



# **Ursa Operating Company, LLC**

**Rockies Region**

**Valley Farms L**

**34A-11-6-92**

**Wellbore #1**

**Design: Actual**

## **End Of Well Report**

**09 January, 2015**



<b>Company:</b>	Ursa Operating Company, LLC	<b>Local Co-ordinate Reference:</b>	Well 34A-11-6-92
<b>Project:</b>	Rockies Region	<b>TVD Reference:</b>	34A-11-6-92 @ 5592.0usft (Capstar 321)
<b>Site:</b>	Valley Farms L	<b>MD Reference:</b>	34A-11-6-92 @ 5592.0usft (Capstar 321)
<b>Well:</b>	34A-11-6-92	<b>North Reference:</b>	True
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Actual	<b>Database:</b>	MasterDB

Project		Rockies Region	
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Central Zone		

Site		Valley Farms L			
Site Position:		Northing:		1,627,813.26	usft
From:	Lat/Long	Easting:		2,399,633.86	usft
Position Uncertainty:		Slot Radius:		13-3/16	"
				Grid Convergence:	-1.34 °

Well		34A-11-6-92, SHL LAT: 39.537783611 LONG: -107.628982431				
Well Position	+N-S	0.0 usft	Northing:	1,627,801.53 usft	Latitude:	39° 32' 16.021 N
	+E-W	0.0 usft	Easting:	2,399,611.78 usft	Longitude:	107° 37' 44.337 W
Position Uncertainty		0.0 usft	Wellhead Elevation:	5,592.0 usft	Ground Level:	5,577.0 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	4/7/2014	9.83	65.76	52,039

Design		Actual			
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	29.5
Vertical Section:		Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
		29.5	0.0	0.0	268.80

Survey Program		Date	1/9/2015		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
154.0	7,400.0	Survey #1 (Wellbore #1)	MWD	MWD - Standard	

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<b>Well:</b>	34A-11-6-92	<b>North Reference:</b>	True
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Actual	<b>Database:</b>	MasterDB

Survey										
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	V. Sec (usft)	N/S (usft)	E/W (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00	
154.0	0.92	166.71	154.0	-0.3	-1.2	0.3	0.60	0.60	0.00	
182.0	0.83	183.59	182.0	-0.3	-1.6	0.3	0.97	-0.32	60.29	
212.0	0.66	171.11	212.0	-0.3	-2.0	0.3	0.78	-0.57	-41.60	
244.0	0.09	169.75	244.0	-0.3	-2.2	0.4	1.78	-1.78	-4.25	
274.0	0.09	121.58	274.0	-0.3	-2.3	0.4	0.24	0.00	-160.57	
304.0	0.09	0.03	304.0	-0.4	-2.2	0.4	0.52	0.00	-405.17	
334.0	0.31	30.75	334.0	-0.4	-2.1	0.5	0.79	0.73	102.40	
364.0	0.40	40.55	364.0	-0.5	-2.0	0.6	0.36	0.30	32.67	
394.0	0.48	10.40	394.0	-0.6	-1.8	0.7	0.81	0.27	-100.50	
424.0	0.35	9.65	424.0	-0.7	-1.6	0.7	0.43	-0.43	-2.50	
454.0	0.26	29.17	454.0	-0.7	-1.4	0.7	0.45	-0.30	65.07	
484.0	0.40	35.58	484.0	-0.8	-1.3	0.8	0.48	0.47	21.37	
514.0	0.54	33.86	514.0	-1.0	-1.1	1.0	0.47	0.47	-5.73	
544.0	0.53	47.18	544.0	-1.1	-0.9	1.2	0.41	-0.03	44.40	
574.0	0.62	28.10	574.0	-1.3	-0.6	1.3	0.70	0.30	-63.60	
604.0	0.57	51.80	604.0	-1.5	-0.4	1.5	0.83	-0.17	79.00	
634.0	0.44	36.42	634.0	-1.7	-0.2	1.7	0.62	-0.43	-51.27	
664.0	0.22	83.81	664.0	-1.8	-0.1	1.8	1.11	-0.73	157.97	
694.0	0.16	40.11	694.0	-1.9	-0.1	1.9	0.51	-0.20	-145.67	
724.0	0.13	150.02	724.0	-2.0	-0.1	2.0	0.79	-0.10	366.37	
754.0	0.35	123.03	754.0	-2.1	-0.2	2.1	0.80	0.73	-89.97	
784.0	0.48	143.07	784.0	-2.2	-0.3	2.2	0.64	0.43	66.80	
814.0	0.40	134.99	814.0	-2.4	-0.5	2.4	0.34	-0.27	-26.93	
844.0	0.40	151.73	844.0	-2.5	-0.6	2.5	0.39	0.00	55.80	
874.0	0.27	193.57	874.0	-2.5	-0.8	2.5	0.89	-0.43	139.47	
934.0	0.08	154.18	934.0	-2.5	-1.0	2.5	0.36	-0.32	-65.65	

