
| 50.00 | 1014.3 | 941.7 | 112.77 | 1.6600 | 1.029 |
| 51.00 | 1028.8 | 956.2 | 112.78 | 1.6471 | 1.058 |
| 52.00 | 1043.3 | 970.7 | 112.82 | 1.6346 | 1.088 |
| 53.00 | 1057.4 | 984.8 | 112.85 | 1.6226 | 1.118 |
| 54.00 | 1071.3 | 998.7 | 112.88 | 1.6111 | 1.148 |
| 55.00 | 1084.8 | 1012.3 | 112.90 | 1.6000 | 1.177 |
| 56.00 | 1098.4 | 1025.8 | 112.95 | 1.5893 | 1.206 |

***** End Shut-in 1

***** Start Flow 2

| | | | |
|------|------|------|--------|
| 0.00 | 72.6 | 0.0 | 112.92 |
| 1.00 | 75.4 | 2.9 | 112.90 |
| 2.00 | 79.8 | 7.2 | 112.88 |
| 3.00 | 81.8 | 9.2 | 112.89 |
| 4.00 | 82.4 | 9.8 | 112.91 |
| 5.00 | 82.9 | 10.3 | 112.94 |
| 6.00 | 83.6 | 11.0 | 112.98 |
| 7.00 | 76.9 | 4.3 | 113.05 |
| 8.00 | 77.5 | 5.0 | 113.14 |
| 9.00 | 77.8 | 5.2 | 113.22 |

 ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: #9689 Bergner #1-16 DST#5 Imperial Oil.Prop.
 DATE: 02/23/97 TIME: 00:28:13

| Time | Pressure PSig | delta P PSig | Temp. DEG F | (T+dT)/dT | P ² /10 ⁶ |
|-------|------------------|-----------------|----------------|-----------|---------------------------------|
| 10.00 | 78.1 | 5.5 | 113.30 | | |
| 11.00 | 78.2 | 5.6 | 113.40 | | |
| 12.00 | 78.5 | 6.0 | 113.49 | | |
| 13.00 | 79.1 | 6.5 | 113.57 | | |
| 14.00 | 79.3 | 6.7 | 113.65 | | |
| 15.00 | 79.8 | 7.2 | 113.73 | | |
| 16.00 | 79.9 | 7.3 | 113.81 | | |
| 17.00 | 80.2 | 7.6 | 113.90 | | |
| 18.00 | 80.5 | 7.9 | 113.98 | | |
| 19.00 | 81.2 | 8.6 | 114.06 | | |
| 20.00 | 81.6 | 9.0 | 114.14 | | |
| 21.00 | 81.7 | 9.1 | 114.22 | | |
| 22.00 | 82.0 | 9.4 | 114.30 | | |
| 23.00 | 82.2 | 9.7 | 114.38 | | |
| 24.00 | 82.9 | 10.3 | 114.45 | | |
| 25.00 | 83.0 | 10.4 | 114.52 | | |
| 26.00 | 83.4 | 10.8 | 114.58 | | |
| 27.00 | 83.8 | 11.2 | 114.64 | | |
| 28.00 | 84.2 | 11.6 | 114.70 | | |
| 29.00 | 84.3 | 11.7 | 114.76 | | |
| 30.00 | 84.7 | 12.1 | 114.82 | | |
| 31.00 | 84.9 | 12.3 | 114.88 | | |
| 32.00 | 85.0 | 12.4 | 114.93 | | |
| 33.00 | 85.6 | 13.0 | 114.99 | | |
| 34.00 | 85.7 | 13.1 | 115.04 | | |
| 35.00 | 86.1 | 13.5 | 115.09 | | |
| 36.00 | 86.4 | 13.8 | 115.14 | | |
| 37.00 | 86.6 | 14.0 | 115.19 | | |
| 38.00 | 87.1 | 14.5 | 115.23 | | |
| 39.00 | 87.4 | 14.9 | 115.29 | | |
| 40.00 | 87.6 | 15.0 | 115.34 | | |
| 41.00 | 88.2 | 15.6 | 115.38 | | |
| 42.00 | 88.4 | 15.8 | 115.43 | | |
| 43.00 | 88.6 | 16.0 | 115.47 | | |
| 44.00 | 88.7 | 16.1 | 115.52 | | |
| 45.00 | 89.0 | 16.4 | 115.56 | | |
| 46.00 | 89.2 | 16.6 | 115.60 | | |
| 47.00 | 89.7 | 17.1 | 115.64 | | |
| 48.00 | 90.1 | 17.5 | 115.69 | | |
| 49.00 | 90.3 | 17.7 | 115.73 | | |
| 50.00 | 90.5 | 18.0 | 115.78 | | |
| 51.00 | 91.0 | 18.4 | 115.83 | | |
| 52.00 | 91.2 | 18.6 | 115.89 | | |
| 53.00 | 91.3 | 18.7 | 115.95 | | |
| 54.00 | 91.6 | 19.1 | 116.01 | | |
| 55.00 | 92.1 | 19.5 | 116.07 | | |
| 56.00 | 92.1 | 19.5 | 116.12 | | |
| 57.00 | 92.6 | 20.1 | 116.19 | | |
| 58.00 | 92.8 | 20.2 | 116.23 | | |
| 59.00 | 93.0 | 20.4 | 116.28 | | |
| 60.00 | 103.8 | 31.2 | 116.33 | | |

***** End Flow 2

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: #9689 Bergner #1-16 DST#5 Imperial Oil Prop.

DATE: 02/23/97 TIME: 00:28:13

| | Time | Pressure PSig | delta P PSig | Temp. DEG F | (T+dT)/dT | P ² /10 ⁶ |
|----------------------|-------|------------------|-----------------|----------------|-----------|---------------------------------|
| ***** Start Shutin 2 | 0.00 | 103.8 | 0.0 | 116.33 | 0.0000 | 0.011 |
| | 1.00 | 123.0 | 19.2 | 116.37 | 94.0000 | 0.015 |
| | 2.00 | 142.6 | 38.8 | 116.41 | 47.5000 | 0.020 |
| | 3.00 | 162.0 | 58.2 | 116.45 | 32.0000 | 0.026 |
| | 4.00 | 181.8 | 78.0 | 116.48 | 24.2500 | 0.033 |
| | 5.00 | 201.8 | 97.9 | 116.51 | 19.6000 | 0.041 |
| | 6.00 | 221.5 | 117.7 | 116.53 | 16.5000 | 0.049 |
| | 7.00 | 241.5 | 137.6 | 116.56 | 14.2857 | 0.058 |
| | 8.00 | 261.3 | 157.4 | 116.59 | 12.6250 | 0.068 |
| | 9.00 | 281.2 | 177.4 | 116.61 | 11.3333 | 0.079 |
| | 10.00 | 301.0 | 197.1 | 116.62 | 10.3000 | 0.091 |
| | 11.00 | 320.5 | 216.7 | 116.66 | 9.4545 | 0.103 |
| | 12.00 | 339.7 | 235.9 | 116.67 | 8.7500 | 0.115 |
| | 13.00 | 358.5 | 254.7 | 116.69 | 8.1538 | 0.129 |
| | 14.00 | 377.2 | 273.4 | 116.72 | 7.6429 | 0.142 |
| | 15.00 | 395.7 | 291.9 | 116.74 | 7.2000 | 0.157 |
| | 16.00 | 414.2 | 310.4 | 116.76 | 6.8125 | 0.172 |
| | 17.00 | 432.1 | 328.3 | 116.78 | 6.4706 | 0.187 |
| | 18.00 | 449.8 | 346.0 | 116.79 | 6.1667 | 0.202 |
| | 19.00 | 467.4 | 363.6 | 116.82 | 5.8947 | 0.218 |
| | 20.00 | 484.7 | 380.9 | 116.84 | 5.6500 | 0.235 |
| | 21.00 | 502.0 | 398.2 | 116.86 | 5.4286 | 0.252 |
| | 22.00 | 519.5 | 415.7 | 116.88 | 5.2273 | 0.270 |
| | 23.00 | 536.7 | 432.9 | 116.90 | 5.0435 | 0.288 |
| | 24.00 | 553.5 | 449.7 | 116.92 | 4.8750 | 0.306 |
| | 25.00 | 569.9 | 466.1 | 116.94 | 4.7200 | 0.325 |
| | 26.00 | 585.6 | 481.7 | 116.96 | 4.5769 | 0.343 |
| | 27.00 | 600.7 | 496.9 | 116.99 | 4.4444 | 0.361 |
| | 28.00 | 615.9 | 512.0 | 116.99 | 4.3214 | 0.379 |
| | 29.00 | 630.6 | 526.8 | 117.01 | 4.2069 | 0.398 |
| | 30.00 | 645.1 | 541.3 | 117.03 | 4.1000 | 0.416 |
| | 31.00 | 659.2 | 555.4 | 117.04 | 4.0000 | 0.435 |
| | 32.00 | 673.3 | 569.5 | 117.05 | 3.9062 | 0.453 |
| | 33.00 | 687.0 | 583.2 | 117.07 | 3.8182 | 0.472 |
| | 34.00 | 700.4 | 596.6 | 117.09 | 3.7353 | 0.491 |
| | 35.00 | 713.8 | 610.0 | 117.10 | 3.6571 | 0.510 |
| | 36.00 | 726.9 | 623.1 | 117.11 | 3.5833 | 0.528 |
| | 37.00 | 739.4 | 635.6 | 117.15 | 3.5135 | 0.547 |
| | 38.00 | 752.8 | 649.0 | 117.14 | 3.4474 | 0.567 |
| | 39.00 | 766.8 | 663.0 | 117.17 | 3.3846 | 0.588 |
| | 40.00 | 780.5 | 676.7 | 117.18 | 3.3250 | 0.609 |
| | 41.00 | 793.6 | 689.8 | 117.18 | 3.2683 | 0.630 |
| | 42.00 | 806.5 | 702.6 | 117.21 | 3.2143 | 0.650 |
| | 43.00 | 819.0 | 715.2 | 117.22 | 3.1628 | 0.671 |
| | 44.00 | 831.7 | 727.9 | 117.25 | 3.1136 | 0.692 |
| | 45.00 | 844.1 | 740.3 | 117.24 | 3.0667 | 0.713 |
| | 46.00 | 856.1 | 752.3 | 117.26 | 3.0217 | 0.733 |
| | 47.00 | 868.1 | 764.2 | 117.28 | 2.9787 | 0.754 |
| | 48.00 | 879.8 | 776.0 | 117.29 | 2.9375 | 0.774 |
| | 49.00 | 891.3 | 787.5 | 117.31 | 2.8980 | 0.794 |
| | 50.00 | 902.8 | 799.0 | 117.38 | 2.8600 | 0.815 |

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: #9689 Bergner #1-16 DST#5 Imperial Oil.Prop.

