

**STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION**

**APPLICATION OF MEWBOURNE OIL COMPANY
FOR A NON-STANDARD OIL SPACING AND
PRORATION UNIT AND COMPULSORY POOLING,
EDDY COUNTY, NEW MEXICO.**

Case No. 15,227

AFFIDAVIT OF DAVID RAWLINS

COUNTY OF MIDLAND)
) ss.
STATE OF TEXAS)

David Rawlins, being duly sworn upon his oath, deposes and states:

1. I am over the age of 18, and have personal knowledge of the matters stated herein.
2. I am a geologist for Mewbourne Oil Company ("Mewbourne"), and I am familiar with the geological matters involved in this case
3. I have been previously qualified as an expert petroleum geologist by the Division.
4. The geological plats attached hereto show the following:
 - (a) Attachment A is a combination structure/net porosity isopach map of the lower Second Bone Spring sand. It shows the porosity trending north-south across the proposed location. The regional structure trends northeast to southwest and dips to the southeast. Production from the 2nd Bone Spring horizontal wells occur updip, downdip, and along strike. A line of cross-section is shown on the map.
 - (b) Attachment B is a west-to-east cross section. The 2nd Bone Spring Lower Sand porosity averages 45 feet across the proposed location. The pay is continuous across the well unit.
5. I conclude from the maps that the project area is justified from a geologic standpoint.
6. Each quarter-quarter section in the project area will contribute more or less equally to production.
7. Attachment C contains information from other Mewbourne wells drilled in this area. Most of the wells are laydown wells, and production from the wells is economic. The only north-south horizontal well is located in section 21. Production from this well is not as good as

Oil Conservation Division
Case No. _____
Exhibit No. 2

the east-west horizontal well. An east-west horizontal well has a better chance of encountering the north-south trending porosity zones.

8. Attachment D is the proposed horizontal well plan. The well will have approximately 20 completion stages and the fluid volumes will be 1,580,000 gallons. The producing interval of the well will be at orthodox locations.

