

Results of Directional Survey

API number:	30-025-41927		
OGRID:		Operator:	NADEL AND GUSSMAN PERMIAN, LLC
		Property:	SUN MCKAY FEDERAL # 3H

surface	ULSTR:	C	10	T 19S	R 32E
				330 FNL	1980 FWL

BH Loc	ULSTR:	N	10	T 19S	R 32E
13885	MD	9508.1	TVD	336 FSL	2076 FWL
				4944 FNL	

Top Perf/OH	ULSTR:	C	10	T 19S	R 32E
9746	MD	9418.2	TVD	815 FNL	2082 FWL

Bot Perf/OH	ULSTR:	N	10	T 19S	R 32E
13699	MD	9507.2	TVD	521 FSL	2055 FWL
				4759 FNL	

	MD	N/S	E/W	VD
	9703.00	-441.90	99.88	9417.90
TOP PERFS/OH	9746.00	-484.84	102.13	9418.16
	9798.00	-536.77	104.85	9418.48
	13698.00	-4428.46	74.66	9507.22
BOT PERFS/OH	13699.00	-4429.45	74.77	9507.22
	13793.00	-4522.88	85.17	9507.55

NEXT TO LAST	13831.00	-4560.64	89.41	9507.78
LAST READING	13885.00	-4614.29	95.52	9508.07
TD	13885.00	-4614.29	95.52	9508.07

Surface Location	330	FN	1980	FW
Projected BHL	4944	FN	2076	FW
Location of				
Top Perfs/OH	815	FN	2082	FW
Bottom Perfs/OH	4759	FN	2055	FW

SUMMARY of Subsurface Locations

Surface Location	C-10-19S-32E	330	FN	1980	FW	Vert. Depth
Top Perfs/OH	C-10-19S-32E	815	FN	2082	FW	9418.16
Bottom Perfs/OH	N-10-19S-32E	4759	FN	2055	FW	9507.22
Projected TD	N-10-19S-32E	4944	FN	2076	FW	9508.07

FEB 19 2015

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DEC 17 2014

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NADEL & GUSSMAN LLC

Lusk

Lea County, NM (Grid North)

Sun McKay Federal #3H

VH - Job #320714-KW-951

Survey: Gyro

SDI Survey Report

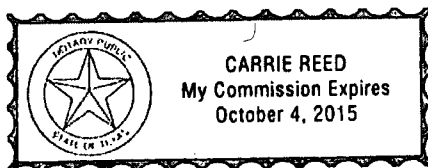
This survey is correct to the best of my knowledge and is supported by actual field data.

Richardson

Notarized this date 4th of August, 2014.

Carrie Reed

Notary Signature
County of Midland
State of Texas



mm

SDI

SDI Survey Report

Company:	NADEL & GUSSMAN LLC	Local Co-ordinate Reference:	Well Sun McKay Federal #3H
Project:	Lusk	TVD Reference:	Mean Sea Level (System)
Site:	Lea County, NM (Grid North)	MD Reference:	Mean Sea Level (System)
Well:	Sun McKay Federal #3H	North Reference:	Grid
Wellbore:	VH - Job #320714-KW-951	Survey Calculation Method:	Minimum Curvature
Design:	VH - Job #320714-KW-951	Database:	EDM-Regulatory

Project	Lusk		
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	Lea County, NM (Grid North)		
Site Position:		Northing:	612,040.73 usft
From:	Lat/Long	Easting:	677,556.15 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16"
		Latitude:	32° 40' 52.580 N
		Longitude:	103° 45' 22.530 W
		Grid Convergence:	0.31 °

Well	Sun McKay Federal #3H, Horizontal		
Well Position	+N/-S	0.0 usft	Latitude: 32° 40' 52.580 N
	+E/-W	0.0 usft	Longitude: 103° 45' 22.530 W
Position Uncertainty	0.0 usft	Wellhead Elevation:	0.0 usft
		Ground Level:	0.0 usft

Wellbore	VH - Job #320714-KW-951		
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Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	7/28/2014	7.32	60.50	48,585

Design	VH - Job #320714-KW-951		
Audit Notes:			
Version:	1.0	Phase:	ACTUAL
		Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)
	0.0	0.0	0.0
			Direction (°)
			71.65

Survey Program	Date 8/5/2014		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name
100.0	8,530.0	Gyro (VH - Job #320714-KW-951)	Keeper
			Description
			Keeper Gyro

Survey	MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	Closure Azimuth (°)	Closure Distance (usft)
	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.0
	100.0	0.20	227.68	100.0	-0.1	-0.1	227.68	0.2
	200.0	0.12	281.69	200.0	-0.2	-0.4	239.34	0.4
	300.0	0.22	145.65	300.0	-0.4	-0.4	225.31	0.5
	400.0	0.05	53.73	400.0	-0.5	-0.2	203.60	0.5
	500.0	0.06	8.49	500.0	-0.4	-0.2	202.52	0.4
	600.0	0.10	12.33	600.0	-0.3	-0.1	207.83	0.3
	700.0	0.11	15.83	700.0	-0.1	-0.1	226.74	0.1
	800.0	0.19	17.09	800.0	0.2	0.0	352.01	0.2
	900.0	0.18	336.42	900.0	0.5	0.0	355.48	0.5
	1,000.0	0.17	292.93	1,000.0	0.7	-0.2	340.43	0.7
	1,100.0	0.20	3.25	1,100.0	0.9	-0.4	337.95	1.0