DATE: 02/23/97 TIME: 00:28:13

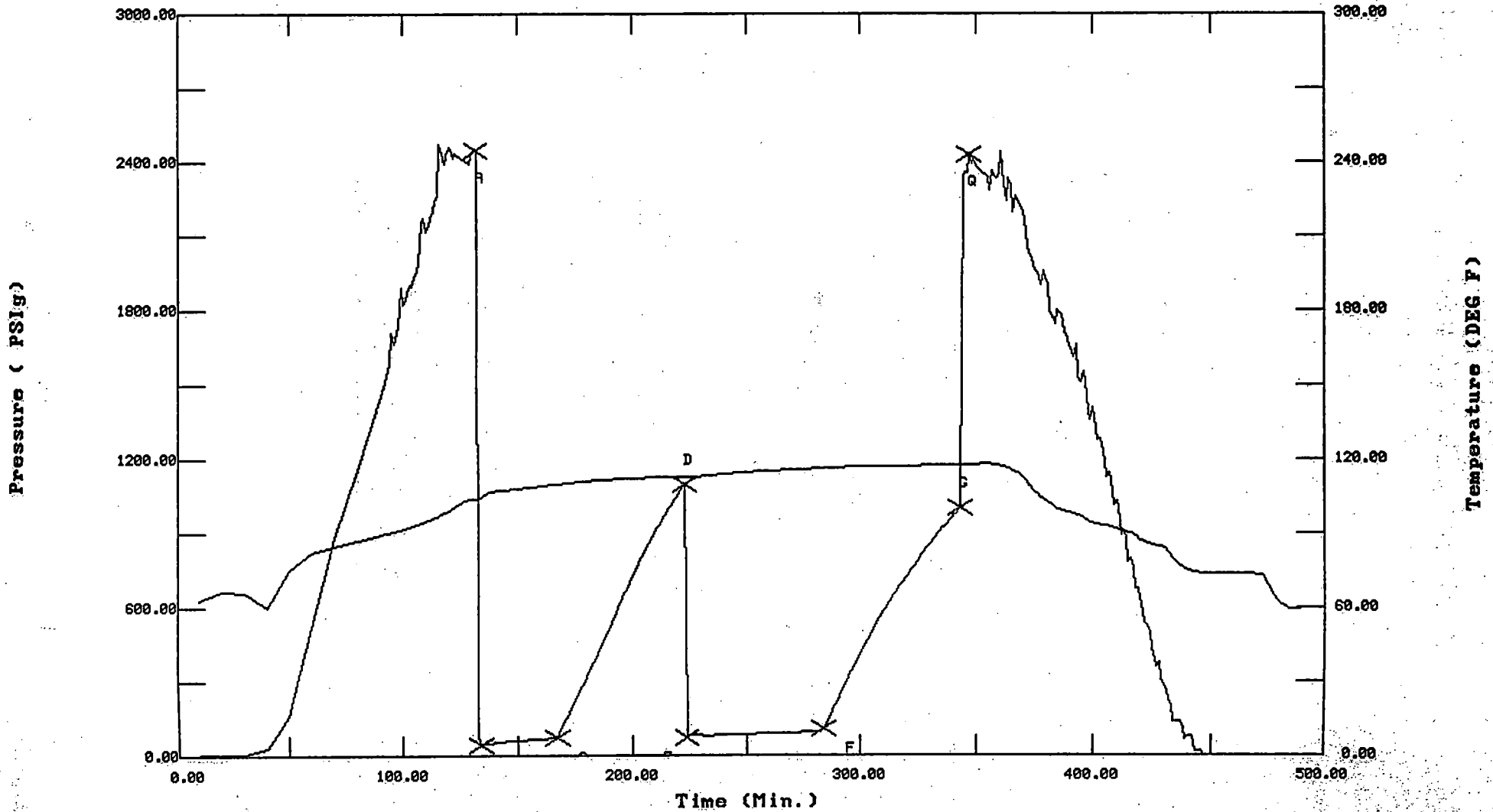
| | Time | Pressure PSig | delta P PSig | Temp. DEG F | (T+dT)/dT | P ² /10 ⁶ |
|---------------------|--------|------------------|-----------------|----------------|-----------|---------------------------------|
| | 51.00 | 914.1 | 810.3 | 117.33 | 2.8235 | 0.836 |
| | 52.00 | 925.4 | 821.6 | 117.35 | 2.7885 | 0.856 |
| | 53.00 | 936.5 | 832.7 | 117.36 | 2.7547 | 0.877 |
| | 54.00 | 947.5 | 843.6 | 117.38 | 2.7222 | 0.898 |
| | 55.00 | 958.2 | 854.4 | 117.38 | 2.6909 | 0.918 |
| | 56.00 | 969.0 | 865.2 | 117.40 | 2.6607 | 0.939 |
| | 57.00 | 979.4 | 875.6 | 117.41 | 2.6316 | 0.959 |
| | 58.00 | 989.8 | 885.9 | 117.44 | 2.6034 | 0.980 |
| ***** End Shut-in 2 | 59.00 | 1000.1 | 896.3 | 117.48 | 2.5763 | 1.000 |
| ***** Final Hydro. | 347.00 | 2428.8 | 0.0 | 117.65 | | |

TEST HISTORY

#9689 Bergner #1-16 DST#5 Imperial Oil.Prop.

Flag Points

| | t (Min.) | P (PSig) |
|----|----------|----------|
| A: | 0.00 | 2450.26 |
| B: | 0.00 | 41.28 |
| C: | 33.00 | 72.59 |
| D: | 56.00 | 1098.35 |
| E: | 0.00 | 72.59 |
| F: | 60.00 | 103.81 |
| G: | 59.00 | 1000.00 |
| Q: | 0.00 | 2428.78 |



TRILOBITE TESTING L.L.C.

OPERATOR : Imperial Oil Properties
 WELL NAME: Bergner #1-16
 LOCATION : 16-32s-18w
 INTERVAL : 5186.00 To 5240.00 ft

DATE 2/23/97

KB 2144.00 ft TICKET NO: 9690 DST #6
 GR 2131.00 ft FORMATION: Mississippi
 TD 5240.00 ft TEST TYPE: CONV

RECORDER DATA

| Mins | | Field | 1 | 2 | 3 | 4 | TIME DATA----- |
|-------|-------------|--------|--------|--------|-----|-----|------------------------|
| PF 30 | Rec. | 11084 | 11084 | 2350 | | | PF Fr. 0129 to 0201 hr |
| SI 60 | Range(Psi) | 4300.0 | 4300.0 | 4995.0 | 0.0 | 0.0 | IS Fr. 0201 to 0301 hr |
| SF 90 | Clock(hrs) | 12 hr | 12 hr | Elec | | | SF Fr. 0301 to 0431 hr |
| FS 90 | Depth(ft) | 5234.0 | 5234.0 | 5191.0 | 0.0 | 0.0 | FS Fr. 0431 to 0601 hr |

| | Field | 1 | 2 | 3 | 4 | |
|----------------|--------|--------|--------|-----|-----|-------------------------------|
| A. Init Hydro | 2619.0 | 2597.0 | 2572.0 | 0.0 | 0.0 | T STARTED 2322 hr |
| B. First Flow | 88.0 | 90.0 | 49.0 | 0.0 | 0.0 | T ON BOTM 0127 hr |
| B1. Final Flow | 99.0 | 74.0 | 52.0 | 0.0 | 0.0 | T OPEN 0129 hr |
| C. In Shut-in | 351.0 | 336.0 | 327.0 | 0.0 | 0.0 | T PULLED 0601 hr |
| D. Init Flow | 88.0 | 71.0 | 44.0 | 0.0 | 0.0 | T OUT 0830 hr |
| E. Final Flow | 99.0 | 75.0 | 54.0 | 0.0 | 0.0 | |
| F. Fl Shut-in | 340.0 | 327.0 | 316.0 | 0.0 | 0.0 | TOOL DATA----- |
| G. Final Hydro | 2619.0 | 2563.0 | 2457.0 | 0.0 | 0.0 | Tool Wt. 2100.00 lbs |
| Inside/Outside | 0 | 0 | I | | | Wt Set On Packer 28000.00 lbs |

RECOVERY

Tot Fluid 90.00 ft of 90.00 ft in DC and 0.00 ft in DP
 60.00 ft of Very Slight Gassy Cut Mud
 0.00 ft of
 0.00 ft of
 30.00 ft of Gas Cut Mud Water
 0.00 ft of 90% mud 8% water 2% gas
 0.00 ft of
 0.00 ft of
 0.00 ft of
 SALINITY 0.00 P.P.M. A.P.I. Gravity 0.00

T ON BOTM 0127 hr
 T OPEN 0129 hr
 T PULLED 0601 hr
 T OUT 0830 hr
 TOOL DATA-----
 Tool Wt. 2100.00 lbs
 Wt Set On Packer 28000.00 lbs
 Wt Pulled Loose 89000.00 lbs
 Initial Str Wt 78000.00 lbs
 Unseated Str Wt 79000.00 lbs
 Bot Choke 0.75 in
 Hole Size 7.88 in
 D Col. ID 2.25 in
 D. Pipe ID 3.80 in
 D.C. Length 211.00 ft
 D.P. Length 4959.00 ft

BLOW DESCRIPTION

Initial Flow:
 Strong blow, bottom of water bucket in
 30 sec

Initial Shut In:
 Bled down for 5 mins, blow back to
 1.5 inches in water bucket

Final Shut In:
 Strong blow, Merla Gauge 59,500 MCF/D

Final Shut In:
 Bled down for 15 min, blow back to
 1" in water bucket

SAMPLES: YES
 SENT TO: Caraway Analytical

MUD DATA-----
 Mud Type
 Weight 9.00 lb/c
 Vis. 61.00 S/L
 W.L. 12.60 in3
 F.C. 0.00 in
 Mud Drop

Amt. of fill 0.00 ft
 Btm. H. Temp. 115.00 F
 Hole Condition good
 % Porosity 0.00
 Packer Size 6.75 in
 No. of Packers 2
 Cushion Amt. 0.00
 Cushion Type
 Reversed Out
 Tool Chased
 Tester Darren Amerine
 Co. Rep. Jon T. Williams
 Contr. Duke
 Rig # 7
 Unit #
 Pump T.