David Rawlins

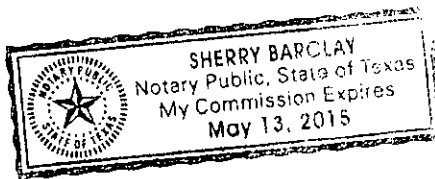
David Rawlins

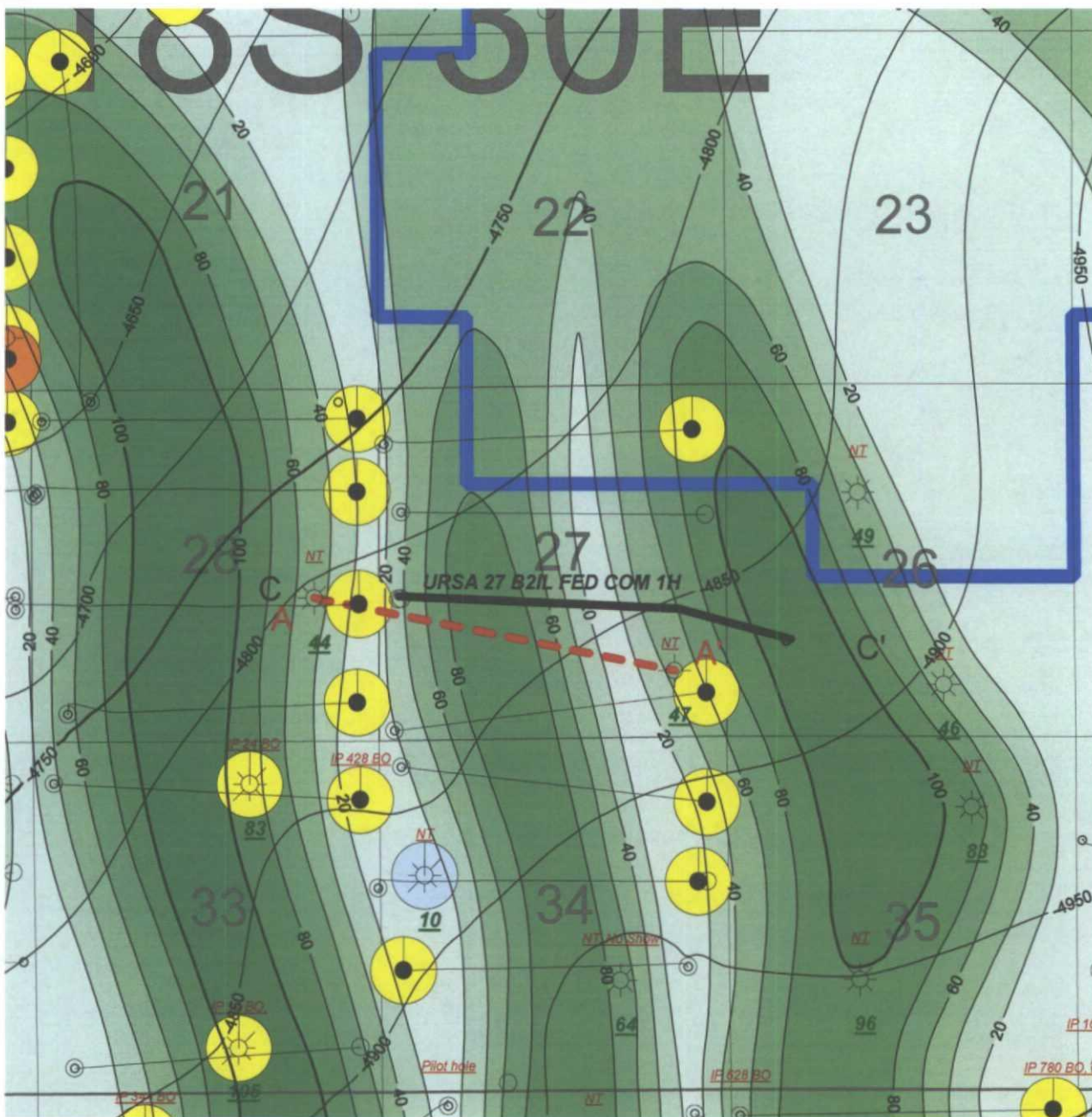
SUBSCRIBED AND SWORN TO before me this 20th day of October, 2014 by David Rawlins.

My Commission Expires:

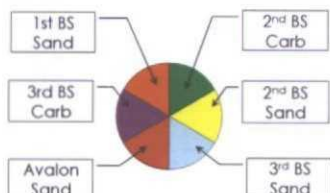
5-13-2015

Sherry Barclay
Notary Public





PRODUCING ZONE COLOR CODE



LEGEND

●
64
Net ft porosity > 10%

MOC Mewbourne Oil Company

URSA 27 B2IL FED COM 1H
2nd BSPG "Lower" SD Net Porosity > 10% & Structure
27-18S-30E EDDY CO. NM

Author: DMR	Wells > 8000 feet	Date: 6 October, 2014
	Scale: 1 inch = 2500 feet	



1" = 2500'

