

District I  
1625 N French Dr., Hobbs, NM 88240  
Phone (575) 393-6161 Fax (575) 393-0720  
District II  
811 S First St., Artesia, NM 88210  
Phone (575) 748-1283 Fax (575) 748-9720  
District III  
1000 Rio Brazos Road, Aztec, NM 87410  
Phone (505) 334-6178 Fax (505) 334-6170  
District IV  
1220 S St Francis Dr., Santa Fe, NM 87505  
Phone (505) 476-3460 Fax (505) 476-3462

State of New Mexico  
Energy Minerals and Natural Resources **HOBBS OCD**  
Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

Form C-101  
Revised August 1, 2011

Permit

SEP 19 2011

RECEIVED

**APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE**

<sup>1</sup> Operator Name and Address McElvain Energy, Inc. 1050 - 17 <sup>th</sup> Street, Suite 2500 Denver, Colorado 80265		<sup>2</sup> OGRID Number 22044
		<sup>3</sup> API Number 30-025-40305
<sup>4</sup> Property Code 38848	<sup>5</sup> Property Name Branch Ranch State 75	
	<sup>6</sup> Well No. 1	

**<sup>7</sup> Surface Location**

UL - Lot	Section	Township	Range	Lot Idn	Feet from	N/S Line	Feet From	E/W Line	County
G	35	15S	33E		1980	North	1650	East	Lea

**<sup>8</sup> Pool Information**

North Hume (Wolfcamp)	Pool Code 33580
-----------------------	-----------------

**Additional Well Information**

<sup>9</sup> Work Type N	<sup>10</sup> Well Type O	<sup>11</sup> Cable/Rotary R	<sup>12</sup> Lease Type S	<sup>13</sup> Ground Level Elevation 4149
<sup>14</sup> Multiple N	<sup>15</sup> Proposed Depth 10,375	<sup>16</sup> Formation Wolfcamp	<sup>17</sup> Contractor Unknown at this time	<sup>18</sup> Spud Date Approx 6 - 12 mos after Permit
Depth to Ground water 85 - 100 ft		Distance from nearest fresh water well 8,790 ft		Distance to nearest surface water 4200'

**<sup>19</sup> Proposed Casing and Cement Program**

Type	Hole Size	Casing Size	Casing Weight/ft	Setting Depth	Sacks of Cement	Estimated TOC
Conduct	26	20		40	2 vds Redimix	Surface
Surface	17.5	13.375	48 & 54.5	1685	1250	Surface
Interm	11	8.625	32	4450	1400	Surface
Prod	7.875	5.50	17	10375	1650	2 Stg to Surface

**Casing/Cement Program: Additional Comments**

--

**Proposed Blowout Prevention Program**

Type	Working Pressure	Test Pressure	Manufacturer
Class III Stack	3,000 psi	250 psi Low - 3000 psi Hi (Annular to 1500)	Cameron or Shaffer

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

I further certify that the drilling pit will be constructed according to NMOCD guidelines ☒, a general permit ☐, or an (attached) alternative OCD-approved plan ☐.

Printed name E. Reed Fischer

Title: Senior Operations Engineer

E-mail Address reedf@mcelvain.com

Date 9/10/11

Phone. (303) 893-0933 xtn 330

**OIL CONSERVATION DIVISION**

Approved By

Title

PETROLEUM ENGINEER

Approved Date:

OCT 05 2011

Expiration Date.

Conditions of Approval Attached

Permit Expires 2 Years From Approval Date Unless Drilling Halts Early

OCT 05 2011

McElvain Energy, Inc.  
1050 17<sup>th</sup> Street, Suite 2500  
Denver, CO 80265  
(303) 893-0933  
(303) 893-0914 fax

**BRANCH RANCH STATE 35 # 1 - DRILLING PROGNOSIS**

September 10, 2011

Lease and Well No.: **Branch Ranch State 35 # 1**      Field: Hume North (Wolfcamp)  
API# 30-025-

Location: T15S, R33E, Section 35: 1,980' FNL and 1,650' FEL (SWNE)  
Lat. – N32°58'30.19" Long – W103°34'54.51"  
Lea County, New Mexico; State Lease # VB20140000

Proposed TD: 10,375'

Elevation: GLE – 4,149' KBE (estimated) – 4,166' (17' KB)