Test Successful: Y

*** TOOL DIAGRAM *** CONV

WELL NAME: Bergner #1-16

LOCATION : 16-32s-18w

TICKET No. 9690 D.S.T. No. 6 DATE 2/23/97

TOTAL TOOL TO BOTTOM OF TOP PACKERS 29'

INTERVAL TOOL

BOTTOM PACKERS AND ANCHOR 24'

TOTAL TOOL 53'

DRILL COLLAR ANCHOR IN INTERVAL

D.C. ANCHOR STND.Stands Single 1 Total 30'

D.P. ANCHOR STND.Stands Single Total

TOTAL ASSEMBLY 83

D.C. ABOVE TOOLS.Stands 4 Single Total 211'

D.P. ABOVE TOOLS.Stands80 Single Total 4959'

TOTAL DRILL COLLARS DRILL PIPE & TOOLS .. 5253'

TOTAL DEPTH 5240'

TOTAL DRILL PIPE ABOVE K.B. 13'

REMARKS:

| | |
|-----------------------------|----------------|
| P.O. SUB | |
| C.O. SUB | 5159' |
| S.I. TOOL | 5164' |
| HMV | 5169' |
| JARS | 5175' |
| SAFETY JOINT | 5177' |
| PACKER 5181' | 5181' |
| PACKER 5186' | 5186' |
| DEPTH STUBB 1' | 5187' |
| ANCHOR | |
| Alpine rec.@5191' | |
| 15'of perfs.to | 5187' 5202' |
| T.C. DEPTH | |
| 30'DRILL COLLAR TO | 5232' |
| Ak-1 rec.@ | 5234' |
| 5'PERFS.TO | 5237' |
| BULLNOSE 3'Bullnose to T.D. | 5240' |

GAS RECOVERY

COMPANY: Imperial Oil Properties

DATE: 2/23/97

WELL NAME: Bergner #1-16

KB Elev: 2144.00 ft TICKET #9690

DST #6

WELL LOCATION: 16-32s-18w

GR Elev: 2131.00 ft FORMATION: Mississippi

INTERVAL Fr.: 5186.00 To 5240.00 T.D.: 5240.00 ft TEST TYPE: CONV

GAS RECOVERY MEASURED WITH MERLA GAUGE

***** GAS RATES FOR FLOW #1

| Time (min) | Orifice (in) | Pressure (Psi) | H2O (in) | Rate (cf/d) |
|---------------|-----------------|-------------------|-------------|----------------|
| 5 | 0.50 | 0 | 58 | 47000.0 |
| 10 | 0.50 | 0 | 66 | 50900.0 |
| 15 | 0.50 | 0 | 72 | 53200.0 |
| 20 | 0.50 | 0 | 74 | 53900.0 |

***** GAS RATES FOR FLOW #2

| Time (min) | Orifice (in) | Pressure (Psi) | H2O (in) | Rate (cf/d) |
|---------------|-----------------|-------------------|-------------|----------------|
| 10 | 0.50 | 0 | 70 | 52400.0 |
| 20 | 0.50 | 0 | 78 | 55300.0 |
| 30 | 0.50 | 0 | 82 | 56800.0 |
| 40 | 0.50 | 0 | 83 | 57000.0 |
| 50 | 0.50 | 0 | 85 | 57800.0 |
| 60 | 0.50 | 0 | 86 | 58100.0 |
| 70 | 0.50 | 0 | 88 | 58800.0 |
| 80 | 0.50 | 0 | 88 | 58800.0 |
| 90 | 0.50 | 0 | 90 | 59500.0 |

NATURAL GAS ANALYSIS REPORT

Sampled by:
Trilobite Testing, L.L.C.
Hays, Kansas
Scott City, Kansas
Phone: 800-728-5369
Fax: 913-625-5620

Analyzed by:
Caraway Analytical, L.L.C.
P. O. Box 2137
Liberal, Kansas 67905
Phone: 316-624-5389
Fax: 316-626-7108

| | | | |
|--------------|--------------------|--------------|----------|
| Lab Number: | 970111 | Analyzed: | 02/26/97 |
| Sample From: | Bergner 1-16 DST 6 | Pressure: | |
| Producer: | Imperial Oil Prop. | Temperature: | |
| Date: | | Location: | 16-32-18 |
| Time: | | County: | Comanche |
| Sampler: | | State: | Kansas |
| Source: | | Formation: | Miss. |

| | Mole % | GPM |
|----------------|------------|-------|
| Helium | He: 0.114 | 0.000 |
| Oxygen | O2: 0.000 | 0.000 |
| Nitrogen | N2: 1.822 | 0.000 |
| Carbon Dioxide | CO2: 0.497 | 0.000 |
| Methane | C1: 92.142 | 0.000 |
| Ethane | C2: 3.155 | 0.844 |
| Propane | C3: 1.048 | 0.289 |
| Iso Butane | iC4: 0.194 | 0.063 |
| Normal Butane | nC4: 0.351 | 0.111 |
| Iso Pentane | iC5: 0.130 | 0.048 |
| Normal Pentane | nC5: 0.133 | 0.048 |
| Hexanes Plus | C6+: 0.414 | 0.181 |

TOTAL: 100.000 1.583
Z Fact: 0.9977
SP.GR.: 0.6167
BTU (SAT): 1048.7 @ 14.73 psia
BTU (DRY): 1067.2 @ 14.73 psia
OCTANE RATING: 124.8

COMMENTS:

0.000

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: #9690 Bergner #1-16 DST#6 Imperial Oil Prop.

DATE: 02/23/97 TIME: 23:24:34

| | Time | Pressure PSig | delta P PSig | Temp. DEG F | (T+dT)/dT | P ² /10 ⁶ |
|----------------------|--------|------------------|-----------------|----------------|-----------|---------------------------------|
| ***** Initial Hydro. | 125.00 | 2572.0 | 0.0 | 102.35 | | |
| ***** Start Flow 1 | 0.00 | 49.0 | 0.0 | 102.54 | | |
| | 1.00 | 44.6 | -4.4 | 102.85 | | |
| | 2.00 | 44.6 | -4.4 | 103.42 | | |
| | 3.00 | 45.6 | -3.4 | 104.07 | | |
| | 4.00 | 44.6 | -4.4 | 104.68 | | |
| | 5.00 | 44.3 | -4.7 | 105.21 | | |
| | 6.00 | 45.1 | -3.9 | 105.63 | | |
| | 7.00 | 44.9 | -4.1 | 105.98 | | |
| | 8.00 | 44.6 | -4.4 | 106.26 | | |
| | 9.00 | 45.6 | -3.4 | 106.50 | | |
| | 10.00 | 45.6 | -3.4 | 106.71 | | |
| | 11.00 | 46.6 | -2.4 | 106.90 | | |
| | 12.00 | 46.2 | -2.9 | 107.08 | | |
| | 13.00 | 45.1 | -3.9 | 107.23 | | |
| | 14.00 | 45.8 | -3.2 | 107.38 | | |
| | 15.00 | 46.5 | -2.5 | 107.51 | | |
| | 16.00 | 46.9 | -2.1 | 107.62 | | |
| | 17.00 | 47.9 | -1.1 | 107.73 | | |
| | 18.00 | 47.5 | -1.5 | 107.82 | | |
| | 19.00 | 48.3 | -0.7 | 107.90 | | |
| | 20.00 | 48.3 | -0.7 | 107.97 | | |
| | 21.00 | 49.6 | 0.6 | 108.03 | | |
| | 22.00 | 49.4 | 0.4 | 108.10 | | |
| | 23.00 | 48.8 | -0.2 | 108.16 | | |
| | 24.00 | 49.5 | 0.5 | 108.23 | | |
| | 25.00 | 49.3 | 0.3 | 108.28 | | |
| | 26.00 | 49.6 | 0.6 | 108.34 | | |
| | 27.00 | 50.7 | 1.7 | 108.38 | | |
| | 28.00 | 50.1 | 1.1 | 108.44 | | |
| | 29.00 | 50.4 | 1.4 | 108.49 | | |
| ***** End Flow 1 | 30.00 | 51.9 | 2.9 | 108.53 | | |
| ***** Start Shutin 1 | 0.00 | 51.9 | 0.0 | 108.53 | 0.0000 | 0.003 |
| | 1.00 | 195.0 | 143.2 | 108.58 | 31.0000 | 0.038 |
| | 2.00 | 266.0 | 214.2 | 108.64 | 16.0000 | 0.071 |
| | 3.00 | 281.7 | 229.9 | 108.68 | 11.0000 | 0.079 |
| | 4.00 | 291.6 | 239.8 | 108.72 | 8.5000 | 0.085 |
| | 5.00 | 298.7 | 246.8 | 108.76 | 7.0000 | 0.089 |
| | 6.00 | 303.7 | 251.9 | 108.79 | 6.0000 | 0.092 |
| | 7.00 | 307.7 | 255.8 | 108.82 | 5.2857 | 0.095 |
| | 8.00 | 310.6 | 258.7 | 108.83 | 4.7500 | 0.096 |
| | 9.00 | 312.9 | 261.0 | 108.85 | 4.3333 | 0.098 |
| | 10.00 | 314.7 | 262.9 | 108.87 | 4.0000 | 0.099 |
| | 11.00 | 316.1 | 264.3 | 108.89 | 3.7273 | 0.10 |
| | 12.00 | 317.3 | 265.5 | 108.91 | 3.5000 | 0.101 |
| | 13.00 | 318.3 | 266.5 | 108.94 | 3.3077 | 0.101 |
| | 14.00 | 319.0 | 267.1 | 108.95 | 3.1429 | 0.102 |
| | 15.00 | 319.6 | 267.7 | 108.97 | 3.0000 | 0.102 |
| | 16.00 | 320.1 | 268.2 | 108.99 | 2.8750 | 0.102 |
| | 17.00 | 320.7 | 268.8 | 109.01 | 2.7647 | 0.103 |
| | 18.00 | 321.0 | 269.2 | 109.03 | 2.6667 | 0.103 |

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: #9690 Bergner #1-16 DST#6 Imperial Oil.Prop.