Attachment

A

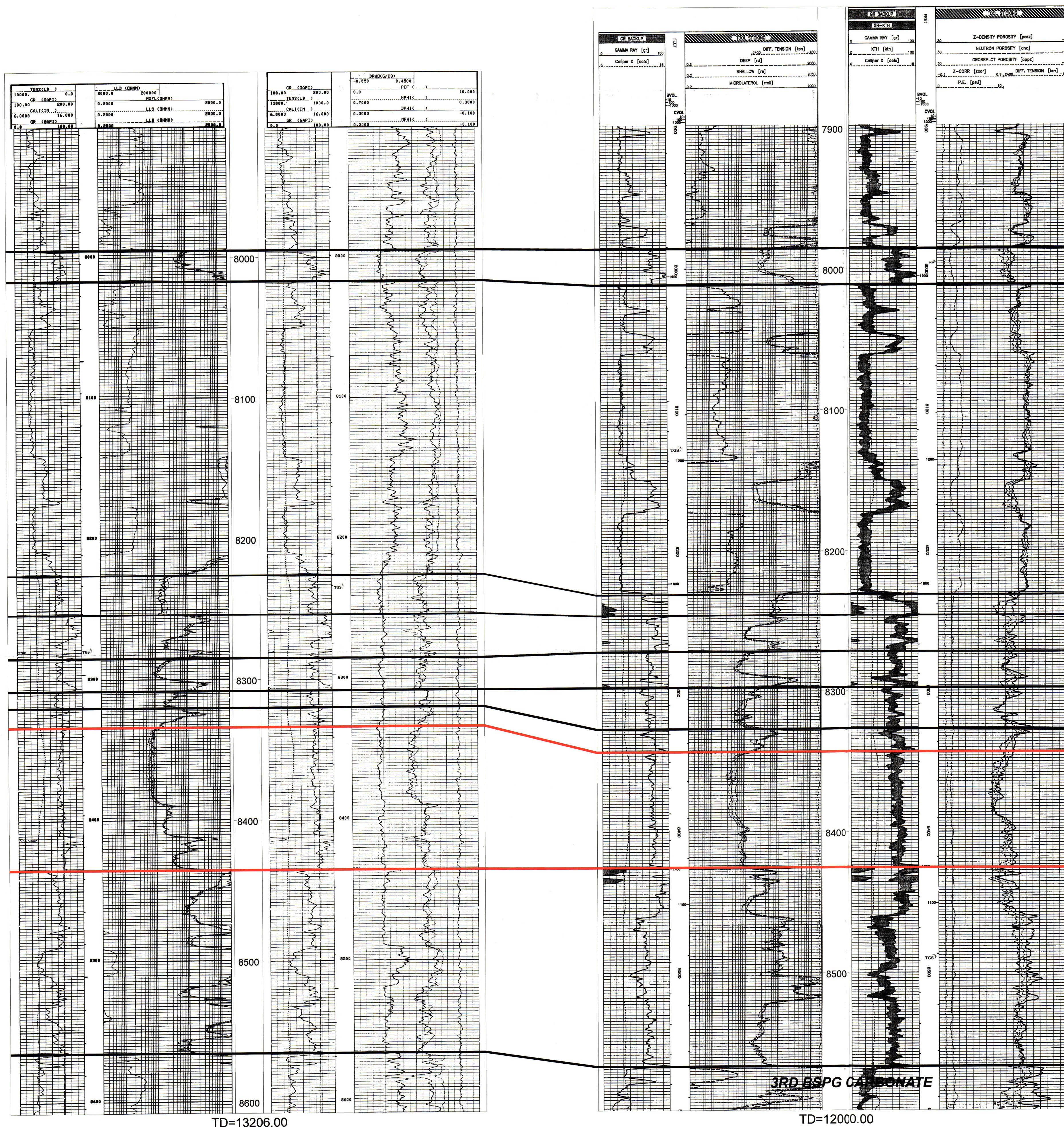
300152465100
 ←
 CHEVRON U S A INCORPORATED
 L R MANNING B FEDEAL NCT A 21
 NW NE SE
 TWP: 18 S - Range: 30 E - Sec. 28
 Datum=3500.00

