CARBONIT

CARBONIT EXPLORATION, INC.

WESTERN DIVISION EXPLORATION

160 INVERNESS DRIVE WEST
INVERNESS BUSINESS PARK
ENGLEWOOD, COLORADO 80112

Office: (303) 773-8209
Telecopier: (303) 741-5456

February 24, 1981

State of Utah
Dept. of Natural Resouraces
Division of Oil & Gas & Mining

Re: Waiver to Rule C-3
General Well Spacing Requirement

As an offset leasehold well operator, Carbonit hereby waives any and all exceptions to Rule C-3 governing general well spacing requirements as they apply to Energetics #32-13 Federal Well located in Section 13 T40S-R22E (2280' FNL 1890'FEL).

Sincerely,

Gary F. Lawyer
Exploration Manager

GFL:v

ENERGETICS INC.

February 26, 1981

State of Utah
Department of Natural Resources
Board of Oil and Gas Conservation
1588 West North Temple
Salt Lake City, Utah 84116

Attn: Mr. Mike Minder, Chief Engineer

Re: Colorado Energetics-Federal 32-13
SW/4 NE/4, 2280' FNL & 1980' FEL
Section 13, T40S, R22E
San Juan County, Utah

Gentlemen:

With reference to the enclosed Application to Drill, Letter of Waiver from Carbonit Exploration, Inc., and our recent verbal communication, Energetics respectfully requests approval of the APD to drill the subject well as an exception to Rule C-3-b "General Well Spacing Requirements", and same exception being granted without a formal hearing before the Board of Oil and Gas Conservation.

Federal 32-13 was staked 2280 feet from the north line and 1980 feet from the east line of Section 13 and, as such, is only 360 feet from the south line of the west half of the NE/4 of the section, this constituting the eighty (80) acre leasehold on which the well will be drilled. Section 13 is not spaced, and the location falls within the minimum 500 feet from a property or lease line as set forth in statewide Rule C-3.

The Federal 32-13 well was located at the site indicated to avoid the sides of steeply dipping canyon walls or placing it in the bottom of an intermittant stream, as shown on the surveyor's and topographic maps.

The nearest producing oil well to the subject location is the J. W. Holmes well, located 1980 feet from the south line and 660 feet from the east line of said Section 13 and being 1668 feet distant from the proposed location. Carbonit Exploration, an interest owner in the Energetics-Holmes Federal 34-13, located 1850 feet from the east line and 800 feet from the south line of Section 13, and in the said J. W. Holmes well, waives any objections to the location of the subject location.

Yours very truly,

K G Cervenka

K. G. Cervenka
Operations Manager

KGC/ct

Enc.

102 INVERNESS TERRACE EAST • 303 779-8282 • ENGLEWOOD, COLORADO 80112

Form OGC-1a

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

SUBMIT IN TRIPLICATE*
(Other instructions on reverse side)

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. Type of Work: DRILL [X] DEEPEN [ ] PLUG BACK [ ]

b. Type of Well: Oil Well [X] Gas Well [ ] Other Single Zone [ ] Multiple Zone [ ]

2. Name of Operator: Colorado Energetics, Inc.

3. Address of Operator: 102 Inverness Terrace East, Englewood, Colorado 80112

4. Location of Well (Report location clearly and in accordance with any State requirements.*)
At surface: SW/4 NE/4 (2280' FNL & 1890' FEL) Sec. 13
At proposed prod. zone: As above

5. Lease Designation and Serial No.: U-056794

6. If Indian, Allottee or Tribe Name: ----

7. Unit Agreement Name: ----

8. Farm or Lease Name: Federal

9. Well No.: 32-13

10. Field and Pool, or Wildcat: ~~Wildcat~~ Turner Bluff

11. Sec., T., R., M., or Blk. and Survey or Area: Sec. 13-T40S-R22E

12. County or Parrish: San Juan

13. State: Utah

14. Distance in miles and direction from nearest town or post office*: 6 miles east of Bluff, Utah

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drlg. line, if any): 360'

16. No. of acres in lease: 80±

17. No. of acres assigned to this well: 40

18. Distance from proposed location* to nearest well, drilling, completed, or applied for, on this lease, ft.: 1st well on lease

19. Proposed depth: 5700'

20. Rotary or cable tools: Rotary

21. Elevations (Show whether DF, RT, GR, etc.): 4517' GR

22. Approx. date work will start*: On approval of permit & rig availability.

23. PROPOSED CASING AND CEMENTING PROGRAM

	Size of Hole	Size of Casing	Weight per Foot	Setting Depth	Quantity of Cement
(4)	17 1/4"	13 3/8", H-40	48# new	350'	Sufficient to cement to surface.
	7 7/8"	5 1/2", K-55	15.5# new	5700'	Amount to cover 750' above Paradox Pay Zone & from 1600' to cover Navajo SS.

(1) Surface Formation: Morrison
(2) Estimated Tops: Entrada 580', Navajo 680', Kayenta 1120', Windgate 1180', Chinle 1550', Cedar Mesa 3500', Hermosa 4525', Lower Ismay 5420', Desert Creek 5525', Akah 5625'.
(3) Estimated Depth of Gas & Oil: Lower Ismay at 5420' & Desert Creek at 5525'.
(5) Pressure Control: 12"-3000 psi double hydraulic BOP's and 12"-3000 psi casing head. Pressure test to 50% of casing internal yield (1350 psi) & test BOP's operationally daily.
(6) Drilling Fluid: Fresh water, nondispersed and dispersed systems. Wt. 9.2-9.5#/gal., Viscosity 34-35 seconds, Water Loss 25-10 cc. Monitor flow line and pits visually.
(7) Auxillary Equipment: No float at bit. Upper kelly cock on Kelly and inside BOP or stab in valve available on derrick floor.
(8) Drill Stem Tests: Test Lower Ismay-Desert Creek as warranted by shows.

(Cont. on Page 2)

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

24. Signed: K G Cerwenka Title: Operations Manager Date: 2-24-81

(This space for Federal or State office use)

Permit No. ..... Approval Date .....

Approved by ..... Title ..... Date .....

Conditions of approval, if any:

APPROVED BY THE DIVISION OF OIL, GAS, AND MINING
DATE: 4-6-81
BY: M. J. Minder

*See Instructions On Reverse Side

COMPANY COLORADO ENERGETICS, INCORPORATED

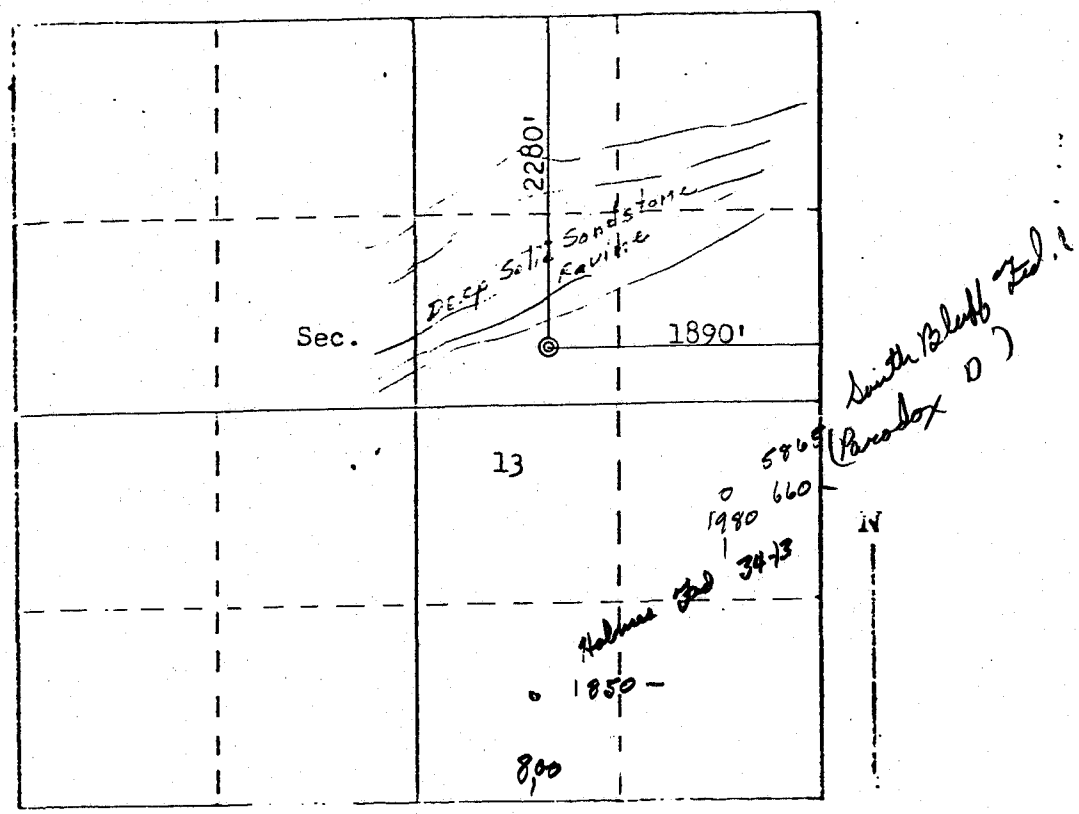
LEASE FEDERAL WELL NO. 32-13

SEC. 13, T. 40S, R. 22E

SAN JUAN COUNTY, UTAH

LOCATION 2280'FNL 1890'FEL

ELEVATION 4517 ungraded ground



SCALE—4 INCHES EQUALS 1 MILE

THIS IS TO CERTIFY THAT THE ABOVE PLAT WAS PREPARED FROM FIELD NOTE OF ACTUAL SURVEYS MADE BY ME OR UNDER MY SUPERVISION AND THAT THE SAME IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

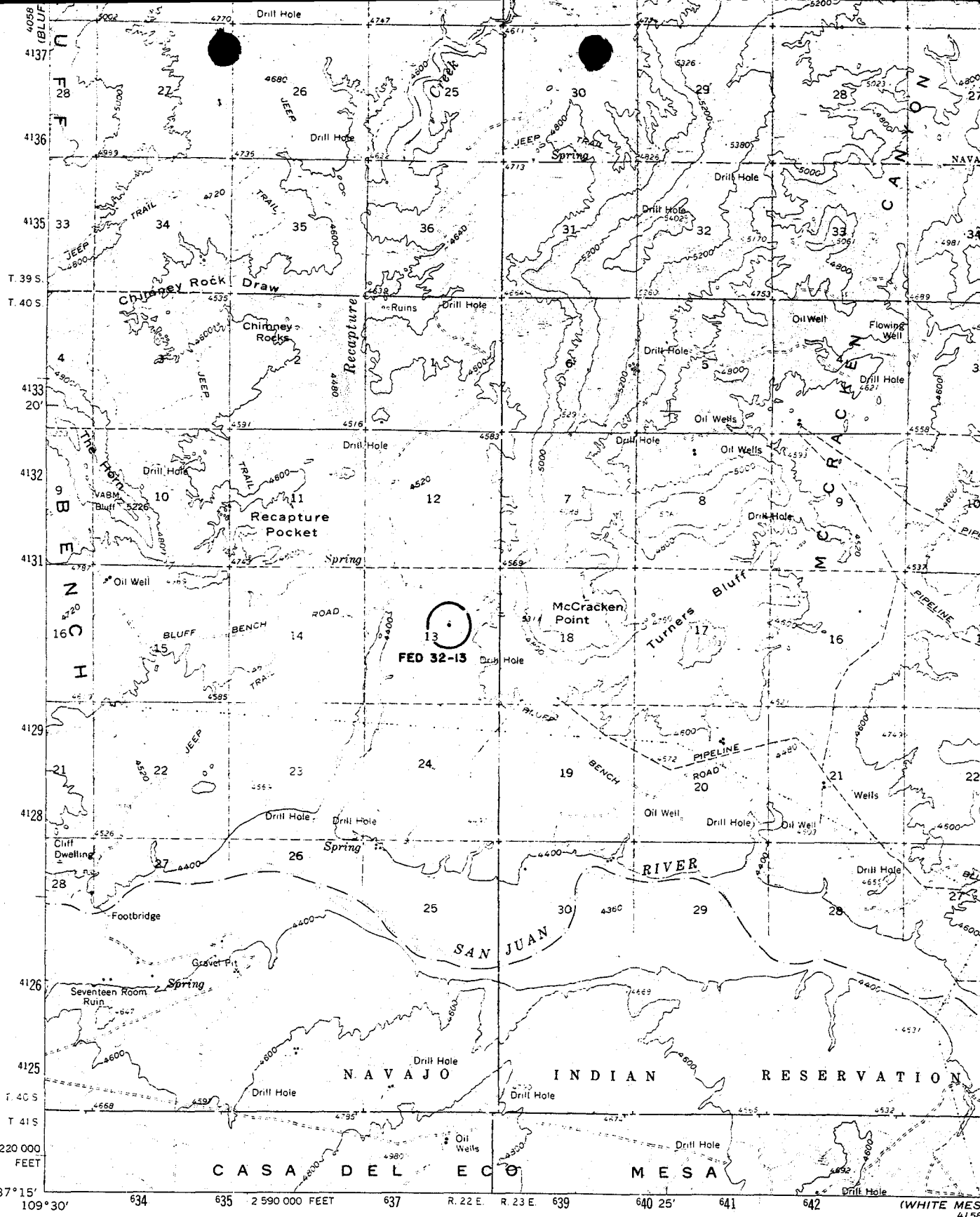
SEAL:

Registered Land Surveyor.

3950

SURVEYED January 20, 1981

FARMINGTON, N. M.