DATE: 02/23/97

TIME: 23:24:34

| Time | Pressure PSig | delta P PSig | Temp. DEG F | (T+dT)/dT | P ² /10 ⁶ |
|---------------------|------------------|-----------------|----------------|-----------|---------------------------------|
| 19.00 | 321.4 | 269.6 | 109.05 | 2.5789 | 0.103 |
| 20.00 | 321.7 | 269.8 | 109.08 | 2.5000 | 0.103 |
| 21.00 | 321.9 | 270.1 | 109.10 | 2.4286 | 0.104 |
| 22.00 | 322.3 | 270.4 | 109.12 | 2.3636 | 0.104 |
| 23.00 | 322.5 | 270.7 | 109.14 | 2.3043 | 0.104 |
| 24.00 | 322.7 | 270.8 | 109.17 | 2.2500 | 0.104 |
| 25.00 | 322.9 | 271.0 | 109.19 | 2.2000 | 0.104 |
| 26.00 | 323.2 | 271.3 | 109.21 | 2.1538 | 0.104 |
| 27.00 | 323.4 | 271.5 | 109.24 | 2.1111 | 0.105 |
| 28.00 | 323.5 | 271.7 | 109.26 | 2.0714 | 0.105 |
| 29.00 | 323.6 | 271.8 | 109.29 | 2.0345 | 0.105 |
| 30.00 | 323.7 | 271.8 | 109.31 | 2.0000 | 0.105 |
| 31.00 | 324.0 | 272.1 | 109.34 | 1.9677 | 0.105 |
| 32.00 | 324.2 | 272.3 | 109.38 | 1.9375 | 0.105 |
| 33.00 | 324.3 | 272.4 | 109.40 | 1.9091 | 0.105 |
| 34.00 | 324.4 | 272.5 | 109.42 | 1.8824 | 0.105 |
| 35.00 | 324.6 | 272.8 | 109.45 | 1.8571 | 0.105 |
| 36.00 | 324.7 | 272.8 | 109.48 | 1.8333 | 0.105 |
| 37.00 | 324.8 | 272.9 | 109.51 | 1.8108 | 0.105 |
| 38.00 | 324.9 | 273.0 | 109.52 | 1.7895 | 0.106 |
| 39.00 | 325.0 | 273.1 | 109.56 | 1.7692 | 0.106 |
| 40.00 | 325.1 | 273.3 | 109.58 | 1.7500 | 0.106 |
| 41.00 | 325.1 | 273.3 | 109.62 | 1.7317 | 0.106 |
| 42.00 | 325.5 | 273.6 | 109.64 | 1.7143 | 0.106 |
| 43.00 | 325.5 | 273.6 | 109.67 | 1.6977 | 0.106 |
| 44.00 | 325.6 | 273.8 | 109.70 | 1.6818 | 0.106 |
| 45.00 | 325.6 | 273.8 | 109.73 | 1.6667 | 0.106 |
| 46.00 | 325.7 | 273.8 | 109.76 | 1.6522 | 0.106 |
| 47.00 | 325.8 | 273.9 | 109.78 | 1.6383 | 0.106 |
| 48.00 | 325.9 | 274.0 | 109.81 | 1.6250 | 0.106 |
| 49.00 | 326.0 | 274.1 | 109.84 | 1.6122 | 0.106 |
| 50.00 | 326.1 | 274.3 | 109.87 | 1.6000 | 0.106 |
| 51.00 | 326.2 | 274.3 | 109.90 | 1.5882 | 0.106 |
| 52.00 | 326.2 | 274.3 | 109.93 | 1.5769 | 0.106 |
| 53.00 | 326.2 | 274.3 | 109.96 | 1.5660 | 0.106 |
| 54.00 | 326.4 | 274.5 | 109.99 | 1.5556 | 0.107 |
| 55.00 | 326.5 | 274.6 | 110.02 | 1.5455 | 0.107 |
| 56.00 | 326.5 | 274.7 | 110.06 | 1.5357 | 0.107 |
| 57.00 | 326.5 | 274.7 | 110.08 | 1.5263 | 0.107 |
| 58.00 | 326.6 | 274.8 | 110.10 | 1.5172 | 0.107 |
| 59.00 | 326.7 | 274.8 | 110.14 | 1.5085 | 0.107 |
| 60.00 | 326.8 | 274.9 | 110.18 | 1.5000 | 0.107 |
| 61.00 | 326.8 | 274.9 | 110.20 | 1.4918 | 0.107 |
| ***** End Shut-in 1 | | | | | |
| ***** Start Flow 2 | 0.00 | 43.9 | 0.0 | 110.22 | |
| | 1.00 | 43.0 | -0.8 | 110.32 | |
| | 2.00 | 44.2 | 0.3 | 110.49 | |
| | 3.00 | 45.0 | 1.1 | 110.66 | |
| | 4.00 | 46.6 | 2.7 | 110.82 | |
| | 5.00 | 46.3 | 2.4 | 110.94 | |
| | 6.00 | 47.9 | 4.0 | 111.05 | |
| | 7.00 | 48.2 | 4.3 | 111.13 | |

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: #9690 Bergner #1-16 DST#6 Imperial Oil Prop.

DATE: 02/23/97 TIME: 23:24:34

| Time | Pressure PSig | delta P PSig | Temp. DEG F | (T+dt)/dt | P^2/10^6 |
|-------|------------------|-----------------|----------------|-----------|----------|
| 8.00 | 47.8 | 3.9 | 111.19 | | |
| 9.00 | 47.8 | 3.9 | 111.24 | | |
| 10.00 | 48.2 | 4.4 | 111.28 | | |
| 11.00 | 47.7 | 3.9 | 111.32 | | |
| 12.00 | 48.9 | 5.0 | 111.34 | | |
| 13.00 | 48.4 | 4.5 | 111.35 | | |
| 14.00 | 50.2 | 6.3 | 111.38 | | |
| 15.00 | 51.0 | 7.1 | 111.39 | | |
| 16.00 | 51.0 | 7.1 | 111.43 | | |
| 17.00 | 51.3 | 7.4 | 111.44 | | |
| 18.00 | 50.5 | 6.6 | 111.43 | | |
| 19.00 | 51.3 | 7.4 | 111.44 | | |
| 20.00 | 49.8 | 6.0 | 111.46 | | |
| 21.00 | 50.2 | 6.3 | 111.47 | | |
| 22.00 | 49.9 | 6.0 | 111.48 | | |
| 23.00 | 50.2 | 6.3 | 111.50 | | |
| 24.00 | 49.9 | 6.0 | 111.51 | | |
| 25.00 | 51.2 | 7.3 | 111.53 | | |
| 26.00 | 51.6 | 7.7 | 111.54 | | |
| 27.00 | 50.8 | 6.9 | 111.55 | | |
| 28.00 | 51.2 | 7.3 | 111.57 | | |
| 29.00 | 51.5 | 7.6 | 111.57 | | |
| 30.00 | 51.5 | 7.6 | 111.59 | | |
| 31.00 | 53.5 | 9.6 | 111.59 | | |
| 32.00 | 51.2 | 7.3 | 111.60 | | |
| 33.00 | 53.0 | 9.1 | 111.62 | | |
| 34.00 | 51.5 | 7.6 | 111.63 | | |
| 35.00 | 51.9 | 8.0 | 111.64 | | |
| 36.00 | 51.9 | 8.0 | 111.66 | | |
| 37.00 | 51.7 | 7.8 | 111.67 | | |
| 38.00 | 52.3 | 8.4 | 111.68 | | |
| 39.00 | 52.3 | 8.4 | 111.68 | | |
| 40.00 | 52.5 | 8.6 | 111.69 | | |
| 41.00 | 52.0 | 8.1 | 111.70 | | |
| 42.00 | 53.0 | 9.1 | 111.71 | | |
| 43.00 | 52.8 | 8.9 | 111.71 | | |
| 44.00 | 52.6 | 8.7 | 111.71 | | |
| 45.00 | 53.4 | 9.5 | 111.72 | | |
| 46.00 | 52.5 | 8.6 | 111.73 | | |
| 47.00 | 52.7 | 8.8 | 111.73 | | |
| 48.00 | 53.3 | 9.4 | 111.75 | | |
| 49.00 | 53.3 | 9.4 | 111.76 | | |
| 50.00 | 53.8 | 9.9 | 111.77 | | |
| 51.00 | 52.9 | 9.1 | 111.79 | | |
| 52.00 | 53.3 | 9.4 | 111.80 | | |
| 53.00 | 53.6 | 9.7 | 111.81 | | |
| 54.00 | 54.4 | 10.5 | 111.83 | | |
| 55.00 | 53.8 | 9.9 | 111.84 | | |
| 56.00 | 53.3 | 9.4 | 111.86 | | |
| 57.00 | 54.5 | 10.6 | 111.88 | | |
| 58.00 | 55.0 | 11.2 | 111.88 | | |

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: #9690 Bergner #1-16 DST#6 Imperial Oil.Prop.