1.1 miles

300153321000

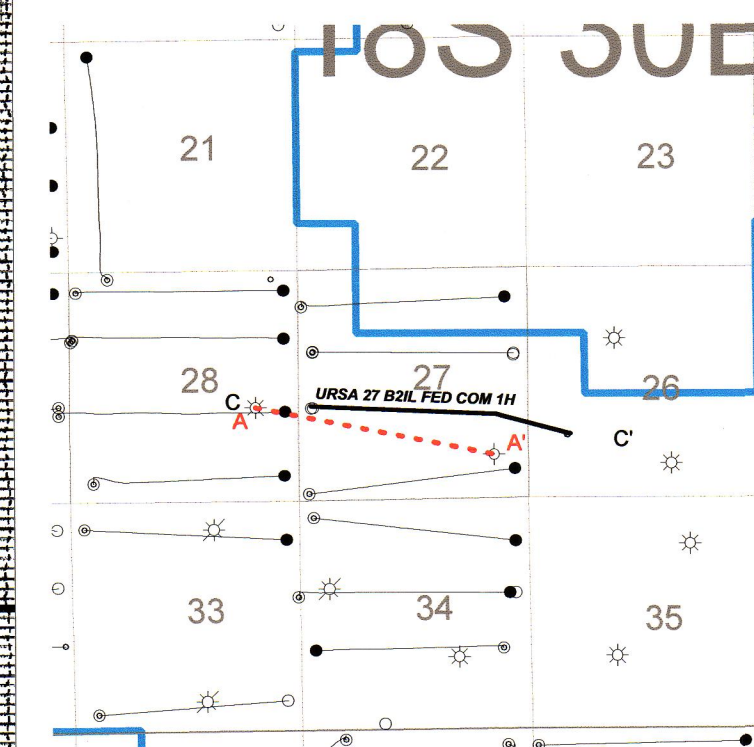
 OXY USA WTP LP
 OXY KID NATE FEDERA 1
 990 FSL 8'10 FEL
 TWP: 18 S - Range: 30 E - Sec. 27
 Datum=3429.00

A



2ND BSPG SAND

2nd BSPG "Lower" Sand Horizontall objective



TD=13206.00

TD=12000.00

Attachment

 Mewbourne Oil Company		
URSA 27 B2IL FED COM 1H 27-18S-30E EDDY CO. NM		
DMR		10/30/14

MEWBOURNE OIL COMPANY URSA 27 PRODUCTION DATA TABLE

Well Name	Operator	API	Location	Direction	Vertical/Horizontal	BSPG Completion Date	BSPG Interval	Cum Oil (MBO)	Cum Gas (BCF)	Cum Water (MBW)
PHOENIX 21 FED COM 1H	MEWBOURNE	300153935000	21MD/18S/30E	N/S	Horizontal	10/28/2011	2nd BSPG Sd	43	99	32
URSA 27 FED COM 4H	MEWBOURNE	300153958200	27DA/18S/30E	E/W	Horizontal	12/14/2013	2nd BSPG Sd	75	110	48
URSA '27' FED COM 1H	MEWBOURNE	300153958100	27MP/18S/30E	E/W	Horizontal	3/28/2014	2nd BSPG Sd	6	4	7
BRADLEY 28 FED COM	MEWBOURNE	300153945800	28DA/18S/30E	E/W	Horizontal	3/15/2012	2nd BSPG Sd	76	163	79
BRADLEY 28 FED COM 2	MEWBOURNE	300153822800	28EH/18S/30E	E/W	Horizontal	7/1/2011	2nd BSPG Sd	53	80	88
BRADLEY 28 FED COM 4H	MEWBOURNE	300154083400	28LI/18S/30E	E/W	Horizontal	1/17/2013	2nd BSPG Sd	37	77	29
BRADLEY 28 FED COM 3H	MEWBOURNE	300154024600	28MP/18S/30E	E/W	Horizontal	7/31/2012	2nd BSPG Sd	79	129	131
BENSON DEEP 'AAS' F 2H	YATES	300154124700	33DA/18S/30E	E/W	Horizontal	3/18/2014	2nd BSPG Sd	7	4	10
BENSON DEEP FED COM 1	YATES	300152433000	33B/18S/30E		Vertical	9/9/2005	2nd BSPG Sd	13	258	185
BENSON DEEP BDX FED 1	YATES	300152279300	33O/18S/30E		Vertical	3/30/2012	2nd BSPG Sd	80	810	17
DORADO 34 DA FED COM 1H	MEWBOURNE	300154139400	34DA/18S/30E	E/W	Horizontal	8/27/2013	2nd BSPG Sd	57	75	101
DORADO 34 EH FED COM 1H	MEWBOURNE	300154189600	34EH/18S/30E	E/W	Horizontal	3/3/2014	2nd BSPG Sd	9	11	41
BENSON DEEP UNIT 2	YATES	300152337100	34E/18S/30E		Vertical	3/13/1986	3rd BSPG Sd	23	593	120

