pKRV0208536016 SWD 4/4/02

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, New Mexico 87505

FORM C-108
Revised 4-1-98

APPLICATION FOR AUTHORIZATION TO INJECT

I. PURPOSE: _____Secondary Recovery _____Pressure Maintenance __X__Disposal _____Storage
Application qualifies for administrative approval? __X__Yes _____No

II. OPERATOR: Dominion Oklahoma Texas Exploration & Production, Inc.

ADDRESS: 14000 Quail Springs Pkwy, Ste 600 Oklahoma City, OK. 73134

CONTACT PARTY: Jaime McAlpine, P.E. PHONE: (405) 749-1300

III. WELL DATA: Complete the data required on the reverse side of this form for each well proposed for injection. Additional sheets may be attached if necessary.

IV. Is this an expansion of an existing project? _____Yes __X__No
If yes, give the Division order number authorizing the project: _____

V. Attach a map that identifies all wells and leases within two miles of any proposed injection well with a one-half mile radius circle drawn around each proposed injection well. This circle identifies the well's area of review.

VI. Attach a tabulation of data on all wells of public record within the area of review which penetrate the proposed injection zone. Such data shall include a description of each well's type, construction, date drilled, location, depth, record of completion, and a schematic of any plugged well illustrating all plugging detail.

VII. Attach data on the proposed operation, including:

MAR 2 0 2002

1. Proposed average and maximum daily rate and volume of fluids to be injected;
2. Whether the system is open or closed;
3. Proposed average and maximum injection pressure;
4. Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and,
5. If injection is for disposal purposes into a zone not productive of oil or gas at or within one mile of the proposed well, attach a chemical analysis of the disposal zone formation water (may be measured or inferred from existing literature, studies, nearby wells, etc.).

*VIII. Attach appropriate geologic data on the injection zone including appropriate lithologic detail, geologic name, thickness, and depth. Give the geologic name, and depth to bottom of all underground sources of drinking water (aquifers containing waters with total dissolved solids concentrations of 10,000 mg/l or less) overlying the proposed injection zone as well as any such sources known to be immediately underlying the injection interval.

IX. Describe the proposed stimulation program, if any.

*X. Attach appropriate logging and test data on the well. (If well logs have been filed with the Division, they need not be resubmitted).

*XI. Attach a chemical analysis of fresh water from two or more fresh water wells (if available and producing) within one mile of any injection or disposal well showing location of wells and dates samples were taken.

XII. Applicants for disposal wells must make an affirmative statement that they have examined available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground sources of drinking water.

XIII. Applicants must complete the "Proof of Notice" section on the reverse side of this form.

XIV City of Carlsbad Requirements.

XIV. Certification: I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.

NAME: Jaime Lyle McAlpine TITLE: Petroleum Engineer

SIGNATURE: _____ DATE: 3/18/02

* If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be resubmitted. Please show the date and circumstances of the earlier submittal: _____

DISTRIBUTION: Original and one copy to Santa Fe with one copy to the appropriate District Office

III. WELL DATA

A. The following well data must be submitted for each injection well covered by this application. The data must be both in tabular and schematic form and shall include:

(1) Lease name; Well No.; Location by Section, Township and Range; and footage location within the section.

(2) Each casing string used with its size, setting depth, sacks of cement used, hole size, top of cement, and how such top was determined.

(3) A description of the tubing to be used including its size, lining material, and setting depth.

(4) The name, model, and setting depth of the packer used or a description of any other seal system or assembly used.

Division District Offices have supplies of Well Data Sheets which may be used or which may be used as models for this purpose. Applicants for several identical wells may submit a "typical data sheet" rather than submitting the data for each well.

B. The following must be submitted for each injection well covered by this application. All items must be addressed for the initial well. Responses for additional wells need be shown only when different. Information shown on schematics need not be repeated.

(1) The name of the injection formation and, if applicable, the field or pool name.

(2) The injection interval and whether it is perforated or open-hole.

(3) State if the well was drilled for injection or, if not, the original purpose of the well.

(4) Give the depths of any other perforated intervals and detail on the sacks of cement or bridge plugs used to seal off such perforations.

(5) Give the depth to and the name of the next higher and next lower oil or gas zone in the area of the well, if any.

XIV. PROOF OF NOTICE

All applicants must furnish proof that a copy of the application has been furnished, by certified or registered mail, to the owner of the surface of the land on which the well is to be located and to each leasehold operator within one-half mile of the well location.

Where an application is subject to administrative approval, a proof of publication must be submitted. Such proof shall consist of a copy of the legal advertisement which was published in the county in which the well is located. The contents of such advertisement must include:

(1) The name, address, phone number, and contact party for the applicant;

(2) The intended purpose of the injection well; with the exact location of single wells or the Section, Township, and Range location of multiple wells;

(3) The formation name and depth with expected maximum injection rates and pressures; and,

(4) A notation that interested parties must file objections or requests for hearing with the Oil Conservation Division, 1220 South St. Francis Dr., Santa Fe, New Mexico 87505, within 15 days.

NO ACTION WILL BE TAKEN ON THE APPLICATION UNTIL PROPER PROOF OF NOTICE HAS BEEN SUBMITTED.

NOTICE: Surface owners or offset operators must file any objections or requests for hearing of administrative applications within 15 days from the date this application was mailed to them.

Side 1

INJECTION WELL DATA SHEET

OPERATOR: Dominion Oklahoma Texas Exploration & Production, Inc.

WELL NAME & NUMBER: New Mexico EV State #1 (30-015-25352)

WELL LOCATION: 1980' FSL & 1980' FWL | K | 32 | 22S | 26E

FOOTAGE LOCATION | UNIT LETTER | SECTION | TOWNSHIP | RANGE

WELLBORE SCHEMATIC

WELL CONSTRUCTION DATA

Surface Casing

Hole Size: 17 1/2" Casing Size: 13 3/8"

Cemented with: 1,360 sx. *or* _____ ft³

Top of Cement: surface Method Determined: visual

Intermediate Casing

Hole Size: 12 1/4" Casing Size: 9 5/8"

Cemented with: 900 sx. *or* _____ ft³

Top of Cement: surface Method Determined: visual

Production Casing

Hole Size: 8 1/2" Casing Size: 5"

Cemented with: 3,150 sx. *or* _____ ft³

Top of Cement: 1,988' Method Determined: T.S.

Total Depth: 11,788'

Injection Interval

2,658' feet to 4,680'

(Perforated or Open Hole; indicate which)

INJECTION WELL DATA SHEET

Tubing Size: 2 7/8" Lining Material: Rice Duoline

Type of Packer: Arrow AD-1 internally coated

Packer Setting Depth: 2,600'

Other Type of Tubing/Casing Seal (if applicable): _____

Additional Data

1. Is this a new well drilled for injection? _____Yes __x__No

   If no, for what purpose was the well originally drilled? Morrow gas production

2. Name of the Injection Formation: Delaware

3. Name of Field or Pool (if applicable): Happy Valley

4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail, i.e. sacks of cement or plug(s) used. Morrow 10,962-11,355' plug set @ 10,800' w/30' cmt on top. Strawn 10,001-10,391', to set CIBP @ 4,800' w/30' cmt on plug.

5. Give the name and depths of any oil or gas zones underlying or overlying the proposed injection zone in this area:

   Morrow 10,962-11,355'

   Strawn 10,001-10,391'

ITEM VI of NEW MEXICO OCD Form C-108

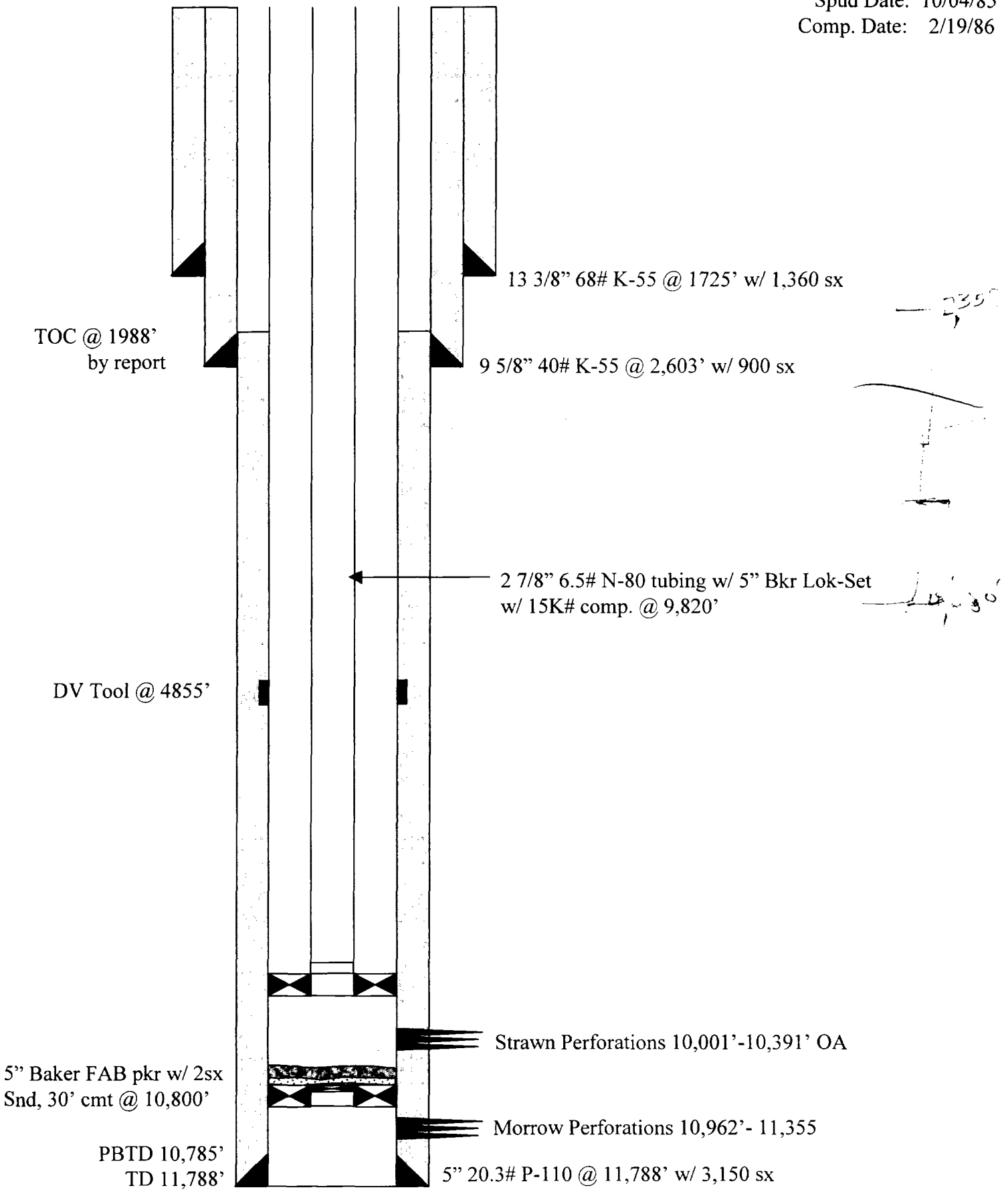
Well Name	Location	Type	TD	Casing	Completion
Barbados State WD-1	NE SE Sec. 32-22S-26E	SWD	5040'	13 3/8" @ 358' 8 5/8" @ 1,643' 5 1/2" @ 5,040'	See attached summary 4342-4783 Lower Delaware
State 'EV' 6	SW NE Sec. 32-22S-26E	OIL	3,100'	13 3/8" @ 362' 8 5/8" @ 1,650' 5 1/2" @ 3,098'	See attached summary 2770-3800' Cherry Canyon

NSA 7/2/01

Current Wellbore Schematic
New Mexico EV State #1
API # 30-015-25352
Sec.32 T22S R26E
Eddy County, New Mexico
G.L. 3342' K.B. 3359'