SDI
SDI Survey Report

Company: NADEL & GUSSMAN LLC
Project: Lusk
Site: Lea County, NM (Grid North)
Well: Sun McKay Federal #3H
Wellbore: VH - Job #320714-KVV-951
Design: VH - Job #320714-KVV-951

Local Co-ordinate Reference: Well Sun McKay Federal #3H
TVD Reference: Mean Sea Level (System)
MD Reference: Mean Sea Level (System)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM-Regulatory

Survey								
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	Closure Azimuth (°)	Closure Distance (usft)	
1,200.0	0.07	322.41	1,200.0	1.1	-0.4	340.77	1.2	
1,300.0	0.11	77.94	1,300.0	1.2	-0.3	344.31	1.2	
1,400.0	0.44	127.84	1,400.0	1.0	0.1	3.75	1.0	
1,500.0	0.50	139.37	1,500.0	0.4	0.7	58.15	0.8	
1,600.0	0.39	160.61	1,600.0	-0.2	1.0	103.29	1.1	
1,700.0	0.50	126.34	1,700.0	-0.8	1.5	118.67	1.7	
1,800.0	0.21	138.40	1,800.0	-1.2	2.0	121.63	2.3	
1,900.0	0.31	86.97	1,900.0	-1.3	2.4	119.51	2.7	
2,000.0	0.37	88.69	2,000.0	-1.3	3.0	114.02	3.3	
2,100.0	0.29	97.43	2,100.0	-1.3	3.5	110.84	3.8	
2,200.0	0.57	70.61	2,200.0	-1.2	4.3	105.93	4.4	
2,300.0	0.35	91.96	2,300.0	-1.1	5.0	101.90	5.1	
2,400.0	1.35	61.61	2,400.0	-0.5	6.4	94.59	6.4	
2,500.0	1.95	61.89	2,499.9	0.8	8.9	84.56	9.0	
2,600.0	2.60	61.59	2,599.8	2.7	12.4	77.60	12.7	
2,700.0	3.23	66.92	2,699.7	4.9	17.0	73.88	17.7	
2,800.0	2.89	66.23	2,799.6	7.0	21.9	72.19	23.0	
2,900.0	2.43	64.92	2,899.5	8.9	26.1	71.09	27.6	
3,000.0	2.06	61.32	2,899.4	10.7	29.6	70.12	31.5	
3,100.0	1.66	63.29	3,099.3	12.2	32.5	69.38	34.7	
3,200.0	1.23	55.32	3,199.3	13.5	34.7	68.75	37.2	
3,300.0	1.29	64.43	3,299.3	14.6	36.6	68.26	39.4	
3,400.0	1.25	54.28	3,399.2	15.7	38.5	67.79	41.6	
3,500.0	1.06	62.64	3,499.2	16.8	40.2	67.35	43.5	
3,600.0	1.05	55.68	3,599.2	17.7	41.8	67.02	45.4	
3,700.0	0.94	67.27	3,699.2	18.5	43.3	66.80	47.1	
3,800.0	0.82	55.99	3,799.2	19.3	44.6	66.65	48.6	
3,900.0	0.97	52.87	3,899.2	20.2	45.9	66.27	50.1	
4,000.0	0.76	58.09	3,999.2	21.0	47.1	65.95	51.6	
4,100.0	0.77	62.79	4,099.2	21.7	48.3	65.81	52.9	
4,200.0	0.59	46.13	4,199.1	22.4	49.3	65.59	54.1	
4,300.0	0.50	63.45	4,299.1	22.9	50.0	65.39	55.0	
4,400.0	0.57	61.42	4,399.1	23.3	50.8	65.34	55.9	
4,500.0	0.71	45.34	4,499.1	24.0	51.7	65.10	57.0	
4,600.0	0.66	31.23	4,599.1	24.9	52.5	64.57	58.1	
4,700.0	0.48	43.65	4,699.1	25.7	53.0	64.12	59.0	
4,800.0	0.57	60.81	4,799.1	26.3	53.8	63.95	59.8	
4,900.0	0.37	45.91	4,899.1	26.7	54.4	63.83	60.7	
5,000.0	0.41	57.14	4,999.1	27.2	55.0	63.70	61.3	
5,100.0	0.84	21.90	5,099.1	28.0	55.5	63.21	62.2	
5,200.0	0.85	23.55	5,199.1	29.4	56.1	62.35	63.3	
5,300.0	0.89	20.81	5,299.1	30.8	56.7	61.48	64.5	
5,400.0	0.81	7.63	5,399.1	32.2	57.1	60.53	65.5	
5,500.0	0.90	32.35	5,499.1	33.6	57.6	59.73	66.7	