**GENERALIZED MUD PROGRAM**

<b>Depth</b>	<b>Hole Size</b>	<b>Mud Weight</b>	<b>Funnel Visc</b>	<b>WL</b>	<b>Chlorides</b>
0–1,685'	17.50"	8.4 – 9.2	32- 33	NC	Fresh
<b>No Logs</b>	<b>Set 13-3/8" Casing</b>				
1,685–4,450	11"	10.0	28 - 29	NC	Saturated (186k)
<b>No Logs</b>	<b>Set 8-5/8" Casing</b>				
4,450–9,700	7-7/8"	8.6 – 9.0	28 – 30	NC	Cut Brine (65K)
<b>Mud Up</b>					
9,700-10,375	7-7/8"	8.7 – 9.1	29 – 32	15-18	Cut Brine (65-80K)

**CASING & CEMENTING: H2O Samples to be tested prior to all cementing.**

Surface Casing: ± 1,685' of new 13-3/8" ST&C in 17.5" hole comprised of 685' of 54.5# J55 on bottom and 48# H40 from 0' to 1,000'. See **Note # 1** below.

Float equip: PDC Drillable Bull-Nose Guide Shoe w/Double Floats, 1 shoe joint, PDC Drillable Float collar, ± 5-7 Type 'B' Centralizers, 1 Stop Ring for shoe joint, Thread-lock for shoe & collar.

Surface Cement: Circulate cement to surface, if cement fails to circulate cement via 1" to bring cement to surface. Assume 100% Excess if no fluid caliper is run and 20% excess over fluid caliper volume if run. Current design: ± 1,000 sx LEAD & 250 sx 'C' TAIL. You may

wish to run a fluid caliper due to large difference in calculated excesses from offset wells. See **Note # 2** below on WOC times.

**Intermediate Casing:**  $\pm 4,450'$  of new 8-5/8", 32#, J55, ST&C in 11" hole.

Float equip: PDC Drillable Float Shoe, PDC Drillable Float Collar. 10 – 12 Type 'B' Centralizers (around intermediate shoe & into surface casing shoe), 1 – Stop Ring for shoe joint, Thread-lock shoe & collar.

Intermediate Cement: Circulate cement to surface. A fluid caliper should be run prior to reaching intermediate TD to help in cement volume determination. Assume 15-20% excess over fluid caliper volume. Current design:  $\pm 1,100$  sx LEAD & 300 sx 'C' TAIL. See **Note # 2** on WOC.

**Production Casing:** TD with new 5 1/2" 17#, I80, LT&C in 7.875" hole. String will include stage tool at approximately 6,750', 2 marker joints, 1 above primary Wolfcamp pay and 1 above any top potential pay. See **Note # 3** on Casing Specs.

Float eq. Guide Shoe w/double floats, Float Collar, Bomb Drop Style Stage Tool,  $\pm 20$  Type 'B' Centralizers spaced immediately below, through and above each potential pay zone, across Stage Tool and 50' into bottom of Intermediate casing. 1 – Stop Ring for shoe joint, Thread –lock for shoe & both sides of float collar.

Production Cement: Two Stage Cement. Tentative depth of stage tool @ 6,750'. Design for 100' of overlap above Stage Tool on 1<sup>st</sup> Stage, 2<sup>nd</sup> Stage TAIL to base of intermediate and 2<sup>nd</sup> Stage LEAD to surface. Allow for 20% excess over caliper log in open-hole. See **Note # 4**.

**NOTE #1:** Surface casing should be set a minimum of 25' into Rustler anhydrite and above salt. Set the casing within 25 – 40' of the Rustler formation top so as not to drill through.

**NOTE #2:** WOC until 500 psi of compressive strength or 18 hours, whichever is greater for both the lead and tail cement blend.

**NOTE #3:** I-80 Casing Specs: IPSCO Manufactured Seamless 5 1/2" OD, 17#, 4.8920" ID & 4.767" DRIFT. Casing rated @ 7,740 psi Burst, 6,280 psi Collapse and 320,000 lbs joint strength for LT&C. MAKE-UP TORQUE: 3350 ft-lbs Optimum, 2510 Minimum and 4190 Maximum. See IPSCO Casing Performance and Dimensions spec sheet. Two 5.5", 17#, I80 marker joints will be included with string.