Attachment

C



COMPANY: Mewbourne Oil Company
WELL: Ursa 27 B2IL Fed Com #1H
COUNTY: Eddy County, New Mexico
DATUM: NAD 1927 (NADCON CONUS)
RIG: Patterson #

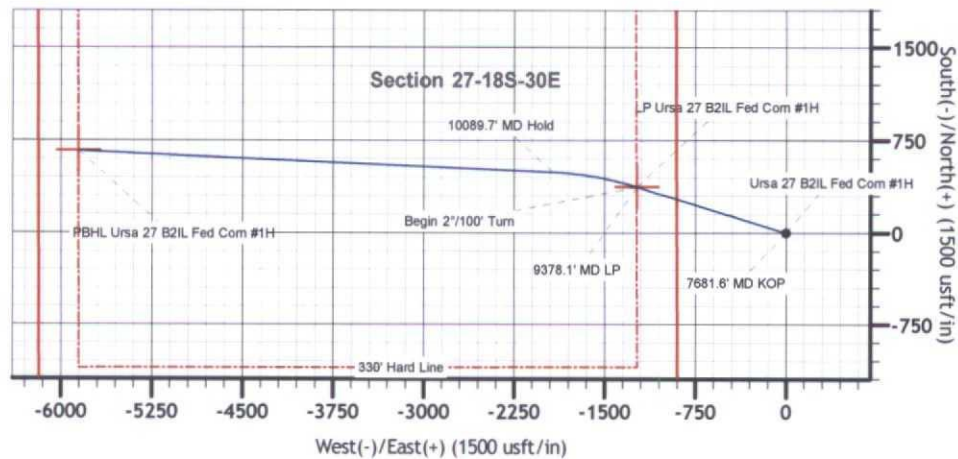


GRID CORRECTION: To convert a Magnetic Direction to a Grid Direction, Add 7.25°

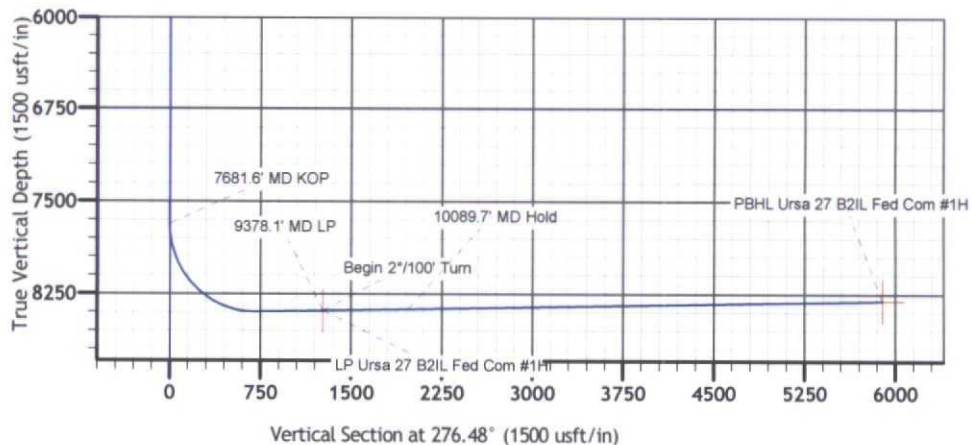
OFFICE: 936.582.7296

GEODETTIC ZONE: New Mexico East 3001							
GL 3408 + 20 @ 3428.0usft (Patterson #)							
GROUND ELEVATION: 3408.0							
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot	
0.0	0.0	624026.70	618585.00	32° 42' 53.833 N	103° 56' 51.987 W		

PLAN SECTIONS										
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	7681.6	0.00	0.00	7681.6	0.0	0.0	0.00	0.00	0.0	
3	8819.0	90.99	286.77	8397.7	210.3	-897.6	8.00	286.77	716.9	
4	9378.1	90.99	286.77	8388.0	371.6	-1232.9	0.00	0.00	1286.9	LP Ursa 27 B2IL Fed Com #1H
5	10089.7	90.99	272.54	8375.6	490.6	-1932.4	2.00	-89.90	1975.4	
6	14017.9	90.99	272.54	8308.0	664.8	-5856.1	0.00	0.00	5893.8	PBHL Ursa 27 B2IL Fed Com #1H



Attachment **D**



Survey Calculation Program

Mewbourne Oil Company .

