

Water Analysis Report by Baker Petrolite

MACK ENERGY

SPRUCE

WELL #1

STACK PACK

Loose Draw - WC (014)

Account Manager
RANDY ALLISON

Summary		Analysis of Sample 158287 @ 75°F					
Sampling Date	6/26/00	Anions	mg/l	meq/l	Cations	mg/l	meq/l
Analysis Date	7/11/00	Chloride	69677	1965	Sodium	45189	1966
Analyst	JOANNA RAGAN	Bicarbonate	4627	75.8	Magnesium	588	48.4
		Carbonate	0.00	0.00	Calcium	726	36.2
TDS (mg/l or g/m ³)	128667	Sulfate	4540	94.5	Strontium	3.50	0.08
Density (g/cm ³ or tonne/m ³)	1.097	Phosphate	N/A	N/A	Barium	1.50	0.02
Anion/Cation Ratio	1.00	Borate	N/A	N/A	Iron	58.0	2.08
		Silicate	N/A	N/A	Potassium	3257	83.3
Carbon Dioxide					Aluminum	N/A	N/A
Oxygen					Chromium	N/A	N/A
					Copper	N/A	N/A
		pH at time of sampling			Lead	N/A	N/A
		pH at time of analysis		5.22	Manganese	N/A	N/A
		pH used in Calculations		5.22	Nickel	N/A	N/A

Conditions		Values Calculated at the Given Conditions - Amounts of Scale in lb/1000bbl										
Temp.	Gauge Press.	Calcite CaCO ₃		Gypsum CaSO ₄ · 2H ₂ O		Anhydrite CaSO ₄		Celestite SrSO ₄		Barite BaSO ₄		CO ₂ Press.
°F	psi	Index	Amount	Index	Amount	Index	Amount	Index	Amount	Index	Amount	psi
80	0.	-0.60		-0.49		-0.49		-1.04		1.71	0.80	223
100	0.	-0.49		-0.55		-0.49		-1.07		1.52	0.79	278
120	0.	-0.38		-0.61		-0.47		-1.08		1.35	0.78	334
140	0.	-0.25		-0.66		-0.42		-1.09		1.20	0.76	388

Note 1: When assessing the severity of the scale problem, both the saturation index (SI) and amount of scale must be considered.

Note 2: Precipitation of each scale is considered separately. Total scale will be less than the sum of the amounts of the five scales.

Note 3: The reported CO₂ pressure is actually the calculated CO₂ fugacity. It is usually nearly the same as the CO₂ partial pressure.

North Permian Basin Region
P.O. Box 740
Sundown, TX 79372-0740
(806) 229-81821
Lab Team Leader - Sheila Hernandez
(915) 495-7240

Water Analysis Report by Baker Petrolite

Company:	MACK ENERGY	Sales RDT:	33512
Region:	PERMIAN BASIN	Account Manager:	WAYNE PETERSON (505) 910-9389
Area:	ARTESIA, NM	ID #:	24121
Lease/Platform:	BEECH FEDERAL LEASE	Analysis Cost:	\$40.00
Entity (or well #):	2		
Formation:	UNKNOWN		
Sample Point:	HEATER		

Summary		Analysis of Sample 163842 @ 75 °F					
Sampling Date:	2/6/02	Anions	mg/l	meq/l	Cations	mg/l	meq/l
Analysis Date:	2/11/02	Chloride:	61963.0	1747.75	Sodium:	21920.1	953.47
Analyst:	JAMES AHRLETT	Bicarbonate:	1078.5	17.67	Magnesium:	660.0	54.29
TDS (mg/l or g/m3):	102880.3	Carbonate:	0.0	0.	Calcium:	15580.0	777.45
Density (g/cm3, tonne/m3):	1.075	Sulfate:	1360.0	28.32	Strontium:	61.0	1.39
Anion/Cation Ratio:	1	Phosphate:			Barium:	0.7	0.01
		Borate:			Iron:	53.0	1.92
		Silicate:			Potassium:	204.0	5.22
Carbon Dioxide:	290 PPM	Hydrogen Sulfide:		70 PPM	Aluminum:		
Oxygen:	0 PPM	pH at time of sampling:		7.2	Chromium:		
Comments:		pH at time of analysis:			Copper:		
		pH used in Calculation:		7.2	Lead:		
					Manganese:		
					Nickel:		