SDI
SDI Survey Report

Company: NADEL & GUSSMAN LLC
Project: Lusk
Site: Lea County, NM (Grid North)
Well: Sun McKay Federal #3H
Wellbore: VH - Job #320714-KW-951
Design: VH - Job #320714-KW-951

Local Co-ordinate Reference: Well Sun McKay Federal #3H
TVD Reference: Mean Sea Level (System)
MD Reference: Mean Sea Level (System)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM-Regulatory

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	Closure Azimuth (°)	Closure Distance (usft)
5,600.0	0.76	55.61	5,599.0	34.6	58.5	59.39	68.0
5,700.0	0.73	76.29	5,699.0	35.2	59.7	59.50	69.3
5,800.0	0.76	71.80	5,799.0	35.5	60.9	59.77	70.5
5,900.0	0.95	94.64	5,899.0	35.7	62.4	60.26	71.9
6,000.0	1.03	93.53	5,999.0	35.5	64.1	61.01	73.3
6,100.0	1.19	95.68	6,099.0	35.4	66.1	61.83	74.9
6,200.0	1.15	94.65	6,199.0	35.2	68.1	62.67	76.7
6,300.0	0.80	77.01	6,299.0	35.3	69.8	63.18	78.2
6,400.0	0.26	304.63	6,398.9	35.6	70.3	63.16	78.8
6,500.0	0.25	149.05	6,498.9	35.5	70.2	63.17	78.7
6,600.0	0.16	245.82	6,598.9	35.3	70.2	63.33	78.5
6,700.0	0.16	227.21	6,698.9	35.1	69.9	63.35	78.3
6,800.0	0.13	245.26	6,798.9	35.0	69.7	63.38	78.0
6,900.0	0.05	273.25	6,898.9	34.9	69.6	63.36	77.9
7,000.0	0.21	293.63	6,998.9	35.0	69.4	63.24	77.7
7,100.0	0.22	313.41	7,098.9	35.2	69.1	63.00	77.5
7,200.0	0.17	315.40	7,198.9	35.4	68.8	62.76	77.4
7,300.0	0.33	311.02	7,298.9	35.7	68.5	62.46	77.3
7,400.0	0.17	298.00	7,398.9	36.0	68.2	62.17	77.1
7,500.0	0.25	244.40	7,498.9	36.0	67.8	62.07	76.8
7,600.0	1.08	230.93	7,598.9	35.3	66.9	62.20	75.6
7,700.0	1.29	194.38	7,698.9	33.6	65.9	62.99	74.0
7,800.0	1.40	166.86	7,798.9	31.3	65.9	64.59	73.0
7,900.0	1.56	158.24	7,898.9	28.9	66.7	66.60	72.7
8,000.0	1.57	163.79	7,998.8	26.3	67.6	68.75	72.5
8,100.0	0.79	155.88	8,098.8	24.3	68.2	70.37	72.4
8,200.0	0.15	125.13	8,198.8	23.6	68.6	71.00	72.6
8,300.0	0.13	288.88	8,298.8	23.6	68.6	71.03	72.6
8,400.0	0.28	134.03	8,398.8	23.5	68.7	71.15	72.6
8,500.0	0.89	88.98	8,498.8	23.3	69.6	71.50	73.4
8,530.0	0.98	100.89	8,528.8	23.3	70.1	71.65	73.9