**NOTE # 4:** The Stage 1 design utilizes one slurry. This same slurry is to be used for the 2<sup>nd</sup> Stage TAIL to be placed between the DV and the intermediate shoe. The 2<sup>nd</sup> Stage LEAD design should cover from the intermediate shoe to surface.

WELLHEAD PROGRAM:

‘A’ Section: 13-5/8” 3K x 13-5/8” SOW Casinghead fitted with 1 - Single Wing 3M Ball Valve & 1 - XXH BP on other wing. Accepts C-22 test plug

‘B’ Section: 13-5/8” 3K Flngd Bottom x 11” 3K Flngd Top Casing Spool fitted with 1 – Single Wing 3K Ball Valve & 1 – XXH BP on other wing. Accepts C-22 test plug. See **Note# 5** below.

‘C’ Section: 11” 3K Flngd Bottom x 7 – 1/16” 5K Flgd Tubinghead (Type C) w/Dual 2-1/16” 5M outlets both w/1-1/2” VR Thds equipped with 2-1/16”, 5M Gate Valves.

**NOTE #5:** Run wear bushing when rotating or tripping in ‘B’ section

MUD LOGGING: Two man Logging from 3,000’ to TD

H2S MONITORING & SAFETY EQUIPMENT: Equipment Rigged up @ 3,300’

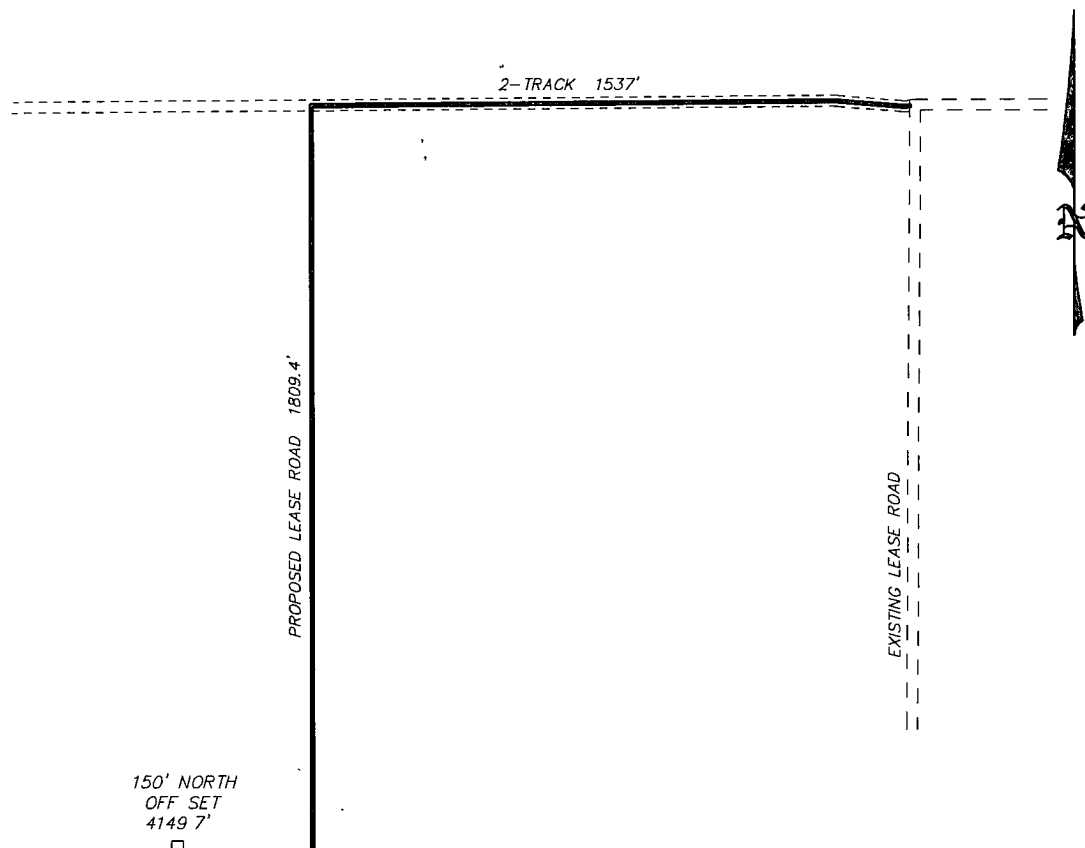
ESTIMATED FORMATION TOPS (Estimate 4166’ KB):