Mapped, edited, and published by the Geological Survey

Control by USGS and USC&GS

Topography by photogrammetric methods from aerial photographs taken 1959. Field checked 1962

Polyconic projection. 1927 North American datum
10,000-foot grid based on Utah coordinate system, south zone
1000-meter Universal Transverse Mercator grid ticks, zone 12, shown in blue

Where omitted, land lines have not been established

UTM GRID AND 1962 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

SCALE 1

CONTOUR INTE
DOTTED LINES REPRESE
DATUM IS MEA

THIS MAP COMPLIES WITH NATION
FOR SALE BY U. S. GEOLOGICAL SURVEY, DENVER
A FOLDER DESCRIBING TOPOGRAPHIC MAPS

Form OGC-1a

SUBMIT IN TRIPLICATE*
(Other instructions on reverse side)

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

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. Type of Work
DRILL [X] DEEPEN [ ] PLUG BACK [ ]

b. Type of Well
Oil Well [X] Gas Well [ ] Other Single Zone [ ] Multiple Zone [ ]

2. Name of Operator
Colorado Energetics, Inc.

3. Address of Operator
102 Inverness Terrace East, Englewood, Colorado 80112

4. Location of Well (Report location clearly and in accordance with any State requirements.*)
At surface
SW/4 NE/4 (2280' FNL & 1890' FEL) Sec. 13
At proposed prod. zone
As above

5. Lease Designation and Serial No.
U-056794

6. If Indian, Allottee or Tribe Name
----

7. Unit Agreement Name
----

8. Farm or Lease Name
Federal

9. Well No.
32-13

10. Field and Pool, or Wildcat
Wildcat

11. Sec., T., R., M., or Blk. and Survey or Area
Sec. 13-T40S-R22E

12. County or Parrish: San Juan
13. State: Utah

14. Distance in miles and direction from nearest town or post office*
6 miles east of Bluff, Utah

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drlg. line, if any): 360'

16. No. of acres in lease: 80±

17. No. of acres assigned to this well: 40

18. Distance from proposed location* to nearest well, drilling, completed, or applied for, on this lease, ft.: 1st well on lease

19. Proposed depth: 5700'

20. Rotary or cable tools: Rotary

21. Elevations (Show whether DF, RT, GR, etc.)
4517' GR

22. Approx. date work will start*
On approval of permit & rig availability.

23. PROPOSED CASING AND CEMENTING PROGRAM

Size of Hole	Size of Casing	Weight per Foot	Setting Depth	Quantity of Cement

(Cont. from Page 1)

(9) Coring: None anticipated.
(10) Logging: Dual Induction-Laterolog, CNL-Density-Gamma Ray & BHC-Sonic logs.
(11) H_2S life protection and detection system and apparatus will be installed prior to drilling the Ismay sections to TD. H_2S chemicals for mud treatment will be stored on location. Anticipated Ismay-Desert Creek pressure gradient .470.
(12) Well Completion: The Ismay-Desert Creek will be perforated in the approximate intervals 5420-5440' & 5525-5555', a string of 2-7/8", 6.5#, J-55 tubing run, and the well acidized with approximately 1500 gallons acid. The drilling location pad will be of sufficient size to accommodate all completion activities and equipment.

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

24.
Signed: K G Cawcutka Title: Operations Manager Date: 2-24-81

(This space for Federal or State office use)

Permit No. ..... Approval Date .....

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

*See Instructions On Reverse Side

COMPANY COLORADO ENERGETICS, INCORPORATED

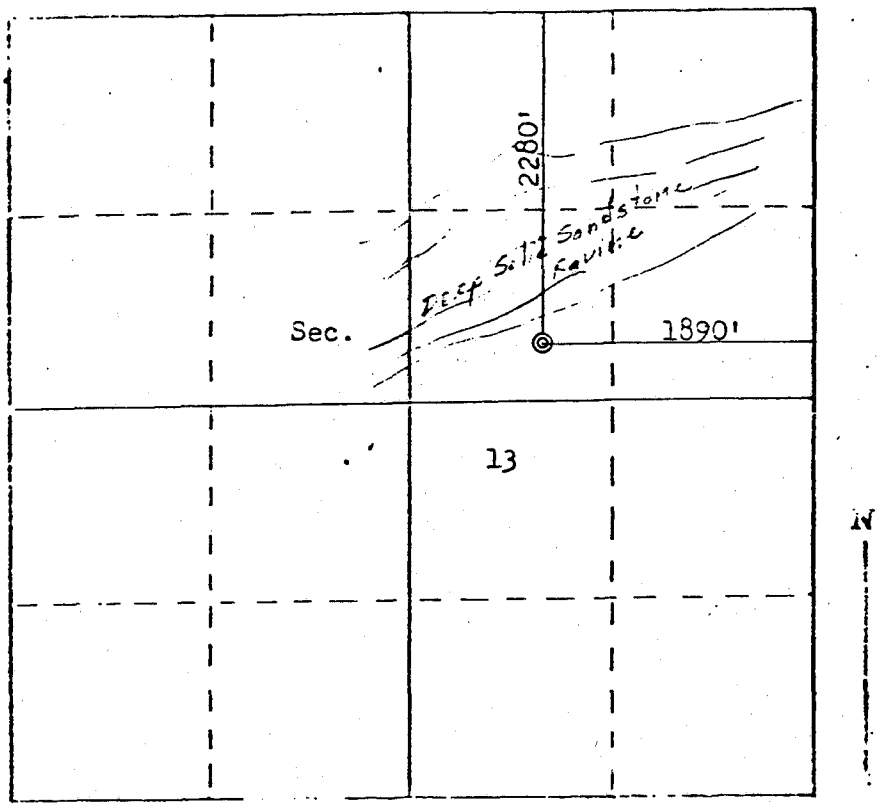
LEASE FEDERAL WELL NO. 32-13

SEC. 13, T. 40S, R. 22E

SAN JUAN COUNTY, UTAH

LOCATION 2280'FNL 1890'FEL

ELEVATION 4517 ungraded ground



SCALE—4 INCHES EQUALS 1 MILE

THIS IS TO CERTIFY THAT THE ABOVE PLAT WAS PREPARED FROM FIELD NOTE OF ACTUAL SURVEYS MADE BY ME OR UNDER MY SUPERVISION AND THAT THE SAME ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

SEAL:

Registered Land Surveyor.

3950

SURVEYED January 20, 1981

FARMINGTON, N. M.

** FILE NOTATIONS **

DATE: March 31, 1981

OPERATOR: Colorado Energetics, Inc

WELL NO: Federal 32-13

Location: Sec. 13 T. 40S R. 22E County: San Juan

File Prepared: ✓ Entered on N.I.D: ✓

Card Indexed: ✓ Completion Sheet: ✓

API Number 43-037-30656

CHECKED BY:

Petroleum Engineer: M.T. Minder 4-6-81
As an oil well only! Call 4-6-81 K. Cervenka the Holmes Fed 34-13 is not a gas well but a pumping oil well in same section

Director:

Administrative Aide: C-3(c) spacing - Topo request submitted w/appl; Too close to #34-13(GW) in Section 13. (Col. Energetics) DR. no formation

APPROVAL LETTER:

Bond Required: Survey Plat Required:

Order No. O.K. Rule C-3

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

Lease Designation Fed. Plotted on Map

Approval Letter Written ✓

Hot Line ✓ P.I. ✓

April 14, 1981

Colorado Energetics, Inc.
102 Inverness Terrace East
Englewood, Colorado 80212

Re: Well No. Federal 32-13
Sec. 13, T. 40S, R. 22E, SW NE
San Juan County, Utah

Insofar as this office is concerned, approval to drill the above referred to oil well on said unorthodox location is hereby granted in accordance with Rule C-3(c), General Rules and Regulations and Rules of Practice and Procedure. Please be advised that this location is approvedd for the production of OIL only.

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

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

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

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

The API number assigned to this well is 43-037-30656.

Sincerely,

DIVISION OF OIL, GAS, AND MINING

Michael T. Minder
Petroleum Engineer

MTM/ko
cc: USGS

JS-165

COMPANY ENERGETICS, INC. WELL FEDERAL #32-13 TEST NO. 1 COUNTY SAN JUAN STATE UTAH

JOHNSTON

Schlumberger

computerized data analysis

F.R. #34111 E

JOHNSTON
Schlumberger

COMPUTERIZED DATA ANALYSIS

JUNE 17, 1981

GENTLEMEN:

THE ENCLOSED TEST APPEARS TO BE A GOOD MECHANICAL DRILL STEM TEST DURING WHICH THE TOOLS DID FUNCTION PROPERLY. THE FORMATION PRODUCED ENOUGH RESERVOIR FLUID FOR PROPER INTENTIFICATION. RESERVOIR PRESSURE DRAWDOWN WAS SUFFICIENT AND ADEQUATE SHUT-IN BUILD-UPS DID OCCUR FOR RELIABLE QUANTITATIVE ANALYSIS. AFTERFLOW WAS STILL IN EFFECT ON THE INITIAL SHUT-IN BUILD-UP TO THE EXTENT THAT THE PLOT IS CONSIDERED UNRELIABLE FOR ANALYSIS. RESERVOIR PARAMETERS WERE CALCULATED BY THE MCKINLEY METHOD.

1. FLOW RATE: A FLOW RATE OF 15 BBLS/DAY OF WATER AND TRACES OF GAS WAS NOTED DURING THIS TEST.

2. RESERVOIR PRESSURE: RESERVOIR PRESSURE WAS ESTIMATED TO BE 2082 P.S.I.A. USING AN ESTIMATED PRESSURE GRADIENT OF 0.371 PSI/FOOT.

3. PERMEABILITY: THE CALCULATED TRANSMISSIBILITY FACTOR OF 7.09 MD.-FT./CP. INDICATES AN AVERAGE EFFECTIVE PERMEABILITY TO WATER OF 0.039 MD. FOR THE REPORTED 100 FOOT TEST INTERVAL. THE CALCULATIONS WERE BASED ON A MCKINLEY SLOPE OF 343.96 P.S.I./LOG CYCLE OBTAINED FROM THE FINAL SHUT-IN BUILD-UP PLOT. IT WAS ASSUMED FOR THE CALCULATIONS: (A) VISCOSITY 0.55 CP., (B) FORMATION VOLUME FACTOR 1.00 BBL/BBL. THESE FIGURES WERE OBTAINED FROM THE AVAILABLE TECHNICAL LITERATURE.

4. WELLBORE DAMAGE: THE CALCULATED DAMAGE RATIO OF 1.44 INDICATES THAT WELLBORE DAMAGE IS PRESENT AT THE TIME AND CONDITIONS OF THIS TEST. THE PRESSURE DROP DUE TO DAMAGE IS ESTIMATED TO BE 568 P.S.I.

5. RADIUS OF INVESTIGATION: THE CALCULATED RADIUS OF INVESTIGATION OF THIS TEST IS 31 FEET BASED ON AN ASSUMED POROSITY OF 10%, COMPRESSIBILITY OF 3.25×10^{-6}, AND OTHER ASSUMPTIONS MADE IN NUMBER 3 ABOVE.

6. GENERAL COMMENTS: THE FORMATION EXHIBITS THE CHARACTERISTICS OF RELATIVELY LOW PERMEABILITY EFFECTIVE TO THE RESERVOIR FLUID AND INDICATES THE PRESENCE OF WELLBORE DAMAGE. WE RECOMMEND MUCH LONGER SHUT-IN PERIODS TO GET MORE RELIABLE RESULTS: A RATIO OF 1:8 FOR INITIAL FLOW AND SHUT-IN AND AT LEAST 1:2.5 FOR THE FINAL FLOW AND SHUT-IN.

