



PHOENIX
TECHNOLOGY SERVICES

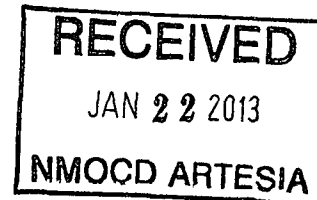
January 9, 2013

Oil Conservation Division
State of New Mexico
811 S. First St.
Artesia, New Mexico 88210

Dear District 2 - Artesia

Attention: Regulatory Department

Re: Apache Corporation
Raven Federal 10H
Eddy Co., NM
API #30-015-40466
Job No. 1211217



Enclosed please find the Survey Data Certification, and the original Plat and one copy of the Survey Report performed on the above referenced Well by Phoenix Technology Services, Inc. (P-5 No. 664171). Other information required by your office is as follows:

Name & Title of Surveyor	Drainhole Number	Surveyed Depths		Dates Performed		Type of Survey
		From	To	Start	End	
Brad Hill	10H	486	9,543	12/12/12	01/02/13	MWD

A certified plat on which the bottom hole location is oriented both to the surface location and to the lease lines (or unit lines in case of pooling) is attached to the survey report. If any other information is required, please contact the undersigned at the letterhead address and phone number.

Best Regards,

Kelly Jo Walter

Kelly Jo Walter
Operations Administrator

Certified mail receipt number: 7011 1570 0001 4364 8271

Phoenix Technology Services SURVEY DATA CERTIFICATION

RECEIVED

JAN 22 2013

NMOCD ARTESIA



PHOENIX
TECHNOLOGY SERVICES

PHOENIX JOB NUMBER

1211217

OPERATOR

Apache

WELL NAME

Raven Federal Com 10H

COUNTY & STATE

Eddy, NM

API WELL NUMBER

30-015-40466

PROPOSED DIRECTION

269.61

TIE-IN DATA						
MEASURED	VERTICAL			N-S	E-W	DATA
DEPTH	DEPTH	INCLIN	AZIMUTH	COORD	COORD	SOURCE
ft	.00 ft	.0 ft	.0 ft	.00 ft	.00 ft	Surface

FIRST SURVEY DATE	FIRST SURVEY DEPTH	INCLIN	AZIMUTH
12-Dec-12	486 ft	1.1	268.4

SURVEY INSTRUMENT TYPE
Phoenix MWD

LAST SURVEY DATE	LAST SURVEY DEPTH	INCLIN	AZIMUTH
2-Jan-13	9,543 ft	93.1	268.6

TO THE BEST OF MY KNOWLEDGE I
CERTIFY THIS SURVEY DATA TO BE
TRUE AND CORRECT.

PROJECTED TD SURVEY DATE	PROJECTED TD SURVEY DEPTH	INCLIN	AZIMUTH
2-Jan-13	9,601 ft	93.1	268.6

Brad Hill

PRINT YOUR NAME ABOVE

Brad Hill

SIGN YOUR NAME ABOVE

MAGNETIC DECLINATION OR TOTAL GRID

TOTAL CORRECTION USED	DECLINATION
7.44	
DECLINATION OR GRID	DECLINATION

1-2-13

TODAY'S DATE

MWD SUPERVISOR 1

Brad Hill

DIRECTIONAL DRILLER 1

Tim Owens

MWD SUPERVISOR 2

Matt Dice

DIRECTIONAL DRILLER 2

Ken Smith

1805 Brittmore Road

Houston, Texas 77043

(713)3370609 (Voice), (713)337-0599 (Fax)



Apache Corporation

Eddy County, NM (Nad27)

Raven Federal

Raven Federal #10H

Raven Federal #10H

Survey: Phoenix MWD Surveys

Apache

02 January, 2013



Company:	Apache Corporation	Local Co-ordinate Reference:	Well: Raven Federal #10H
Project:	Eddy County, NM (Nad27)	TVD Reference:	Well @ 3741.00usft (Original Well Elev +14' KB)
Site:	Raven Federal	MD Reference:	Well @ 3741.00usft (Original Well Elev +14' KB)
Well:	Raven Federal #10H	North Reference:	Grid
Wellbore:	Raven Federal #10H	Survey Calculation Method:	Minimum Curvature
Design:	Raven Federal #10H Surveys	Database:	GCR DB v5000

Project:	Eddy County, NM (Nad27)		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

Site		Raven Federal					
Site Position:		Northing:	673,239.70	usft	Latitude:	32° 51' 0.2430 N	
From:	Map	Easting:	633,303.50	usft	Longitude:	103° 53' 57.3509 W	
Position Uncertainty:	0.00	usft	Slot Radius:	13-3/16	"	Grid Convergence:	0.24 °

Well	Raven Federal #10H					
Well Position	+N/-S	0.00 usft	Northing:	673,239.70 usft	Latitude:	32° 51' 0.2430 N
	+E/-W	0.00 usft	Easting:	633,303.50 usft	Longitude:	103° 53' 57.3509 W
Position Uncertainty		0.00 usft	Wellhead Elevation:	usft	Ground Level:	3,727.00 usft