Scientific Drilling

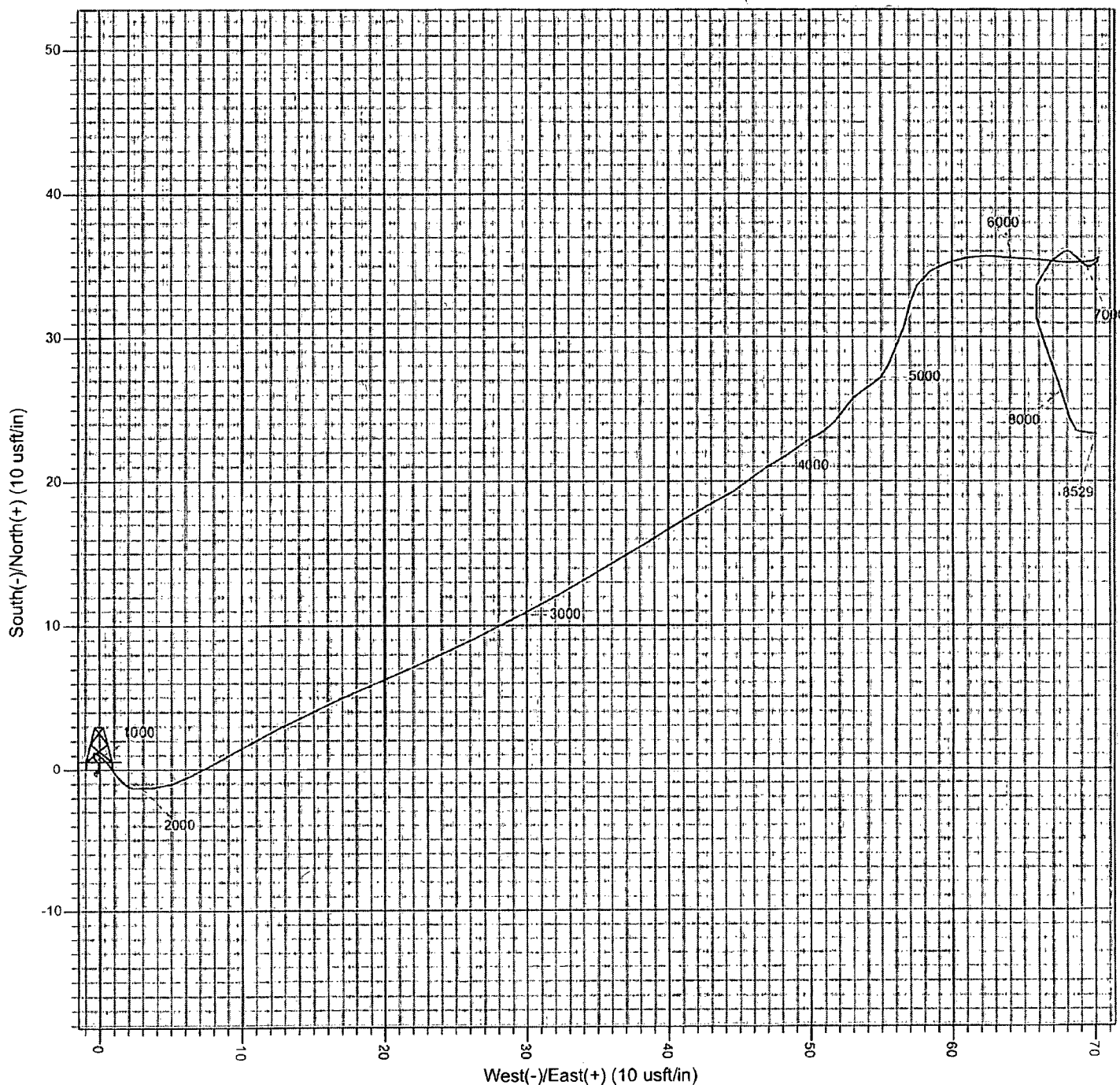
Project: Lusk
Lea County, NM (Grid North)
Well: Sun McKay Federal #3H
Wellbore: VH - Job #320714-KW-951
Design: VH - Job #320714-KW-951

WELL DETAILS: Sun McKay Federal #3H

Mean Sea Level (System)

Ground Level: 0.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	612040.73	677556.15	32° 40' 52.580 N	103° 45' 22.530 W	



PROJECT DETAILS: Lusk	SITE DETAILS: Lea County, NM (Grid North)
Geodetic System: US State Plane 1927 (Exact solution)	Site Centre Latitude: 32° 40' 52.580 N
Datum: NAD 1927 (NADCON CONUS)	Longitude: 103° 45' 22.530 W
Ellipsoid: Clarke 1866	Positional Uncertainty: 0.0
Zone: New Mexico East 3001	Convergence: 0.31
System Datum: Mean Sea Level	Local North: Grid



PHOENIX
TECHNOLOGY SERVICES

SEP 29 2014

September 25, 2014

Nadel & Gussman Permian, L.L.C.
Attention: Regulatory Department
601 N. Marienfield, Suite 508
Midland, TX 79701

Re: Nadel & Gussman Permian, L.L.C.
Sun McKay Federal 3H
Lea County, NM
API #30-025-41927
Job No. 1411270

Dear Regulatory Department;

Phoenix Technology Services, Inc. has filed the Survey Data Certification, Surveys, and Lease Plat for the above referenced well with the State of New Mexico Oil Conservation Division – District 1 via certified mail. A copy of the filing is attached for your records.

Name of Surveyor	Drain Hole Number	Surveyed Depths		Dates Performed		Type of Survey
		From	To	Start	End	
Jeff Thomas	3H	8,610	13,831	07/29/14	08/09/14	MWD

Thank you for the opportunity to be of service. Please contact me if you have any questions or require additional information.