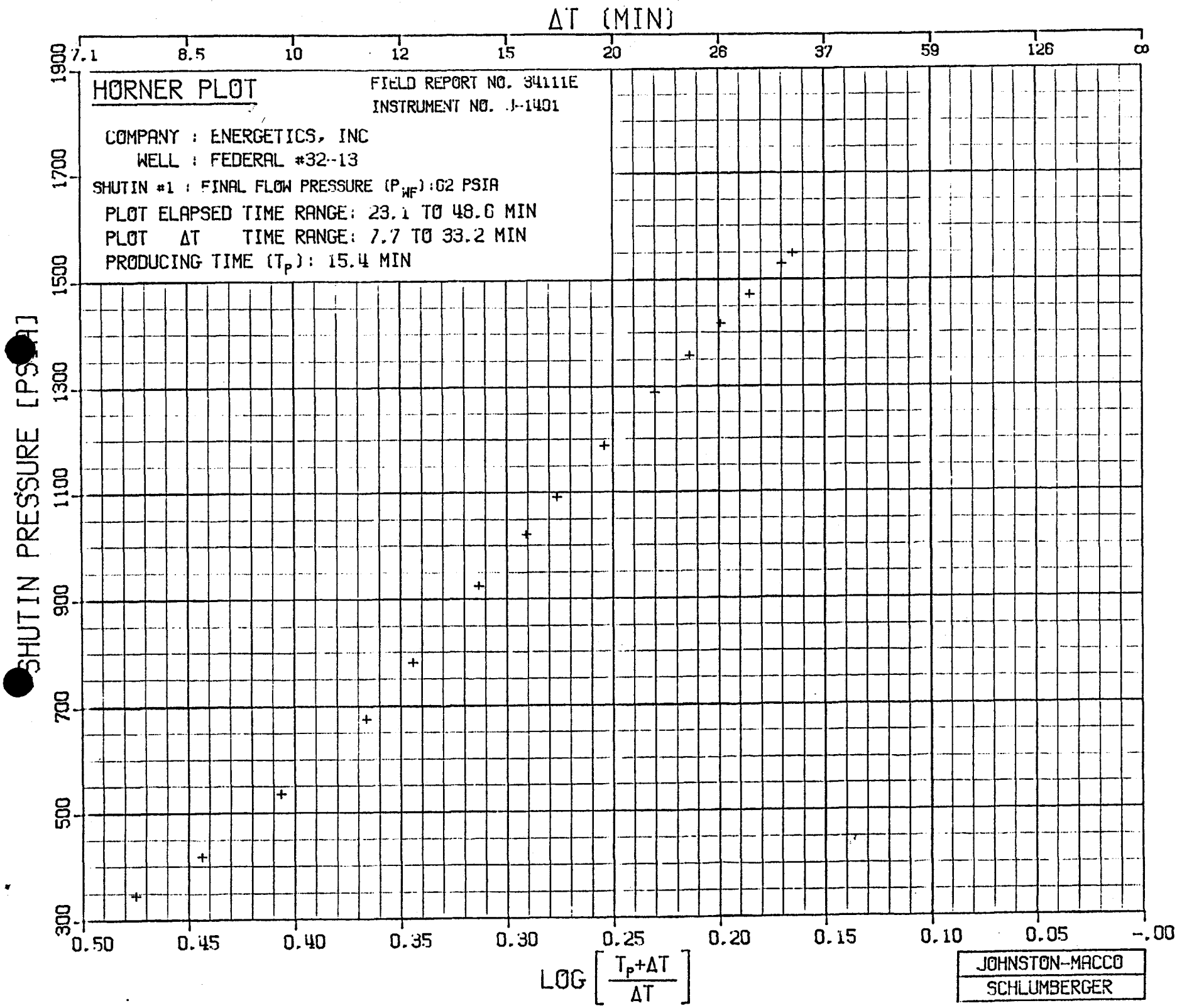
P.K. Suresh

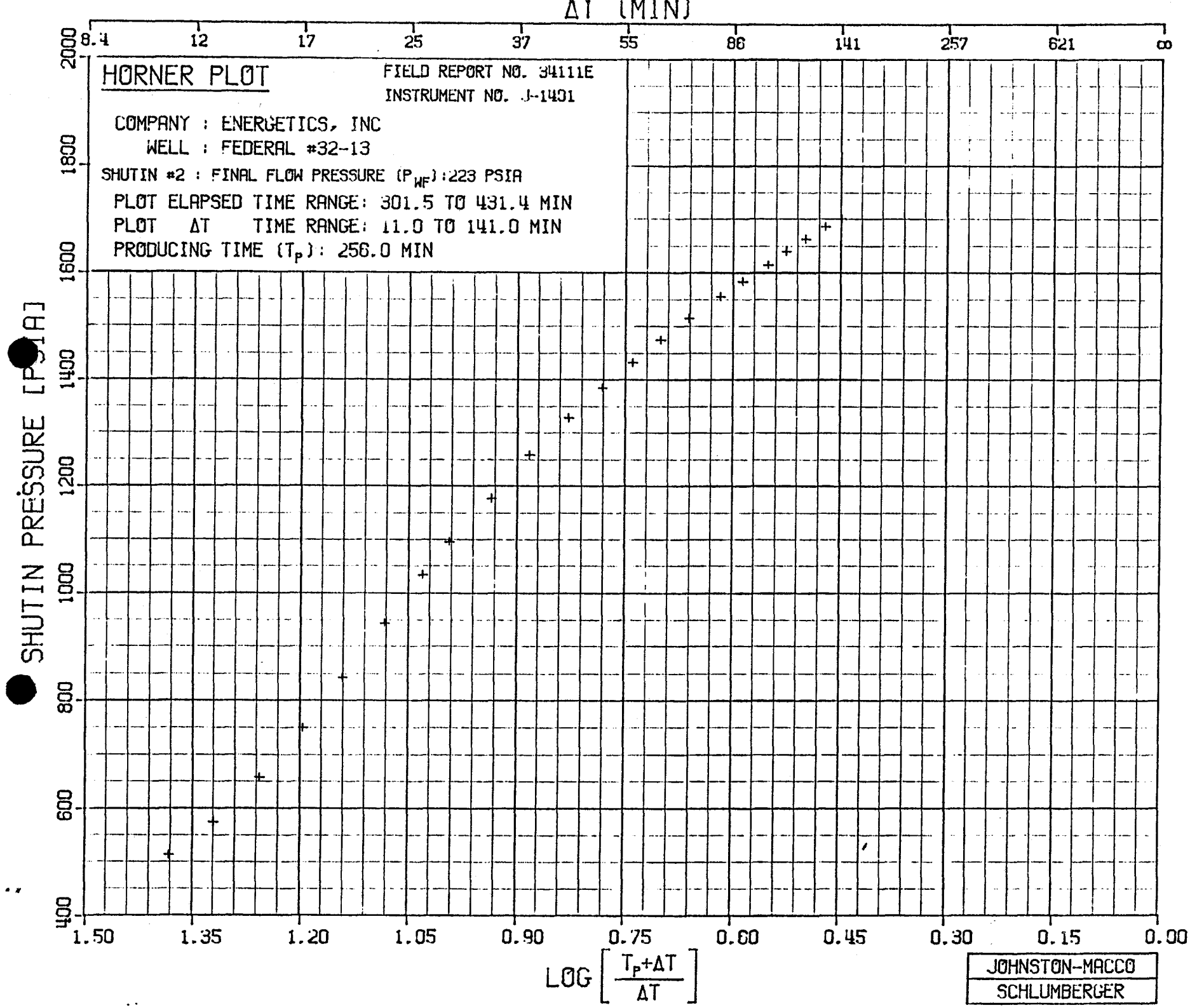
P.K. SURESH
DENVER RESERVOIR EVALUATION DEPARTMENT

ENERGETICS, INC.
FEDERAL #32-13, SAN JUAN COUNTY,
UTAH, TEST #1, 5734' TO 5635'
SEC. 13, T40S R22E

FIELD REPORT # 34111 E

In making any interpretation, our employees will give Customer the benefit of their best judgment as to the correct interpretation. Nevertheless, since all interpretations are opinions based on inferences from electrical, mechanical or other measurements, we cannot, and do not guarantee the accuracy or correctness of any interpretations, and we shall not be liable or responsible, except in the case of gross or wilful negligence on our


ΔT (MIN)
7.1
8.5
10
12
15
20
26
37
59
126
∞
HORNER PLOT
FIELD REPORT NO. 34111E
INSTRUMENT NO. J-1401
COMPANY : ENERGETICS, INC
WELL : FEDERAL #32-13
SHUTIN #1 : FINAL FLOW PRESSURE (P_{WF}):62 PSIA
PLOT ELAPSED TIME RANGE: 23.1 TO 48.6 MIN
PLOT ΔT TIME RANGE: 7.7 TO 33.2 MIN
PRODUCING TIME (T_P): 15.4 MIN
SHUTIN PRESSURE [PSIA]
1900
1700
1500
1300
1100
900
700
500
300
0.50
0.45
0.40
0.35
0.30
0.25
0.20
0.15
0.10
0.05
-.00
LOG $\left[\frac{T_P+\Delta T}{\Delta T}\right]$
JOHNSTON-MACCO
SCHLUMBERGER


ΔT (MIN)
8.4
12
17
25
37
55
86
141
257
621
∞
HORNER PLOT
FIELD REPORT NO. 34111E
INSTRUMENT NO. J-1401
COMPANY : ENERGETICS, INC
WELL : FEDERAL #32-13
SHUTIN #2 : FINAL FLOW PRESSURE (P_{WF}):223 PSIA
PLOT ELAPSED TIME RANGE: 301.5 TO 431.4 MIN
PLOT ΔT TIME RANGE: 11.0 TO 141.0 MIN
PRODUCING TIME (T_p): 256.0 MIN
SHUTIN PRESSURE [PSIA]
2000
1800
1600
1400
1200
1000
800
600
400
1.50
1.35
1.20
1.05
0.90
0.75
0.60
0.45
0.30
0.15
0.00
LOG $\left[\frac{T_p+\Delta T}{\Delta T}\right]$
JOHNSTON-MACCO
SCHLUMBERGER

JS-164-A

COMPANY ENERGETICS, INC. WELL FEDERAL #32-13 TEST NO. 3 COUNTY SAN JUAN STATE UTAH

JOHNSTON-MACCO

Schlumberger

technical report

FIELD REPORT #34112 E

TEST TICKET DATA PRINTOUT

WELL IDENTIFICATION

1.	WELL	FEDERAL #32-13
2.	COMPANY	ENERGETICS, INC.
3.		102 INVERNESS TERRACE EAST
4.		ENGLEWOOD, CO. 80112
5.	CUSTOMER	SAME
6.		
7.		
8.	FIELD	WILDCAT
9.	COUNTY	SAN JUAN
10.	STATE/PROV.	UTAH
11.	LOCATION	SEC. 13, T40S R22E
12.	TECHNICIAN	ROSENBERG (VERNAL)
13.	TEST APPROVED BY	MR. CHARLES HAUGHT
14.	TEST DATE	6-12-81
15.	DEPTH REFERENCE	KELLY BUSHING
16.	DEPTH REFERENCE ELEVATION	S.L. 4534. FT

HOLE INFORMATION

1. THE HOLE IS STRAIGHT.

2.	TOTAL DEPTH	5739. FT
3.	OPEN HOLE DIAMETER	7.80 IN

MUD INFORMATION

1.	MUD TYPE	DISPERSED & WEIGHTED
2.	MUD WEIGHT	10.1 LB/GAL
3.	MUD VISCOSITY	47. MARSH FUNNEL SEC
4.	CORRECTED WATER LOSS	8.0 CC/30 MIN
5.	MUD RESISTIVITY	1.50 OHM-M
6.	MUD RES. MEAS. TEMP.	96.0 DEG F
7.	MUD FILTRATE RESISTIVITY	0.49 OHM-M
8.	MUD FILT. RES. MEAS. TEMP.	92.0 DEG F
9.	MUD CHLORIDES CONTENT	2200.0 PPM BY WEIGHT

TEST TICKET DATA PRINTOUT

TEST INFORMATION

1. FIELD REPORT NUMBER : 34112E
2. TEST TYPE : M.F.E. OPEN HOLE STRADDLE
3. TEST NUMBER : 3
4. TELEFLOW IN USE ? : NO
5. SSDR OR J-300 IN USE ? : NO
6. SPRO IN USE ? : NO
7. PTSDL IN USE ? : NO

TEST STRING INFORMATION

#	COMPONENT NAME	EFFECTIVE I.D. (IN)	EFFECTIVE O.D. (IN)	FLOW PATH LENGTH (FT)	J/M CODE
1	DRILL PIPE	3.40	4.00		0
2	DRILL COLLARS	2.80	6.25	401.	0
3	TEST TOOL STRING	0.93	5.00	46.	0

TEST STRING PLACEMENT

1. TEST TYPE CODE 2 - OFF BOTTOM*
2. DEPTH AT BOTTOM OF DEEPEST PACKER SUB : - FT
3. DEPTH AT BOTTOM OF DEEPEST UPPER PACKER RUBBER : - FT
4. DEPTH AT TOP OF SHALLOWEST LOWER PACKER RUBBER : - FT

* DID NOT REACH TOTAL DEPTH AND SET PACKERS

TEST ZONE DESCRIPTION

	FORMATION NAME	TOP (FT)	BOTTOM (FT)	PRODUCTION ZONE THICKNESS (FT)	POROSITY
1	LOWER ISMAY			7.	6-10%

TEST TICKET DATA PRINTOUT

TEST CONDITIONS

1. BOTTOMHOLE CHOKE(S) EFF. INTERNAL DIA. : 0.68 IN

TEST TOOL SAMPLE CHAMBER RECOVERY DATA

SAMPLE PRESSURE : 0. PSIG
OIL GRAVITY : DEG. API @ DEG F
GAS/OIL RATIO : 0. FT3/BBL

SAMPLE CHAMBER CONTENTS

FLUID	VOLUME	RESISTIVITY	CHLORIDES
GAS	0.0 FT3		
OIL	0.0 CC		
WATER	0.0 CC	OHM-M @ DEG F	PPM
MUD	0.0 CC	OHM-M @ DEG F	
TOTAL LIQUID	0.0 CC		

RECOVERY INFORMATION

DESCRIPTION	FEET	% OIL	% H2O	OTH	API DEG.	API DEG.F	RESISTIVITY OHM-M	RESISTIVITY DEG.F	CHL PPM

JS-164-A

COMPANY ENERGETICS, INC. WELL FEDERAL #32-13 TEST NO. 2 COUNTY SAN JUAN STATE UTAH

JOHNSTON-MACCO

Schlumberger

technical report

FIELD REPORT #34110 E

TEST TICKET DATA PRINTOUT

WELL IDENTIFICATION

1.	WELL	: FEDERAL #32-13
2.	COMPANY	: ENERGETICS, INC.
3.		: 102 INVERNESS TERRACE EAST
4.		: ENGLEWOOD, CO. 80112
5.	CUSTOMER	: SAME
6.		:
7.		:
8.	FIELD	: WILDCAT
9.	COUNTY	: SAN JUAN
10.	STATE/PROV.	: UTAH
11.	LOCATION	: SEC. 13, T40S R22E
12.	TECHNICIAN	: ROSENBERG (VERNAL)
13.	TEST APPROVED BY	: MR. CHARLES HAUGHT
14.	TEST DATE	: 6-11-81
15.	DEPTH REFERENCE	: KELLY BUSHING
16.	DEPTH REFERENCE ELEVATION	: S.L. 4534. FT

HOLE INFORMATION

1. THE HOLE IS STRAIGHT.

2.	TOTAL DEPTH	: 5739. FT
3.	OPEN HOLE DIAMETER	: 7.80 IN

MUD INFORMATION

1.	MUD TYPE	: DISPERSED & WEIGHTED
2.	MUD WEIGHT	: 9.9 LB/GAL
3.	MUD VISCOSITY	: 47. MARSH FUNNEL SEC
4.	CORRECTED WATER LOSS	: 8.0 CC/30 MIN
5.	MUD RESISTIVITY	: 1.50 OHM-M
6.	MUD RES. MEAS. TEMP.	: 96.0 DEG F
7.	MUD FILTRATE RESISTIVITY	: 0.49 OHM-M
8.	MUD FILT. RES. MEAS. TEMP.	: 92.0 DEG F
9.	MUD CHLORIDES CONTENT	: 2200.0 PPM BY WEIGHT

* TEST TICKET DATA PRINTOUT *

TEST INFORMATION

1. FIELD REPORT NUMBER : 34110E
2. TEST TYPE : M.F.E. OPEN HOLE STRADDLE
3. TEST NUMBER : 2
4. TELEFLOW IN USE ? : NO
5. SSDR OR J-300 IN USE ? : NO
6. SPRO IN USE ? : NO
7. PTSDL IN USE ? : NO

TEST STRING INFORMATION

#	COMPONENT NAME	EFFECTIVE I.D. (IN)	EFFECTIVE O.D. (IN)	FLOW PATH LENGTH (FT)	J/M CODE
1	DRILL PIPE	3.34	4.00	5095.	
2	DRILL COLLARS	2.80	6.25	523.	
3	TEST TOOL STRING	0.93	5.00	121.	