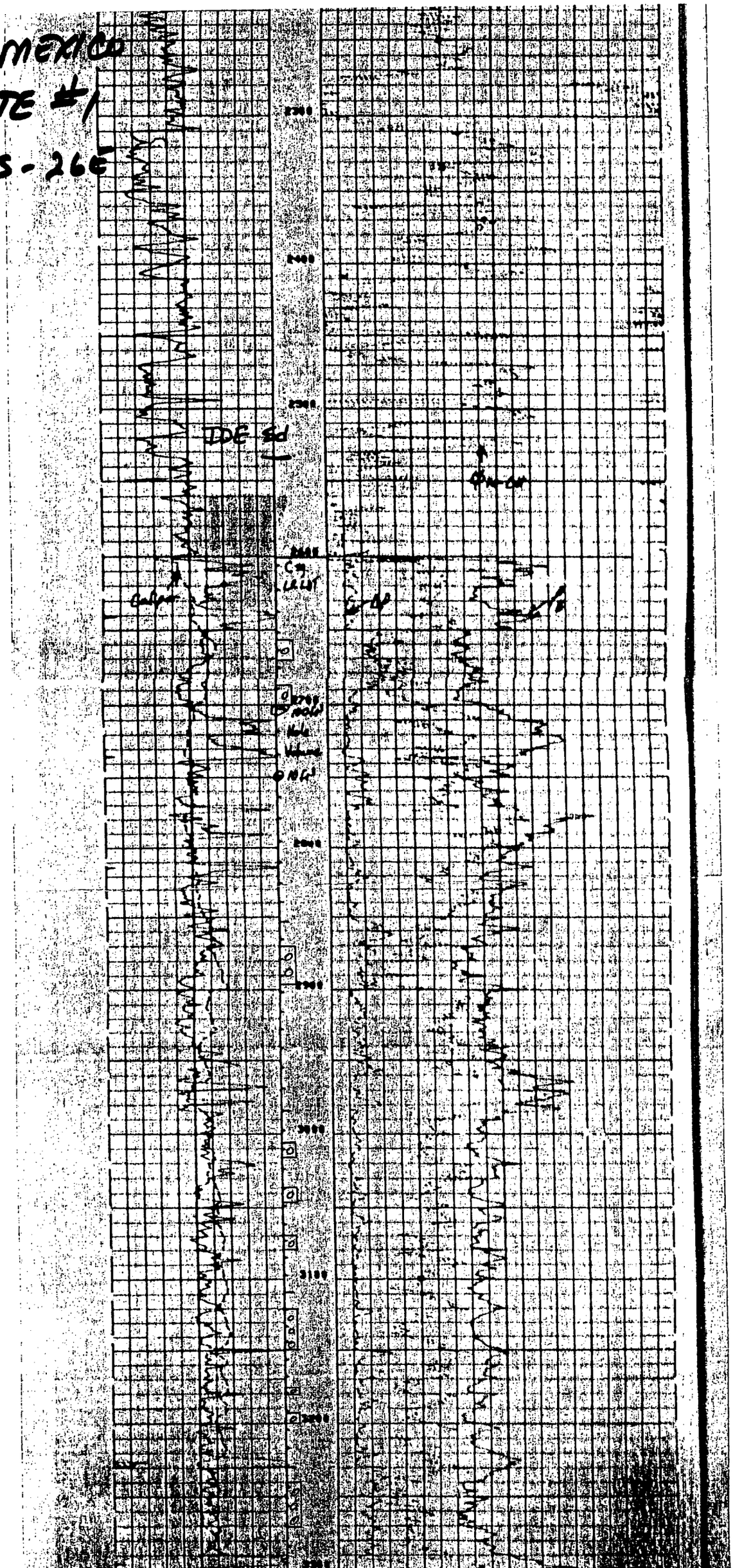
2/01/02: JLM

Spud Date: 10/04/85
Comp. Date: 2/19/86



NEW MEXICO
EV STATE #1
32-22S-26E

EXHIBIT I



PI/Dwights PLUS on CD Well Summary Report

Date: 3/8/2002
Time: 10:05 AM

General Information

State	:	NEW MEXICO	Final Status	:	SERVCE
County	:	EDDY	Drill Total Depth	:	5040
Field	:	HAPPY VALLEY	Log Total Depth	:	
Operator Name	:	LOUIS DREYFUS NATURA			
Lease Name	:	BARBADOS STATE			
Well Number	:	WD-1	Spud Date	:	OCT 21, 1995
API Number	:	30015275580000	Comp Date	:	FEB 08, 1996
Regulatory API	:				
Init Lahee Class	:	U	Hole Direction	:	VERTICAL
Final Lahee Class	:	U	Reference Elevation	:	
Permit Number	:		Ground Elevation	:	3334
Geologic Province	:	PERMIAN BASIN	KB Elevation	:	
Formation at TD	:	452BSPG BONE SPRING			
Oldest Age Pen	:	452 PERMIAN LEONARDIAN			
Township	:	22 S	Section	:	32 SEC
Range	:	26 E	Spot	:	
Base Meridian	:	NEW MEXICO			

Additional Location Information

Footage Location	:	1980 FSL 660 FEL CONGRESS SECTION			
Latitude	:	32.3463900	Latitude (Bot)	:	
Longitude	:	-104.3083200	Longitude (Bot)	:	
Lat./Long. Source	:	TS			
Location Narrative	:	Type: LOCATION	Remark: 7 MI SW CARLSBAD, NM		

Production Tests

Test	Top Form	Base Form	Top Depth	Base Depth	Choke	Oil GOR	Grav	Prod Method	Test Method
001	453DLWR	453DLWR	4342	4783				PERF	UNDESIGNATED

Production Volume

Test	Oil Amount	Oil Unit	Oil Desc	Cond Amount	Cond Unit	Cond Desc	Gas Amount	Gas Unit	Gas Desc	Wtr Amount	Wtr Unit	Wtr Desc
001												

Production Treatment

Test	Top	Base	Volume	Meas	Amount	T/P	PSI	Inj	Type	Nbr	Agent	Add
001	4342	4426	1200	GAL					ACID			
001	4342	4426	12000	GAL	41000	LB			FRAC		SAND	

Production Perforation

Test	Top	Base	Type	Method	Top Form	Base Form	Status	Count	Density	Per
001	4342	4344		PERF	453DLWR	453DLWR	A	43		
001	4402	4426		PERF	453DLWR	453DLWR	A	43		
001	4712	4724		PERF	453DLWR	453DLWR	A	43		
001	4760	4783		PERF	453DLWR	453DLWR	A	43		

Formations

Form Code	Form Name	Top Depth	Top TVD	Base Depth	Base TVD	Source	Lithology
453DLWR	DELAWARE	1675				LOG	
452BSPG	BONE SPRING	4934				LOG	

Log Data

Run No	Log Type	Top	Base	Log MD	Max Temp
01	CCL				
01	CB				
01	GR				

PI/Dwights PLUS on CD Well Summary Report

Date: 3/8/2002
Time: 10:05 AM

Casing Data

Size	Base Depth	Cement	Unit
13 3/8 IN	358	400	SACK
8 5/8 IN	1643	625	SACK
5 1/2 IN	5040	1200	SACK

Tubing Data

Size	Base Depth	Mixed String
2 7/8 IN	4336	

Dwights Energydata Narrative

Accumulated through 1997

Perfs:	4760-4783 (Delaware)
Perfs:	w/2 SPF 47 holes total - no treatment rptd
Perfs:	4712-4724 (Delaware)
Perfs:	w/2 SPF 25 holes total - no treatment rptd - CIBP @ 4665
Perfs:	4402-4426 (Delaware)
Perfs:	w/2 SPF 49 holes total
Perfs:	4342-4344 (Delaware)
Perfs:	w/4 SPF 49 holes total - acid 4342-4426 w/1200 gal 7 1/2% Fe 116 ball
Perfs:	slrs - frac 4342-4426 w/8000 gal WF30 95000 gal Boragel 41000# 16/30
Perfs:	Brady sd 12000# 16/30 Super LC sd
Dwights number:	T4614820

PI/Dwights PLUS on CD Well Summary Report

Date: 3/8/2002
Time: 10:05 AM

General Information

State	:	NEW MEXICO	Final Status	:	OIL
County	:	EDDY	Drill Total Depth	:	3098
Field	:	HAPPY VALLEY	Log Total Depth	:	3100
Operator Name	:	LOUIS DREYFUS NATURA			
Lease Name	:	STATE `EV`			
Well Number	:	6	Spud Date	:	NOV 04, 1996
API Number	:	30015291850000	Comp Date	:	DEC 09, 1996
Regulatory API	:				
Init Lahee Class	:	D	Hole Direction	:	VERTICAL
Final Lahee Class	:	DO	Reference Elevation	:	3334 KB
Permit Number	:		Ground Elevation	:	3320
Geologic Province	:	PERMIAN BASIN	KB Elevation	:	3334
Formation at TD	:	453CRCN CHERRY CANYON			
Oldest Age Pen	:				
Producing Formation	:	453CRCN CHERRY CANYON			
Township	:	22 S	Section	:	32 SEC
Range	:	26 E	Spot	:	
Base Meridian	:	NEW MEXICO			

Additional Location Information

Footage Location	:	1650 FNL 1650 FEL CONGRESS SECTION			
Latitude	:	32.3513300	Latitude (Bot)	:	
Longitude	:	-104.3116400	Longitude (Bot)	:	
Lat./Long. Source	:	TS			
Location Narrative	:	Type: LOCATION	Remark: 7 MI SW CARLSBAD, NM		

Initital Potential Tests

Test	Top Form	Base Form	Top Depth	Base Depth	Choke	GOR	Oil Grav	Prod Method	Test Method
001	453CRCN	453CRCN	2770	2800		500	41	PERF	PUMPING

IP Volume

Test	Oil Amount	Oil Unit	Oil Desc	Cond Amount	Cond Unit	Cond Desc	Gas Amount	Gas Unit	Gas Desc	Wtr Amount	Wtr Unit	Wtr Desc
001	14	BPD					7	MCFD		210	BBL	

IP Treatment

Test	Top	Base	Volume	Meas	Amount	T/P	PSI	Inj	Type	Nbr	Agent	Add
001	2770	2800	500	GAL					ACID			
001	2770	2800	34000	GAL					FRAC		SAND	

IP Perforation

Test	Top	Base	Type	Method	Top Form	Base Form	Status	Count	Density	Per
001	2770	2800		PERF	453CRCN	453CRCN	A	31		

Formations

Form Code	Form Name	Top Depth	Top TVD	Base Depth	Base TVD	Source	Lithology
453DLWR	DELAWARE	1628				LOG	
453CRCN	CHERRY CANYON	2447				LOG	

Mud Data

Depth	Weight	Unit
3100	8.9	PPG

Log Data

Run No	Log Type	Top	Base	Log MD	Max Temp
01	LLD	1650	3098	3098	99
01	MFSF	1650	3098	3098	99

01	GR	1650	3098	3098	99
01	DNCP	200	3098	3098	99
01	NEC	200	3098	3098	99
01	GR	200	3098	3098	99

Casing Data

Size	Base Depth	Cement	Unit
13 3/8 IN	362	500	SACK
8 5/8 IN	1650	737	SACK
5 1/2 IN	3098	400	SACK

Dwights Energydata Narrative

Accumulated through 1997

IP:	(Three Amigos 2770-2800) P 14 BOPD grav 41.0; 7 MCFGPD; 210 BWPD
Perfs:	2770-2800 (Three Amigos)
Perfs:	w/31 holes total - sptd w/500 gal 7 1/2% HCl - frac w/8000 gal 30#
Perfs:	linear gel 12500 gal 30# borate gel
Dst:	None
Cores:	(Delaware) Sidewall
Cores:	- no details
Dwights number:	T4787570

ITEM VII of NEW MEXICO PCD For C-108

DATA on PROPOSED OPERATIONS

NEW MEXICO "EV" STATE #1

1. The proposed average and maximum daily injection rate is expected to be 1000 BWPD and 1800 BWPD respectively.

2. The injection system will be operated as a closed system. With tank level monitoring to prevent over flow of tanks.

3. The average injection pressure is expected to be 600 psi. The maximum injection pressure should not be over 1000 psi.

4. The source for the disposal water will be all wells that Dominion OK TX E&P, Inc. operates or owns an interest in:
   Sections 27, 28, 29, 32, 33, 34 of T22S-R26E and Sections 3, 4, 5 of T23S-R26E Eddy County New Mexico. Water analysis for the Delaware water in the Dall Federal #2 is attached as Exhibit VII 4a. Water analysis for the Strawn water in the NM "EV" State #1 is attached as Exhibit VII 4b.