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<b>Well:</b>	34A-11-6-92	<b>North Reference:</b>	True
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Actual	<b>Database:</b>	MasterDB

Survey										
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	V. Sec (usft)	N/S (usft)	E/W (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	
964.0	0.09	199.32	964.0	-2.5	-1.0	2.5	0.22	0.03	150.47	
1,036.0	0.36	176.72	1,036.0	-2.5	-1.3	2.5	0.39	0.37	-31.39	
1,079.0	0.04	175.90	1,079.0	-2.5	-1.5	2.5	0.74	-0.74	-1.91	
1,121.0	1.10	298.86	1,121.0	-2.1	-1.3	2.2	2.67	2.52	292.76	
1,164.0	2.55	295.43	1,163.9	-0.9	-0.7	0.9	3.38	3.37	-7.98	
1,207.0	3.69	284.66	1,206.9	1.3	0.1	-1.3	2.97	2.65	-25.05	
1,249.0	5.10	275.70	1,248.8	4.4	0.6	-4.4	3.72	3.36	-21.33	
1,292.0	6.27	271.58	1,291.5	8.7	0.9	-8.7	2.88	2.72	-9.58	
1,335.0	7.56	272.75	1,334.2	13.8	1.1	-13.9	3.02	3.00	2.72	
1,378.0	8.83	272.75	1,376.8	19.9	1.4	-20.0	2.95	2.95	0.00	
1,420.0	10.68	268.54	1,418.2	27.1	1.4	-27.1	4.72	4.40	-10.02	
1,463.0	12.13	268.18	1,460.3	35.6	1.2	-35.6	3.38	3.37	-0.84	
1,506.0	13.51	269.25	1,502.3	45.1	1.0	-45.1	3.26	3.21	2.49	
1,548.0	14.77	269.69	1,543.0	55.4	0.9	-55.4	3.01	3.00	1.05	
1,591.0	16.35	270.12	1,584.4	66.9	0.9	-66.9	3.68	3.67	1.00	
1,677.0	17.84	267.04	1,666.6	92.2	0.2	-92.2	2.03	1.73	-3.58	
1,762.0	17.75	265.68	1,747.5	118.1	-1.4	-118.1	0.50	-0.11	-1.60	
1,847.0	17.27	265.72	1,828.6	143.6	-3.4	-143.6	0.56	-0.56	0.05	
1,933.0	18.06	266.47	1,910.5	169.7	-5.1	-169.6	0.96	0.92	0.87	
2,018.0	18.19	267.75	1,991.3	196.1	-6.5	-196.1	0.49	0.15	1.51	
2,104.0	17.71	267.17	2,073.1	222.6	-7.6	-222.5	0.60	-0.56	-0.67	
2,189.0	17.71	267.04	2,154.1	248.5	-8.9	-248.4	0.05	0.00	-0.15	
2,275.0	18.11	268.93	2,236.0	274.9	-9.9	-274.8	0.82	0.47	2.20	
2,360.0	17.94	269.95	2,316.8	301.2	-10.1	-301.1	0.42	-0.20	1.20	
2,446.0	17.53	269.33	2,398.7	327.4	-10.3	-327.3	0.52	-0.48	-0.72	
2,532.0	17.23	268.49	2,480.8	353.1	-10.8	-353.0	0.45	-0.35	-0.98	
2,616.0	16.96	267.35	2,561.1	377.8	-11.7	-377.6	0.51	-0.32	-1.36	