Conditions		Values Calculated at the Given Conditions - Amounts of Scale in lb/1000 bbl										
Temp	Gauge Press.	Calcite CaCO3		Gypsum CaSO4*2H2O		Anhydrite CaSO4		Celestite SrSO4		Barite BaSO4		CO2 Press
°F	psi	Index	Amount	Index	Amount	Index	Amount	Index	Amount	Index	Amount	psi
80	0	1.94	201.27	0.20	294.46	0.18	207.93	-0.43	0.00	0.73	0.32	0.43
100	0	1.97	208.24	0.17	249.77	0.21	234.55	-0.43	0.00	0.56	0.32	0.59
120	0	2.00	214.90	0.14	218.70	0.26	281.46	-0.42	0.00	0.41	0.32	0.79
140	0	2.04	221.24	0.13	200.32	0.34	338.20	-0.40	0.00	0.29	0.32	1.01

Note 1: When assessing the severity of the scale problem, both the saturation index (SI) and amount of scale must be considered.

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Note 3: The reported CO2 pressure is actually the calculated CO2 fugacity. It is usually nearly the same as the CO2 partial pressure.

VIII. GEOLOGICAL DATA

Lithologic Detail
Dolomite

Geological Name
Lower Abo (Lanier)

Thickness
144'

Depth
6450-6594'

IX. PROPOSED STIMULATION PROGRAM

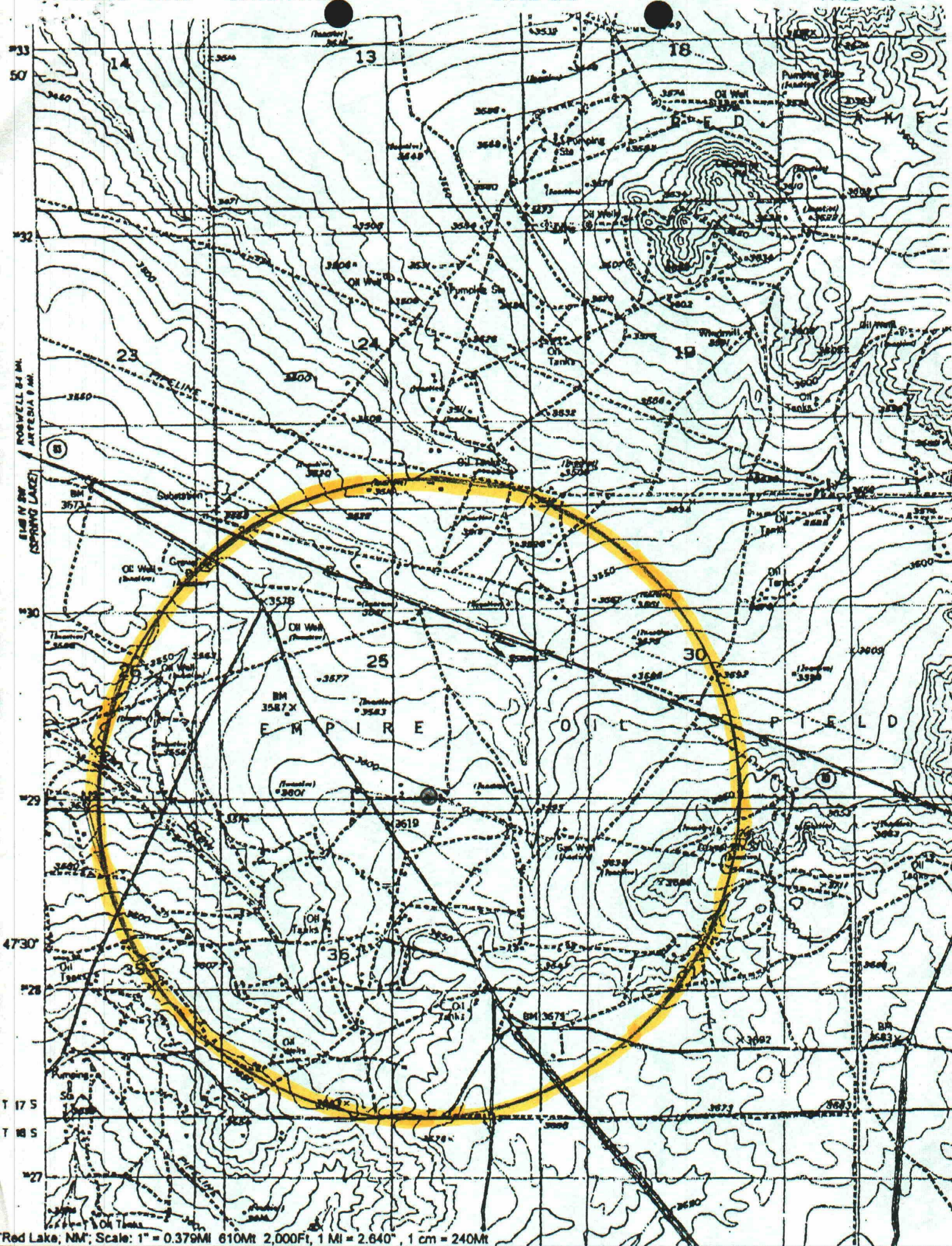
To be treated with 1000 gallons 15% acid