5. Water analysis of the disposal zone formation water in the New Mexico "EV" State #1 as Exhibit 5a.

EXHIBIT VII 46.

Laboratory Services, Inc.
4016 Fiesta Drive
Hobbs, New Mexico 88240
Telephone: (505) 397-3713

Water Analysis

COMPANY Dominion E & P

SAMPLE EV State #2 Morrow
SAMPLED BY Gene Simer

DATE TAKEN
REMARKS Sec. 32, T-22S, R-26E
2100' FNL & 660' FEL

Barium as Ba	0	
Carbonate alkalinity PPM	0	
Bicarbonate alkalinity PPM	344	
pH at Lab	4.63	
Specific Gravity @ 60°F	1.000	
Magnesium as Mg	195	
Total Hardness as CaCO3	336	
Chlorides as Cl	1,539	
Sulfate as SO4	25	
Iron as Fe	63	
Potassium	2	
Hydrogen Sulfide	0	
Rw	3.6	@ 20° C
Total Dissolved Solids	2,350	
Calcium as Ca	141	
Nitrate	0	

Results reported as Parts per Million unless stated

Langelier Saturation Index -2.67

Analysis by: Vickie Biggs
Date: 3/5/02

EXHIBIT VII 4a.

Laboratory Services, Inc.
4016 Fiesta Drive
Hobbs, New Mexico 88240
Telephone: (505) 397-3713

Water Analysis

COMPANY Dominion E & P

SAMPLE Sheep Draw Fed. Com. #1 Strawn
SAMPLED BY Gene Simer

DATE TAKEN
REMARKS UL B, Sec. 33, T-22S, R-26E
660' FNL & 2310' FEL

Barium as Ba	0	
Carbonate alkalinity PPM	0	
Bicarbonate alkalinity PPM	32	
pH at Lab	3.29	
Specific Gravity @ 60°F	1.040	
Magnesium as Mg	6,206	
Total Hardness as CaCO3	10,700	
Chlorides as Cl	40,595	
Sulfate as SO4	0	
Iron as Fe	70	
Potassium	13	
Hydrogen Sulfide	0	
Rw	0.18	@ 21° C
Total Dissolved Solids	51,600	
Calcium as Ca	4,494	
Nitrate	55	

Results reported as Parts per Million unless stated

Langelier Saturation Index -3.63

Analysis by: Vickie Biggs
Date: 3/5/02

EXHIBIT VII 5a.

Laboratory Services, Inc.
4016 Fiesta Drive
Hobbs, New Mexico 88240
Telephone: (505) 397-3713

Water Analysis

COMPANY Dominion E & P

SAMPLE Dall Federal #2 Delaware
SAMPLED BY Gene Simer

DATE TAKEN
REMARKS Sec. 33, T-22S, R-26E
1980' FSL & 660' FWL

Barium as Ba	0	
Carbonate alkalinity PPM	76	
Bicarbonate alkalinity PPM	612	
pH at Lab	7.55	
Specific Gravity @ 60°F	1.060	
Magnesium as Mg	13,282	
Total Hardness as CaCO3	22,900	
Chlorides as Cl	73,424	
Sulfate as SO4	2,750	
Iron as Fe	0	
Potassium	13	
Hydrogen Sulfide	330	
Rw	0.11	@ 20° C
Total Dissolved Solids	102,450	
Calcium as Ca	9,618	
Nitrate	2,266	

Results reported as Parts per Million unless stated

Langelier Saturation Index 2.3

Analysis by: Vickie Biggs
Date: 3/5/02

ITEM VIII of NEW MEXICO OCD Form C-108

Geologic Data of the Injection Zone & Underground Drinking Water

New Mexico "EV" State #1

The proposed interval for salt water disposal is the Delaware between the depth of 2358' and 4680' in the New Mexico "EV" State #1. The Delaware is a sequence of well consolidated sandstone, siltstone and shale strata of Permian age.

The proposed Delaware disposal zone has had no production tests or stimulation.

Interval	Holes Perforated	Stimulation	Results
2,358-4,680'	410 holes of Delaware perforations for disposal. Calculated wet from open hole logs with no economical shows from mud log.		

No commercial pay in the Delaware has been found in the New Mexico "EV" State #1.

Based on information from the New Mexico State Engineers office in Roswell, the nearest fresh water well is 3/4 mile from the proposed saltwater disposal well. This water well has a total depth of 150' and is located in the NE NE NE/4 of Section 32–T22S–R26E. The fresh water zone in this well is the Alluvium found at a depth of 80' to 250' from surface. The City of Carlsbad has fresh water wells producing from the Capitan Acquifer at a depth range of 600' to 1500'. The City of Carlsbad wells are 2 miles from the proposed salt water injection well. The location of the wells are in the SE SE of Section 1-T23S-R25E.

There are no known fresh water strata underlying the Delaware formation.

ITEMS IX through XIII

New Mexico OCD Form C-108

New Mexico "EV" State #1

Item IX. The proposed Delaware disposal zones from 2658-4680' will be acidized with 15% acid solution and if needed stimulated with 30# gel w/ 16/30 sand. Volumes to be determined at a later date.

Item X. There is no test data on this well other than what is outlined in the schematic and that given in Item VIII of this application.

All logs for this well were included with the original completion form for the well.

Item XI. The Alluvium water aquifer produces water from a depth range of 80 to 250'. The Capitan Acquifer produces fresh water from 600' to 1500'. No contamination of the aquifer should occur since the proposed disposal well has surface casing set at 1,725' and intermediate casing set at 2,603' with cement circulated to surface on both.

A water analysis of the fresh water well in the NE NE NE of Sec. 32-T22S-R26E is attached as Exhibit XI A.

A water analysis of the City of Carlsbad fresh water well in the SE SE Section 1-T23S-R25E is attached as Exhibit XI B.

Item XII Dominion Oklahoma Texas Exploration & Production, Inc. has examined all applicable geological and engineering data in the surrounding area of the proposed disposal well and finds no evidence of open faults or any other hydraulic connection between the disposal zone and any underground source of drinking water.

Item XIII. Proof of notice is attached. See Exhibits XIII A and B.

analex
DIVISION OF XCO

303/863-0014
DENVER, COLORADO

COMPANY EXXON USA
Well Name N.M. "EV" STATE #1 Job #
Location SEC. 32 T. 22S R. 26E 1980' FSL 1980' FWL EDDY Co. NEW MEXICO St
Elevation GL 3249 KB Spud 10/4/85 Finish
Total Depth Interval Logged 1725'-
Pump Stroke-Length-Pump #1 16" Pump #2 16"
Pump Liner-Diameter-Pump #1 5½" Pump #2 5½"

LOGGING GEOLOGISTS
RANDY S. PRICE
DAVID FLOYD

COMPANY AND RIG PERSONNEL
Company Geologist BARRY REID
Company Foreman PAUL REGNAUD / RON GUDGEL
Drilling Company EXETER # 67
Tool Pusher J.D. TIDWELL
Type of Mud FRESH WATER-

SERVICES PERFORMED TWO GEOLOGISTS CONTINOUS 24 H.R. LOGGING WITH (F.I.D.) TOTAL HYDROCARBON ANALYZER AND (F.I.D.) GAS CHROMATOGRAPH.

HOLE SIZE	DEPTH
17½"	1725'
12¼"	2600'

CASING RECORD

Depth	Size	Date
1725'	13 3/8"	10/12/85

SYMBOLS

- ANHYDRITE
- CALCITE
- CHERT
- CONGLOMERATE
- COAL
- DOLOMITE
- GYPSUM
- LIMESTONE
- MARLSTONE
- PYRITE
- SALT
- SANDSTONE
- SHALE
- SILTSTONE
- BENTONITIC
- CALCAREOUS
- CARBONACEOUS
- CAVINGS
- DOLOMITIC
- FOSSILS
- GLAUCONITIC
- NO SAMPLES
- OOLITES
- SILICEOUS
- VERY POOR SAMPLES
- STRINGERS

ABBREVIATIONS

CG—Connection Gas
CO—Circulate Out
DCV—Survey
DST—Drill Stem Test
LAC—8 oz. Carride
LAT—Logged After Trip
NB—New Bit
NCB—New Core Bit
PP—Pump Pressure
RPM—Revolutions/Minute
SPM—Strokes/Minute
TG—Trip Gas
WOB—Weight on Bit

PACKER POINTS
INTERVAL DST'D
AMT OF CORE RECOVERED
INTERVAL CORED

SHOW

Gas Chromatograph (Attenuation scale is 100X) (.1%) (1%) (10%)
C1—Methane iC4—Isobutane
C2—Ethane nC4—Normal
C3—Propane

Continuous Mud Gas (Attenuation scale is X100)
1% by vol. C1 in air = 100 units
10 UNITS 100 UNITS 1000 UNITS
1% 1% 10%
X—X—Cuttings Gas—X—X—
8 OZ CARBIDE LAG
23 MIN @ 55 SPM
1% TEST GAS
CALIBRATED w/ 1% TEST GAS
C1 22000 DIV
C2 27375 DIV
C3 24625 DIV
iC4 21375 DIV
nC4 18250 DIV

Lithology Descriptions, Remarks and Observations

DOL, tan, gen dkbrn-brn, gen dkgybrn, mod frm-fra, occ hd, argil, mod-v arg, slty, occ sdy, n vis ϕ, tr bri yel mnrl flor, NSOC

SS, clr-ltgy, mod-mody ind, sly & sil cmt, fgr, sbrd, mod-v srt, sl-arg & slty, sl vis ϕ, NSFOC

DOL, dkgy-dkbrn, mod-v ind, argnl, v arg, slty n vis ϕ, bri yel mnrl flor occ, NSOC

SS, ltgy-clr, fri-mod ind cly & occ dol cmt, fgr, sbrd, mod srt, mod arg, ϕ p-fr vis ϕ, NSFOC

SH, dkgy-blk, frm, sbblky v slty, occ sdy & micm, sl dol

SS, ltgy, mfri-frm, sly & prob sil cmt, dol cmt in pt, fgr, sbrd, m srt mod arg, occ dol tr dism pyr, n-p vis int-grnm ϕ, NSFOC