Best Regards,

Dana Robinson

Dana Robinson
Operations Administrator

PHOENIX TECHNOLOGY SERVICES
SURVEY DATA CERTIFICATION



PHOENIX JOB NUMBER 1411270

OPERATOR Nadel and Gussman Permian

WELL NAME Sun McKay Federal 3H

COUNTY & STATE

Lea County, NM

API WELL NUMBER 30-025-41927

PROPOSED DIRECTION 179.6

TIE-IN DATA

MEASURED DEPTH	VERTICAL DEPTH	INCLIN	AZIMUTH	N-S COORD	E-W COORD	DATA SOURCE
8,530 ft	8,528.78 ft	0.98	100.89	23.25	70.13	MS Survey

FIRST SURVEY DATE	FIRST SURVEY DEPTH	INCLIN	AZIMUTH
29-Jul-23	8,610 ft	1.1	96.9

SURVEY INSTRUMENT

TYPE

PHOENIX MWD

LAST SURVEY DATE	LAST SURVEY DEPTH	INCLIN	AZIMUTH
9-Aug-14	13,831 ft	89.7	173.5

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
9-Aug-14	13,885 ft	89.7	173.5

Jeff Thomas

PRINT YOUR NAME ABOVE

Jeff Thomas

SIGN YOUR NAME ABOVE

MAGNETIC DECLINATION OR TOTAL GRID

TOTAL CORRECTION USED	7.01
DECLINATION OR GRID	Grid

8/10/2014

TODAY'S DATE

MWD SUPERVISOR 1

Jeff Thomas

DIRECTIONAL DRILLER 1

George Woodgate

MWD SUPERVISOR 2

Shawn Ramnarine

DIRECTIONAL DRILLER 2

Zach Johnson

1805 Brittmore Road

Houston, Texas 77043

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



Phoenix Technology Services
Survey Report

HOBBS OCD

DEC 30 2014

RECEIVED

Company: Nadel and Gussman Permian, LLC
Project: Lea County, New Mexico (NAD 83)
Site: Sun McKay Federal
Well: 3H
Wellbore: Wellbore #1 Job #1411270
Design: Surveys (Patriot 5)

Local Co-ordinate Reference: Well 3H
TVD Reference: WELL @ 3690.50usft (Patriot 5)
MD Reference: WELL @ 3690.50usft (Patriot 5)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: Compass 5000 GCR DB

Project	Lea County, New Mexico (NAD 83)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site	Sun McKay Federal		
Site Position:		Northing:	612,060.76 usft
From:	Map	Easting:	718,890.08 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 40' 52.57958 N
		Longitude:	103° 45' 22.52651 W
		Grid Convergence:	0.31 °

Well	3H		
Well Position	+N/-S	0.00 usft	Northing:
	+E/-W	0.00 usft	Easting:
Position Uncertainty	0.00 usft	Wellhead Elevation:	0.00 usft
		Latitude:	32° 40' 52.57958 N
		Longitude:	103° 45' 22.52651 W
		Ground Level:	3,667.00 usft

Wellbore	Wellbore #1 Job #1411270		
Magnetics	Model Name	Sample Date	Declination
	IGRF2010_14	07/14/14	(°)
			7.33
		Dip Angle	(°)
		60.50	
		Field Strength	(nT)
		48,561	

Design	Surveys (Patriot 5)		
Audit Notes:			
Version:	1.0	Phase:	ACTUAL
		Tie On Depth:	0.00
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W
	(usft)	(usft)	(usft)
	0.00	0.00	0.00
		Direction	(°)
		179.60	

Survey Program	Date 08/10/14		
From	To	Survey (Wellbore)	Tool Name
(usft)	(usft)		
100.00	8,530.00	Scientific Gyro Survey (Wellbore #1 Job #	PHX+MWD+IGRF
8,610.00	13,885.00	Phoenix MWD Surveys (Wellbore #1 Job #	PHX+MWD+IGRF
			Description
			PHX+MWD+IGRF v3:standard declination
			PHX+MWD+IGRF v3:standard declination

Survey	Measured Depth	Inclination	Azimuth	Vertical Depth	+N/-S	+E/-W	Vertical Section	Dogleg Rate	Build Rate	Turn Rate
	(usft)	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(°/100usft)	(°/100usft)	(°/100usft)
	8,530.00	0.98	100.89	8,528.78	23.25	70.13	-22.76	0.00	0.00	0.00
	Tie-in to Scientific Gyro									
	8,610.00	1.10	96.90	8,608.77	23.03	71.56	-22.53	0.18	0.15	-4.99
	First Phoenix MWD Survey									
	8,705.00	1.30	104.40	8,703.75	22.66	73.51	-22.14	0.27	0.21	7.89
	8,800.00	1.30	109.00	8,798.73	22.04	75.58	-21.51	0.11	0.00	4.84
	8,832.00	1.40	68.50	8,830.72	22.06	76.28	-21.53	2.93	0.31	-126.56
	8,864.00	3.30	11.21	8,862.69	23.11	76.83	-22.57	8.76	5.94	-179.03
	8,895.00	5.20	26.80	8,893.61	25.24	77.63	-24.70	7.12	6.13	50.29



Phoenix Technology Services

Survey Report

Company: Nadel and Gussman Permian, LLC
Project: Lea County, New Mexico (NAD 83)
Site: Sun McKay Federal
Well: 3H
Wellbore: Wellbore #1 Job #1411270
Design: Surveys (Patriot 5)