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2,702.0	16.57	266.38	2,643.4	402.6	-13.0	-402.4	0.56	-0.45	-1.13	
2,785.0	18.19	269.63	2,722.6	427.4	-13.9	-427.2	2.27	1.95	3.92	
2,872.0	17.71	268.67	2,805.4	454.2	-14.2	-454.0	0.65	-0.55	-1.10	
2,958.0	17.25	267.12	2,887.4	480.0	-15.2	-479.8	0.76	-0.53	-1.80	
3,043.0	17.36	270.56	2,968.6	505.3	-15.7	-505.1	1.21	0.13	4.05	
3,128.0	16.74	272.01	3,049.8	530.2	-15.1	-530.0	0.88	-0.73	1.71	
3,214.0	17.62	268.71	3,132.0	555.6	-15.0	-555.4	1.53	1.02	-3.84	
3,299.0	16.74	266.38	3,213.2	580.7	-16.1	-580.4	1.31	-1.04	-2.74	
3,385.0	18.02	265.68	3,295.3	606.3	-17.9	-606.1	1.51	1.49	-0.81	
3,470.0	17.84	268.51	3,376.1	632.5	-19.2	-632.2	1.05	-0.21	3.33	
3,555.0	16.08	265.20	3,457.4	657.2	-20.5	-656.9	2.36	-2.07	-3.89	
3,641.0	16.39	268.80	3,540.0	681.3	-21.8	-680.9	1.22	0.36	4.19	
3,726.0	18.41	272.49	3,621.1	706.6	-21.4	-706.4	2.71	2.38	4.34	
3,812.0	18.28	273.72	3,702.8	733.6	-20.0	-733.4	0.47	-0.15	1.43	
3,897.0	16.74	271.35	3,783.8	759.1	-18.8	-758.9	2.00	-1.81	-2.79	
3,983.0	16.96	268.89	3,866.1	784.1	-18.8	-783.8	0.87	0.26	-2.86	
4,068.0	15.95	268.49	3,947.6	808.1	-19.3	-807.9	1.20	-1.19	-0.47	
4,154.0	12.96	264.49	4,030.9	829.6	-20.5	-829.3	3.66	-3.48	-4.65	
4,240.0	10.33	261.99	4,115.1	846.9	-22.5	-846.6	3.11	-3.06	-2.91	
4,325.0	8.35	262.38	4,199.0	860.6	-24.4	-860.2	2.33	-2.33	0.46	
4,410.0	6.20	266.38	4,283.3	871.3	-25.5	-870.9	2.60	-2.53	4.71	
4,496.0	5.32	264.32	4,368.9	879.9	-26.2	-879.5	1.05	-1.02	-2.40	
4,581.0	4.35	257.99	4,453.6	887.0	-27.3	-886.6	1.30	-1.14	-7.45	
4,667.0	3.78	252.58	4,539.4	892.9	-28.8	-892.5	0.80	-0.66	-6.29	
4,698.6	3.50	248.93	4,570.9	894.8	-29.5	-894.4	1.14	-0.87	-11.54	
34A-11-6-92 TGT										
4,752.0	3.08	241.36	4,624.2	897.6	-30.7	-897.2	1.14	-0.80	-14.19	