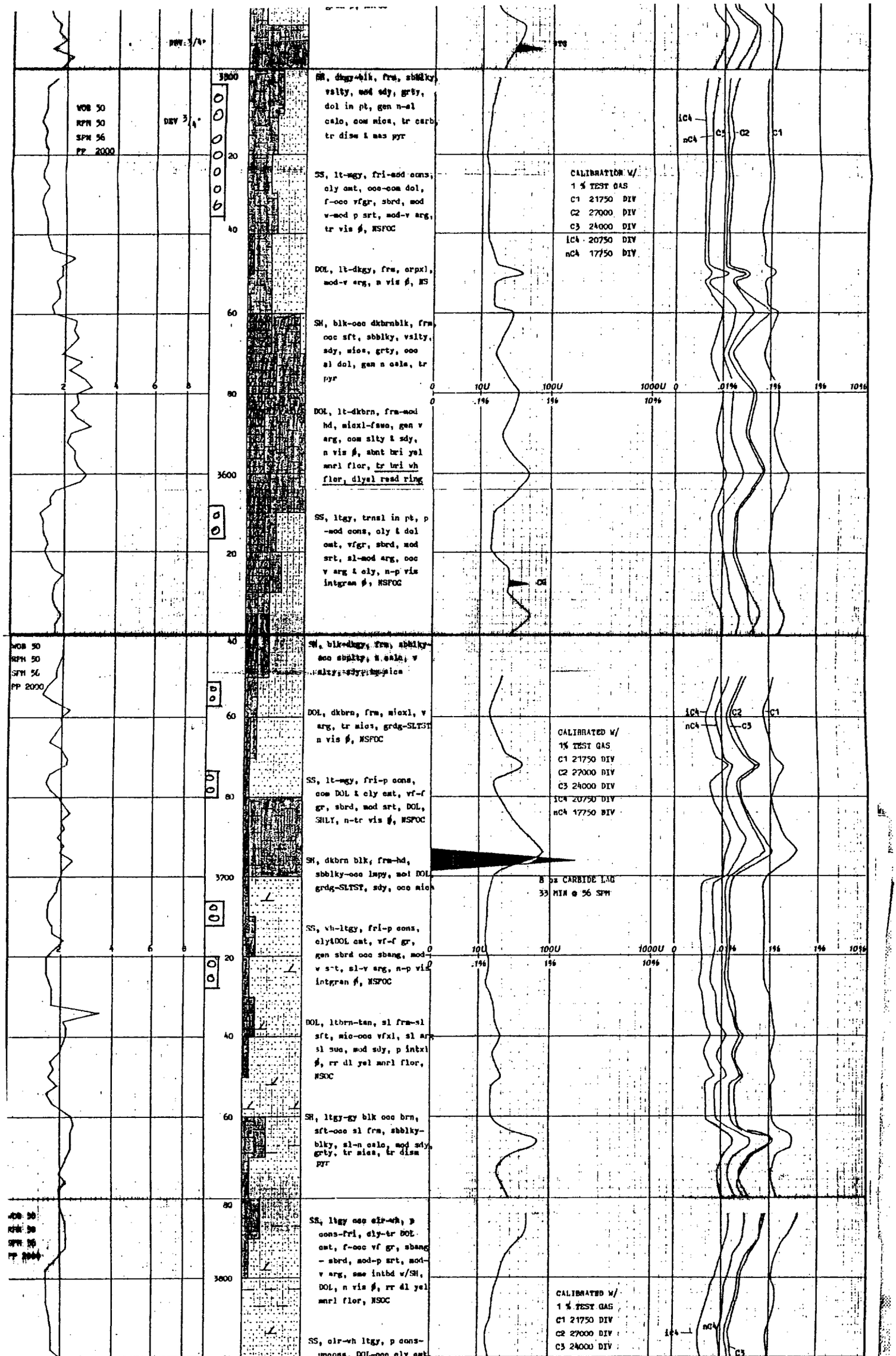
SH, dkgy-blk, frm, sbblky, very, mod sdy, grty, dol in pt, gen n-sl calc, occ micm, tr carb