Wellbore						Raven Federal #10H					
Magnetic						Magnetic					
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Design: Raven Federal #10H Surveys				
Audit Notes:				
Version:	1.0	Phase:	ACTUAL	Tie On Depth: 0.00
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction
	(usft)	(usft)	(usft)	(°)
	0.00	0.00	0.00	269.61

Survey Program		Date	01/02/13		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
486.00	9,601.00	Phoenix MWD Surveys (Raven Federal #1	MWD	MWD - Standard	



Phoenix Technology Services

Apache



Company:	Apache Corporation	Local Co-ordinate Reference:	Well Raven Federal #10H
Project:	Eddy County, NM (Nad27)	TVD Reference:	Well @ 3741.00usft (Original Well Elev + 14' KB)
Site:	Raven Federal	MD Reference:	Well @ 3741.00usft (Original Well Elev + 14' KB)
Well:	Raven Federal #10H	North Reference:	Grid
Wellbore:	Raven Federal #10H	Survey Calculation Method:	Minimum Curvature
Design:	Raven Federal #10H Surveys	Database:	GCR DB v5000

Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVDSS (usft)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)	
0.00	0.00	0.00	-3,741.00	0.00	0.00	0.00	0.00	0.00	673,239.70	633,303.50	
100.00	0.23	268.40	-3,641.00	100.00	-0.01	-0.20	0.20	0.23	673,239.69	633,303.30	
200.00	0.45	268.40	-3,541.00	200.00	-0.02	-0.79	0.79	0.23	673,239.68	633,302.71	
300.00	0.68	268.40	-3,441.01	299.99	-0.05	-1.78	1.78	0.23	673,239.65	633,301.72	
400.00	0.91	268.40	-3,341.02	399.98	-0.09	-3.16	3.16	0.23	673,239.61	633,300.34	
486.00	1.10	268.40	-3,255.03	485.97	-0.13	-4.66	4.66	0.23	673,239.57	633,298.84	
First Phoenix MWD Survey 486'											
500.00	1.10	270.50	-3,241.03	499.97	-0.13	-4.93	4.93	0.29	673,239.57	633,298.57	
600.00	1.20	275.27	-3,141.05	599.95	0.00	-6.92	6.92	0.14	673,239.70	633,296.58	
700.00	1.33	275.18	-3,041.08	699.92	0.24	-9.10	9.10	0.13	673,239.94	633,294.40	
800.00	1.46	270.59	-2,941.11	799.89	0.25	-11.61	11.60	0.17	673,239.95	633,291.89	
900.00	1.11	294.29	-2,841.14	899.86	0.59	-13.91	13.90	0.63	673,240.29	633,289.59	
1,000.00	0.99	330.33	-2,741.15	999.85	1.80	-15.13	15.12	0.66	673,241.50	633,288.37	
1,100.00	1.09	10.69	-2,641.17	1,099.83	3.50	-15.44	15.41	0.72	673,243.20	633,288.06	
1,200.00	1.58	32.71	-2,541.19	1,199.81	5.57	-14.49	14.45	0.70	673,245.27	633,289.01	
1,300.00	1.92	39.50	-2,441.24	1,299.76	8.18	-12.64	12.58	0.40	673,247.88	633,290.86	
1,400.00	1.65	60.21	-2,341.29	1,399.71	10.27	-10.33	10.26	0.69	673,249.97	633,293.17	
1,500.00	1.03	108.79	-2,241.32	1,499.68	10.79	-8.00	7.93	1.24	673,250.49	633,295.50	
1,600.00	1.09	137.72	-2,141.34	1,599.66	9.64	-6.63	6.56	0.53	673,249.34	633,296.87	
1,700.00	1.73	144.96	-2,041.37	1,699.63	7.67	-5.12	5.07	0.66	673,247.37	633,298.38	
1,800.00	1.99	147.93	-1,941.42	1,799.58	5.03	-3.27	3.24	0.28	673,244.73	633,300.23	
1,900.00	2.51	155.13	-1,841.50	1,899.50	1.60	-1.52	1.51	0.59	673,241.30	633,301.98	
2,000.00	2.73	156.02	-1,741.61	1,999.39	-2.72	0.43	-0.41	0.23	673,236.98	633,303.93	
2,100.00	2.79	158.04	-1,641.73	2,099.27	-7.11	2.31	-2.26	0.12	673,232.59	633,305.81	
2,200.00	1.81	166.13	-1,541.81	2,199.19	-10.96	3.63	-3.55	1.03	673,228.74	633,307.13	
2,300.00	1.19	181.97	-1,441.84	2,299.16	-13.33	3.91	-3.81	0.74	673,226.37	633,307.41	
2,400.00	1.44	191.12	-1,341.87	2,399.13	-15.67	3.65	-3.55	0.33	673,224.03	633,307.15	