Ursa 27 B2IL Fed Com #1H

Section 27-18S-30E Ursa 27 B2IL Fed Com #1H

Eddy County, New Mexico

MD (ft)	Incl.	Azim.	TVD (ft)	N-S (ft)	E-W (ft)	VS (ft)	Dogleg (°/100ft)
7700.00	1.47	286.77	7700.00	0.07	-0.23	0.23	8.00
7750.00	5.47	286.77	7749.90	0.94	-3.12	3.21	8.00
7800.00	9.47	286.77	7799.46	2.82	-9.35	9.61	8.00
7850.00	13.47	286.77	7848.45	5.69	-18.87	19.39	8.00
7900.00	17.47	286.77	7896.63	9.54	-31.64	32.51	8.00
7950.00	21.47	286.77	7943.76	14.34	-47.59	48.91	8.00
8000.00	25.47	286.77	7989.61	20.09	-66.66	68.50	8.00
8050.00	29.47	286.77	8033.97	26.75	-88.74	91.19	8.00
8100.00	33.47	286.77	8076.60	34.28	-113.72	116.86	8.00
8150.00	37.47	286.77	8117.32	42.65	-141.50	145.41	8.00
8200.00	41.47	286.77	8155.90	51.82	-171.93	176.67	8.00
8250.00	45.47	286.77	8192.18	61.75	-204.85	210.51	8.00
8300.00	49.47	286.77	8225.97	72.38	-240.13	246.76	8.00
8350.00	53.47	286.77	8257.11	83.66	-277.57	285.24	8.00
8400.00	57.47	286.77	8285.45	95.55	-317.00	325.76	8.00
8450.00	61.47	286.77	8310.84	107.98	-358.23	368.12	8.00
8500.00	65.47	286.77	8333.17	120.88	-401.05	412.13	8.00
8550.00	69.47	286.77	8352.32	134.21	-445.27	457.56	8.00
8600.00	73.47	286.77	8368.20	147.89	-490.65	504.20	8.00
8650.00	77.47	286.77	8380.74	161.85	-536.98	551.81	8.00
8700.00	81.47	286.77	8389.88	176.04	-584.04	600.17	8.00
8750.00	85.47	286.77	8395.56	190.37	-631.59	649.03	8.00
8800.00	89.47	286.77	8397.77	204.78	-679.41	698.17	8.00