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Survey										
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4,838.0	2.64	232.28	4,710.1	901.3	-33.1	-900.8	0.73	-0.51	-10.56	
4,923.0	1.93	218.26	4,795.0	903.8	-35.4	-903.2	1.06	-0.84	-16.49	
5,008.0	1.86	221.64	4,880.0	905.6	-37.5	-905.0	0.16	-0.08	3.98	
5,094.0	1.54	217.78	4,965.9	907.3	-39.5	-906.6	0.39	-0.37	-4.49	
5,179.0	1.23	220.81	5,050.9	908.6	-41.1	-907.9	0.37	-0.36	3.56	
5,264.0	0.53	267.66	5,135.9	909.6	-41.8	-908.9	1.12	-0.82	55.12	
5,350.0	1.13	298.59	5,221.9	910.7	-41.4	-910.1	0.85	0.70	35.97	
5,435.0	0.44	305.98	5,306.9	911.7	-40.8	-911.1	0.82	-0.81	8.69	
5,520.0	0.31	356.56	5,391.9	912.0	-40.4	-911.4	0.40	-0.15	59.51	
5,606.0	0.57	32.59	5,477.9	911.8	-39.8	-911.1	0.43	0.30	41.90	
5,691.0	0.75	34.79	5,562.9	911.2	-39.0	-910.6	0.21	0.21	2.59	
5,777.0	0.48	356.91	5,648.9	910.9	-38.2	-910.3	0.55	-0.31	-44.05	
5,863.0	0.13	8.08	5,734.9	910.9	-37.7	-910.3	0.41	-0.41	12.99	
5,948.0	0.31	85.77	5,819.9	910.6	-37.6	-910.1	0.36	0.21	91.40	
6,033.0	0.31	228.19	5,904.9	910.6	-37.7	-910.0	0.69	0.00	167.55	
6,119.0	0.40	164.78	5,990.9	910.7	-38.2	-910.1	0.44	0.10	-73.73	
6,204.0	0.76	130.88	6,075.9	910.2	-38.8	-909.6	0.57	0.42	-39.88	
6,289.0	0.53	105.40	6,160.9	909.4	-39.3	-908.8	0.43	-0.27	-29.98	
6,375.0	0.92	61.16	6,246.9	908.4	-39.1	-907.8	0.76	0.45	-51.44	
6,460.0	0.77	291.78	6,331.9	908.3	-38.5	-907.7	1.80	-0.18	-152.21	
6,546.0	1.76	301.10	6,417.8	910.0	-37.6	-909.4	1.17	1.15	10.84	
6,631.0	1.32	332.21	6,502.8	911.5	-36.1	-911.0	1.09	-0.52	36.60	
6,716.0	1.10	328.52	6,587.8	912.4	-34.5	-911.8	0.27	-0.26	-4.34	
6,802.0	1.05	352.65	6,673.8	912.9	-33.1	-912.4	0.53	-0.06	28.06	
6,887.0	1.05	351.37	6,758.8	913.1	-31.5	-912.6	0.03	0.00	-1.51	
6,972.0	1.58	30.40	6,843.7	912.5	-29.7	-912.1	1.19	0.62	45.92	
7,058.0	2.11	42.83	6,929.7	910.8	-27.5	-910.4	0.77	0.62	14.45	

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7,143.0	1.98	41.21	7,014.6	908.7	-25.3	-908.4	0.17	-0.15	-1.91	
7,229.0	1.71	41.21	7,100.6	906.9	-23.2	-906.6	0.31	-0.31	0.00	
7,314.0	2.02	41.41	7,185.5	905.0	-21.1	-904.8	0.36	0.36	0.24	
7,400.0	2.04	44.49	7,271.5	902.9	-18.9	-902.7	0.13	0.02	3.58	

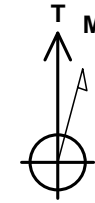
Checked By: _____	Approved By: _____	Date: _____
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**Ursa** | OPERATING  
COMPANY