Company:	Apache Corporation	Local Co-ordinate Reference:	Well: Raven Federal #10H
Project:	Eddy County, NM (Nad27)	TVD Reference:	Well @ 3741.00usft (Original Well Elev + 14 KB)
Site:	Raven Federal	MD Reference:	Well @ 3741.00usft (Original Well Elev + 14 KB)
Well:	Raven Federal #10H	North Reference:	Grid
Wellbore:	Raven Federal #10H	Survey Calculation Method:	Minimum Curvature
Design:	Raven Federal #10H Surveys	Database:	GCR DB v5000

Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVDSS (usft)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)	
2,500.00	1.15	197.68	-1,241.90	2,499.10	-18.00	3.02	-2.89	0.33	673,221.70	633,306.52	
2,600.00	0.31	253.71	-1,141.91	2,599.09	-19.12	2.46	-2.33	1.01	673,220.58	633,305.96	
2,700.00	0.30	314.73	-1,041.91	2,699.09	-18.94	2.01	-1.88	0.31	673,220.76	633,305.51	
2,800.00	0.30	304.72	-941.91	2,799.09	-18.59	1.62	-1.50	0.05	673,221.11	633,305.12	
2,900.00	0.30	298.51	-841.91	2,899.09	-18.37	1.16	-1.03	0.03	673,221.33	633,304.66	
3,000.00	0.23	298.88	-741.91	2,999.09	-18.10	0.76	-0.63	0.07	673,221.60	633,304.26	
3,100.00	0.29	282.93	-641.91	3,099.09	-17.97	0.37	-0.25	0.09	673,221.73	633,303.87	
3,200.00	0.29	283.11	-541.91	3,199.09	-17.85	-0.14	0.26	0.00	673,221.85	633,303.36	
3,300.00	0.22	269.10	-441.91	3,299.09	-17.84	-0.54	0.67	0.09	673,221.86	633,302.96	
3,400.00	0.40	260.38	-341.92	3,399.08	-17.79	-1.05	1.17	0.19	673,221.91	633,302.45	
3,500.00	0.38	239.40	-241.92	3,499.08	-18.08	-1.76	1.88	0.14	673,221.62	633,301.74	
3,600.00	0.30	294.10	-141.92	3,599.08	-18.31	-2.22	2.34	0.32	673,221.39	633,301.28	
3,700.00	0.82	359.04	-41.93	3,699.07	-17.39	-2.42	2.54	0.75	673,222.31	633,301.08	
3,800.00	0.86	352.76	-58.06	3,799.06	-15.88	-2.51	2.61	0.10	673,223.82	633,300.99	
3,900.00	0.74	340.95	158.05	3,899.05	-14.53	-2.82	2.92	0.20	673,225.17	633,300.68	
4,000.00	0.70	349.14	258.05	3,999.05	-13.37	-3.21	3.30	0.11	673,226.33	633,300.29	
4,100.00	0.70	341.84	358.04	4,099.04	-12.18	-3.47	3.55	0.09	673,227.52	633,300.03	
4,200.00	0.76	331.18	458.03	4,199.03	-10.99	-4.03	4.10	0.15	673,228.71	633,299.47	
4,300.00	0.60	334.51	558.02	4,299.02	-9.97	-4.54	4.60	0.16	673,229.73	633,298.96	
4,400.00	0.62	331.54	658.02	4,399.02	-9.04	-5.02	5.08	0.04	673,230.66	633,298.48	
4,500.00	0.97	305.55	758.01	4,499.01	-7.98	-5.60	5.66	0.49	673,231.72	633,297.90	
4,600.00	18.92	273.12	856.31	4,597.31	-7.50	-21.04	21.09	18.11	673,232.20	633,282.46	
4,700.00	35.88	276.60	944.33	4,685.33	-2.49	-67.46	67.47	17.03	673,237.21	633,236.04	
4,800.00	45.89	274.14	1,019.89	4,760.89	3.83	-132.46	132.43	10.14	673,243.53	633,171.04	
4,900.00	57.35	268.38	1,081.71	4,822.71	4.25	-210.81	210.78	12.30	673,243.95	633,092.69	
5,000.00	69.55	271.22	1,126.31	4,867.31	4.27	-300.08	300.05	12.46	673,243.97	633,003.42	
5,100.00	84.22	272.61	1,149.49	4,890.49	6.85	-397.01	396.96	14.74	673,246.55	632,906.49	

Company:	Apache Corporation	Local Co-ordinate Reference:	Well Raven Federal #10H
Project:	Eddy County, NM (Nad27)	TVD Reference:	Well @ 3741'00usft (Original Well Elev + 14' KB)
Site:	Raven Federal	MD Reference:	Well @ 3741'00usft (Original Well Elev + 14' KB)
Well:	Raven Federal #10H	North Reference:	Grid
Wellbore:	Raven Federal #10H	Survey Calculation Method:	Minimum Curvature
Design:	Raven Federal #10H Surveys	Database:	GCR DB v5000

Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVDSS (usft)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)	
5,200.00	88.80	269.43	1,154.51	4,895.51	8.72	-496.83	496.76	5.57	673,248.42	632,806.67	
5,300.00	91.09	267.72	1,154.76	4,895.76	5.97	-596.78	596.73	2.86	673,245.67	632,706.72	
5,400.00	93.20	267.09	1,150.87	4,891.87	1.27	-696.59	696.57	2.21	673,240.97	632,606.91	
5,500.00	92.99	267.87	1,144.99	4,885.99	-3.38	-796.31	796.31	0.81	673,236.32	632,507.19	
5,600.00	91.74	268.36	1,140.82	4,881.82	-6.54	-896.17	896.19	1.34	673,233.16	632,407.33	
5,700.00	91.80	269.38	1,137.86	4,878.86	-8.58	-996.10	996.14	1.01	673,231.12	632,307.40	
5,800.00	90.05	271.85	1,136.23	4,877.23	-7.40	-1,096.07	1,096.10	3.03	673,232.30	632,207.43	
5,900.00	89.67	270.68	1,136.93	4,877.93	-5.24	-1,196.04	1,196.05	1.23	673,234.46	632,107.46	
6,000.00	90.38	269.78	1,136.77	4,877.77	-4.90	-1,296.04	1,296.04	1.14	673,234.80	632,007.46	
6,100.00	90.75	269.11	1,135.76	4,876.76	-5.89	-1,396.03	1,396.04	0.77	673,233.81	631,907.47	
6,200.00	91.06	268.48	1,134.19	4,875.19	-7.99	-1,495.99	1,496.01	0.70	673,231.71	631,807.51	
6,300.00	91.48	268.48	1,132.01	4,873.01	-10.89	-1,595.93	1,595.97	0.42	673,228.81	631,707.57	
6,400.00	90.31	268.64	1,129.83	4,870.83	-13.27	-1,695.87	1,695.92	1.18	673,226.43	631,607.63	
6,500.00	89.85	268.15	1,130.33	4,871.33	-15.94	-1,795.84	1,795.90	0.67	673,223.76	631,507.66	
6,600.00	90.64	268.38	1,129.91	4,870.91	-19.26	-1,895.78	1,895.87	0.82	673,220.44	631,407.72	
6,700.00	90.40	269.97	1,128.71	4,869.71	-20.94	-1,995.75	1,995.85	1.61	673,218.76	631,307.75	
6,800.00	91.26	270.42	1,127.64	4,868.64	-20.24	-2,095.74	2,095.83	0.98	673,219.46	631,207.76	
6,900.00	91.84	272.16	1,124.75	4,865.75	-18.35	-2,195.68	2,195.75	1.83	673,221.35	631,107.82	
7,000.00	89.98	271.93	1,122.81	4,863.81	-14.36	-2,295.57	2,295.62	1.88	673,225.34	631,007.93	
7,100.00	90.39	270.66	1,122.87	4,863.87	-12.04	-2,395.54	2,395.57	1.33	673,227.66	630,907.96	
7,200.00	90.68	270.87	1,121.87	4,862.87	-10.86	-2,495.53	2,495.55	0.36	673,228.84	630,807.97	
7,300.00	91.56	271.47	1,119.96	4,860.96	-8.84	-2,595.49	2,595.49	1.07	673,230.86	630,708.01	
7,400.00	90.61	271.10	1,118.00	4,859.00	-6.55	-2,695.44	2,695.43	1.02	673,233.15	630,608.06	
7,500.00	89.78	270.71	1,117.66	4,858.66	-4.90	-2,795.43	2,795.40	0.92	673,234.80	630,508.07	
7,600.00	89.42	267.91	1,118.48	4,859.48	-6.28	-2,895.40	2,895.38	2.83	673,233.42	630,408.10	
7,700.00	90.81	267.99	1,117.99	4,858.99	-9.85	-2,995.34	2,995.33	1.39	673,229.85	630,308.16	
7,800.00	89.42	267.83	1,118.14	4,859.14	-13.45	-3,095.27	3,095.29	1.41	673,226.25	630,208.23	

Company:	Apache Corporation	Local Co-ordinate Reference:	Well Raven Federal #10H
Project:	Eddy County, NM (Nad27)	TVD Reference:	Well @ 3741.00usft (Original Well Elev + 14' KB)
Site:	Raven Federal	MD Reference:	Well @ 3741.00usft (Original Well Elev + 14' KB)
Well:	Raven Federal #10H	North Reference:	Grid
Wellbore:	Raven Federal #10H	Survey Calculation Method:	Minimum Curvature
Design:	Raven Federal #10H Surveys	Database:	GCR DB v5000