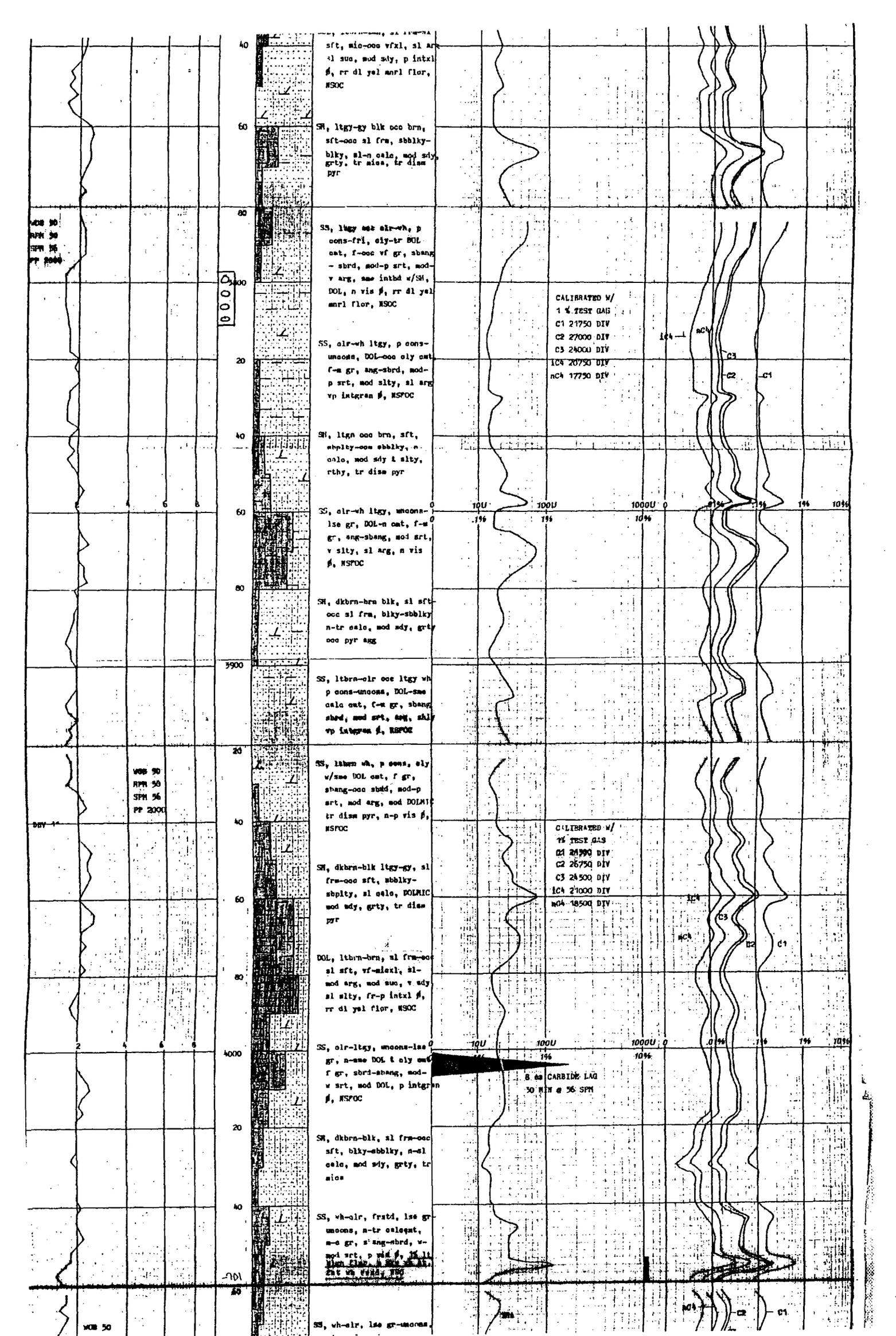
Graphic Lithology

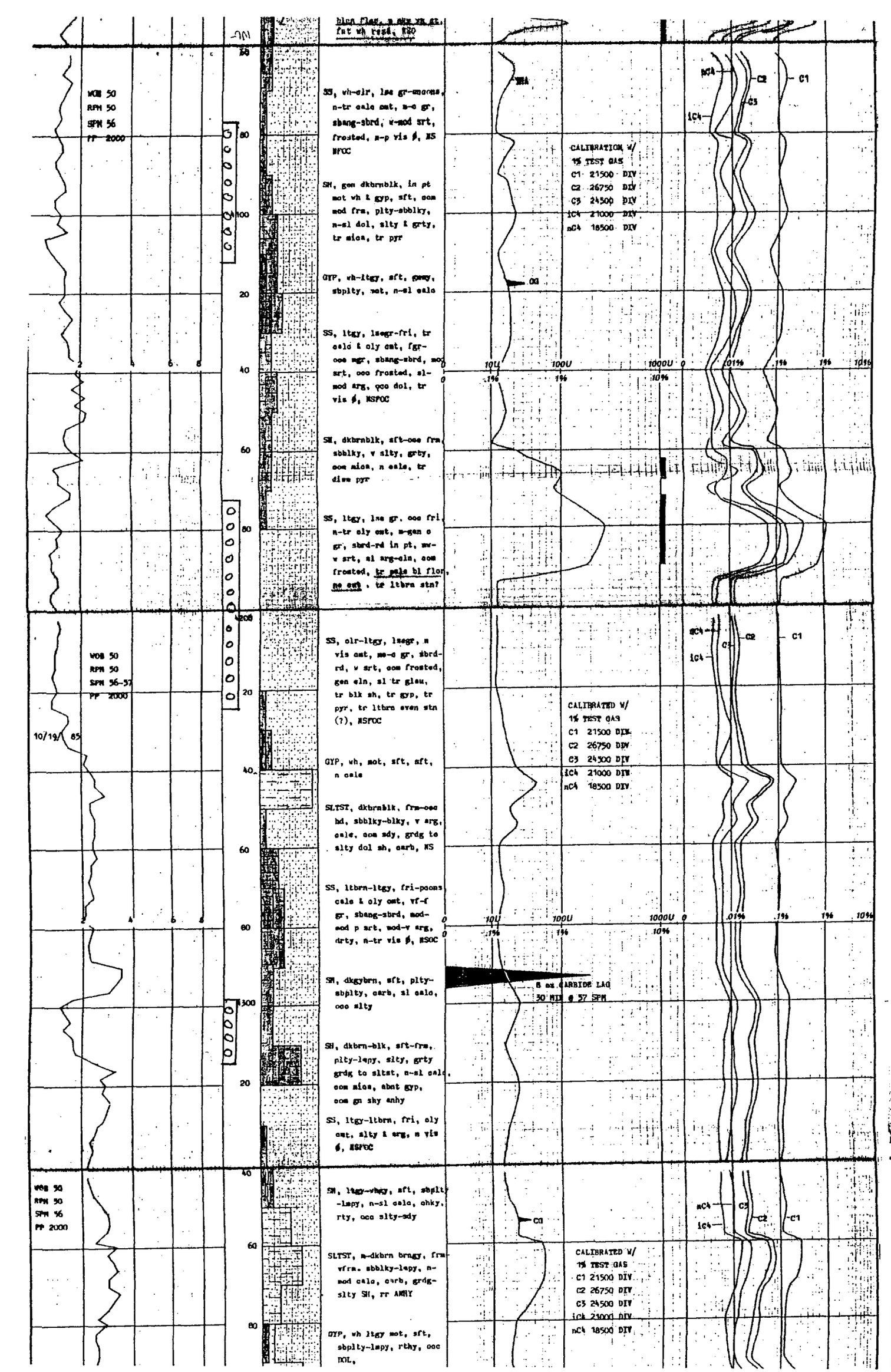
DEPTH
DST INTERVAL
INTERVAL CORED

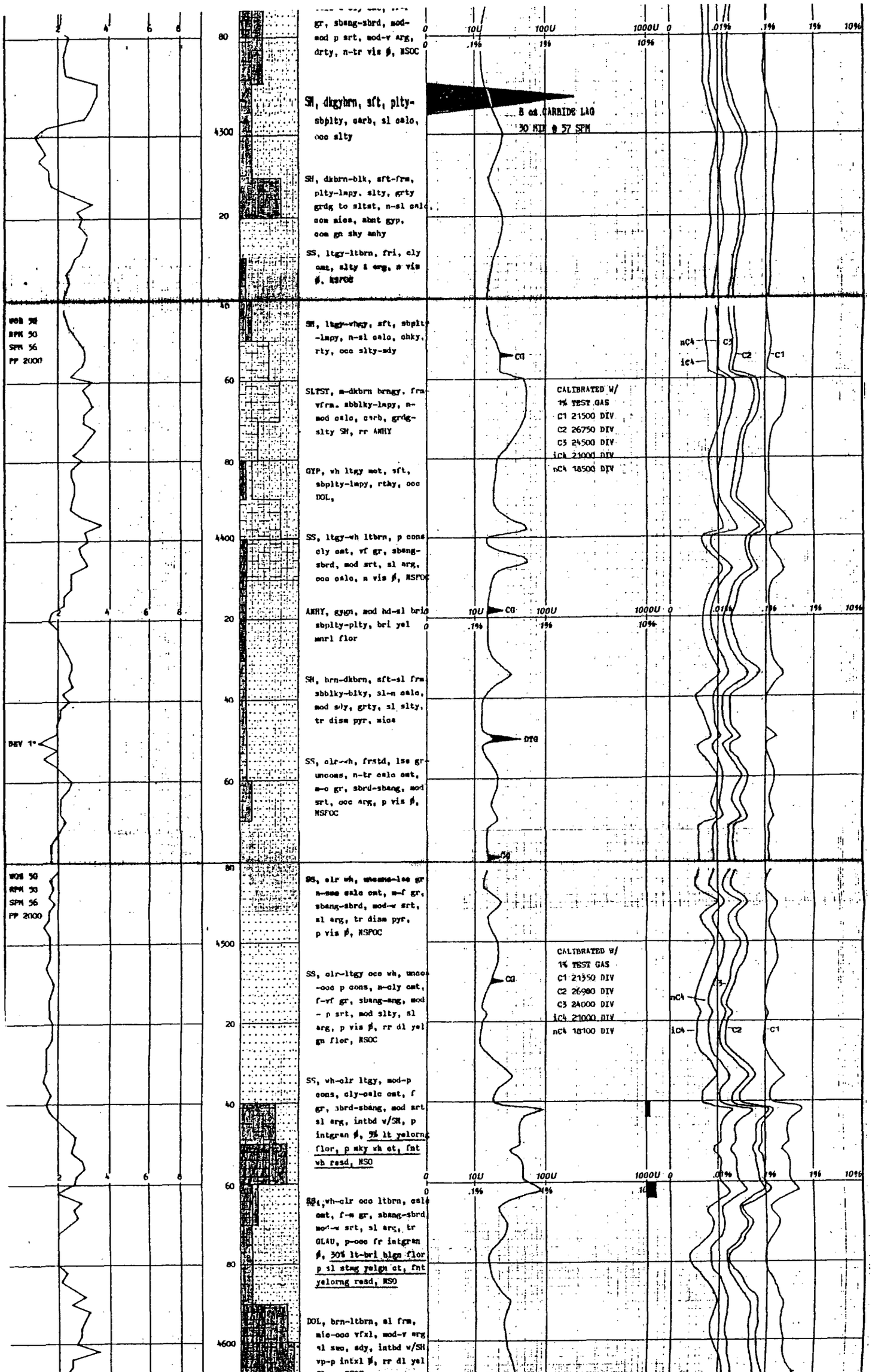
Rate of Penetration
min/ft ⊠ ft/hr □
DPU

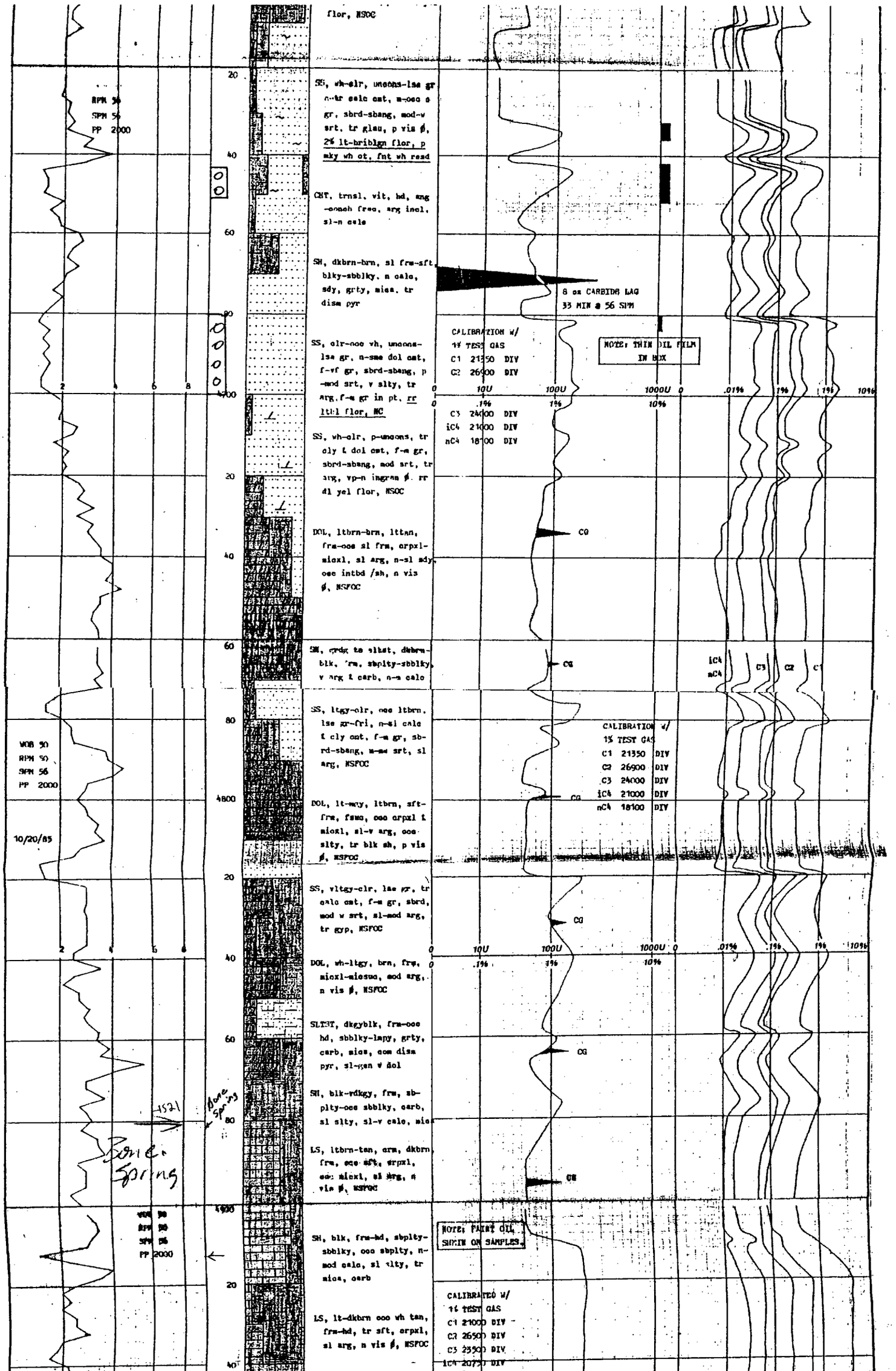
WOB 50
RPM 50
SPM 55
PP 2000
CABLE BROKEN ON RIG GEOLOGRAPH NO DETAIL DATA
10/10/85
DST 3/4"


WOB 50
RPM 50
SPM 56
PP 2000
DEV 3 1/4°
3600
3700
3800
SH, dkgy-blk, frm, sbblky, vslty, mod sdy, grty, dol in pt, gen n-sl calc, com mica, tr carb, tr dism & mas pyr
SS, lt-mgy, fri-mod cons, cly cmt, occ-com dol, f-occ vfgr, sbrd, mod w-mod p srt, mod-v arg, tr vis ϕ, NSFOC
DOL, lt-dkgy, frm, crpxl, mod-v arg, n vis ϕ, NS
SH, blk-occ dkbrnblk, frm, occ sft, sbblky, vslty, sdy, mica, grty, occ sl dol, gen n calc, tr pyr
DOL, lt-dkbrn, frm-mod hd, micxl-fsuc, gen v arg, com slty & sdy, n vis ϕ, abnt bri yel mnrl flor, tr bri wh flor, dlysl resd ring
SS, ltgy, trnsl in pt, p -mod cons, cly & dol cmt, vfgr, sbrd, mod srt, sl-mod arg, occ v arg & cly, n-p vis intgran ϕ, NSFOC
SH, blk-dkgy, frm, sbblky-occ sbslty, n calc, v slty, sdy, gy mica
DOL, dkbrn, frm, micxl, v arg, tr mica, grdg-SLTST n vis ϕ, NSFOC
SS, lt-mgy, fri-p cons, com DOL & cly cmt, vf-f gr, sbrd, mod srt, DOL, SHLY, n-tr vis ϕ, NSFOC
SH, dkbrn blk, frm-hd, sbblky-occ lmpy, mod DOL grdg-SLTST, sdy, occ mica
SS, wh-ltgy, fri-p cons, cly&DOL cmt, vf-f gr, gen sbrd occ sbang, mod w s-t, sl-v arg, n-p vis intgran ϕ, NSFOC
DOL, ltbrn-tan, sl frm-sl sft, mic-occ vfxl, sl arg sl suc, mod sdy, p intxl ϕ, rr dl yel mnrl flor, NSOC
SH, ltgy-gy blk occ brn, sft-occ sl frm, sbblky-blky, sl-n calc, mod sdy, grty, tr mica, tr dism pyr
SS, ltgy occ clr-wh, p cons-fri, cly-tr DOL cmt, f-occ vf gr, sbang - sbrd, mod-p srt, mod-v arg, sme intbd w/SH, DOL, n vis ϕ, rr dl yel mnrl flor, NSOC
SS, clr-wh ltgy, p cons-unconsl, DOL-occ cly cmt
CALIBRATION W/
1 % TEST GAS
C1 21750 DIV
C2 27000 DIV
C3 24000 DIV
iC4 20750 DIV
nC4 17750 DIV
CALIBRATED W/
1% TEST GAS
C1 21750 DIV
C2 27000 DIV
C3 24000 DIV
iC4 20750 DIV
nC4 17750 DIV
8 oz CARBIDE LAG
33 MIN @ 56 SPM
CALIBRATED W/
1 % TEST GAS
C1 21750 DIV
C2 27000 DIV
C3 24000 DIV
iC4 20750 DIV
iC4
nC4
C5
C2
C1
C3
0
10U
100U
1000U
1%
10%


sft, mic-occ vfxl, sl arg
sl suc, mod sdy, p intxl
ϕ, rr dl yel anrl flor,
NSOC
SH, ltgy-gy blk occ brn,
sft-occ sl frm, sbblky-
blky, sl-n calc, mod sdy,
grty, tr mica, tr diss
pyr
SS, ltgy wht clr-wh, p
cons-fri, cly-tr DOL
cmt, f-occ vf gr, sbang
- sbrd, mod-p srt, mod-
v arg, sme intbd w/SH,
DOL, n vis ϕ, rr dl yel
anrl flor, NSOC
SS, clr-wh ltgy, p cons-
unconsn, DOL-occ cly cmt,
f-m gr, ang-sbrd, mod-
p srt, mod slty, sl arg
vp intgran ϕ, NSFOC
SH, ltgn occ brn, sft,
sbplty-occ sbblky, n-
calc, mod sdy & slty,
rthy, tr diss pyr
SS, clr-wh ltgy, unconsn-
lse gr, DOL-n cmt, f-m
gr, ang-sbang, mod srt,
v slty, sl arg, n vis
ϕ, NSFOC
SH, dkbrn-brn blk, sl sft-
occ sl frm, blky-sbblky
n-tr calc, mod sdy, grty
occ pyr agg
SS, ltbrn-clr occ ltgy wh
p cons-unconsn, DOL-sme
calc cmt, f-m gr, sbang
sbrd, mod srt, ang, slty
vp intgran ϕ, NSFOC
SS, ltbrn wh, p cons, cly
w/sme DOL cmt, f gr,
sbang-occ sbrd, mod-p
srt, mod arg, mod DOLMIC
tr diss pyr, n-p vis ϕ,
NSFOC
SH, dkbrn-blk ltgy-gy, sl
frm-occ sft, sbblky-
sbplty, sl calc, DOLMIC
mod sdy, grty, tr diss
pyr
DOL, ltbrn-brn, sl frm-occ
sl sft, vf-mlexl, sl-
mod arg, mod suc, v sdy
sl slty, fr-p intxl ϕ,
rr dl yel flor, NSOC
SS, clr-ltgy, unconsn-lse
gr, n-sme DOL & cly cmt
f gr, sbrd-sbang, mod-
w srt, mod DOL, p intgran
ϕ, NSFOC
SH, dkbrn-blk, sl frm-occ
sft, blky-sbblky, n-sl
calc, mod sdy, grty, tr
mica
SS, wh-clr, frstd, lse gr-
unconsn, n-tr calc cmt,
m-c gr, sbang-sbrd, w-
mod srt, p mod ϕ, tr lt
brn flor, n stn on lt,
dat wh fluor, NSO
SS, wh-clr, lse gr-unconsn,
WOB 30
RPM 50
SPM 56
PP 2000
3000
3900
4000
CALIBRATED W/
1 % TEST GAS
C1 21750 DIV
C2 27000 DIV
C3 24000 DIV
iC4 20750 DIV
nC4 17750 DIV
CALIBRATED W/
1% TEST GAS
C1 24300 DIV
C2 26750 DIV
C3 24500 DIV
iC4 21000 DIV
nC4 18500 DIV
8 ea CARBIDE LAG
30 MIN @ 56 SPM
0 10U 100U 1000U
0 .1% 1% 10%