<u>Formation</u>	<u>Drill Depth</u>	<u>SubSea</u>	<u>Pay Objective</u>
Rustler	1660	2506	
<b>SURFACE CASING</b>	<b>1685</b>		
Yates	2818	1348	
Queen	3641	525	
Penrose	3920	246	
San Andres	4240	-74	
<b>INTERMEDIATE CSG</b>	<b>4450</b>		
Tubb	7254	-3088	
Abo	7995	-3829	
Wolfcamp	9674	-5508	
B Wolfcamp Carb	9960	-5794	
BM Marker 1	10032	-5866	
W-1 Marker	10095	-5929	
Wolfcamp Pay	10175	-6009	Primary
W-1A Marker	10225	-6059	
W-2 Marker	10282	-6816	
W-3 Marker	10331	-6165	
TD	10,375		

ELOGS:

GR from TD to surface. Density/Neutron from TD to base of Intermediate Casing. AIT if mud salinity is < 80,000 ppm and HRLA if mud salinity if > 80,000 ppm from TD to base of Intermediate Casing. No sidewall cores anticipated.

SECTION 35, TOWNSHIP 15 SOUTH, RANGE 33 EAST, N.M.P.M.,  
LEA COUNTY, NEW MEXICO.



**McELVAIN OIL & GAS PROPERTIES**  
**BRANCH RANCH STATE "35" #1**

ELEV. - 4149'

150' WEST  
OFF SET □  
4149.1'

Lat - N 32°58'30.19"  
Long - W 103°34'54.51"  
NMSPCE - N 719282.595  
E 771804.829  
(NAD-83)

150' EAST  
OFF SET □  
4148.2'

150' SOUTH  
OFF SET  
4148.8'

200 0 200 400 FEET  
SCALE: 1" = 200'

**Directions to Location:**

FROM MILE MARKER 2 OF WY 457, GO NORTH 1.1  
MILES TO LEASE ROAD, ON LEASE ROAD GO WEST  
1.4 MILES TO CATTLE GUARD AND PROPOSED LEASE  
ROAD.