DATE: 02/23/97

TIME: 23:24:34

| Time | Pressure PSig | delta P PSig | Temp. DEG F | (T+dT)/dT | P ² /10 ⁶ | |
|----------------------|------------------|-----------------|----------------|-----------|---------------------------------|-------|
| 59.00 | 54.1 | 10.2 | 111.89 | | | |
| 60.00 | 54.8 | 10.9 | 111.91 | | | |
| 61.00 | 54.0 | 10.1 | 111.92 | | | |
| 62.00 | 54.0 | 10.1 | 111.94 | | | |
| 63.00 | 54.1 | 10.2 | 111.96 | | | |
| 64.00 | 54.4 | 10.5 | 111.97 | | | |
| 65.00 | 55.9 | 12.0 | 111.98 | | | |
| 66.00 | 54.3 | 10.4 | 112.00 | | | |
| 67.00 | 54.8 | 10.9 | 112.02 | | | |
| 68.00 | 54.5 | 10.6 | 112.04 | | | |
| 69.00 | 54.8 | 10.9 | 112.05 | | | |
| 70.00 | 55.0 | 11.1 | 112.07 | | | |
| 71.00 | 54.9 | 11.0 | 112.08 | | | |
| 72.00 | 54.8 | 10.9 | 112.09 | | | |
| 73.00 | 55.3 | 11.4 | 112.10 | | | |
| 74.00 | 55.4 | 11.5 | 112.12 | | | |
| 75.00 | 55.4 | 11.5 | 112.14 | | | |
| 76.00 | 55.6 | 11.7 | 112.15 | | | |
| 77.00 | 55.5 | 11.6 | 112.17 | | | |
| 78.00 | 55.8 | 11.9 | 112.19 | | | |
| 79.00 | 55.6 | 11.7 | 112.19 | | | |
| 80.00 | 55.9 | 12.0 | 112.20 | | | |
| 81.00 | 56.1 | 12.2 | 112.21 | | | |
| 82.00 | 56.4 | 12.5 | 112.23 | | | |
| 83.00 | 56.0 | 12.1 | 112.24 | | | |
| 84.00 | 56.7 | 12.8 | 112.26 | | | |
| 85.00 | 56.0 | 12.1 | 112.27 | | | |
| 86.00 | 56.7 | 12.8 | 112.29 | | | |
| 87.00 | 56.4 | 12.5 | 112.30 | | | |
| 88.00 | 56.6 | 12.7 | 112.32 | | | |
| 89.00 | 54.5 | 10.6 | 112.35 | | | |
| ***** End Flow 2 | | | | | | |
| ***** Start Shutin 2 | 0.00 | 54.5 | 0.0 | 112.35 | 0.0000 | 0.003 |
| | 1.00 | 228.4 | 174.0 | 112.36 | 120.0000 | 0.052 |
| | 2.00 | 258.2 | 203.8 | 112.39 | 60.5000 | 0.067 |
| | 3.00 | 272.3 | 217.9 | 112.40 | 40.6667 | 0.074 |
| | 4.00 | 282.0 | 227.5 | 112.45 | 30.7500 | 0.080 |
| | 5.00 | 288.7 | 234.2 | 112.48 | 24.8000 | 0.083 |
| | 6.00 | 293.7 | 239.2 | 112.50 | 20.8333 | 0.086 |
| | 7.00 | 297.7 | 243.2 | 112.52 | 18.0000 | 0.089 |
| | 8.00 | 300.6 | 246.2 | 112.54 | 15.8750 | 0.090 |
| | 9.00 | 303.0 | 248.5 | 112.56 | 14.2222 | 0.092 |
| | 10.00 | 304.9 | 250.4 | 112.57 | 12.9000 | 0.093 |
| | 11.00 | 306.4 | 252.0 | 112.60 | 11.8182 | 0.094 |
| | 12.00 | 307.8 | 253.4 | 112.62 | 10.9167 | 0.095 |
| | 13.00 | 308.8 | 254.3 | 112.62 | 10.1538 | 0.095 |
| | 14.00 | 309.6 | 255.1 | 112.64 | 9.5000 | 0.096 |
| | 15.00 | 310.4 | 255.9 | 112.65 | 8.9333 | 0.096 |
| | 16.00 | 311.0 | 256.6 | 112.65 | 8.4375 | 0.097 |
| | 17.00 | 311.6 | 257.2 | 112.67 | 8.0000 | 0.097 |
| | 18.00 | 312.0 | 257.6 | 112.69 | 7.6111 | 0.097 |
| | 19.00 | 312.4 | 257.9 | 112.70 | 7.2632 | 0.098 |

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: #9690 Bergner #1-16 DST#6 Imperial Oil Prop.

DATE: 02/23/97

TIME: 23:24:34

| Time | Pressure PSig | delta P PSig | Temp. DEG F | (T+dT)/dT | P^2/10^6 |
|-------|------------------|-----------------|----------------|-----------|----------|
| 20.00 | 312.9 | 258.4 | 112.71 | 6.9500 | 0.098 |
| 21.00 | 313.2 | 258.7 | 112.74 | 6.6667 | 0.098 |
| 22.00 | 313.6 | 259.2 | 112.76 | 6.4091 | 0.098 |
| 23.00 | 313.9 | 259.4 | 112.79 | 6.1739 | 0.099 |
| 24.00 | 314.4 | 259.9 | 112.82 | 5.9583 | 0.099 |
| 25.00 | 314.6 | 260.1 | 112.85 | 5.7600 | 0.099 |
| 26.00 | 315.0 | 260.5 | 112.89 | 5.5769 | 0.099 |
| 27.00 | 315.1 | 260.7 | 112.93 | 5.4074 | 0.099 |
| 28.00 | 315.5 | 261.0 | 112.96 | 5.2500 | 0.10 |
| 29.00 | 315.7 | 261.3 | 112.99 | 5.1034 | 0.10 |
| 30.00 | 308.7 | 254.2 | 113.03 | 4.9667 | 0.095 |
| 31.00 | 309.0 | 254.6 | 113.08 | 4.8387 | 0.095 |
| 32.00 | 309.1 | 254.6 | 113.11 | 4.7188 | 0.096 |
| 33.00 | 309.4 | 255.0 | 113.15 | 4.6061 | 0.096 |
| 34.00 | 309.7 | 255.2 | 113.19 | 4.5000 | 0.096 |
| 35.00 | 309.8 | 255.3 | 113.21 | 4.4000 | 0.096 |
| 36.00 | 310.0 | 255.6 | 113.25 | 4.3056 | 0.096 |
| 37.00 | 310.3 | 255.8 | 113.28 | 4.2162 | 0.096 |
| 38.00 | 310.4 | 255.9 | 113.31 | 4.1316 | 0.096 |
| 39.00 | 310.5 | 256.1 | 113.33 | 4.0513 | 0.096 |
| 40.00 | 310.8 | 256.3 | 113.37 | 3.9750 | 0.097 |
| 41.00 | 310.9 | 256.4 | 113.39 | 3.9024 | 0.097 |
| 42.00 | 311.1 | 256.7 | 113.41 | 3.8333 | 0.097 |
| 43.00 | 311.3 | 256.8 | 113.44 | 3.7674 | 0.097 |
| 44.00 | 311.4 | 257.0 | 113.47 | 3.7045 | 0.097 |
| 45.00 | 311.6 | 257.2 | 113.51 | 3.6444 | 0.097 |
| 46.00 | 311.8 | 257.3 | 113.53 | 3.5870 | 0.097 |
| 47.00 | 311.9 | 257.4 | 113.56 | 3.5319 | 0.097 |
| 48.00 | 312.0 | 257.6 | 113.58 | 3.4792 | 0.097 |
| 49.00 | 312.2 | 257.7 | 113.61 | 3.4286 | 0.097 |
| 50.00 | 312.3 | 257.8 | 113.64 | 3.3800 | 0.098 |
| 51.00 | 312.5 | 258.1 | 113.66 | 3.3333 | 0.098 |
| 52.00 | 312.6 | 258.2 | 113.69 | 3.2885 | 0.098 |
| 53.00 | 312.8 | 258.3 | 113.71 | 3.2453 | 0.098 |
| 54.00 | 312.9 | 258.4 | 113.74 | 3.2037 | 0.098 |
| 55.00 | 313.0 | 258.5 | 113.77 | 3.1636 | 0.098 |
| 56.00 | 313.0 | 258.6 | 113.79 | 3.1250 | 0.098 |
| 57.00 | 313.3 | 258.8 | 113.81 | 3.0877 | 0.098 |
| 58.00 | 313.5 | 259.0 | 113.84 | 3.0517 | 0.098 |
| 59.00 | 313.5 | 259.1 | 113.86 | 3.0169 | 0.098 |
| 60.00 | 313.6 | 259.2 | 113.88 | 2.9833 | 0.098 |
| 61.00 | 313.8 | 259.3 | 113.92 | 2.9508 | 0.098 |
| 62.00 | 313.9 | 259.4 | 113.95 | 2.9194 | 0.099 |
| 63.00 | 314.0 | 259.6 | 113.96 | 2.8889 | 0.099 |
| 64.00 | 314.1 | 259.7 | 113.98 | 2.8594 | 0.099 |
| 65.00 | 314.2 | 259.8 | 114.00 | 2.8308 | 0.099 |
| 66.00 | 314.3 | 259.8 | 114.03 | 2.8030 | 0.099 |
| 67.00 | 314.5 | 260.0 | 114.06 | 2.7761 | 0.099 |
| 68.00 | 314.6 | 260.1 | 114.08 | 2.7500 | 0.099 |
| 69.00 | 314.7 | 260.3 | 114.11 | 2.7246 | 0.099 |
| 70.00 | 314.9 | 260.4 | 114.14 | 2.7000 | 0.099 |

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: #9690 Bergner #1-16 DST#6 Imperial Oil.Prop.