WOB 50
RPM 50
SPM 56
PP 2000
SS, wh-clr, lse gr-mgcms, n-tr calc cmt, m-c gr, sbang-sbrd, w-mod srt, frosted, m-p vis ϕ, NS NFOC
SH, gen dkbrnblk, in pt mot wh & gyp, sft, com mod frm, plty-sbblky, n-sl dol, slty & grty, tr mica, tr pyr
GYP, wh-ltgy, sft, gumy, sbplty, mot, n-sl calc
SS, ltgy, lsegr-fri, tr calc & oly cmt, fgr-cgr, sbang-sbrd, mod srt, occ frosted, sl-mod arg, occ dol, tr vis ϕ, NSFOC
SH, dkbrnblk, sft-occ frm, sbblky, v slty, grty, com mica, n calc, tr disw pyr
SS, ltgy, lse gr, occ fri, n-tr oly cmt, m-gcn c gr, sbrd-rd in pt, mw-w srt, sl arg-cln, com frosted, tr calc bl flor, no cut, tr ltbrn stn?
CALIBRATION W/ 1% TEST GAS
C1 21500 DIV
C2 26750 DIV
C3 24500 DIV
iC4 21000 DIV
nC4 18500 DIV
WOB 50
RPM 50
SPM 56-57
PP 2000
10/19/85
SS, olr-ltgy, lsegr, n vis cmt, mc-c gr, sbrd-rd, w srt, com frosted, gen cln, sl tr glau, tr blk sh, tr gyp, tr pyr, tr ltbrn even stn (?), NSFOC
GYP, wh, mot, sft, sft, n calc
SLTST, dkbrnblk, frm-occ hd, sbblky-blky, v arg, calc, com sdy, grdg to slty dol sh, carb, NS
SS, ltbrn-ltgy, fri-pcons calc & oly cmt, vf-f gr, sbang-sbrd, mod-mod p srt, mod-v arg, drty, n-tr vis ϕ, NSOC
SH, dkgybrn, sft, plty-sbplty, carb, sl calc, occ slty
SH, dkbrn-blk, sft-frm, plty-lmpy, slty, grty grdg to sltst, n-sl calc, com mica, abnt gyp, com gn shy anhy
SS, ltgy-ltbrn, fri, oly cmt, slty & arg, n vis ϕ, NSFOC
6 oz CARBIDE LAG
30 MIN @ 57 SPM
WOB 50
RPM 50
SPM 56
PP 2000
SH, ltgy-vhgy, sft, sbplty-lmpy, n-sl calc, chky, rty, occ slty-sdy
SLTST, m-dkbrn brngy, frm-vfrm, sbblky-lmpy, n-mod calc, carb, grdg-slty SH, rr ANHY
GYP, wh ltgy mot, sft, sbplty-lmpy, rthy, occ DOL,


gr, sbang-sbrd, mod-
mod p srt, mod-v arg,
drty, n-tr vis ϕ, NSOC
SH, dkgybrn, sft, plty-
sbplty, carb, sl calc,
occ slty
8 oz CARBIDE LAG
30 MIN @ 57 SPM
SH, dkbrn-blk, sft-frm,
plty-lmpy, slty, grty
grdg to sltst, n-sl calc,
com mica, abnt gyp,
occ gn shy anhy
SS, ltgy-ltbrn, fri, cly
cmt, slty & arg, p vis
ϕ, NSFOC
WOB 50
RPM 50
SPM 56
PP 2000
SH, ltgy-whgy, sft, sbplty
-lmpy, n-sl calc, chky,
rty, occ slty-sdy
SLTST, m-dkbrn brngy, frm
vfrm, sbblky-lmpy, n-
mod calc, carb, grdg-
slty SH, rr ANHY
GYP, wh ltgy mot, sft,
sbplty-lmpy, rthy, occ
DOL,
SS, ltgy-wh ltbrn, p cons
cly cmt, vf gr, sbang-
sbrd, mod srt, sl arg,
occ calc, n vis ϕ, NSFOC
ANHY, gygn, mod hd-sl brit
sbplty-plty, bri yel
mnrl flor
SH, brn-dkbrn, sft-sl frm
sbblky-blky, sl-n calc,
mod sdy, grty, sl slty,
tr dism pyr, mica
DEV 1°
SS, clr-wh, frstd, lse gr
uncons, n-tr calc cmt,
m-c gr, sbrd-sbang, mod
srt, occ arg, p vis ϕ,
NSFOC
WOB 50
RPM 50
SPM 56
PP 2000
SS, clr wh, uncons-lse gr
n-sme calc cmt, m-f gr,
sbang-sbrd, mod-w srt,
sl arg, tr dism pyr,
p vis ϕ, NSFOC
SS, clr-ltgy occ wh, uncon
-occ p cons, n-cly cmt,
f-vf gr, sbang-ang, mod
- p srt, mod slty, sl
arg, p vis ϕ, rr dl yel
gn flor, NSOC
SS, wh-clr ltgy, mod-p
cons, cly-calc cmt, f
gr, sbrd-sbang, mod srt
sl arg, intbd w/SH, p
intgran ϕ, 5% lt yelorng
flor, p sky wh ct, fnt
wh resd, NSO
SS, wh-clr occ ltbrn, calc
cmt, f-m gr, sbang-sbrd
mod-w srt, sl arg, tr
GLAU, p-occ fr intgran
ϕ, 30% lt-bri blgn flor
p sl stag yelgn ct, fnt
yelorng resd, NSO
DOL, brn-ltbrn, sl frm,
mic-occ vfxl, mod-v arg
sl sno, sdy, intbd w/SH
vp-p intxl ϕ, rr dl yel
flor, NSOC
CALIBRATED W/
1% TEST GAS
C1 21500 DIV
C2 26750 DIV
C3 24500 DIV
iC4 21000 DIV
nC4 18500 DIV
CALIBRATED W/
1% TEST GAS
C1 21350 DIV
C2 26980 DIV
C3 24000 DIV
iC4 21000 DIV
nC4 18100 DIV
C1
C2
C3
iC4
nC4
CO
DTG
10U
100U
1000U
.1%
1%
10%


flor, NSOC
RPM 56
SPM 56
PP 2000
SS, wh-clr, uncons-lse gr, n-tr calc cmt, m-occ c gr, sbrd-sbang, mod-w srt, tr glau, p vis ϕ, 2% lt-briblgn flor, p mky wh ot, fnt wh read
CHT, trnsl, vit, hd, sng-conch frac, arg incl, sl-n calc
SH, dkbrn-brn, sl frm-sft, blky-sbblky, n calc, sdy, grty, mica, tr dism pyr
8 oz CARBIDE LAG
33 MIN @ 56 SPM
CALIBRATION W/
1% TEST GAS
C1 21350 DIV
C2 26900 DIV
NOTE: THIN OIL FILM IN MUD
SS, clr-occ vh, uncons-lse gr, n-sme dol cmt, f-vf gr, sbrd-sbang, p-mod srt, v slty, tr arg, f-m gr in pt, rr ltbl flor, MC
C3 24000 DIV
iC4 21000 DIV
nC4 18100 DIV
SS, wh-clr, p-uncons, tr oly & dol cmt, f-m gr, sbrd-sbang, mod srt, tr arg, vp-n ingrns ϕ, rr dl yel flor, NSOC
DOL, ltbrn-brn, lttan, frm-occ sl frm, crpxl-microxl, sl arg, n-sl sdy, occ intbd /sh, n vis ϕ, NSFOC
CG
SH, grdg to slhst, dkbrn-blk, frm, sbplty-sbblky, v arg & carb, n-n calc
SS, ltgy-clr, occ ltbrn, lse gr-fri, n-sl calc & cly cmt, f-m gr, sbrd-sbang, m-mw srt, sl arg, NSFOC
WOB 50
RPM 50
SPM 56
PP 2000
10/20/85
DOL, lt-mgy, ltbrn, sft-frm, fsmo, occ crpxl & microxl, sl-v arg, occ slty, tr blk sh, p vis ϕ, NSFOC
SS, vltgy-clr, lse gr, tr calc cmt, f-m gr, sbrd, mod w srt, sl-mod arg, tr gyp, NSFOC
DOL, wh-ltgy, brn, frm, microxl-miosuc, mod arg, n vis ϕ, NSFOC
SLTST, dkgyblk, frm-occ hd, sbblky-lmpy, grty, carb, mica, occ dism pyr, sl-scon w dol
SH, blk-vdkgy, frm, sbplty-occ sbblky, carb, sl slty, sl-v calc, mica
LS, ltbrn-tan, crm, dkbrn, frm, occ sft, crpxl, occ microxl, sl arg, n vis ϕ, NSFOC
NOTE: FAINT OIL SHOW ON SAMPLES
SH, blk, frm-hd, sbplty-sbblky, occ sbplty, n-mod calc, sl slty, tr mica, carb
LS, lt-dkbrn occ wh tan, frm-hd, tr sft, crpxl, sl arg, n vis ϕ, NSFOC
CALIBRATED W/
1% TEST GAS
C1 21000 DIV
C2 26500 DIV
C3 23500 DIV
iC4 20750 DIV
nC4 17900 DIV
0 10U 100U 1000U 0 .01% 1% 10%
0 .1% 1% 10%

Schlumberger

SIMULTANEOUS

COMPENSATED NEUTRON-LITHO DENSITY

COMPANY Exxon

API # 30-015-25352

WELL N.M. "EV" State Com #1

FIELD Carlsbad, South

COUNTY Eddy STATE New Mexico

COUNTY / FIELD / LOCATION / WELL / COMPANY

LOCATION 1980' FSL & 1980' FWL
X: 505085
Y: 489724

API SERIAL NO.	SEC.	TWP.	RANGE
	32	22S	26E

Other Services:
DLL, MSFL
NGT, SHDT
Cores

Permanent Datum: G.L. ; Elev.: 3341.6
Log Measured From K.B. 12.8 Ft. Above Perm. Datum
Drilling Measured From K.B.