Survey										
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVDSS (usft)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)
7,900.00	90.46	267.67	1,117.80	4,858.80	-17.64	-3,195.18	3,195.22	1.06	673,222.06	630,108.32
8,000.00	89.23	268.88	1,118.58	4,859.58	-20.41	-3,295.13	3,295.19	1.73	673,219.29	630,008.37
8,100.00	89.96	269.29	1,118.74	4,859.74	-22.35	-3,395.11	3,395.18	0.84	673,217.35	629,908.39
8,200.00	89.05	270.79	1,120.13	4,861.13	-21.99	-3,495.09	3,495.16	1.75	673,217.71	629,808.41
8,300.00	90.13	270.60	1,120.75	4,861.75	-20.48	-3,595.08	3,595.13	1.10	673,219.22	629,708.42
8,400.00	90.93	269.73	1,119.85	4,860.85	-20.41	-3,695.07	3,695.12	1.19	673,219.29	629,608.43
8,500.00	91.91	269.60	1,117.40	4,858.40	-21.04	-3,795.04	3,795.09	0.98	673,218.66	629,508.46
8,600.00	91.47	270.18	1,113.72	4,854.72	-21.52	-3,894.97	3,895.02	0.73	673,218.18	629,408.53
8,700.00	90.69	270.70	1,112.58	4,853.58	-20.36	-3,994.95	3,995.00	0.94	673,219.34	629,308.55
8,800.00	91.73	270.34	1,110.47	4,851.47	-19.47	-4,094.92	4,094.96	1.10	673,220.23	629,208.58
8,900.00	90.73	269.75	1,107.52	4,848.52	-19.28	-4,194.88	4,194.91	1.17	673,220.42	629,108.62
9,000.00	90.02	269.34	1,107.59	4,848.59	-20.23	-4,294.87	4,294.91	0.81	673,219.47	629,008.63
9,100.00	91.01	269.04	1,106.78	4,847.78	-21.58	-4,394.86	4,394.90	1.03	673,218.12	628,908.64
9,200.00	92.16	269.31	1,104.01	4,845.01	-23.22	-4,494.80	4,494.86	1.18	673,216.48	628,808.70
9,300.00	91.35	269.36	1,100.45	4,841.45	-24.23	-4,594.73	4,594.79	0.81	673,215.47	628,708.77
9,400.00	91.36	268.54	1,098.48	4,839.48	-25.92	-4,694.70	4,694.77	0.82	673,213.78	628,608.80
9,500.00	92.69	268.54	1,095.09	4,836.09	-28.68	-4,794.60	4,794.68	1.33	673,211.02	628,508.90
9,543.00	93.10	268.60	1,092.88	4,833.88	-29.74	-4,837.53	4,837.62	0.96	673,209.96	628,465.97
Last Phoenix MWD Survey, 9543										
9,600.00	93.10	268.60	1,089.79	4,830.79	-31.13	-4,894.43	4,894.53	0.00	673,208.57	628,409.07
9,601.00	93.10	268.60	1,089.74	4,830.74	-31.16	-4,895.43	4,895.53	0.00	673,208.54	628,408.07
Projection to Bit, 9601										

Company:	Apache Corporation	Local Co-ordinate Reference:	Well Raven Federal #10H
Project:	Eddy County, NM (Nad27)	TVD Reference:	Well @ 3741.00usft (Original Well Elev +14' KB)
Site:	Raven Federal	MD Reference:	Well @ 3741.00usft (Original Well Elev +14' KB)
Well:	Raven Federal #10H	North Reference:	Grid
Wellbore:	Raven Federal #10H	Survey Calculation Method:	Minimum Curvature
Design:	Raven Federal #10H Surveys	Database:	GCR DB v5000

Survey Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
486.00	485.97	-0.13	-4.66	First Phoenix MWD Survey, 486'
9,543.00	4,833.88	-29.74	-4,837.53	Last Phoenix MWD Survey, 9543'
9,601.00	4,830.74	-31.16	-4,895.43	Projection to Bit, 9601'

Checked By: _____ Approved By: _____ Date: _____

DISTRICT I
1625 N. French Dr., Hobbs, NM 88240
Phone: (505) 393-6161 Fax: (505) 393-0720

DISTRICT II
811 S. First St., Artesia, NM 88210
Phone: (505) 748-1283 Fax: (505) 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 & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, New Mexico 87505

Form C-102
Revised August 1, 2011
Submit one copy to appropriate
District Office

AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-015	Pool Code 96831	Pool Name Cedar Lake; Glorieta - Yeso
Property Code	Property Name RAVEN FEDERAL COM	Well Number 10H
OGRID No. 873	Operator Name APACHE CORPORATION	Elevation 3727'