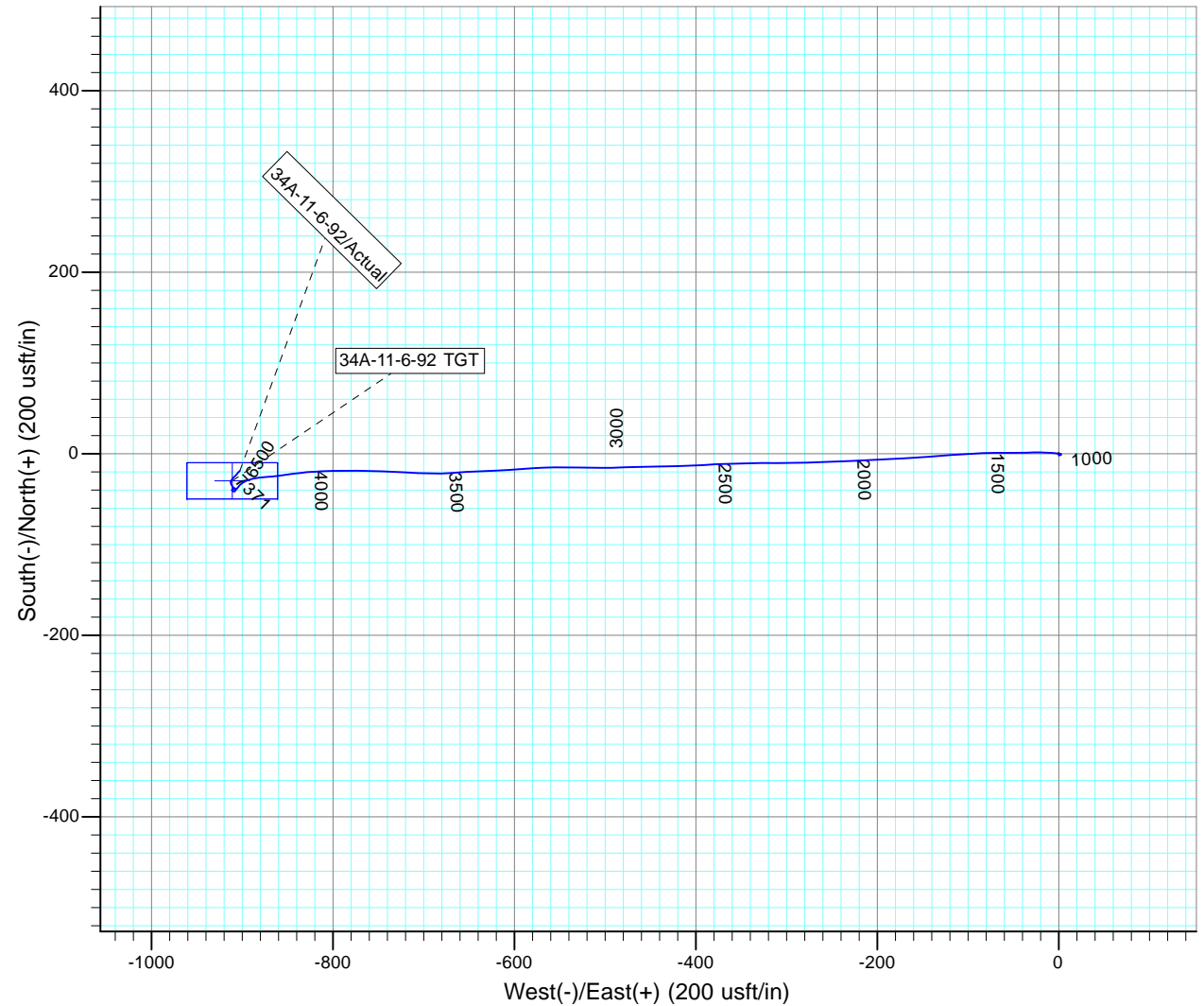
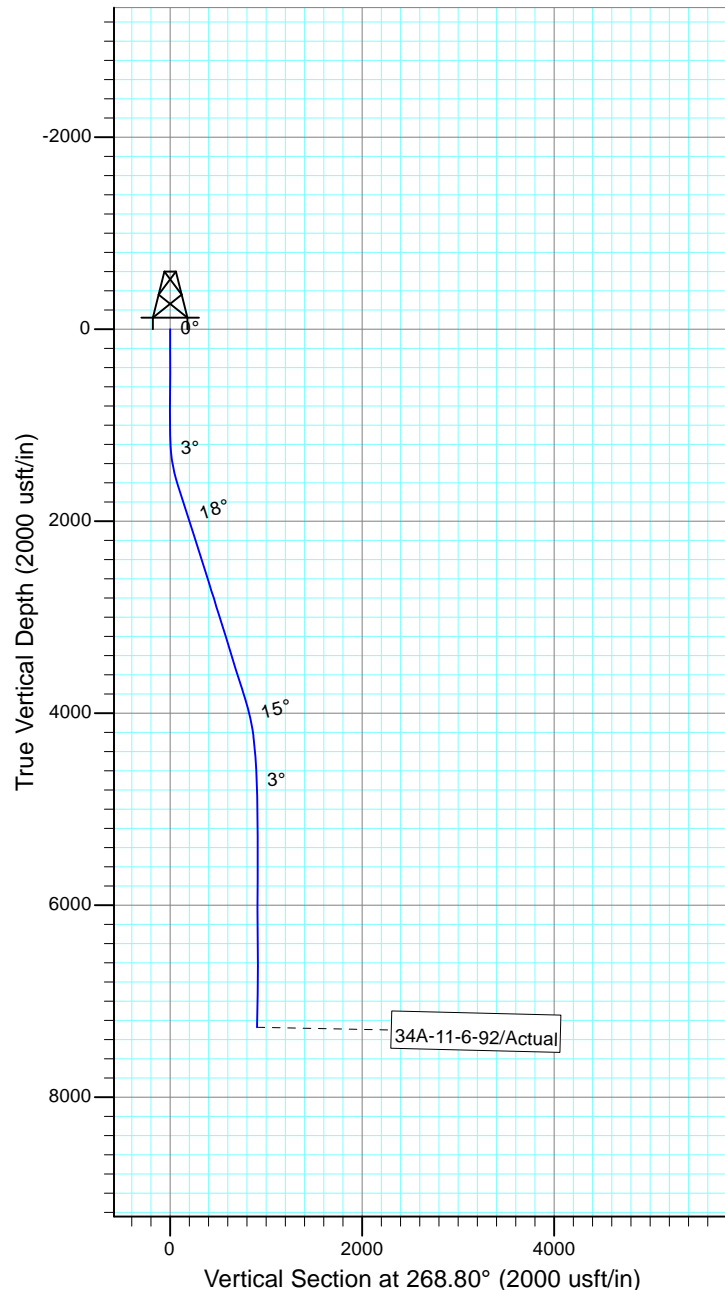
Project: Rockies Region  
Site: Valley Farms L  
Well: 34A-11-6-92  
Wellbore: Wellbore #1  
SURVEY: Actual

**FINAL SURVEY REPORT**



Azimuths to True North  
Magnetic North: 9.83°

Magnetic Field  
Strength: 52039.0snT  
Dip Angle: 65.76°  
Date: 4/7/2014  
Model: IGRF2010



Design: Actual (34A-11-6-92/Wellbore #1)

Created By: Sarah Webb-Hudson Date: 12:06, January 09 2015  
*THIS SURVEY IS CORRECT TO THE BEST OF MY KNOWLEDGE AND IS  
SUPPORTED BY ACTUAL FIELD DATA.*