Local Co-ordinate Reference: Well 3H
TVD Reference: WELL @ 3690.50usft (Patriot 5)
MD Reference: WELL @ 3690.50usft (Patriot 5)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: Compass 5000 GCR DB

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
8,927.00	6.50	45.30	8,925.44	27.81	79.57	-27.25	7.11	4.06	57.81
8,959.00	5.90	83.70	8,957.27	29.26	82.50	-28.65	12.84	-1.88	120.00
8,991.00	4.00	120.90	8,989.16	28.87	85.09	-28.27	11.35	-5.94	116.25
9,022.00	3.60	202.90	9,020.11	27.42	85.64	-26.82	16.11	-1.29	264.52
9,054.00	7.40	203.90	9,051.95	24.61	84.41	-24.02	11.88	11.88	3.13
9,086.00	10.90	193.50	9,083.54	19.78	82.87	-19.20	12.05	10.94	-32.50
9,118.00	16.10	181.10	9,114.66	12.39	82.08	-11.82	18.51	16.25	-38.75
9,149.00	21.90	176.60	9,143.95	2.32	82.34	-1.74	19.28	18.71	-14.52
9,181.00	27.80	175.20	9,172.98	-11.09	83.32	11.67	18.53	18.44	-4.38
9,213.00	33.20	174.10	9,200.54	-27.25	84.85	27.84	16.96	16.88	-3.44
9,244.00	36.70	173.60	9,225.95	-44.91	86.75	45.51	11.33	11.29	-1.61
9,276.00	39.00	173.80	9,251.21	-64.42	88.91	65.04	7.20	7.19	0.63
9,308.00	42.50	174.10	9,275.45	-85.19	91.10	85.82	10.95	10.94	0.94
9,339.00	47.30	175.90	9,297.40	-106.98	93.00	107.63	16.02	15.48	5.81
9,371.00	52.10	177.80	9,318.10	-131.34	94.32	132.00	15.67	15.00	5.94
9,403.00	57.50	178.60	9,336.54	-157.47	95.14	158.13	17.00	16.88	2.50
9,435.00	61.40	179.40	9,352.80	-185.02	95.61	185.68	12.38	12.19	2.50
9,466.00	64.20	180.20	9,366.97	-212.58	95.71	213.25	9.32	9.03	2.58
9,498.00	67.70	180.90	9,380.01	-241.80	95.43	242.46	11.12	10.94	2.19
9,530.00	71.00	180.50	9,391.29	-271.74	95.06	272.40	10.38	10.31	-1.25
9,561.00	75.80	179.50	9,400.14	-301.44	95.06	302.09	15.79	15.48	-3.23
9,608.00	80.70	178.20	9,409.71	-347.43	95.99	348.09	10.77	10.43	-2.77
9,703.00	89.40	177.10	9,417.90	-441.90	99.88	442.59	9.23	9.16	-1.16
9,798.00	89.90	176.90	9,418.48	-536.77	104.85	537.49	0.57	0.53	-0.21
9,893.00	86.80	177.80	9,421.22	-631.62	109.24	632.36	3.40	-3.26	0.95
9,989.00	88.30	177.50	9,425.32	-727.44	113.17	728.22	1.59	1.56	-0.31
10,084.00	88.80	176.60	9,427.73	-822.29	118.06	823.09	1.08	0.53	-0.95
10,179.00	89.00	176.10	9,429.55	-917.08	124.10	917.92	0.57	0.21	-0.53
10,274.00	89.30	178.80	9,430.96	-1,011.96	126.33	1,012.83	2.86	0.32	2.84
10,369.00	88.80	181.10	9,432.53	-1,106.94	128.41	1,107.81	2.48	-0.53	2.42
10,464.00	89.20	180.90	9,434.19	-1,201.91	126.76	1,202.77	0.47	0.42	-0.21
10,559.00	89.90	180.00	9,434.94	-1,296.91	126.01	1,297.75	1.20	0.74	-0.95
10,654.00	90.50	179.50	9,434.61	-1,391.90	126.42	1,392.75	0.82	0.63	-0.53
10,749.00	91.30	179.40	9,433.11	-1,486.89	127.34	1,487.74	0.85	0.84	-0.11
10,844.00	89.30	181.00	9,432.62	-1,581.88	127.00	1,582.73	2.70	-2.11	1.68
10,939.00	89.60	180.90	9,433.53	-1,676.88	125.43	1,677.69	0.33	0.32	-0.11
11,034.00	89.80	182.30	9,434.03	-1,771.82	122.78	1,772.63	1.49	0.21	1.47
11,129.00	88.30	183.40	9,435.60	-1,866.88	118.05	1,867.46	1.96	-1.58	1.16
11,224.00	87.10	183.70	9,439.41	-1,961.42	112.18	1,962.16	1.30	-1.26	0.32
11,319.00	86.70	183.50	9,444.55	-2,056.10	106.22	2,056.79	0.47	-0.42	-0.21
11,414.00	86.80	183.00	9,449.94	-2,150.79	100.84	2,151.44	0.54	0.11	-0.53
11,509.00	86.80	182.10	9,455.24	-2,245.55	96.62	2,246.17	0.95	0.00	-0.95
11,604.00	88.30	182.80	9,459.30	-2,340.37	92.57	2,340.86	1.74	1.58	0.74