DATE: 02/23/97 TIME: 23:24:34

| Time | Pressure PSig | delta P PSig | Temp. DEG F | (T+dT)/dT | P ² /10 ⁶ | |
|---------------------|------------------|-----------------|----------------|-----------|---------------------------------|-------|
| 71.00 | 314.8 | 260.3 | 114.16 | 2.6761 | 0.099 | |
| 72.00 | 315.0 | 260.5 | 114.18 | 2.6528 | 0.099 | |
| 73.00 | 315.0 | 260.6 | 114.20 | 2.6301 | 0.099 | |
| 74.00 | 315.0 | 260.6 | 114.22 | 2.6081 | 0.099 | |
| 75.00 | 315.2 | 260.8 | 114.26 | 2.5867 | 0.099 | |
| 76.00 | 315.3 | 260.8 | 114.28 | 2.5658 | 0.099 | |
| 77.00 | 315.4 | 260.9 | 114.31 | 2.5455 | 0.099 | |
| 78.00 | 315.5 | 261.0 | 114.34 | 2.5256 | 0.10 | |
| 79.00 | 315.5 | 261.0 | 114.36 | 2.5063 | 0.10 | |
| 80.00 | 315.6 | 261.2 | 114.39 | 2.4875 | 0.10 | |
| 81.00 | 315.6 | 261.2 | 114.41 | 2.4691 | 0.10 | |
| 82.00 | 315.8 | 261.4 | 114.44 | 2.4512 | 0.10 | |
| 83.00 | 316.0 | 261.5 | 114.46 | 2.4337 | 0.10 | |
| 84.00 | 316.0 | 261.5 | 114.48 | 2.4167 | 0.10 | |
| 85.00 | 316.1 | 261.6 | 114.51 | 2.4000 | 0.10 | |
| 86.00 | 316.1 | 261.7 | 114.53 | 2.3837 | 0.10 | |
| 87.00 | 316.1 | 261.7 | 114.56 | 2.3678 | 0.10 | |
| 88.00 | 316.4 | 261.9 | 114.58 | 2.3523 | 0.100 | |
| 89.00 | 316.4 | 261.9 | 114.61 | 2.3371 | 0.100 | |
| ***** End Shut-in 2 | 90.00 | 316.5 | 262.0 | 114.64 | 2.3222 | 0.100 |
| ***** Final Hydro. | 399.00 | 2456.6 | 0.0 | 114.79 | | |

TEST HISTORY

#9690 Bergner #1-16 DST#6 Imperial Oil Prop.

Flag Points

t (Min.) P (PSig)

| | | |
|----|-------|---------|
| A: | 0.00 | 2572.04 |
| B: | 0.00 | 49.01 |
| C: | 30.00 | 51.86 |
| D: | 61.00 | 328.79 |
| E: | 0.00 | 43.89 |
| F: | 89.00 | 54.46 |
| G: | 90.00 | 316.47 |
| Q: | 0.00 | 2456.64 |

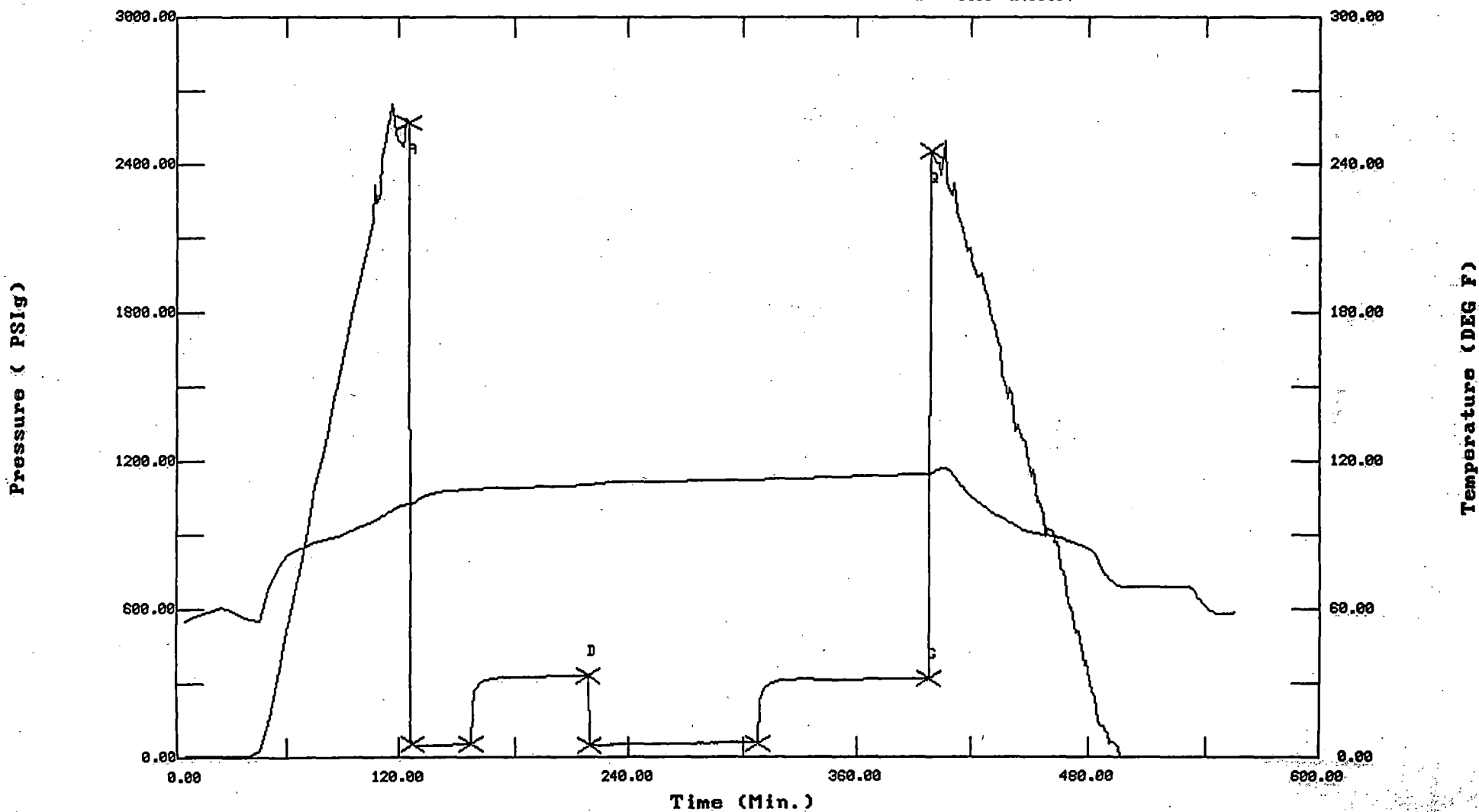
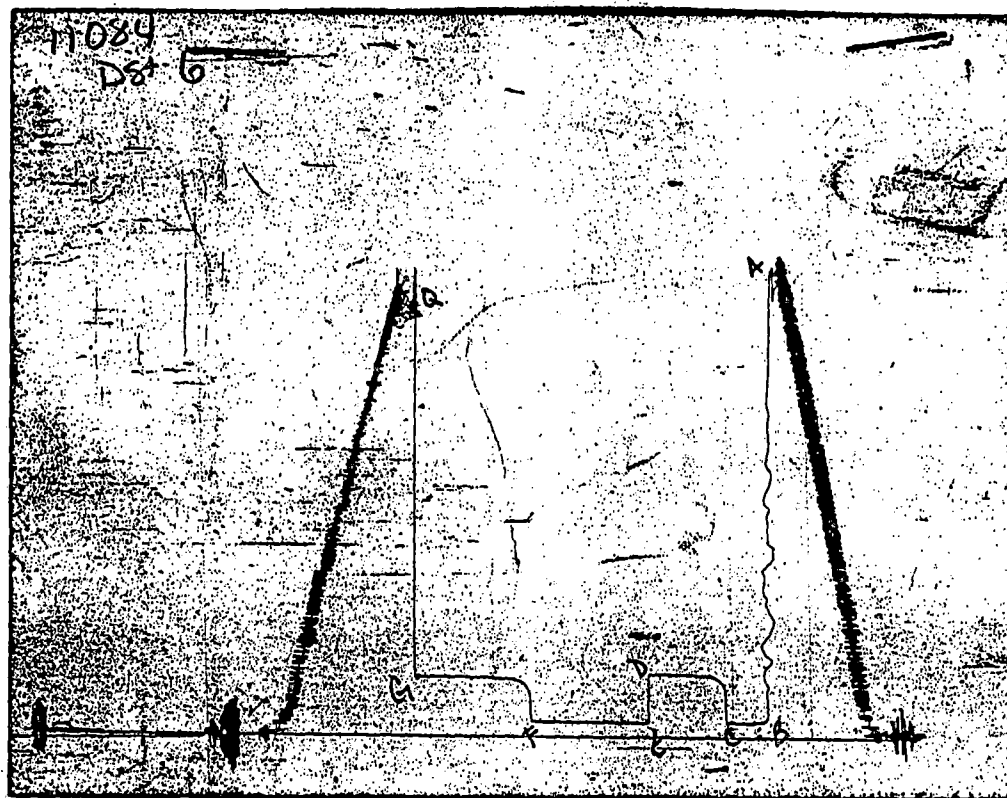


CHART PAGE



This is a photocopy of the actual AK-1 recorder chart

TRILOBITE TESTING L.L.C.

OPERATOR : Imperial Oil Properties
 WELL NAME: Bergner #1-16
 LOCATION : 16-32s-18w
 INTERVAL : 5680.00 To 5710.00 ft

DATE 2/26/97
 KB 2144.00 ft TICKET NO: 9691 DST #7
 GR 2131.00 ft FORMATION: Viola
 TD 5710.00 ft TEST TYPE: CONV.