TEST STRING PLACEMENT

1. TEST TYPE CODE 2 - OFF BOTTOM
2. DEPTH AT BOTTOM OF DEEPEST PACKER SUB : 5675. FT
3. DEPTH AT BOTTOM OF DEEPEST UPPER PACKER RUBBER : 5635. FT
4. DEPTH AT TOP OF SHALLOWEST LOWER PACKER RUBBER : 5674. FT

TEST ZONE DESCRIPTION

	FORMATION NAME	TOP (FT)	BOTTOM (FT)	PRODUCTION ZONE THICKNESS (FT)	POROSITY
1	DESERT CREEK			20.	6-10%

TEST TICKET DATA PRINTOUT

TEST CONDITIONS

1. BOTTOMHOLE CHOKE(S) EFF. INTERNAL DIA. : 0.68 IN

TEST TOOL SAMPLE CHAMBER RECOVERY DATA

SAMPLE PRESSURE : PSIG
OIL GRAVITY : DEG. API @ DEG F
GAS/OIL RATIO : FT3/BBL

SAMPLE CHAMBER CONTENTS

FLUID	VOLUME	RESISTIVITY	CHLORIDES
GAS	FT3		
OIL	CC		
WATER	CC	OHM-M @ DEG F	PPM
MUD	CC	OHM-M @ DEG F	
TOTAL LIQUID	CC		

RECOVERY INFORMATION

DESCRIPTION	FEET	% OIL	% H2O	OTH	API DEG.	API DEG.F	RESISTIVITY OHM-M	RESISTIVITY DEG.F	CHL PPM

****
* TEST TICKET DATA PRINTOUT *
****

SURFACE INFORMATION

	DESCRIPTION	TIME	PRESSURE	CHOKE SIZE
1	SET PACKER	1800	-	1/4"
2	OPENED TOOL	1802	-	"
3		1803	1.0 OZ.	"
4		1812	16.0 OZ.	"
5	PACKER SEAT FAILURE; PULLED LOOSE & CAME OUT OF HOLE	1813	-	"
			-	-

FIELD REPORT NO.: 34110 E

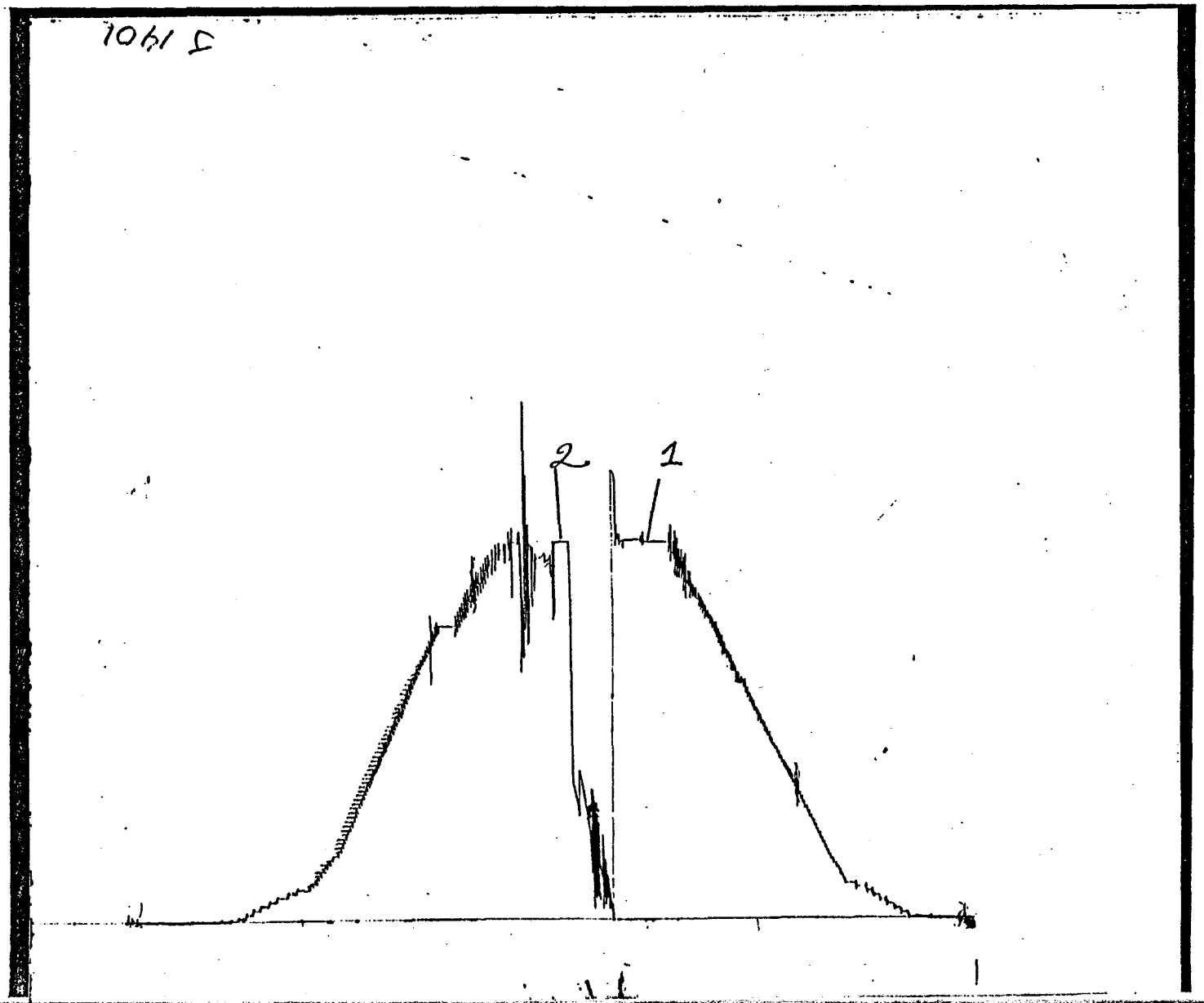
CAPACITY: 6400#

INSTRUMENT NO.: J-1401

NUMBER OF REPORTS: 16

JOHNSTON Schlumberger

UNSUCCESSFUL TEST; PACKER SEAT FAILURE



JS—167

****
* WELL TEST DATA PRINTOUT *
****

ELD REPORT # : 34110E

MPANY : ENERGETICS, INC
WELL : FEDERAL #32-13

INSTRUMENT # : J-1401
CAPACITY [PSI] : 6400.
DEPTH [FT] :
PORT OPENING : OUTSIDE
TEMPERATURE [DEG F] : 125.0

BEL POINT INFORMATION
****

	TIME OF DAY HH:MM:SS	DATE DD-MM	EXPLANATION	ELAPSED TIME,MIN	BOT HOLE PRESSURE PSIA
1		11-JN	HYDROSTATIC MUD		2955.03
2		11-JN	HYDROSTATIC MUD		2960.48

FIELD REPORT NO.: 34110 E

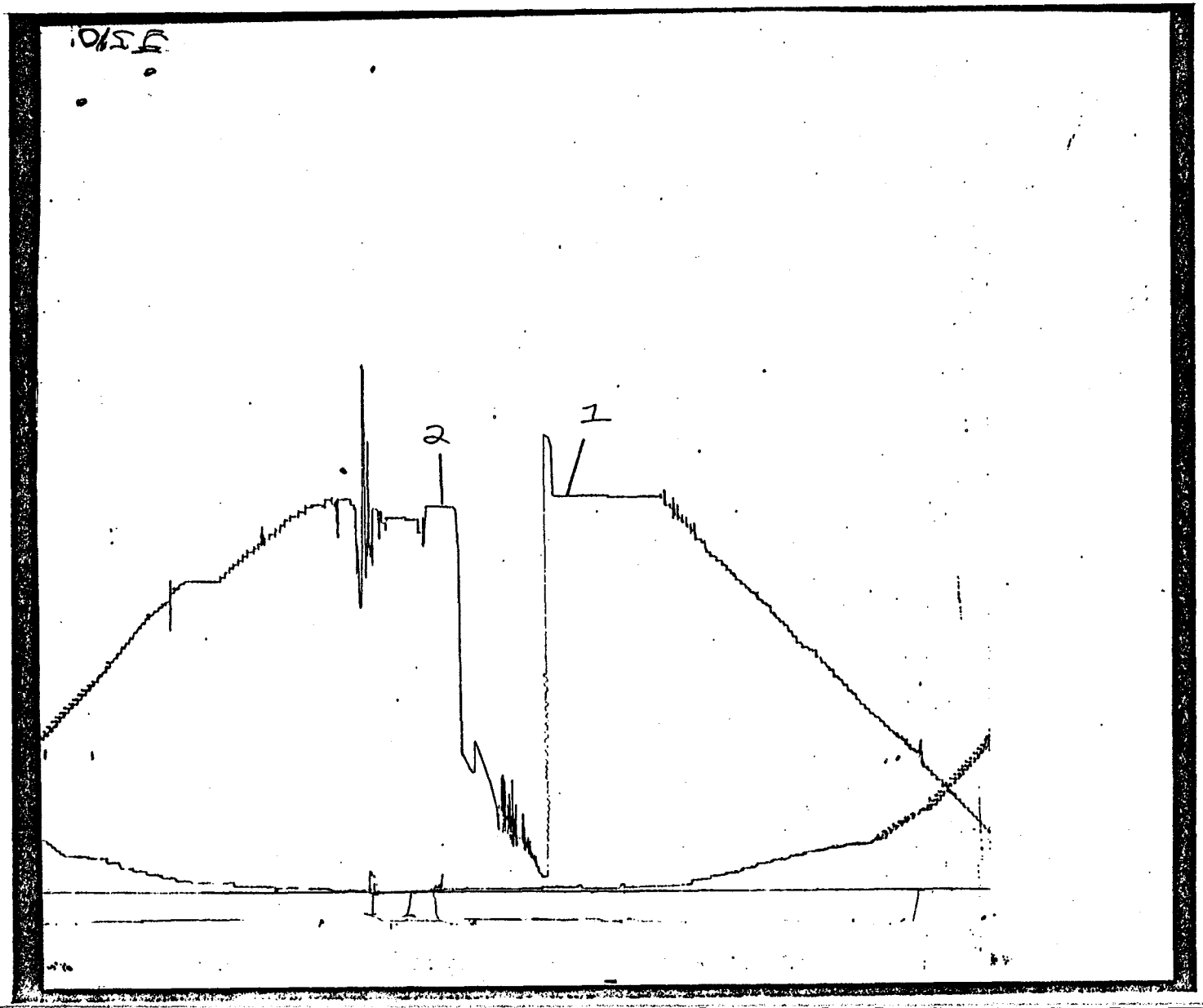
CAPACITY: 6400#

INSTRUMENT NO.: J-510

NUMBER OF REPORTS: 16

JOHNSTON Schlumberger

INSTRUMENT RAN BELOW STRADDLE



JS—167

****
* WELL TEST DATA PRINTOUT *
****

ELD REPORT # : 34110E

MPANY : ENERGETICS, INC.
WELL : FEDERAL #32-13

INSTRUMENT # : J-510
CAPACITY [PSI] : 6400.
DEPTH [FT] :
PORT OPENING : OUTSIDE
TEMPERATURE [DEG F] : 125.0

BEL POINT INFORMATION
****

	TIME OF DAY HH:MM:SS	DATE DD-MM	EXPLANATION	ELAPSED TIME,MIN	BOT HOLE PRESSURE PSIA
1		11-JN	HYDROSTATIC MUD		3021.96
2		11-JN	HYDROSTATIC MUD		2943.29

JOHNSTON
Schlumberger

DISTRIBUTION FOR TECHNICAL REPORTS
JS-223

RECEIVED
JUN 1 0
DIVISION OF
OIL, GAS & MINING

FIELD REPORT NO.	34111 E
DATE	6-11-81

COMPANY	WELL	NO.
ENERGETICS, INC.	FEDERAL 32-13	32-13

CUSTOMER	FIELD
SAME	

COUNTY	STATE
SAN JUAN	UTAH

☐ THIS TEST ONLY ☒ ALL TESTS ON THIS WELL

JOHNSTON HAS BEEN REQUESTED TO FURNISH THE FOLLOWING COMPANIES WITH TECHNICAL REPORTS. THIS DISTRIBUTION WILL BE AS INDICATED AT LEFT UNLESS OTHERWISE STATED.