Phoenix Technology Services

Survey Report

Company: Nadel and Gussman Permian, LLC
Project: Lea County, New Mexico (NAD 83)
Site: Sun McKay Federal
Well: 3H
Wellbore: Wellbore #1 Job #1411270
Design: Surveys (Patriot 5)

Local Co-ordinate Reference: Well 3H
TVD Reference: WELL @ 3690.50usft (Patriot 5)
MD Reference: WELL @ 3690.50usft (Patriot 5)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: Compass 5000 GCR DB

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
11,699.00	88.80	183.40	9,461.71	-2,435.20	87.43	2,435.75	0.82	0.53	0.63
11,794.00	90.10	185.20	9,462.62	-2,529.92	80.31	2,530.42	2.34	1.37	1.89
11,889.00	89.70	184.60	9,462.78	-2,624.58	72.19	2,625.02	0.76	-0.42	-0.63
11,984.00	89.50	184.50	9,463.45	-2,719.27	64.66	2,719.66	0.24	-0.21	-0.11
12,079.00	89.40	184.30	9,464.36	-2,813.99	57.37	2,814.32	0.24	-0.11	-0.21
12,175.00	89.40	184.80	9,465.36	-2,909.68	49.75	2,909.96	0.52	0.00	0.52
12,270.00	89.30	184.50	9,466.44	-3,004.36	42.05	3,004.58	0.33	-0.11	-0.32
12,365.00	88.10	183.50	9,468.60	-3,099.10	35.43	3,099.28	1.64	-1.26	-1.05
12,460.00	87.70	183.60	9,472.08	-3,193.88	29.55	3,193.89	0.43	-0.42	0.11
12,556.00	87.40	183.10	9,476.18	-3,289.61	23.94	3,289.69	0.61	-0.31	-0.52
12,651.00	87.70	182.30	9,480.24	-3,384.41	19.47	3,384.47	0.90	0.32	-0.84
12,746.00	87.40	181.40	9,484.30	-3,479.28	16.41	3,479.31	1.00	-0.32	-0.95
12,841.00	87.00	179.80	9,488.94	-3,574.15	15.42	3,574.17	1.73	-0.42	-1.68
12,936.00	87.90	178.10	9,493.17	-3,669.04	17.16	3,669.07	2.02	0.95	-1.79
13,032.00	98.50	177.10	9,496.19	-3,764.91	21.17	3,764.96	1.21	0.63	-1.04
13,127.00	87.70	177.30	9,499.34	-3,859.74	25.81	3,859.83	0.87	-0.84	0.21
13,222.00	87.80	176.20	9,503.07	-3,954.51	31.19	3,954.63	1.16	0.11	-1.16
13,317.00	89.60	175.20	9,505.22	-4,049.22	38.31	4,049.38	2.17	1.89	-1.05
13,412.00	89.50	175.00	9,505.97	-4,143.66	46.43	4,144.09	0.24	-0.11	-0.21
13,508.00	89.70	174.30	9,506.64	-4,239.44	55.38	4,239.73	0.76	0.21	-0.73
13,603.00	89.80	174.40	9,507.05	-4,333.98	64.73	4,334.33	0.15	0.11	0.11
13,698.00	90.00	173.60	9,507.22	-4,428.46	74.66	4,428.87	0.87	0.21	-0.84
13,793.00	89.60	173.70	9,507.55	-4,522.88	85.17	4,523.36	0.43	-0.42	0.11
13,831.00	89.70	173.50	9,507.78	-4,560.64	89.41	4,561.15	0.59	0.26	-0.53
Final Phoenix MWD Survey									
13,885.00	89.70	173.50	9,508.07	-4,614.29	95.52	4,614.85	0.00	0.00	0.00
Projection to TD									

Survey Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
8,530.00	8,528.78	23.25	70.13	Tie-in to Scientific Gyro
8,610.00	8,608.77	23.03	71.56	First Phoenix MWD Survey
13,831.00	9,507.78	-4,560.64	89.41	Final Phoenix MWD Survey
13,885.00	9,508.07	-4,614.29	95.52	Projection to TD