RECORDER DATA

| Mins | Field | 1 | 2 | 3 | 4 | TIME DATA----- |
|-------------------|--------|--------|--------|-----|-----|------------------------|
| PF 15 Rec. | 11084 | 11084 | Alpine | | | PF Fr. 1738 to 1756 hr |
| SI 30 Range(Psi) | 4300.0 | 4300.0 | 4995.0 | 0.0 | 0.0 | IS Fr. 1756 to 1826 hr |
| SF 30 Clock(hrs) | 12 hr | 12 hr | Elec. | | | SF Fr. 1826 to 1856 hr |
| FS 45 Depth(ft) | 5707.0 | 5707.0 | 5685.0 | 0.0 | 0.0 | FS Fr. 1856 to 1941 hr |

| | Field | 1 | 2 | 3 | 4 | |
|----------------|-------|-----|--------|-----|-----|-------------------|
| A. Init Hydro | 0.0 | 0.0 | 2900.0 | 0.0 | 0.0 | T STARTED 1520 hr |
| B. First Flow | 0.0 | 0.0 | 1614.0 | 0.0 | 0.0 | T ON BOTM 1736 hr |
| Bl. Final Flow | 0.0 | 0.0 | 1735.0 | 0.0 | 0.0 | T OPEN 1738 hr |
| C. In Shut-in | 0.0 | 0.0 | 2005.0 | 0.0 | 0.0 | T PULLED 1841 hr |
| D. Init Flow | 0.0 | 0.0 | 1594.0 | 0.0 | 0.0 | T OUT 2000 hr |
| E. Final Flow | 0.0 | 0.0 | 1700.0 | 0.0 | 0.0 | |
| F. Fl Shut-in | 0.0 | 0.0 | 2000.0 | 0.0 | 0.0 | |
| G. Final Hydro | 0.0 | 0.0 | 2657.0 | 0.0 | 0.0 | |
| Inside/Outside | 0 | 0 | I | | | |

RECOVERY

Tot Fluid 5650.00 ft of 0.00 ft in DC and 0.00 ft in DP
 5650.00 ft of Gas in the pipe
 0.00 ft of
 0.00 ft of
 0.00 ft of
 0.00 ft of
 0.00 ft of
 0.00 ft of

SALINITY 0.00 P.P.M. A.P.I. Gravity 0.00

BLOW DESCRIPTION

Initial Flow:
 Strong blow, Gas to surface in 60 sec

Initial Shut In:

Final Flow:
 Strong blow, Big gas!

Final Shut In:

SAMPLES:
 SENT TO:

TOOL DATA-----

| | |
|------------------|---------------|
| Tool Wt. | 2100.00 lbs |
| Wt Set On Packer | 25000.00 lbs |
| Wt Pulled Loose | 105000.00 lbs |
| Initial Str Wt | 79000.00 lbs |
| Unseated Str Wt | 79000.00 lbs |
| Bot Choke | 0.75 in |
| Hole Size | 7.88 in |
| D Col. ID | 2.25 in |
| D. Pipe ID | 3.80 in |
| D.C. Length | 241.00 ft |
| D.P. Length | 5426.00 ft |

MUD DATA-----

| Mud Type | Chemical |
|----------|-----------|
| Weight | 9.30 lb/c |
| Vis. | 49.00 S/L |
| W.L. | 7.80 in3 |
| F.C. | 0.00 in |
| Mud Drop | |

| | |
|----------------|----------|
| Amt. of fill | 0.00 ft |
| Btm. H. Temp. | 132.00 F |
| Hole Condition | good |
| % Porosity | 0.00 |
| Packer Size | 6.75 in |
| No. of Packers | 2 |
| Cushion Amt. | 0.00 |

Cushion Type
 Reversed Out
 Tool Chased
 Tester Darren Amerine
 Co. Rep. Jon T. Williams
 Contr. Duke
 Rig # 7
 Unit #
 Pump T.

Test Successful: Y

*** TOOL DIAGRAM *** CONV

WELL NAME: Bergner #1-16

LOCATION : 16-32s-18w

TICKET No. 9691 D.S.T. No. 7 DATE 2/26/97

TOTAL TOOL TO BOTTOM OF TOP PACKERS 29'

INTERVAL TOOL

BOTTOM PACKERS AND ANCHOR 30'

TOTAL TOOL 59'

DRILL COLLAR ANCHOR IN INTERVAL

D.C. ANCHOR STND.Stands Single Total

D.P. ANCHOR STND.Stands Single Total

TOTAL ASSEMBLY 59'

D.C. ABOVE TOOLS.Stands 4 Single Total 241'

D.P. ABOVE TOOLS.Stands 87 Single 1 Total 5426'

TOTAL DRILL COLLARS DRILL PIPE & TOOLS .. 5726'

TOTAL DEPTH 5710'

TOTAL DRILL PIPE ABOVE K.B. 16'

REMARKS:

| | |
|------------------------------|-------|
| P.O. SUB | |
| C.O. SUB | 5653' |
| S.I. TOOL | 5658' |
| HMV | 5663' |
| JARS | 5669' |
| SAFETY JOINT | 5671' |
| PACKER Top | 5675' |
| PACKER Bottom | 5680' |
| DEPTH | |
| STUBB 1' | 5681' |
| ANCHOR | |
| Alpine rec. @ 5685 | |
| 27' of perms. to | 5681' |
| | 5708' |
| T.C. DEPTH | |
| Ak-1 rec. @ 5707' | |
| BULLNOSE 2' Bullnose to T.D. | 5710' |

GAS RECOVERY

COMPANY: Imperial Oil Properties

DATE: 2/26/97

WELL NAME: Bergner #1-16

KB Elev: 2144.00 ft TICKET #9691

DST #7

WELL LOCATION: 16-32s-18w

GR Elev: 2131.00 ft FORMATION: Viola

INTERVAL Fr.: 5680.00 To 5710.00 T.D.: 5710.00 ft TEST TYPE: CONV.

GAS RECOVERY MEASURED WITH MERLA GAUGE

***** GAS RATES FOR FLOW #1

| Time (min) | Orifice (in) | Pressure (Psi) | H2O (in) | Rate (cf/d) |
|---------------|-----------------|-------------------|-------------|----------------|
| 5 | 1.50 | 75 | 0 | 5245000.0 |
| 10 | 1.50 | 90 | 0 | 6140000.0 |

***** GAS RATES FOR FLOW #2

| Time (min) | Orifice (in) | Pressure (Psi) | H2O (in) | Rate (cf/d) |
|---------------|-----------------|-------------------|-------------|----------------|
| 5 | 2.00 | 30 | 0 | 7819000.0 |
| 10 | 2.00 | 35 | 0 | 8546000.0 |
| 10 | 2.00 | 35 | 0 | 8546000.0 |
| 15 | 2.00 | 35 | 0 | 8546000.0 |
| 20 | 2.00 | 35 | 0 | 8546000.0 |
| 25 | 2.00 | 40 | 0 | 9614250.0 |
| 30 | 2.00 | 40 | 0 | 9614250.0 |

 ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: #9691 Bergner #1-16 DST#7 Imperial Oil Prop.
 DATE: 02/26/97 TIME: 15:21:50

| | Time | Pressure PSig | delta P PSig | Temp. DEG F | (T+dT)/dT | P ² /10 ⁶ |
|----------------------|--------|------------------|-----------------|----------------|-----------|---------------------------------|
| ***** Initial Hydro. | 138.00 | 2900.3 | 0.0 | 109.40 | | |
| ***** Start Flow 1 | 0.00 | 1614.3 | 0.0 | 111.88 | | |
| | 1.00 | 1615.8 | 1.5 | 113.72 | | |
| | 2.00 | 1637.1 | 22.8 | 115.53 | | |
| | 3.00 | 1656.4 | 42.1 | 117.20 | | |
| | 4.00 | 1672.8 | 58.5 | 118.67 | | |
| | 5.00 | 1685.9 | 71.7 | 120.00 | | |
| | 6.00 | 1697.8 | 83.5 | 121.13 | | |
| | 7.00 | 1713.8 | 99.5 | 122.11 | | |
| | 8.00 | 1721.6 | 107.3 | 122.95 | | |
| | 9.00 | 1728.8 | 114.6 | 123.74 | | |
| | 10.00 | 1732.7 | 118.4 | 124.41 | | |
| | 11.00 | 1734.8 | 120.5 | 125.00 | | |
| | 12.00 | 1736.0 | 121.7 | 125.52 | | |
| | 13.00 | 1736.7 | 122.5 | 125.95 | | |
| | 14.00 | 1737.1 | 122.9 | 126.34 | | |
| ***** End Flow 1 | 15.00 | 1735.9 | 121.6 | 126.69 | | |
| ***** Start Shutin 1 | 0.00 | 1735.9 | 0.0 | 126.69 | 0.0000 | 3.013 |
| | 1.00 | 1991.1 | 255.2 | 127.00 | 16.0000 | 3.964 |
| | 2.00 | 1996.0 | 260.1 | 127.67 | 8.5000 | 3.984 |
| | 3.00 | 1997.7 | 261.9 | 128.60 | 6.0000 | 3.991 |
| | 4.00 | 1999.2 | 263.3 | 129.42 | 4.7500 | 3.997 |
| | 5.00 | 2000.3 | 264.5 | 129.99 | 4.0000 | 4.001 |
| | 6.00 | 2001.1 | 265.2 | 130.28 | 3.5000 | 4.004 |
| | 7.00 | 2001.8 | 265.9 | 130.47 | 3.1429 | 4.007 |
| | 8.00 | 2002.1 | 266.2 | 130.56 | 2.8750 | 4.008 |
| | 9.00 | 2002.5 | 266.6 | 130.54 | 2.6667 | 4.010 |
| | 10.00 | 2002.8 | 266.9 | 130.51 | 2.5000 | 4.011 |
| | 11.00 | 2002.9 | 267.1 | 130.47 | 2.3636 | 4.012 |
| | 12.00 | 2003.3 | 267.5 | 130.39 | 2.2500 | 4.013 |
| | 13.00 | 2003.4 | 267.6 | 130.34 | 2.1538 | 4.014 |
| | 14.00 | 2003.6 | 267.7 | 130.23 | 2.0714 | 4.014 |
| | 15.00 | 2003.9 | 268.0 | 130.11 | 2.0000 | 4.015 |
| | 16.00 | 2004.0 | 268.1 | 129.98 | 1.9375 | 4.016 |
| | 17.00 | 2004.0 | 268.1 | 129.85 | 1.8824 | 4.016 |
| | 18.00 | 2004.1 | 268.2 | 129.72 | 1.8333 | 4.016 |
| | 19.00 | 2004.3 | 268.4 | 129.60 | 1.7895 | 4.017 |
| | 20.00 | 2004.4 | 268.5 | 129.47 | 1.7500 | 4.017 |
| | 21.00 | 2004.4 | 268.6 | 129.38 | 1.7143 | 4.018 |
| | 22.00 | 2004.5 | 268.7 | 129.24 | 1.6818 | 4.018 |
| | 23.00 | 2004.8 | 268.9 | 129.12 | 1.6522 | 4.019 |
| | 24.00 | 2004.9 | 269.0 | 129.00 | 1.6250 | 4.020 |
| | 25.00 | 2004.9 | 269.0 | 128.94 | 1.6000 | 4.020 |
| | 26.00 | 2005.0 | 269.1 | 128.78 | 1.5769 | 4.020 |
| | 27.00 | 2005.0 | 269.1 | 128.68 | 1.5556 | 4.020 |
| | 28.00 | 2005.0 | 269.2 | 128.60 | 1.5357 | 4.020 |
| | 29.00 | 2005.2 | 269.3 | 128.50 | 1.5172 | 4.021 |
| ***** End Shut-in 1 | 30.00 | 2005.2 | 269.3 | 128.40 | 1.5000 | 4.021 |
| ***** Start Flow 2 | 0.00 | 1594.4 | 0.0 | 128.05 | | |
| | 1.00 | 1595.4 | 1.0 | 127.55 | | |
| | 2.00 | 1610.2 | 15.9 | 127.08 | | |