1 CARBONITE EXPLORATION, INC. 2190 NORTH LOOP WEST, SUITE 401 HOUSTON, TEXAS 77018 ATTN: ROBERT C. AHLBORN	1 AVIVA, INC. NOMINEE P.O. BOX 2532 DENVER, COLORADO 80201 ATTN: MS. ANDREA S. POLLACK
4 CARBONITE EXPLORATION, INC. 160 INVERNESS DRIVE WEST ENGLEWOOD, COLORADO 80112 ATTN: GARY LAWYER	3 ENERGETICS '80 L.P. 102 INVERNESS TERRACE EAST ENGLEWOOD, COLORADO 80112
1 SUNEXCO ENERGY CORPORATION C/O OWEN BIRD, BARRISTERS & SOLICITORS # 2803, 595 BURRARD STREET P.O. BOX 49130 VANCOUVER, B.C. CANADA U7X155 ATTN: MICHAEL P. WARREN	3 U.S. GEOLOGICAL SURVEY P.O. BOX 3524 JARVIS, BUILDING DURANGO, COLORADO 81301
	1 DIVISION OF OIL, GAS & MINING STATE OF UTAH 1588 WEST NORTH TEMPLE SALT LAKE CITY, UTAH 84116
1 EMI 2ND C/O LOIL OIL CORPORATION LINCOLN COURT BUILDING 1580 LINCOLN, SUITE 510 DENVER, COLORADO 80703 ATTN: LARRY N. MYERS	1 WHITE PINE FUND 1980 C/O SARGENT ENERGY CORPORATION 930 PAIN TOWER MINNEAPOLIS, MINNESOTA 55402 ATTN: DANIEL GRUTE

TEST PHASE : FLOW PERIOD # 2

TIME OF DAY HH:MM:SS	DATE DD-MM	ELAPSED TIME,MIN	DELTA TIME,MIN	BOT HOLE PRESSURE PSIA
14:19:26	11-JN	290.44	240.61	223.37

TEST PHASE : SHUTIN PERIOD # 2
FINAL FLOW PRESSURE [PSIA] = 223.37
PRODUCING TIME [MIN] = 255.99

TIME OF DAY HH:MM:SS	DATE DD-MM	ELAPSED TIME,MIN	DELTA TIME,MIN	BOT HOLE PRESSURE PSIA	DELTA P PSI	LOG HORNER TIME
14:19:26	11-JN	290.44	0.00	223.37	0.00	
14:20:26	11-JN	291.44	1.00	244.80	21.43	2.410
14:21:26	11-JN	292.44	2.00	266.23	42.86	2.111
14:22:26	11-JN	293.44	3.00	287.67	64.30	1.936
14:23:26	11-JN	294.44	4.00	310.90	87.53	1.813
14:24:26	11-JN	295.44	5.00	334.28	110.91	1.718
14:25:26	11-JN	296.44	6.00	358.06	134.69	1.640
14:26:26	11-JN	297.44	7.00	387.10	163.73	1.575
14:27:26	11-JN	298.44	8.00	416.14	192.77	1.518
14:28:26	11-JN	299.44	9.00	448.23	224.86	1.469
14:29:26	11-JN	300.44	10.00	480.95	257.58	1.425
14:31:26	11-JN	302.44	12.00	547.84	324.47	1.349
14:33:26	11-JN	304.44	14.00	621.73	398.36	1.285
14:35:26	11-JN	306.44	16.00	698.61	475.24	1.230
14:37:26	11-JN	308.44	18.00	774.03	550.66	1.182
14:39:26	11-JN	310.44	20.00	846.99	623.62	1.140
14:41:26	11-JN	312.44	22.00	912.11	688.74	1.102
14:43:26	11-JN	314.44	24.00	972.01	748.64	1.067
14:45:26	11-JN	316.44	26.00	1026.88	803.51	1.035
14:47:26	11-JN	318.44	28.00	1075.85	852.48	1.006
14:49:26	11-JN	320.44	30.00	1116.12	892.75	0.979
14:54:26	11-JN	325.44	35.00	1201.80	978.43	0.920
14:59:26	11-JN	330.44	40.00	1276.61	1053.24	0.869
15: 4:26	11-JN	335.44	45.00	1332.85	1109.48	0.825
15: 9:26	11-JN	340.44	50.00	1378.74	1155.37	0.787
15:14:26	11-JN	345.44	55.00	1418.65	1195.28	0.752
15:19:26	11-JN	350.44	60.00	1452.63	1229.26	0.722
15:24:26	11-JN	355.44	65.00	1482.36	1258.99	0.694
15:29:26	11-JN	360.44	70.00	1508.57	1285.20	0.668
15:34:26	11-JN	365.44	75.00	1530.81	1307.44	0.645
15:39:26	11-JN	370.44	80.00	1551.83	1328.46	0.623
15:44:26	11-JN	375.44	85.00	1569.70	1346.33	0.603
15:49:26	11-JN	380.44	90.00	1586.40	1363.03	0.585
15:59:26	11-JN	390.44	100.00	1615.65	1392.28	0.551
16: 9:26	11-JN	400.44	110.00	1645.32	1421.95	0.522
16:19:26	11-JN	410.44	120.00	1667.07	1443.70	0.496
16:29:26	11-JN	420.44	130.00	1686.86	1463.49	0.473

TEST PHASE : SHUTIN PERIOD # 2
FINAL FLOW PRESSURE [PSIA] = 223.37
PRODUCING TIME [MIN] = 255.99

TIME OF DAY HH:MM:SS	DATE DD-MM	ELAPSED TIME,MIN	DELTA TIME,MIN	BOT HOLE PRESSURE PSIA	DELTA P PSI	LOG HORNER TIME
16:39:26	11-JN	430.44	140.00	1699.89	1476.52	0.452
16:40:26	11-JN	431.44	141.00	1701.19	1477.82	0.450

****
* TEST TICKET DATA PRINTOUT *
****

SURFACE INFORMATION

	DESCRIPTION	TIME	PRESSURE	CHOKE SIZE
1	SET PACKER	0927	-	1/4"
2	OPENED TOOL	0929	-	"
3	BLOW, 1/2" IN WATER			
4	BLOW, 1 1/2" IN WATER	0934	-	"
5	BLOW, 2 1/4" IN WATER	0943	-	"
6	CLOSED FOR INITIAL SHUT-IN	0945	-	"
7	FINISHED SHUT-IN	1015	-	"
8	RE-OPENED TOOL	1018	-	"
9	BLOW, 2" IN WATER			
10	BLOW, 3 1/2" IN WATER	1023	-	"
11		1031	3.0 OZ.	"
12		1045	3.0 OZ.	"
13		1050	2.7 OZ.	"
14		1107	3.2 OZ.	"
15		1125	3.0 OZ.	"
16		1135	2.7 OZ.	"
17		1145	2.2 OZ.	"
18		1220	.75 OZ.	"
19		1300	1.7 OZ.	"
20		1330	1.0 OZ.	"
21		1345	2.0 OZ.	"
22		1418	1.7	
23		1418	1.7 OZ.	"
24	CLOSED FOR FINAL SHUT-IN	1419	-	"
25	FINISHED SHUT-IN	1640	-	"
26	PULLED PACKER LOOSE	1645	-	"

Reservoir Engineering Data

JOHNSTON

Recorder No. J-1401

Field Report No. 34111 E

Damage Ratio	DR	1.44	Effective Transmissibility TO WATER	$\frac{Kh}{\mu B}$	7.09 $\frac{Md\text{-}ft.}{Cp.}$
Maximum Reservoir Pressure ESTIMATED	P_o	2067 P.S.I.G.	Effective Transmissability	$\frac{Kh}{\mu B}$	$\frac{Md\text{-}ft.}{Cp.}$
Slope of Shut-in Curve CALCULATED	M	343.96 PSI/log cycle	Flow Rate WATER	Q	15 Bbl./day
Potentiometric Surface (Datum Plane, Sea Level)	PS	3732 ft.	Pressure Gradient		PSI ft.
Productivity Index	PI	0.008 Bbl./day/PSI	Gas Oil Ratio	GOR	CF/Bbl.
Radius of Investigation		31 ft.	K (Effective to WATER)		0.039 Md.

Assumptions made for Calculations for Liquid Recoveries

1. Q is averaged at a constant rate.
2. P_f is formation flowing pressure at a constant rate.
3. Formation flow is taken as single phase flow.
   If gas is produced at surface, phase separation is assumed to have occurred in drill pipe.
4. Radial flow is assumed.
5. For the purpose of calculating EDR where specific reservoir parameters are not available it is assumed that:

   Effective permeability, K, will fall between ..... 1 to 200 md
   Formation porosity, ϕ, will fall between ..... 0.1 to 0.3
   Fluid compressibility, c, will fall between ..... 10^{-6} to 10^{-5}
   Fluid viscosity, μ, will fall between ..... 0.05 to 50 cp.
   Well bore radius, r_w, will fall between ..... $3\frac{7}{8}$" to $4\frac{3}{4}$"

   Which gives an average value for the function log $\frac{K}{\phi\mu c r_w^2}$ of 5.5
6. Other standard radial flow, equilibrium assumptions.

Empirical Equations:

1. $EDR = \frac{P_o - P_f}{M(\log T + 2.65)}$ where $M = \frac{P_1 - P_{10}}{\text{Log Cycle}}$
2. Transmissibility $\frac{Kh}{\mu\beta} = \frac{162.6\,Q}{M}$
3. DST J $\frac{Q}{P_o - P_f}$ Theoretical J $\frac{7.08 \times 10^{-3}\,Kh}{\mu\beta \ln(r_e/r_w)}$ Assumed $\ln(r_e/r_w) = 7.60$
4. P.S. = [P_o × 2.309 ft./PSI] − [Recorder depth to sea level.]
5. Radius of investigation, $r_i = \sqrt{\frac{Kt}{40\phi\mu c}}$ where t = time in days

In making any interpretation, our employees will give Customer the benefit of their best judgment as to the correct interpretation. Nevertheless, since all interpretations are opinions based on inferences from electrical, mechanical or other measurements, we cannot, and do not guarantee the accuracy or correctness of any interpretations, and we shall not be liable or responsible, except in the case of gross or wilful negligence on our part, for any loss, costs, damages or expenses incurred or sustained by Customer resulting from any interpretation made by any of our agents or employees.

****
* TEST TICKET DATA PRINTOUT *
****

SURFACE INFORMATION

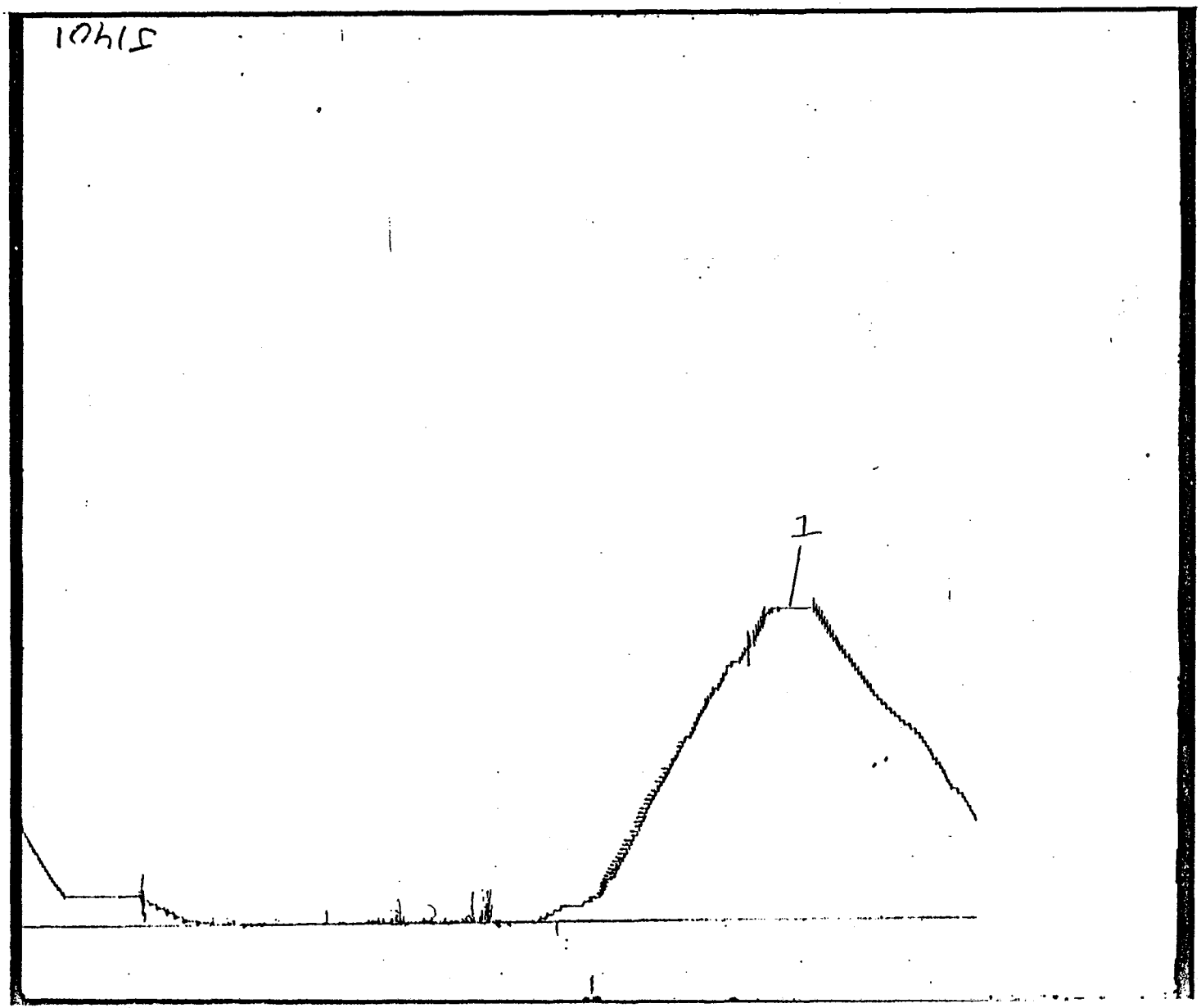
DESCRIPTION	TIME	PRESSURE	CHOKE SIZE
INCOMPLETE TEST; WATER ZONE WASH-OUT			

FIELD REPORT NO.: 34112 E CAPACITY: 6400#

INSTRUMENT NO.: J-1401 NUMBER OF REPORTS: 16

JOHNSTON Schlumberger

INCOMPLETE TEST; WATER ZONE WASH-OUT.