**McELVAIN ENERGY, INC**

REF: BRANCH RANCH STATE "35" #1 / WELL PAD TOPO

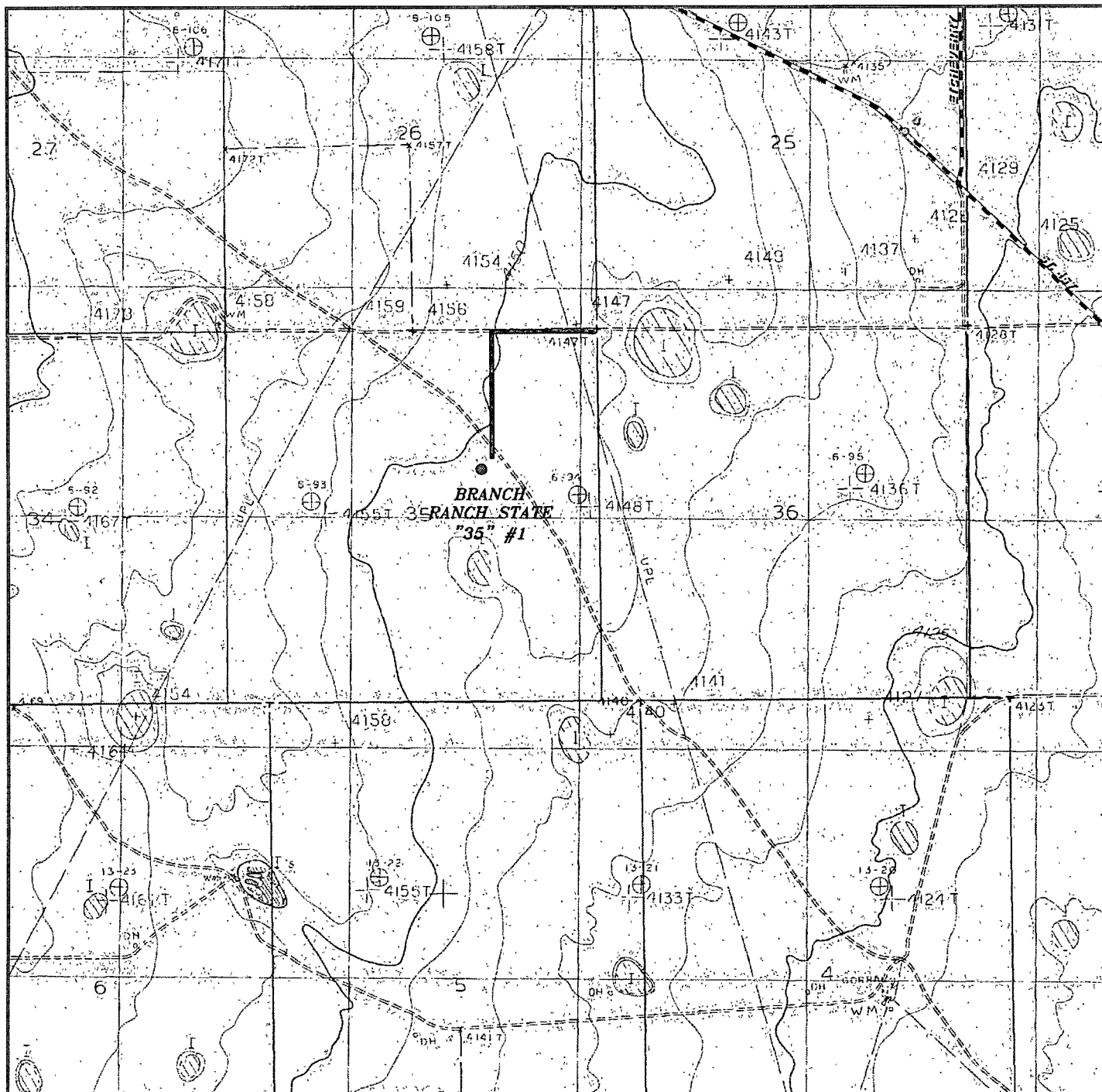
THE BRANCH RANCH STATE "35" #1 LOCATED 1980'  
FROM THE NORTH LINE AND 1650' FROM THE EAST LINE OF  
SECTION 35, TOWNSHIP 15 SOUTH, RANGE 33 EAST,  
N.M.P.M., LEA COUNTY, NEW MEXICO.

**BASIN SURVEYS** P.O. BOX 1786-HOBBS, NEW MEXICO

W.O. Number. 25156 Drawn By: J. SMALL

Date: 09-01-2011 Disk: JMS 25156

Survey Date: 08-29-2011 Sheet 1 of 1 Sheets



# **BRANCH RANCH STATE '35' #1**

Located 1980' FNL and 1650' FEL  
Section 35, Township 15 South, Range 33 East,  
N.M.P.M., Lea County, New Mexico.



focused on excellence  
in the oilfield

P.O. Box 1786  
1120 N. West County Rd.  
Hobbs, New Mexico 88241  
(575) 393-7316 - Office  
(575) 392-2206 - Fax  
basinsurveys.com