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: #9691 Bergner #1-16 DST#7 Imperial Oil Prop.

DATE: 02/26/97 TIME: 15:21:50

| Time | Pressure PSig | delta P PSig | Temp. DEG F | (T+dT)/dT | P ² /10 ⁶ |
|-------|------------------|-----------------|----------------|-----------|---------------------------------|
| 3.00 | 1629.4 | 35.1 | 126.72 | | |
| 4.00 | 1648.7 | 54.3 | 126.51 | | |
| 5.00 | 1671.5 | 77.1 | 126.44 | | |
| 6.00 | 1688.6 | 94.3 | 126.50 | | |
| 7.00 | 1701.7 | 107.3 | 126.67 | | |
| 8.00 | 1710.8 | 116.4 | 126.88 | | |
| 9.00 | 1718.3 | 124.0 | 127.12 | | |
| 10.00 | 1722.8 | 128.4 | 127.42 | | |
| 11.00 | 1728.3 | 133.9 | 127.65 | | |
| 12.00 | 1733.3 | 138.9 | 127.90 | | |
| 13.00 | 1734.4 | 140.1 | 128.08 | | |
| 14.00 | 1735.9 | 141.5 | 128.33 | | |
| 15.00 | 1736.9 | 142.5 | 128.53 | | |
| 16.00 | 1735.2 | 140.8 | 128.70 | | |
| 17.00 | 1735.2 | 140.8 | 128.85 | | |
| 18.00 | 1732.9 | 138.6 | 128.96 | | |
| 19.00 | 1728.1 | 133.7 | 129.15 | | |
| 20.00 | 1723.8 | 129.4 | 129.13 | | |
| 21.00 | 1718.2 | 123.8 | 129.21 | | |
| 22.00 | 1715.6 | 121.3 | 129.20 | | |
| 23.00 | 1710.4 | 116.1 | 129.22 | | |
| 24.00 | 1707.6 | 113.2 | 129.22 | | |
| 25.00 | 1705.7 | 111.4 | 129.21 | | |
| 26.00 | 1703.2 | 108.9 | 129.23 | | |
| 27.00 | 1701.5 | 107.2 | 129.22 | | |
| 28.00 | 1700.3 | 105.9 | 129.22 | | |

***** End Flow 2

***** Start Shutin 2

| | | | | | |
|-------|--------|-------|--------|---------|-------|
| 0.00 | 1700.3 | 0.0 | 129.22 | 0.0000 | 2.891 |
| 1.00 | 1982.7 | 282.4 | 129.24 | 44.0000 | 3.931 |
| 2.00 | 1987.2 | 286.9 | 129.73 | 22.5000 | 3.949 |
| 3.00 | 1989.2 | 289.0 | 130.52 | 15.3333 | 3.957 |
| 4.00 | 1990.9 | 290.6 | 131.22 | 11.7500 | 3.964 |
| 5.00 | 1992.0 | 291.7 | 131.71 | 9.6000 | 3.968 |
| 6.00 | 1993.0 | 292.7 | 132.08 | 8.1667 | 3.972 |
| 7.00 | 1993.7 | 293.4 | 132.25 | 7.1429 | 3.975 |
| 8.00 | 1994.3 | 294.0 | 132.35 | 6.3750 | 3.977 |
| 9.00 | 1994.7 | 294.4 | 132.36 | 5.7778 | 3.979 |
| 10.00 | 1995.2 | 294.9 | 132.35 | 5.3000 | 3.981 |
| 11.00 | 1995.5 | 295.3 | 132.30 | 4.9091 | 3.982 |
| 12.00 | 1995.9 | 295.6 | 132.24 | 4.5833 | 3.984 |
| 13.00 | 1996.1 | 295.8 | 132.17 | 4.3077 | 3.985 |
| 14.00 | 1996.3 | 296.0 | 132.13 | 4.0714 | 3.985 |
| 15.00 | 1996.6 | 296.3 | 132.05 | 3.8667 | 3.987 |
| 16.00 | 1996.8 | 296.5 | 131.97 | 3.6875 | 3.987 |
| 17.00 | 1996.9 | 296.6 | 131.91 | 3.5294 | 3.988 |
| 18.00 | 1997.2 | 296.9 | 131.83 | 3.3889 | 3.989 |
| 19.00 | 1997.5 | 297.2 | 131.75 | 3.2632 | 3.990 |
| 20.00 | 1997.6 | 297.4 | 131.67 | 3.1500 | 3.991 |
| 21.00 | 1997.7 | 297.4 | 131.60 | 3.0476 | 3.991 |
| 22.00 | 1997.9 | 297.6 | 131.51 | 2.9545 | 3.992 |
| 23.00 | 1998.0 | 297.7 | 131.43 | 2.8696 | 3.992 |
| 24.00 | 1998.1 | 297.9 | 131.35 | 2.7917 | 3.993 |

 ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: #9691 Bergner #1-16 DST#7 Imperial Oil.Prop.

DATE: 02/26/97 TIME: 15:21:50

| Time | Pressure PSig | delta P PSig | Temp. DEG F | (T+dT)/dT | P ² /10 ⁶ |
|---------------------|------------------|-----------------|----------------|-----------|---------------------------------|
| 25.00 | 1998.4 | 298.1 | 131.26 | 2.7200 | 3.994 |
| 26.00 | 1998.6 | 298.3 | 131.21 | 2.6538 | 3.994 |
| 27.00 | 1998.5 | 298.2 | 131.14 | 2.5926 | 3.994 |
| 28.00 | 1998.6 | 298.4 | 131.07 | 2.5357 | 3.995 |
| 29.00 | 1998.8 | 298.5 | 130.99 | 2.4828 | 3.995 |
| 30.00 | 1998.8 | 298.5 | 130.93 | 2.4333 | 3.995 |
| 31.00 | 1998.9 | 298.6 | 130.85 | 2.3871 | 3.996 |
| 32.00 | 1999.1 | 298.8 | 130.78 | 2.3438 | 3.996 |
| 33.00 | 1999.2 | 298.9 | 130.72 | 2.3030 | 3.997 |
| 34.00 | 1999.2 | 299.0 | 130.66 | 2.2647 | 3.997 |
| 35.00 | 1999.3 | 299.0 | 130.59 | 2.2286 | 3.997 |
| 36.00 | 1999.5 | 299.2 | 130.53 | 2.1944 | 3.998 |
| 37.00 | 1999.4 | 299.1 | 130.48 | 2.1622 | 3.998 |
| 38.00 | 1999.6 | 299.3 | 130.41 | 2.1316 | 3.998 |
| 39.00 | 1999.7 | 299.4 | 130.36 | 2.1026 | 3.999 |
| 40.00 | 1999.8 | 299.6 | 130.30 | 2.0750 | 3.999 |
| 41.00 | 1999.8 | 299.6 | 130.27 | 2.0488 | 3.999 |
| 42.00 | 1999.9 | 299.6 | 130.26 | 2.0238 | 4.000 |
| 43.00 | 1999.9 | 299.6 | 130.19 | 2.0000 | 4.000 |
| 44.00 | 2000.0 | 299.7 | 130.14 | 1.9773 | 4.000 |
| 45.00 | 2000.2 | 299.9 | 130.09 | 1.9556 | 4.001 |
| 46.00 | 2000.1 | 299.8 | 130.04 | 1.9348 | 4.000 |
| ***** End Shut-in 2 | | | | | |
| ***** Final Hydro. | 262.00 | 2656.8 | 0.0 | 130.02 | |

TEST HISTORY

#9691 Bergner #1-16 DST#7 Imperial Oil Prop.

Flag Points

t (Min.) P (PSig)

| | | |
|----|-------|---------|
| R1 | 0.00 | 2900.29 |
| B1 | 0.00 | 1614.26 |
| C1 | 15.00 | 1735.87 |
| D1 | 30.00 | 2005.19 |
| E1 | 0.00 | 1594.37 |
| F1 | 28.00 | 1700.29 |
| G1 | 46.00 | 2000.00 |
| Q1 | 0.00 | 2656.81 |