JS-167

****
* WELL TEST DATA PRINTOUT *
****

IELD REPORT # : 34112E

COMPANY : ENERGETICS, INC
WELL : FEDERAL #32-13

INSTRUMENT # : J-1401
CAPACITY [PSI] : 6400.
DEPTH [FT] :
PORT OPENING : OUTSIDE
TEMPERATURE [DEG F] : 125.0

ABEL POINT INFORMATION
****

#	TIME OF DAY HH:MM:SS	DATE DD-MM	EXPLANATION	ELAPSED TIME,MIN	BOT HOLE PRESSURE PSIA
1		12-JN	HYDROSTATIC MUD		2441.38

FIELD REPORT NO.: 34112 E

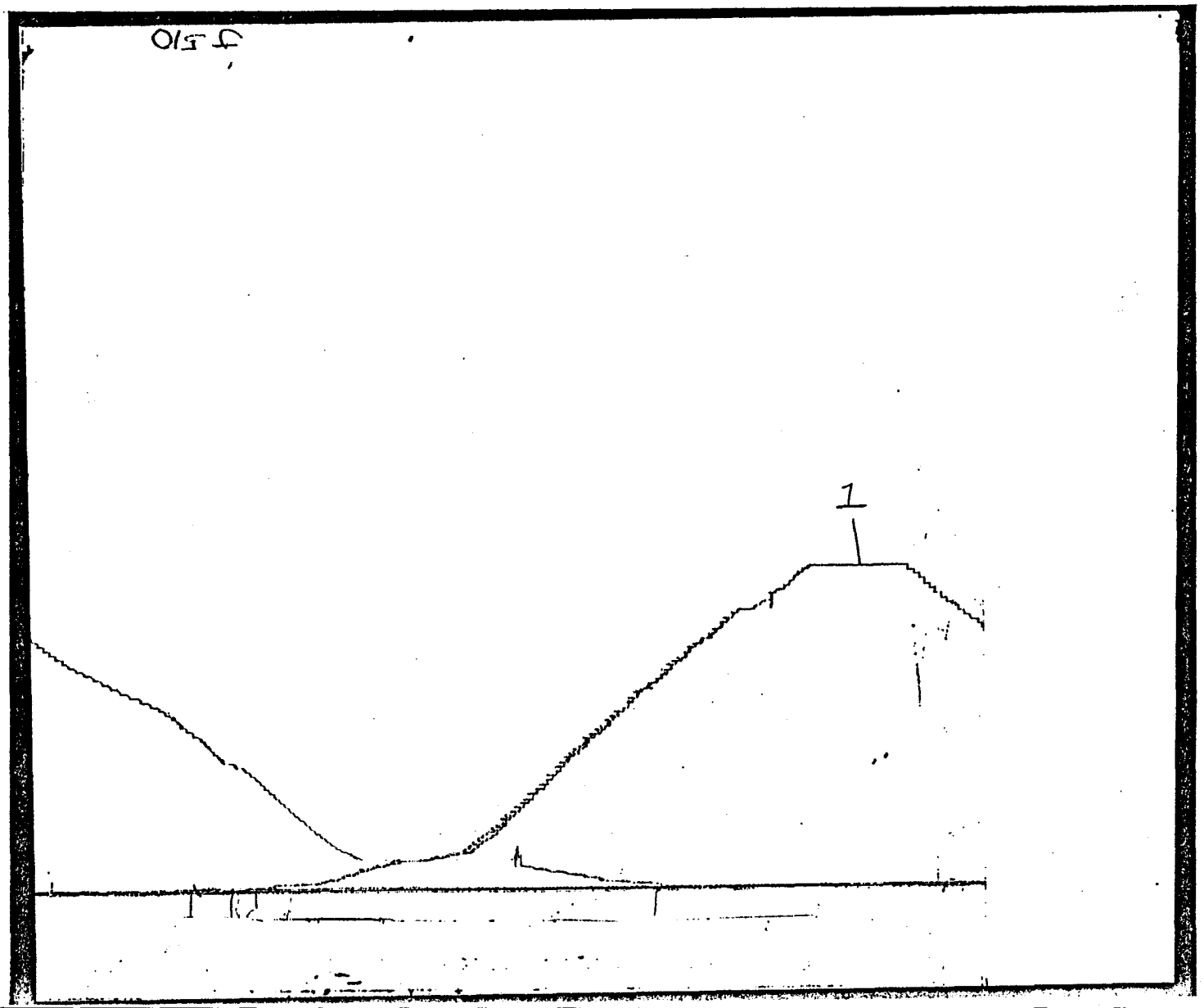
CAPACITY: 6400#

INSTRUMENT NO.: J-510

NUMBER OF REPORTS: 16

JOHNSTON Schlumberger

INSTRUMENT RAN BELOW STRADDLE



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****
* WELL TEST DATA PRINTOUT *
****

FIELD REPORT # : 34112E

COMPANY : ENERGETICS, INC.
WELL : FEDERAL #32-13

INSTRUMENT # : J-510
CAPACITY [PSI] : 6400.
DEPTH [FT] :
PORT OPENING : OUTSIDE
TEMPERATURE [DEG F] : 125.0

LABEL POINT INFORMATION
****

#	TIME OF DAY HH:MM:SS	DATE DD-MM	EXPLANATION	ELAPSED TIME,MIN	BOT HOLE PRESSURE PSIA
1		11-JN	HYDROSTATIC MUD		2446.50

Form OGC-1b

SUBMIT IN TRIPLICATE*
(Other instructions on reverse side)

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

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use Form 9–331–C for such proposals.)

1. oil well ☐ gas well ☐ other Dry Hole
2. NAME OF OPERATOR: Energetics, Inc.
3. ADDRESS OF OPERATOR: 102 Inverness Ter. East, Englewood, CO 80112
4. LOCATION OF WELL (REPORT LOCATION CLEARLY. See space 17 below.)
   AT SURFACE:
   AT TOP PROD. INTERVAL:
   AT TOTAL DEPTH:
5. LEASE: U-056794
6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
7. UNIT AGREEMENT NAME:
8. FARM OR LEASE NAME: Federal
9. WELL NO.: 32-13
10. FIELD OR WILDCAT NAME: Wildcat
11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: Sec. 13-T40S-R22E
12. COUNTY OR PARISH: San Juan
13. STATE: Utah
14. API NO. Permit No. 43-037-30656
15. ELEVATIONS (SHOW DF, KDB, AND WD): 4517 GRD

16. CHECK APPROPRIATE BOX TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

REQUEST FOR APPROVAL TO:		SUBSEQUENT REPORT OF:
TEST WATER SHUT-OFF	☐	☐
FRACTURE TREAT	☐	☐
SHOOT OR ACIDIZE	☐	☐
REPAIR WELL	☐	☐
PULL OR ALTER CASING	☐	☐
MULTIPLE COMPLETE	☐	☐
CHANGE ZONES	☐	☐
ABANDON*	☒	☐
(other)		

(NOTE: Report results of multiple completion or zone change on Form 9–330.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

Permission to plug and abandon from USGS and BLM, June 13, 1981

142 sx Class B cement plug 5610-5410'
123 sx Class B cement plug 3560-3360'
123 sx Class B cement plug 1560-1360'
132 sx Class B cement plug 1220-890'
76 sx Class B cement plug 427-327' (across bottom of surface casing)

APPROVED BY THE STATE OF UTAH DIVISION OF OIL, GAS, AND MINING
DATE: 7/21/81
BY: [illegible]

Subsurface Safety Valve: Manu. and Type _____ Set at _____ Ft.

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

SIGNED [signature] TITLE Petroleum Engineer DATE June 23, 1981

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____
CONDITIONS OF APPROVAL, IF ANY:

*See Instructions on Reverse Side

TEST TICKET DATA PRINTOUT

TEST INFORMATION

1. FIELD REPORT NUMBER : 34111E
2. TEST TYPE : M.F.E. OPEN HOLE
3. TEST NUMBER : 1
4. TELEFLOW IN USE ? : NO
5. SSDR OR J-300 IN USE ? : NO
6. SPRO IN USE ? : NO
7. PTSDL IN USE ? : NO

TEST STRING INFORMATION

#	COMPONENT NAME	EFFECTIVE I.D. (IN)	EFFECTIVE O.D. (IN)	FLOW PATH LENGTH (FT)	J/M CODE
1	DRILL PIPE	3.34	4.00	5095.	
2	DRILL COLLARS	2.80	6.25	493.	
3	TEST TOOL STRING	0.93	5.00	151.	

TEST STRING PLACEMENT

1. TEST TYPE CODE 1 - ON BOTTOM
2. DEPTH AT BOTTOM OF DEEPEST PACKER SUB : 5636. FT
3. DEPTH AT BOTTOM OF DEEPEST UPPER PACKER RUBBER : 5635. FT

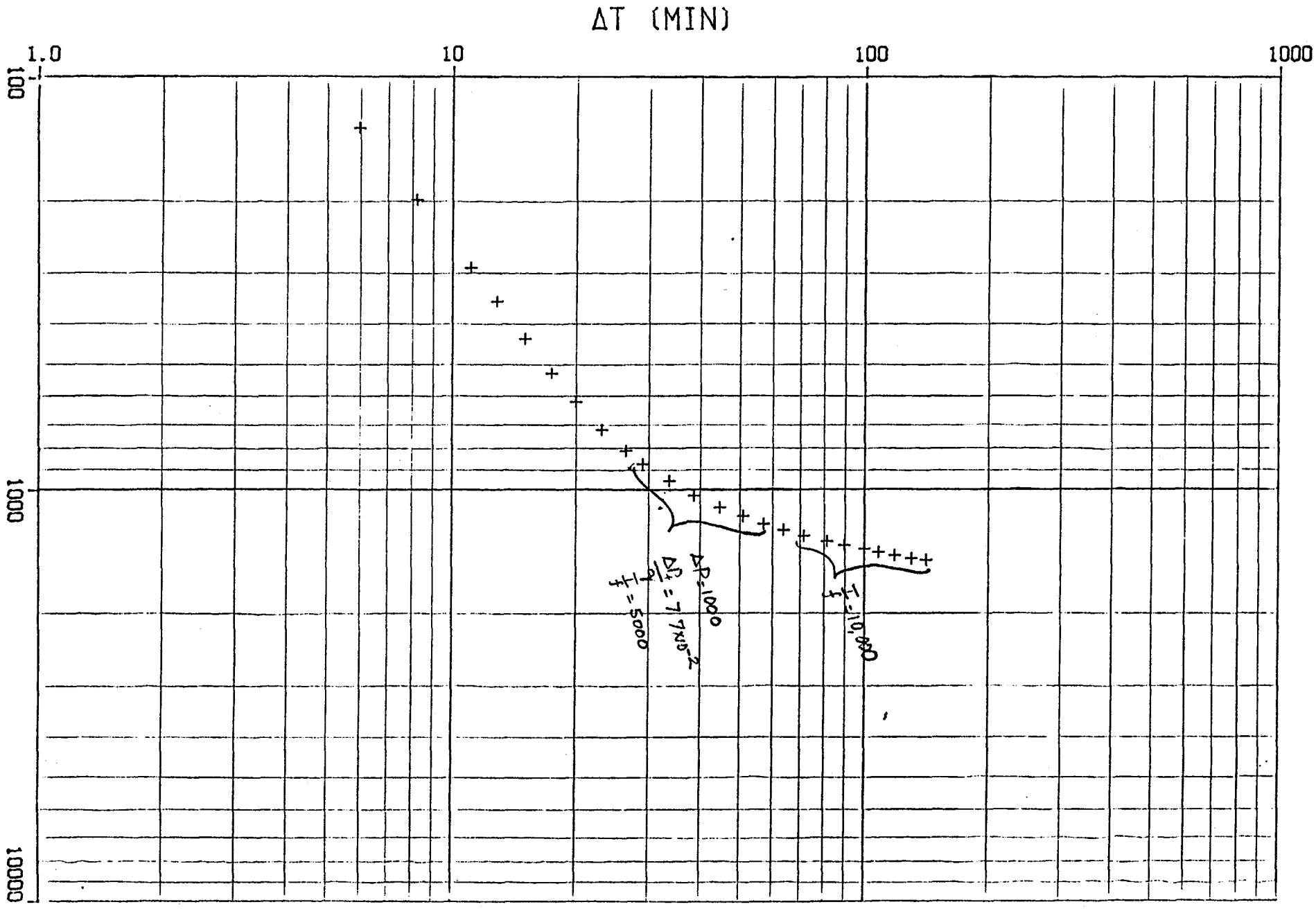
TEST ZONE DESCRIPTION

	FORMATION NAME	TOP (FT)	PRODUCTION ZONE BOTTOM (FT)	PRODUCTION ZONE THICKNESS (FT)	POROSITY
1	DESERT CREEK	[illegible]		100.	6-10%