X. LOGS AND TEST DATA

Well data to be filed with the OCD

XI. ANALYSIS OF FRESHWATER WELLS

There are no freshwater wells within one mile of this well



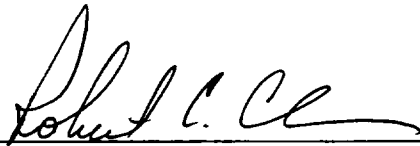
XII. AFFIRMATIVE STATEMENT

RE: Beech Federal #3

We have examined the available geologic and engineering data and find no evidence of open faults or any other hydraulic connection between the disposal zone and any underground source of drinking water.

Mack Energy Corporation

Date: 5-14-02


Robert C Chase, Vice President

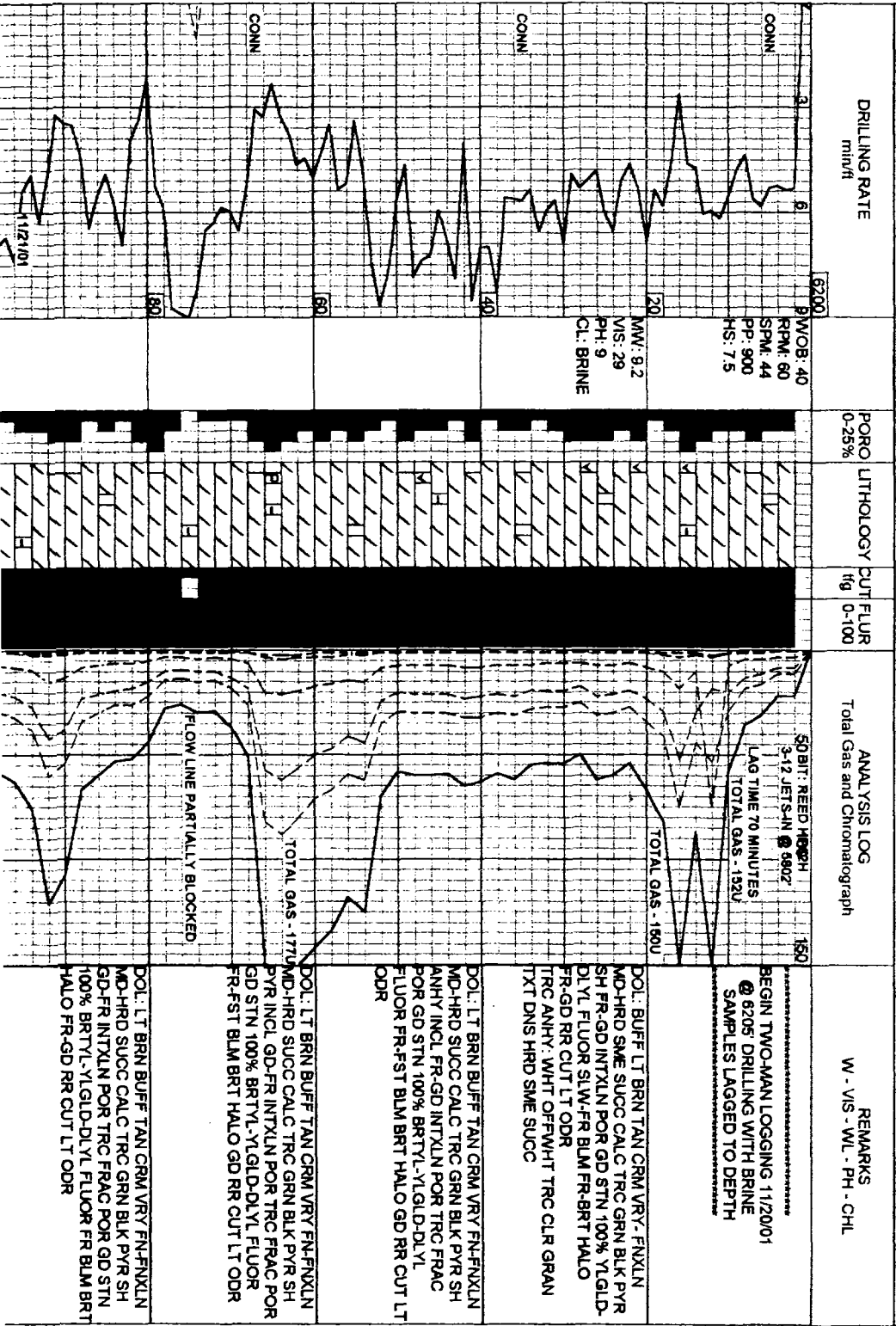
Advance Consultants Corp.

Well Consultants - Geological Services
Digital Hydrocarbon Well Logging
P. O. Box 5274, Midland, TX. 79704
Ph: (915) 683-6276
Fax: (915) 683-9862
DEC 4 2001

Interval Logged 6200 to 7952 ft. 5.0 inch Log

Company: MACK ENERGY CORP.
Well: BEECH FED #3
Location: 330' FLS & 1775' FEL
Survey: SEC. 25, T-17-S, R-27-E
County and State: EDDY, NEW MEXICO
Geologists: PILAR RITCHERSON and JOHN WINTERS
Elevation: G.L. 3926 K.B. 3940
Dates Logged: 11/19/2001 to 11/30/2001
API #: 30-015-32036

ABBREVIATIONS		LITHOLOGY SYMBOLS		GAS CHROMATOGRAPH	
NR: No Returns	DC: Depth Correction	Sand: + + + + +	Chart: A A A A A	Total Gas: ———	C3: ———
CG: Connection Gas	DST: Drill Stem Test	Lime:	Cong: X X X X X	C1: ———	C4: ———
CO: Circulate Out	NCB: New Core Bit	Dolo: / / / / /	Shale: — — — — —	C2: ———	C5: ———
TG: Trip Gas	DCB: Diamond Core Bit	Anth: ✓ ✓ ✓ ✓ ✓	Salt: + + + + +		
NB: New Bit	DS: Directional Survey	Silt: :: :: :: :: ::	Cement: C C C C C		