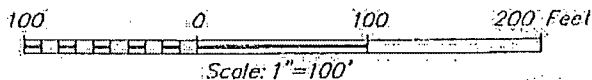
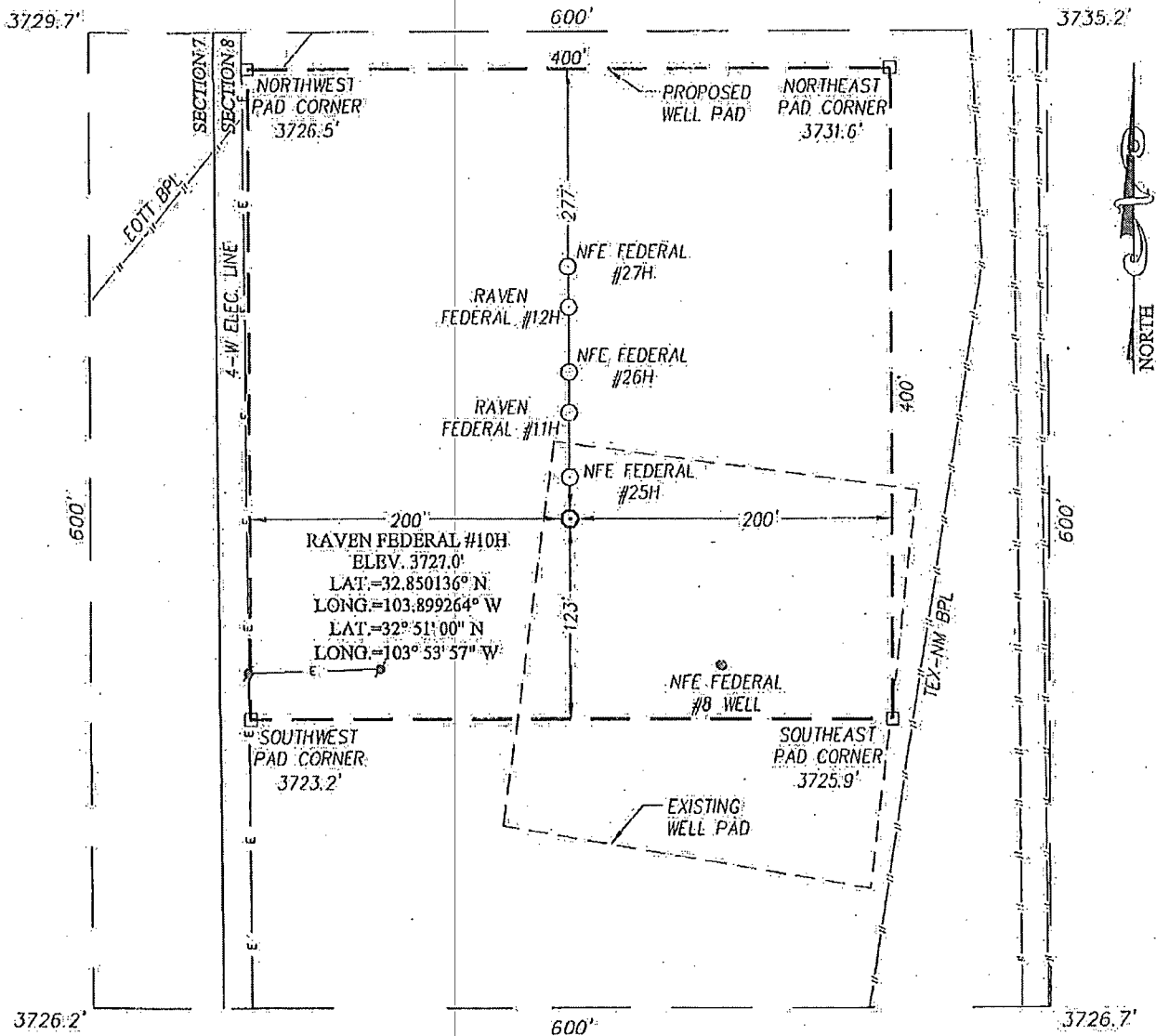
Surface Location									
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
E	8	17-S	31-E		2218	NORTH	220	WEST	EDDY

Bottom Hole Location If Different From Surface									
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
2	7	17-S	31-E		2218	NORTH	330	WEST	EDDY
Dedicated Acres		Joint or Infill	Consolidation Code	Order No.					
191.68									

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

		OPERATOR CERTIFICATION I hereby certify that the information herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order, heretofore entered by this division. <i>Sorima L. Flores</i> 5/11/12 Signature Date Sorima L. Flores Printed Name sorima.flores@apachecorp.com E-mail Address
CORNER COORDINATES TABLE ① - Y=674101.9 N, X=628075.2 E ② - Y=674135.1 N, X=633078.6 E ③ - Y=672781.8 N, X=628079.2 E ④ - Y=672814.9 N, X=638086.3 E		SURVEYOR CERTIFICATION I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief. MARCH 27, 2012 Date of Survey Signature & Seal of Professional Surveyor: <i>Ronald P. Eidson</i> 3/29/2012 Certificate Number: Gary G. Blason 12641 Ronald P. Eidson 3239 APSC W.O.: 12.11.0632

SECTION 8, TOWNSHIP 17 SOUTH, RANGE 31 EAST, N.M.P.M.
EDDY COUNTY **NEW MEXICO**



DIRECTIONS TO LOCATION

FROM THE INTERSECTION OF U.S. HWY. #82 AND CO. RD. #221 (SKELLY) GO NORTH APPROX. 1.3 MILES. TURN RIGHT AND GO NORTHEAST APPROX. 0.5 MILES TO A CURVE. GO EAST APPROX. 0.5 MILES. TURN LEFT AND GO NORTH APPROX. 0.1 MILES TO THE LOCATION.