LOG LOG PLOT

COMPANY : ENERGETICS, INC
WELL : FEDERAL #32-13
FIELD REPORT NO. 34111E
INSTRUMENT NO. J-1401

SHUTIN #2 :
FINAL FLOW PRESSURE (P_{WF}): 223 PSIA
PLOT ELAPSED TIME RANGE: 296.4 TO 431.4 MIN
PLOT ΔT TIME RANGE: 5.9 TO 141.0 MIN



JOHNSTON-MACCO

TEST TICKET DATA PRINTOUT

WELL IDENTIFICATION

1.	WELL	FEDERAL #32-13
2.	COMPANY	ENERGETICS, INC.
3.		102 INVERNESS TERRACE EAST
4.		ENGLEWOOD, CO. 80112
5.	CUSTOMER	SAME
6.		
7.		
8.	FIELD	WILDCAT
9.	COUNTY	SAN JUAN
10.	STATE/PROV.	UTAH
11.	LOCATION	SEC. 13, T40S R22E
12.	TECHNICIAN	ROSENBERG (VERNAL)
13.	TEST APPROVED BY	MR. CHARLES HAUGHT
14.	TEST DATE	6-11-81
15.	DEPTH REFERENCE	KELLY BUSHING
16.	DEPTH REFERENCE ELEVATION	S.L. 4534. FT

HOLE INFORMATION

1. THE HOLE IS STRAIGHT.

2.	TOTAL DEPTH	5739. FT
3.	OPEN HOLE DIAMETER	7.80 IN

MUD INFORMATION

1.	MUD TYPE	DISPERSED & WEIGHTED
2.	MUD WEIGHT	9.9 LB/GAL
3.	MUD VISCOSITY	47. MARSH FUNNEL SEC
4.	CORRECTED WATER LOSS	8.0 CC/30 MIN
5.	MUD RESISTIVITY	1.50 OHM-M
6.	MUD RES. MEAS. TEMP.	96.0 DEG F
7.	MUD FILTRATE RESISTIVITY	0.49 OHM-M
8.	MUD FILT. RES. MEAS. TEMP.	92.0 DEG F
9.	MUD CHLORIDES CONTENT	2200.0 PPM BY WEIGHT

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****************************
* TEST TICKET DATA PRINTOUT *
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TEST CONDITIONS

1. BOTTOMHOLE CHOKE(S) EFF. INTERNAL DIA. : 0.68 IN

TEST TOOL SAMPLE CHAMBER RECOVERY DATA

SAMPLE PRESSURE : 129. PSIG
OIL GRAVITY : DEG. API @ DEG F
GAS/OIL RATIO : FT3/BBL

SAMPLE CHAMBER CONTENTS

FLUID	VOLUME	RESISTIVITY	CHLORIDES
GAS	0.1 FT3		
OIL	0.0 CC		
WATER	700.0 CC	0.14 OHM-M @ 80.0 DEG F	3740. PPM
MUD	910.0 CC	0.49 OHM-M @ 89.0 DEG F	
TOTAL LIQUID	1610.0 CC		

RECOVERY INFORMATION

	DESCRIPTION	FEET	% OIL	% H2O	% OTH	API DEG.	API DEG.F	RESISTIVITY OHM-M	RESISTIVITY DEG.F	CHL PPM
1	GAS & OIL-CUT MUD WITH									
2	TRACE OF OIL	340								
3	- TOP							1.9	90	4700.
4	- MIDDLE							.36	84	760.
5	- BOTTOM							.36	80	1680.

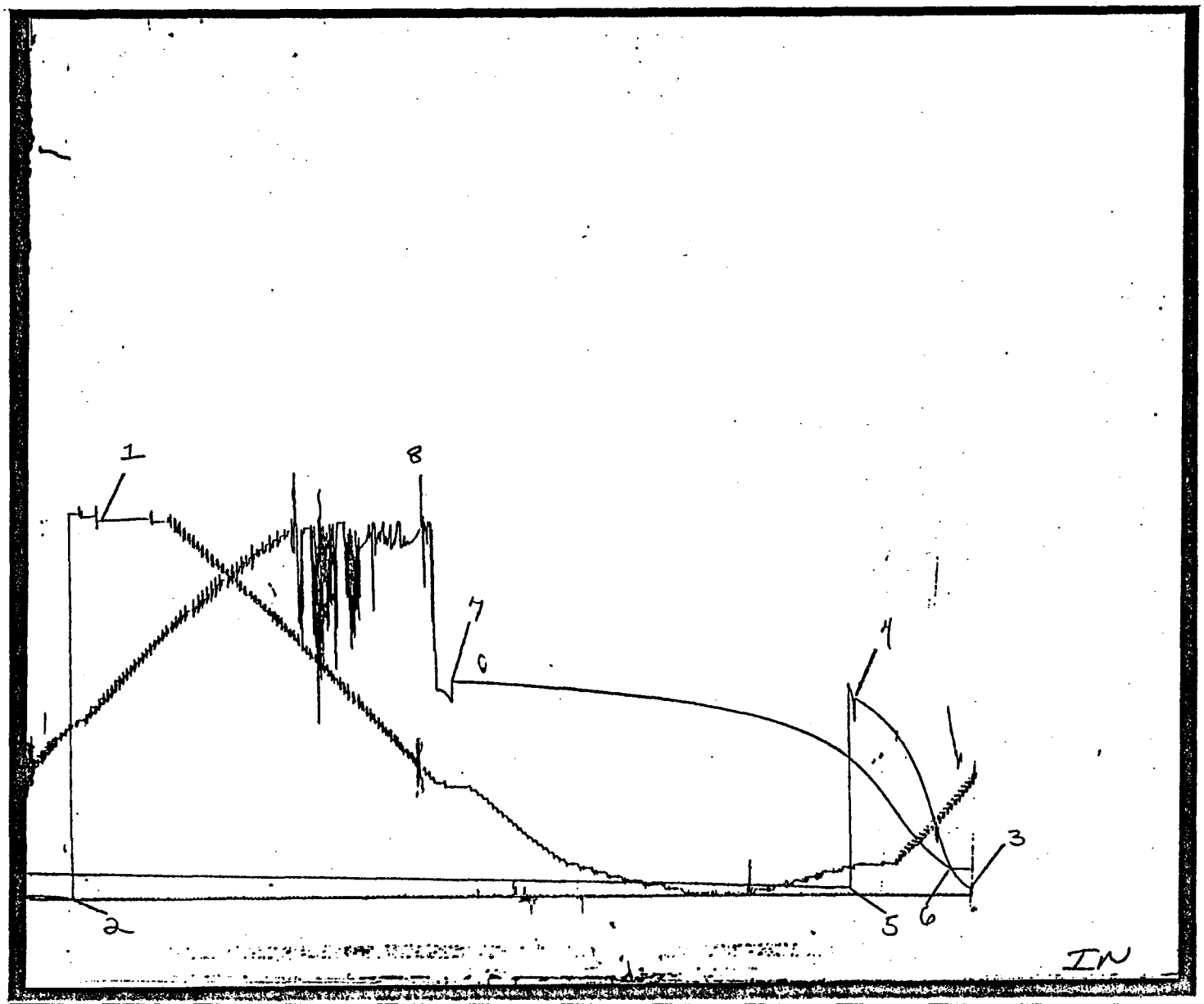
FIELD REPORT NO.: 34111 E

CAPACITY: 6400#

INSTRUMENT NO.: J-1401

NUMBER OF REPORTS: 16

JOHNSTON Schlumberger

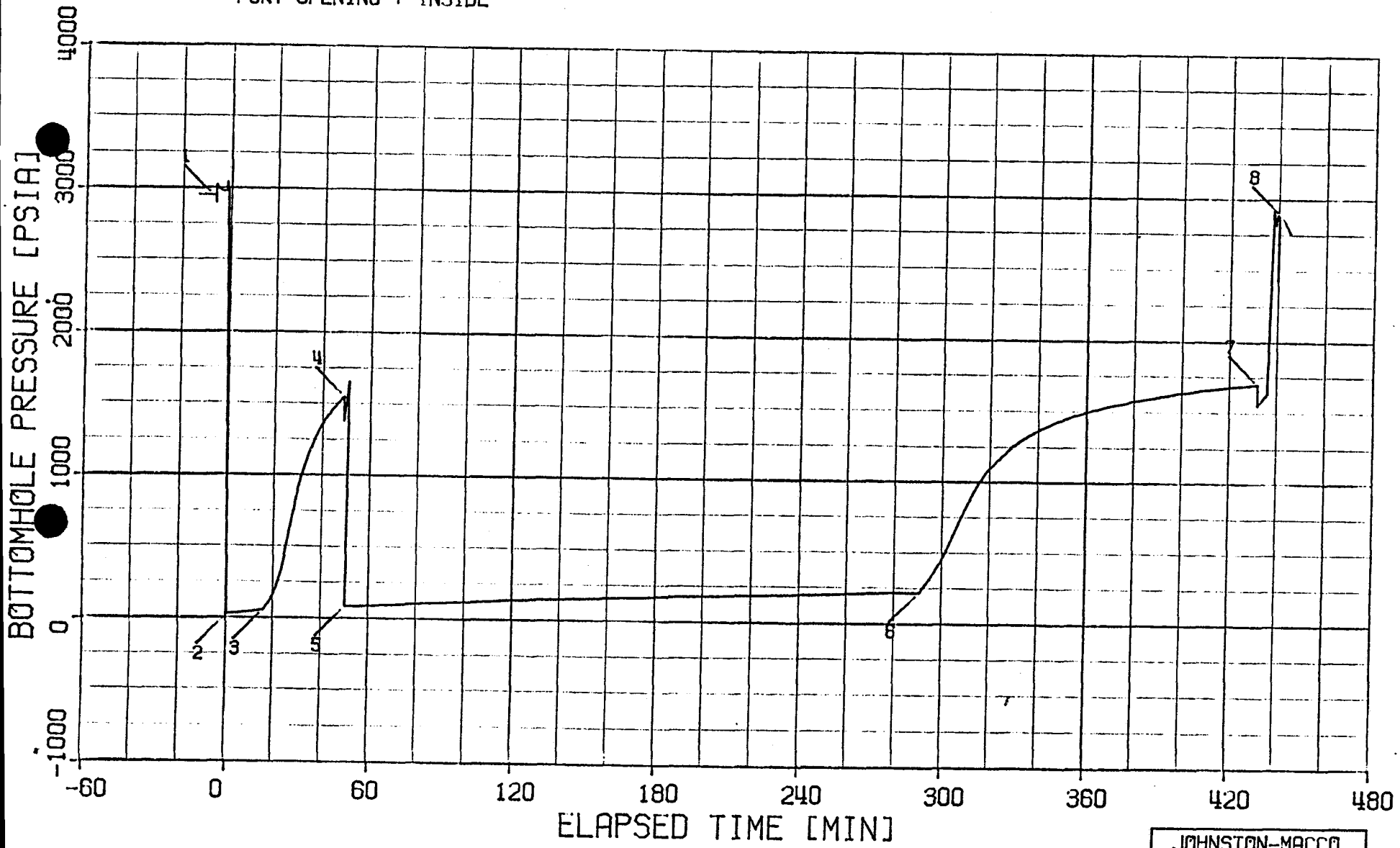


JS—167

BOTTOMHOLE PRESSURE LOG

FIELD REPORT NO. 34111E
INSTRUMENT NO. J-1401
DEPTH : 5605 FT
CAPACITY : 0400 PSI
PORT OPENING : INSIDE

COMPANY : ENERGETICS, INC
WELL : FEDERAL #32-13



JOHNSTON-MACCO
SCHLUMBERGER

WELL TEST DATA PRINTOUT

FIELD REPORT # : 34111E

COMPANY : ENERGETICS, INC
WELL : FEDERAL #32-13

INSTRUMENT # : J-1401
CAPACITY [PSI] : 6400.
DEPTH [FT] : 5605.0
PORT OPENING : INSIDE
TEMPERATURE [DEG F] : 125.0

LABEL POINT INFORMATION

#	TIME OF DAY HH:MM:SS	DATE DD-MM	EXPLANATION	ELAPSED TIME,MIN	BOT HOLE PRESSURE PSIA
1	9:20:59	11-JN	HYDROSTATIC MUD	-8.02	2952.15
2	9:29: 0	11-JN	START FLOW	0.00	28.23
3	9:44:23	11-JN	END FLOW & START SHUT-IN	15.38	61.56
4	10:17:35	11-JN	END SHUT-IN	48.58	1548.99
5	10:18:50	11-JN	START FLOW	49.83	88.79
6	14:19:26	11-JN	END FLOW & START SHUT-IN	290.44	223.37
7	16:40:26	11-JN	END SHUT-IN	431.44	1701.19
8	16:49:20	11-JN	HYDROSTATIC MUD	440.33	2888.06