8819.01	90.99	286.77	8397.69	210.27	-697.61	716.87	8.00
8900.00	90.99	286.77	8396.29	233.64	-775.14	796.55	0.00
9000.00	90.99	286.77	8394.55	262.49	-870.87	894.92	0.00
9100.00	90.99	286.77	8392.82	291.35	-966.60	993.29	0.00
9200.00	90.99	286.77	8391.09	320.20	-1062.33	1091.67	0.00
9300.00	90.99	286.77	8389.35	349.06	-1158.06	1190.04	0.00
9378.14	90.99	286.77	8388.00	371.60	-1232.86	1266.91	0.00
9400.00	90.99	286.34	8387.62	377.83	-1253.82	1288.43	2.00
9500.00	91.00	284.34	8385.88	404.28	-1350.24	1387.22	2.00
9600.00	91.00	282.34	8384.14	427.34	-1447.52	1486.48	2.00
9700.00	91.00	280.34	8382.40	446.99	-1545.55	1586.10	2.00
9800.00	91.00	278.34	8380.66	463.21	-1644.21	1685.96	2.00
9900.00	90.99	276.34	8378.92	475.97	-1743.37	1785.93	2.00
10000.00	90.99	274.33	8377.19	485.27	-1842.91	1885.89	2.00
10089.65	90.99	272.54	8375.64	490.64	-1932.39	1975.40	2.00
10100.00	90.99	272.54	8375.47	491.10	-1942.72	1985.72	0.00
10200.00	90.99	272.54	8373.74	495.53	-2042.61	2085.47	0.00
10300.00	90.99	272.54	8372.02	499.97	-2142.50	2185.22	0.00
10400.00	90.99	272.54	8370.30	504.40	-2242.38	2284.97	0.00
10500.00	90.99	272.54	8368.58	508.83	-2342.27	2384.72	0.00
10600.00	90.99	272.54	8366.86	513.26	-2442.16	2484.47	0.00
10700.00	90.99	272.54	8365.13	517.70	-2542.05	2584.22	0.00
10800.00	90.99	272.54	8363.41	522.13	-2641.93	2683.97	0.00
10900.00	90.99	272.54	8361.69	526.56	-2741.82	2783.71	0.00
11000.00	90.99	272.54	8359.97	531.00	-2841.71	2883.46	0.00
11100.00	90.99	272.54	8358.25	535.43	-2941.59	2983.21	0.00
11200.00	90.99	272.54	8356.52	539.86	-3041.48	3082.96	0.00
11300.00	90.99	272.54	8354.80	544.30	-3141.37	3182.71	0.00
11400.00	90.99	272.54	8353.08	548.73	-3241.25	3282.46	0.00
11500.00	90.99	272.54	8351.36	553.16	-3341.14	3382.21	0.00
11600.00	90.99	272.54	8349.64	557.59	-3441.03	3481.96	0.00
11700.00	90.99	272.54	8347.91	562.03	-3540.91	3581.71	0.00
11800.00	90.99	272.54	8346.19	566.46	-3640.80	3681.46	0.00
11900.00	90.99	272.54	8344.47	570.89	-3740.69	3781.21	0.00

URSA 27 B2ILFED COM 1H

12000.00	90.99	272.54	8342.75	575.33	-3840.57	3880.96	0.00
12100.00	90.99	272.54	8341.03	579.76	-3940.46	3980.71	0.00
12200.00	90.99	272.54	8339.30	584.19	-4040.35	4080.46	0.00
12300.00	90.99	272.54	8337.58	588.63	-4140.23	4180.21	0.00
12400.00	90.99	272.54	8335.86	593.06	-4240.12	4279.96	0.00
12500.00	90.99	272.54	8334.14	597.49	-4340.01	4379.71	0.00
12600.00	90.99	272.54	8332.42	601.93	-4439.90	4479.46	0.00
12700.00	90.99	272.54	8330.69	606.36	-4539.78	4579.20	0.00
12800.00	90.99	272.54	8328.97	610.79	-4639.67	4678.95	0.00
12900.00	90.99	272.54	8327.25	615.22	-4739.56	4778.70	0.00
13000.00	90.99	272.54	8325.53	619.66	-4839.44	4878.45	0.00
13100.00	90.99	272.54	8323.81	624.09	-4939.33	4978.20	0.00
13200.00	90.99	272.54	8322.08	628.52	-5039.22	5077.95	0.00
13300.00	90.99	272.54	8320.36	632.96	-5139.10	5177.70	0.00
13400.00	90.99	272.54	8318.64	637.39	-5238.99	5277.45	0.00
13500.00	90.99	272.54	8316.92	641.82	-5338.88	5377.20	0.00
13600.00	90.99	272.54	8315.20	646.26	-5438.76	5476.95	0.00
13700.00	90.99	272.54	8313.47	650.69	-5538.65	5576.70	0.00
13800.00	90.99	272.54	8311.75	655.12	-5638.54	5676.45	0.00
13900.00	90.99	272.54	8310.03	659.55	-5738.42	5776.20	0.00
14000.00	90.99	272.54	8308.31	663.99	-5838.31	5875.95	0.00
14017.85	90.987	272.541	8308	664.78	-5856.15	5893.76	0