COMPANY: Mack Energy Corporation

WELL: Beech Federal #3

FIELD: Logan Draw Wolfcamp

COUNTY: Eddy

STATE: New Mexico

Field: Logan Draw Wolfcamp Location: 330' FSL & 1775' FEL Well: Beech Federal #3 Company: Mack Energy Corporation	Schlumberger		Platform Express Three Detector Litho-Density Compensated Neutron / NGT			
			LOCATION		330' FSL & 1775' FEL	
	Permanent Datum: Ground Level		Elev.: 3616 ft			
	Log Measured From: Kelly Bushing		10.0 ft above Perm. Datum			
Drilling Measured From: Kelly Bushing						
API Serial No. 30-015-32036		SECTION 25		TOWNSHIP 17-S		RANGE 27-E
Logging Date		30-NOV-2001				
Run Number		One				
Depth Driller		7950 ft				
Schlumberger Depth		7960 ft				
Bottom Log Interval		7842 ft				
Top Log Interval		200 ft				
Casing Driller Size @ Depth		8.625 in @ 400 ft		@		
Casing Schlumberger		402 ft				
Bit Size		7.875 in				
Type Fluid In Hole		Cut Brine / Starch / Gel				
Density	Viscosity	10 lbm/gal	30 s			
Fluid Loss	PH	13 cm3	10			
Source Of Sample		Circulation Tank				
RM @ Measured Temperature		0.057 ohm.m	@ 48 degF	@		
RMF @ Measured Temperature		0.050 ohm.m	@ 51 degF	@		
RMC @ Measured Temperature			@	@		
Source RMF RMC		Pressed				
RM @ MRT	RMF @ MRT	0.027 @ 109	0.025 @ 109	@	@	
Maximum Recorded Temperatures		107 degF	109			
Circulation Stopped Time		30-NOV-2001	4:00			
Logger On Bottom Time		30-NOV-2001	11:00			
Unit Number	Location	3178 Roswell				
Recorded By		R. Delidais				
Witnessed By		T. Hall / M. Brewer				

COMPANY: Mack Energy Corporation

WELL: Beech Federal #3

FIELD: Logan Draw Wolfcamp

COUNTY: Eddy

STATE: New Mexico

Field: Logan Draw Wolfcamp Location: 330' FSL & 1775' FEL Well: Beech Federal #3 Company: Mack Energy Corporation	Schlumberger		Platform Express			
			Azimuthal Laterolog			
	LOCATION 330' FSL & 1775' FEL		Elev.: K.B. 3626 ft G.L. 3613 ft D.F. 3625 ft			
			Permanent Datum: Ground Level		Elev.: 3616 ft	
Log Measured From: Kelly Bushing		10.0 ft above Perm. Datum				
Drilling Measured From: Kelly Bushing						
API Serial No. 30-015-32036		SECTION 25	TOWNSHIP 17-S	RANGE 27-E		
Logging Date		30-NOV-2001				
Run Number		One				
Depth Driller		7950 ft				
Schlumberger Depth		7960 ft				
Bottom Log Interval		7952 ft				
Top Log Interval		402 ft				
Casing Driller Size @ Depth		8.625 in @ 400 ft @				
Casing Schlumberger		402 ft				
Bit Size		7.875 in				
Type Fluid In Hole		Cut Brine / Starch / Gel				
Density	Viscosity	10 lbm/gal	30 s			
Fluid Loss	PH	13 cm3	10			
Source Of Sample		Circulation Tank				
RM @ Measured Temperature		0.057 ohm.m @ 48 degF		@		
RMF @ Measured Temperature		0.050 ohm.m @ 51 degF		@		
RMC @ Measured Temperature		@		@		
Source RMF	RMC	Pressed				
RM @ MRT	RMF @ MRT	0.027 @ 109	0.025 @ 109	@	@	
Maximum Recorded Temperatures		107 degF 109				
Circulation Stopped	Time	30-NOV-2001 4:00				
Logger On Bottom	Time	30-NOV-2001 11:00				
Unit Number	Location	3178 Roswell				
Recorded By		R. Deliquais				
Witnessed By		T. Hall / M. Brewer				