PROVIDING SURVEYING SERVICES
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JOHN WEST SURVEYING COMPANY
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 HOBBS, N.M. 88240
 (575) 393-3117 www.jwsc.biz

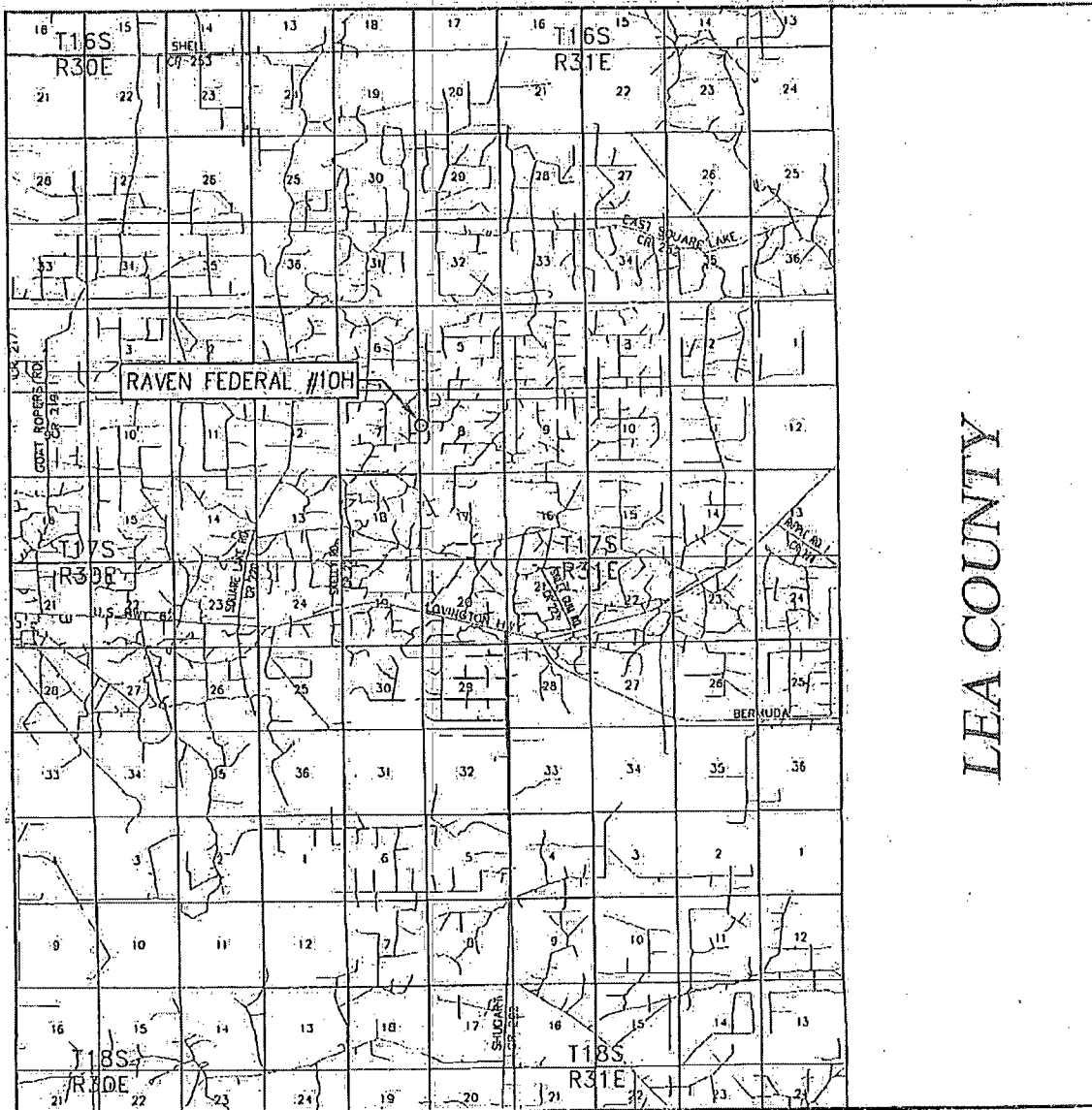
APACHE CORPORATION

RAVEN FEDERAL #10H WELL
 LOCATED 2218 FEET FROM THE NORTH LINE
 AND 220 FEET FROM THE WEST LINE OF SECTION 8,
 TOWNSHIP 17 SOUTH, RANGE 31 EAST, N.M.P.M.,
 EDDY COUNTY, NEW MEXICO

Survey Date: 3/27/12	CAD Date: 3/27/12	Drawn By: AF
W.O. No: 12110632	Rev:	Rel. W.O.: 11112713

Sheet 1 of 1

VICINITY MAP



LEA COUNTY

SCALE: 1" = 2 MILES

SEC. 8 TWP. 17-S RGE. 31-E

SURVEY N.M.P.M.