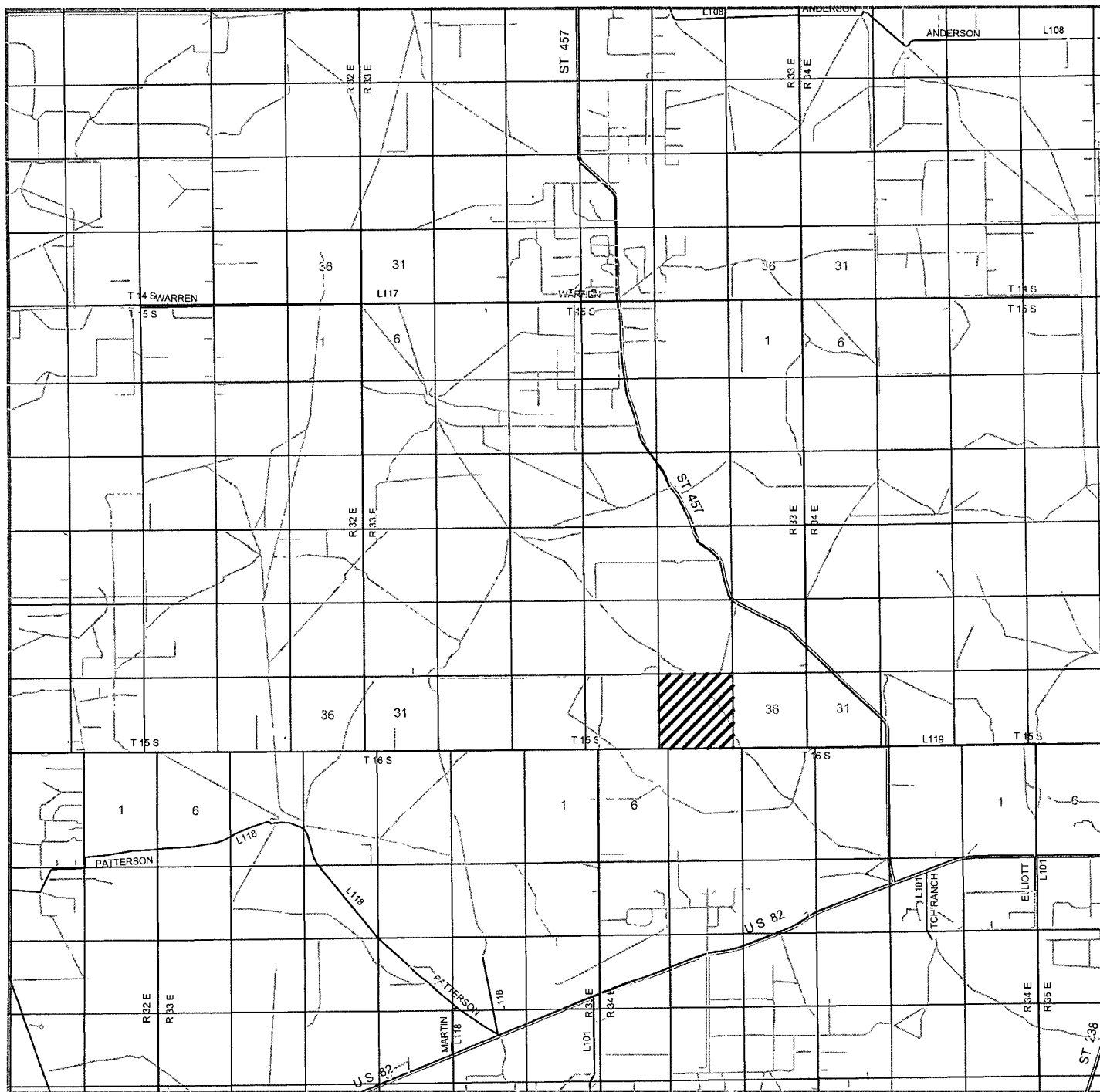
W.O. Number: JMS 25156

Survey Date: 08-29-2011

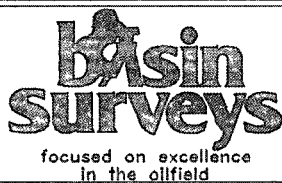
Scale: 1" = 2000'

Date: 09-01-2011

**McELVAIN  
ENERGY, INC**



**BRANCH RANCH STATE #35 #1**  
 Located 1980' FNL and 1650' FEL  
 Section 35, Township 15 South, Range 33 East,  
 N.M.P.M., Lea County, New Mexico.



P.O. Box 1786  
 1120 N. West County Rd.  
 Hobbs, New Mexico 88241  
 (575) 393-7316 - Office  
 (575) 392-2206 - Fax  
[basinsurveys.com](http://basinsurveys.com)