Elev.: K.B. 3359.4
D.F. 3358.4
G.L. 3341.6

Date	11-23-85			
Run No.	ONE			
Depth—Driller	11788			
Depth—Logger	11788			
Btm. Log Interval	11785			
Top Log Interval	0			
Casing—Driller	9⅝ @2603	@	@	@
Casing—Logger	2602			
Bit Size	8½			
Type Fluid in Hole	XL Drispac			
Dens. / Visc.	10.4 / 40			
pH / Fluid Loss	10.2 / 6 ml	ml	ml	ml
Source of Sample	Circulated			
Rm @ Meas. Temp.	.061 @63 °F	@ °F	@ °F	@ °F
Rmf @ Meas. Temp.	.061 @63 °F	@ °F	@ °F	@ °F
Rmc @ Meas. Temp.	— @ — °F	@ °F	@ °F	@ °F
Source: Rmf / Rmc	Meas. / —			
Rm @ BHT	.023 @175 °F	@ °F	@ °F	@ °F
Circulation Stopped	23:00 11-21			
Logger on Bottom	16:06 11-22			
		°F	°F	°F

TITE HOLE

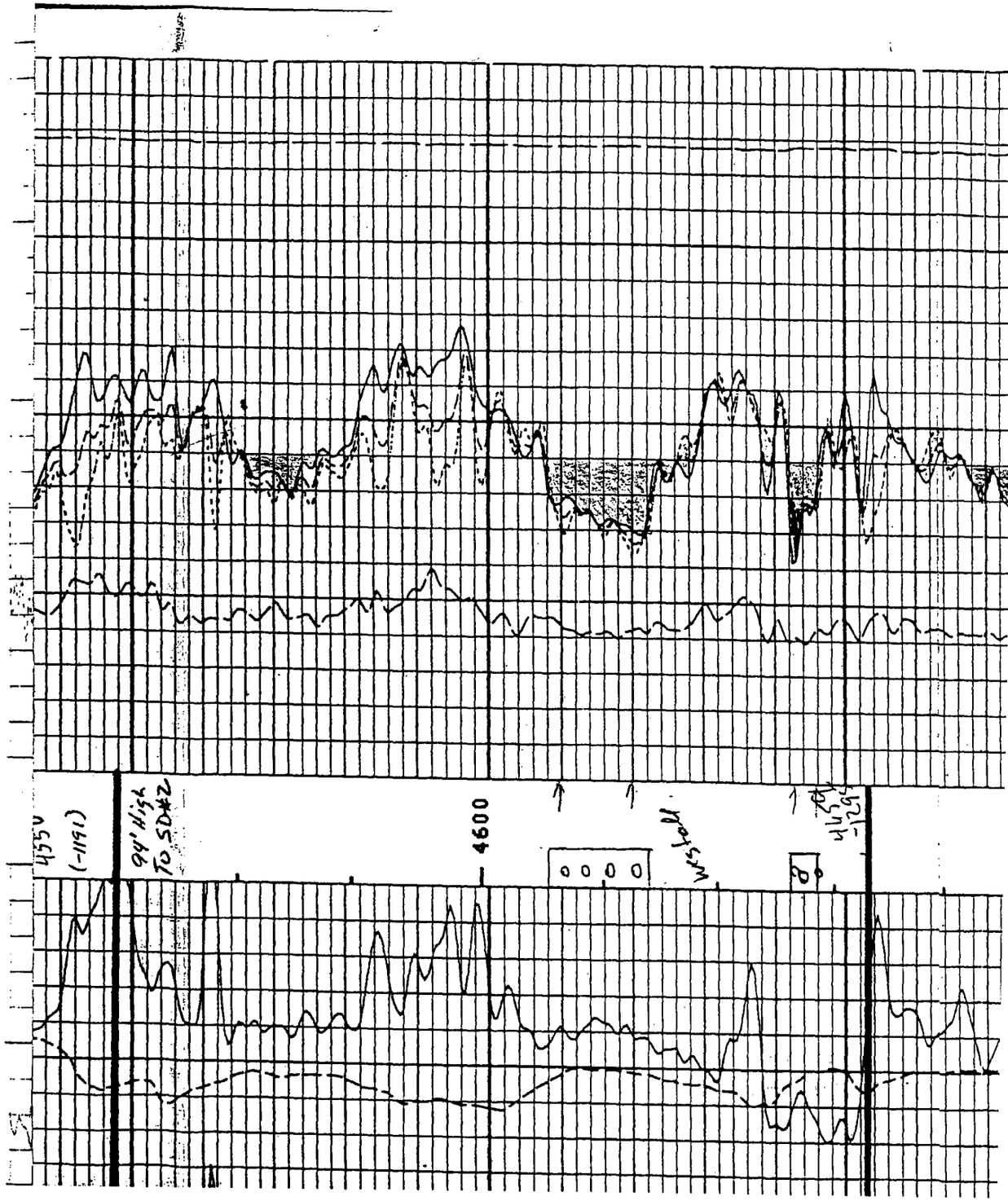


EXHIBIT XI B.

Laboratory Services, Inc.
4016 Fiesta Drive
Hobbs, New Mexico 88240
Telephone: (505) 397-3713

Water Analysis

COMPANY Dominion E & P

SAMPLE City of Carlsbad Water Well #1
SAMPLED BY Gene Simer

DATE TAKEN
REMARKS Sec. 1, T-23S, R-25E
SE/SE 1/4

Barium as Ba	0
Carbonate alkalinity PPM	0
Bicarbonate alkalinity PPM	268
pH at Lab	6.91
Specific Gravity @ 60°F	1.000
Magnesium as Mg	203
Total Hardness as CaCO3	350
Chlorides as Cl	400
Sulfate as SO4	170
Iron as Fe	0
Potassium	2
Hydrogen Sulfide	0
Rw	NA
Total Dissolved Solids	1,200
Calcium as Ca	147
Nitrate	2

Results reported as Parts per Million unless stated

Langelier Saturation Index -0.51

Analysis by: Vickie Biggs
Date: 3/5/02

EXHIBIT XI A.

Laboratory Services, Inc.
4016 Fiesta Drive
Hobbs, New Mexico 88240
Telephone: (505) 397-3713

Water Analysis

COMPANY Dominion E & P

SAMPLE Fresh Water Windmill
SAMPLED BY Gene Simer

DATE TAKEN
REMARKS Sec. 32, T-22S, R-26E
990' FNL & 1750' FEL

Barium as Ba	0
Carbonate alkalinity PPM	0
Bicarbonate alkalinity PPM	244
pH at Lab	6.87
Specific Gravity @ 60°F	1.000
Magnesium as Mg	406
Total Hardness as CaCO3	700
Chlorides as Cl	250
Sulfate as SO4	750
Iron as Fe	0
Potassium	2
Hydrogen Sulfide	0
Rw	NA
Total Dissolved Solids	1,980
Calcium as Ca	294
Nitrate	17

Results reported as Parts per Million unless stated

Langelier Saturation Index -0.28

Analysis by: Vickie Biggs
Date: 3/5/02

EXHIBIT XIII

Affidavit of Publication

No. 21915

State of New Mexico,
County of Eddy, ss.

Dawn Higgins,

being first duly sworn, on oath says:

That she is Business Manager of the Carlsbad Current-Argus, a newspaper published daily at the City of Carlsbad, in said county of Eddy, state of New Mexico and of general paid circulation in said county; that the same is a duly qualified newspaper under the laws of the State wherein legal notices and advertisements may be published; that the printed notice attached hereto was published in the regular and entire edition of said newspaper and not in supplement thereof on the date as follows, to wit:

March 7	2002
March 14	2002
	2002
	2002
	2002
	2002

That the cost of publication is $ 57.24, and that payment thereof has been made and will be assessed as court costs.

Dawn Higgins

Subscribed and sworn to before me this

13 day of March, 2002

Stephanie Dobson

My commission expires 12/13/05

Notary Public

March 7, 14, 2002

Dominion Oklahoma Texas Exploration and Production, Inc., 14000 Quail Springs Parkway, Suite 600, Oklahoma City, Oklahoma 73134-2600, Attention: Mr. Jaime McAlpine, Production Engineer (405) 749-1300, proposes to convert the New Mexico "EV" State #1 well from a temporarily aban- doned well to a water disposal well. The New Mexico "EV" State #1 is located 1980' FSL & 1980' FWL of Section 32, Township 22 South, Range 26 East, N.M.P.M., Eddy County, New Mexico

1800 barrels of water per day maximum shall be injected at 1000 psi into the Delaware formation at a depth of 2,658' - 4,680'.

Interested parties must file objections or request a hearing with the New Mexico Oil Conservation Division, P.O. Box 2088, Santa Fe, New Mexico 87501 within 15 days.

Exhibit XIII A

Dominion Exploration & Production, Inc.

Application for Authorization to Inject in New Mexico EV State #1
SW/4 Section 32-T22S-R26E
Eddy County, New Mexico

CERTIFICATE OF SERVICE

I, Jaime Lyle McAlpine, P.E., Dominion Exploration & Production Inc., Operator of the New Mexico EV State #1, have on this 18th day of March, 2002, mailed or caused to be mailed, postage prepaid, a copy of the Application for Authorization to Inject to the following persons:

Landowner

State of New Mexico
P.O. Box 1148
Santa Fe, NM 87504-1148

Grazing Lease

Fech Land and Cattle Company
353 Dark Canyon Road
Carlsbad, NM 88220

Offset Operators

None

By: _____ Date: 3/18/02
Jaime L. McAlpine, P.E., Dominion E & P

EXHIBIT XIII

Affidavit of Publication

No. 21915

State of New Mexico,
County of Eddy, ss.

Dawn Higgins

being first duly sworn, on oath says:

That she is Business Manager of the Carlsbad Current-Argus, a newspaper published daily at the City of Carlsbad, in said county of Eddy, state of New Mexico and of general paid circulation in said county; that the same is a duly qualified newspaper under the laws of the State wherein legal notices and advertisements may be published; that the printed notice attached hereto was published in the regular and entire edition of said newspaper and not in supplement thereof on the date as follows, to wit:

March 7	2002
March 14	2002
	2002
	2002
	2002
	2002

That the cost of publication is $ 57.24 and that payment thereof has been made and will be assessed as court costs.

Dawn Higgins

Subscribed and sworn to before me this

15 day of March, 2002

Stephanie Dobson

My commission expires 12/13/05

Notary Public

March 7, 14, 2002

Dominion Oklahoma Texas Exploration and Production, Inc., 14000 Quail Springs Parkway, Suite 600, Oklahoma City, Oklahoma 73134-2600, Attention: Mr. Jaime McAlpine, Production Engineer (405) 749-1300, proposes to convert the New Mexico "EV" State #1 well from a temporarily abandoned well to a water disposal well. The New Mexico "EV" State #1 is located 1980' FSL & 1980' FWL of Section 32, Township 22 South, Range 26 East, N.M.P.M., Eddy County, New Mexico

1800 barrels of water per day maximum shall be injected at 1000 psi into the Delaware formation at a depth of 2,658' - 4,080'.

Interested parties must file objections or request a hearing with the New Mexico Oil Conservation Division, P.O. Box 2088, Santa Fe, New Mexico 87501 within 15 days.

Exhibit XIII A

Dominion Exploration & Production, Inc.

Application for Authorization to Inject in New Mexico EV State #1
SW/4 Section 32-T22S-R26E
Eddy County, New Mexico

CERTIFICATE OF SERVICE

I, Jaime Lyle McAlpine, P.E., Dominion Exploration & Production Inc., Operator of the New Mexico EV State #1, have on this 18th day of March, 2002, mailed or caused to be mailed, postage prepaid, a copy of the Application for Authorization to Inject to the following persons:

Landowner

State of New Mexico
P.O. Box 1148
Santa Fe, NM 87504-1148

Grazing Lease

Fech Land and Cattle Company
353 Dark Canyon Road
Carlsbad, NM 88220

Offset Operators

None

By: _____ Date: 3/19/02
Jaime L. McAlpine, P.E., Dominion E & P

ITEM XIV

CITY of CARLSBAD REQUIREMENTS

I. Dominion Oklahoma Texas Exploration & Production, Inc. (DOTEPI) agrees that the proposed New Mexico "EV" State #1 Water Disposal well and related facilities will be subject to the following:

(a) The water disposal well and related facilities will be only used for the disposal of water from currently producing oil and/ or gas wells and any future producing oil and/or gas wells located in the following Sections:

Sections 27, 28, 29, 32, 33, and 34 of T22S-R26E Eddy County, New Mexico, Sections 3, 4, and 5 of T23S-R26E Eddy County, New Mexico.

(b) The water disposal well and related facilities will be limited to the disposal of water from producing oil and/or gas wells which are either operated by DOTEPI or in which DOTEPI owns an interest. In no event will the disposal well and related facilities become a commercial facility. This condition shall be applicable to the successors and assigns of DOTEPI.

(c) At all times during the operation of the disposal well and related facilities, the City of Carlsbad, its employees and agents shall have access at its individual risk and expense to inspect the facility. The City of Carlsbad its employees and agents, agree to indemnify and hold harmless DOTEPI, its employees and agents from and against any and all liens, judgments, and claims of any kind of character resulting from or arising out of its right to inspect the disposal well and related facilities, including without limitation any injuries resulting from such inspection.

(d) The City of Carlsbad reserves the right to report any and all results obtained from said sampling of the permitted well to the proper authorities (i.e. the New Mexico Oil Conservation Division and/or the New Mexico Environment Department) at any time.

(e) The City of Carlsbad also requires that the permit holder submit a report stating the quantity injected at the SWD for each month to the Environmental Services Department of the City of Carlsbad. This report will be sent at the same time as required by the Oil Conservation Division.