Checked By: _____ Approved By: _____ Date: _____

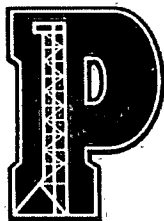
SUN MCKAY FEDERAL #3H

30-025-41927

SEC. 10-T19S-R32E

LEA CO., NM

PERFS	FRAC FLUID (BBLs)	ACID (BBLs)	40/70 (LBS)	20/40 WHITE (LBS)	20/40 OIL PLUS (LBS)
13,490' - 13,699'	4,813	119	8,500	198,180	100,160
13,178' - 13,390'	5,074	96	8,000	198,400	99,840
12,866' - 13,078'	4,879	93	8,000	198,920	100,180
12,546' - 12,766'	4,679	94	8,000	199,860	100,160
12,242' - 12,454'	4,639	94	8,000	199,860	100,160
11,930' - 12,138'	4,601	97	8,980	198,300	100,000
11,618' - 11,830'	4,623	95	8,000	197,340	99,340
11,306' - 11,518'	4,362	94	9,000	198,140	100,780
10,994' - 11,206'	4,366	94	9,000	198,940	101,520
10,682' - 10,894'	4,516	94	9,000	198,940	90,640
10,370' - 10,582'	4,585	95	9,000	202,220	100,060
10,058' - 10,270'	4,691	109	8,000	192,740	100,400
9,746' - 9,956'	5,156	226	8,000	192,400	100,060
TOTALS	60,984	1,400	109,480	2,574,240	1,293,300



PATRIOT DRILLING, LLC

OPERATOR: Nadel & Gussman Permian
WELL/LEASE: Sun McKay Fed # 3H
COUNTY: Lea Co., New Mexico
Sec. 10, T 19S, R 32E

AUG 28 2014

HOBSOCD

DEC 17 2014

RECEIVED

**STATE OF NEW MEXICO
DEVIATION REPORT**

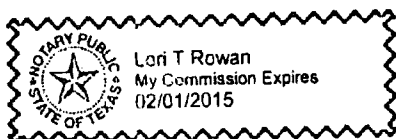
<u>Depth</u>	<u>Deviation</u>	<u>Depth</u>	<u>Deviation</u>
437	3/4	5,166	2
620	1	5,355	3 1/2
811	3/4	5,482	3 1/4
1,061	3/4	5,671	3 1/2
1,311	1	5,766	2 1/4
1,573	3/4	5,960	3
1,827	1	6,152	2 1/2
2,050	1	6,242	4
2,300	1	6,435	4
2,810	3 3/4	6,626	2 3/4
2,969	2 3/4	6,721	1/2
3,124	2	6,911	3/4
3,550	1 1/4	7,290	1/4
4,025	1	7,736	1
4,500	1/4	8,212	3/4
4,976	3	8,602	1 1/4
5,039	2 1/2	8,800	1 1/2
		8,864	3 1/2

Patriot Drilling, LLC

M. Leroy Peterson, Executive Vice-President

The foregoing instrument was acknowledged before me on this 14th day of August, 2014 by M. Leroy Peterson, Executive Vice-President of Patriot Drilling, LLC.

My Commission Expires: 02/01/2015



Lori T. Rowan
Notary Public for Ector Co., Texas

FORM APPROVED
OMB NO 1004-0137
Expires: October 31, 2014

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

RECEIVED

Lease Serial No.
NMNM 112413A

[illegible]

* (See instructions and spaces for additional data on page 2)

[Handwritten signature]

mm

28b: Production - Interval C

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr API	Gas Gravity	Production Method
			→						
Choke Size	Tbg. Press. Flwg. SI	Csg. Press	24 Hr Rate	Oil BBL	Gas MCF	Water BBL	Gas/Oil Ratio	Well Status	
			→						

28c: Production - Interval D

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr API	Gas Gravity	Production Method
			→						
Choke Size	Tbg. Press. Flwg. SI	Csg. Press	24 Hr Rate	Oil BBL	Gas MCF	Water BBL	Gas/Oil Ratio	Well Status	
			→						

29 Disposition of Gas (Solid, used for fuel, vented, etc.)

30 Summary of Porous Zones (Include Aquifers);

Show all important zones of porosity and contents thereof: Cored intervals and all drill-stem tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures and recoveries.

31. Formation (Log) Markers

Formation	Top	Bottom	Descriptions, Contents, etc	Name	Top
					Meas. Depth
DELAWARE	5,200'	7,150'	SANDSTONE	RUSTLER	1,100'
1ST BONE SPRING	7,226'	9,200'	SANDSTONE	TOP SALT	1,300'
2nd BONE SPRING	9,200'	MD	SANDSTONE	BOTTOM SALT	2,700'
				DELAWARE	5,200'
				BONE SPRING	7,150'

32 Additional remarks (include plugging procedure):

33. Indicate which items have been attached by placing a check in the appropriate boxes:

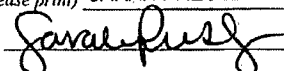
- ☒ Electrical/Mechanical Logs (1 full set req'd)
 ☐ Geologic Report
 ☐ DST Report
 ☒ Directional Survey
 ☐ Sundry Notice for plugging and cement verification
 ☐ Core Analysis
 ☐ Other:

34 I hereby certify that the foregoing and attached information is complete and correct as determined from all available records (see attached instructions)*

Name (please print) SARAH PRESLEY

Title REGULATORY ANALYST

Signature



Date 12/15/2014

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Continued on page 3)

(Form 3160-4, page 2)