SUMMARY OF FLOW PERIODS

PERIOD	START ELAPSED TIME,MIN	END ELAPSED TIME,MIN	DURATION MIN	START PRESSURE PSIA	END PRESSURE PSIA
1	0.00	15.38	15.38	28.23	61.56
2	49.83	290.44	240.61	88.79	223.37

SUMMARY OF SHUTIN PERIODS

PERIOD	START ELAPSED TIME,MIN	END ELAPSED TIME,MIN	DURATION MIN	START PRESSURE PSIA	END PRESSURE PSIA	FINAL FLOW PRESSURE PSIA	PRODUCING TIME, MIN
1	15.38	48.58	33.20	61.56	1548.99	61.56	15.38
2	290.44	431.44	141.00	223.37	1701.19	223.37	255.99

TEST PHASE : FLOW PERIOD # 1

TIME OF DAY HH:MM:SS	DATE DD-MM	ELAPSED TIME,MIN	DELTA TIME,MIN	BOT HOLE PRESSURE PSIA
9:29: 0	11-JN	0.00	0.00	28.23
9:34: 0	11-JN	5.00	5.00	42.03
9:39: 0	11-JN	10.00	10.00	51.58
9:44: 0	11-JN	15.00	15.00	60.84
9:44:23	11-JN	15.38	15.38	61.56

TEST PHASE : SHUTIN PERIOD # 1
FINAL FLOW PRESSURE [PSIA] = 61.56
PRODUCING TIME [MIN] = 15.38

TIME OF DAY HH:MM:SS	DATE DD-MM	ELAPSED TIME,MIN	DELTA TIME,MIN	BOT HOLE PRESSURE PSIA	DELTA P PSI	LOG HORNER TIME
9:44:23	11-JN	15.38	0.00	61.56	0.00	
9:45:23	11-JN	16.38	1.00	82.27	20.71	1.214
9:46:23	11-JN	17.38	2.00	102.97	41.41	0.939
9:47:23	11-JN	18.38	3.00	128.57	67.01	0.787
9:48:23	11-JN	19.38	4.00	158.32	96.76	0.685
9:49:23	11-JN	20.38	5.00	196.12	134.56	0.610
9:50:23	11-JN	21.38	6.00	239.75	178.19	0.552
9:51:23	11-JN	22.38	7.00	296.90	235.34	0.505
9:52:23	11-JN	23.38	8.00	367.75	306.19	0.466
9:53:23	11-JN	24.38	9.00	451.96	390.40	0.433
9:54:23	11-JN	25.38	10.00	543.89	482.33	0.404
9:56:23	11-JN	27.38	12.00	714.56	653.00	0.358
9:58:23	11-JN	29.38	14.00	882.44	820.88	0.322
10: 0:23	11-JN	31.38	16.00	1013.86	952.30	0.293
10: 2:23	11-JN	33.38	18.00	1124.54	1062.98	0.268
10: 4:23	11-JN	35.38	20.00	1213.08	1151.52	0.248
10: 6:23	11-JN	37.38	22.00	1290.07	1228.51	0.230
10: 8:23	11-JN	39.38	24.00	1353.27	1291.71	0.215
10:10:23	11-JN	41.38	26.00	1407.51	1345.95	0.202
10:12:23	11-JN	43.38	28.00	1453.44	1391.88	0.190
10:14:23	11-JN	45.38	30.00	1493.17	1431.61	0.180
10:17:35	11-JN	48.58	33.20	1548.99	1487.43	0.165

TEST PHASE : FLOW PERIOD # 2

TIME OF DAY HH:MM:SS	DATE DD-MM	ELAPSED TIME,MIN	DELTA TIME,MIN	BOT HOLE PRESSURE PSIA
10:18:50	11-JN	49.83	0.00	88.79
10:23:50	11-JN	54.83	5.00	90.35
10:28:50	11-JN	59.83	10.00	94.33
10:33:50	11-JN	64.83	15.00	98.32
10:38:50	11-JN	69.83	20.00	103.38
10:43:50	11-JN	74.83	25.00	108.68
10:48:50	11-JN	79.83	30.00	113.34
10:53:50	11-JN	84.83	35.00	117.91
10:58:50	11-JN	89.83	40.00	122.32
11: 3:50	11-JN	94.83	45.00	126.60
11: 8:50	11-JN	99.83	50.00	129.56
11:13:50	11-JN	104.83	55.00	131.97
11:18:50	11-JN	109.83	60.00	134.59
11:23:50	11-JN	114.83	65.00	137.73
11:28:50	11-JN	119.83	70.00	140.87
11:33:50	11-JN	124.83	75.00	144.00
11:38:50	11-JN	129.83	80.00	147.13
11:43:50	11-JN	134.83	85.00	150.09
11:48:50	11-JN	139.83	90.00	152.33
11:53:50	11-JN	144.83	95.00	154.57
11:58:50	11-JN	149.83	100.00	156.87
12: 3:50	11-JN	154.83	105.00	159.17
12: 8:50	11-JN	159.83	110.00	161.48
12:13:50	11-JN	164.83	115.00	163.79
12:18:50	11-JN	169.83	120.00	166.09
12:23:50	11-JN	174.83	125.00	168.60
12:28:50	11-JN	179.83	130.00	171.92
12:33:50	11-JN	184.83	135.00	175.24
12:38:50	11-JN	189.83	140.00	178.38
12:43:50	11-JN	194.83	145.00	180.05
12:48:50	11-JN	199.83	150.00	181.72
12:53:50	11-JN	204.83	155.00	183.66
12:58:50	11-JN	209.83	160.00	186.47
13: 3:50	11-JN	214.83	165.00	189.28
13: 8:50	11-JN	219.83	170.00	192.12
13:13:50	11-JN	224.83	175.00	194.97
13:18:50	11-JN	229.83	180.00	197.66
13:23:50	11-JN	234.83	185.00	199.87
13:28:50	11-JN	239.83	190.00	202.08
13:33:50	11-JN	244.83	195.00	204.49
13:38:50	11-JN	249.83	200.00	207.01
13:43:50	11-JN	254.83	205.00	209.58
13:48:50	11-JN	259.83	210.00	212.67
13:53:50	11-JN	264.83	215.00	215.76
13:58:50	11-JN	269.83	220.00	218.44
14: 3:50	11-JN	274.83	225.00	220.54
14: 8:50	11-JN	279.83	230.00	222.63
14:13:50	11-JN	284.83	235.00	223.37
14:18:50	11-JN	289.83	240.00	223.37

FILE IN QUADRUPLICATE
FORM OGC-8-X

P&A

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING
1588 West North Temple
Salt Lake City, Utah 84116

REPORT OF WATER ENCOUNTERED DURING DRILLING

Well Name & Number: Federal 32-13

Operator: Colorado Energetics, Inc. Address: 102 Inverness Terrace East Englewood, CO 80112

Contractor: CRC Colo. Well, Inc. Address: P.O. Box 1006, Grand Junction, CO 81648

Location SW 1/4 NE 1/4; Sec. 13 T. 40S N/S, R. 22E E/W; San Juan County.

Water Sands:

	Depth: From-	Depth: To-	Volume: Flow Rate or Head	Quality: Fresh or Salty
1.	1070'		1½" stream	Fresh
2.	1100'		4" stream	Fresh
3.				
4.				
5.				

(Continue on Reverse Side if Necessary)

RECEIVED
JUN 25 1991
DIVISION OF
OIL, GAS & MINING

Formation Tops:

Remarks:

NOTE: (a) Upon diminishing supply of forms, please inform this office.
(b) Report on this form as provided for in Rule C-20, General Rules and Regulations and Rules of Practice and Procedure.
(c) If a water analysis has been made of the above reported zone, please forward a copy along with this form.

Form OGC-3

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

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

Form approved.
Budget Bureau No. 42-R355.5.

7

5. LEASE DESIGNATION AND SERIAL NO.
API 43-037-30656
U-056794

WELL COMPLETION OR RECOMPLETION REPORT AND LOG*

1a. TYPE OF WELL: OIL WELL ☐ GAS WELL ☐ DRY ☒ Other

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

2. NAME OF OPERATOR: Energetics, Inc.

3. ADDRESS OF OPERATOR: 102 InvernessTerrace East, Englewood, CO 80112

4. LOCATION OF WELL (*Report location clearly and in accordance with any State requirements*)*
At surface: SW/4 NE/4 (2280' FNL & 1890 FEL) Sec. 13
At top prod. interval reported below: same
At total depth: same

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7. UNIT AGREEMENT NAME:

8. FARM OR LEASE NAME: Federal

9. WELL NO.: 32-13

10. FIELD AND POOL, OR WILDCAT: Wildcat

11. SEC., T., R., M., OR BLOCK AND SURVEY OR AREA: Sec. 13-T40S-R22E

14. PERMIT NO.: 43-037-30656 Letter | DATE ISSUED: 4-4-81 | 12. COUNTY OR PARISH: San Juan | 13. STATE: Utah

15. DATE SPUDDED	16. DATE T.D. REACHED	17. DATE COMPL. (*Ready to prod.*)	18. ELEVATIONS (DF, RKB, RT, GR, ETC.)*	19. ELEV. CASINGHEAD
5-17-81	6-12-81	Dry Hole	4517 GRD	NA

20. TOTAL DEPTH, MD & TVD	21. PLUG, BACK T.D., MD & TVD	22. IF MULTIPLE COMPL., HOW MANY*	23. INTERVALS DRILLED BY	ROTARY TOOLS	CABLE TOOLS
5737'			→	0-5737'	

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

25. WAS DIRECTIONAL SURVEY MADE: NO

26. TYPE ELECTRIC AND OTHER LOGS RUN: Dual Induction-SFL, FDC/CNL, BHC, Cyberlook

27. WAS WELL CORED: NO

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

CASING SIZE	WEIGHT, LB./FT.	DEPTH SET (MD)	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
13 3/8"	48	377'	17½"	450 sx Class 'B'	None

29. LINER RECORD

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

30. TUBING RECORD

SIZE	DEPTH SET (MD)	PACKER SET (MD)
	None	

31. PERFORATION RECORD (*Interval, size and number*): None

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

DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED

33.* PRODUCTION

DATE FIRST PRODUCTION: Dry Hole | PRODUCTION METHOD (*Flowing, gas lift, pumping—size and type of pump*) | WELL STATUS (*Producing or*

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

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

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

TEST WITNESSED BY

35. LIST OF ATTACHMENTS

RECEIVED
JUN 25 1981
DIVISION OF
OIL, GAS & MINING

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

SIGNED [signature] TITLE Petroleum Engineer DATE 6-23-81

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

INSTRUCTIONS

General: This form is designed for submitting a complete and correct well completion report and log on all types of lands and leases to either a Federal agency or a State agency, or both, pursuant to applicable Federal and/or State laws and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local, area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from, the local Federal and/or State office. See instructions on items 22 and 24, and 33, below regarding separate reports for separate completions.
If not filed prior to the time this summary record is submitted, copies of all currently available logs (drillers, geologists, sample and core analysis, all types electric, etc.), formation and pressure tests, and directional surveys, should be attached hereto, to the extent required by applicable Federal and/or State laws and regulations. All attachments should be listed on this form, see item 35.
Item 4: If there are no applicable State requirements, locations on Federal or Indian land should be described in accordance with Federal requirements. Consult local State or Federal office for specific instructions.
Item 18: Indicate which elevation is used as reference (where not otherwise shown) for depth measurements given in other spaces on this form and in any attachments.
Items 22 and 24: If this well is completed for separate production from more than one interval zone (multiple completion), so state in item 22, and in item 24 show the producing interval, or intervals, top(s), bottom(s) and name(s) (if any) for only the interval reported in item 33. Submit a separate report (page) on this form, adequately identified, for each additional interval to be separately produced, showing the additional data pertinent to such interval.
Item 29: *"Sacks Cement":* Attached supplemental records for this well should show the details of any multiple stage cementing and the location of the cementing tool.
Item 33: Submit a separate completion report on this form for each interval to be separately produced. (See instruction for items 22 and 24 above.)

37. SUMMARY OF POROUS ZONES:
SHOW ALL IMPORTANT ZONES OF POROSITY AND CONTENTS THEREOF; CORED INTERVALS; AND ALL DRILL-STEM TESTS, INCLUDING DEPTH INTERVAL TESTED, CUSHION USED, TIME TOOL OPEN, FLOWING AND SHUT-IN PRESSURES, AND RECOVERIES

FORMATION	TOP	BOTTOM	DESCRIPTION, CONTENTS, ETC.
Desert Creek	5633	5737	DST #1 Mis-Run DST #2 Open 255 min. Rec. 340' salt water. IF 26 ISI 1546 FF 77 FSI 1700
	5530	5556	DST #3 Water Flow
Permission to	Plug and Ab	andon June	13, 1981
	5410	5610	142 sx cement plug
	3360	3560	123 sx cement plug
	1360	1560	123 sx cement plug
	327	427	76 sx cement plug
	Top of sur	face csg.	10 sx cement plug

38. GEOLOGIC MARKERS

NAME	TOP MEAS. DEPTH	TOP TRUE VERT. DEPTH
Chinle	1485	
Cedar Mesa	3405	
Ismay	5410	
Desert Creek	5525	