Form C-101
Revised 10-1-78

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OIL CONSERVATION DIVISION
P. O. BOX 2088
SANTA FE, NEW MEXICO 87501

RECEIVED
JUL 29 1985
O. C. D.
ARTESIA, OFFICE

5A. Indicate Type of Lease: STATE [X] FEE [ ]
5. State Oil & Gas Lease No.: V-708

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. Type of Work: DRILL [X] DEEPEN [ ] PLUG BACK [ ]
b. Type of Well: OIL WELL [ ] GAS WELL [X] OTHER — SINGLE ZONE [X] MULTIPLE ZONE [ ]
7. Unit Agreement Name: —
8. Farm or Lease Name: New Mexico EV State Com.
2. Name of Operator: Exxon Corporation
9. Well No.: 1
3. Address of Operator: P. O. Box 1600, Midland, Texas 79702
10. Field and Pool, or Wildcat: South Carlsbad (Morrow)
4. Location of Well: UNIT LETTER K LOCATED 1980 FEET FROM THE South LINE AND 1980 FEET FROM THE West LINE OF SEC. 32 TWP. 22S RGE. 26E NMPM
12. County: Eddy

19. Proposed Depth	19A. Formation	20. Rotary or C.T.
13,600	Morrow	Rotary

21. Elevations (Show whether DF, RT, etc.)	21A. Kind & Status Plug. Bond	21B. Drilling Contractor	22. Approx. Date Work will start
3346' GL	Blanket	Unknown	Upon approval

23. PROPOSED CASING AND CEMENT PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	SACKS OF CEMENT	EST. TOP
17 1/2"	13 3/8"	54.5	1900	700	Surface
12 1/4"	9 5/8"	36, 40	2600	500	Surface
8 1/2"	5"	15, 18	13600	900	9000'

Mud Program

Interval	Type	WT (ppg)	pH
0- 1650	FW	8.4-8.8	No control
1650- 2600	FW	8.4-8.8	10-10.5
2600- 8000	CBW	9.0-9.5	10-10.5
8000-10000	BW	10-10.5	10-10.5
10000-13600	BW	10-10.5	9.5-10

BOP Program

Casing	Type	Working Pressure
13 3/8	SA	2000 psi
9 5/8	RRA	5000 psi

Diagrammatic sketch and specifications of BOP are attached. Gas is not dedicated to a purchaser.

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. GIVE BLOWOUT PREVENTER PROGRAM, IF ANY.

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

Signed [signature] for Title Unit Head Date 7-26-85

(This space for State Use)

APPROVED BY JOHN ARMSTRONG [signature] TITLE OIL AND GAS INSPECTOR DATE JUL 30 1985

CONDITIONS OF APPROVAL, IF ANY:

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

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OIL CONSERVATION DIVISION

BOX 2088
SANTA FE, NEW MEXICO 87501

RECEIVED
DEC 12 1985
O. C. D.

Form C-103
Revised 10-1-78

5a. Indicate Type of Lease: State [X] Fee [ ]

5. State Oil & Gas Lease No.: V-708

SUNDRY NOTICES AND REPORTS ON WELLS

(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT —" (FORM C-101) FOR SUCH PROPOSALS.)

1. OIL WELL [X] GAS WELL [X] OTHER-

7. Unit Agreement Name: ---

2. Name of Operator: Exxon Corporation ✓

8. Farm or Lease Name: New Mexico EV State Com.

3. Address of Operator: Box 1600, Midland, Texas

9. Well No.: 1

4. Location of Well: UNIT LETTER K, 1980 FEET FROM THE South LINE AND 1980 FEET FROM THE West LINE, SECTION 32, TOWNSHIP 22S, RANGE 26E, NMPM.

10. Field and Pool, or Wildcat: Und. South Carlsbad (Morrow)

15. Elevation (Show whether DF, RT, GR, etc.): 3346' GR

12. County: Eddy

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

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
PERFORM REMEDIAL WORK [ ]	PLUG AND ABANDON [ ]	REMEDIAL WORK [ ]	ALTERING CASING [ ]
TEMPORARILY ABANDON [ ]		COMMENCE DRILLING OPNS. [ ]	PLUG AND ABANDONMENT [ ]
PULL OR ALTER CASING [ ]	CHANGE PLANS [ ]	CASING TEST AND CEMENT JOB [X]	
OTHER [ ]		OTHER [ ]	

17. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work) SEE RULE 1103.

On 11-23-85 set 5", 20.3# P110 SFJ-P at 11788' w/2200 sx C1H-1st stage. Circulated 175 sx to surface. Cemented 2nd stage w/950 sx Trinity lite - TOC at 1988. FRR 11-25-85

12-4-85 Tested casing to 2000# - OK.

18. I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNED Melba Knipling TITLE Unit Head DATE 12-6-85

APPROVED BY Les McClennan TITLE SUPERVISOR, DISTRICT II DATE DEC 23 1985

CONDITIONS OF APPROVAL, IF ANY:

R-8229 — SWD 629 – 6/24/96 — 633 PSI MAX — Class 2D — MORROW

API	Well Name	NS Ftg	EW Ftg	CD	Sec	Tsp	Rge	Operator	OGRID Col	Prop Nbr	Pool IDN	Formation/ Notes	Plug Date	Gas Prod 2000	Oil Prod 2000	Gas Prod 2001	Oil Prod 2001
30-015-25352	NEW MEXICO EV STATE #001	1980S	1980W	K	32	22S	26E	LOUIS DREYFUS NATURAL GAS CORP.	25773	16392	0		9999-12-31	0	0	0	0
30-015-27558	BARBADOS STATE #001	1980S	660E		32	22S	26E	LOUIS DREYFUS NATURAL GAS CORP.	25773	16934	96100	DELAWARE	9999-12-31	0	0	0	0
30-015-27559	EV STATE COM #002	2100N	660E		32	22S	26E	LOUIS DREYFUS NATURAL GAS CORP.	25773	20643	78060	~~DELAWARE~~ — ??	9999-12-31	37569	0	8558	0
30-015-27751	EV STATE #003	1180N	330E		32	22S	26E	LOUIS DREYFUS NATURAL GAS CORP.	25773	16936	29665	DELAWARE	9999-12-31	3550	1690	1210	7731
30-015-28849	EV STATE #004	990N	1650E	B	32	22S	26E	LOUIS DREYFUS NATURAL GAS CORP.	25773	16936	29665	DELAWARE	9999-12-31	4669	5021	2894	3737
30-015-29185	EV STATE #006	1650N	1650E	G	32	22S	26E	LOUIS DREYFUS NATURAL GAS CORP.	25773	16936	0	DELAWARE	2001-07-02	0	0	0	0
30-015-29522	HACKBERRY 31 STATE #001	1980N	660E	H	31	22S	26E	DEVON ENERGY PRODUCTION COMPANY,	6137	28723	0	MORROW	9999-12-31	0	0	0	0

EV#3 4,190'–4210' 53°/146°W/65°S DELAWARE

EV#1 10,001'–10,391', 10962'–11355' STRAWN — 5" 20.3# @ 11,788' w/ 3150 SX (8 1/2" HOLE) (2200 SX CL H + 950 TRINITY LITE)

EV#4 2892'–2902' 146°/160°S/386°W

EV#6 PLUGGED 7/6/01 2,770'–2800' 5.5" 3139' CMT: 180 SX LITE + 300 SX PRM. CIRC 82 SX

14°/7°S/210°W

EV#2 11,497'–11,545' 4½" Liner w/ 200 SX

11,385'–11,400' Lower MORROW 3542'S/3°W/0°/2025 PSI FTP

SWD Barbados State #1 4342'–4782' WOLFCAMP ONLY TA'd 2/96 (CONVERTED TO SWD) 5½" @ 5040' w/ 1200 SX CIRC 64 SX

PKR @ 3960

Inj 3166–4430 2⅞"

(Jana_D_Zielny@dom.com) DOMINION
Jana Zielny in Carlsbad
BARB INJEC
405-749-5210
610 PSI Pressure

PRPRTY	PRPSUB	PRPDES	APINUM	CSNAME	WLST	PRODMO	PRODYR	INJAMT	INJDAY	PRSTUB
4307	001	BARBADOS STATE 1 (SWD)	300152755800	EDDY	NM	4	1999	25188	30	0
4307	001	BARBADOS STATE 1 (SWD)	300152755800	EDDY	NM	5	1999	26014	31	0
4307	001	BARBADOS STATE 1 (SWD)	300152755800	EDDY	NM	6	1999	24501	30	0
4307	001	BARBADOS STATE 1 (SWD)	300152755800	EDDY	NM	7	1999	26267	31	0
4307	001	BARBADOS STATE 1 (SWD)	300152755800	EDDY	NM	8	1999	25248	31	0
4307	001	BARBADOS STATE 1 (SWD)	300152755800	EDDY	NM	9	1999	24502	30	0
4307	001	BARBADOS STATE 1 (SWD)	300152755800	EDDY	NM	10	1999	24237	31	0
4307	001	BARBADOS STATE 1 (SWD)	300152755800	EDDY	NM	11	1999	22519	30	0
4307	001	BARBADOS STATE 1 (SWD)	300152755800	EDDY	NM	12	1999	21939	31	0
4307	001	BARBADOS STATE 1 (SWD)	300152755800	EDDY	NM	1	2000	25071	31	0
4307	001	BARBADOS STATE 1 (SWD)	300152755800	EDDY	NM	2	2000	21351	29	0
4307	001	BARBADOS STATE 1 (SWD)	300152755800	EDDY	NM	3	2000	21582	31	0
4307	001	BARBADOS STATE 1 (SWD)	300152755800	EDDY	NM	4	2000	18697	30	0
4307	001	BARBADOS STATE 1 (SWD)	300152755800	EDDY	NM	5	2000	22819	31	0
4307	001	BARBADOS STATE 1 (SWD)	300152755800	EDDY	NM	6	2000	20912	27	0
4307	001	BARBADOS STATE 1 (SWD)	300152755800	EDDY	NM	7	2000	22868	31	0
4307	001	BARBADOS STATE 1 (SWD)	300152755800	EDDY	NM	8	2000	20413	31	0
4307	001	BARBADOS STATE 1 (SWD)	300152755800	EDDY	NM	9	2000	19208	30	0
4307	001	BARBADOS STATE 1 (SWD)	300152755800	EDDY	NM	10	2000	22690	31	0
4307	001	BARBADOS STATE 1 (SWD)	300152755800	EDDY	NM	11	2000	22482	30	0
4307	001	BARBADOS STATE 1 (SWD)	300152755800	EDDY	NM	12	2000	19071	31	0
4307	001	BARBADOS STATE 1 (SWD)	300152755800	EDDY	NM	2	2001	18377	28	0
4307	001	BARBADOS STATE 1 (SWD)	300152755800	EDDY	NM	3	2001	21419	31	0
4307	001	BARBADOS STATE 1 (SWD)	300152755800	EDDY	NM	4	2001	22150	30	0
4307	001	BARBADOS STATE 1 (SWD)	300152755800	EDDY	NM	5	2001	26328	31	0
4307	001	BARBADOS STATE 1 (SWD)	300152755800	EDDY	NM	6	2001	22377	30	0
4307	001	BARBADOS STATE 1 (SWD)	300152755800	EDDY	NM	7	2001	23722	31	0
4307	001	BARBADOS STATE 1 (SWD)	300152755800	EDDY	NM	8	2001	23442	31	0
4307	001	BARBADOS STATE 1 (SWD)	300152755800	EDDY	NM	9	2001	22083	30	0
4307	001	BARBADOS STATE 1 (SWD)	300152755800	EDDY	NM	10	2001	21577	31	0
4307	001	BARBADOS STATE 1 (SWD)	300152755800	EDDY	NM	11	2001	20623	30	0
4307	001	BARBADOS STATE 1 (SWD)	300152755800	EDDY	NM	12	2001	20321	31	0
4307	001	BARBADOS STATE 1 (SWD)	300152755800	EDDY	NM	1	2002	16970	31	0
4307	001	BARBADOS STATE 1 (SWD)	300152755800	EDDY	NM	2	2002	7742	28	0