W.O. Number: JMS 25156

Survey Date: 08-29-2011

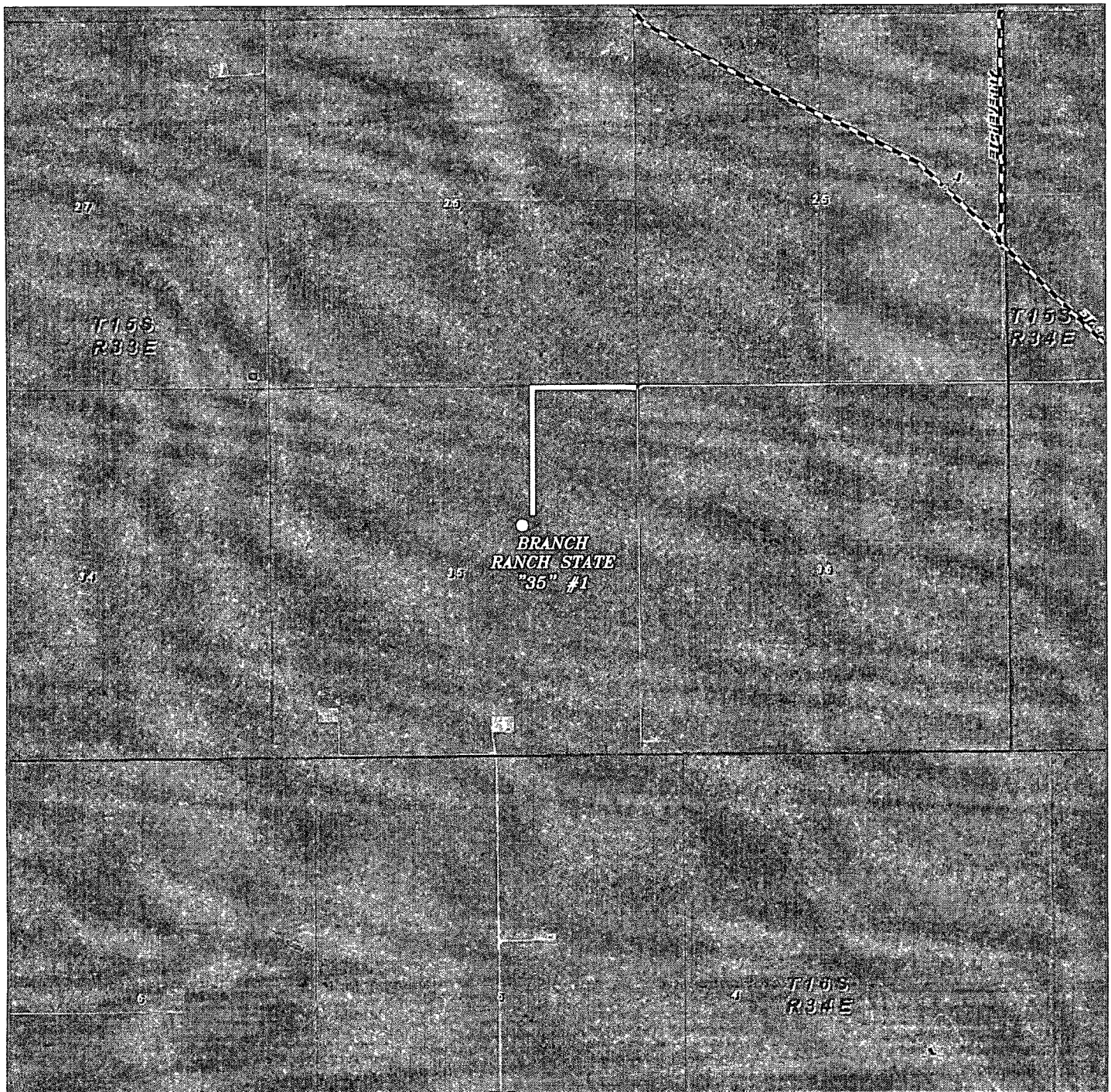
Scale: 1" = 2 Miles

Date: 09-01-2011



**McELVAIN  
 ENERGY, INC**





BRANCH RANCH STATE "35" #1  
 Located 1980' FNL and 1650' FEL  
 Section 35, Township 15 South, Range 33 East,  
 N.M.P.M., Lea County, New Mexico.

**basin**  
**surveys**  
 focused on excellence  
 in the oilfield

P.O. Box 1786  
 1120 N. West County Rd.  
 Hobbs, New Mexico 88241  
 (575) 393-7316 - Office  
 (575) 392-2206 - Fax  
 basinsurveys.com

W.O. Number: JMS 25156

Scale: 1" = 2000'

YELLOW TINT - USA LAND  
 BLUE TINT - STATE LAND  
 NATURAL COLOR - FEE LAND



**McELVAIN**  
**ENERGY, INC**