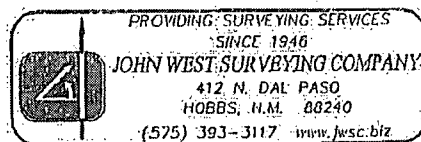
COUNTY EDDY STATE NEW MEXICO

DESCRIPTION 2218' FNL & 220' FWL

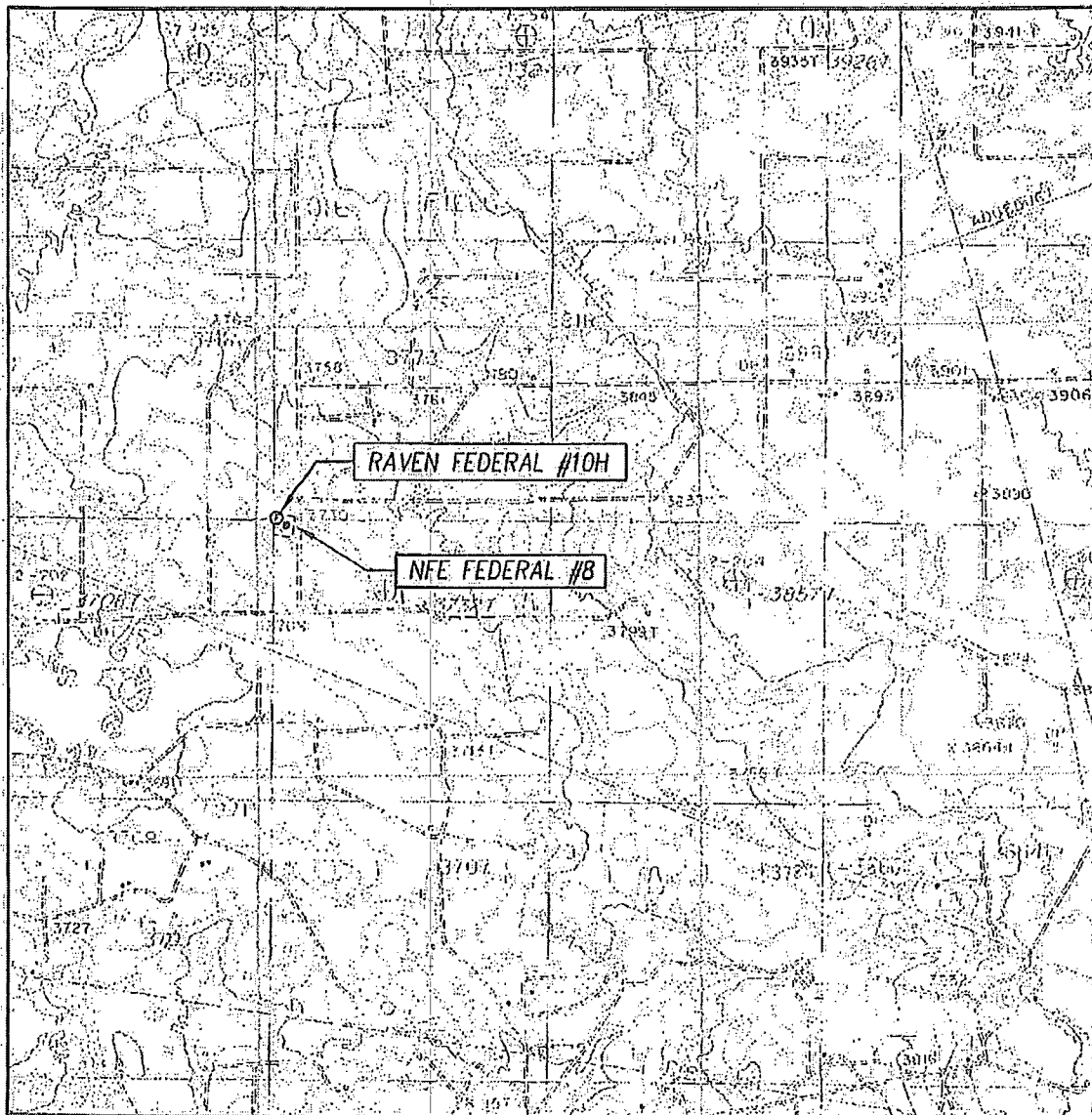
ELEVATION 3727'

OPERATOR APACHE CORPORATION

LEASE RAVEN FEDERAL



LOCATION VERIFICATION MAP



SCALE: 1" = 2000'

CONTOUR INTERVAL:
LOCO HILLS, N.M. - 10'

SEC. 8 TWP. 17-S RGE. 31-E

SURVEY N.M.P.M.

COUNTY EDDY STATE NEW MEXICO

DESCRIPTION 2218' FNL & 220' FWL

ELEVATION 3727'

OPERATOR APACHE CORPORATION

LEASE RAVEN FEDERAL

U.S.G.S. TOPOGRAPHIC MAP
LOCO HILLS, N.M.

